



ENQUIRY DOCUMENT - MR

(Document No : B861-000-EX-MR-6001-02-RFQ)



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BIDDING DOCUMENT NO. SM/B861-000-EX-MR-6001/02

(LIMITED DOMESTIC COMPETITIVE BIDDING)

BIDDING DOCUMENT FOR

TENDER DOCUMENT FOR HEAT EXCHANGER (PLATES-GASKETTED) FOR AMBIENT AIR HEATING SYSTEM PROJECT OF KLL UNDER DOMESTIC COMPETITIVE BIDDING BASIS

Notes:

- 1) Bids submitted in GeM portal shall only be considered for evaluation.
- 2) This enquiry is being issued to limited bidders, who are already registered with EIL for complete MR items.
- 3) Only those suppliers who are intimated of publication of the enquiry through EIL e-mail will be eligible to submit their bids. Bids received in GeM Portal from any other supplier shall not be considered for evaluation and shall be rejected.
- 4) In case of any contradictions between the clauses of Terms & Conditions of Tender document and clauses of GCC of GeM Portal, the Terms & Conditions of this tender Document shall prevail.

SECTION-I

LETTER INVITING BID (LIB)

SECTION-I
"LETTER INVITING BID (LIB)"

Ref No: SM/B861-000-EX-MR-6001/02

Date: 21.08.2024

**SUB: TENDER DOCUMENT FOR HEAT EXCHANGER (PLATES-GASKETTED) FOR
AMBIENT AIR HEATING SYSTEM PROJECT OF KLL
[BIDDING DOCUMENT NO.: SM/B861-000-EX-MR-6001/02]**

This enquiry is issued on Limited Bidding basis to EIL enlisted suppliers for "Captioned Item" mentioned above only. A separate intimation to the EIL suppliers eligible for this enquiry shall be sent through mail subsequent to issue of enquiry in GeM Portal.

Only those suppliers who are intimated of publication of the enquiry through EIL e-mail will be eligible to submit their bids. Bids received from any other supplier shall not be considered for evaluation and shall be rejected.

Dear Sir/Madam,

1.0 Konkan LNG Limited Dabhol, a subsidiary of **GAIL (INDIA) Limited**, New Delhi [having Registered Office at 'GAIL Bhawan', 16, Bhikaiji Cama Place, R.K. Puram, New Delhi, India CIN U11100DL2015PLC288147], as their Project Management Consultant (PMC) for Ambient Air Heating System Project at KLL DABHOL.

KLL/ EIL, invites bids from bidders for the subject supply/job, in complete accordance with the following details and enclosed Tender Documents.

2.0 The brief details of the tender are as under:

(A)	SCOPE OF SUPPLY/PROCUREMENT	HEAT EXCHANGER (PLATES-GASKETTED) [For Complete details refer bid document]				
(B)	GEM BID NO.	GEM/2024/B/5307324				
(C)	TYPE OF BIDDING SYSTEM	TWO BID SYSTEM				
(D)	CONTRACTUAL DELIVERY/COMPLETION DATE	Within 09 (Nine) Months on FOT Site Basis from the date of Fax of Acceptance (FOA). Date of receipt of material at site shall be considered as date of delivery.				
(E)	BID SECURITY / EARNEST MONEY DEPOSIT (EMD)	<table border="1"><tbody><tr><td>APPLICABLE</td><td><input checked="" type="checkbox"/></td></tr><tr><td>NOT APPLICABLE</td><td><input type="checkbox"/></td></tr></tbody></table>	APPLICABLE	<input checked="" type="checkbox"/>	NOT APPLICABLE	<input type="checkbox"/>
APPLICABLE	<input checked="" type="checkbox"/>					
NOT APPLICABLE	<input type="checkbox"/>					

		<p><u>EMD Amount:</u> INR 15.00 Lakhs</p> <p><u>Note:</u> EMD exemption is applicable to MSE bidders.</p> <p>(Refer clause no.16 of ITB).</p>
(E1)	DECLARATION FOR BID SECURITY	Bidders who are allowed for exemption as per clause no.16.9 are required to submit Declaration for Bid Security in bid as per proforma at Form F-2A.
(F)	DATE, TIME & VENUE OF PRE-BID MEETING	<p>Date: 28.08.2024 Time: 1500 HRS (IST) Venue: Through Video Conference (Teams) Link: https://teams.microsoft.com/l/meetup-join/19%3ameeting_OGVhMTAzYTYtYjg1Zi00NGM4LTg1NDktMzQ4MGVjZDRhNjA5%40thread.v2/0?context=%7b%22Tid%22%3a%226d8d019c-084b-4eb0-8615-09848b9a7d64%22%2c%22Oid%22%3a%22b9fe9220-41f2-468c-aafe-8b2e7eea74fc%22%7d</p>
(G)	BID DUE DATE AND TIME (ON OR BEFORE)	<p>Date : 10.09.2024 Time : 1400 Hrs (IST)</p>
(H)	DATE & TIME OF UNPRICE BID OPENING	<p>Date : 10.09.2024 Time : 1430 Hrs (IST)</p>
(I)	CONTACT DETAILS OF TENDER DEALING OFFICER	<p>a) Name : Ms. Sunita Mitra Designation: Sr. General Manager (SCM – C&P) First Floor, Engineers India Bhawan, 1, Bhikaji Cama Place, New Delhi – 110066 Phone No.: +91-11-2676 3504 E-mail : s.mitra@eil.co.in</p> <p>b) Name : Mr. Manoj Kumar / Mr. Anil Dubey Phone No. : +91-11-2676 8186 E-mail : manoj.kumar.pur@eil.co.in / anil.dubey@eil.co.in</p>
(J)	DEALING KLL'S OFFICE ADDRESS	Konkan LNG Limited, Post: Anjanwel, Taluka Guhagar; Dist. RatnagirL Pin Code 415634 (Maharashtra)

In case the days specified above happens to be a holiday in KLL/EIL, the next working day shall be implied w.r.t. bid opening (mentioned in GeM bid) and pre bid meeting, etc.

- 3.0 Bids must be submitted strictly in accordance with Clause No. 11 of ITB (Section-III). The LIB is an integral and inseparable part of the Tender Document.

4.0 Bid must be submitted only on GeM Portal (<https://gem.gov.in/>). Further, The following documents in addition to uploading in the bid on GeM Portal shall also be submitted in Original (in physical form) within 7 (seven) days from the Bid Due Date provided the scanned copies of the same have been uploaded in GeM Portal by the bidder along with e-bid within the Bid Due Date & Time, to the address mentioned in Bidding Data Sheet (BDS) [Annexure-I to Section-III):-

- i) EMD/Bid Security / Declaration for Bid Security
- ii) Integrity Pact
- iii) Power of Attorney

5.0 Bidder(s) are advised to submit their bid strictly as per terms and conditions of the Tender Documents and not to stipulate any deviations/exceptions.

6.0 Any bidder, who wishes to quote against this Tender Document, may download the complete Tender Document alongwith its amendment(s) if any from GeM Portal and submit their Bid complete in all respect as per terms & conditions of Tender Document on or before the Bid Due Date & Time.

7.0 Bid(s) received from bidders to whom tender/information regarding this Tender Document has been issued as well as offers received from the bidder(s) by downloading Tender Document from GeM Portal shall be taken into consideration for evaluation & award provided that the Bid is found responsive subject to provisions contained in Clause No. 2 of ITB (Section-III).

The Tender Document calls for offers on single point “Sole Bidder” responsibility basis (except where Consortium bid is allowed pursuant to clause no. 3.0 of ITB) and in total compliance of Scope of Supply /Specification(s) as specified in Tender Document.

8.0 Any revision, clarification, corrigendum, time extension, etc. to this Tender Document will be hosted on the GeM Portal only. Bidders are requested to visit the GeM Portal regularly to keep themselves updated.

9.0 All the bidders including those who are not willing to submit their bid, are required to submit F-6 (Acknowledgement cum Consent letter) duly filled within 7 days from the date of receipt of tender information.

10.0 The subject enquiry is issued on domestic Limited basis. Hence, as per provisions of PPP-MII policy, only Class-I Local suppliers with minimum Local Content of 50% are eligible to quote for the subject tender.

11.0 Bidders are required to update their GST registration details on GeM portal to enable evaluation of bids after considering ITC of GST, wherever applicable. However, evaluation bids will be based on the confirmations & documents submitted by the bidder in the their bid irrespective of the status/evaluation on GeM portal. GAIL’s decision in this regard shall be final.

12.0 As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are participating as MSE on GeM Portal (including updating their status in Profile) while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and

applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in the their bid irrespective of selection/option made on GeM portal.

This is not an Order.

For & on behalf of
Konkan LNG Limited
(Authorized Signatory)

(Authorized Signatory)

Name : Ms. Sunita Mitra
Designation: Sr. GM (SCM- C&P)
Engineers India Limited, New Delhi

CUT-OUT SLIP

DO NOT OPEN - THIS IS A QUOTATION

Client : KONKAN LNG LIMITED
Project : AMBIENT AIR HEATING SYSTEM PROJECT
RFQ No. : SM/B861-000-EX-MR-6001/02
Item : HEAT EXCHANGER (PLATES-GASKETTED)
Due Date & Time : 10.09.2024; 1400 HRS (IST)

From:

To :

	SUNITA MITRA SR. GM (SCM) - ENGINEERS INDIA LIMITED, ENGINEERS INDIA BHAWAN, 1, BHIKAJI CAMA PLACE, NEW DELHI, INDIA - 110066
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*(To be pasted on the envelope containing Originals of Integrity Pact, Power of Attorney,
Earnest Money Deposit/Bid Security/ Declaration for Bid Security)*

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SECTION-II

A. **EVALUATION METHODOLOGY**

All items (i.e. MR Item No. 01.001A1, 01.002A1, 01.003A1, 01.004A1 & 01.005A1) shall be clubbed together and shall be awarded to a single bidder. Bidder shall quote for all items of MR else offer shall be rejected.

Notes:

- (i) Bidder shall indicate single price in GeM portal considering Supply + Transportation +GST ON SUPPLY + GST ON TRANSPORTATION. In case of any contradiction, prices indicated in GeM portal shall prevail.
- (ii) Prices for supply of Two Years O & M Spares shall not be considered for evaluation.
- (iii) BIDS NOT CONFORMING TO “ZERO DEVIATION BID” REQUIREMENT SHALL BE REJECTED.
- (iv) Indian Bidders to consider Input Tax credit of IGST (in case of import of raw materials/components) in their quoted prices.

Note: KLL will be able to avail input tax credit in the instant tender. Single price in GeM portal shall be reflected accordingly.

B. Government of India Policies / Preferences:

- (i) Purchase Preference under PPP-MII – **Only Class-I Local suppliers with minimum Local Content of 50% are eligible to quote for the tender**
- (ii) MSE (PPP-2012) preference –**Applicable**
- (iii) Policy for Domestically Manufactured Iron & Steel Products: Not Applicable

C. **PROCUREMENT FROM A BIDDER WHICH SHARES A LAND BORDER WITH INDIA**

1. OM no. 7/10/2021-PPD(1) dated 23.02.2023, Department of Expenditure, Ministry of Finance, Govt. of India refers. The same are available at website <https://doe.gov.in/procurement-policy-divisions>.
2. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. For details of competent authority refer to Annexure I of Order (Public Procurement no. 4) dated 23.02.2023.

Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.

Further the above will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects. Updated lists of

countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs, Govt. of India

3. **"Bidder"** (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) **for purpose of this provision** means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
4. **"Bidder from a country which shares a land border with India"** for the purpose of this:
- a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
5. **"Beneficial owner"** for the purpose of above (4) will be as under:
- i. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.
Explanation—
 - a) "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
 - b) "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
 - ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

-
- iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
 - iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
 - v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
6. **"Agent"** for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons

Note :

- (i) A person who procures and supplies finished goods from an entity from a country which shares a land border with India will, regardless of the nature of his legal or commercial relationship with the producer of the goods, be deemed to be an Agent for the purpose of this Order.
 - (ii) However, a bidder who only procures raw material, components etc. from an entity from a country which shares a land border with India and then manufactures or converts them into other goods will not be treated as an Agent.]
7. **"Transfer of Technology"** means dissemination and transfer of all forms of commercially usable knowledge such as transfer of know-how, skills, technical expertise, designs, processes and procedures, trade secrets, which enables the acquirer of such technology to perform activities using the transferred technology independently. (Matters of interpretation of this term shall be referred to the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade, and the interpretation of the Committee shall be final.)
8. **"Specified Transfer of Technology"** means a transfer of technology in the sectors and/or technologies, specified at Schedule-I, II & 3 of this order.

9. **SUBMISSION OF CERTIFICATE IN BIDS:**

Bidder shall submit a certificate in this regard as Form-I-A.

For cases falling under the category of Transfer of Technology, Bidder shall submit a certificate in this regard as Form-I-B.

If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate rejection of the bid/termination and further action as per “Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices” of tender document.

- 10.** The registration, wherever applicable, should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

11. PROVISION TO BE IN WORKS CONTRACTS, INCLUDING TURNKEY CONTRACTS:

The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in Para 4 herein above. A Certificate to this regard is to be submitted by bidder is placed at Form-II.

[Note: Procurement of raw material, components, etc. does not constitute sub-contracting].

UNDERTAKING ON LETTERHEAD

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD(1) dated 23.02.2023 of Dept of Expenditure, Ministry of Finance, Government of India

<https://doe.gov.in/procurement-policy-divisions>

Dear Sir

We, M/s _____ (*Name of Bidder*), have read the clause regarding restrictions on Procurement from a Bidder of a country which shares a land border with India as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) Bidder is not from such a country []]
- (ii) If the Bidder is from such a country []]
which shares a land border with India, has been registered
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority to be attached by the bidder)

(Bidder is to tick appropriate option (✓ or X) above).

We hereby certify that we fulfill all requirements in this regard and is eligible to be considered against the subject tender.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

UNDERTAKING ON LETTERHEAD
(Applicable in case of Transfer of Technology cases only)

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

REF: OM No. 7/10/2021-PPD(1) dated 23.02.2023 of Dept of Expenditure, Ministry of Finance, Government of India

<https://doe.gov.in/procurement-policy-divisions>

Dear Sir

We, M/s_____ (*Name of Bidder*), have read the clause regarding restrictions on Procurement from a Bidder of a Country having Transfer of Technology (ToT) arrangement as mentioned in the tender document in line with the above referred guidelines dated 23.02.2023 for Procurement from a bidder which shares a land border with India and We certify that

- (i) The Bidder does not have ToT with such a country []
- (iii) If the Bidder is having ToT from such a country []
which share a land border with India, has been registered
with the Competent Authority.
(Evidence of valid registration by the
Competent Authority to be attached by the bidder)

(Bidder is to tick appropriate option (✓) above).

We hereby certify that we fulfill all requirements in this regard and is eligible to be considered against the subject tender.

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Schedule I

List of Category-I Sensitive sectors:

Sr. No.	Sector
(i)	Atomic Energy
(ii)	Brocasting/ Print and Digital Media
(iii)	Defense
(iv)	Space
(v)	Telecommunications

Schedule II

List of Category-II Sensitive sectors:

Sr.No.	Sector
(i)	Power and Energy (including exploration/ generation/transmission/ distribution/ pipeline)
(ii)	Banking and Finance including Insurance
(iii)	Civil Aviation
(iv)	Construction of ports and dams & river valley projects
(v)	Electronics and Microelectronics
(vi)	Meteorology and Ocean Observation
(vii)	Mining and extraction (including deep sea projects)
(viii)	Railways
(ix)	Pharmaceuticals & Medical Devices
(x)	Agriculture
(xi)	Health
(xii)	Urban Transportation

Schedule III

List of Sensitive Technologies:

Sr.No.	Sensitive Technologies
(i)	Additive Manufacturing (e.g. 3D Printing)
(ii)	Any equipment having electronic programmable components or autonomous systems (e.g. SCADA systems)
(iii)	Any technology used for uploading and streaming of data including broadcasting, satellite communication etc.
(iv)	Chemical Technologies
(v)	Biotechnologies including Genetic Engineering and Biological Technologies
(vi)	Information and Communication Technologies
(vii)	Software

SECTION-III

INSTRUCTIONS TO **BIDDERS**

(TO BE READ IN CONJUNCTION WITH
BIDDING DATA SHEET (BDS)

INSTRUCTION TO BIDDERS

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INSTRUCTIONS TO BIDDERS [ITB]

[A] – GENERAL

1 SCOPE OF BID

- 1.1 The Purchaser as defined in the "General Conditions of Contract-Goods [GCC-Goods]", wishes to receive bids as described in this Invitation For Bid (the “**Tender Document /Bid Document**”) issued by the Purchaser. Purchaser/Owner occurring herein under shall be considered synonymous.
- 1.2 SCOPE OF BID: The scope of Supply shall be as defined in the Tender Document.
- 1.3 The successful Bidder (the “**Supplier**”) shall complete delivery of goods alongwith its incidental services (if any) as per Specification, Scope of Supply/Job within the period stated in Special Conditions of Contract.
- 1.4 Throughout the Tender Documents, the terms 'Bid', 'Tender', ‘Offer’ & ‘proposal’ and their derivatives [Bidder/Tenderer, Bid/Tender/Offer etc.] are synonymous. Further, 'Day' means 'Calendar Day' and 'Singular' also means 'Plural'.

2 ELIGIBLE BIDDERS

- 2.1 The Bidder shall not be under a declaration of ineligibility by Purchaser for Corrupt/ Fraudulent/ Collusive/ Coercive practices, as defined in ITB, Clause No. 39” (Action in case Corrupt/ Fraudulent/ Collusive/ Coercive Practices).
- 2.2 The Bidder is not put on ‘Holiday’ by KLL or Public Sector Project Management Consultant (like EIL, Mecon etc. only due to “poor performance” or “corrupt and fraudulent practices”) or banned/blacklisted by Government department/ Public Sector on due date of submission of bid. Further, neither bidder nor their allied agency/(ies) (as defined in the Annexure-I, Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of KLL or the Ministry of Petroleum and Natural Gas.

Bidders marked “Suspended” on GeM (but eligible as per KLL’s Tender Document) will be evaluated as per terms & conditions of the Tender Document.

If the Tender Document is/was issued inadvertently / downloaded from, then Bid submitted by such Bidder shall not be considered for opening/ evaluation/ award.

In case there is any change in status of the declaration prior to award of Contract, the same has to be promptly informed to KLL by the Bidder.

It shall be the sole responsibility of the bidder to inform about their status regarding para 1 of clause 2.2 herein above on due date of submission of bid and during the course of finalization of the tender. Concealment of the facts shall tantamount to misrepresentation of facts and shall lead to action against such Bidders as per clause 39 of ITB.

- 2.3 Bidder shall not be affiliated with a firm or entity:
 - (i) that has provided consulting services related to the work to the Purchaser during the preparatory stages of the work or of the project of which the works/services forms a part of or
 - (ii) that has been hired (proposed to be hired) by the Purchaser as an Engineer/ Consultant for the Contract.

2.4 Neither the firm/entity appointed as the Project Management Consultant (PMC) for a Project (except feasibility report) nor its affiliates shall be allowed to participate in the tendering process unless it is the sole Licensor/Licensor nominated agent/ vendor.

2.5 Pursuant to qualification criteria set forth in the Tender Document, the Bidder shall furnish all necessary supporting documentary evidence to establish Bidder's claim of meeting qualification criteria.

2.6 Power of Attorney:

Power of Attorney (POA) to be issued by the bidder in favour of the authorised employee(s), in respect of the particular tender, for purpose of signing the documents including bid, all subsequent communications, agreements, documents etc. pertaining to the tender and act and take any and all decision on behalf of the bidder. Any consequence resulting due to such signing shall be binding on the Bidder.

The Power of Attorney shall be issued as per the constitution of the bidder as below:

- a) **In case of Proprietorship:** by Proprietor
- b) **In case of Partnership:** by all Partners or Managing Partner
- c) **In case of Limited Liability Partnership:** by any bidder's employee authorized in terms of Deed of LLP
- d) **In case of Public / Limited Company:** PoA in favour of authorized employee(s) by Board of Directors through Board Resolution or by the designated officer authorized by Board to do so. Such Board Resolution should be duly countersigned by Company Secretary / MD / CMD / CEO.

The Power of Attorney should be valid till award of contract / order to successful bidder.

2.7 In case of change of constitution of bidder after submission of bid, the same shall be informed by the bidder to KLL promptly. Failure to same shall be considered as misrepresentation by the bidder.

3 BID FROM "CONSORTIUM" – NOT APPLICABLE

4 ONE BID PER BIDDER

4.1 A Bidder shall submit only 'one [01] Bid' in the same Bidding Process either as single entity or as a member of any consortium (wherever consortium bid is allowed). A Bidder who submits or participates in more than 'one [01] Bid' will cause all the proposals in which the Bidder has participated to be disqualified.

4.2 A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices. The bidder found to have a conflict of interest shall be disqualified. A bidder shall be considered to have a conflict of interest with one or more bidders in this bidding process, if:

- a) they have controlling partner (s) in common; or
- b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- c) they have the same legal representative/authorized signatory/agent for purposes of this bid; or
- d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- e) Bidder participates in more than one bid in bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties

are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.

- f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
- g) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business.

Bidders are required to submit a confirmation for no conflict of interest with other bidders in Format F-5.

4.3 Alternative Bids shall not be considered.

4.4 The provisions mentioned at sl. no. 4.1 and 4.2 shall not be applicable wherein bidders are quoting for different Items / Sections / Parts / Groups/ SOR items of the same tender which specifies evaluation on Items / Sections / Parts / Groups/ SOR items basis.

4.5 Bidders are required to provide complete details of all Directors/Partners/Proprietors etc. including Father's name, Residential address, AADHAR, PAN Card details & DIN Nos. in Form F-1 of ITB and corresponding documents duly notarized by Notary Public. It is the responsibility of the participating Bidder(s) to assess the relationship as mentioned above.

In case any undertaking/declaration given by a Bidder(s) in this regard is found to be false, this would be a sufficient ground for rejection of Bid(s) /termination of contract and also initiation of further action as per "Procedure for Action in case of Corrupt/Fraudulent/ Collusive / Coercive Practices" of tender document.

5 COST OF BIDDING

5.1 The Bidder shall bear all costs associated with the preparation and submission of the Bid including but not limited to Documentation Charges, Bank charges, all courier charges, translation charges, authentication charges and any associated charges including taxes & duties thereon. Further, KLL will in no case, be responsible or liable for these costs, regardless of the outcome of the bidding process.

6 SITE VISIT

6.1 The Bidder is advised to visit and examine the site and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a Contract for the required supply/job. The costs of visiting the site shall be borne by the Bidder.

6.2 The Bidder or any of its personnel or agents shall be granted permission by the Purchaser to enter upon its premises and land for the purpose of such visits, but only upon the express conditions that the Bidder, its personnel and agents will release and indemnify the Purchaser and its personnel, agents from and against all liabilities in respect thereof, and will be responsible for death or injury, loss or damage to property, and any other loss, damage, costs, and expenses incurred as a result of inspection.

6.3 The Bidder shall not be entitled to hold any claim against KLL for non-compliance due to lack of any kind of pre-requisite information as it is the sole responsibility of the Bidder to

obtain all the necessary information with regard to site, surrounding, working conditions, weather etc. on its own before submission of the Bid.

[B] – TENDER DOCUMENT

7 CONTENTS OF TENDER DOCUMENT

7.1 The contents of Bidding Documents / Tender Documents are those stated below shall be '**Bid specific Additional Terms and Conditions (ATC)**' of GeM bid, and should be read in conjunction with any 'Addendum / Corrigendum and Clarification(s)' issued in accordance with "ITB: Clause-8 & 9":

- GeM Bid
- Section-I : Invitation for Bid [IFB]*
- Section-II : Bid Evaluation Criteria [BEC] & Evaluation Methodology
- Section-III : Instructions to Bidders [ITB], Annexures & Forms & Format **
- Section-IV : General Conditions of Contract [GCC]-Goods (Rev.1)***
- Section-V : Special Conditions of Contract [SCC]
- Section-VI : Material Requisition

GeM bid document generated or available on GeM portal shall also be part of Bidding Document / Tender Document.

*Request for Quotation', wherever applicable, shall also form part of the Bidding Document.

** The subject tender is based on standard formats and applicability of some specific clauses may be seen in Annexure-IV to Section-III i.e. BDS (Bidding Data Sheet).

*** General Conditions of Contract – Goods (Rev.1) is attached in Section-IV of tender.

7.2 The Bidder is expected to examine all instructions, forms, terms & conditions of the Tender Document. The RFQ & IFB together with all its attachments thereto, shall be considered to be read, understood and accepted by the Bidders. Failure to furnish all information required by the Tender Document or submission of a Bid not substantially responsive to the Tender Document in every respect will be at Bidder's risk and may result in the rejection of his Bid.

8 CLARIFICATION OF TENDER DOCUMENT

8.1 A prospective Bidder requiring any clarification(s) of the Tender Document may notify KLL in writing or by email in the format "F-9" at KLL 's mailing address indicated in the IFB/BDS or on GeM portal no later than 02 (two) days prior to pre-bid meeting (in cases where pre-bid meeting is scheduled) or 05 (five) days prior to the bid closing date in cases where pre-bid meeting is not scheduled. KLL reserves the right to ignore the bidders request for clarification if received after the aforesaid period. KLL may respond in writing to the request for clarification. KLL 's response including an explanation of the query, but without identifying the source of the query will be uploaded GeM portal.

8.2 Any clarification or information required by the Bidder but same not received by the Purchaser as per instructions at clause 8.1 above is liable to be considered as "no clarification / information required".

9 AMENDMENT OF TENDER DOCUMENT

- 9.1 At any time prior to the 'Due Date & Time of Bid Submission', Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder(s), modify the Tender Document by addenda/ corrigendum.
- 9.2 Any addendum/ corrigendum thus issued shall be integral part of the Tender Document and shall be uploaded on GeM Portal. Bidders have to take into account all such addendum/ corrigendum before submitting their Bid.
- 9.3 The Purchaser, if consider necessary, may extend the bid due date in order to allow the Bidders a reasonable time to furnish their most competitive bid taking into account the addenda/ corrigendum issued thereof.

[C] – PREPARATION OF BID

10 LANGUAGE OF BID:

The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the Bid exchanged by Bidder and KLL shall be written in English language only. In case a document, certificate, printed literature etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Indian Chamber of Commerce, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.

11. DOCUMENTS COMPRISING THE BID

- 11.1 All pages of the Bid must be signed by the "authorized signatory" of the Bidder holding Power of Attorney. The Bid must be submitted on GeM-portal (<https://gem.gov.in>) as follows:-:

11.1.1 PART-I: "TECHNO-COMMERCIAL / UN-PRICED BID"

- (a) 'Covering Letter' on Bidder's 'Letter head' clearly specifying the enclosed contents with index.
- (b) 'Bidder's General Information', as per 'Form F-1'.
- (c) 'Letter of Authority' on the Letter Head, as per 'Form F-3'
- (d) 'Agreed Terms and Conditions', as per 'Form F-5'
- (e) Duly certified / attested documents in accordance with the "Bid Evaluation Criteria [BEC]", Section II of Tender Document.
- (f) Copy of Power of Attorney in favour of the authorized signatory of the Bid, as per clause no.2.6 of ITB.
- (g) Any other information/details required as per Tender Document
- (f) Copy of EMD / Declaration for Bid Security, as per Clause 16 of ITB
- (g) Undertaking as per *Form-1 to Annexure-V to Section-III*.
- (h) Undertaking as per *Form-2 to Annexure-V to Section-III*
- (i) Undertaking as per *Form-I-A, Form-I-B & Form-II to Section-II* regarding Provisions for Procurement from a Bidder which shares a land border with India
- (j) All other forms and Formats including Annexures.
- (k) Tender Document, its Corrigendum/Amendment/Clarification(s) duly signed by the Authorized Signatory holding POA.

- (l) Additional document specified in BDS, SCC, Scope of Supply or mentioned elsewhere in the Tender Document.

Note: All the pages of the Bid must be signed by the "Authorized Signatory" of the Bidder holding POA.

Further, Bidders must submit the original "Bid Security / EMD", Power of Attorney, Integrity Pact and any other documents specified in the Tender Document to the address mentioned in IFB, in a sealed envelope, superscribing the details of Tender Document (i.e. tender number & tender for) within 7 days from the Bid Due Date.

Bidders are required to submit the EMD in original by Bid Due Date and Time or upload a scanned copy of the same in the Part-I of the Bid. If the Bidder is unable to submit EMD in original by Bid Due Date and Time, the Bidder is required to upload a scanned copy of the EMD in Part-I of Bid, provided the original EMD, copy of which has been uploaded, is received within 7 days from the Bid Due Date, failing which the Bid will be rejected irrespective of their status/ranking in tendering process and notwithstanding the fact that a copy of EMD was earlier uploaded by the Bidder.

11.1.2 PART-II: Price Bid

- i) The Prices are to be submitted strictly as per the Price bid / Schedule of Rate (SOR) on GeM portal. KLL shall not be responsible for any failure on the part of the bidder to follow the instructions.
- ii) Bidders are advised NOT to mention Rebate/Discount separately, either in the SOR or anywhere else in the offer. In case Bidder(s) intend to offer any Rebate/Discount, they should include the same in the item rate(s) itself under the SOR and indicate the discounted unit rate(s) only.
- iii) If any unconditional rebate has been offered in the quoted rate the same shall be considered in arriving at evaluated price. However no cognizance shall be taken for any conditional discount for the purpose of evaluation of the bids.
- iv) In the event as a result of techno-commercial discussions or pursuant to seeking clarifications / confirmations from bidders, while evaluating the un-priced part of the bid, any of the bidders submits a sealed envelope stating that it contains revised prices; such bidder(s) will be requested to withdraw the revised prices failing which the bid will not be considered for further evaluation.

12 BID PRICES

- 12.1 If required, the break-up of various components as included in the quoted price shall be obtained from successful bidders before placement of order/contract on them.

The material is required to be delivered through a registered common carrier as per section 3 of Carriage by the Road Act 2007.

Also, KLL reserves the right to transport the material with it's own transporter.

- 12.2 As stated elsewhere in tender, bidder is required to quote all components. In case, it is found that some of components are not considered, the same shall be considered inclusive in total

- quoted price for evaluation and ordering. No confirmation from the bidder shall be sought in this regard and no representation from the bidder shall be entertained in this regard.
- 12.4 The delivery basis of the goods is mentioned in BDS. If the Goods are dispatched through dedicated full truck load, date of receipt of Goods by Purchaser at its designated site(s) /Store shall be considered as the date of delivery. Similarly, in case of break-bulk dispatches, the date of LR/GR shall be considered as date of delivery. The delivery terms [other than those mentioned in BDS] shall be interpreted as per INCOTERMS®2020 or its latest version.
- 12.5 All duties, taxes and other levies (if any) payable by the Seller under the Contract or for any other cause, including GST (CGST & SGST/UTGST or IGST) on finished product & on the incidental services, shall be included in the rates / prices and the total bid-price submitted by the Bidder. Bidders are required to quote the prices after carefully reading the provisions mentioned in tender document including SCC, GCC, Scope of Work, etc.
- 12.6 Prices quoted by the Bidder, shall remain firm and fixed and valid till completion of the Contract and will not be subject to variation on any account, whatsoever; unless any price escalation/variation is allowed elsewhere in the Tender Document.

13 **GST (CGST & SGST/ UTGST or IGST)**

- 13.1 Within the contractual delivery period, the statutory variation in applicable GST (CGST & SGST/UTGST or IGST) on supply and on incidental services, shall be to KLL's account.

Beyond the contractual delivery period, in case KLL is not entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then any increase in the rate of GST (CGST & SGST/UTGST or IGST) beyond the contractual delivery period shall be to Supplier's account whereas any decrease in the rate GST (CGST & SGST/UTGST or IGST) shall be passed on to the Purchaser.

Beyond the contractual delivery period, in case KLL is entitled for input tax credit of GST (CGST & SGST/UTGST or IGST), then statutory variation in applicable GST (CGST & SGST/UTGST or IGST) on supply and on incidental services, shall be to KLL's account.

The base date for the purpose of applying statutory variation shall be the Bid Due Date.

- 13.2 In case of statutory variation(s) in the taxes & duties mentioned at clause no. 13.1 above, the Supplier shall submit a copy of the 'Government Notification' to evidence the rate as applicable on the Bid Due Date and on the date of revision. Claim for payment of Statutory variation should be raised preferably along with the e-Invoice/Invoice. Any claim for arrears on account of statutory variation shall be submitted to Purchaser within two [02] months from the date of issue of such 'Government Notification', otherwise such claim may not be entertained.
- 13.3 Where KLL is entitled to avail the input tax credit of **GST (CGST & SGST/UTGST or IGST):-**
- 13.3.1 Owner/ KLL will reimburse the **GST (CGST & SGST/UTGST or IGST)** to the Supplier at actuals against submission of E-Invoices/Invoices as per format specified in rules/regulation of GST to enable Owner/ KLL to claim input tax credit of **GST (CGST & SGST/UTGST or IGST)** paid. In case of any variation in the executed quantities, the amount on which the **GST (CGST & SGST/UTGST or IGST)** is applicable shall be

modified in same proportion. Returns and details required to be filled under GST laws & rules should be timely filed by supplier with requisite details.

13.3.2 The input tax credit of quoted GST (CGST & SGST/UTGST or IGST) shall be considered for evaluation of bids, as per evaluation criteria of tender document.

13.4 Where KLL is not entitled to avail/take the full input tax credit of **GST (CGST & SGST/UTGST or IGST)**:-

13.4.1 Owner/ KLL will reimburse **GST (CGST & SGST/UTGST or IGST)** to the Supplier at actuals against submission of E-Invoices/Invoices as per format specified in rules/regulation of GST subject to the ceiling amount of **GST (CGST & SGST/UTGST or IGST)** as quoted by the bidder, subject to any statutory variations, except variations arising due to change in turnover. In case of any variation in the executed quantities (If directed and/or certified by the Engineer-In-Charge) the ceiling amount on which **GST (CGST & SGST/UTGST or IGST)** is applicable will be modified on pro-rata basis.

13.4.2 The bids will be evaluated based on total price including quoted **GST (CGST & SGST/UTGST or IGST)**.

13.5 **New Taxes & duties:** Any new taxes & duties, if imposed by the State/ Central Govt. of India on the finished goods after the due date of bid submission but before the Contractual Delivery/Completion Date, shall be reimbursed to the Supplier on submission of copy of notification(s) issued from State/ Central Govt. Authorities along with documentary evidence for proof of payment of such taxes & duties, but only after ascertaining its applicability with respect to the Contract.

13.6 Deemed Export benefits are not applicable and Bidder should furnish prices without considering the same.

13.7 **Regarding Reconciliation between GSTR 2A and Input Tax Credit**

Supplier shall ensure timely submission of correct e-invoice /invoice(s), as per GST rules/regulation, with all required supporting document(s) within a period specified in Contract to enable KLL to avail input credit of GST (CGST & SGST/UTGST or IGST). Further, returns and details required to be filled under GST laws & rules should be timely filed by Supplier of Goods / Services with requisite details.

If input tax credit is not available to KLL for any reason not attributable to KLL, then KLL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the e-invoice/invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, against any amounts paid or becomes payable by KLL in future to the Supplier/Contractor under this contract or under any other contract.

In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of KLL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from KLL to the government exchequer, then, that Supplier shall be put under Holiday list of KLL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on KLL.

- 13.8 The supplier shall mention the particulars of KLL, (place specified in BDS) on the e-Invoice/Invoice. Besides, if any other particulars of KLL are required to be mentioned, under GST rules/ regulations on the date of dispatch, the same shall also be mentioned on the e-Invoice/Invoice.
- 13.9 KLL will prefer to deal with registered supplier of goods/ services under GST. Therefore, bidders are requested to get themselves registered under GST, if not registered yet. However, in case any unregistered bidder is submitting their bid, Bids will be evaluated as per quoted prices without loading of GST (CGST & SGST/UTGST or IGST), if not quoted. Further, an unregistered bidder is required to mention its Income Tax PAN in bid document.
- 13.10 In case the GST rating of vendor on the GST portal / Govt. official website is negative / black listed, then the bids may be rejected by KLL. Further, in case rating of bidder is negative / black listed after award of work for supply of goods / services, then KLL shall not be obligated or liable to pay or reimburse **GST (CGST & SGST/UTGST or IGST)** to such vendor and shall also be entitled to deduct / recover such **GST (CGST & SGST/UTGST or IGST)** along with all penalties / interest, if any, incurred by KLL.
- 13.11 **Anti-profiteering clause**
As per Clause 171 of GST Act, it is mandatory to pass on the benefit due to reduction in rate of tax or from input tax credit to the consumer by way of commensurate reduction in prices. The Service Provider may note the above and quote their prices accordingly.
- 13.12 GST (CGST & SGST/UTGST or IGST) is implemented w.e.f. 01.07.2017 which subsumed various indirect taxes and duties applicable before 01.07.2017. Accordingly, the provisions of General Condition of Contract relating to taxes and duties which are subsumed in GST are modified to aforesaid provisions mentioned in clause no. 12 and 13 of ITB.
- 13.13 GST, as included by the bidder, shall be deemed as final and binding for the purpose of bid evaluation (applicable for tenders where bidder quotes the GST rates). In case a bidder enters “zero/blank” GST or an erroneous GST, the bid evaluation for finalizing the L1 bidder will be done considering the quoted GST rate. No request for change in GST will be entertained after submission of bids.
In cases where the successful bidder quotes a wrong GST rate, for releasing the order, the following methodology will be followed:
- In case the actual GST rate applicable is lower than the quoted GST rate, the actual GST rate will be added to the quoted basic prices. The final cash outflow will be based on actual GST rate.
 - In case the actual GST rate applicable is more than the quoted GST rate, the basic prices quoted will be reduced proportionately, keeping the final cash outflow the same as the overall quoted amount.
- Based on the Total Cash Outflow calculated as above, KLL shall place orders.
- 13.14 Wherever TDS under GST Laws has been deducted from the e-Invoices/invoices raised / payments made to the vendors, as per the provisions of the GST law / Rules, Vendors should accept the corresponding GST-TDS amount populated in the relevant screen on GST common portal (www.gst.gov.in). Further, Vendors should also download the GST TDS certificate from GST common portal (reference path: Services > User Services > View/Download Certificates option).

13.15 Provision w.r.t. E- Invoicing requirement as per GST laws:

Supplier who is required to comply with the requirements of E-invoice for B2B transactions as per the requirement of GST Law will ensure the compliance of requirement of E Invoicing under GST law. If the invoice issued without following this process, such invoice can-not be processed for payment by KLL as no ITC is allowed on such invoices.

Therefore, all the payments to such supplier who is liable to comply with e-invoice as per GST Laws shall be made against the proper e-invoice(s) only. Further, returns and details required to be filled under GST laws & rules against such e-invoices should be timely filed by Supplier of Goods with requisite details.

If input tax credit is not available to KLL for any reason attributable to supplier (both for E-invoicing cases and non-E-invoicing cases), then KLL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the supplier under this contract or under any other contract.

To ensure compliance, undertaking in requisite format is to be submitted by supplier as per format F-12 along with documents for release of payment.

- 13.16 Full payment including GST will be released at the time of processing of invoice for payment, where the GST amount reflects in Form GSTR-2A of KLL. However, in case where the GST amount doesn't reflect in Form GSTR-2A of KLL, the amount of GST will be released after reflection of GST amount of corresponding invoice in Form GSTR-2A of KLL.

14 BID CURRENCIES:

Bidders must submit Bid in Indian Rupees only.

15 BID VALIDITY:

- 15.1 Bid shall be kept valid for period specified in GeM bid from the final 'Bid Due Date'. A Bid valid for a shorter period may be rejected by KLL as 'non-responsive'.
- 15.2 In exceptional circumstances, prior to expiry of the original 'Bid Validity Period', the Employer may request the Bidders to extend the 'Period of Bid Validity' for a specified additional period on GeM portal. The request and the responses thereto shall also be made in writing or by email (outside GeM, if required). After opening of price bids in GeM, the extension (outside GeM, if any) will be regularized through GeM with L-1 bidder. Bidder may refuse the request without forfeiture of his EMD/Bid Security. A Bidder agreeing to the request will not be required or permitted to modify his Bid, but will be required to extend the validity of its 'EMD' for the period of the extension and in accordance with "ITB: Clause-16" in all respects.

16 EARNEST MONEY DEPOSIT (EMD)

- 16.1 Bid must be accompanied with earnest money deposit (i.e Earnest Money Deposit (EMD) also known as Bid Security) in the form of '**Demand Draft**' / '**Banker's Cheque**' / '**Insurance Surety Bond**' / '**Fixed Deposit Receipt**' [in favour of Konkan LNG Limited payable at place mentioned in BDS] or '**Bank Guarantee**' strictly as per the format given

in form F-2B of the Tender Document. Bidder shall ensure that EMD submitted in the form of 'Bank Guarantee' should have a validity of at least 'two [02] months' beyond the validity of the Bid. EMD submitted in the form of 'Demand Draft' or 'Banker's Cheque' should be valid for three months.

Bid not accompanied with EMD, or EMD not in requisite format shall be liable for rejection. The EMD shall be submitted in Indian Rupees only.

- 16.2 The bidder can also submit the EMD through online banking transaction i.e. IMPS/NEFT/RTGS etc. For this purpose, the details of KLL's Bank Account are mentioned under BDS. While remitting, the bidder must indicate EMD and tender/E-tender no. under remarks. Bidders shall be required to submit/ upload the successful transaction details along-with their bid/e-bid in addition to forwarding the details to dealing officer through email/letter with tender reference number immediately after remittance of EMD. In absence of submitting/ uploading the remittance details, the bid is likely to be considered as bid not accompanied with EMD. Further, in case of the online transaction, submission of EMD in original is not applicable.
- 16.3 KLL shall not be liable to pay any documentation charges, Bank charges, commission, interest etc. on the amount of EMD. In case EMD is in the form of a 'Bank Guarantee', the same shall be from any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with 'Reserve Bank of India' as Scheduled Foreign Bank. However, in case of 'Bank Guarantee' from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the 'Bank Guarantee' itself or separately on its letterhead. Purchaser will verify the BG from issuing bank
- 16.4 Any Bid not secured in accordance with "ITB: Clause-16.1, 16.2 & Clause-16.3" may be rejected by KLL as non-responsive.
- 16.5 Unsuccessful Bidder's EMD will be discharged/ returned as promptly as possible, but not later than 'thirty [30] days' after finalization of tendering process.
- 16.6 The successful Bidder's EMD will be discharged upon the Bidder's acknowledging the 'Award' and signing the 'Agreement' (if applicable) and furnishing the 'Contract Performance Security (CPS)/ Security Deposit' pursuant to clause no. 38 of ITB.
- 16.7 Notwithstanding anything contained herein, the EMD may also be forfeited in any of the following cases:
- (a) If a Bidder withdraws his Bid during the 'Bid Validity' period
 - (b) If a Bidder has indulged in corrupt/fraudulent /collusive/coercive practice
 - (c) If the Bidder modifies Bid during the period of bid validity (after Due Date and Time for Bid Submission).
 - (d) Violates any other condition, mentioned elsewhere in the Tender Document, which may lead to forfeiture of EMD.
 - (e) In the case of a successful Bidder, if the Bidder fails to:
 - (i) acknowledge receipt of the "Notification of Award" / Fax of Acceptance[FOA]",
 - (ii) furnish "Contract Performance Security / Security Deposit", in accordance with "ITB: Clause-38"
 - (iii) accept 'arithmetical corrections' as per provision of the clause 30 of ITB.

16.8 In case EMD is in the form of 'Bank Guarantee' the same must indicate the Tender Document No. and the name of Tender Document for which the Bidder is quoting. This is essential to have proper correlation at a later date.

16.9 MSEs (Micro & Small Enterprises) are exempted from submission of EMD in accordance with the provisions of PPP-2012 and Clause 40 of ITB. However, for traders as per Udyam certificate, bidder with major activity as Services (Trading) in Udyam certificate and in Works contracts, exemption of EMD is not applicable. The Government Departments/PSUs/ Startups are exempted from the payment of EMD. In addition to above, following categories of Sellers/Service Providers are also exempted from furnishing Earnest Money / Bid Bond :

(i) Micro and Small Enterprises who are manufacturer of the Primary Product Category or Service Provider of the Primary Service Category and give specific confirmation to this effect at the time of bid submission and whose credentials are validated online through Udyam Registration / Udyog Aadhaar (as validated by Government from time to time) and through uploaded supporting documents.

(ii) Start-ups as recognized by Department of Industrial Policy and Promotion (DIPP).

(iii) KVIC, ACASH, WDO, Coir Board, TRIFED and Kendriya Bhandar.

(iv) Sellers who have got their credentials verified through the process of Vendor Assessment by Vendor Assessment Agencies for the Primary Product / Primary Service for which Bid / RA has been invited.

(v) Sellers/ Service Provider having annual turnover of INR 500 Crore or more, at least in one of the past three completed financial year(s).

(vi) Sellers / Service Providers holding BIS License for the Primary Product Category whose credentials are validated through BIS database and through uploaded supporting documents.

(vii) Central/State PSUs.

(viii) Seller / Service Provider registered with designated Agency / Authority as specified in the bid document by the Buyer – such bidder shall have to upload scanned copy of relevant registration document in place of Bid Security document while bidding.

Bidders The Government Departments/PSUs/ Startups (if any) are required to submit relevant document for exemption from furnishing Earnest Money / Bid Bond

16.10 In case of forfeiture of EMD/ Bid Security, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by KLL. The forfeiture amount will be subject to final decision of KLL based on other terms and conditions of order.

16.11 EMD/Bid Bond will not be accepted in case the same has reference of ‘remitter’/’financer’ other than bidder on the aforementioned financial instrument of EMD/ Bid Bond submitted by the bidder and bid of such bidder will be summarily rejected.

16.12 In case the Bidder is submitting EMD in the form of Fixed Deposit (FDR), Bidder is required to submit FDR in the name of the KLL A/c..... (Name of Bidder) along with Third Party Deposit Confirmation Letter from bank. The detailed modalities of FDR along with Third Party Deposit Confirmation Letter is attached with ITB. (Refer Annexure-VI)

16A DECLARATION FOR BID SECURITY

Bidder to whom exemption is allowed as per Clause no. 16.9 above are required to submit Declaration for Bid Security as per proforma at Form F-2A.

17 PRE-BID MEETING

17.1 The Bidder(s) or his designated representative are invited to attend a “Pre-Bid Meeting” which will be held at Date, Time & Venue as specified in IFB. It is expected that a Bidder shall not depute more than 02 representatives for the meeting.

17.2 Purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The Bidder must submit their queries / clarifications to KLL in the format “F-9”, as mentioned at clause no. 8.0 of ITB.

17.3 The text of the questions raised and the responses that may become necessary as a result of the Pre-Bid Meeting, will be prepared in the form of Addendum / Corrigendum /Clarification to the Tender Document and will be uploaded on GeM Portal and not through the minutes of the Pre-Bid Meeting.

17.4 Non-attendance of the Pre-Bid Meeting will not be a cause for disqualification of Bidder.

18 FORMAT AND SIGNING OF BID

18.1 The Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person(s) duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by person signing, must be typed or printed below the signature. All pages of the Bid except for unamendable printed literature where entry(s) or amendment(s) has been made, shall be initialed by the person or persons signing the Bid.

18.2 The Bid shall contain no alterations, omissions, or additions, unless such corrections are initialed by the person(s) signing the Bid.

19 ZERO DEVIATION AND REJECTION CRITERIA

19.1 ZERO DEVIATION: Deviation to terms and conditions of Tender Document may lead to rejection of Bid. KLL will accept Bid based on terms & conditions of Tender Document only. Bidder may note, KLL will determine the substantial responsiveness of each bid to the Tender Document pursuant to provision contained in clause 29 of ITB. For purpose of this, a substantially responsive bid is one which conforms to all terms and conditions of the Tender Document without deviation(s) or exception n(s). KLL’s determination of a Bid’s responsiveness is based on the content of the Bid itself without recourse to extrinsic evidence.

Bidder is requested not to take any deviation(s)/exception(s) to the terms & conditions of Tender Document, and submit all requisite documents as mentioned in this Tender Document, failing which their Bid will be liable for rejection. If a Bidder does not reply to the queries in the permitted time frame then its Bid shall be evaluated based on the documents available in the Bid.

As a principle, clarifications from bidders after opening of tenders will not be sought. However, where clarifications / documents from the bidders on important aspects are absolutely necessary for finalization of tender, clarifications from bidder can be asked. The request for clarification shall be given in email/portal, asking the bidder to respond by a specified date, and also mentioning therein that, if the bidder does not comply or respond by the date, his tender will be liable to be rejected. Depending on the outcome, such tenders are to be ignored or considered further. No change in prices or substance of the bid including specifications, shall be offered or permitted. No post-bid clarification at the initiative of the bidder shall be entertained. The shortfall information/ documents should be sought only in case of historical documents which pre-existed bids and which have not undergone change since then.

19.2 **REJECTION CRITERIA:** Notwithstanding the above, deviation to the following clauses of Tender Document shall lead to summarily rejection of Bid:

- (a) Firm Price
- (b) Earnest Money Deposit / Bid Bond / Bid Security declaration
- (c) Specifications
- (d) Schedule of Rates / Price Schedule / Price Basis
- (e) Delivery Period / Period of Contract/ Completion schedule
- (f) Period of Validity of Bid
- (g) Price Reduction Schedule
- (h) Contract Performance Security / Security Deposit
- (i) Warranty/ Guarantee
- (j) Arbitration / Resolution of Dispute/Jurisdiction of Court
- (k) Force Majeure & Applicable Laws
- (l) Integrity Pact
- (m) Any other condition specifically mentioned in the Tender Document elsewhere that non-compliance of the clause lead to rejection of Bid

Note: Further, it is once again reminded not to mention any condition in the Bid which is contradictory to the terms & conditions of Tender Document.

20 **E-PAYMENT**

KLL (India) Limited has initiated payments electronically to Suppliers / Contractors electronically through ‘e-banking’.

[D] – SUBMISSION OF BIDS

21 **SUBMISSION, SEALING AND MARKING OF BID**

- 21.1 Bid shall be submitted through GeM Portal only in the manner specified in Tender Document. No Manual/ Hard Copy (Original) / E-mail Bid shall be acceptable.
- 21.2 EMD /Physical documents shall be addressed to the owner at address specified in IFB.
- 21.3 Bids submitted under the name of AGENT/ REPRESENTATIVE /RETAINER/ ASSOCIATE etc. on behalf of a Bidder /Affiliate shall not be accepted.

22 DEADLINE FOR SUBMISSION OF BID

- 22.1 The Bid must be uploaded on GeM Portal only not later than the Bid Due Date & Time specified in IFB of the Tender Documents.
- 22.2 KLL may, in exceptional circumstances and at its discretion, extend the Due Date & Time for Bid submission through a Corrigendum as per clause no. 8.0 and/or 9.0 of ITB. In that case all rights and obligations of KLL and the Bidder, previously subject to the original Due Date & Time will thereafter be subject to the Due Date & Time as extended. Such Corrigendum for extension of Due Date & Time of Bid submission will be uploaded on the GeM Portal.

23 LATE BID

- 23.1 GeM portal shall close immediately after the due date and time for submission of bid and no bids can be submitted thereafter.

In case the EMD /physical documents have been received but the Bid is not submitted by the bidder in the GeM Portal, such EMD/—physical documents shall be returned immediately.

- 23.2 EMD /physical documents received to address other than one specifically stipulated in the Tender Document will not be considered for evaluation/opening/award if not received to the specified destination within stipulated date & time.

24 MODIFICATION AND WITHDRAWAL OF BID

- 24.1 The Bidder may withdraw or modify its Bid after bid submission but before the Bid Due Date & Time.
- 24.2 No bid shall be modified/ withdrawn after the Bid Due Date & Time.
- 24.3 Any withdrawal/ modification/substitution of Bid in the interval between the Bid Due Date & Time and the expiration of the period of bid validity specified by the Bidder in their Bid shall result in the Bidder's forfeiture of EMD pursuant to clause 16 of ITB /-invocation of action as per Bid Security declaration and rejection of Bid.
- 24.4 The latest Bid submitted by the Bidder before Bid Due Date & Time shall be considered for evaluation and all other Bid(s) shall be considered to be unconditionally withdrawn.

[E] BID OPENING AND EVALUATION:

25 PURCHASER'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

- 25.1 KLL reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids, at any time prior to award of Contract, without thereby incurring any liability

to the affected Bidder(s) or any obligations to inform the affected Bidder(s) of the ground for KLL 's action.

- 25.2 In GeM, there is provision for representation against disqualification of bidder within the specified period after disqualifying the bidder against GeM Bid. Disqualified bidders should not upload new/additional documents against representation on GeM as the same shall not be evaluated.

Further, following decisions of KLL shall not be subject to review:

- a) Determination of the need for procurement;
- b) Selection of the mode of procurement or bidding system;
- c) Choice of selection procedure;
- d) Provisions limiting participation of bidders in the procurement process;
- e) The decision to enter into negotiations with the L1 bidder;
- f) Cancellation of the procurement process except where it is intended to subsequently re-tender the same requirements;
- g) Issues related to ambiguity in contract terms may not be taken up after a contract has been signed, all such issues should be highlighted before consummation of the contract by the vendor/ contractor; and
- h) Complaints against specifications except under the premise that they are either vague or too specific so as to limit competition may be permissible.

26 BID OPENING

26.1 Unpriced Bid Opening:

KLL/EIL will open bids, at date, time and location stipulated in the BDS.

26.2 Priced Bid Opening:

26.2.1 KLL/EIL will open the price bids of those Bidders who meet the qualification requirement and whose bid is determined to be technically and commercially responsive. Techno-commercial bid evaluation status will be informed to all bidders (including techno-commercially not qualified Bidders).

26.2.2 The price bids of those Bidders who were not found to be techno-commercially responsive shall not be opened.

27 CONFIDENTIALITIES

Information relating to the examination, clarification, evaluation and comparison of bids, and recommendations for the award of a contract, shall not be disclosed to bidders or any other person not officially concerned with such a process until the award to the successful bidder.

28 CONTACTING THE PURCHASER

28.1 From the time of bid opening to the time of contract award, no bidder shall contact KLL on any matter related to the bid, except on request and prior written permission.

28.2 Any effort by the bidder to influence KLL in bid evaluation, bid comparison or contract award decisions will vitiate the process and will result in the rejection of the bidder's bid and action shall be initiated as per the KLL's procedure for action in case Corrupt / Fraudulent / Collusive / Coercive practices in this regard apart from forfeiture of EMD/ Bid

Security, if any.

29 EXAMINATION OF BIDS AND DETERMINATION OF RESPONSIVENESS

- 29.1 The purchaser's determination of a bid's responsiveness is based on the content of the bid only. Prior to the detailed evaluation of Bids, the Purchaser will determine whether each Bid:-
- (a) meets the "Bid Evaluation Criteria" of the Tender Document;
 - (b) has been properly signed;
 - (c) is accompanied by the required ~~EMD / Bid Security~~ Bid Security Declaration
 - (d) is substantially responsive to the requirements of the Tender Document; and
 - (e) provides any clarification and/or substantiation that the Purchaser may require to determine responsiveness pursuant to "ITB: Clause-29.2"
- 29.2 A substantially responsive Bid is one which conforms to all the terms & conditions, specifications etc. of the Tender Document without any material deviation or reservation or omission, for this purpose Purchaser defines the foregoing terms below:-
- a) "Deviation" is departure from the requirement specified in the Tender Documents.
 - b) "Reservation" is the setting of limiting condition(s) or withholding from complete acceptance of the requirement in the Tender Documents.
 - c) "Omission" is the failure to submit part or all of the information or documentation required in the Tender Document for evaluation of bid.
- 29.3 A material deviation, reservation or omission is one that,
- a) If accepted would,
 - i) affect in any substantial way the scope, quality or performance of the job as specified in Tender Document.
 - ii) limit, in any substantial way, inconsistent with the Tender Document, the Purchaser's rights or the Bidder's obligation under the proposed Contract.
 - b) If rectified, would unfairly affect the competitive position of other bidders presenting substantially responsive bids.
- 29.4 The Purchaser shall examine all aspects of the Bid to confirm that all requirements have been met without any material deviation, reservation or omission.
- 29.5 Tenders that do not meet the basic requirements specified in the bid documents are to be treated as unresponsive {both during Techno-commercial evaluation and Financial Evaluation in case of Two Bid System) and will be ignored. All tenders received will first be scrutinized to see whether the tenders meet the basic requirements as incorporated in the Bid document and to identify unresponsive tenders, if any. Unresponsive offers may not subsequently be made responsive by correction or withdrawal of the non- conforming stipulation. Some important points on the basis of which a tender may be declared as unresponsive and be ignored during the initial scrutiny are :
- i) The tender is not in the prescribed format or is unsigned or not signed as per the stipulations in the bid document;
 - ii) The required EMD has not been provided or exemption from EMD is claimed without acceptable proof of exemption;
 - iii) The bidder is not eligible to participate in the bid as per laid down eligibility criteria

- iv) The bid departs from the essential requirements specified in the bidding document (for example, the tenderer has not agreed to give the required contract performance security); or
- v) Against a schedule in the list of requirements in the tender enquiry, the tenderer has not quoted for the entire requirement as specified in that schedule (example: in a schedule, it has been stipulated that the tenderer will supply the equipment, install and commission it and also train the KLL's personnel for operating the equipment. The tenderer has, however, quoted only for supply of the equipment).

30 CORRECTION OF ERRORS

Not Applicable

31 CONVERSION TO SINGLE CURRENCY FOR COMPARISON OF BIDS

Not Applicable. All bids submitted must be in the currency specified at clause 14 of ITB.

32 EVALUATION AND COMPARISON OF BIDS

Bid shall be evaluated as per Evaluation Methodology mentioned in Section-II of Tender Document on lowest bid basis.

In case of a tie at the lowest bid (L1) position between two or more bidders, the order/LOA will be placed based on the Reverse Auction as per GeM.

33 QUANTITY VARIATION

33.1 Where nature of items is such that the items cannot be supplied in exact quantity of the Purchase Order as in case of cables/ steel/ chemicals etc., quantity tolerance upto $\pm 5\%$ may be allowed, if there is no specific quantity variation/tolerance criteria in SCC. For such tolerance, separate amendment to Purchase Order would not be necessary.

33.2 The Purchaser reserves the right to delete the requirement of any one or more items of Tender Document without assigning any reason.

34 PURCHASE PREFERENCE

Purchase preference to Micro & Small Enterprises (MSEs) and Domestically Manufactured Electronic Products / Telecom Products or Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017 etc. shall be allowed as per Government instructions in vogue, as applicable from time to time.

As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are participating as MSE on GeM Portal (including updating their status in Profile) while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in their bid irrespective of selection/option made on GeM portal.

Bidders are advised to update their status on GeM Portal to avoid any complexity in evaluation.

[F] – AWARD OF CONTRACT

35 AWARD

Subject to “ITB: Clause-29.0”, KLL will place order to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest provided that Bidder, is determined to be qualified to satisfactorily perform the Contract.

“KLL/EIL intent to place the SAP order/contract directly on the address from where Goods are produced/dispatched OR Services are rendered. In case, bidder wants order/contract at some other address or supply of Goods/ Services from multiple locations, bidder is required to provide in their bid, the address on which order is to be placed”.

KLL/EIL will place the Purchase Order/Contract directly on the successful bidder from whom the bid has been received & evaluated and will not place order on other entities such as subsidiary, business associate or partner, dealer/distributor etc. of the Bidder.

36 NOTIFICATION OF AWARD / FAX OF ACCEPTANCE [FOA]

- 36.1 Prior to the expiry of ‘Period of Bid Validity’, Notification of Award for acceptance of the Bid will be intimated to the successful Bidder by KLL either by E - mail /Letter or like means defined as the “Fax of Acceptance (FOA)”. The Contract shall enter into force on the date of FOA and the same shall be binding on KLL and successful Bidder (i.e. Supplier/Seller). The Notification of Award/FOA will constitute the formation of a Contract. The detailed Purchase Order /Contract shall be issued thereafter incorporating terms & conditions of Tender Document, Corrigendum, Clarification(s), Bid and agreed variation(s)/acceptable deviation(s), if any. KLL may choose to issue Notification of Award in form of detailed Purchase Order without issuing FOA and in such case the Contract shall enter into force on the date of detailed Purchase Order only.
- 36.2 Contract/ Delivery/Completion Period shall commence from the date of Notification of Award/FOA or as mentioned therein.
- 36.3 Upon the successful Bidder’s / Supplier’s furnishing of ‘Contract Performance Security / Security Deposit’, pursuant to “ITB: Clause-38”, KLL will promptly discharge his EMD, pursuant to “ITB: Clause-16”.
- 36.4 The order value is subject to Price Reduction Schedule (PRS) clause.
- 36.5 **In addition to GeM Contract(s), KLL will place SAP generated Order(s) / Contract(s) outside GeM portal for execution of Order(s) / Contract(s) and payment to suppliers outside GeM portal. SAP Order(s)/Contract(s) will be generated by mentioning unit price excluding GST, quantity and percentage of GST. Thus, break-up of quoted prices (such as Ex-works price, freight charges & GST) shall be provided by bidders post price bid opening, based on request from KLL.**

37.0 DISPATCH SCHEDULE

- 37.1 If Purchase Order issued based on FOT (Free on Truck) / FOR (Free on Rail) project site basis, materials shall be delivered at the destination on freight prepaid & door delivery basis and for the cases where order(s) are finalized on Ex-Works basis the transportation will be arranged by supplier(s) / KLL on 'freight to pay' basis and the freight will be paid at the destination.

Seller shall submit the following details of goods/cargo within 15 days from Notification of Award to the designated authority as per Purchase Order:

- (i) Shipments Schedule
 - (ii) Dimension details of packages
 - (iii) Detailed technical write-up along with Catalogue (if applicable)
 - (iv) Any other document/details, if mentioned in Purchase Order
- 37.2 The consignment should be handed over to transporter with E-way bill, wherever required as per law/act. In case such e-way bill is required to be issued by KLL, the concerned designated order issuing authority may be contacted in this regard. It will be the responsibility of the supplier to ensure the compliance of the provisions relating to E-Way bill before dispatch of the consignment and any financial implication arising due to non-compliance in this regard will be to the account of the supplier.
- 37.3 It shall be responsibility of the seller to send intimation immediately on dispatch of the material so that necessary arrangements can be made at site. Delays on account of the same shall solely be attributable to the Supplier.
- 37.4 Wherever, part shipment is allowed (refer BDS), the Supplier is allowed to make part shipment. However, until specified elsewhere in Tender Document, Payment for such part supplied Goods shall be made after supply of complete quantity of respective item.
- 37.5 Wherever the items make a full truck load, the suppliers to dispatch such items in a full truck direct to the consignee on a door delivery basis to the site. In such cases, the supplier to send a consignee copy of the lorry receipt to the consignee along with the consignment and the consignment shall be booked to KLL and not "self". The supplier should dispatch the consignments to the designated consignee. All dispatch documents, that is, railway/lorry receipt, goods consignment note, airway bill, invoices, packing list, freight memos, test certificate, and so on, shall be sent to the concerned authority which will arrange to make the payment. If the payment is to be made through the bank, all original documents are to be sent through the designated bank.

Where critical equipment is involved, suitable special instructions will be provided in SCC to the supplier about the mode of transport, loading, avoidance of transshipment and, if necessary, provision of escorts. In case of chemicals, powdery materials, liquid materials, and so on, supplier is to ensure proper packaging to avoid spillage en route, so as to avoid pollution problems and also to conform to the ISO 14001 standard (wherever applicable).

38 CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT [CPS/SD]

- 38.1 Within 30 days of the receipt of the notification of award/ FOA from KLL, the successful Bidder shall furnish the Contract Performance Security/Security Deposit (CPS) in accordance with of General Conditions of the Contract. The CPS shall be in the form of either Banker's Cheque or Demand Draft or Insurance Surety Bond or Fixed Deposit Receipt or Bank Guarantee or Letter of Credit and shall be in the currency of the Contract. However, there shall be no Contract Performance security / PBG requirement for contracts:
- a) Placed under Direct Purchase / L-1 Purchase Option under Para (i) and (ii) of GFR rule 149;
 - b) Placed through Bids / RA with estimated bid value up to Rs 5 Lakh (in case of Goods contracts); and

38.2 The CPS shall be for an amount as specified in BDS towards faithful performance of the contractual obligations and performance of equipment/material. For the purpose of CPS, Contract/Order Value shall be exclusive of **GST (CGST & SGST/UTGST or IGST)**. Bank Guarantee towards CPS shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalized Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect should be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.

The Supplier shall submit CPS as per Form F-4 of Tender Document only but not as per format of GeM. Further, they also submit covering letter along with CPS as per format at F-4

38.3 Failure of the successful Bidder to comply with the requirements of this article shall constitute sufficient grounds for the annulment of the award and forfeiture of the EMD / action as per declaration for Bid Security.

38.4 Further, Ministry of Finance (MOF) Department of financial service has issued direction for submission of Bank Guarantee through online vide letter ref number F.No.7/112/2011-BOA dated 17th July 2012. The successful bidder can submit CPS online through issuing bank to KLL directly as per the above direction including its revisions, if any. In such cases confirmation will not be sought from issuing banker by KLL.

38.5 The successful bidder can also submit the SD/CP G through online banking transaction i.e. IMPS/NEFT/RTGS/SWIFT etc. For this purpose, the details of KLL's Bank Account is mentioned in BDS. Further, in case a successful Bidder is willing to furnish SD/CPS through SWIFT, the details may be obtained from Purchase Officer immediately after receipt of FOA.

While remitting such online transaction, the bidder must indicate "Security Deposit/ Contract Performance Security against FOA/DLOA/PO no. _____ (contractor/ vendor to specify the FOA/DLOA/PO No.)" under remarks column of such transaction on respective bank portal. The contractor/vendor shall be required to submit the successful transaction details to the dealing officer immediately through email/letter and necessarily within 30 days from the date of Fax of Acceptance.

38.6 In case of forfeiture of Contract Performance Security/ Security Deposit in terms of GCC, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by KLL. The forfeiture amount will be subject to final decision of KLL based on other terms and conditions of order.

38.7 CPS/Security Deposit will not be accepted in case the same has reference of 'remitter'/'financer' other than bidder on the aforementioned financial instrument of CPS/ Security Deposit submitted by the Supplier.

38.8 The first payment to vendor is to be released only after submission of CPS / Security Deposit (SD).

38.9 Before the CPS / Security Deposit (SD) is released a "No Claim Certificate" is to be submitted by the supplier/vendor.

38.12 In case KLL allows additional time for submission of CPBG/SD/CPS beyond 30 days, a penal interest of Marginal Cost of Fund based Lending Rate (MCLR) for one year charged by SBI (applicable on due date of submission of CPBG/SD i.e. 30th day after issuance of

FOA/Notification of award) plus 4.0% per annum (on CPBG/SD amount) shall be charged for delay beyond 30 days i.e. from 31st days after issuance of FOA/Award.

- 38.13 In case the Vendor/Contractor is submitting CPS in the form of Fixed Deposit (FDR), Vendor/Contractor is required to submit FDR in the name of the KLL A/c..... (Name of Vendor/Contractor) along with Third Party Deposit Confirmation Letter from bank. The detailed modalities of FDR along with Third Party Deposit Confirmation Letter is attached with ITB. (refer Annexure-VI)

39 PROCEDURE FOR ACTION IN CASE CORRUPT/ FRAUDULENT /COLLUSIVE/ COERCIVE PRACTICES

- 39.1 Procedure for action in case Corrupt/ Fraudulent/Collusive/Coercive Practices shall be as per Appendix-1 of General Conditions of Contract- Goods (Rev.1).
- 39.2 The Fraud Prevention Policy document is available on KLL's website (<https://konkanlng.in/>)
- 39.3 Name and contact details of nodal officer- refer BDS:

39.4 NON-APPLICABILITY OF ARBITRATION CLAUSE IN CASE OF BANNING OF VENDORS/ SUPPLIERS / CONTRACTORS/BIDDERS/ CONSULTANTS INDULGED IN FRAUDULENT/ COERCIVE PRACTICES

Notwithstanding anything contained contrary in GCC or elsewhere in the Purchase Order, in case it is found that the Bidder/ Supplier indulged in fraudulent/ coercive practices at the time of bidding, during execution of the Contract and/or on other grounds as mentioned in KLL's "Procedure for action in case Corrupt/ Fraudulent/ Collusive/Coercive Practices" (Annexure-I), the Bidder/Supplier shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by Konkan LNG Ltd., to such Bidder/Supplier.

The Bidder /Supplier / understands and agrees that in such cases where Bidder /Supplier has been banned (in terms of aforesaid procedure) from the date of issuance of such order by KLL, such decision of KLL shall be final and binding on the Bidder /Supplier and the 'Arbitration Clause' mentioned in the GCC or elsewhere in the Purchase Order shall not be applicable for any consequential issue /dispute arising in the matter.

40 PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES (MSE)

- 40.1 Following provision has been incorporated for Micro and Small Enterprises (MSE), in line with notification of Government of India, vide Gazette of India No. 503 dated 26.03.2012 proclaiming the Public Procurement Policy on procurement of goods and services from MSEs.

- i) Exemption to MSEs from payment of EMD.
- ii) In Tender, participating Micro and Small Enterprises quoting price within price band of L1 + 15% shall also be allowed to supply a portion of requirement by bringing down their prices to L1 price in a situation where L1 price is from someone other than a micro and small enterprises and such micro and small enterprises shall be allowed to supply upto 25% of the total tendered value. In case of more than one such Micro and Small Enterprises, the supply shall be shared proportionately (to tendered quantity). Further, out of above 25%, 4% shall be reserved for MSEs owned by SC/ST entrepreneurs. Further, 3% shall be reserved for MSEs owned by women

within above 25% reservation. The respective quota(s) shall be transferred to other MSEs in case of non-availability of MSEs owned by SC/ST entrepreneurs / MSEs owned by Women.

The quoted prices against various items shall remain valid in case of splitting of quantities of the items above.

In case tendered item is non-splitable or non-dividable (specified in Bid Data Sheet), MSE quoting price within price band L1 (other than MSE) + 15% , may be awarded for full/ complete supply of total tendered value subject to matching of L1 price.

40.2 The MSE(s) owned by SC/ST Entrepreneurs shall mean:-

- a) In case of proprietary MSE, Proprietor(s) shall be SC/ST.
- b) In case of partnership MSE, the SC/ST partners shall be holding atleast 51% share in the unit
- c) In case of private Limited Companies, at least 51% share is held by SC/ST. If the MSE is owned by SC/ST Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

The MSE(s) owned by Women shall mean:-

- a) In case of proprietary MSE, Proprietor(s) shall be Women.
- b) In case of partnership MSE, the Women partners shall be holding atleast 51% share in the unit
- c) In case of private Limited Companies, at least 51% share is held by Women. If the MSE is owned by Women Entrepreneurs, the bidder shall furnish appropriate documentary evidence in this regard.

40.3 In case Bidder is a Micro or Small Enterprise, the Bidder shall submit Udyam Registration Certificate for availing benefit under Public Procurement Policy for MSEs-2012.

Vide Gazette notification dated 18.10.2022 of Ministry of MSME, the following is notified:

“In case of an upward change in terms of investment in plant and machinery or equipment or turnover or both, and consequent re-classification, an enterprise shall continue to avail of all nontax benefits of the category (micro or small or medium) it was in before the re-classification, for a period of three years from the date of such upward change”

Accordingly, in case of upward change in status, MSE bidder is required to submit the previous certificate also to get the MSE benefits.

The above document(s) submitted by the Bidder shall be duly certified by the Chartered Accountant (not being an employee or a Director or not having any interest in the bidder's company/firm) and notary public with legible stamp.

If the bidder does not provide the above confirmation or appropriate document or any evidence, then it will be presumed that they do not qualify for any preference admissible in the Public Procurement Policy (PPP) 2012.

The Public Procurement Policy for MSEs is meant for procurement of only goods produced & Services rendered by MSEs.

The benefits of Public Procurement Policy, such as, exemption from payment of EMD, free tender document shall be given to all eligible MSEs except traders, bidder with major activity as Services (Trading) in Udyam certificate. Further, for purchase preference bidder shall submit additional document evidencing the authenticity of service providers or manufacturers of the item to be procured.

- 40.4 If against an order placed by KLL, successful Bidder(s) (other than Micro/Small Enterprise) is procuring material/services from their sub-vendor who is a Micro or Small Enterprise as per provision mentioned at clause no.40.3 above with prior consent in writing from KLL, the details like Name, Registration No., Address, Contact No. details of material & value of procurement made, etc. of such Enterprises shall be furnished by the successful Bidder at the time of submission of invoice/Bill.
- 40.5 Further, MSEs who are availing the benefits of the Public Procurement Policy (PPP) 2012 get themselves registered with MSME Data Bank being operated by NSIC, under SME Division, M/o MSME, in order to create proper data base of MSEs which are making supplies to CPSUs.
- 40.6 NSIC has initiated a scheme of “Consortia and Tender Marketing Scheme” under which they are assisting the Micro & Small enterprises to market their products and services through tender participation on behalf of the individual unit or through consortia.

Accordingly, if the MSEs or the consortia, on whose behalf the bid is submitted by NSIC, is meeting the BEC and other terms and conditions of tender their bid will be considered for further evaluation.

Further, in such cases a declaration is to be submitted by MSE/ consortia on their letter head (s) that all the terms and conditions of tender document shall be acceptable to them.

- 40.7 It may be noted that Government of India has implemented Trade Receivable Discounting System (TreDS) to address challenges faced by MSMEs in delayed payments (after receipt/acceptance of Material/Services) from Government buyers leading to shortfall of Working Capital. TreDS is an online electronic institutional mechanism for facilitating the financing of trade receivables of MSMEs through multiple financiers. KLL is already registered on the following TreDS platform:

- M/s Receivable Exchange of India (RXIL), Mumbai
- M/s Mynd Solutions Private Limited (Mynd), New Delhi
- M/s A. TREDS (Invoicemart), Mumbai

MSME Bidders are required to register on the TreDS platform. The MSME vendors can avail the TReDS facility, if they want to.

- 40.8 Interest payment on delayed payments to MSME is payable in line with Micro, Small and Medium Enterprises Development Act, 2006.

41 PACKING INSTRUCTIONS

- 41.1 Packing shall be strong and sturdy such that it can withstand loading/unloading & pushing by mechanical devices. All packaging shall be done in such a manner as to reduce volume and weight as much as possible without jeopardizing the safety of the material. All packing materials shall be new.
- 41.2 Fragile articles should have special packing materials depending on type of materials.

- 41.3 All soft and delicate surfaces on equipment/material should be carefully protected / painted with suitable coating and wrapped to prevent rusting and damage. All mechanical and electrical equipment and other heavy articles should be securely fastened to the bottom of the case, to avoid damage.
- 41.4 Attachments and spare parts of equipment and all small pieces shall be packed separately in wooden cases with adequate protection inside the case and sent along with main equipment. Each item shall be tagged so as to identify it with the main equipment and part number and reference number shall be indicated.
- 41.5 All protrusions shall be suitably protected and openings shall be blocked by wooden/steel covers as may be required.
- 41.6 Detailed case wise packing list in water proof envelope shall be inserted in each package together with equipment/material. One copy of 'Detailed Packing List' shall be fastened outside of the package in waterproof envelope and covered by metal cover.
- 41.7 Each package shall be marked on three sides with proper paints/indelible waterproof ink as follows:

PURCHASER:

DESTINATION:

Purchase Order No.....

Net Wt..... Kgs,

Gross Wt..... Kgs.

Dimensions.....X.....X.....CM.

Package No. (Sl. No. of total packages).....

Seller's Name.....

- 41.8 Permits are to be obtained separately for entry/use of vehicles/trailers etc. inside the plant. The following requirements are to be met to obtain vehicle permit:-
- Vehicle/Equipment etc. should be brought to site in good conditions.
 - Valid Road Tax Certificate, fitness certificate and insurance policy from Competent Authority
 - Valid operating/driving license of driver/operator
 - Any other requirement mentioned elsewhere in Tender Document

42 VENDOR PERFORMANCE EVALUATION

Shall be as stipulated at Appendix-2 of General Conditions of Contract- Goods (Rev.1).

43 MENTIONING OF PAN NO. IN INVOICE/BILL

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for transactions related to procurement of goods / services/ exceeding Rs. 2 Lacs per transaction or as amended from time to time.

Accordingly, Supplier should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case Supplier do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of Supplier shall be processed only after fulfilment of above requirement.

44 DISPUTE RESOLUTION MECHANISM

44.1 QUARTERLY CLOSURE OF THE CONTRACT AND SAMADHAN MECHANISM

During execution of orders, various issues may arise. In order to timely detect and to address the contractual issue(s) during the execution of contracts, KLL has introduced a mechanism of Quarterly Closure of the contract, under which all the related issues /disputes will be monitored and addressed on quarterly basis for resolution. Vendor/ Supplier/ Contractor/Consultant (hereinafter referred 'Vendor') should first refer any issues/disputes to Engineer-in-Charge (EIC) for LOA/contracts/ Dealing C&P Executive for Purchase Orders and co-operate them for smooth execution of the contract and to timely address the issues, if any. For applicability of 'Quarterly Closure', please refer BDS.

In case issue is not resolved by above, Supplier may submit their issue(s) to Vendor Grievance Portal, which will be addressed by KLL within 15 days.

Accordingly, the methodology for resolution of issue(s)/ grievance (s) of Vendor shall be as under:

- (i) Any issue should be first referred to EIC for contracts/ Dealing C&P Executive for Purchase Orders.
- (ii) In case issue is not resolved, Vendor may submit their issue/ grievance through online Vendor Grievance Portal.
- (iii) In case, Vendor is not satisfied, there is a provision of escalation of issue to higher authority in KLL. This option is available two times to vendor.
- (iv) Further, issue(s) can only be submitted upto 1 month after closure of respective Order/ LOA/Contract.
- (v) Vendor should refer their issue/ grievance through above mode only. Issue/ grievance received through any other mode shall not be entertained.

44.2 **CONCILIATION AND ARBITRATION**

Shall be as per cl.no.30 of General Conditions of Contract (GCC)-Goods.

45 **DISPUTES BETWEEN CPSE'S/GOVERNMENT DEPARTMENT'S/ ORGANIZATIONS**

Shall be as per cl.no.30.4 of General Conditions of Contract (GCC)-Goods

46 **REPEAT ORDER**

Not Applicable

47 **PROMOTION OF PAYMENT THROUGH CARDS AND DIGITAL MEANS**

To promote cashless transactions, the onward payments by Suppliers to their employees, service providers, sub-contractors and suppliers may be made through Cards and Digital means to the extent possible

48 **PROVISIONS FOR STARTPUS (AS DEFINED IN GAZETTE NOTIFICATION NO. D.L-33004/99 DATED 18.02.2016 AND 23.05.2017 OF MINISTRY OF COMMERCE AND INDUSTRY AND AS AMENDED FROM TIME TO TIME) (FOR APPLICABILITY REFER BDS):- NOT APPLICABLE**

49 PROVISION REGARDING INVOICE FOR REDUCED VALUE OR CREDIT NOTE TOWARDS PRS

PRS is the reduction in the consideration / contract value for the goods / services covered under this contract. In case of delay in supply/ execution of contract, supplier should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If supplier has raised the invoice for full value, then supplier should issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if supplier fails to submit the invoice with reduced value or does not issue credit note as mentioned above, KLL will release the payment to supplier after giving effect of the PRS clause with corresponding reduction of taxes charged on vendor's invoice, to avoid delay in delivery/collection of material.

In case any financial implication arises on KLL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of supplier. KLL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by KLL in future to the Supplier under this contract or under any other contract.

50 UNIQUE DOCUMENT IDENTIFICATION NUMBER BY PRACTICING CHARTERED ACCOUNTANTS

Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them as per provisions of Tender Document.

However, UDIN may not be required for documents being attested by Chartered Accountants in terms of provisions of Tender Document.

51 PROVISION W.R.T. TDS ON PURCHASE OF GOODS UNDER SECTION 194Q OF INCOME TAX ACT

51.1 TDS as applicable will be deducted by KLL under section 194Q of the Income Tax Act, 1961 on Purchases exceeds Rs. 50 Lakhs or limit defined therein from time to time during the financial year.

51.2 Since KLL is liable to deduct Income Tax TDS under section 194Q, the provision of TCS as per section 206C(1H) of the Income Tax Act, 1961 shall not be applicable.

51.3 Higher rate of TDS for non-filers of ITR

As per Section 206AB of Income Tax Act, 1961, in case of any vendor/supplier who does not filed their Income Tax Return for both of the two previous years preceding to current year and aggregate amount of TDS is more than or equal to 50,000/- in each of those previous two years (or limit defined by Govt. from time to time), then TDS will be deducted at the higher of following rates:

- (I) Twice the rate mentioned in relevant TDS section.
- (II) Twice the rate or rates in force
- (III) 5%

52 DOCUMENTS FOR PAYMENT:

Payment terms shall be as mentioned in GCC-Goods/SCC.

However, for release of payment, the following documents is to be submitted by supplier/ vendor:

- i) Supplier's Invoice indicating, inter alia description and specification of the goods, quantity, unit price, total value;
- ii) Packing list;
- iii) LR/GR/consignment note;
- iv) Manufacturer's guarantee certificate and in-house inspection certificate (wherever applicable);
- v) Inspection certificate issued by purchaser's inspector (wherever applicable); and
- vi) Any other document(s) as and if required in terms of the contract.

53 ORDER TRANSMITTAL SYSTEM: Not Applicable

**ADDENDUM TO INSTRUCTIONS TO BIDDERS
(INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)**

Detailed instructions regarding bid submission procedure under e-tendering system (e-tender portal) is available on <https://gailtenders.in/Gailtenders/Home.asp> as detailed below

The screenshot displays the GAIL Tenders website interface. At the top, there is a navigation bar with links for 'ACTIVE TENDERS', 'TENDERS SEARCH', 'CORRIGENDUM', and 'TENDER AWARDED'. Below this is a green banner with the GAIL logo and the slogan "Think Digital, Be Digital". The main heading reads "GAIL Tenders The GAIL Tenders Information System". A search bar and a date indicator (Friday, November 11, 2022) are visible. The page is divided into several sections: "Tender Statistics" (83 tenders, 28 corrigendums), "Todays Statistics" (0 tenders, 1 corrigendum), and a red-bordered box containing the title "ADDENDUM TO INSTRUCTIONS TO BIDDERS (INSTRUCTIONS FOR PARTICIPATION IN E-TENDER)". Other sections include "ACTIVE TENDERS", "TENDERS BY CLASSIFICATIONS", and "TENDER SEARCH". The footer contains links for "General Conditions of Contracts (GCCs)", "Corporate Website", "Corporate Intranet", "Corporate Email", "Reverse Auction Training Videos", and "GAIL (India) Limited".

BIDDING DATA SHEET (BDS)

ITB (SECTION-III) TO BE READ IN CONJUNCTION WITH THE FOLLOWING:

ITB clause	Description				
A. GENERAL					
1.1	The Purchaser is: Konkan LNG Limited The consignee details for the goods are: HOD (Mechanical - Projects), Konkan LNG Limited, At & Post Anjanwel, Tal-Guhagar, Dist. Ratnagiri, Maharashtra, Pin-415634, Ph. No.: 02359-241015				
1.2	The Invitation for Bid/ Tender is for HEAT EXCHANGER (PLATES-GASKETTED) FOR AMBIENT AIR HEATING SYSTEM PROJECT				
General	The Purchaser is: Konkan LNG Limited The consignee details and Delivery Location for the goods are as under:- Consignee: Konkan LNG Limited, Delivery Location: As per MR _____				
B. TENDER DOCUMENT					
8.1	For clarification purposes only, the communication address is: Ms. Sunita Mitra, Sr. GM (SCM) EIB-1ST FLOOR, Engineers India Limited 1, Bhikaiji Cama Place, New Delhi – 110066 (INDIA) E-mail: s.mitra@eil.co.in ; anil.dubey@eil.co.in Ph: 011 2676 3504 / 8186				
C. PREPARATION OF BID					
11.1.1 (j)	Additional documents to be submitted by the Bidder with its Part-I (Techno-commercial/ Unpriced bid): SCC/Scope of Work refers				
12 & 13	Whether KLL will be able to avail input tax credit in the instant tender: <table border="1" style="margin-left: auto; margin-right: auto;"><tr><td style="text-align: center;">YES</td><td style="text-align: center;"><input checked="" type="checkbox"/></td></tr><tr><td style="text-align: center;">NO</td><td style="text-align: center;"><input type="checkbox"/></td></tr></table>	YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
YES	<input checked="" type="checkbox"/>				
NO	<input type="checkbox"/>				
12.2	Transit Insurance shall be arranged by: - KLL				
12.4	Delivery basis shall be: FOT Site Basis				

13.7 and 13.8	Details of Buyer:	
	Consignee	Konkan LNG Limited Anjanewel, Taluka – Guhagar, Distt. – Ratnagiri, Maharashtra. Pin 415634 (India)
	PAN No.	AAGCK0390Q
	GST no.	27AAGCK0390Q1Z0
	KLL Bank details	<i>Name of Account Holder: Konkan LNG Limited</i> <i>Name of Bank: HDFC Bank Limited</i> <i>Account Number: 50200049097182</i> <i>(Current Account)</i> <i>Branch: Delhi</i> <i>IFS Code: HDFC0000329</i> <i>MICR Code: 110240052</i>
14	The currency of the Bid shall be INR	
15	The bid validity period shall be 03 months from final 'Bid Due Date'.	
16.1 16.9 & 38.5	<p>In case 'Earnest Money / Bid Security' or "Contract Performance Security" is in the form of 'Demand Draft' or 'Banker's Cheque' or Insurance Surety Bond' or 'Fixed Deposit Receipt, the same should be favor of Konkan LNG Limited, payable at Ratnagiri.</p> <p>In case of submission through online banking transaction i.e. IMPS / NEFT / RTGS / SWIFT, etc, the details of KLL's Bank account are as under:</p> <p>Name of Account Holder: Konkan LNG Limited Name of Bank: HDFC Bank Limited Account Number: 50200049097182 (Current Account) Branch: Delhi IFS Code: HDFC0000329 MICR Code: 110240052</p> <p>Bidder to mention reference no. "EMD/6001/02" in narration while remitting the EMD / Bid Security amount and to mention reference no. "CPS/6001/02" in narration while remitting the CPS amount in KLL's Bank Account.</p>	
D. SUBMISSION AND OPENING OF BIDS		
22	The GeM Bid No. of this bidding process is: GEM/2024/B/5307324	
22.2	<p>For submission of physical document as per clause no. 4.0 of IFB, the Owner's address is :</p> <p>Ms. Sunita Mitra, Sr. GM (SCM) EIB-1ST FLOOR, Engineers India Limited 1, Bhikaiji Cama Place, New Delhi – 110066 (INDIA)</p>	

	E-mail: s.mitra@eil.co.in ; anil.dubey@eil.co.in Ph: 011 2676 3504 / 8186				
E. EVALUATION, AND COMPARISON OF BIDS					
32	Evaluation Methodology is mentioned in Section-II. Tie-breaker methodology available on GeM portal will be followed.				
34	The following Purchase Preference Policy will be applicable as per provisions mentioned in tender: i) Micro & Small Enterprises (MSEs) ii) Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017				
F. AWARD OF CONTRACT					
36	The following designated authority shall be contacted after receipt of Notification of Award for all contractual matters :- Name: Mr. S R Kashkari, GM (Project) Address: 1, Bhikaiji Cama Place, New Delhi-110066 M: 9958849289				
37.4	Whether part shipment is allowed: Yes				
38	<table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">APPLICABLE</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">NOT APPLICABLE</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <p>The value/ amount of Contract Performance Security/ Security Deposit The “Contract Performance Security (CPS)/ Security Deposit (SD)” is SD/CPBG @ 5% of Total Order/ Contract Value within 30 days of FOA/ notification of award. Total order value for the purpose of CPBG shall be total of basic supply price & basic freight price. This shall be exclusive of GST.</p>	APPLICABLE	<input checked="" type="checkbox"/>	NOT APPLICABLE	<input type="checkbox"/>
APPLICABLE	<input checked="" type="checkbox"/>				
NOT APPLICABLE	<input type="checkbox"/>				
39.2	Name and contact details of nodal officer are as under: Name: Sh. Kumara Swamy Battula Designation: Chief Manager Contact Details / E-mail ID: 9868122824/ ksbattula@konkanlng.in				
40	Whether tendered item is non-split able or not-divisible: Bottomline basis <table border="1" style="width: 100%;"> <tr> <td style="text-align: center;">YES</td> <td style="text-align: center;"><input checked="" type="checkbox"/></td> </tr> <tr> <td style="text-align: center;">NO</td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	<input checked="" type="checkbox"/>	NO	<input type="checkbox"/>
YES	<input checked="" type="checkbox"/>				
NO	<input type="checkbox"/>				

44.1	Quarterly Closure of Contract		
	APPLICABLE	<input checked="" type="checkbox"/>	
	NOT APPLICABLE	<input type="checkbox"/>	
48	Applicability of provisions relating to Startups:		
	APPLICABLE	<input type="checkbox"/>	
	NOT APPLICABLE	<input checked="" type="checkbox"/>	
53	Applicability of provisions relating to Order Transmittal System:		
	APPLICABLE	<input checked="" type="checkbox"/>	
	NOT APPLICABLE	<input type="checkbox"/>	
Clause no.38 of GCC	Fall Clause:		
	APPLICABLE	<input type="checkbox"/>	
	NOT APPLICABLE	<input checked="" type="checkbox"/>	
SCC	Documents required for accepting the Goods: Please refer Bidding Document.		
% BREAK-UP OF ITEMS IN GROUPS FOR THE PURPOSE OF PRICE REDUCTION SCHEDULE AND BILLING	Group-A1: HEAT EXCHANGER (PLATES-GASKETTED)		
	MR SL. NO.	TAG NO.	% BREAK-UP
	01.001 A1	700-EP-1001 A	20%
	01.002 A1	700-EP-1001 B	20%
	01.003 A1	700-EP-1001 C	20%
	01.004 A1	700-EP-1001 D	20%
	01.005 A1	700-EP-1001 E	20%
	NOTE: Bidder shall indicate single price in GeM portal considering Supply+ Transportation + GST on Supply + GST on Transportation for entire Group A1.		
Tender Fee	Not Applicable.		
Custom Duty	Merit Rate of Custom Duty is Applicable.		
Conciliation is not adopted. Hence clause no. 30.1 of GCC-Goods is not applicable.			

ANNEXURE-V TO SECTION-III

POLICY TO PROVIDE PURCHASE PREFERENCE AS PER PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017

1.0 Ministry of Petroleum & Natural Gas vide Notification No. FP-20013/2/2017-FP-PNG-Part(4) (E-41432) dated 26.04.2022 has notified that Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT and as amended from time to time shall be applicable to all the Public Sector Undertakings and their wholly owned subsidiaries under MoP&NG with certain modifications.

2.0 The Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) issued by DPIIT to encourage 'Make in India' and promote manufacturing & production of goods and services in India with a view to enhancing income and employment.

3.0 **DEFINITIONS:-**

- (i) **Local Content** means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.

Further Local value addition through services such as transportation, insurance, installation, commissioning, training, and after sale support like AMC/CMC etc. shall be considered in local content calculation.

- (ii) **'Class-I local supplier'** means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of equal to or more than 50%.

'Class-II local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content of more than 20% but less than 50%.

'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%.

- (iii) **L1** mean the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per tender or other procurement solicitation.

- (iv) **Margin of Purchase Preference:** means the maximum extent to which the price quoted by a Class-I local supplier may be above the L1 for purpose of purchase Preference.

- (v) **Nodal Ministry** means the Ministry of Petroleum & Natural Gas

(vi) **Procuring Entity** means Konkan LNG Limited

(vi) **Works** means all the works as per Rule 130 of GFR-2017 also include 'turnkey works'

4.0 **Margin of Purchase Preference:** The margin of purchase preference shall be 20%.

5.0 **ELIGIBILITY OF 'CLASS-I LOCAL SUPPLIER'/ 'CLASS-II LOCAL SUPPLIER'/ 'NON-LOCAL SUPPLIERS' FOR DIFFERENT TYPES OF PROCUREMENT**

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', shall be eligible to bid irrespective of purchase value.

(b) Only 'Class-I local supplier' and 'Class-II local supplier', shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry/ International Competitive bidding has been issued. In global tender enquiries/ International Competitive bidding 'Non local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.

(c) Works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts

(d) HP-HT Operations in upstream oil and gas business activities shall be exempted from this order.

6.0 **PURCHASE PREFERENCE METHODOLOGY UNDER PPP-MII (SUBJECT TO QUANTITY DISTRIBUTION APPLICABLE TO MSES AS PER PUBLIC PROCUREMENT POLICY FOR MSE 2012, REFER EXAMPLES GIVEN BELOW):**

(a) Purchase preference shall be given to 'Class-I local supplier' in procurements in the manner specified here under.

(b) In the procurements of goods or works which are cover by para 5 (b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.

ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local

supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

- (c) In the procurements of goods or works which are covered by para 5 (b) and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:
- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
 - ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
 - iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.
 - iii. "Class-II local supplier" will not get purchase preference in any procurement.
- d) **Applicability in tenders where contract is to be awarded to multiple bidders -** In tenders where contract is awarded to multiple bidders subject to matching of L1 rates or otherwise which are covered by para 5 (b), the 'Class-I local supplier' shall get purchase preference over 'Class II- local supplier' as well as 'Non-local supplier', as per following procedure:
- i) If 'Class-I Local suppliers' qualify for award of contract for at least 50% of the tendered quantity in any tender, the contract may be awarded to all the qualified bidders as per award criteria stipulated in the bid documents. However, in case 'Class -I Local suppliers' do not qualify for award of contract for at least 50% of the tendered quantity, purchase preference should be given to the 'Class-I local supplier' over 'Class-II local suppliers'/'

'Non local suppliers' provided that their quoted rate falls within 20% margin of purchase preference of the highest quoted bidder considered for award of contract so as to ensure that the 'Class-I Local suppliers' taken in totality are considered for award of contract for at least 50% of the tendered quantity.

- ii) First purchase preference has to be given to the lowest quoting 'Class-I local supplier', whose quoted rates fall within 20% margin of purchase preference, subject to its meeting the prescribed criteria for award of contract as also the constraint of maximum quantity that can be sourced from any single supplier. If the lowest quoting 'Class-I local supplier', does not qualify for purchase preference because of aforesaid constraints or does not accept the offered quantity, an opportunity may be given to next higher 'Class-I local supplier', falling within 20% margin of purchase preference, and so on.

7.0 CONCURRENT APPLICATION OF PUBLIC PROCUREMENT POLICY FOR MICRO AND SMALL ENTERPRISES ORDER, 2012 AND PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA) ORDER, 2017 :

The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act. Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorized in following four broad categories for consideration or applicability of purchase preference:

Category	Terminology
Supplier is both MSE & Class-I local supplier.	"MSE Class-I local supplier"
Supplier is MSE but not Class-I local supplier.	"MSE but non-Class-I local supplier"
Supplier is not MSE but is Class-I local supplier.	"Non-MSE but Class-I local supplier"
Supplier is neither MSE nor Class-I local.	"Non-MSE non Class-I local supplier"

The applicability of PPP-MSE Order and PPP-MII Order in various scenarios, involving simultaneous purchase preference to MSEs and Class-I local suppliers under PPP-MSE Order and PPP-MII Order respectively, shall be as under:

- a) Items covered under Para 3(a) of PPP- MII Order, 2017 for which Nodal Ministry has notified sufficient local capacity and competition: For these items, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-II local suppliers or Non-local suppliers, including MSEs which are Class-II local suppliers/ Non-local suppliers, are not eligible to bid. Possible scenarios can be as under:
 - (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be

awarded to L-1.

- (ii) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is given to MSEs as per PPP-MSE Order. Balance quantity is to be awarded to the L-1 bidder.
- b) Items reserved exclusively for procurement from MSEs as per PPP-MSE Order: These items are reserved exclusively for purchase from MSEs. Hence, non-MSEs are not eligible to bid for these items. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
 - (ii) L-1 is "MSE non-Class-I local supplier" - Purchase preference is to be given to Class-I local supplier as per PPP-MII Order. Balance quantity, is to be awarded to L-1 bidder.
- c) If items are neither notified for sufficient local capacity nor reserved for MSEs, then the process will be as follows:
- c(a) Items covered under Para 3A(b) of PPP-MII Order are divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (ix) L-1 is "MSE Class-I local supplier" - 100% of the tendered quantity is to be awarded to L-1.
 - (x) L-1 is "Non-MSE but Class-I local supplier" - Purchase preference is to be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity is to be awarded to L-1 bidder.
 - (xi) L-1 is "MSE but non-Class-I local supplier" - Purchase preference is to be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity is to be awarded to L-1 bidder.
 - (xii) L-1 is "Non-MSE non-Class-I local supplier" - Purchase preference is to be given to MSEs as per PPP-MSE Order. Thereafter, purchase preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs above" as per PPP- MII Order. For the balance quantity, contract is to be awarded to L-1 bidder. (Refer Illustrative example).
- c (b) Items covered under Para 3A(c) of PPP-MII Order, 2017 are non- divisible items and both MSEs as well as Class-I local suppliers are eligible for purchase preference. Possible scenarios can be as under:
- (i) L-1 is "MSE Class-I local supplier"- Contract is awarded to L-1.

- (ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference - Purchase preference is to be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on.
- (iii) If conditions mentioned in sub paras (i) and (ii) above are not met i.e. L-1 is neither "MSE Class-I local supplier" nor "non-MSE Class-I local supplier" is eligible to take benefit of purchase preference, the contract is to be awarded/ purchase preference to be given in different possible scenarios as under:
 - A. L1 is "MSE but non-Class-I local supplier" or "Non-MSE but Class-I local supplier" – Contract is to be awarded to L1.
 - B. L1 is "Non-MSE non-Class-I local supplier" - First purchase preference to be given to MSE as per PPP-MSE Order. If MSE not eligible/ does not accept - purchase preference to be given to Class- I Local supplier as per PPP-MII Order. If Class-I Local supplier also not eligible/ does not accept - contract to be awarded to L-1.
- d) Items reserved for both MSEs and Class- I local suppliers: These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs/Class-II local suppliers/ Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.
- e) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.

8.0 Example to deal Various situations in case a bidder is eligible to seek benefit under Public Procurement (Preference to Make in India), Order 2017 as well as Public Procurement Policy for MSE 2012 (PPP for MSE 2012) :

(Scenario: Divisible items, both MSEs as well as Class-I local suppliers eligible for purchase preference and L-1 is "Non-MSE non-Class-I local supplier") Item - Desktop computer Qty- 50 Nos.

Details of bids received

Sr. No.	Name of bidder	Rates quoted	Price Ranking	Status of bidder
1	A	100	L1	"Non-MSE non- Class-I local supplier"
2	B	110	L2	"Non-MSE but Class-I local supplier"

3	C	112	L3	"MSE but non- Class-I local supplier"
4	D	115	L4	"Non-MSE but Class-I local supplier"
5	E	118	L5	"MSE but non- Class-I local supplier"
6	F	120	L6	"MSE Class-I local supplier"

1. In this case, first purchase preference is to be given to MSEs as per PPP-MSE Order for 25% of tendered quantity of 50 Nos. i.e. 12.5 Nos. (Rounded off to the next whole number say 13 Nos). Accordingly, invite L3 (bidder C), whose quoted rates falls within 15% margin of purchase preference to match L1 price i.e. Rs. 100/- for quantity of 13 Nos. Bidder "E" and "F", although MSEs, will not get purchase preference since their quoted rates don't fall within 15% margin of purchase preference. Bidder C will be considered for order of 13 Nos. on confirmation of reduction of price.
2. For 50% of balance quantity of 37 number (tendered quantity of 50- 13 awarded to bidder C; assuming bidder C has confirmed to accept L1 rates), purchase preference will be given to lowest Class-I local supplier as per PPP-MII Order. Accordingly, bidder B will be invited to match L-1 price for 50% of 37 Nos i.e. 18.5 (say 19 Nos of computers). If bidder "B" does not accept the L1 price i.e. price of Rs. 100/- per unit, next higher Class-I local supplier falling within 20% margin of purchase preference, i.e. bidder "D", may be invited to match L-1 price for 19 Nos. of computers and so on.
3. For remaining quantity i.e. 18 Nos (50-13-19), the contract will be awarded to lowest quoting bidder i.e. Bidder "A", who is L-1 in the example.

9.0 VERIFICATION OF LOCAL CONTENT/ DOMESTIC VALUE ADDITION

- a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall require to indicate percentage of local content and provide **self-certification** (as per proforma at Form-1) that the item offered meets the minimum local content for 'Class-I local supplier'/ 'Class-II local supplier' as the case may be and shall give details of the location(s) at which the local value addition is made.
- b. In cases of procurement for a value in excess of Rs. 10 crores, in addition to Form-1 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content as per proforma at Form -2.
- c. In case a complaint is received by the procuring agency relating to implementation of this order including the claim of a bidder regarding local content/ domestic value addition, the same shall be referred to Competent Authority who is empowered to look into procurement related complaints.

- d. Nodal Ministry may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/accountant's certificates on random basis and in the case of complaints. A complaint fee of Rs.2 Lakh or 1% of the value of the domestically manufactured products being procured (subject to a maximum of Rs. 5 Lakh), whichever is higher, shall be paid by Demand Draft to be deposited with KLL. In case, the complaint is found to be incorrect, the complaint fee shall be forfeited. In case, the complaint is upheld and found to be substantially correct, deposited fee of the complainant would be refunded without any interest.
- e. In case of false declarations, KLL shall initiate action for banning such manufacturer/supplier/service provider as per as per KLL's extant "Procedure for action in case Corrupt/Fraudulent/Collusive/Coercive Practices"
- f. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph g below.
- g. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:
 - i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
 - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
 - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

10.0 RECIPROCITY CLAUSE

- i. When a Nodal Ministry/Department identifies that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, due to restrictive tender conditions which have direct or indirect effect of barring Indian companies such as registration in the procuring country, execution of projects of specific value in the procuring country etc., it shall provide such details to all its procuring entities including CMDs/CEOs of PSEs/PSUs, State Governments and other procurement agencies under their administrative control and

GeM for appropriate reciprocal action.

- ii. Entities of countries which have been identified by the nodal Ministry/Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry/ Department, except for the list of items published by the Ministry/ Department permitting their participation.
- iii. The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.

SELF CERTIFICATION BY BIDDER WHO CLASS-I LOCAL SUPPLIER/ CLASS-II LOCAL SUPPLIER TOWARDS MANDATORY MINIMUM LOCAL CONTENT/ DOMESTIC VALUE ADDITION

To,
M/s Konkan LNG Limited

SUB:

TENDER NO:

Dear Sir

We, M/s_____ (*Name of Bidder*) confirm that as per the definition of policy we are:

Class-I Local supplier []

Class-II Local Supplier []

(Bidder is to tick appropriate option (✓) above).

It is further confirm that M/s_____ (*Name of Bidder*) meet the mandatory minimum Local content/Domestic Value Addition requirement for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of%.

The details of the location (s) at which the local value addition is made is as under:

.....

.....

We further confirm that in case we fail to meet the minimum local content/domestic value addition, the same shall be treated false information and KLL will take action as per provision of tender document.

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

**CERTIFICATE BY STATUTORY AUDITOR/COST AUDITOR/ CHARTERED
ACCOUNTANT OF BIDDER TOWARDS MANDATORY MINIMUM LOCAL
CONTENT/ DOMESTIC VALUE ADDITION
(IN CASE BIDDER IS CLASS-I LOCAL SUPPLIER/ CLASS-II LOCAL SUPPLIER)**

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

Dear Sir

“We _____ the statutory auditor/ cost auditor/chartered accountant (not an employee of the company) of M/s. _____ (*Name of the bidder*) hereby certify that as per definition specified in policy, M/s. _____ (*Name of the bidder*) is

Class-I Local supplier []

Class-II Local Supplier []

(Bidder is to tick appropriate option (✓) above).

It is further confirm that M/s _____ (*Name of Bidder*) quoted vide offer No. _____ dated _____ against tender No. _____ meet the mandatory minimum Local content/Domestic Value Addition requirement specified for Class-I Local supplier/ Class-II Local supplier (as the case may be) under Policy for Public Procurement (Preference to Make in India), Order 2017 (PPP-MII) and has value addition of% .

Name of Audit Firm:

[Signature of Authorized Signatory]

Name:

Date:

Designation:

Seal:

Membership no.

Note:

- (i) This certificate it to be furnished by the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
- (ii) The above format is indicative, the statutory auditor/ cost auditor/ cost accountant can modify the format without changing the intent of certification.

ANNEXURE-VI TO SECTION-III

Fixed Deposit Receipt as CPS:

- (i) The Fixed Deposit Receipt (FDR) submitted by Vendor/Contractor from a Bank based in India shall be duly pledged / lien in favour of “Konkan LNG Limited”(KLL).
The FDR shall be in the name of the Konkan LNG Limited A/c(Name of Vendor/Contractor) and the Vendor/Contractor cannot encash / pre-mature this FDR without the discharge letter / NOC/approval of KLL. However, KLL can encash this FDR without the approval of the Vendor/Contractor in case of non-compliance of the terms of the order/contract.
The original FDR shall be accompanied by a confirmation letter in original on letter head from the issuing bank to KLL as per the format of “**Third Party Deposit Confirmation Letter**” placed as **Annexure**
Note : FDR (free from any encumbrance payable at place mentioned in BDS) along with original confirmation letter in the manner mentioned above shall be submitted by the Vendor/Contractor within 30 days of the receipt of the notification of award/ FOA from KLL.
Here Bank means - Any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with ‘Reserve Bank of India’ as Scheduled Foreign Bank. However, in case of “Fixed Deposit” from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the “Fixed Deposit” itself or separately on its letterhead. KLL will verify the Fixed Deposit Receipt from issuing bank.
- (ii) The FDR submitted should have a validity of at least ‘three [03] months’ beyond the Warranty Period/Defect Liability Period.
- (iii) Any dispute arising out of or in relation to the said FDR shall be subject to the exclusive jurisdiction of courts at New Delhi.
- (iv) FDR in Original and Third Party Deposit Confirmation Letter in Original has to be kept in Custody of KLL.

Fixed Deposit Receipt as EMD:

- (i) The Fixed Deposit Receipt (FDR) submitted by Bidder from a Bank based in India shall be duly pledged / lien in favour of “Konkan LNG Limited”(KLL).
The FDR shall be in the name of the Konkan LNG Limited A/c.....(Name of Bidder)and the Bidder cannot encash / pre-mature this FDR without the discharge letter / NOC/approval of KLL. However, KLL can encash this FDR without the approval of the Bidder in case of non-compliance of the terms of the tender.
The original FDR shall be accompanied by a confirmation letter in original on letter head from the issuing bank to KLL as per the format of “**Third Party Deposit Confirmation Letter**” placed as **Annexure**
Note: FDR (free from any encumbrance payable at place mentioned in BDS) along with original confirmation letter in the manner mentioned above shall be uploaded/submitted as per tender conditions.
Bank means - Any Indian scheduled Bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International Bank situated in India and registered with ‘Reserve Bank of India’ as Scheduled Foreign Bank. However, in case of “Fixed Deposit” from Banks other than the Nationalized Indian Banks, the Bank must be commercial Bank having net worth in excess of Rs. 100 Crores [Rupees One Hundred Crores] and a declaration to this effect should be made by such commercial Bank either in the “Fixed Deposit” itself or separately on its letterhead. KLL will verify the Fixed Deposit Receipt from issuing bank.
- (ii) The FDR should have a validity of at least ‘two [02] months’ beyond the date on which the bid expires.
- (iii) Any dispute arising out of or in relation to the said FDR shall be subject to the exclusive jurisdiction of courts at New Delhi.
- (iv) FDR in Original and Third Party Deposit Confirmation Letter in Original has to be kept in Custody of KLL.

Third Party Deposit Confirmation Letter

Date: __/__/____

To,

Konkan LNG Limited,

.....
.....
.....

Dear Sir/ Madam

Sb: Issuance of Cumulative FDR..... amounting to ₹.....valid till.....

It is hereby certified that Cumulative Fixed Deposit Receipt (FDR) bearing number.....dated..... amounting to ₹..... (Amount in figure and words) has been issued by (Name of the Bank) branch address..... The maturity value is ₹..... on dated.....

This FDR has been issued on the request of M/s.....(Name of the contractor) under the PO no. / W.O. No/Tender no.....This FDR can be encashed/ redeemed without any consent/ letter from the contractor M/s.....(Name of the contractor) on the demand by Konkan LNG Limited and the payment will be made to Konkan LNG Limited excluding the interest earned thereon. The Contractor cannot encash/ premature above FDR unless above original FDR is accompanied by the discharge letter/NOC/approval of KLL.

If the FDR is not withdrawn, till date of maturity, it may be renewed or treated as instructed by the Contractor & KLL for renewal.

This FDR has been issued by authorized signatory of the Bank.

For or on behalf of..... [Name of the Bank & Branch details (Including IFS Code)]

Signature.....

Name:.....

Designation:.....

Contact no.

Email Id.

Stamp of Bank.....

Note:

- (i) **This letter forms an integrated part of FDR**
- (ii) **In case confirmation is required, the communication can be send to the following:**
Details for confirmations (including Address, Email Id, IFS Code and contact no.)

FORMS & FORMAT

LIST OF FORMS & FORMATS

Form No.	Description
F-1	BIDDER'S GENERAL INFORMATION
F-2 OR F-2A	PROFORMA OF "BANK GUARANTEE" FOR "EARNEST MONEY DEPOSIT / BID SECURITY" OR DECLARATION FOR BID SECURITY
F-3	LETTER OF AUTHORITY
F-4	PROFORMA OF "BANK GUARANTEE" FOR CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"
F-5	AGREED TERMS & CONDITIONS
F-6	ACKNOWLEDGEMENT CUM CONSENT LETTER
F-7	BIDDER'S EXPERIENCE
F-8(A)	CHECK LIST
F-8(B)	CHECKLIST FOR BID EVALUATION CRITERIA (BEC) QUALIFYING DOCUMENTS
F-9	FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S WORKING CAPITAL IS INADEQUATE
F-10	FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER
F-11	FORMAT FOR CONSORTIUM/JV AGREEMENT
F-12	BIDDER'S QUERIES FOR PRE BID MEETING
F-13	E-BANKING MANDATE FORM
F-14	INTEGRITY PACT
F-15	FREQUENTLY ASKED QUESTIONS (FAQs)
F-16	UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-INVOICE AS PER GST LAWS)
F-17	FORMAT FOR NO CLAIM CERTIFICATE FOR RELEASE OF CPS/SECURITY DEPOSIT

F-1

BIDDER'S GENERAL INFORMATION

To,
M/s KONKAN LNG LIMITED

TENDER NO:

1	Bidder Name	M/s.....
2	Status of Firm	Proprietorship Firm/Partnership firm/ Limited Liability Partnership (LLP) firm/Public Limited/ Pvt. Limited/ Govt. Dept. / PSU/ Others If Others Specify: _____ [Enclose relevant certificates / partnership deed/certificate of Registration, as applicable]
3a	Name of Proprietor/ Partners/ Directors of the firm/company including their Father's Name and residential address, Aadhar No., Pan Card Details & DIN Nos. [As per clause for 'One Bid Per Bidder' under Section-III of Tender Document]	
3b	Name of Power of Attorney holders of bidder	
4	Number of Years in Operation	
5	Address of Registered Office:	City: District: State: PIN/ZIP:
6	Bidder's address where order/contract is to be placed	City: District: State: PIN/ZIP:
7	Office responsible for executing the contract with GST no. * (In case supply of works are from multiple locations, addresses and GST	City: District: State:

	no. of all such locations are to be provided).	PIN/ZIP: GST No.:
8	Telephone Number/ Mobile no. of address where order is to be placed	_____ (Country Code) (Area Code) (Telephone No.)
9	E-mail address	
10	Website	
11	Mobile Number:	
12	ISO Certification, if any	{ If yes, please furnish details }
13	PAN No.	
14	GST No. (refer sl. no. 7 above)	
15	EPF Registration No.	
16	ESI code No.	
17	Whether Micro or Small Enterprise	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)</i>
	Whether MSE is owned by SC/ST Entrepreneur(s)	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)</i>
	Whether MSE is owned by Women	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB: Clause No. 40)</i>
	Details of registration in TReDS	Yes / No <i>If Yes, please provide the name of portal</i>
18	Whether Bidder is Startups or not	Yes / No <i>(If Yes, Bidder to submit requisite documents as specified in ITB: Clause No.50)</i>
	In case of Start-up confirm the following: (i) Date of its incorporation/ registration [The certificate shall only be valid for the entity upto ten years from the date of its incorporation/ registration] (ii) Whether turnover for any financial years since incorporation/ registration has exceed Rs.100 Crores.	

Note: **KLL intent to place the order/contract directly on the address from where Goods are produced/dispatched. In case, bidder wants order/ contract at some other address or supply of Goods from multiple locations, bidder is required to provide the address on which order is to be placed at sl.no.6 above.*

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

Annexure-A to F-1

To,
M/s KONKAN LNG LIMITED

ITEM/ WORKS:

TENDER NO:

Name of Bidder:

Sl. No.	Name of Proprietor/ Partners/ Directors	Father's Name	Residential Address	Aadhar No.	Pan Card Details	DIN Nos. (if applicable)

Note: The corresponding documents i.e. Aadhar, PAN & DIN etc. are also to be **provided duly attested by Notary Public.**

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

FORMAT F-2

PROFORMA OF "BANK GUARANTEE"
FOR "EARNEST MONEY / BID SECURITY"

(To be stamped in accordance with the Stamp Act)

To, M/s KONKAN LNG LIMITED _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to	
	Claim period up to (There should be three months gap between expiry date of BG & Claim period)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

In accordance with Letter Inviting Tender under your reference No _____ M/s. _____ having their Registered / Head Office at _____ (hereinafter called the Tenderer), wish to participate in the said tender for

As an irrevocable Bank Guarantee against Earnest Money for the amount of _____ is required to be submitted by the Tenderer as a condition precedent for participation in the said tender which amount is liable to be forfeited on the happening of any contingencies mentioned in the Tender Document.

We, the _____ Bank at _____ having our Head Office _____ (Local Address) guarantee and undertake to pay immediately on demand without any recourse to the tenderers by KONKAN LNG LIMITED, the amount _____ without any reservation, protest, demur and recourse. Any such demand made by KLL, shall be conclusive and binding on us irrespective of any dispute or difference raised by the Tenderer.

This guarantee shall be irrevocable and shall remain valid up to _____ [this date should be two (02) months beyond the validity of the bid]. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instructions from M/s. _____ whose behalf this guarantee is issued.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this _____ day of _____ 20__ at _____.

Notwithstanding anything contained herein:

- a) The Bank's liability under this Guarantee shall not exceed (currency in figures) (currency in words only)
- b) This Guarantee shall remain in force upto _____ (this expiry date of BG should be two months beyond the validity of bid) and any extension(s) thereof; and
- c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended,

the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of KLL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name

Designation

WITNESS:

(SIGNATURE)

(NAME)

(SIGNATURE)

(NAME)

Designation with Bank Stamp

(OFFICIAL ADDRESS)

Attorney as per

Power of Attorney No. _____

Date: _____

**INSTRUCTIONS FOR FURNISHING "BID SECURITY / EARNEST MONEY" BY
"BANK GUARANTEE"**

1. The Bank Guarantee by Bidders will be given on non-judicial stamp paper as per "Stamp Duty" applicable. The non-judicial stamp paper should be in the name of the issuing Bank.
2. The expiry date should be arrived at in accordance with "ITB: Clause-16.1".
3. The Bank Guarantee by bidders will be given from Bank as specified in "ITB : Clause - 16.2".
4. A letter from the issuing Bank of the requisite Bank Guarantee confirming that said Bank Guarantee / all future communication relating to the Bank Guarantee shall be forwarded to the Employer at its address as mentioned at "ITB".
5. Bidders must indicate the full postal address of the Bank along with the Bank's E-mail / Phone from where the Earnest Money Deposit has been issued as per proforma provided below..
6. If a Bank Guarantee is issued by a commercial Bank, then a letter to Employer confirming its net worth is more than Rs. 1,000,000,000.00 [Rupees One Hundred Crores] or equivalent along with documentary evidence in the Bank Guarantee itself.

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR
ALONG WITH BANK GUARANTEE

1	BANK GUARANTEE NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
3	BANK GUARANTEE AMOUNT	:				
4	TENDER NO	:				
5	NATURE OF BANK GUARANTEE	:				
	(Please Tick (√) Whichever is Applicable		PERFORMANC E BANK GUARANTEE	SECURI TY DEPOSI T	EM D	ADVAN CE
6	BG ISSUED BANK DETAILS					
(A)		EMAIL ID	:			
(B)		ADDRESS	:			
(C)		PHONE NO	:			

FORMAT F-2A

DECLARATION FOR BID SECURITY

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

Dear Sir

After examining / reviewing provisions of above referred tender documents (including all corrigendum/ Addenda), we M/s _____ (*Name of Bidder*) have submitted our offer/ bid no.

We, M/s _____ (*Name of Bidder*) hereby understand that, according to your conditions, we are submitting this Declaration for Bid Security.

We understand that we will be put on watch list/holiday/ banning list (as per policies of KLL in this regard), if we are in breach of our obligation(s) as per following:

- (a) have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or
- (b) having been notified of the acceptance of our Bid by the KLL during the period of bid validity:
 - (i) fail or refuse to execute the Contract, if required, or
 - (ii) fail or refuse to furnish the Contract Performance Security, in accordance provisions of tender document.
 - (iii) fail or refuse to accept 'arithmetical corrections' as per provision of tender document.
- (c) having indulged in corrupt/fraudulent /collusive/coercive practice as per procedure.

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

F-3

LETTER OF AUTHORITY

[Pro forma for Letter of Authority for Attending 'Pre-Bid Meetings']

Ref:
To,
M/s KONKAN LNG LIMITED

Date:

SUB:
TENDER NO:

Dear Sir,

I/We, _____ hereby authorize the following representative(s) for attending Pre-Bid Meeting', against the above Tender Document:

[1] Name & Designation _____ Signature _____
Phone/Cell:
Fax:
E-mail: @

[2] Name & Designation _____ Signature _____
Phone/Cell:
Fax:
E-mail: @

We confirm that we shall be bound by all commitments made by aforementioned authorised representative(s).

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

Note:

- (i) This "Letter of Authority" should be on the "**letterhead**" of the Firm / Bidder and should be signed by a person competent and having the 'Power of Attorney' to bind the Bidder. Not more than 'two [02] persons per Bidder' are permitted to attend "Pre-Bid Meetings'.
- (ii) Bidder's authorized representative is required to carry a copy of this authority letter while attending the 'Pre-Bid Meetings'.

PROFORMA OF "BANK GUARANTEE" FOR "CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT"

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

THIS FORMAT SUPERSEDE THE FORMAT OF GEM

To, M/s KONKAN LNG LIMITED _____	Bank Guarantee No.	
	Date of BG	
	BG Valid up to (Expiry date)	
	Claim period up to (indicate date of expiry of claim period which includes minimum three months from the expiry date)	
	Stamp Sl. No./e-Stamp Certificate No.	

Dear Sir(s),

M/s. _____ having registered office at _____ (herein after called the “contractor/supplier” which expression shall wherever the context so require include its successors and assignees) have been placed/ awarded the job/work of _____ vide PO/LOA /FOA No. _____ dated _____ for KONKAN LNG LIMITED having registered office at 16, Bhikaiji Cama Place, R.K. Puram, New Delhi (herein after called the “KLL” which expression shall wherever the context so require include its successors and assignees).

The Contract conditions provide that the SUPPLIER/CONTRACTOR shall pay a sum of Rs. _____ (Rupees _____) as full Contract Performance Guarantee in the form therein mentioned. The form of payment of Contract Performance Guarantee includes guarantee executed by Nationalized Bank/Scheduled Commercial Bank, undertaking full responsibility to indemnify KONKAN LNG LIMITED, in case of default.

The said M/s. _____ has approached us and at their request and in consideration of the premises we having our office at _____ have agreed to give such guarantee as hereinafter mentioned.

1. We _____ hereby undertake to give the irrevocable & unconditional guarantee to you that if default shall be made by M/s. _____ in performing any of the terms and conditions of the tender/order/contract or in payment of any money payable to KONKAN LNG LIMITED we shall on first demand pay without demur, contest, protest and/ or without any recourse to the contractor to KLL in such manner as KLL may direct the said amount of Rupees _____ only or such portion thereof not exceeding the said sum as you may require from time to time.
2. You will have the full liberty without reference to us and without affecting this guarantee, postpone for any time or from time to time the exercise of any of the powers and rights

conferred on you under the order/contract with the said _____ M/s. _____ and to enforce or to forbear from endorsing any powers or rights or by reason of time being given to the said M/s. _____ and such postponement forbearance would not have the effect of releasing the bank from its obligation under this debt.

3. Your right to recover the said sum of Rs. _____ (Rupees _____) from us in manner aforesaid is absolute & unequivocal and will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s. _____ and/or that any dispute or disputes are pending before any officer, tribunal or court or arbitrator or any other authority/forum and any demand made by you in the bank shall be conclusive and binding. The bank shall not be released of its obligations under these presents by any exercise by you of its liberty with reference to matter aforesaid or any of their or by reason or any other act of omission or commission on your part or any other indulgence shown by you or by any other matter or changed what so ever which under law would, but for this provision, have the effect of releasing the bank.
4. The guarantee herein contained shall not be determined or affected by the liquidation or winding up dissolution or changes of constitution or insolvency of the said supplier/contractor but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.
5. The bank undertakes not to revoke this guarantee during its currency without your previous consent and further agrees that the guarantee shall continue to be enforceable until it is discharged by KLL in writing. However, if for any reason, the supplier/contractor is unable to complete the supply/work within the period stipulated in the order/contract and in case of extension of the date of delivery/completion resulting extension of defect liability period/guarantee period of the supplier/contractor fails to perform the supply/work fully, the bank hereby agrees to further extend this guarantee at the instance of the supplier/contractor till such time as may be determined by KLL. If any further extension of this guarantee is required, the same shall be extended to such required period on receiving instruction from M/s. _____ (contractor) on whose behalf this guarantee is issued.
6. Bank also agrees that KLL at its option shall be entitled to enforce this Guarantee against the bank (as principal debtor) in the first instant, without proceeding against the supplier/contractor and notwithstanding any security or other guarantee that KLL may have in relation to the supplier's/contractor's liabilities.
7. The amount under the Bank Guarantee is payable forthwith without any delay by Bank upon the written demand raised by KLL. Any dispute arising out of or in relation to the said Bank Guarantee shall be subject to the exclusive jurisdiction of courts at New Delhi.
8. Therefore, we hereby affirm that we are guarantors and responsible to you on behalf of the Supplier/Contractor up to a total amount of _____ (amount of guarantees in words and figures) and we undertake to pay you, upon your first written demand declaring the Supplier/Contractor to be in default under the order/contract and without caveat or argument, any sum or sums within the limits of (amounts of guarantee) as aforesaid, without your needing to prove or show grounds or reasons for your demand or the sum specified therein.

9. We have power to issue this guarantee in your favor under Memorandum and Articles of Association and the undersigned has full power to do under the Power of Attorney, dated _____ granted to him by the Bank.

10. Notwithstanding anything contained herein:

a) The Bank's liability under this Guarantee shall not exceed (currency in figures) (currency in words only)

b) This Guarantee shall remain in force upto _____ (this date should be expiry date of defect liability period of the Contract) and any extension(s) thereof; and

c) The Bank shall be released and discharged from all liability under this Guarantee unless a written claim or demand is issued to the Bank on or before the midnight of(indicate date of expiry of claim period which includes minimum three months from the expiry of this Bank Guarantee) and if extended, the date of expiry of the last extension of this Guarantee. If a claim has been received by us within the said date, all the rights of KLL under this Guarantee shall be valid and shall not cease until we have satisfied that claim.

Details of next Higher Authority of the Officials who have issued the Bank Guarantee:

Name

Designation

Yours faithfully,

Bank by its Constituted Attorney

Signature of a person duly
Authorized to sign on behalf of the
Bank

INSTRUCTIONS FOR FURNISHING
"CONTRACT PERFORMANCE SECURITY / SECURITY DEPOSIT" BY "BANK
GUARANTEE"

1. The Bank Guarantee by successful Bidder(s) will be given on non-judicial stamp paper as per 'stamp duty' applicable. The non-judicial stamp paper should be in name of the issuing bank.
2. The Bank Guarantee by Bidders will be given from bank as specified in cl.no. 38.2 of ITB [Section-III] of Tender Document.
3. A letter from the issuing bank of the requisite Bank Guarantee confirming that said Bank Guarantee and all future communication relating to the Bank Guarantee shall be forwarded to Purchaser.
4. If a Bank Guarantee is issued by a commercial bank, then a letter to Purchaser and copy to Consultant (if applicable) confirming its net worth is more than Rs. 100,00,00,000.00 [Rupees One Hundred Crores] or its equivalent in foreign currency alongwith documentary evidence or in the Bank Gaurantee itself.
5. Supplier shall submit attached cover letter (Annexure) while submitting Contract Performance Security / Security Deposit.

MATTER TO BE MENTIONED IN COVERING LETTER TO BE SUBMITTED BY VENDOR ALONG WITH BANK GUARANTEE

1	BANK GUARANTEE NO	:				
2	VENDOR NAME / VENDOR CODE	:	NAME			
			VENDOR CODE			
3	BANK GUARANTEE AMOUNT	:				
4	PURCHASE ORDER/ LOA NO	:				
5	NATURE OF BANK GUARANTEE (Please Tick (√) Whichever is Applicable)	:	PERFORMANCE BANK GUARANTEE	SECURITY DEPOSIT	EMD	ADVANCE
6	BG ISSUED BANK DETAILS					
		(A)	EMAIL ID	:		
		(B)	ADDRESS	:		
		(C)	PHONE NO	:		

F-5

AGREED TERMS & CONDITIONS

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

This Format duly filled in, signed & stamped must form part of Bidder's Bid and must be submitted in Part –I (Un-priced Bid). Clauses confirmed hereunder need not be repeated in the Bid.

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
1.	Bidder's name, Vendor Code of KLL (if any) and address	Bidder's name : KLL's Vendor Code: Address:
2.	Bidder furnishes bid security declaration OR EMD/Bid Security details as under a) EMD/ Bid Security No. & date b) Value c) Validity d) Bank Address/e-mail ID/Mobile no. [in case of BG] Bidder furnishes bid security declaration [applicable for bidders to whom exemption is allowed as per cl.no.16.9 of Section-III].	
3.	Bidder confirms that the currency of quoted prices is in Indian Rupees.	
4.	Bidder confirms that quoted prices will remain firm and fixed (except where price escalation/variation is allowed in the Tender) till complete execution of the order.	
5.	Bidder confirms that quoted prices are strictly as per Price Schedule format of the GeM.	
6.	Bidder specify the Dispatch Point [Location, Dist. & State from where material will be dispatched]:	
7.	Bidder confirms acceptance of relevant Terms of Payment specified in the Bid Document.	
8.	Bidder confirms that Contract Performance Security/ Security Deposit (CPS) will be furnished as per Bid Document within 30 days of FOA in case of successful bidder.	
9.	Bidder confirms that CPS shall be from any Indian scheduled bank (excluding Co-operative banks and Regional Rural bank) or a branch of an International bank situated in India and registered with Reserve bank of India as scheduled foreign bank. However, in case of bank guarantees from banks other than the Nationalised Indian banks, the bank must be a commercial bank having net worth in excess of Rs 100 crores and a declaration to this effect	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	shall be made by such commercial bank either in the Bank Guarantee itself or separately on its letterhead.	
10.	Bidder confirms acceptance to Delivery/Completion Period as per Bid Document	
11.	(i) Bidder confirms acceptance of Price Reduction Schedule (PRS) for delay in delivery as specified in Bid Document. (ii) In case of delay, the bills shall be submitted after reducing the price reduction due to delay (refer PRS Clause).	
12.	a) Bidder confirms acceptance of all terms and conditions of Bid Document (all sections & enclosures). b) Bidder confirms that printed terms and conditions of Bidder are not applicable.	
13.	Bidder confirms that their offer is valid for period specified in BDS from the final 'Bid Due Date'.	
14.	Bidder confirms that (i) none of Directors (in Board of Director) of bidder is a relative of any Director (in Board of Director) of KLL or (ii) the bidder is not a firm in which any Director (in Board of Director) of KLL or their relative is a partner.	
15.	Bidder confirms that all correspondence must be in ENGLISH language only.	
16.	Bidder confirms that all Bank charges associated with Bidder's Bank regarding release of payment etc. shall be borne by Bidder.	
17.	Bidder confirms that the quoted prices is in compliance with the Section 171 of CGST Act/ SGST Act as mentioned as clause no. 13.10 of ITB (Anti-profiteering clause)	
18.	Bidder confirms that they have included GST (CGST & SGST/ UTGST or IGST) in Price Schedule of GeM.	
19.	Bidder confirms that GST registration details have been updated on GeM portal.	
20.	Whether in the instant tender items are covered in reverse charge rule of GST (CGST & SGST/UTGST or IGST). If yes, Bidder confirms that they have included GST (CGST & SGST/ UTGST or IGST) in Price Schedule / Schedule of Rates of GeM	Yes/ No
21.	Bidder confirms that they have mentioned Harmonized System Nomenclature (HSN) in Bid.	
22.	Bidder confirms that (i) any variation in GST at the time of supplies for any reasons, other than statutory, including variations due to turnover, shall be borne by them and (ii) any error of interpretation of applicability of rate of GST (CGST & SGST/ UTGST or IGST)	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	on components of an item and/or various items of tender by them shall be to bidder's account.	
23.	Whether bidder is liable to raise E-Invoice as per GST Act.	Yes/No
	If yes, bidder will raise E-Invoice and confirm compliance to provision of tender in this regard.	
24.	Part Order: (a) Bidder confirms acceptance to Part Order. (b) Bidder confirms that any charges quoted extra as lumpsum shall be applicable prorata on value basis in the event of part order.	
25.	Testing and Inspection charges: Bidder confirms that goods and services are subject to stage-wise and final Inspection by Owner / Owner's Authorized representative. Travel, Living and Personnel expenses of Owner / Authorized representative shall be borne by Owner / authorized representative.	
26.	<u>No Deviation Confirmation:</u> It may be note that any 'deviation / exception' in any form may result in rejection of Bid. Therefore, Bidder confirms that they have not taken any 'exception / deviation' anywhere in the Bid. In case any 'deviation / exception' is mentioned or noticed, Bidder's Bid may be rejected.	
27.	If the Bidder becomes a successful Bidder pursuant to the provisions of the Tender Document, the following Confirmation shall be automatically become enforceable: "Bidder agrees and acknowledges that the Employer is entering into the Contract/Agreement solely on its own behalf and not on behalf of any other person or entity. In particular, it is expressly understood & agreed that the Government of India is not a party to the Contract/Agreement and has no liabilities, obligations or rights thereunder. It is expressly understood and agreed that the Purchaser is authorized to enter into Contract/Agreement, solely on its own behalf under the applicable laws of India. Bidder expressly agrees, acknowledges and understands that the Purchaser is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Agreement. Accordingly, Bidder hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, VIP claims or counter claims against the Government of India arising out of the Agreement and covenants not to sue to	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	Government of India as to any manner, claim, cause of action or things whatsoever arising of or under the Agreement."	
28.	<p>Bidder hereby confirms that they are not on 'Holiday' by KLL or Public Sector Project Management Consultant (like EIL, Mecon only due to "poor performance" or "corrupt and fraudulent practices") or banned by Government department/ Public Sector on due date of submission of bid.</p> <p>Further, Bidder confirms that neither they nor their allied agency/(ies) (as defined in the Procedure for Action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices) are on banning list of KLL or the Ministry of Petroleum and Natural Gas.</p>	
29.	The contents of this Tender Document have not been modified or altered by Bidder. In case, it is found that the tender document has been modified / altered by the bidder, the bid submitted by them shall be liable for rejection.	
30.	Bidder confirms that they have read and understood the General Conditions of Contract – Goods (Rev.1) enclosed at Section-IV & no 'exception / deviation' anywhere has been taken in the same and that they shall abide by provisions of relevant GCC-Goods (Rev.1).	
31.	<p>Bidder certifies that they would adhere to the Fraud Prevention Policy of KLL [available on KLL's website (www.konkanlng.in)] and shall not indulge themselves or allow others (working in KLL) to indulge in fraudulent activities and that they would immediately apprise KLL of the fraud/suspected fraud as soon as it comes to their notice.</p> <p>Concealment of facts regarding their involvement in fraudulent activities in connection with the business transaction(s) of KLL is liable to be treated as crime and dealt with by the procedures of KLL as applicable from time to time.</p>	
32.	Bidder confirms that there is no conflict of interest with other bidders, as per clause no. 4.2 of Section-III (ITB) of Tender Document.	
33.	In case of any variance in the terms and conditions between GeM Contract and SAP PO/LOA, the terms and conditions of SAP PO/LOA shall prevail.	
34.	Bidder confirms that as specified in tender that evaluation bids will be based on the confirmations & documents submitted by bidders in the their bid and methodology specified in Section II of tender document irrespective of the status/evaluation on GeM portal and KLL's decision in this regard shall be final.	
35.	As per GEM policy/guidelines, MSE bidders have to update their status in their Profile and declare whether they are participating as MSE on GeM Portal (including updating their status in Profile)	

Sl.	DESCRIPTION	BIDDER'S CONFIRMATION
	while submitting the bid on GeM tender. Further, MSE are required to upload relevant documents in bid as per provision of tender. However, evaluation and applicability of EMD exemption and purchase preference policy will be based on the confirmations & documents submitted by the bidder in the their bid irrespective of selection/option made on GeM portal. (Applicable only for MSE Bidders).	
36.	Confirm that, in case of contradiction between the confirmations provided in this format and terms & conditions mentioned elsewhere in the offer, the confirmations given in this format shall prevail.	

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

Seal:

F-6
ACKNOWLEDGEMENT CUM CONSENT LETTER

(On receipt of Tender Document/information regarding the tender, Bidder shall acknowledge the receipt and confirm his intention to bid or reason for non-participation against the enquiry /tender through e-mail/fax to Purchase Officer in KLL who issued the Tender Document, by filling up the Format)

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

Dear Sir,

We hereby acknowledge receipt of a complete set of Tender Document along with enclosures for subject item/job and/or the information regarding the subject tender.

- We intend to bid as requested for the subject item/job and furnish following details with respect to our quoting office:

Postal Address with Pin Code:

Telephone Number :

Fax Number :

Contact Person :

E-mail Address :

Mobile No. :

Date :

Seal/Stamp :

- We are unable to bid for the reason given below:

Reasons for non-submission of bid:

Agency's Name :

Signature :

Name :

Designation :

Date :

Seal/Stamp :

F-7
BIDDER'S EXPERIENCE

To,

M/s KONKAN LNG LIMITED

SUB:

TENDER NO:

Sl. No	Description of the Supply/ Services	PO/ Contract No. and date	Full Address & phone nos. of Client.	Postal & nos. of	Value of Contract /Order (Specify Currency Amount)	Date of Commencement	Scheduled Completion /Delivery Period (Months)	Date of Actual Completion	Reasons for delay in execution, if any
(1)	(2)	(3)	(5)	(6)	(7)	(8)	(9)	(10)	

Place:

[Signature of Authorized Signatory of Bidder]

Date:

Name:

Designation:

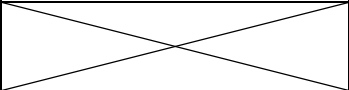
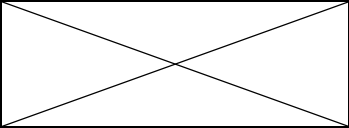
Seal:

Note:

Only documents (Work Order, Completion certificate, Execution Certificate etc.) which have been referred/ specified in the bid shall be considered in reply to queries during evaluation of Bids. Any new document submitted against representation option provided on GeM portal shall also be not considered for re-valuation of bid.

F-8 (A)
CHECK LIST

Bidders are requested to duly fill in the checklist. This checklist gives only certain important items to facilitate the Bidder to make sure that the necessary data/information as called for in the Tender Document has been submitted by them along with their offer/Bid. This, however, does not relieve the Bidder of his responsibilities to make sure that his Bid is otherwise complete in all respects. Please ensure compliance and tick (√) against following points:

S. No.	DESCRIPTION	CHECK BOX	REFERENCE PAGE NO. OF THE BID SUBMITTED
1.0	Confirm that the following details have been submitted in the Un-priced part of the Bid		
i	Covering Letter, Letter of Submission		
ii	Earnest Money Deposit / Declaration for Bid Security		
iii	Duly signed Tender Document along with drawings and addendum (if any)		
iv	Power of Attorney in the name of person signing the bid.		
v	Confirm submission of documents alongwith unpriced bid as per tender requirement (including cl.no.11.1.1 of Section-III).		
2.0	Confirm that all forms duly filled in are enclosed with the bid duly signed by authorised person(s)		
3.0	Confirm that the price part is uploaded in GeM portal.		
4.0	Confirm that Undertaking as per Form-1 to Section-II have been submitted by the bidder (Guidelines from Procurement from a Country sharing a Land Border with India)		
5.0	Confirm submission of Checklist against Bid Evaluation Criteria as per format F-8(B)		

Place:
Date:

[Signature of Authorized Signatory of Bidder]
Name:
Designation:
Seal:

F-8(B)

: DELETED

F-9
FORMAT FOR CERTIFICATE FROM BANK IF BIDDER'S
WORKING CAPITAL IS INADEQUATE/NEGATIVE

NOT APPLICABLE

F-10 : NOT APPLICABLE

**FORMAT FOR CHARTERED ACCOUNTANT CERTIFICATE/ CERTIFIED
PUBLIC ACCOUNTANT (CPA) FOR FINANCIAL CAPABILITY OF THE
BIDDER**

We have verified the Audited Financial Statements and other relevant records of M/s..... (Name of the bidder) and certify the following:

A. AVERAGE ANNUAL FINANCIAL TURNOVER* DURING THE LAST THREE FINANCIAL YEARS:

Year	Amount (Currency)
Year 1:	
Year 2:	
Year 3:	
Total (A)	
Average Annual Financial Turnover during the last three financial years (A/3)	

B. NETWORTH* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year ____
	Amount (Currency)
1. Net Worth	

C. WORKING CAPITAL* AS PER LAST AUDITED FINANCIAL STATEMENT:

Description	Year ____
	Amount (Currency)
1. Current Assets	
2. Current Liabilities	
3. Working Capital (Current Assets-Current liabilities)	

****Refer Instructions***

Note:

- 1.0 It is further certified that the above mentioned applicable figures are matching with the returns filed with Registrar of Companies (ROC) [Applicable only in case of Indian Companies]**
- 2.0 We confirm that above figures are after referring instructions at page 2 of 2 of F-10.**
- 3.0 Practicing Chartered Accountants shall generate Unique Document Identification Number (UDIN) for all certificates issued by them**

Name of Audit Firm:
Chartered Accountant/CPA
Date:

[Signature of Authorized Signatory]
Name:
Designation:
Seal:
Membership No.:
UDIN:

Instructions:

1. The Separate Pro-forma shall be used for each member in case of JV/ Consortium.
2. The financial year would be the same as one normally followed by the bidder for its Annual Report.
3. The bidder shall provide the audited annual financial statements as required for this Tender document. Failure to do so would result in the Proposal being considered as non- responsive.
4. For the purpose of this Tender document:
 - (i) **Annual Turnover** shall be “Revenue from Operations” as per Profit & Loss account of audited annual financial statements.
 - (ii) **Working Capital** shall be “Current Assets less Current liabilities” and
 - (iii) **Net Worth** shall be Paid up share capital plus Free Reserves & Surplus less accumulated losses, deferred expenditure and miscellaneous expenditure not written off, if any.
5. **In case the date of constitution/incorporation of the bidder is less than 3 years old, the average turnover in respect of the completed financial years after the date of constitution/ incorporation shall be taken into account for minimum Average Annual Financial Turnover criteria.**
6. **Above figures shall be calculated after considering the qualification, if any, made by the statutory auditor on the audited financial statements of the bidder including quantified financial implication.**
7. This certificate is to be submitted on the letter head of Chartered Accountant/CPA.

(Page 2 of 2)

F-11: NOT APPLICABLE

**FORMAT FOR CONSORTIUM AGREEMENT
(ON NON- JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)**

CONSORTIUM/JV AGREEMENT

This Consortium Agreement executed on this Day of Between M/s, a company incorporated under the law of and having its registered/principal office at..... (herein after called the "Member-I"/ 'Lead Member' which expression shall include its successors, executors and permitted assigns) and M/s, a company incorporated under the laws of, and having its registered/principal office at (herein after called the 'Member – II'/ 'Second Member' which expression shall include its successors, executors and permitted assigns) 'and M/s, a company incorporated under the laws of, and having its registered/principal office at (herein after called the 'Member – III'/ 'Third Member' which expression shall include its successors, executors and permitted assigns), for the purpose of making a bid and entering into a contract (in case of award) in response to bid document no..... for the work of
(Name of Project) of M/s (herein after called the 'Owner').

WHEREAS, the Owner invited bids vide its bid document no. for the work of

AND WHEREAS as per tender documents, Consortium entities will also be considered by the Owner provided they meet the specific requirements in that regard. As a pre-condition of bidding documents, the Consortium bidder shall provide in its bid a Consortium Agreement in an acceptable format in which the Members to the Consortium are jointly and severally liable to the Owner to bind themselves to the bid conditions accept the contract award, if selected and perform all the contractual obligations thereto.

AND WHEREAS the bid is being submitted to the Owner vide our proposal dated based on the Consortium Agreement being these presents and the bid with its bid forms and submission documents, in accordance with the requirement of tender conditions and requirements have been signed by both the Members and submitted to the Owner.

NOW THIS INDENTURE WITNESSETH AS UNDER:

In consideration of the above premises and agreements all the Members to this Consortium/JV do hereby now agree as follows:

- (a) We the Members in the Consortium hereby confirm that the name and style of the Consortium shall be Consortium.

- (b) In consideration of the bid submission by us to the Owner and the award of Contract by the Owner to the Consortium (if selected by the Owner), we the Members to the Consortium, hereby agree that the Member-I (M/s.....) shall act as the lead Member for self, and for and on behalf of Member-II/ Member-III and further declare and confirm that we shall jointly and severally be bound unto the Owner for execution of the contract in accordance with the contract terms and shall jointly and severally be liable to the Owner to perform all contractual obligations including technical guarantees. Further, the lead Member is authorized to incur liabilities and receive instructions for and on behalf of any or both Members of the Consortium and the entire execution of the Contract.
- (c) In case of any breach of the said Contract by any of the Members of the CONSORTIUM, we hereby agree to be fully responsible for the successful execution/performance of the Contract in accordance with the terms of the Contract.
- (d) Further, if the Owner suffered any loss or damage on account of any breach of the Contract or any shortfall in the completed equipment/plant, meeting the guaranteed performance parameters as per the technical specifications/ contract documents, the Second & Third Member of these presents undertakes to promptly make good such loss or damage caused to the Owner, on the Owner's demand without any demure. It shall neither be necessary nor obligatory on the part of the Owner to proceed against the Lead Member to these presents before proceeding against the Second & Third Member.
- (e) The financial liability of the Member (s) to this Consortium/JV Agreement, to the Owner with respect to the any or all claims arising out of the performance or non-performance of the Contract shall, however be not limited in any way so as to restrict or limit the liabilities of either of the Member.
- (f) Division of responsibilities of Scope of work among different Consortium/JV members is as per **APPENDIX I (Responsibility Matrix)** to this Consortium/JV Agreement.
- (g) It is expressly understood and agreed between the Members to this agreement that the responsibilities and obligations of each of the Members shall be as delineated in '**APPENDIX I**' to this agreement. It is further agreed by the Members that the above sharing of responsibilities and obligations shall not in any way be a limitation of the joint and several responsibilities of the Members under the Contract.
- (h) This Consortium Agreement shall be governed, construed and interpreted in accordance with Laws of India courts of Delhi shall have exclusive jurisdiction in all matters arising thereunder.
- (i) In case of award of contract, we the Member s to this Consortium/JV Agreement do hereby agree that we shall furnish the contract performance guarantee in favour of the Owner from a bank acceptable / approved by the Owner for a value as stipulated in the Contract Award and such guarantee shall be in the names of Consortium/JV.

(j) It is further agreed that this CONSORTIUM Agreement shall be irrevocable and shall form an integral part of the Contract and shall continue to be enforceable till the Owner discharges the same. It shall be effective date first above mentioned for all purposes and intents.

~~(k) In case bid submitted by Joint Venture, the details of equity partnership and assets of the JV shall be attached as a separate annexure to this agreement.~~

(l) This agreement remains in force till the end of Defects Liability Period.

IN WITNESS WHEREOF, the Members to this Consortium/JV agreement have, through their respective authorized representatives, have executed these presents and affixed their hands and common seal of their respective companies on the day, month and year first abovementioned.

1. Seal of
M/s.
has been affixed in my/our presence
pursuant to Board Resolution dated
.....
Signature
Designation

For M/s. (..... Member
.....
(Signature of authorised Representative)
Name:
Designation:

1. Seal of
M/s.
has been affixed in my/our presence
pursuant to Board Resolution dated
.....
Signature
Designation

For M/s. (..... Member-II
.....
(Signature of authorised Representative)
Name:
Designation:

1. Seal of
M/s.
has been affixed in my/our presence
pursuant to Board Resolution dated
.....

For M/s. (..... Member-III
.....
(Signature of authorised Representative)
Name:
.....

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BIDDER'S QUERIES FOR PRE BID MEETING

To,
M/s KONKAN LNG LIMITED
Sub :
Tender No :

SL. NO.	REFERENCE OF TENDER DOCUMENT				BIDDER'S QUERY	KLL'S REPLY
	SEC. NO.	Page No.	Clause No.	Subject		

NOTE: The Pre-Bid Queries may be sent by fax / e-mail before due date for receipt of Bidder's queries in terms of Clause No. 8.1 of ITB.

SIGNATURE OF AUTHORISED REPRESENTATIVE OF BIDDER:

NAME OF BIDDER : _____

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E-Banking Mandate Form

**(APPLICABLE ONLY IN CASE BIDDER'S BANK ACCOUNT IS NOT MAPPED
IN KLL)**

(To be issued on vendors letter head)

1. Vendor/customer Name :
2. Vendor/customer Code:
3. Vendor /customer Address:
4. Vendor/customer e-mail id:
5. Particulars of bank account
 - a) Name of Bank
 - b) Name of branch
 - c) Branch code:
 - d) Address:
 - e) Telephone number:
 - f) Type of account (current/saving etc.)
 - g) Account Number:
 - h) RTGS IFSC code of the bank branch
 - i) NEFT IFSC code of the bank branch
 - j) 9 digit MICR code

I/We hereby authorize KONKAN LNG LIMITED to release any amount due to me/us in the bank account as mentioned above. I/We hereby declare that the particulars given above are correct and complete. If the transaction is delayed or lost because of incomplete or incorrect information, we would not hold the KONKAN LNG LIMITED responsible.

(Signature of vendor/customer)

BANK CERTIFICATE

We certify that ----- has an Account no. ----- with us and we confirm that the details given above are correct as per our records.

Bank stamp

Date

(Signature of authorized officer of bank)

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INTEGRITY PACT

INTEGRITY PACT

INTEGRITY PACT

INTRODUCTION:

KLL as one of its endeavour to maintain and foster most ethical and corruption free business environment, have decided to adopt the Integrity Pact, a tool developed by the Transparency International, to ensure that all activities and transactions between the Company (KLL) and its Counterparties (Bidders, Contractors, Vendors, Suppliers, Service Providers/Consultants etc.) are handled in a fair and transparent manner, completely free of corruption.

Considering the above, the details mentioned at attached Annexure-1 are applicable as stated in Instruction to Bidders of Bid Document in addition to the existing stipulation regarding Corrupt and Fraudulent Practices.

The attached copy of the Integrity Pact at Annexure- 2 shall be included in the Bid submitted by the bidder (to be executed by the bidder). In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.



Bidder is required to sign the Integrity Pact with KLL as per format & terms and conditions enclosed with tender. In case a bidder does not sign the Integrity Pact, his bid shall be liable for rejection.

I COMMITMENTS AND OBLIGATIONS OF THE “COUNTERPARTY”

- a) The Counterparty, directly or indirectly (through agent, consultant, advisor, etc.), shall not pay any bribe/ influence or give undue/ unlawful benefit to anyone to gain undue advantage in dealing with KLL.
- b) The Counterparty will not engage in collusion of any kind including price fixation etc. with other Counterparts.
- c) The counterparty will not pass KLL’s confidential information to any third party unless specifically authorized by KLL in writing.
- d) The Counterparties shall promote and observe best ethical practices within their respective organizations.
- e) The Counterparty shall inform the Independent External Monitor.
 - i) If it received any demand, directly or indirectly, for a bribe/ favour or any illegal gratification/ payment / benefit;
 - ii) If it comes to know of any unethical or illegal payment / benefit;
 - iii) If it makes any payment to any KLL associate.
- f) The Counterparty shall not make any false or misleading allegations against KLL or its associates.

II VIOLATIONS & CONSEQUENCES:

- a) If a Counterparty commits a violation of its Commitments and Obligations under the Integrity Pact Programme during bidding process, their entire Earnest Money Deposit/ Bid Security, would be forfeited and in addition, action shall be taken as per **“Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”**
- b) In case of violation of the Integrity pact by Counterparty after award of the Contract, KLL shall be entitled to terminate the Contract. Further, KLL would forfeit the security deposits/ Contract Performance Bank Guarantee and in addition, action shall be taken as per **“Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices”**



INDEPENDENT EXTRNAL MONITORS (IEMS)

Presently the panel consisting of the following Independent External Monitors (IEMs) has been appointed by KLL, in terms of Integrity Pact (IP) which forms part of KLL Tenders / Contracts.

- i. Shri Rishi Kumar Shukla (email id: Rishi.shukla@gov.in; Rishi_2000in@yahoo.com)
- ii. Shri Deva Pampapathi Reddy (email id : dpreddyhd@gmail.com; dpreddyias@gmail.com)

This panel is authorised to examine / consider all references made to it under this tender/ contract. The bidder(s) , in case of any dispute(s) / complaint(s) pertaining to this tender may raise the issue either with the designated tender/contract issuing officer or Nodal Officer (presently S. Srikanth, DGM- Email s.srikanth@gail.co.in) in KLL or directly with the IEMs on the panel or IEM c/o Chief Vigilance Officer, GAIL (India) Limited, GAIL Bhawan, 16, Bhikaiji Cama Place, R.K. Puram, New Delhi – 110066.



INTEGRITY PACT
(To be executed on plain paper)

Between Konkan LNG Limited, a Government of India Public Sector, (here-in-after referred to as "Principal").

AND

_____ (here-in-after referred to as "The Bidder/ Contractor").

(Principal and the Bidder / Contractor are here-in-after are referred to individually as "Party" or collectively as "Parties").

PREAMBLE

The Principal intends to award under laid down organizational procedures, contract/s for _____. The Principal values full compliance with all relevant laws of land rules, regulations, and economic use of resources and of fairness /transparency in its relations with its Bidder (s) and/or Contractor (s).

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 – Commitments of the Principal

1. The Principal commits itself to take all measures necessary to prevent corruption and to observe the following Principles:-
 - i) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or for a third person, any material or immaterial benefit which the person is not legally entitled to.
 - ii) The Principal will, during the tender process treat all Bidder(s) with equity and reasons. The Principal will in particular, before and during the tender process, provide to all Bidder (s) the same information and will not provide to any Bidder (s) confidential / additional information through which the Bidder (s) could obtain an advantage in relation to the tender process or the contract execution.
 - iii) The Principal will exclude from the process all known prejudiced persons.
2. If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal Code (IPC)/ Prevention of Corruption Act (PC Act), or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officers and in addition can initiate disciplinary actions.



Section 2 – Commitments of the Bidder (s)/Contractor (s)

1. The Bidder (s) / Contractor (s) commits themselves to take all measures necessary to prevent corruption. The Bidder (s)/ Contractor (s) commits themselves to observe the following principles during participation in the tender process and during the contract execution:
 - i) The Bidder (s) / Contractor (s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - ii) The Bidder (s) / Contractor (s) will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other action to restrict competitiveness or to introduce cartelisation in the bidding process.
 - iii) The Bidder (s) / Contractor (s) will not commit any offence under the relevant IPC/PC Act; further, the Bidder (s) / Contractor (s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - iv) The Bidder (s)/ Contractor (s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly, the Bidder (s)/ Contractor (s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further, all the payments made to the Indian agent/ representative have to be in India Rupees only.
 - v) The Bidder (s) / Contractor (s) will, when presenting their bid, disclose any and all payments made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
 - vi) Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the Courts while representing the matter to IEMs and shall wait for their decision in the matter.
2. The Bidder(s)/ Contractor(s) shall not instigate third person to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder (s) / Contractor (s), before award or during execution has committed a transgression through a violation of Section 2, above or in any other form such as to put their reliability or credibility in question, the Principal is entitled to disqualify the Bidder (s) / Contractor (s) from the tender process or take action as per provisions of “**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**”.



Section 4 – Compensation for Damages

1. If the Principal has disqualified the Bidder (s) from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent to Earnest Money Deposit / Bid Security .
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equal to the Contract Value or the amount equivalent to Performance Bank Guarantee.

Section 5 – Previous transgression

1. The Bidder declares that no previous transgression occurred in the last three years, with any other Company in any country conforming to the anti-corruption approach or with any Public Sector Enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or actions can be taken as per provisions of “**Procedure for action in case Corrupt /Fraudulent/ Collusive/Coercive Practices**”

Section 6 – Equal treatment to all Bidders/ Contractors / Subcontractors

1. In case of sub-contracting, the Principal contractor shall take the responsibility of the adoption of IP by the sub-contractor. It is to be ensured by him that all sub-contractors also sign the IP.
2. The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 – Criminal charges against violating Bidder (s) / Contractor (s) / Sub-contractor (s)

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to the Chief Vigilance Officer.

Section 8 –Independent External Monitor / Monitors

1. The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his/her functions neutrally and independently. The Monitor would have access to all documents/records pertaining to the contract for which a complaint or issue is raised before them, as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed. It will be obligatory for him/ her to treat the information and documents of the Bidders/ Contractors as confidential. He/she reports to the Chairman, KLL



3. The Bidder (s)/ Contractor (s) accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his/her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to Sub-contractors.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
6. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or to take corrective action, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
7. The Monitor will submit a written report to the Chairman, KLL within 30 days from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
8. If the Monitor has reported to the Chairman, KLL, a substantiated suspicion of an offence under relevant IPC/PC Act, and the Chairman, KLL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Chief Vigilance Officer. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Central Vigilance Commission.
9. The word 'Monitor' would include both singular and plural.
10. In case of any complaints referred under IP Program, the role of IEMs is advisory and would not be legally binding and it is restricted to resolving the issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidder.
11. After award of contract, the IEMs shall look into any issue relating to execution of contract, if specifically raised before them. As an illustrative example, if a contractor who has been awarded the contract, during the execution of contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs.

Section 9 – Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded. Any violation to the same would entail disqualification of the bidders and exclusion from future business dealing.

If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by the Chairman, KLL.



Section 10 – Miscellaneous provisions

1. This agreement is subject to Indian Law. Place of performance and exclusive jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices, if any, need to be made in writing. Side agreements have not been made.
3. If the Contractor / Bidder is a Joint Venture or a partnership concern or a consortium, this agreement must be signed by all partners or consortium members.
4. Should one or several of the provisions of this agreement turn out to be invalid, the remainder of this agreement shall remain valid. In this case, the parties will strive to come to an agreement to their original intentions in such a case.
5. Issues like warranty / guarantee, etc. shall be outside the purview of IEMs.
6. In the event of any contradiction between the Integrity Pact and its Annexure, the Clause in Integrity Pact will prevail.



(For & on Behalf of Principal)

SHIVADHANDAYUTHABARI
Chief Manager (C & P)
KONKAN LNG LIMITED
AT POST-ANJANWEL, TAL-GUHAGAR,
DIST. RATNAGIRI, PIN CODE - 415634

(For & on Behalf of Bidder/Contractor)

(Office Seal)

Place -----

Date -----

Witness 1:
(Name & Address)

.....
.....
.....

Witness 2:
(Name & Address)

.....
.....
.....

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FREQUENTLY ASKED QUESTIONS (FAQs)

SL.NO.	QUESTION	ANSWER
1.0	Can any vendor quote for subject Tender?	Yes. A Vendor has to meet Bid Evaluation Criteria given under Section II of Tender document in addition to other requirements.
2.0	Should the Bid Evaluation Criteria documents be attested?	Yes. Please refer Section II of Tender document
3.0	Is attending Pre Bid Meeting mandatory.	No. Refer Clause No. 17 of Instruction to Bidders of Tender Document. However attending Pre Bid Meeting is recommended to sort out any issue before submission of bid by a Bidder.
4.0	Can a vendor submit more than 1 offer?	No. Please refer Clause No. 4 of Instruction to Bidders of Tender Document.
5.0	Is there any Help document available for GeM.	Refer training module presentations and FAQs as available on GeM Portal.
6.0	Are there are any MSE (Micro & Small Enterprises) benefits available?	Yes. Refer Clause No. 40 of Instructions to Bidders of Tender Document.
7.0	Are there are any benefits available to Startups?	Refer Clause No. 48 of Instructions to Bidders of Tender Document.

All the terms and conditions of Tender remain unaltered.

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**UNDERTAKING REGARDING SUBMISSION OF ELECTRONIC INVOICE (E-
INVOICE AS PER GST LAWS)**

(to be submitted on letter head along with documents for release of payment)

To,
M/s KONKAN LNG LIMITED

.....

SUB:

PO NO:

Dear Sir,

We _____ (Name of the Supplier) hereby confirm that E-Invoice provision as per the GST Law is

(i) Applicable to us []]

(ii) Not Applicable to us []]

(Supplier is to tick appropriate option (✓) above).

In case, same is applicable to us, we confirm that we will submit E-Invoice after complying with all the requirements of GST Laws. If the invoice issued without following this process, such invoice can-not be processed for payment by KLL as no ITC is allowed on such invoices. We also confirm that If input tax credit is not available to KLL for any reason attributable to Supplier (both for E-invoicing cases and non-E-invoicing cases), then KLL shall not be obligated or liable to pay or reimburse GST (CGST & SGST/UTGST or IGST) claimed in the invoice(s) and shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) or Input Tax Credit amount together with penalties and interest, if any, by adjusting against any amounts paid or becomes payable in future to the Supplier under this contract or under any other contract.

Place: [Signature of Authorized Signatory of Bidder]

Date: Name:

Designation:

Seal:

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**NO CLAIM CERTIFICATE
(TO BE SUBMITTED BEFORE RELEASE OF CPS/SECURITY DEPOSIT)**

[On the Letter-head of Contractor]

We, _____, a company incorporated under the laws of India/ a Consortium between *___ and *___ (*name of Consortium partners to be inserted*)/ a Partnership Firm consisting of *___ and *___ (*name of Partners to be inserted*)/ a Sole Proprietorship (as the case may be), having its registered office at _____ and carrying on business under the name and style M/s. _____ were awarded the contract by KONKAN LNG LIMITED. in reference to Tender No. _____ dated _____ (“Order/Contract”).

After completion of the above-said items/job under the Order/Contract, we have scrutinized all our claims, contentions, disputes, issues and we hereby confirm that after adjusting all payments received by us against our R.A. Bills and final bill, we have no claims, dues, issues and contentions from KONKAN LNG LIMITED.

We further absolve KONKAN LNG LIMITED from all liabilities present or future arising directly or indirectly out of the Contract.

There is no economic duress or any other compulsion on us for submission of this no claim certificate.

Place:	[Signature of Authorized Signatory of Service Provider]
Date:	Name:
	Designation:
	Seal:

SECTION-IV

GENERAL CONDITIONS OF CONTRACT [Rev.1]

FOR

**PROCUREMENT OF
GOODS**

Konkan LNG Limited

GENERAL CONDITIONS OF CONTRACT-GOODS [Rev.1]

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Clause Title

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Appendix-I: Procedure for Action in Case of Corrupt/Fraudulent/Collusive/Coercive Practices

Appendix-II: Procedure for Evaluation of Performance of Vendor/ Supplier/ Contractor/ Consultant

a. DEFINITIONS, INTERPRETATIONS & PRIORITY OF CONTRACT DOCUMENTS

b. Definitions

In this document, General Conditions of Contract (GCC-Goods), the following terms shall have the following respective meanings:

- i. "Approved" means prior approval in writing.
- ii. The "Bid" or "Tender" "Offer" means the proposal along with supporting documents submitted before Notification of Award by the Bidder for consideration / acceptance by the Purchaser.
- iii. "Bidder" Designates the person(s) or legal entity / Firm / Company /Corporation /Organisation, and it's legal representatives, successors and permitted assigns which has made a proposal or submitted Bid/Tender/Offer with the aim of concluding a Contract with the Purchaser.
- iv. "Consultant" or "PMC" [if engaged] shall mean M/s.having its registered office at..... who are the consultant to the Purchaser for this Contract. The term Consultant includes successors, assigns of M/s.
- v. "Contract" shall mean all obligations, commitments, promises agreed upon between Purchaser and Supplier for supply of Goods including execution of the Services(if any) as per Purchase Order(PO) and its subsequent amendment(s), if any in writing thereto.
- vi. "Contract Price" or "Purchase Order Value" shall mean the total sum accepted or the total sum calculated in accordance with the prices accepted in the Contract as payable to the Supplier under the Contract for the full and proper performance of its contractual obligations. The Contract Price /Purchase Order Value is subject to Price Reduction Schedule clause.
- vii. "Completion Date" shall mean the date on which the supplied Goods are successfully commissioned by the Supplier and handed over to the Purchaser.

"Delivery Date" shall be the date on which Goods are supplied by Supplier as per delivery terms of the Contract.

- viii. "Commercial Operation" shall mean the condition of the operation in which the complete Goods / equipment covered under the Contract is officially declared by the Purchaser to be available for continuous operation at different loads upto and including rated capacity.

- ix. "Day" shall mean a day of 24 hours from midnight to midnight irrespective of the number of hours worked in that day.
- x. "Delivery" shall mean the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.

Delivery terms shall be interpreted as per current edition of INCOTERMS, published by the International Chamber of Commerce before the due date of submission of Bid

- xi. "Drawings" shall mean and include Engineering drawings, sketches showing plans, sections and elevations in relation to the Contract together with modifications and/or revisions thereto.
- xii. "Engineer" or "Engineer-in-Charge" shall mean the person designated from time to time by Purchaser/Consultant and shall include those who are expressly authorized to act for and on behalf of Purchaser/Consultant for operation of this Contract.
- xiii. "Fax of Acceptance" shall mean intimation regarding notification of award by the Purchaser/Consultant to the successful Bidder/Supplier through a fax/ letter/ email conveying that the Tender/Bid/Offer has been accepted in accordance with the provisions contained therein.
- xiv. "Final Acceptance" shall mean the Purchaser's written acceptance of the Goods supplied and works/Services performed under the Contract after successful completion of performance and guarantee test, at/after the Completion Date.
- xv. "Goods" shall mean articles, materials, equipment, machinery, instruments, stores, design and drawings, data and other property to be supplied by Supplier including Services (if any), to complete the Contract and Amendment(s) thereto.
- xvi. "Inspector" shall mean any person or third party Agency nominated by Purchaser/ Consultant to inspect Goods, stage wise as well as final, before dispatch, at Supplier's works and/or on receipt at Site as per terms of the Contract.
- xvii. "Initial Operation" shall mean the first integral operation of the complete Goods covered under the Contract with sub-systems and supporting equipment(s) in service or available for service.
- xviii. "Purchase Order" means the Contract Document/Order collectively the Tender Documents, Designs, Drawings, Specification, Bill of Quantities,

Schedule of Rates alongwith its break-up (if any), Fax of Acceptance (if any), agreed variations and amendments (if any) and such other documents constituting the Tender and acceptance thereof.

- xix. "Purchaser" shall mean KONKAN LNG LIMITED having its registered office at 16, BHIKAIJI CAMA PLACE, R.K.PURAM, NEW DELHI-110066 (INDIA). The term Purchaser includes successors, assigns of KLL
- xx. "Performance and Guarantee Tests" shall mean all operational checks and tests required to determine and demonstrate capacity, efficiency and operating characteristics as specified in the Purchase Order.
- xxi. "Project" designates the aggregate of the Goods and/or Services to be provided by one or more Suppliers/Contractors.
- xxii. "Quantities / Bills of Quantities" designate the quantity calculations to be taken into account when these calculations are made from detailed or construction drawings or from work actually performed, and presented according to a jointly agreed breakdown of the Goods and/or Services.
- xxiii. "Supplier" shall mean the successful Bidder whose Bid has been accepted by the Purchaser for supply of Goods and incidental Services (if any). The term Supplier is a synonyms of Seller and Vendor/Contractor and also includes its successor(s) and permitted assign(s).
- xxiv. "Service" shall mean those services ancillary to the supply of Goods, such as transportation and insurance and any other incidental services such as erection, installation, testing, commissioning, provision of technical assistance, training and other such obligations of the Supplier covered under the Contract.
- xxv. "Site" means the land(s) and other place(s) on, under, in or across/through which the Goods and/or Services have to be supplied, erected, assembled, adjusted, tested, arranged and/or commissioned.
- xxvi. "Specifications" shall mean and include schedules, details, description, statement of technical data, performance characteristics, standards (Indian and/or International) and standard specifications including all addenda/corrigenda published before entering into the Contract, as applicable and specified in the Contract.
- xxvii. "Sub-Contract" shall mean order placed by the Supplier, for any portion of the Contract, after necessary consent and prior written approval of Purchaser unless otherwise explicitly mentioned in the Contract.

- xxviii. "Sub-Contractor" shall mean the person(s) / firm / Organisation / company (other than the Supplier) and its legal representatives, successors and permitted assigns named in the Contract for supply of any part of the Goods or Service(s) or to whom any part of the Contract has been sub-let by the Supplier with the prior consent in writing of the Consultant/Purchaser unless otherwise explicitly mentioned in the Contract.
- xxix. "Start-Up" shall mean the time period required to bring the Goods covered under the Contract from an inactive condition, when construction is essentially complete to the state of readiness for trial operation. The start-up period shall include preliminary inspection and check out of Goods and supporting subsystems, initial operation of the complete Goods covered under the Contract to obtain necessary pre-trial operation data, perform calibration and corrective action, shutdown inspection and adjustment prior to the trial operation period.
- xxx. "Tests" shall mean such process or processes to be carried out by the Supplier as are prescribed in the Contract or considered necessary by Purchaser or his representative in order to ascertain quality, workmanship, performance and efficiency of Goods or part thereof.
- xxxi. "Tests on Completion" shall mean such tests as prescribed in the Contract to be performed by the Supplier before the complete Goods and Services are taken over by the Purchaser.
- xxxii. "Week" shall mean a period of any consecutive seven Days.

c. Interpretations & Priority of Contract Documents

- i. The documents forming the Contract are to be read together and interpreted as mutually explanatory of one another. If there is a direct inconsistency in specific obligation(s), then for the purposes of interpretation, and unless otherwise provided in the Contract, the priority of the Contract Documents shall be in accordance with following sequence:

- Purchase Order
- Fax of Acceptance
- Specific Technical Specification/Job Specifications (pertaining to Scope of Supply)
- Drawings
- Special Purchase Conditions(SPC) / Special Conditions of Contract (SCC)
- General Technical Specifications (if applicable)
- Instructions to Bidders (ITB)
- General Conditions of Contract (GCC)
- Any other document forming part of the Contract

A Amendment issued to Purchase Order after signing of formal Contract shall take precedence over respective clauses of the formal Contract and its annexures.

The higher priority interpretation shall be adopted only to the extent required to deal with an inconsistency. Specific term(s) agreed take priority over general statement(s) and terms in Contract Document created at a later date govern over terms in earlier Contract Document. Subject to foregoing, the terms of the groups of documents set out above have equal importance within their group.

- ii. Headings and Marginal Notes: All headings and marginal notes to the clauses of these General Conditions of Contract or to the Specifications or to any other Tender Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation thereof the Contract.
- iii. Singular and Plural: In Contract Documents unless otherwise stated specifically, the singular shall include the plural and vice versa wherever the context so requires.
- iv. Interpretation: Words implying 'Person(s)/Party(ies)' shall include relevant Corporate Companies / Registered Associations/ Body of Individuals/ Firm of Partnership' and any firm/organization having legal capacity, as the case may be.
- v. Gender: Where the context so requires, words imparting the masculine gender shall also include the feminine gender and the neuter gender and vice versa.
- vi. Severability: Should any provision of this Contract be found to be invalid, illegal or otherwise not enforceable by any court of law, such finding shall not affect the remaining provisions hereto and they shall remain binding on the parties hereto.
- vii. Incoterms:
 - 1 The meaning of any trade term and the rights and obligations of Parties thereunder shall be as prescribed by Incoterms® 2020 or its latest version.
 - 2 EXW, FOB,FCA,CIF, CIP& CPT and other similar terms, shall be governed by the rules prescribed in the Incoterms® 2020 or its latest version, published by the International Chamber of Commerce, applicable as on due date of submission of Bid.

a. SUPPLIER TO INFORM

- b. The Supplier shall be deemed to have carefully examined all Contract documents to his entire satisfaction. Any lack of information shall not in any way relieve the Supplier of his responsibility to fulfill his obligation under the Contract.

- a. **APPLICATION**

- b. These General Conditions of Contract (GCC-Goods) shall apply to the extent that they are not superseded by provisions of other parts of the Contract.

- a. **COUNTRY OF ORIGIN**

- b. All goods and services supplied under the contract shall have their Origin as quoted by the Bidder and accepted by Purchaser.
- c. For purposes of this Clause “Origin” means the place where the Goods were mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.
- d. In case of Contract with foreign Suppliers, a certificate issued by relevant Chamber of Commerce specifying Country of Origin shall form part of shipping/dispatch documents.
- e. The Origin of goods and services is distinct from the nationality of the Supplier.
- f. In case of any export/re-export control restrictions imposed by parent country of Bidder / country of origin on the Goods offered/supplied regarding Goods’ end use or end user, then Bidder shall intimate the same upfront in their offer. In such case, right to accept or reject the Bid of such Bidder shall be decided by Purchaser on its sole discretion.

- a. **SCOPE OF CONTRACT**

- b. Scope of the Contract shall be as defined in the Purchase Order/Contract Document(s) and Annexure thereto.
- c. Completeness of the Goods and Services shall be the responsibility of the Supplier. Any equipment, fittings and accessories which may not be specifically mentioned in the Scope, Specifications or drawings, but which are usual or necessary for the satisfactory functioning of the Goods (i.e. successful operation and functioning of the Equipment being Supplier’s responsibility) shall be provided by Supplier without any extra cost.
- d. The Supplier shall follow the good engineering practices in the manufacture of Goods/Equipment(s) notwithstanding any omission in the Specifications. The true intent and meaning of these documents is that Supplier shall in all respects, design, engineer, manufacture and supply the Goods, equipment in a thorough workmanlike manner and supply the same in prescribed time to the entire satisfaction of Purchaser.

- e. The Supplier shall furnish three (3) copies in English language of Technical documents, final drawings, preservation instructions, operation and maintenance manuals, test certificates, spare parts catalogues for all equipments to the Purchaser. The Supplier shall also furnish the above in computer readable soft copies in PDF format or equivalent by electronic mode.
- f. The documents once submitted by the Supplier shall be firm and final and not subject to subsequent changes unless otherwise explicitly agreed by the Purchaser in writing. The Supplier shall be responsible for any loss to the Purchaser/Consultant consequent to furnishing of incorrect data/drawings.
- g. All dimensions and weight should be in metric system.
- h. All equipment to be supplied and work to be carried out under the Contract shall conform to and comply with the provisions of relevant regulations/Acts(State Government or Central Government) as may be applicable to the type of equipment/work carried out and necessary certificates shall be furnished.
- i. The Supplier shall provide cross sectional drawings, wherever applicable, to identify the spare part numbers and their location
- j. Specifications, design and drawings issued to the Supplier alongwith Tender Document/RFQ and Contract are not sold or given but loaned. These remain property of Purchaser/Consultant or its assigns and are subject to recall by Purchaser/Consultant. The Supplier and his employees shall not make use of the drawings, specifications and technical information for any purpose at any time except for manufacture against the Contract and shall not disclose the same to any person, firm or corporate body, without prior written permission of Purchaser/Consultant. All such details shall be kept confidential.
- k. Supplier shall pack, protect, mark and arrange for dispatch of Equipment as per instructions given in the Contract.
- l. The Supplier on his own behalf and on behalf of Sub-Contractor(s) hereby represents that both have full legal right, power and authority to transfer the ownership of the equipment/material to Purchaser.

a. STANDARDS

- b. The Goods supplied under the Contract shall conform to the standards mentioned in the Technical Specifications, or such other standards which ensure equal or higher quality, and when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution(s).

a. INSTRUCTIONS, DIRECTION & CORRESPONDENCE

- b. The Goods described in the Contract are to be supplied according to the standards, data sheets, tables, specifications and drawings attached thereto and/or enclosed with the Contract, itself and according to all conditions, both general and specific enclosed with the contract, unless any or all of them have been modified or cancelled in writing as a whole or in part.
- c. All instructions and orders to Supplier shall, excepting what is herein provided, be given by Purchaser/Consultant.
- d. All provision of Goods and supply of Services shall be carried out under the direction of and to the satisfaction of Purchaser/Consultant.
- e. All communications including technical/commercial clarifications and/or comments shall be addressed to Purchaser/ Consultant and shall always bear reference to the Purchase Order number.
- f. Invoices for payment against Contract shall be addressed to Purchaser.
- g. The Purchase Order number shall be shown on all invoices, communications, packing lists, containers and bills of lading, etc.

a. CONTRACT OBLIGATIONS

- b. Purchaser will be the sole judge in the matter of award of Contract and the decision of Purchaser shall be final and binding on the Supplier.

The Acceptance of Tender/Bid will be intimated to the successful Bidder by the Purchaser through notification of award of Contract either by fax / e - mail /letter or like means defined as Fax of Acceptance (FOA). The Contract shall enter into force on the date of Notification of Award and the same shall be binding on Purchaser and Supplier.

- c. If after award of the Contract, the Supplier does not acknowledge the receipt of FOA/PO or fails to furnish the Contract Performance Security within the prescribed time limit, the Purchaser reserves the right to cancel the Contract and apply all remedies available to him under the terms and conditions of this Contract.
- d. Once a Contract enters into force, the terms and conditions contained therein shall take precedence over the Supplier's bid and all previous correspondence.

e. Supplier's Responsibilities

8.4.1 The Supplier shall supply all the Goods and incidental Services as per terms and conditions of Purchase Order within the Delivery and Completion schedule mentioned therein.

f. Purchaser's Responsibilities

8.5.1 Whenever the supply of Goods and incidental Services requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

g. Joint and Several Responsibility:

8.6.1 Where Supplier's Goods/Equipment(s) or any part thereof are to be used jointly with other equipment(s) supplied by another manufacturer(s), the name of the such manufacturer(s) will be communicated separately to Supplier, the Purchaser/Consultant will hold Supplier and the manufacturer(s) jointly and severally responsible for the perfect operation of the entire group or section of equipment as regard the technical and mechanical characteristics stipulated in the specification. Such responsibility shall also include the mechanical coupling as well as dynamic and starting moment.

8.6.2 Consequently, Supplier shall establish and maintain all necessary contact with the manufacturer to be indicated by Purchaser/Consultant with a view to ensuring the exchange of all relevant data and information.

a. MODIFICATION IN CONTRACT

9.1 All modifications leading to changes in the Contract with respect to technical and/or commercial aspects including terms of delivery, shall be considered valid only when accepted in writing by Purchaser/Consultant by issuing amendment to the Contract. Issuance of acceptance or otherwise in such cases shall not be any ground for extension of agreed delivery date and also shall not affect the performance of contract in any manner except to the extent mutually agreed through a modification of Contract.

9.2 Based on the requirement, the Purchaser/Consultant in writing shall have the right to change the quantities, specifications, drawings etc. without changing the indented purpose of the Contract. If such changes cause an increase or decrease in the price or time required for the supply, the Supplier shall submit the proposal indicating the implications along with documentary evidence/ back-up documents/ calculations within 7 days, for review and processing of change order/amendment to the Contract by Purchaser/Consultant. On receipt of the amendment to the Contract, Supplier shall execute the change order.

9.3 Purchaser/Consultant shall not be bound by any printed conditions or provisions in the Supplier's Bid Forms or acknowledgment of Contract, invoices, packing list and other documents which purport to impose any conditions at variance with or supplemental to Contract.

a. USE OF CONTRACT DOCUMENTS & INFORMATION

10.1 The Supplier shall not, without the Purchaser's/Consultant's prior written consent, disclose the Contract or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purpose of such performance.

10.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in clause no. 10.1. except for purpose of performing the Contract.

a. PATENT RIGHTS, LIABILITY & COMPLIANCE OF REGULATIONS

11.1 Supplier hereby warrants that the use or sale of the materials delivered hereunder will not infringe claims of any patent covering such material and Supplier agrees to be responsible for and to defend at his sole expense all suits and proceedings against Purchaser based on any such alleged patent infringement and to pay all costs, expenses and damages which Purchaser and/or Consultant may have to pay or incur by reason of any such suit or proceedings.

11.2 The Supplier shall, indemnify and hold harmless the Purchaser/Consultant and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser/Consultant may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, industrial design rights or other intellectual property right registered or otherwise by reason of

(a) the installation or the use of the Goods or any part thereof in the country where the Site is located; and

(b) the sale of the products (which is produced by use of the Goods) in any country.

11.3 Supplier shall also protect and fully indemnify the Purchaser from any claims from Supplier's workmen/employees or their heirs, dependents, representatives, etc. or from any

other person(s) or company(ies) etc. for any acts of commissions or omission while executing the Contract.

- 11.4 Supplier shall be responsible for compliance with all requirements under the laws and shall protect and indemnify completely the Purchaser from any claims/penalties arising out of any infringements.

12.0 CONTRACT PERFORMANCE SECURITY (CPS):

- 12.1 Within 30 days after the Supplier's receipt of FOA, the Supplier shall furnish Contract Performance Security (CPS) in the form of Demand Draft/online direct transfer/Bank Guarantee in the format attached as Appendix-III, for an amount equivalent to defined percentage (mentioned in tender/ FOA) of the total Purchase Order Value excluding GST on finished goods or for the amount mentioned in the Tender Document/FOA.

- 12.2 The proceeds of CPS shall be appropriated by the Purchaser as compensation for any loss resulting from the Supplier's failure to complete his obligations under the Contract without prejudice to any of the rights or remedies the Purchaser may be entitled to as per terms and conditions of Contract. The proceeds of this CPS shall also govern the successful performance of Goods and Services during the entire period of Contractual Warrantee/Guarantee.

In case of forfeiture of Contract Performance Security/ Security Deposit, the forfeited amount will be considered inclusive of tax and tax invoice will be issued by KLL. The forfeiture amount will be subject to final decision of KLL based on other terms and conditions of order/ contract.

- 12.3 The CPS shall be denominated in the currency of the Contract.

- 12.4 The CPS shall be valid for the duration upto expiry of Warrantee/Guarantee period with claim period as per the format attached as Appendix-III. The Bank Guarantee will be discharged by Purchaser within 3 months from the date of expiration of the Supplier's entire obligations, including any warrantee/guarantee obligations, under the Contract.

- 12.5 All compensation, claim or other sums of money payable by the Supplier to the Purchaser/Consultant under terms of this Contract may be deducted from or paid by the encashment or sale of a sufficient part of his Contract Performance Security or from any sums which may be due or may become due to the Supplier by the Purchaser/Consultant of any account whatsoever and in the event of his CPS being reduced by reasons of any such deductions or sale of aforesaid, the Supplier shall within ten days thereafter make good in bank drafts/Bank Guarantee as aforesaid any sum or sums which may have been deducted

from or realized by sale of his CPS, or any part thereof. The Supplier shall pay to the Purchaser/Consultant on demand any balance remaining due. No interest shall be payable by the Purchaser/Consultant for sum deposited as CPS and no claim whatsoever in this regard shall be entertained by Purchaser.

a. INSPECTION, TESTING & EXPEDITING

- 13.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications. The special conditions of Contract and/or the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing the identity of any representative(s) retained for these purposes.
- 13.2 The inspections and tests may be conducted on the premises of the Supplier or his sub-contractor(s), at point of Delivery and/or at the Goods' final destination. When conducted on the premises of the Supplier or his sub-contractor (s), all reasonable facilities and assistance including access to the drawings and production data shall be furnished to the inspectors at no charge to the Purchaser.
- 13.3 Should any inspected or tested Goods fail to conform to the Specifications, the Purchaser may reject them and the Supplier shall either replace the rejected Goods or make all alterations necessary to meet Specifications' requirements, free of cost to the Purchaser.
- 13.4 The Purchaser's right to inspect, test and where necessary reject the Goods after the Goods' arrival in the Purchaser's country shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser, or their representative prior to the Goods shipment from the country of Origin.
- 13.5 The Inspector may follow the progress of the manufacture of the Goods under the Contract to ensure that the requirements outlined in the Contract are not being deviated with respect to schedule and quality. Supplier shall allow the Inspector to visit, during working hours, the workshops relevant for execution of the Contract during the entire period of Contract validity.
- 13.6 Any materials/goods covered under scope of Contract, which during the process of inspection by Inspector, at any stage of manufacture/fabrication and subsequent stages, prior to dispatch is found not conforming to the requirements/specifications of the Purchase Order, shall be liable for immediate rejection. Supplier shall be responsible and liable for immediate replacement of such material with acceptable material at no extra cost or impact on the delivery schedule to Purchaser.

- 13.7 In order to enable Purchaser's representatives to obtain entry visas in time, Supplier shall notify Purchaser two months before assembly, testing and packing of main Equipment. If requested, Supplier shall assist Purchaser's representatives in getting visas in the shortest possible time (applicable only in case of foreign order).
- 13.8 Supplier shall place at the disposal of the Inspector, free of charge, all tools, instruments, and other apparatus necessary for the inspection and/or testing of the Goods. The Inspector is entitled to prohibit the use and dispatch of Goods and/or materials which have failed to comply with the characteristics required for the Goods during tests and inspections.
- 13.9 Supplier shall advise in writing of any delay in the inspection program at the earliest, describing in detail the reasons for delay and the proposed corrective action.
- 13.10 All Tests and trials in general, including those to be carried out for materials not manufactured by Supplier shall be witnessed by the Inspector. Therefore, Supplier shall confirm to Purchaser by fax or e-mail about the exact date of inspection with at least 30 days notice. Supplier shall specify the Goods and quantities ready for testing and indicate whether a preliminary or final test is to be carried out.
- 13.11 If on receipt of this notice, Purchaser should waive the right to witness the test, timely information will be given accordingly.
- 13.12 Any and all expenses incurred in connection with tests, preparation of reports and analysis made by qualified laboratories, necessary technical documents, testing documents and drawings shall be at Supplier's cost. The technical documents shall include the reference and numbers of the standards used in the construction and, wherever deemed practical by the Inspector, copy of such standards.
- 13.13 Nothing in Clause-13 shall in any way release the Supplier from any warranty/guarantee or other obligations under this Contract.
- 13.14 Arrangements for all inspections required by Indian Statutory Authorities and as specified in technical specifications shall be made by Supplier.
- 13.15 **INSPECTION & REJECTION OF MATERIALS BY CONSIGNEES**

When materials are rejected by the consignee, the Supplier shall be intimated with the details of such rejected materials, as well as the reasons for their rejection, also giving location where such materials are lying at the risk & cost of the Supplier. The Supplier will be called upon either to remove the materials or to give instructions as to their disposal within 14 days and in the case of dangerous, infected and perishable materials within 48 hours from the

date of such written Notice, failing which the consignee/Purchaser will either return the materials to the Supplier on freight to pay or otherwise dispose them off at the Supplier's risk and cost. The Purchaser shall also be entitled to recover handling & storage charges, as per Clause No. 27.4

14. TIME SCHEDULE & PROGRESS REPORTING

14.1 Time Schedule Network/Bar Chart

14.1.1 Together with the Contract confirmation, Supplier shall submit to Purchaser, his time schedule regarding the documentation, manufacture, testing, supply, erection and commissioning of the Goods.

14.1.2 The time schedule will be in the form of a network or a bar chart clearly indicating all main or key events regarding documentation, supply of raw materials, manufacturing, testing, delivery, erection and commissioning.

14.1.3 The original issue and subsequent revisions of Supplier's time schedule shall be sent to Purchaser.

14.1.4 The time schedule network/bar chart shall be updated at least every second month or as agreed with Purchaser.

14.2 Progress Trend Chart/Monthly Report

14.2.1 Supplier shall report monthly to Purchaser, on the progress of the execution of Contract and achievement of targets set out in time bar chart.

14.2.2 The progress will be expressed in percentages as shown in the progress trend chart attached to the Time Schedule specification.

14.2.3 The first issue of the Progress Trend Chart will be forwarded together with the time bar chart alongwith Contract confirmation.

14.2.4 Purchaser's/Consultant's representatives shall have the right to inspect Supplier's premises with a view to evaluating the actual progress of Contract execution on the basis of Supplier's time schedule documentation.

14.2.5 Irrespective of such inspection, Supplier shall advise Consultant, with copy to Purchaser, at the earliest possible date of any anticipated delay in the progress.

14.3 Notwithstanding the above, in case progress on the execution of contract at various stages is not as per time schedule and is not satisfactory in the opinion of the Purchaser/Consultant

which shall be conclusive or Supplier shall neglect to execute the Contract with due diligence and expeditiousness or contravenes the provisions of the Contract, Purchaser/Consultant may give notice of the same in writing to the Supplier calling upon him to make good the failure, neglect or contravention complained of. Should Supplier fail to comply with such notice within the period considered reasonable by Purchaser/Consultant, the Purchaser/Consultant shall have the option and be at liberty to cancel the Contract wholly or in part out and make alternative arrangements to obtain the requirements and completion of Contract at the Supplier's risk and cost and recover from the Supplier, all extra cost incurred by the Purchaser on this account. In such event Purchaser/Consultant shall not be responsible for any loss that the Supplier may incur and Supplier shall not be entitled to any gain. Purchaser/Consultant shall, in addition, have the right to encash Contract Performance Security in full or part.

15. DELIVERY & DOCUMENTS AND DISPATCH SCHEDULE

- 15.1 Delivery of the Goods shall be made by the Supplier in accordance with terms specified in the Contract, and the goods shall remain at the risk of the Supplier until delivery has been completed.
- 15.2 Delivery shall be deemed to have been made:
- 52.** In the case of FOB/FCA, CFR/CPT& CIF/CIP Contracts, when the Goods have been put on board the ship/flight, at the specified port of loading and a clean Bill of Lading/Airway Bill is obtained. The date of Bill of Lading/Airway Bill shall be considered as the delivery date.
 - 53.** In case of FOT despatch point Contract (For Indian bidder), on evidence that the goods have been loaded on the carrier and a negotiable copy of the Goods receipt obtained. The date of LR/GR shall be considered as the date of delivery.
 - 54.** In case of FOT site (for Indian bidders) Contract, date of receipt of Goods by Purchaser/Consultant at the designated site(s) shall be considered as the date of delivery.
 - 55.** For Contracts involving Services, the delivery/completion period for such Services mentioned in Contract shall commence from zero date as intimated by the Purchaser/Consultant in writing or as mentioned in SCC or elsewhere.
- 15.3 The delivery terms are binding and essential and consequently, no delay is allowed without the written approval of Purchaser/Consultant. Any request concerning delay will be void unless accepted by Purchaser/Consultant through a modification to the Contract.

- 15.4 Delivery time shall include time for submission of drawings for approval, incorporation of comments, if any, and final approval of drawings by Purchaser/Consultant.
- 15.5 In the event of delay in delivery, Price Reduction Schedule as stipulated in Clause– 26 shall apply. The Contract shall be continued to be in force till the delivery of Goods or written Notice from Purchaser to Supplier for termination of Contract.
- 15.6 It should be noted that if a Contract is placed on a higher bidder as a result of this tender, in preference to the lowest acceptable offer, in consideration of an earlier delivery, the Supplier will be liable to pay to KLL the difference between the contract rate and the rate quoted by the lowest acceptable bidder in case of failure to complete the supply in terms of such Contract within the date of delivery specified in the Tender Document and incorporated in the Contract. This is without prejudice to other rights and remedies available to KLL, under terms of Contract.
- 15.7 The documentation, in English Language, shall be delivered in due time, in proper form and in the required number of copies as specified in the contract.
- 15.8 The additional copies of final drawings and instructions will be included in the package of goods, properly enveloped and protected.
- 15.9 The Supplier should comply with the Packing, Marking and Shipping Documentation Specifications.
- 15.10 **Dispatch Schedule**

15.10.1 Indian Bidder:

If Purchase Order issued based on FOT (Free on Truck) / FOR (Free on Rail) project site basis, materials shall be delivered at the destination on freight prepaid & door delivery basis and for the cases where order(s) are finalized on Ex-works basis the transportation will be arranged by supplier(s) / KLL on 'freight to pay' basis and the freight will be paid at the destination.

Supplier shall submit the following details of goods/cargo within 15 days from Notification of Award to the designated authority as per Purchase Order:

- (a) Shipments Schedule
- (b) Dimension details of packages
- (c) Detailed technical write-up along with Catalogue (if applicable)
- (d) Any other document/details, if mentioned in Purchase Order

The consignment should be handed over to transporter with E-way bill, wherever required as per law/act. In case such e-way bill is required to be issued by KLL, the concerned designated order issuing authority may be contacted in this regard. It will be the responsibility of the supplier to ensure the compliance of the provisions relating to E-Way bill before dispatch of the consignment and any financial implication arising due to non-compliance in this regard will be to the account of the supplier.

It shall be responsibility of the Supplier to send intimation immediately on dispatch of the material so that necessary arrangements can be made at site. Delays on account of the same shall solely be attributable to the Supplier.

15.10.2 Foreign Bidder:

Where the Supplier is required under the Contract to deliver the Goods on CFR or CIF, transportation of the Goods to the port of discharge or such other point in the country of destination as shall be specified in the Contract shall be arranged and paid for by the Supplier and the for the cases where order(s) are finalized on FOB or FCA basis the transportation will be arranged by KLL.

Supplier shall submit the following details of goods/cargo within 15 days from Notification of Award to the designated authority as per Purchase Order:

- (i) Shipments Schedule
- (ii) Dimension details of packages
- (iii) Detailed technical write-up along with Catalogue (if applicable)
- (iv) Any other document/details, if mentioned in Purchase Order

It shall be responsibility of the Supplier to send intimation and Original Shipping Documents immediately on dispatch of the material so that necessary arrangements can be made at Destination Port. Delays on account of the same shall solely be attributable to the Supplier.

All equipments / materials are to be insured by KLL for transit/marine risks unless specified otherwise in the purchase order, to cover the damages during the transportation etc.

Any such damage during the transportation shall be immediately notified to under-writers as well as the transporter, for further necessary action for recovery of transit damages.

For the purpose of arranging transit/marine insurance of the goods despatched / shipped, vendors are required to furnish the despatch / shipping particulars to the Insurance Company giving complete details of despatches along with Policy No. etc.

16 TRANSIT RISK INSURANCE

16.1 All Goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery.

16.2 The Purchaser shall arrange transit risks Insurance for the Goods supplied by indigenous Supplier unless specified otherwise in the Purchase Order, to cover the risk & damages during the inland transportation. Further, where delivery is on FOB/FCA or CFR/CPT basis, marine insurance shall be the responsibility of the Purchaser.

Any such damage during the transportation shall be immediately notified to under-writers as well as the transporter under intimation to consignee, for further necessary action for recovery of transit damages.

16.3 Insurance Requirements:

Indigenous Supplier: Transit risk insurance from F.O.T. despatch point onwards shall be arranged and borne by KLL unless specified otherwise in the Purchase Order.

Immediately after shipment, the Supplier shall inform the Purchaser's insurance agent and Purchaser/Consultant giving the details of shipment regarding LR number and date, invoice no. & date with value, number of packages/cases, gross/net weight, value of goods and Purchase Order number along with Insurance policy no., for arranging insurance of the consignment against transit risk from the despatch point to the Site/warehouse of the consignee.

Foreign Supplier : Marine insurance as well as transit insurance in Purchaser's country shall be arranged and borne by KLL, in case of EXW, FOB/FCA, CFR/C&F orders as per INCOTERMS.

Immediately after shipment, the Supplier shall inform the Purchaser's insurance agent and Purchaser/Consultant giving the details of shipment regarding name of vessel, B/L or AWB number and date, invoice no. & date with value, packing details including number of packages/cases&gross/net weight, value of goods and Purchase Order number & date, ETD & ETA of vessel at ports along with Insurance policy no., for arranging necessary insurance.

The Supplier shall ensure that in effecting despatch of Goods, the primary responsibility of the carriers for safe movement is always retained so that the Purchaser's interests are fully

safeguarded and are in no way jeopardised. The Supplier shall furnish the cost of materials against each equipment.

Purchaser's Insurance Agent & Insurance policy no.:

[The name and address of Insurance Agent and Insurance policy no. shall be mentioned in Tender Document/Purchase Order]

17. PACKING & SHIPPING INSTRUCTIONS AND TRANSPORTATION

17.1 Packing & Marking:

The Supplier shall dispatch the materials in worthy/Sea worthy/Air worthy packing conforming to the international norms of packing/ prescribed standards in force to withstand air/ocean/land journey and ensuring the safety of cargo en-route and also arrival of materials at ultimate destination in good condition. Hazardous/dangerous cargo ordered alongwith other material, against a particular supply order, the hazardous/dangerous cargo should be packed in a separate identifiable box to avoid payment of excess freight and delay in clearance. The consignment shall be comprehensively insured against all risks by the Supplier in case of contracts with transit insurance in Supplier's scope from Supplier's warehouse to ultimate consignee's ware-house basis and each case/packing shall have on its outer side the following marking in English in indelible ink:

- (i) Purchase Order No. and date
- (ii) Country of origin (Applicable for Foreign Suppliers)
- (iii) Name of Supplier
- (iv) Case number (running number upon total number of boxes).
- (v) Gross and net weight in Kilogram on each box.
- (vi) Dimension of packages
- (vii) Port of destination (Applicable for Foreign Suppliers)
- (viii) Consignee
- (ix) TOP/DON'T TURNOVER/HANDLE WITH CARE (as applicable)
- (x) The equipment which cannot be packed shall bear metal tags with above marking indicated thereon. Each box shall contain one copy of packing list and Material Safety Data Sheet (if applicable) in English.

In case of hazardous chemicals / materials the bidder will provide Material Safety Data Sheets along with quotation and also while dispatching the materials. The bidder will also provide special hazard identification symbols / markings on each packing of hazardous chemicals.

The Supplier shall be held liable for all damages or breakages to the goods due to the defective or insufficient packing as well as for corrosion due to insufficient protection. Packaged equipment or material showing damage, defects or shortages resulting from

improper packaging material or packing procedures or having concealed damage or shortages, at the time of unpacking shall be to the Supplier's account.

17.2 Shipping Instructions:

The Supplier shall notify the Purchaser/Consultant & all concerned and also the port as well as ultimate consignee by e-mail the Bill of Lading/Airway Bill number and date, the name of ship/flight, ship manifest, the date of departure of the ship/flight, the port of loading and destination, brief description of materials, gross/net weight and total number of packages, quantity, value and Purchase Order number and date within 2 days from the departure of the ship or within 24 hours from the departure of the flight from the port of loading.

17.3 Copies of dispatch documents should reach Purchaser/Consultant well in advance failing which any demurrage/wharfage etc. incurred on account of late/ non-receipt of dispatch document/wrong dispatches of consignment will be recovered from Supplier. In case of documents through Bank, it may be noted that the documents will be retired only if the dispatches are made as per the terms of the Purchase Order.

17.4 Where the Supplier is required under the Contract to deliver the Goods on FOB/FCA basis, transport of the Goods until delivery, that is, upto and including the point of putting the Goods on board the export conveyance at the specified port of loading, shall be arranged and paid for by the Supplier and the cost thereof shall be included in the Purchase Order Value.

17.5 Where the Supplier is required under the Contract to deliver the Goods on CFR/CPT or CIF/CIP basis, transport of the Goods to the port of discharge or such other point in the country of destination as specified in the Contract shall be arranged and paid for by the Supplier and the cost thereof shall be included in the Purchase Order Value.

17.6 Where the Supplier is required under the Contract to deliver the Goods on FOT destination point basis, transport of the Goods upto the destination point shall be specified in the Contract shall be arranged and paid by the Supplier and the cost thereof shall be included in the Purchase Order Value.

17.7 As per the Section 3 of the "Carriage by Road Act 2007", no person can engage in the business of a common carrier unless granted a certificate of registration to do so and any transportation of goods through unregistered common carrier is illegal. Accordingly, Goods should be transported through registered common carriers only.

18. INCIDENTAL SERVICES

- 18.1 The Supplier may be required to provide any or all of the following Services:
- 18.1.1 Performance or supervision of onsite assembly and/or start-up of the supplied Goods:
- 18.1.2 Furnishing tools required for assembly and/or maintenance of the supplied Goods:
- 18.1.3 Performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this Service shall not relieve the Supplier of any warrantee/guarantee obligations under the Contract.
- 18.1.4 Training of the Purchaser's personnel at the Supplier's premise and/or at Site, in assembly, start-up operation, maintenance and/or repair of the supplied Goods at no extra cost. However, Purchaser will bear boarding, lodging & personal expenses of Trainees.
- 18.2 Prices charged by the Supplier for the preceding incidental Services, shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.
- 18.3 When required, Supplier shall depute necessary personnel for supervision and/or erection of the Goods/Equipments at site for duration to be specified by Purchaser on mutually agreed terms. Supplier's personnel shall be available at Site within seven Days for emergency action and twenty-one Days for medium and long-term assistance, from the date of notice given by Purchaser.
- 18.4 If the cost of incidental Services is not shown separately in the Price Schedules /t Schedule of Rates, then the same shall be considered included in the quoted prices.

19. SPARE PARTS, MAINTENANCE TOOLS ETC.

- 19.1 Supplier may be required to provide any or all of the following materials and notification pertaining to Spare parts (including standby equipments, accessories, sub-assemblies/assemblies etc.)manufactured or sourced by the Supplier. Such Spares shall be supplied directly by Supplier and the responsibility shall not be passed on to his dealers/distributers/stockists or Indian associates.
- 19.1.1 Such Spare parts as the Purchaser may opt to purchase from the Supplier, provided that his option shall not relieve the Supplier of any warrantee obligations under the Contract, and
- 19.1.2 In the event of termination of production of the spare parts:
- i) Advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure such Spares, and

- ii) Following such termination, furnishing at no cost to the Purchaser, the blue prints, drawings and specifications of the spare parts, if any when requested.
- 19.2 Supplier shall supply item wise list with value of each item of Spare parts and maintenance tools requirements, along with full details of all manufacturers/ sub-supplier(s) for spares/maintenance tools sourced by Supplier.
- 19.3 Spare parts shall be new and of first class quality as per engineering standards/ codes, free of any defects (even concealed), deficiency in design, materials & workmanship and also shall be completely interchangeable with the corresponding parts.
- 19.4 Type and sizes of FILTER ELEMENTS shall be clearly indicated.
- 19.5 Spare parts shall be packed for long storage under tropical climatic conditions in suitable cases, clearly marked as to intended purpose.
- 19.6 A list of special tools and gauges required for normal maintenance and special handling and lifting appliances, if any, for the Goods, shall be submitted to Purchaser.
- 19.7 Bidders should note that if they do not comply with above conditions, their Bid may be rejected.

20. **GUARANTEE**

- 20.1 All Goods or Materials shall be supplied strictly in accordance with the specifications, drawings, data sheets, other attachments and conditions stated in the Contract.

No deviation from such specifications or alterations or of these conditions shall be made without Purchaser's /Consultant's agreement in writing which must be obtained before any work against the order is commenced. All materials supplied by the Supplier pursuant to the Contract (irrespective of whether engineering, design data or other information has been furnished, reviewed or approved by Purchaser/Consultant) are guaranteed to be of the best quality of their respective kinds (unless otherwise specifically authorised in writing by Purchaser/Consultant) and shall be free from faulty design, workmanship and materials, and to be of sufficient size and capacity and of proper materials so as to fulfil in all respects all operating conditions, if any, specified in the Contract.

If any trouble or defect, originating with the design, material, workmanship or operating characteristics of any materials, arises at any time prior twelve(12) months from the date of the first commercial operation of the Goods/Equipments or twenty four (24) months from the date of last shipment whichever period shall first expire, and the Supplier is notified thereof, Supplier shall, at his own expense and as promptly as possible, make such

alterations, repairs and replacements as may necessary to permit the materials to function in accordance with the specifications and to fulfil the foregoing guarantees. However, in no case, warranty of repaired/replaced part shall exceed 24 months from the date of commissioning of original equipment or 36 months from last supply, whichever is earlier. This period excludes repair/replacement/rectification period of defective goods.

Purchaser/Consultant may, at his option, remove such defective materials, at Supplier's expense in which event Supplier shall, without cost to Purchaser/Consultant and as promptly as possible, furnish and install proper materials.

In case defects are of such nature that Goods shall have to be taken to Supplier's works for rectification etc., Supplier shall take the Goods at his costs after giving necessary undertaking or security as may be required by Purchaser/Consultant. Purchaser/Consultant may, if so required by the Supplier, dispatch the Goods by quickest mode on "Freight-to-pay" basis to the Supplier's works. After repairs Supplier shall deliver the Goods at Site on freight pre-paid basis. All risks in transit to and fro and all expenses on account of to and fro freight, insurance, customs clearance, transportation and handling, port charges and customs duty etc. shall be borne by the Supplier.

In the event that the materials supplied do not meet the specifications and/or not in accordance with the drawings data sheets or the terms of the Contract (including guarantee period) and rectification is required at site, Purchaser/Consultant shall notify the Supplier giving full details of differences. The Supplier shall attend the site within seven (7) days of receipt of such notice to meet and agree with representatives of Purchaser/Consultant, the action required to correct the deficiency. Should the Supplier fail to attend meeting at Site within the time specified above, Purchaser/Consultant shall immediately rectify the work/materials and Supplier shall reimburse Purchaser all costs and expenses incurred in connection with such trouble or defect.

20.2 Performance Guarantee of Equipment

20.2.1 Supplier shall guarantee that the performance of the Equipment supplied under the Contract shall be strictly in conformity with the specifications and shall perform the duties specified under the Contract.

20.2.2 If the Supplier fails to prove the guaranteed performance of the Equipment set forth in the specification, the Supplier shall investigate the causes and carry out necessary rectifications/modifications to achieve the guaranteed performance. In case the Supplier fails to do so within a reasonable period, the Supplier shall replace the Equipment and prove guaranteed performance of the new equipment without any extra cost to Purchaser.

20.2.3 If the Supplier fails to prove the guarantee within a reasonable period, Purchaser/Consultant shall have the option to take over the Equipment and rectify, if possible, the Equipment to fulfil the guarantees and/or to make necessary additions to make up the deficiency at Supplier's risk and cost. All expenditure incurred by the Purchaser/Consultant in this regard shall be to Supplier's account.

21. TERMS OF PAYMENT

21.1 In case of supply, payment shall be released **within 15 days** after receipt and acceptance of goods and submission of relevant documents complete in all respects through e-banking unless otherwise specifically mentioned in the Special Conditions of Contract.

21.2 The type(s) of payment to be made to the Supplier under this Contract shall be as mentioned above unless otherwise specifically specified in the Special Conditions of Contract.

21.3 The Supplier's request(s) for payment shall be made to the Purchaser in writing accompanied by an invoice describing, as appropriate, the Goods delivered and services performed, and by shipping documents submitted, and upon fulfillment of other obligations stipulated in the Contract.

21.4 Payment will be made in the currency or currencies in which the Contract Price has been stated in the Supplier's bid, as well as in other currencies in which the Supplier had indicated in his bid that he intends to incur expenditure in the performance of the Contract and wishes to be paid. If the requirements are stated as a percentage of the bid price alongwith exchange rates used in such calculations these exchange rates shall be maintained.

21.5 Mentioning of PAN no. in Invoice/Bill

As per CBDT Notification No. 95/2015 dated 30.12.2015, mentioning of PAN no. is mandatory for transactions related to procurement of goods / services exceeding Rs. 2 Lakhs per transaction or as amended from time to time.

Accordingly, Supplier should mention their PAN no. in their invoice/ bill for any transaction exceeding Rs. 2 lakhs. As provided in the notification, in case Supplier do not have PAN no., they have to submit declaration in Form 60 along with invoice/ bill for each transaction.

Payment of Supplier shall be processed only after fulfilment of above requirement.

21.6 Foreign Suppliers should ensure submission of Tax Residency Certificate(TRC), Form 10F or Permanent Establishment(PE) information within specified time.

General Notes:

- (i) All foreign currency payments to foreign bidder shall be released through Cash against Documents (CAD) through bank, If Supplier insists payment through an irrevocable Letter of Credit, which shall be opened through Government of India Nationalised Bank and hence shall not be confirmed. In case any bidder insists on confirmation, charges towards confirmation shall be borne by him. L/C shall be established within 30 days after receipt of acknowledgement of Letter/Fax of Acceptance/Purchase Order together with Contract Performance Security.
- (ii) For dispatches on FOT dispatch point (in India) basis involving payment through bank, the payment shall be through Purchaser's bank. Payment through Bank, wherever applicable, shall be released as per normal banking procedures.
- (iii) All bank charges incurred in connection with payments shall be to Supplier's account in case of Indian bidders and to respective accounts in case of Foreign bidder.
- (iv) Unless otherwise specifically stated in Bid Document, all payments shall be made in the currency quoted.
- (v) No interest charges for delay in payments, if any, shall be payable by Purchaser.
- (vi) In case of Indian bidder, variation, if any, on account of customs duty on their built-in-import content, as per terms of bid document, shall be claimed separately by bidder after receipt of goods at site(s). However, any price benefits to the Purchaser, on account of such variation as per terms specified in the Bid Document, shall be passed on to the Purchaser alongwith invoicing itself.
- (vii) Agency commission, if any, to Indian agent for Foreign bidders, indicated in prices, shall be paid to the agent in equivalent Indian Rupees on receipt and acceptance of material at site and after completion of its role & responsibility by such agent.
- (viii) Wherever buy-back is involved, 5% payment towards supply of new item shall be made only after uplifting the buy-back items.

22. PRICES

- 22.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not, with the exception of any price adjustments authorized by the Contract, vary from the prices quoted by the Supplier in his bid.

23. SUBLETTING & ASSIGNMENT

- 23.1 The Supplier shall not without previous consent in writing of the Purchaser authority, sublet, transfer or assign the Contract or any part thereof or interest therein or benefit or

advantage thereof in any manner whatsoever. Provided, nevertheless, that any such consent shall not relieve the Supplier from any obligation, duty or responsibility under the Contract.

23.2 There is no obligation on part of Purchaser/Consultant to release any payment to Sub-Contractor.

24. TIME AS ESSENCE OF CONTRACT

24.1 The original or extended time of delivery/completion of the Goods/Services as stipulated in the Contract shall be deemed to be the essence of the Contract.

25. DELAYS IN THE SUPPLIER'S PERFORMANCE

25.1 If the specified delivery schedule is not adhered to or the progress of manufacture or supply of the items is not satisfactory or is not in accordance with the progress schedule, the Purchaser has the right to:

- (i) hire for period of delay from elsewhere goods which in Purchaser's opinion will meet the same purpose as the Goods which are delayed and Supplier shall be liable without limitation for such hire charges plus overhead charges @ 15% thereupon; or
- (ii) terminate /cancel the Contract in whole or in part without liability for termination/cancellation charges. In that event, Purchaser may procure from elsewhere goods which Purchaser's opinion would meet the same purpose as the Goods for which Contract is cancelled and Supplier shall be liable without limitations for the difference between the cost of such substitution and the price set forth in the Contract for the Goods involved; or
- (iii) hire the substitute goods vide (i) above and if the ordered goods continue to remain undelivered thereafter, cancel the order in part or in full vide (ii) above.

25.2 Any inexcusable delay by the Supplier or his sub-contractor shall render the Supplier liable, without prejudice to any other terms of the Contract, to any or all of the following sanctions:

- 43 forfeiture of Contract Performance Security,
- 44 imposition of price reduction for delay in delivery and
- 45 termination of the contract for default.

As per Performance Evaluation procedure (Appendix-II), the Supplier's non-performance or poor performance shall affect the future business relationship with KLL and its PMCs.

26. PRICE REDUCTION SCHEDULE (PRS) FOR DELAYED DELIVERY

26.1 Subject to Clause-29, if the Supplier fails to deliver any or all of the Goods or performance of the services within the time period (s) specified in the Contract, the Purchaser shall, without prejudice to his other remedies under the Contract, deduct from the Contract Price, a sum calculated on the basis of the Contract Price, including subsequent modifications.

26.1.1 Deductions shall apply as per following formula:

(i) For order including only supply of Goods/Equipment/Package

In case of delay in delivery of equipment/materials or delay in completion, PRS shall be applicable ½ % (half percent) of the order value per complete week of delay or part thereof subject to a maximum of 5% (five percent) of the Total Contract Price/ Order Value.

The portion of supply completed in all respect which can be used for commercial operation shall not be considered for applying PRS, if delivered within contractual delivery period. The remaining supplies which are completed beyond the contractual delivery shall attract price reduction schedule @ 1/2 % of the delayed delivery value maximum up to 5% of total Purchase Order Value.

Decision of the Purchaser in the matter of usage for commercial operation shall be final and binding.

Note: When installation and/or commissioning is in Supplier's scope, the above clause 'A' will not be applicable, in such cases clause 'B' below will be applicable.

(ii) For order including both supply of Goods and Services (i.e. supervision, installation, erection, commissioning etc.)

For delay in supply:

The PRS shall be applicable @ ½ % (half percent) of price of respective goods/equipment / package (including spares etc. even if prices are indicated separately in the order but excluding value of Services) per week of delay or part thereof subject to maximum 5% (five percent) of Total Contract/ Order Value excluding value of Services.

For delay in Services (i.e. supervision, installation, erection, commissioning etc.):

The PRS shall be applicable @ ½ % (half percent) of Total Contract/ Order Value of respective equipment / package (including value of spares, Services etc. even if

prices are indicated separately in the Contract) per week of delay or part thereof subject to maximum 5% (five percent)of Total Contract/ Order Value including value of Services.

In no case, total PRS shall exceed 5% (five percent)of Total Contract/ Order Value (Supply +Services).

However, if the completion of supply and services together are achieved within the overall completion period, no PRS shall be applicable.

For specific provision relating to supervision by Supplier (wherever applicable), refer SCC.

- 26.2 Both Supplier and Purchaser agree that the above percentages of price reduction are genuine pre estimates of the loss/damage which the Purchaser would have suffered on account of delay/breach on the part of the Supplier and the said amount will be payable on demand without there being any proof of the actual loss/or damage caused by such breach/delay. A decision of the Purchaser/EIC in the matter of applicability of price reduction shall be final and binding.
- 26.3 In case of delay in delivery on the part of Supplier, the invoice/document value shall be reduced proportionately for the delay and payment shall be released accordingly.
- 26.4 In the event the invoice value is not reduced proportionately for the delay, the Purchaser may deduct the amount so payable by Supplier, from any amount falling due to the Supplier or by recovery against the Contract Performance Security.
- 26.5 In case of Annual Rate Contract (ARC), the PRS shall be applicable on the value of Release Order /Individual Order(s) and not on the entire value of ARC.
- 26.6 In case of FOT Site /dispatch point order, the value referred in PRS clause is the EXW value (i.e. excluding GST and Freight/Inland Transportation) for delay in supply. In case of Import, PRS shall be applicable on FOB amount (except EXW orders) for delay in supply.
- 26.7 PRS is the reduction in the consideration / contract value for the goods / services covered under this contract. In case of delay in supply/ execution of contract, Supplier should raise invoice for reduced value as per Price Reduction Schedule Clause (PRS clause). If Supplier has raised the invoice for full value, then Supplier shall issue Credit Note towards the applicable PRS amount with applicable taxes.

In such cases if Supplier fails to submit the invoice with reduced value or does not issue credit note as mentioned above, KLL will release the payment to Supplier after giving effect of the PRS clause with corresponding reduction of taxes charged on vendor's invoice, to avoid delay in delivery/collection of material.”

In case any financial implication arises on KLL due to issuance of invoice without reduction in price or non-issuance of Credit Note, the same shall be to the account of Supplier. KLL shall be entitled to deduct / setoff / recover such GST amount (CGST & SGST/UTGST or IGST) together with penalties and interest, if any, against any amounts paid or becomes payable by KLL in future to the Supplier under this contract or under any other contract.

27. REJECTIONS, REMOVAL OF REJECTED EQUIPMENT & REPLACEMENT

- 27.1 Preliminary inspection at Supplier's works by Inspector shall not prejudice Purchaser's/Consultant's claim for rejection of the Goods / Equipment on final inspection at Site or claims under warranty provisions.
- 27.2 If the Equipments are not of specification or fail to perform specified duties or are otherwise not satisfactory the Purchaser/Consultant shall be entitled to reject the Equipment/Material or part thereof and ask free replacement within reasonable time failing which obtain his requirements from elsewhere at Supplier's cost and risk.
- 27.3 Nothing in this clause shall be deemed to deprive the Purchaser and/or Affect any rights under the Contract which it may otherwise have in respect of such defects or deficiencies or in any way relieve the Supplier of his obligations under the Contract.
- 27.4 Goods/Equipment rejected by the Purchaser/Consultant shall be removed by the Supplier at his cost within 14 days of notice after repaying the amounts received against the Supply. Failure or any delays of Supplier for removal of Goods/Equipment, the Purchaser shall also be entitled to recover handling and storage charges @5% of the estimated value of such Goods for each month or part of a month without relieving the Supplier from any other related liability. In the event of the Supplier's failure to remove the same within a period of 6 months or as decided by the Purchaser, the Purchaser may take action for removal through auction or sale on behalf of the Supplier and at his risk in all respects. The Supplier shall be liable to pay the Purchaser the handling & storage charges as mentioned above plus overhead charges @ 15% of sale value of such materials. The decision of Purchaser w.r.t. such removal and the amount of the proceeds shall be final and binding on the Supplier. The Purchaser shall in no way be responsible for any deterioration or damage to the Equipment under any circumstances whatsoever.

27.5 In case of rejection of Equipment, Purchaser shall have the right to recover the amounts, if any, from any of Supplier's invoices pending with Purchaser or by alternative method(s).

28. TERMINATION OF CONTRACT

28.1 Termination for Default

28.1.1 The Purchaser may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or in part:

- i) If the Supplier fails to deliver any or all of the Goods within the time period(s) specified in the Contract; or
- ii) If the Supplier fails to perform any other obligation(s) under the Contract, and
- iii) If the Supplier, in either of the above circumstances, does not cure his failure within a period of 30 days (or any such period as the Purchaser may authorize in writing) after receipt of the default notice from the Purchaser.

28.1.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to clause no. 28.1.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, goods similar to those undelivered and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods. However, the Supplier shall continue performance of the Contract to the extent not terminated.

28.1.3 In case of termination of Contract herein set forth (under clause 28) [except under conditions of Force Majeure (under clause 29)], the Purchaser is entitled to put Supplier on under Suspension and/or Holiday as per provisions of "Procedure for Action in Case of Corrupt/Fraudulent/Collusive/Coercive Practices (Appendix-I)" and "Procedure for Evaluation of Performance of Vendor/ Supplier/ Contractor/ Consultant" of Tender Document (Appendix-II)".

28.2 Termination for Insolvency

28.2.1 The Purchaser, may at any time, terminate the Contract by giving written notice to the Supplier, without compensation to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

28.3 Termination for Convenience including short-closure

28.3.1 The Purchaser may, by written notice/communication to the Supplier, may short-close/terminate the Contract, in whole or part, at any time for his convenience. The notice/communication to the Supplier shall specify that short-closure/termination is for the

Purchaser's convenience, the extent to which performance of work under the Contract is short-closed/terminated and the date upon which such short-closure/termination becomes effective.

28.3.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice/communication of termination/short-closure shall be purchased by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may opt:

- (i) to have any portion completed and delivered at the Contract terms and prices, and /or
- (ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

28.4 Termination of Contract for Corrupt/Fraudulent/ Collusive/Coercive Practices and Non-Performance

If the Bidder/Supplier is found to have indulged in Corrupt/Fraudulent /Collusive/Coercive practices, the Contract shall be terminated and the Bidder/ Supplier shall be banned for future business with KLL. The detailed procedure for banning including suspension in this regard is attached as Appendix-I to this GCC.

Due to non- performance of the Supplier leading to termination of the Contract, the Supplier shall be put on suspension list and also on holiday list of Purchaser for a period mentioned in the detailed procedure. The detailed procedure for evaluation of performance in this regard is attached as Appendix-II to this GCC.

29. FORCE MAJEURE

29.1 Force Majeure shall mean and be limited to the following:

- (i) Act of terrorism;
- (ii) Riot, war, invasion, act of foreign enemies, hostilities (whether war be declared or not), civil war, rebellion, revolution, insurrection of military or usurped power;
- (iii) Ionizing, radiation or contamination, radio activity from any nuclear fuel or from any nuclear waste from the combustion of nuclear fuel, radioactive toxic explosive or other hazardous properties of any explosive assembly or nuclear component;
- (iv) Pandemic, Epidemics, earthquakes, flood, natural fire/wildfire, hurricanes, typhoons or other physical natural disaster, but excluding weather conditions regardless of severity; and

- (v) Freight embargo, strikes at national or state-wide level or industrial disputes (more than 7 consecutive days) at a national or state-wide level where supplier's Works is located.

For the avoidance of doubt, inclement weather, third party breach, delay in supply of materials (other than conditions mentioned above at sl. no. (i) to (v)) or commercial hardship shall not constitute a Force Majeure event.

The Supplier shall advise Purchaser/Consultant by a registered letter/courier duly certified by the local Chamber of Commerce or statutory authorities, the beginning and end of the above causes of delay within ten (10) days of the occurrence and cessation of such Force Majeure Conditions.

The extension of time for a period upto the period of delay attributable to the causes of Force Majeure shall be the sole remedy of the Supplier for any delay under this clause and the Supplier shall not be entitled in addition to or in lieu of such extension to claim any damages or compensation on any account whatsoever whether under the law governing contracts or any other law in force, and the Supplier hereby waives and disclaims any and all contrary rights.

In case force majeure conditions persists for period exceeding 02 (Two) Months, the Purchaser reserves the right to cancel the Purchase order or part of it.

Supplier shall categorically specify the extent of Force Majeure Conditions prevalent in their works at the time of submitting their bid and whether the same have been taken into consideration or not in their quotations. In the event of any force majeure cause, the Supplier or the Purchaser shall not be liable for delays in performing their obligations under this order and the delivery dates will be extended to the Supplier without being subject to price reduction for delayed deliveries, as stated elsewhere.

Payment in case of termination due to Force Majeure

In case of termination of Order/contract due to Force Majeure, the Supplier will get payment of goods supplied and/ or services performed as at the date of the commencement of the relevant event of Force Majeure.

The Supplier has no entitlement and Purchaser has no liability for:

- (i) Any costs, losses, expenses, damages or the payment of any part of the Order/ Contract Price during an event of Force Majeure; and
- (ii) Any delay costs in any way incurred by the Supplier due to an event of Force Majeure.

30. DISPUTE RESOLUTION MECHANISM

30.1 Conciliation

KLL has framed the Conciliation Rules 2010 in conformity with Part – III of the Arbitration and Conciliation Act 1996 as amended from time to time for speedier, cost effective and amicable settlement of disputes through conciliation. All issue(s)/dispute(s) arising under the Contract, which cannot be mutually resolved within a reasonable time, may be referred for conciliation in accordance with KLL Conciliation Rules 2010 as amended from time to time. A copy of the said rules have been made available on KLL’s web site i.e. www.gailonline.com.

Where invitation for Conciliation has been accepted by the other party, the Parties shall attempt to settle such dispute(s) amicably under Part-III of the Arbitration and Conciliation Act, 1996 and KLL Conciliation Rules, 2010. It would be only after exhausting the option of Conciliation as an Alternate Dispute Resolution Mechanism that the Parties hereto shall invoke Arbitration Clause. For the purpose of this clause, the option of ‘Conciliation’ shall be deemed to have been exhausted, even in case of rejection of ‘Conciliation’ by any of the Parties.

30.2 Arbitration

All issue(s)/dispute(s) excluding the matters that have been specified as excepted matters and listed at clause no. 30.2.6 and which cannot be resolved through Conciliation, such issue(s)/dispute(s) shall be referred to arbitration for adjudication by Sole Arbitrator.

The party invoking the Arbitration shall have the option to either opt for Ad-hoc Arbitration as provided at Clause 30.2.1 below or Institutionalized Arbitration as provided at Clause 30.2.2 below, the remaining clauses from 30.2.3 to 30.2.7 shall apply to both Ad-hoc and Institutional Arbitration:-

30.2.1 On invocation of the Arbitration clause by either party, KLL shall suggest a panel of three independent and distinguished persons (Retd Supreme Court & High Court Judges only) to the other party from the Panel of Arbitrators maintained by ‘Delhi International Arbitration Centre (DIAC) to select any one among them to act as the Sole Arbitrator. In the event of failure of the other party to select the Sole Arbitrator within 30 days from the receipt of the communication from KLL suggesting the panel of arbitrators, the right of selection of the sole arbitrator by the other party shall stand forfeited and KLL shall appoint the Sole Arbitrator from the suggested panel of three Arbitrators for adjudication of dispute(s). The decision of KLL on the appointment of the sole arbitrator shall be final and binding on the other party. The fees payable to Sole Arbitrator shall be governed by the fee Schedule of ‘‘Delhi International Arbitration Centre’.

OR

30.2.2 If a dispute arises out of or in connection with this contract, the party invoking the Arbitration shall submit that dispute to any one of the Arbitral Institutions i.e. ICADR/ICA/DIAC/SFCA and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd. Supreme Court/High Court Judge to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to a specific Arbitral institution for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

30.2.3 The cost of arbitration proceedings shall be shared equally by the parties.

30.2.4 The Arbitration proceedings shall be in English language and the seat, venue and place of Arbitration shall be New Delhi, India only.

30.2.5 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matter relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.

30.2.6 **List of Excepted matters:**

- A. Dispute(s)/issue(s) involving claims below Rs 25 lakhs and above Rs 25 crores.
- B. Dispute(s)/issue(s) relating to indulgence of Supplier/Vendor/Bidder in corrupt/fraudulent/collusive/coercive practices and/or the same is under investigation by CBI or Vigilance or any other investigating agency or Government.
- C. Dispute(s)/issue(s) wherein the decision of Engineer-In-Charge/owner/KLL has been made final and binding in terms of the Contract.

30.2.7 Disputes involving claims below Rs 25 Lakhs and above Rs. 25 crores:-Parties mutually agree that dispute(s)/issue(s) involving claims below Rs 25 Lakhs and above Rs 25 crores shall not be subject matter of Arbitration and are subject to the exclusive jurisdiction of the Court(s) situated at New Delhi.

30.3 Governing Law and Jurisdiction:

The Contract shall be governed by and construed in accordance with the laws in force in India. The Parties hereby submit to the exclusive jurisdiction of the Courts situated at New Delhi for adjudication of disputes, injunctive reliefs, actions and proceedings, if any, arising out of this Contract.

30.4 Disputes between CPSE's/Government Department's/ Organizations

Subject to conciliation as provided above, in the event of any dispute (other than those related to taxation matters) or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts) inter se and also between CPSEs and Government Departments /Organizations), such dispute or difference shall be taken up by either party for resolution only through AMRCD as mentioned in OPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018.

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through it's administrative Ministry/Department, whose decision will be final and binding on all concerned.

The above provisions mentioned at clause no. 30.1 to 30.4 shall supersede provisions relating to Conciliation, Arbitration, Governing Law & Jurisdiction and Disputes between CPSE's/ Government Department's/ Organizations mentioned elsewhere in tender document.

30.5 Continuance of the Contract:

Notwithstanding the fact that settlement of dispute(s) (if any) may be pending, the parties hereto shall continue to be governed by and perform the work in accordance with the provisions under this Contract and no payment due or payable to the Supplier shall be withheld on account of such proceedings.

30.6 Non-Applicability of Arbitration Clause in Case of Banning of Vendors/ Suppliers / Bidders indulged in Fraudulent/ Coercive Practices

Notwithstanding anything contained contrary in GCC or elsewhere in the Purchase Order, in case it is found that the Bidder/ Supplier indulged in fraudulent/ coercive practices at the time of bidding, during execution of the Contract and/or on other grounds as mentioned in KLL's "Procedure for action in case Corrupt/ Fraudulent/ Collusive/Coercive Practices" (Appendix-I), the Bidder/Supplier shall be banned (in terms of aforesaid procedure) from the date of issuance of such order by KLL to such Bidder/Supplier.

The Bidder /Supplier understands and agrees that in such cases where Bidder /Supplier has been banned (in terms of aforesaid procedure) from the date of issuance of such order by KLL, such decision of KLL shall be final and binding on the Bidder /Supplier and the 'Arbitration Clause' mentioned in the GCC or elsewhere in the Purchase Order shall not be applicable for any consequential issue /dispute arising in the matter.

31. GOVERNING LANGUAGE

- 31.1 The Contract shall be written in English language as specified by the Purchaser/Consultant in the Instruction to Bidders. All literature, correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in English language. Printed literature in other language shall only be considered, if it is accompanied by an English translation. For the purposes of interpretation, English translation shall govern and be binding on all parties. The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.
- 31.2 The Supplier shall ensure that the language/terminology/description of Goods used in Purchase Order/Bill of Lading/Airway Bill/Invoice is verbatim in English and not at variance.

32. NOTICES

- 32.1 TO THE SUPPLIER: Any notice to be given to the Supplier may be served by the Purchaser/Consultant by facsimile / e-mail or through registered post/Courier at the address/contact information furnished by the Supplier. Proof of issue of any such notice could be conclusive of the Supplier having been duly informed of all contents therein.
- 32.2 TO THE PURCHASER/CONSULTANT: Any notice to be given to the Purchaser/Consultant under the terms of the Contract may be served by the Supplier, by facsimile / e-mail or delivering the same through registered post /Courier at the concerned site office.
- 32.3 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

33. TAXES & DUTIES

- 33.1 A foreign Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country.

33.2 A domestic Supplier shall be entirely responsible for all taxes, duties, license fees etc. incurred until the delivery of the contracted goods to the Purchaser. However, GST on finished products shall be reimbursed by Purchaser.

33.3 Customs duty payable in India for imported Goods ordered by Purchaser on foreign Supplier shall be borne and paid by Purchaser.

33.4 Any income tax payable in respect of supervisory services rendered by foreign Supplier under the Contract shall be as per the Indian Income Tax Act and shall be borne by Supplier. It is upto the Bidder/Supplier to ascertain the amount of these taxes and to include them in his Bid price.

33.5 **TDS**

33.5.1 TDS as applicable will be deducted by KLL under section 194Q of the Income Tax Act, 1961 on Purchases exceeds Rs. 50 Lakhs or limit defined therein from time to time during the financial year.

33.5.2 Since KLL is liable to deduct Income Tax TDS under section 194Q, the provision of TCS as per section 206C(1H) of the Income Tax Act, 1961 shall not be applicable.

33.5.3 Higher rate of TDS for non-filers of ITR

As per Section 206AB of Income Tax Act, 1961, in case of any vendor/customer who does not filed their Income Tax Return for both of the two previous years preceding to current year and aggregate amount of TDS is more than or equal to Rs. 50,000/- in each of those previous two years (or limit defined by Govt. from time to time), then TDS will be deducted at the higher of following rates:

- (i) Twice the rate mentioned in relevant TDS section.
- (ii) Twice the rate or rates in force
- (iii) 5%

34. **BOOKS & RECORDS**

34.1 Supplier shall maintain adequate books and records in connection with Contract and shall make them available for inspection and audit by Purchaser/Consultant or their authorized agents or representatives during the terms of Contract until expiry of the Contract Performance Security. Fixed price (lumpsum or unit price) Contract will not be subject to audit as to cost except for cost reimbursable items, such as escalation and termination claims, transportation and comparable requirements.

35. **PERMITS & CERTIFICATES**

35.1 Supplier shall procure, at his expense, all necessary permits, certificates and licences required by virtue of all applicable laws, regulations, ordinances and other rules in effect at the place where any of the work is to be performed, and Supplier further agrees to hold Purchaser and/or Consultant harmless from liability or penalty which might be imposed by reason of any asserted or established violation of such laws, regulations, ordinances or other rules. Purchaser will provide necessary permits for Supplier's personnel to undertake any work at Site in connection with Contract.

36. **GENERAL**

36.1 In the event that terms and conditions stipulated in the General Conditions of Contract should deviate from terms and conditions stipulated in the Contract, the latter shall prevail.

36.2 **Losses due to non-compliance of Instructions**

Losses or damages occurring to the Purchaser owing to the Supplier's failure to adhere to any of the instructions given by the Purchaser/Consultant in connection with the Contract execution shall be recoverable from the Supplier.

36.3 **Recovery of sums due**

All costs, damages or expenses which the Purchaser/Consultant may have paid, for which under the Contract Supplier is liable, may be recovered by the Purchaser (he is hereby irrevocably authorized to do so) from any money due to or becoming due to the Supplier under this Contract or other Contracts and/or may be recovered by action at law or otherwise. If the sums due to the Supplier be not sufficient to recover the recoverable amount, the Supplier shall pay to the Purchaser, on demand, the balance amount.

36.4 **Payments, etc. not to affect rights of the Purchaser**

No sum paid on account by the Purchaser nor any extension of the date for completion granted by the Purchaser/Consultant shall affect or prejudice the rights of the Purchaser against the Supplier or relieve the Supplier of his obligation for the due fulfillment of the Contract.

36.5 **Cut-off Dates**

No claims or correspondence on claims on this Contract shall be entertained by the Purchaser/Consultant after 90 days after expiry of the Contract Performance Security (from the date of final extension, if any)

36.6: **Indemnity**

The Supplier hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified the Purchaser/KLL and all its employees, agents and assigns from and against all losses, penalties interests, costs etc., which may arise out of breach of any terms and conditions of this Contract by the Supplier and the employees' /personnel/sub-contractors/agents or any third party appointed by the Supplier for the purpose of implementation of their obligations under this Contract. The Supplier undertakes to compensate the Purchaser/KLL forthwith on demand without protest any loss suffered by the Purchaser/KLL together with direct/indirect expenses . This Indemnity shall remain valid and irrevocable for all claims of the Purchaser/KLL arising from any such case or court case filed for which Purchaser/KLL or its employees has been made party until now or here -in- after.

36.7 Paragraph heading

The paragraph heading in these conditions shall not affect the construction thereof.

36.8 Retired Purchaser's Director

No Director of KLL is allowed to participate in tender for a period of 1 (one) year after his retirement from the employment of KLL, without the prior permission of KLL. The Contract if awarded is liable to be cancelled if the tenderer is found at any time to be such a person and has not obtained the permission of KLL before submission of the tender. Any tender by a person aforesaid shall carry a disclosure thereof on the tender, and shall be accompanied by a copy of the document by which the requisite consent is given. Such disqualifications shall apply to every partner of a partnership firm.

The tenderer is required to state whether he is a relative of any Director of KLL, or whether the tenderer is a partnership firm, whether a Director of KLL or its relative is a partner in the firm, or whether the tenderer is a Company, whether a Director of KLL or relative of such Director is a substantial member holding more than 10% (ten percent) of the paid up capital in the Company, or a Director of the Company. The definition of relative shall be as per The Companies Act, 2013 and its amendment(s).

37. IMPORT LICENSE

37.1 No import license is required for the imports covered under this Contract.

38. FALL CLAUSE

The following Fall Clause shall be applicable in the Contract, only if there is a specific mention of its applicability in ITB or SCC of Tender Document.

38.1 The price charged for the Goods supplied under the Contract by the Supplier shall in no event exceed the lowest price at which the Supplier or his agent/principal/dealer, as the case may be, sells the Goods of identical description to any Persons/Organizations including the Purchaser or any Department of the Central Govt. or any Department of a State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be, during the currency of the Contract.

38.2 If at any time during the said period, the Supplier or his agent/principal/dealer, as the case may be, reduces the sale price, sells or offers to sell such materials to any persons/organizations including the Purchaser or any Deptt. of Central Govt. or State Govt. as the case may be, at a price lower than the price chargeable under the Contract, he shall forthwith notify such reduction or sale or offer of sale to the Purchase Authority who has issued the Purchase Order and the price payable under the Purchase Order for the materials supplied after the date of coming into force of such reduction or sale or offer of sale shall stand correspondingly reduced.

The above stipulation will, however, not apply to:

- (i) Export/Deemed Export by the supplier;
- (ii) Sale of goods as original equipment prices lower than the price charged for normal replacement;
- (iii) Sale of goods such as drugs, which have expiry date;
- (iv) Sale of goods at lower price on or after the date of completion of sale/placement of order of goods or services by the authority concerned, under the existing or previous Rate Contracts as also under any previous contracts entered into with the Central or State Government Departments including new undertakings (excluding joint sector companies and or private parties) and bodies.

38.3 The Supplier shall furnish the following certificate to the concerned Paying Authority along with each bill for payment for supplies made against this order:-

“I/We certify that there has been no reduction in sale price of the items/Goods/materials of description identical to those supplied to the KLL under the order herein and such items/Goods/materials have not been offered/sold by me/us to any person/organizations including the Purchaser or any Deptt. of Central Govt. or any Deptt. of State Govt. or any Statutory Undertaking of the Central or State Govt. as the case may be upto the date of bill/during the currency of the Contract whichever is later, at a price lower than the price charged to the KLL under this Purchase Order”.

Such a certificate shall be obtained, except for quantity of items/Goods/materials categories under sub-clause (i), (ii) & (iii) of sub-para 38.2 above, of which details shall be furnished by the Supplier.

39. **PUBLICITY & ADVERTISING**

39.1 Supplier shall not without the written permission of Purchaser/Consultant make a reference to Purchaser/Consultant or any Company affiliated with Purchaser/Consultant or to the destination or the description of goods or services supplied under the contract in any publication, publicity or advertising media.

40. **REPEAT ORDER**

40.1 Purchaser reserves the right, within 6 months of order to place repeat order up to 25% of the original quantity without any change in unit price or other terms and conditions.

41. **LIMITATION OF LIABILITY**

41.1 Notwithstanding anything contrary contained herein, the aggregate total liability of Supplier, excluding his liability towards infringement of patent, trade mark or industrial design rights under the contract or otherwise shall be limited to 100% of value of Purchase order, except that this clause shall not limit the liability of the Supplier for following:

- (i) In the event of breach of any Applicable Law;
- (ii) In the event of fraud, Willful Misconduct or illegal or unlawful acts, or gross Negligence of the Supplier or any person acting on behalf of the Supplier; or
- (iii) In the event of acts or omissions of the Supplier which are contrary to the most elementary rules of diligence which a conscientious Supplier would have followed in similar circumstances; or
- (iv) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
- (v) For any damage to any third party, including death or injury of any third party caused by the Supplier or any person or firm acting on behalf of the Supplier in executing the Contract.

However, neither party shall be liable to the other party for any indirect and consequential damages, loss of profits or loss of production.

42. **COMPLETION CERTIFICATE AND EXECUTION CERTIFICATE**

42.1 No Completion Certificate shall be issued against orders for supply of goods only. However, for these cases, a copy of Good Receipt (GR) duly signed by concerned Store-in-charge will be forwarded to the Supplier.

42.2 Completion Certificate, in case of Purchase Orders for supply of Goods along with associated/incidental Services (like erection, installation, commissioning etc.) should be issued after completion of supplies/services in accordance with Contract.

- 42.3 Completion of supplies, for issuance of completion certificate, shall be completion of supply and acceptance of Goods in all respect as per provisions of Contract.
- 42.4 **Application for Completion Certificate:** When the Supplier fulfills his obligation under the Contract he shall be eligible to apply for Completion Certificate. The Purchaser/Consultant shall normally issue to the Supplier the Completion Certificate within one month after receiving any application thereof from the Supplier after verifying from the completion documents and satisfying himself that the supplies have been made in accordance with and as set out in the Contract.
- 42.5 **Completion Certificate:** Within one month from receipt of application from Supplier after the completion of the Supplies in all respects as specified above at clause no. 42.4, the Supplier shall be furnished with a certificate by the Purchaser/Consultant such completion. Purchaser's/Consultant's certification about completion of supplies in all aspects shall be binding and conclusive.
- 42.6 **Execution Certificate:** Execution Certificate during currency of Rate contract can be issued by Purchaser/Consultant against written request from Supplier.

(i) **PROVISIONS FOR BUY-BACK ITEMS:**

The following provision for Buy-Back shall be applicable in the Contract, only if there is a specific mention of its applicability in ITB or SCC of Tender Document.

- 43.1 Old materials will be handed over to the Supplier in terms of the contract with proper documentation on "as is where is basis". The Supplier is required to take away such materials out of KLL immediately after handing over to them.
- 43.1 The Supplier will not sell these materials to any Purchaser's employee without written permission of Purchaser/HR Department-Purchaser, to be obtained by the Purchaser employee(s). Even after such permission is obtained by employee(s), the Supplier is free to take decision whether to sell such item(s) to Purchaser employee(s) or not.
- 43.2 The Supplier will maintain a separate record for such sales to Purchaser employees and will make the same available as and when required by Purchaser.
- 43.3 The Supplier will accept payment only by Cheque/Demand Draft/e-banking (NEFT) for sale of old item(s) to KLL employee(s).
- 43.4 The Supplier is required to take away the buy-back items out of KLL premises at his cost within 14 days of notice. Failure or any delays of Supplier for removal of buy-back items, the Purchaser shall be entitled to recover handling and storage charges @5% of the buy-

back value of such items for each month or part of a month without relieving the Supplier from any other related liability. In the event of the Supplier's failure to remove the same within a period of 6 months, the Purchaser will take action for removal through auction or sale on behalf of the Supplier and at his risk in all respects. The buy back amount deducted from payment and proceed of such action or sale will be adjusted towards handling, storage and overhead charges of KLL. The decision of Purchaser w.r.t. such removal and the amount of the proceeds shall be final and binding on the Supplier. The Purchaser shall in no way be responsible for any deterioration or damage to the Equipment under any circumstances whatsoever. Further, such action shall be considered as poor-performance and action will be taken as per procedure in this regard.

(ii) CONFIDENTIALITY:

The Supplier, its Sub-Contractor and their personnel shall not, either during the term or within two (2) years after the expiration of this Contract, disclose any proprietary or confidential information related to work / Project, this Contract, or Purchaser's business or operations without the prior consent of the Purchaser.

(iii) INTELLECTUAL PROPERTY RIGHT:

The Supplier shall retain the copy right and other intellectual property rights in the Supplier's document and other design documents made by (or on behalf of) the Supplier.

Subject to the confidentiality obligations, by signing the Contract, within the value of Contract, the Supplier shall be deemed to give to the Purchaser a non-terminable, transferable, non-exclusive and royalty-free right to copy, use and communicate the Supplier's documents for the operation, maintenance, repair of the Goods/Work / Plant, training and Statutory purposes, but not for any other purpose. Such documents of the Supplier shall not be used, copied or communicated to a third party by or on behalf of the Purchaser for the purposes other than those permitted, without the Supplier's Consent.

(iv) ACTION IN CASE OF CORRUPT/ FRAUDULENT/ COLLUSIVE/ COERCIVE PRACTICES AND POOR PERFORMANCE:

The procedure for action in case of Corrupt/ Fraudulent/ Collusive/ Coercive Practices containing provisions for putting a Bidder/Supplier on suspension and/or banning list (as the case may be) if such an agency has indulged in Corrupt/ Fraudulent/ Collusive/ Coercive Practices. The Procedure is also enclosed as Appendix-I to this GCC.

Further, Bidder/Supplier accepts and solemnly affirms that they would adhere to the Fraud Prevention Policy of KLL and shall not indulge themselves or allow others (working in KLL) to indulge in fraudulent activities and that they would immediately apprise the Owner/KLL/Employer / Organization(s) of the fraud/ suspected fraud as soon as it comes to their notice. Concealment of facts regarding Bidder/Supplier's involvement in fraudulent

activities in connection with the business transaction(s) of KLL is liable to be treated as crime and dealt with by the procedures of KLL as applicable from time to time. The Fraud Prevention Policy document is available on KLL's website (www.gailonline.com).

(v) VENDOR PERFORMANCE EVALUATION

The procedure for evaluation of performance of Supplier containing provisions for putting a Bidder / Supplier on suspension and/or holiday list (as the case may be) is enclosed as Appendix II to this GCC.

PROCEDURE FOR ACTION IN CASE CORRUPT/FRAUDULENT/COLLUSIVE/COERCIVE PRACTICES

A Definitions:

- A.1 “Corrupt Practice” means the offering, giving, receiving or soliciting, directly or indirectly, anything of value to improperly influence the actions in selection process or in contract execution.
“Corrupt Practice” also includes any omission for misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained or an obligation avoided.
- A.2 “Fraudulent Practice” means and include any act or omission committed by a agency or with his connivance or by his agent by misrepresenting/ submitting false documents and/ or false information or concealment of facts or to deceive in order to influence a selection process or during execution of contract/ order.
- A.3 “Collusive Practice amongst bidders (prior to or after bid submission)” means a scheme or arrangement designed to establish bid prices at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition.
- A.4 “Coercive practice” means impairing or harming or threatening to impair or harm directly or indirectly, any agency or its property to influence the improperly actions of an agency, obstruction of any investigation or auditing of a procurement process.
- A.5 “Vendor/Supplier/Contractor/Consultant/Bidder” is herein after referred as “Agency”
- A.6 ”Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).
- A.7 “Competent Authority” shall mean the authority, who is competent to take final decision for Suspension of business dealing with an Agency/ (ies) and Banning of business dealings with Agency/ (ies) and shall be the “Director” concerned.
- A.8 “Allied Agency” shall mean all concerns which come within the sphere of effective influence of the banned/suspended agency shall be treated as allied agency. In determining this, the following factors may be taken into consideration:
- a) Whether the management is common;
 - b) Majority interest in the management is held by the partners or directors of banned/ suspended agency;
 - c) Substantial or majority shares are owned by the banned/ suspended agency and by virtue of this it has a controlling voice.
 - d) Directly or indirectly controls, or is controlled by or is under common control with another bidder.
 - e) All successor agency will also be considered as allied agency.
- A.9 “Investigating Agency” shall mean any department or unit of GAIL/KLL investigating into the conduct of Agency/ party and shall include the Vigilance Department of the GAIL/KLL, Central Bureau of Investigation, State Police or any other agency set up by the Central or state government having power to investigate.
- A.10 "Obstructive practice": materially impede the procuring entity's investigation into allegations of one or more of the above mentioned practices either by deliberately destroying, falsifying, altering; or by concealing of evidence material to the investigation; or by making false statements to investigators and/ or by threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or by impeding GAIL/KLL's rights of audit or access to information.

B Actions against bidder(s) indulging in corrupt /fraudulent/ collusive/ coercive practice

B.1 Irregularities noticed during the evaluation of the bids :

If it is observed during bidding process/ bids evaluation stage that a bidder has indulged in corrupt/fraudulent /collusive/coercive practice, the bid of such Bidder (s) shall be rejected and its Earnest Money Deposit (EMD) shall be forfeited.

Further, such agency shall be banned for future business with GAIL/KLL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2 Irregularities noticed after award of contract

(i). During execution of contract:

If an agency, is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, action shall be initiated for putting the agency on banning list.

After conclusion of process and issuance of Speaking order for putting party on banning list, the order (s)/ contract (s) where it is concluded that such irregularities have been committed shall be terminated and Contract cum Performance Bank Guarantee (CPBG) submitted by agency against such order (s)/ contract (s) shall also be forfeited. Further such order/ contract will be closed following the due procedure in this regard.

The amount that may have become due to the contractor on account of work already executed by him shall be payable to the contractor and this amount shall be subject to adjustment against any amounts due from the contractor under the terms of the contract. No risk and cost provision will be enforced in such cases.

Suspension of order/ contract:

Further, only in the following situations, the concerned order (s)/ contract(s) (where Corrupt/Fraudulent/ Collusive/ Coercive Practices are observed) and payment shall be suspended after issuance of Suspension cum Show Cause Notice:

- (i) Head of Corporate Vigilance Department/CVO based on the investigation by them, recommend for specific immediate action against the agency.
- (ii) Head of Corporate Vigilance Department/CVO based on the input from investigating agency, forward for specific immediate action against the agency.

Suspension cum Show Cause Notice being issued in above cases after approval of the competent authority (as per provisions mentioned under Clause no. D) shall also include the provision for suspension of Order (s)/ Contract (s) and payment. Accordingly, after issuance of Suspension cum Show Cause Notice, the formal communication for suspension of Order (s)/ Contract (s) and payment with immediate effect will be issued by the concerned person of GAIL/KLL.

During suspension, Contractor/ Service Providers will be allowed to visit the plant/ site for upkeep of their items/ equipment, GAIL/KLL's issued materials (in case custody of same is not taken over), demobilizing the site on confirmation of EIC, etc.

In addition to above, Recovery of payments (other than due payments) including balance advance payments, if any, made by along with interest thereon at the prevailing rate shall be recovered.

(ii). After execution of contract and during Defect liability period (DLP)/ Warranty/Guarantee Period:

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after execution of contract and during DLP/ Warranty/Guarantee Period, the agency shall be banned for future business with GAIL/KLL for a period specified in para B 2.2 below from the date of issue of banning order.

Further, the Contract cum Performance Bank Guarantee (CPBG)/Contract Performance Security (CPS) submitted by agency against such order (s)/ contract (s) shall be forfeited.

(iii). After expiry of Defect liability period (DLP)/ Warranty/Guarantee Period

If an agency is found to have indulged in corrupt/fraudulent/ collusive/coercive practices, after expiry of Defect liability period (DLP)/ Warranty/Guarantee Period, the agency shall be banned for future business with GAIL/KLL for a period specified in para B 2.2 below from the date of issue of banning order.

B.2.2 Period of Banning

The period of banning of agencies indulged in Corrupt/ Fraudulent/ Collusive/Coercive Practices shall be as under and to be reckoned from the date of banning order:

S. No.	Description	Period of banning from the date of issuance of Banning order
1	Misrepresentation/False information other than pertaining to BEC of tender but having impact on the selection process. For example, if an agency confirms not being in holiday in GAIL/KLL/PSU's PMC or banned by PSUs/ Govt. Dept., liquidation, bankruptcy & etc. and subsequently it is found otherwise, such acts shall be considered in this category.	06 Months
2	Corrupt/Fraudulent (except mentioned at sl. no. 1 above) /Collusive/Coercive Practices	01 year
2.1	If an agency again commits Corrupt/Fraudulent (except mentioned at sl. no. 1 above) /Collusive/ Coercive Practices in subsequent cases after their banning, such situation of repeated offense to be dealt with more severity.	2 years (in addition to the period already served)
3	Indulged in unauthorized disposal of materials provided by GAIL/KLL	2 years
4	If act of vendor/ contractor is a threat to the National Security	2 years

C Effect of banning on other ongoing contracts/ tenders

- C.1 If an agency is put on Banning, such agency should not be considered in ongoing tenders/future tenders.
- C.2 However, if such an agency is already executing other order (s)/ contract (s) where no corrupt/fraudulent/ collusive/coercive practice is found, the agency should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract.
- C.3 If an agency is put on the Banning List during tendering and no irregularity is found in the case under process:
 - C.3.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
 - C.3.2 After opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
 - C.3.3 After opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.

D. Procedure for Suspension of Bidder

D.1 Initiation of Suspension

Action for suspension business dealing with any agency/(ies) shall be initiated by Corporate C&P Department when

- (i) Corporate Vigilance Department based on the fact of the case gathered during investigation by them recommend for specific immediate action against the agency.
- (ii) Corporate Vigilance Department based on the input from Investigating agency, forward for specific immediate action against the agency.
- (iii) Non performance of Vendor/Supplier/Contractor/Consultant leading to termination of Contract/ Order.

D.2 Suspension Procedure:

- D.2.1 The order of suspension would operate initially for a period not more than six months and is to be communicated to the agency and also to Corporate Vigilance Department. Period of suspension can be extended with the approval of the Competent Authority by one month at a time with a ceiling of six months pending a conclusive decision to put the agency on banning list.
- D.2.2 During the period of suspension, no new business dealing may be held with the agency.
- D.2.3 Period of suspension shall be accounted for in the final order passed for banning of business with the agency.
- D.2.4 The decision regarding suspension of business dealings should also be communicated to the agency.
- D.2.5 If a prima-facie, case is made out that the agency is guilty on the grounds which can result in banning of business dealings, proposal for issuance of suspension order and show cause notice shall be put up to the Competent Authority. The suspension order and show cause notice must include that (i) the agency is put on suspension list and (ii) why action should not be taken for banning the agency for future business from GAIL/KLL.
The competent authority to approve the suspension will be same as that for according approval for banning.

D 3 Effect of Suspension of business:

Effect of suspension on other on-going/future tenders will be as under:

- D.3.1 No enquiry/bid/tender shall be entertained from an agency as long as the name of agency appears in the Suspension List.
- D.3.2 If an agency is put on the Suspension List during tendering:
 - D.3.2.1 After issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the agency shall be ignored.
 - D.3.2.2 After opening Technical bid but before opening the Price bid, the Price bid of the agency shall not be opened and BG/EMD submitted by the agency shall be returned to the agency.
 - D.3.2.3 After opening of price, BG/EMD made by the agency shall be returned; the offer of the agency shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.
- D.3.3 The existing contract (s)/ order (s) under execution shall continue.
- D.3.4 Tenders invited for procurement of goods, works and services shall have provision that the bidder shall submit a undertaking to the effect that (i) neither the bidder themselves nor their allied agency/(ies) are on banning list of GAIL/KLL or the Ministry of Petroleum and Natural Gas and (ii) bidder is not banned by any Government department/ Public Sector.

F. Appeal against the Decision of the Competent Authority:

- F.1 The agency may file an appeal against the order of the Competent Authority for putting the agency on banning list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of banning order.

- F.2 Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- F.3 Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.

- G. Wherever there is contradiction with respect to terms of 'Integrity pact' , GCC and 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice', the provisions of 'Procedure for action in case of Corrupt/Fraudulent/ Collusive/Coercive Practice' shall prevail.

PROCEDURE FOR EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

1.0 **GENERAL**

A system for evaluation of Vendors/ Suppliers/Contractors/ Consultants and their performance is a key process and important to support an effective purchasing & contracting function of an organization.

Performance of all participating Vendors/ Suppliers/Contractors/ Consultants need to be closely monitored to ensure timely receipt of supplies from a Vendor, completion of an assignment by a Consultant or complete execution of order by a contractor within scheduled completion period. For timely execution of projects and meeting the operation & maintenance requirement of operating plants, it is necessary to monitor the execution of order or contracts right from the award stage to completion stage and take corrective measures in time.

2.0 **OBJECTIVE**

The objective of Evaluation of Performance aims to recognize, and develop reliable Vendors/ Suppliers/Contractors/ Consultants so that they consistently meet or exceed expectations and requirements. The purpose of this procedure is to put in place a system to monitor performance of Vendors/ Suppliers/Contractors/ Consultants associated with KLL so as to ensure timely completion of various projects, timely receipt of supplies including completion of works & services for operation and maintenance of operating plants and quality standards in all respects.

3.0 **METHODOLOGY**

i) **Preparation of Performance Rating Data Sheet**

Performance rating data Sheet for each and every Vendor/ Supplier/Contractor/Consultant for all orders/Contracts with a value of Rs. 50 Lakhs and above is recommended to be drawn up. Further, Performance rating data Sheet for orders/contracts of Vendor/Supplier/Contractor/ Consultant who are on watch list/holiday list/ banning list shall be prepared irrespective of order/ contract value. These data sheets are to be separately prepared for orders/ contracts related to Projects and O&M. Format, Parameters, Process, responsibility for preparation of Performance Rating Data Sheet are separately mentioned.

ii) **Measurement of Performance**

Based on the parameters defined in Data Sheet, Performance of concerned Vendor/ Supplier/Contractor/ Consultant would be computed and graded accordingly. The measurement of the performance of the Party would be its ability to achieve the minimum scoring of 60% points in the given parameters.

iii) **Initiation of Measures:**

Depending upon the Grading of Performance, corrective measures would be initiated by taking up the matter with concerned Vendor/ Supplier/Contractor/ Consultant. Response of Vendor/ Supplier/Contractor/ Consultant would be considered before deciding further course of action.

iv) **Implementation of Corrective Measures:**

Based on the response of Vendor/ Supplier/Contractor/ Consultant, concerned Engineer-in-Charge for the Projects and/or OIC in case of O&M would recommend for continuation or discontinuation of such party from the business of KLL.

v) Orders/contracts placed on Proprietary/OEM basis for O&M will be evaluated and, if required, corrective action will be taken for improvement in future.

4.0 **EXCLUSIONS:**

The following would be excluded from the scope of evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants :

- i) Orders/Contracts below the value of Rs. 50 Lakhs if Vendor/ Supplier/Contractor/ Consultant is not on watch list/ holiday list/ banning list.
- ii) Orders for Misc./Administrative items/ Non stock Non valued items (PO with material code ending with 9).

However, concerned Engineer-in-Charge /OICs will continue to monitor such cases so as to minimize the impact on Projects/O&M plants due to non performance of Vendors/ Suppliers/Contractors/ Consultants in all such cases.

5.0 PROCESS OF EVALUATION OF PERFORMANCE OF VENDORS/ SUPPLIERS/ CONTRACTORS/ CONSULTANTS

5.1 FOR PROJECTS

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of PROJECTS shall be done immediately with commissioning of any Project.
- ii) On commissioning of any Project, EIC (Engineer-in-charge)/ Project-in-charge shall prepare a Performance Rating Data Sheet (Format at Annexure-1) for all Orders and Contracts.
- iii) Depending upon the Performance Rating, following action shall be initiated by Engineer-in-charge/Project-in-charge:

Sl.No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future
4	VERY GOOD	No further action

- iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.
- v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):
 - (a) **First Instance: Holiday (Red Card) for One Year**
 - (b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years**
2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

- (a) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.
- (b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of One Year**
- (c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.**

B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/ Contractor/Consultant (under Clause no. 28.1 of GCC-Goods)

- (a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Years.
Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken. However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s). The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequence instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.
- (b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.
- (c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**

(C) Where Performance rating is “FAIR”:
Issuance of warning to such defaulting Vendor/ Supplier/Contractor/ Consultant to improve their performance.

5.2 FOR CONSULTANCY JOBS

Monitoring and Evaluation of consultancy jobs will be carried out in the same way as described in para 5.1 for Projects.

5.3 FOR OPERATION & MAINTENANCE

- i) Evaluation of performance of Vendors/ Suppliers/Contractors/ Consultants in case of Operation and Maintenance shall be done immediately after execution of order/ contract.
- ii) After execution of orders a Performance Rating Data Sheet (Format at Annexure-2) shall be prepared for Orders by Site C&P and for Contracts/Services by respective Engineer-In-Charge.

iii) Depending upon Performance Rating, following action shall be initiated by EIC:

Sl. No.	Performance Rating	Action
1	POOR	Seek explanation for Poor performance
2.	FAIR	Seek explanation for Fair performance
3	GOOD	Letter to the concerned for improving performance in future.
4	VERY GOOD	No further action

iv) Reply from concerned Vendor/ Supplier/Contractor/ Consultant shall be examined. In case of satisfactory reply, Performance Rating data Sheet to be closed with a letter to the concerned for improving performance in future.

v) When no reply is received or reasons indicated are unsatisfactory, the following actions need to be taken:

A) Where performance rating is “POOR” (as per Performance Rating carried out after execution of Order/ Contract and where no reply/ unsatisfactory reply is received from party against the letter seeking the explanation from Vendor/Supplier/Contractor/ Consultant along with sharing the performance rating)

Recommend such defaulting Vendor / Supplier / Contractor / Consultant for the following action:

1. Poor Performance on account of Quality (if marks obtained against Quality parameter is less than 20):

(a) **First Instance: Holiday (Red Card) for One Year**

(b) **Subsequent instance (s) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Holiday (Red Card) for Two Years**

2. Poor Performance on account of other than Quality (if marks obtained against Quality parameter is more than 20):

(e) **First such instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor/ Consultant shall be put on watch list for a period of Two (2) Years.

(b) **Second such instance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of One Year**

(c) **Subsequent instances (more than two) in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: Putting on Holiday (Red Card) for a period of Two Years.**

B) Where Poor/Non-Performance leading to termination of contract or Offloading of contract due to poor performance attributable to Vendor/Supplier/ Contractor/Consultant (under Clause no. 28.1 of GCC-Goods)

(a) **First instance: Advisory notice (Yellow Card)** shall be issued and Vendor/Supplier/Contractor /Consultant shall be put on watch list for a period of Two (2) Year.

Further such vendor will not be allowed to participate in the re-tender of the same supply/work/services of that location which has terminated / offloaded. Moreover, it will be ensured that all other action as per provision of contract including forfeiture of Contract Performance Security (CPS) etc. are undertaken.

However, such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

The Yellow card will be automatically revoked after a period of two years unless the same is converted into Red Card due to subsequent instances of poor/ non-performance in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant.

(b) **Second instances** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card)** for period of One Year and they shall also to be considered for Suspension.

(c) **Subsequent instances (more than two)** in other ongoing order (s)/ contract (s) or new order (s) /contact (s) on such Vendor/ Supplier/ Contractor/ Consultant: **Holiday (Red Card) for period of Two Years and they shall also to be considered for Suspension.**

(C) Where Performance rating is “FAIR”

Issuance of warning to such defaulting Vendors/Contractors/Consultants to improve their performance.

6.0 **REVIEW & RESTORATION OF PARITES PUT ON HOLIDAY**

6.1 An order for Holiday passed for a certain specified period shall deemed to have been automatically revoked on the expiry of that specified period and it will not be necessary to issue a specific formal order of revocation.

Further, in case Vendor/ Supplier/Contractor/ Consultant is put on holiday due to quality, and new order is placed on bidder after restoration of Vendor/ Supplier/Contractor/ Consultant, such order will be properly monitored during execution stage by the concerned site.

7.0 **EFFECT OF HOLIDAY**

7.1 If a Vendor/ Supplier/Contractor/ Consultant is put on Holiday, such Vendor/ Supplier/Contractor/ Consultant shall not be considered in ongoing tenders/future tenders.

7.2 However, if such Vendor/ Supplier/Contractor/ Consultant is already executing any other order/ contract and their performance is satisfactory in terms of the relevant contract, should be allowed to continue till its completion without any further increase in scope except those incidental to original scope mentioned in the contract. In such a case CPBG will not be forfeited and payment will be made as per provisions of concerned contract. However, this would be without prejudice to other terms and conditions of the contract.

7.3. Effect on other ongoing tendering:

7.3.1 after issue of the enquiry /bid/tender but before opening of Technical bid, the bid submitted by the party shall be ignored.

7.3.2 after opening Technical bid but before opening the Price bid, the Price bid of the party shall not be opened and BG/EMD submitted by the party shall be returned to the party.

7.3.3 after opening of price, BG/EMD made by the party shall be returned; the offer of the party shall be ignored & will not be further evaluated. In case such agency is lowest (L-1), next lowest bidder shall be considered as L-1.

8.0 While putting the Vendor/ Supplier/Contractor/ Consultant on holiday as per the procedure, the holding company, subsidiary, joint venture, sister concerns, group division of the errant Vendor/ Supplier/Contractor/ Consultant shall not be considered for putting on holiday list.

Any bidder, put on holiday, will not be allowed to bid through consortium route also in new tender during the period of holiday.

- 9.0 If an unsuccessful bidder makes any vexatious, frivolous or malicious complaint against the tender process with the intention of delaying or defeating any procurement or causing loss to KLL or any other bidder, such bidder will be put on holiday for a period of six months, if such complaint is proved to be vexatious, frivolous or malicious, after following the due procedure.

10. APPEAL AGAINST THE DECISION OF THE COMPETENT AUTHORITY:

- (a) The party may file an appeal against the order of the Competent Authority for putting the party on Holiday list. The appeal shall be filed to Appellate Authority. Such an appeal shall be preferred within one month from the of receipt of Holiday order.
- (b) Appellate Authority would consider the appeal and pass appropriate order which shall be communicated to the party as well as the Competent Authority.
- (c) Appeal process may be completed within 45 days of filing of appeal with the Appellate Authority.
- (d) “Appellate Authority” shall mean Committee of Directors consisting of Director (Finance) and Director (BD) for works centers under Director (Projects). For all other cases committee of Directors shall consist of Director (Finance) & Director (Projects).

11. ERRANT BIDDER

In case after price bid opening the lowest evaluated bidder (L1) is not awarded the job for any mistake committed by him in bidding or withdrawal of bid or modification of bid or varying any term in regard thereof leading to re-tendering, KLL shall forfeit EMD if paid by the bidder and such bidders shall be debarred from participation in retendering of the same job(s)/item(s).

Further, such bidder will be put on Watch List (Yellow Card) for a period of two years after following the due procedure. However, during the period in watch list such vendor will be allowed to participate in all other tenders and to execute other ongoing order/ contract (s) or new contract/ order (s).

In case of subsequent instances of default in other tender(s) during aforesaid watch list period, the action shall be initiated as per provision of sl. no. 2 of para A of Clause no. 5.1 (v) and 5.3 (v).

The Yellow card will be automatically revoked after specified period unless the same is converted into Red Card.

12. In case CBIC (Central Board of Indirect Taxes and Customs)/ any tax authority / any equivalent government agency brings to the notice of KLL that the Supplier has not remitted the amount towards GST (CGST & SGST/UTGST or IGST) collected from KLL to the government exchequer, then, that Supplier shall be put under Holiday list of KLL for period of six months after following the due procedure. This action will be in addition to the right of recovery of financial implication arising on KLL.

Konkan LNG Limited
PERFORMANCE RATING DATA SHEET
(FOR PROJECTS/ CONSULTANCY JOBS)

- i) Project/Work Centre :
- ii) Order/ Contract No. & date :
- iii) Brief description of Items :
Works/Assignment
- iv) Order/Contract value (Rs.) :
- v) Name of Vendor/Supplier/ Contractor/ Consultant :
- vi) Contracted delivery/ Completion Schedule :
- vii) Actual delivery/ Completion date :

Performance Parameter	Delivery/ Completion Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allotted				

Note:

Remarks (if any)

PERFORMANCE RATING (**)

Note :

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance.
- (*) Allocation of marks should be as per enclosed instructions
- (**) Performance rating shall be classified as under :

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of
Authorised Signatory:

Name:

Designation:

Instructions for allocation of marks

1. Marks are to be allocated as under :

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Upto 3 months	Before CDD	40
	Delay upto 4 weeks	35
	" 8 weeks	30
	" 10 weeks	25
	" 12 weeks	20
	" 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	" 8 weeks	30
	" 10 weeks	25
	" 16 weeks	20
	" 20 weeks	15
	" 24 weeks	10
	More than 24 weeks	0

1.2 QUALITY PERFORMANCE 40 Marks

For Normal Cases : No Defects/ No Deviation/ No failure:		40 marks
i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks

1.3 RELIABILITY PERFORMANCE**20 Marks**

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks

Konkan LNG Limited
PERFORMANCE RATING DATA SHEET
(FOR O&M)

- i) Location :
- ii) Order/ Contract No. & date :
- iii) Brief description of Items :
Works/Assignment
- iv) Order/Contract value (Rs.) :
- v) Name of Vendor/Supplier/ Contractor/ Consultant :
- vi) Contracted delivery/ Completion Schedule :
- vii) Actual delivery/ Completion date :

Performance Parameter	Delivery Performance	Quality Performance	Reliability Performance#	Total
Maximum Marks	40	40	20	100
Marks Allocated (*)				

Remarks (if any)

PERFORMANCE RATING (**)

Note :

- (#) Vendor/Supplier/Contractor/Consultant who seek repeated financial assistance or deviation beyond contract payment term or seeking direct payment to the sub-vendor/sub-contractor due to financial constraints, then '0' marks should be allotted against Reliability Performance
- (*) Allocation of marks should be as per enclosed instructions
- (**) Performance rating shall be classified as under :

Sl. No.	Range (Marks)	Rating
1	60 & below	POOR
2	61-75	FAIR
3	76-90	GOOD
4	More than 90	VERY GOOD

Signature of
Authorised Signatory:

Name:

Designation:

Instructions for allocation of marks (For O&M)

1. Marks are to be allocated as under :

1.1 DELIVERY/ COMPLETION PERFORMANCE 40 Marks

Delivery Period/ Completion Schedule	Delay in Weeks	Marks
a) Upto 3 months	Before CDD	40
	Delay upto 4 weeks	35
	" 8 weeks	30
	" 10 weeks	25
	" 12 weeks	20
	" 16 weeks	15
	More than 16 weeks	0
b) Above 3 months	Before CDD	40
	Delay upto 4 weeks	35
	" 8 weeks	30
	" 10 weeks	25
	" 16 weeks	20
	" 20 weeks	15
	" 24 weeks	10
	More than 24 weeks	0

1.2 QUALITY PERFORMANCE 40 Marks

For Normal Cases : No Defects/ No Deviation/ No failure:		40 marks
i) Rejection/Defects	Marks to be allocated on prorata basis for acceptable quantity as compared to total quantity for normal cases	10 marks
ii) When quality failure endanger system integration and safety of the system	Failure of severe nature - Moderate nature - low severe nature	0 marks 5 marks 10-25 marks
iii) Number of deviations	1. No deviation 2. No. of deviations ≤ 2 3. No. of deviations > 2	5 marks 2 marks 0 marks

1.3 RELIABILITY PERFORMANCE**20 Marks**

A.	FOR WORKS/CONTRACTS	
i)	Submission of order acceptance, agreement, PBG, Drawings and other documents within time	4 marks
ii)	Mobilization of resources as per Contract and in time	4 marks
iii)	Liquidation of Check-list points	4 marks
iv)	Compliance to statutory and HS&E requirements or Reliability of Estimates/Design/Drawing etc. in case of Consultancy jobs	4 marks
v)	Timely submission of estimates and other documents for Extra, Substituted & AHR items	4 marks
B.	FOR SUPPLIES	
i)	Submission of order acceptance, PBG, Drawings and other documents within time	5 marks
ii)	Attending complaints and requests for after sales service/ warranty repairs and/ or query/ advice (upto the evaluation period).	5 marks
iii)	Response to various correspondence and conformance to standards like ISO	5 marks
iv)	Submission of all required documents including Test Certificates at the time of supply	5 marks

F. No. 4(1)/2013-DPE(GM)/FTS-1835
Government of India
Ministry of Heavy Industries & Public Enterprises
Department of Public Enterprises

Public Enterprises Bhawan,
Block No. 14, CGO Complex,
Lodhi Road, New Delhi-110003.
Dated: 22nd May, 2018

OFFICE MEMORANDUM

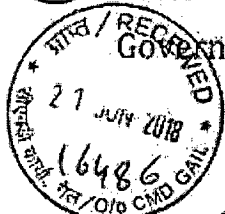
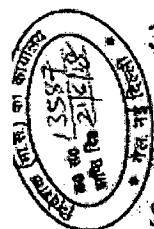
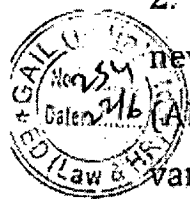
Subject: Settlement of commercial disputes between Central Public Sector Enterprises (CPSEs) *inter se* and CPSE(s) and Government Department(s)/Organization(s) - Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD).

The undersigned is directed to refer to Department of Public Enterprises guidelines issued vide OM No. 4(1)/2011-DPE (PMA)-GL dated 12.06.2013, No.4(1)2011-DPE(PMA) dated 24.03.2014, No. 4(1)/2011-DPE (PMA) dated 26.03.2014 and No. 4(1)/2013-DPE(PMA)/FTS-1835 dated 11-04-2017 regarding the resolution of commercial disputes between Central Public Sector Enterprises (CPSEs) *inter se* and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments) through PMA (Permanent Machinery of Arbitration) mechanism.

2. To make the mechanism more effective and binding on the disputing parties, a new mechanism namely Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD) having two level (tier) structure has been evolved in consultation with various stakeholders to replace the existing PMA mechanism which stands wound up from the date of issue of this OM.

3. **Applicability**

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts *inter se* and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways,



OSM (L)
Please circulate
to Law Officers.

ED (Legal) (HR)

21/5/18

DCM to Sir (HR)
A. Wali 21/5

Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for its resolution through AMRCD.

4. As per the approved new mechanism to resolve the commercial disputes, the following structure and procedure shall be followed by the concerned disputing parties:

A. Structure:

- i. At the First level (tier), such commercial disputes shall be referred to a Committee comprising of Secretaries of the Administrative Ministries/Departments to which the disputing CPSEs/Parties belong and Secretary-D/o Legal Affairs. The Financial Advisors (FAs) of the two concerned Administrative Ministries/Departments will represent the issues related to the dispute in question before the above Committee. In case the two disputing parties belong to the same Ministry/Department, the above said Committee will comprise Secretary of the administrative Ministry/Department concerned, Secretary-D/o Legal Affairs and Secretary-Department of Public Enterprises. In such a case, the matter may be represented before the Committee by the FA and one Joint Secretary of that Ministry/Department.

Further, in case of a dispute between CPSE and State Government Department/Organization, the above said Committee will comprise the Secretary of the Ministry/Department of the Union to which the CPSE belongs and Secretary-D/o Legal Affairs and a senior officer nominated by the Chief Secretary of the State concerned. In such a case, the matter will be represented before the Committee by the FA of the concerned administrative Ministry/Department and the concerned Principal Secretary of the State Government Department/ Organisation.

- ii. In case the dispute remains unresolved even after consideration by the above Committee, the same will be referred at the Second level (tier) to the Cabinet Secretary, whose decision will be final and binding on all concerned.

B. Procedure:

- i. At the First level(tier), the claiming party(Claimant) will approach the FA of it's administrative Ministry/Department for representing the dispute before the Secretary of it's administrative Ministry/Department. The Secretary of administrative Ministry/Department of claiming party will intimate the same to the Secretary of administrative Ministry/Department of responding party (Respondent) and Secretary-D/o Legal Affairs and thereafter meetings will take place in the administrative Ministry/Department of the claiming party to examine the facts and resolve the dispute on merit. The FAs of the concerned administrative Ministries/Departments will represent the issues related to the dispute in question before the above Committee. After arriving at a decision by the Committee, the Secretary of the administrative Ministry/Department of the claiming party will write down the decision and it will be signed jointly by both the Secretaries and Secretary- D/o Legal Affairs. A copy of the decision will be communicated by the Secretary of the administrative Ministry/Department of the claiming party to each party to the dispute for implementation.

In case where one party (1st party) to the dispute is a Department/Organization of a State Government, the procedure for admitting the dispute will be same as above, however, all meetings in connection with resolution of the dispute will be held in the administrative Ministry/Department (Union) of other party(2nd Party) irrespective of the position of the 1st Party whether as a Claimant or Respondent. The presentation of the issues before the above Committee in this case will be done by the FA of the concerned Administrative Ministry/Department and concerned Principal Secretary of the State Government Department/Organization.

- ii. The Committee of Secretaries at the First level(tier) shall finalise its decision within 3 months after having received the reference/notice in writing regarding the dispute from the concerned aggrieved party.

5. Appeal

Any party aggrieved with the decision of the Committee at the First level (tier) may prefer an appeal before the Cabinet Secretary at the Second level (tier) within 15 days from the date of receipt of decision of the Committee at First level, through it's administrative Ministry/Department, whose decision will be final and binding on all concerned.

6. Arbitration Clause

- (i) The CPSEs will ensure inclusion of a clause in all the existing and future commercial contracts between CPSEs, *inter-se* and CPSEs and Government Departments/Organizations as under:-

"In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts *inter se* and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS-1835 dated 22-05-2018".

- (ii) The on-going contracts shall also be suitably amended accordingly.

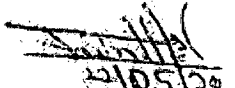
7. Disposal of pending cases in PMA

All pending cases with Sole Arbitrator-PMA and Appellate Authority shall stand transferred with immediate effect to concerned administrative Ministries/Departments to be dealt with as per above mentioned laid down mechanism of dispute resolution. All cases in which the hearing has been completed

by Sole Arbitrator, the award will be made by Sole Arbitrator. Appeal if any, made against such cases will lie with the Cabinet Secretary at Second level(tier).

8. All the administrative Ministries/Departments concerned with Central Public Sector Enterprises/ Port Trusts etc. are requested to bring these guidelines to the notice of all CPSEs under their administrative control for strict compliance.

9. This issues with the approval of the Competent Authority.


22/05/2018
(J. N. Prasad)

Director

Tel. 24360736

To.

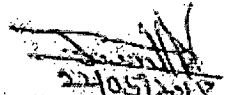
1. Secretary of all Ministries/Departments of the Government of India.
2. Chief Secretary of all the States and Union Territories.

Copy to:

1. Sh. G. S. Yadav, Joint Secretary & Arbitrator-PMA, DPE.
2. Chief Executive of all CPSEs for information and necessary compliance.

Copy forwarded for kind information to:

- (i) The Prime Minister's Office, South Block, New Delhi.
- (ii) The Cabinet Secretariat, Rashtrapati Bhawan, New Delhi.
- (iii) PS to the Minister (HI&PE), Udyog Bhawan, New Delhi.
- (iv) Secretary (DPE), CGO Complex, New Delhi.
- (v) Secretary (Law), D/o Legal Affairs, Shastri Bhawan, New Delhi.

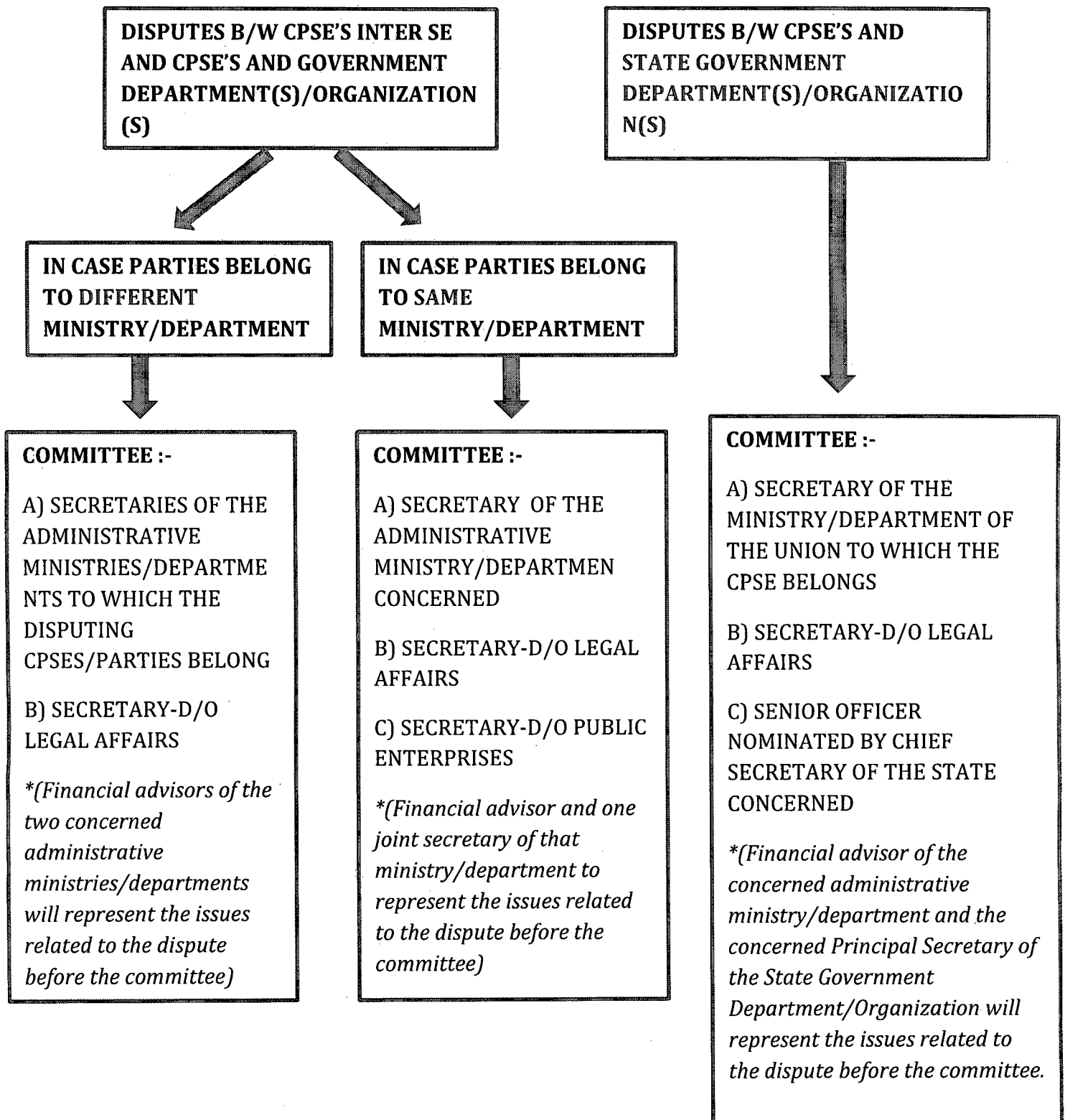

22/05/2018
(J. N. Prasad)

Director

Tel. 24360736

SETTLEMENT OF COMMERCIAL DISPUTES BETWEEN CPSE'S INTER SE AND CPSE'S AND GOVERNMENT DEPARTMENT(S)/ORGANIZATION(S)- ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSE'S DISPUTES ON THE BASIS OF CIRCULAR DATED 22.05.2018 RECEIVED FROM DPE.

(TIER 1)



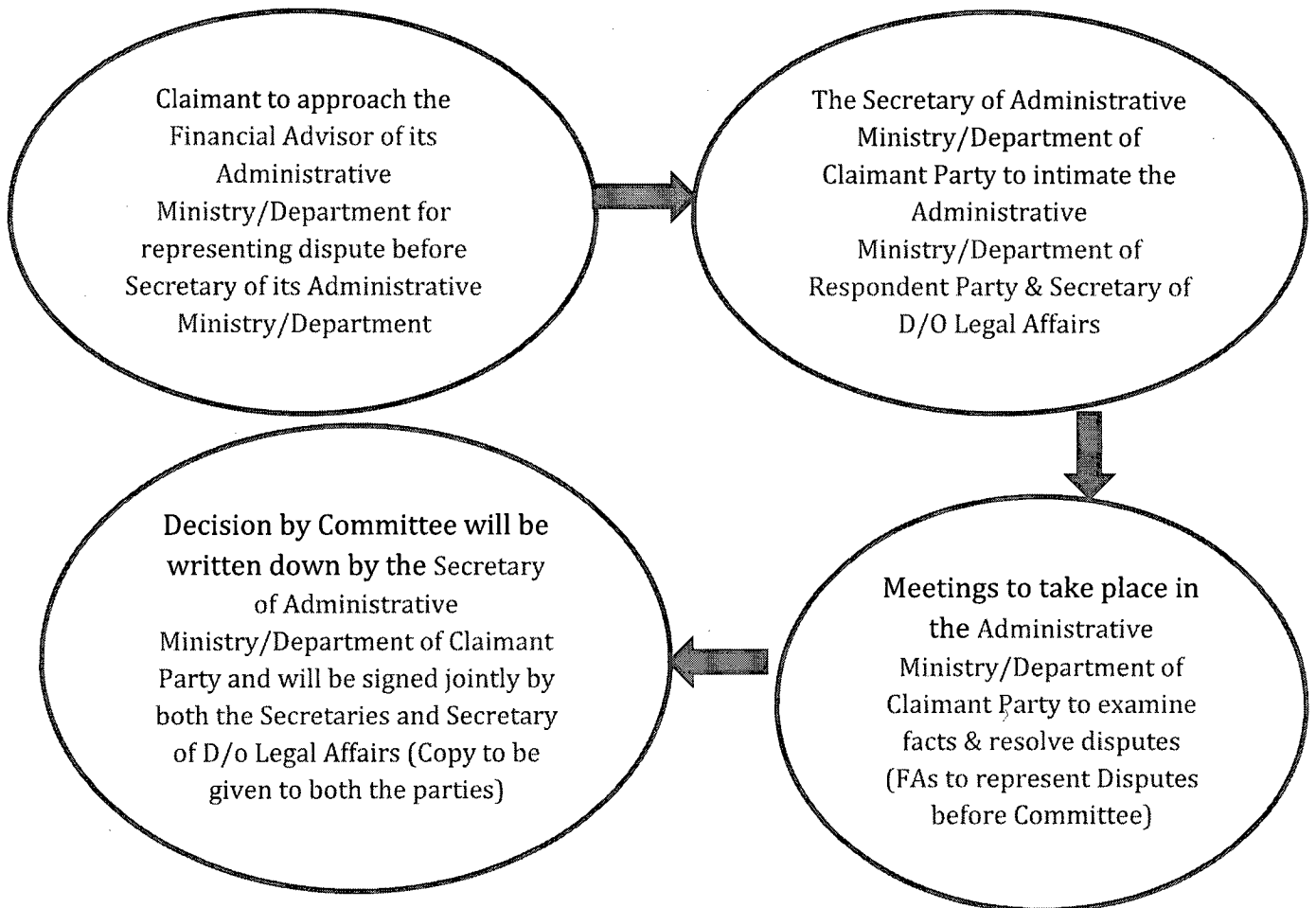
(TIER 2)

IN CASE THE DISPUTE REMAINS UNRESOLVED EVEN AFTER CONSIDERATION BY THE ABOVE COMMITTEE:-

APPEALS FROM DECISION OF COMMITTEE TO BE FILED WITHIN 15 DAYS:-

CABINET SECRETARY (Decision final & binding)

PROCEDURE TO BE FOLLOWED:-



IN CASE 1st PARTY TO THE DISPUTE IS A DEPARTMENT/ORGANIZATION OF A STATE GOVERNMENT (SAME PROCEDURE TO BE FOLLOWED AS ABOVE)

EXCEPT

- The meetings will be held in the Administrative Ministry/Department of other Party (2nd Party) whether 1st Party is Claimant or not.
- The presentation of issues will be done by FA of the concerned Administrative Ministry/Department and concerned Principal Secretary of the State Government Department/Organization.



SPECIAL CONDITIONS OF CONTRACT (SCC)-PURCHASE

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1.0 DEFINITIONS

- 1.1 EFFECTIVE DATE shall mean the date on which Contractor / Supplier's obligations will commence and that will be the date of Fax of Acceptance (FOA).
- 1.2 WAREHOUSE / DUMP YARD / DUMP SITE / DELIVERY LOCATION shall mean a place hired/owned by Owner for the purpose of storing the material at Project site.

2.0 INTERPRETATIONS

- i. Where any portion of the "GCC – GOODS" is repugnant to or at variance with any provisions of the SCC then, unless a different intention appears, the provisions of the SCC shall be deemed to over-ride the provisions of the "GCC – GOODS". SCC provisions shall prevail to the extent of such repugnancy, or variations exist.
- ii. In Contract Documents, the singular shall include the plural and vice versa wherever the context so requires, unless otherwise stated specifically.
- iii. Notwithstanding the sub-division of the Contract Documents into separate sections and volumes every part of each shall be deemed to be supplementary to and complementary of every other part and shall be read with and into the Contract so far as it may be practicable to do so.
- iv. All headings, subtitles and marginal notes to the clauses of the GCC - GOODS, SCC or to the Specifications or to any other part of Bidding Document are solely for the purpose of giving a concise indication and not a summary of the contents thereof, and they shall never be deemed to be part thereof or be used in the interpretation or construction thereof.
- v. The terms fully capitalized and/or initial capitalized shall be interchangeable and shall have the meaning as assigned to fully capitalized term or initial capitalised term.
- vi. Except the obligation of payment to Seller, Consultant may discharge all other Purchaser's obligations. In Bidding Documents at all such places where obligations are confined to Purchaser alone, such provision to be read as 'Purchaser/Consultant's' obligation to the extent the context so means/ requires.

3.0 SELLER'S SCOPE (GCC – GOODS)

- 3.1 Supply of Goods / Equipments as per MR.
- 3.1.1 Seller's scope shall include (a) manufacturing of items / goods / equipments as per Material Requisition, technical specifications; (b) preparation of Quality Assurance / Quality control programme; (c) obtaining Consultant's approval; (d) arranging Inspection and Testing certification; (e) Inspection by Purchaser's/Consultant/Agency Designated by Purchaser and obtaining Inspection Release Note; (f) obtaining dispatch clearance; (g) Packing; (h) Loading on truck/trailer for Indian Bidder/ loading on ship at FOB Port of exit including stowing as applicable for Foreign Bidder.
- 3.2 Transportation/shipment of material up to project site from vendors site.
- 3.3 Site work, wherever applicable, as per requirements specified elsewhere in the Bidding document, "Health, Safety & Environment", shall be applicable.
- 3.4 Site supervision for Erection & Commissioning as per requirements specified in the Bidding document, wherever applicable.
- 3.5 Training of owner's / consultant's person(s) at vendor's works / project site, wherever applicable, as per guidelines given in the Material Requisition. The prices for Training shall be included in the quoted prices until and unless specifically asked for extra prices in the price schedule formats.

3.6 Any other specific requirement / activity though specifically not covered but is required as per scope of work, scope of supply, specifications, standards, drawings, GPC, GCC, SCC or any other part of Bidding Document.

4.0 **DELIVERY / COMPLETION SCHEDULE**

4.1 Delivery / Completion schedule shall be as specified in the LIB/BDS.

4.2 Delivery period, as detailed in Clause 4.1 of SCC, shall be the essence of Contract.

5.0 **DESPATCH INSTRUCTIONS**

5.1 Seller shall obtain dispatch clearance from the Purchaser/ Consultant prior to each dispatch.

5.2 Copy of Inspection Release Certificate, Dispatch Clearance and Statement showing the name of the vessel/transporter, description and weight of material and shipping marks etc. to be submitted along with the documents.

5.3 Ultimate Consignee address (Stores) shall be as mentioned in Material Requisition attached with the bidding document.

5.4 Port Consignee address (Stores) is as follows:

HOD (Mechanical - Projects),
Konkan LNG Limited,
At & Post Anjanwel, Tal-Guhagar,
Dist. Ratnagiri, Maharashtra,
Pin-415634,
Ph. No.: [02359-241015](tel:02359-241015)

6.0 **INDEPENDENT SELLER**

6.1 It is expressly understood and agreed that Seller is an independent party and that neither the Seller/ its personnel are servants, agents or employees of Purchaser/ Consultant nor the Seller has any kind of interest in other sellers.

7.0 **LIEN**

7.1 Seller shall ensure that the supplies made under the Contract is free from any claims of title/liens from any third party. In the event of such claims by any party, Seller shall at his own cost defend, indemnify and hold harmless the Purchaser or its authorised representative from such disputes of title/liens, costs, consequences etc.

8.0 **RECOVERIES**

8.1 In case, the statutory variation entitles the Employer to recover the amount (irrespective of Contractual Delivery) such amount will be recovered from any bill of the Contractor / Supplier, immediately on enforcement of such variation, under intimation to the Contractor / Supplier.

9.0 **INSURANCE**

As per GCC (GOODS) Clause No. 16. Details of Purchaser's Insurance Agent and Insurance Policy shall be covered in Purchase Order.

Insurance policy details shall be shared at the time of placement of order.

10.0 **PRICE REDUCTION SCHEDULE (PRS):**

Price Reduction Schedule (PRS) shall be applicable as per Clause 26 of GCC-Goods (Rev. 01).

Further, in case of delay in completion, the bidder shall calculate the applicable price reduction for delayed completion and raise their invoices net of contract price.

Total order value for the purpose of PRS shall be total of basic supply price & basic freight price. This shall be exclusive of GST.

11.0 TERMS AND MODE OF PAYMENT

11.1 The terms and mode of payment shall be as per Annexure-I to SCC.

11.2 No claim Certificate is Annexed as Annexure – II to this SCC. Seller is required to furnish the same along with the final invoice/bill. Payment against final bill shall be released only after Seller's furnishing this certificate duly filled in signed and stamped.

12.0 ORIGIN OF GOODS

12.1 A certificate issued by relevant Chamber of Commerce to this effect shall form part of shipping documents.

13.0 FALL CLAUSE

DELETED.

14.0 QUALITY ASSURANCE/QUALITY CONTROL

14.1 The Bidder shall prepare a detailed Quality Assurance Plan (QAP) for the execution of Contract for various facilities, which will be mutually discussed and agreed to.

14.2 The Bidder shall establish document and maintain an effective Quality Assurance System as outlined in recognized codes.

14.3 The Purchaser/Consultant, while agreeing to a Quality Assurance Plan, shall mark the stages where they would like to witness the tests; review any or all stages of work at shop/site etc., as deemed necessary for quality assurance.

15.0 DELETED

16.0 POST ORDER CORRESPONDENCE

Details of persons for post order correspondence shall be intimated in the Purchase Order.

17.0 Custom Duty

The Employer is entitled to Merit rate of Customs Duty for imports made for this Project.

The bidder while quoting the price may consider the merit rate of custom duty.

In case, no import is made for execution of the order, this clause will not be applicable.

18.0 INDEMNITY BOND

18.1 Material Requisition involving Site Works/Package, where the Bidder is required to be the sole custodian of all goods on behalf of Purchaser, and will be responsible for safety, security, storage, protection etc. till handing over of Equipment/ System. The Purchaser will have the 'Title of Ownership' on all such supplies/ Works performed as soon as any progressive payments are made to the Bidder, and the Bidder shall not subject these Works for use other than those

intended under the Contract. Bidder shall furnish an Indemnity bond (in the prescribed format Attached as Annexure-III to SCC) before the commencement of despatches, covering the total value of goods, valid till the date of handing over of the Equipment/ System. Bidder's authorised signatory shall sign the Indemnity bond.

19.0 **THIRD PARTY INSPECTION**

19.1 **Seller to note the following:**

QAP will be approved by EIL/Purchaser incorporating requirements of Inspection and Test Plan, Technical specifications provided with Purchase Order / Contract document.

Material to be supplied according to EN 10204-3.2 compliance and vendor to issue 3.2 compliance certificate duly signed by inspection agency. Final Inspection release note shall be issued by EIL/Purchaser.

Certification of final documents, wherever applicable, for release of final payment, shall be carried out by Inspection Authority, issuing the final inspection certificate.

19.2 **Indian bidder:**

Inspection/Certification of all the goods of Indian origin, shall be done by EIL for which no extra charges shall be payable.

All bought out items including import content (if applicable) shall be subject to inspection by (i.e. **CEIL/LRQA/IR CLASS / IRS/TUV (NORD/SUD/RHEINLAND)/ DNV/BV**) for which charges to be included in the quoted prices and no additional charges will be paid by Purchaser.

20.0 **DELETED**

20 **ORDER OF PRECEDENCE**

20.1 The Articles contained in this Section shall supplement to the Special Conditions of Contract and General Conditions of Contracts – Goods. Where any portion of Special Conditions of Contracts and General Conditions of Contract – Goods is repugnant or at variance with any provisions of Instructions to Bidders. Instructions to Bidders shall be deemed to over-ride the provision(s) of Special Conditions of Contract and General Conditions of Contract-Goods only to the extent that such repugnancies of variations in Instructions to Bidders are not possible of being reconciled with the provisions of Special Conditions of Contract and General Conditions of Contract – Goods. Order of Precedence shall be as under:

20.2 ncies of variations in Instructions to Bidders are not possible of being reconciled with the provisions of Special Conditions of Contract and General Conditions of Contract – Goods. Order of Precedence shall be as under:

20.3 in Instructions to Bidders are not possible of being reconciled with the provisions of Special Conditions of Contract and General Conditions of Contract – Goods. Order of Precedence shall be as under:

- (a) Purchase Order
- (b) Letter of Award / Fax of Acceptance
- (c) RFQ / IFB
- (d) Bid Data Sheet
- (e) Job Specifications
- (f) Drawings
- (g) Instruction to Bidders with e-tender instructions
- (h) Special Conditions of Contract
- (i) Technical Specifications
- (j) General Conditions of Contract
- (k) Other Documents

A variation or amendment issued after the execution of the formal contract shall take precedence over respective clauses of the formal contract and its Annexures.

21 Invoicing Address:

All invoices shall be raised on the following address:

In-charge, F&A Department,
Konkan LNG Limited,
AT & Post Anjanwel, Taluka Guhagar,
Dist. Ratnagiri: 415634, Maharashtra

22 PRADHAN MANTRI SURAKSHA BIMA YOJANA (PMSBY) AND PRADHAN MANTRI JEEVAN JYOTI BIMA YOJANA (PMJJBY)- IN CASE OF SITE WORK

Contractor shall ensure that all its personnel deployed under this contract have obtained additional insurance coverage under the Pradhan Mantri Suraksha Bima Yojana (PMSBY) and Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) through the participating banks and submit the proof of such insurance coverage to the satisfaction of KLL. The cost of the insurance premium amount for both the above schemes shall be borne by the contractor giving evidence/proof to KLL in this respect and Contractor shall suitably consider the same in their bid.

Both the schemes are to be regulated continuously on yearly basis and the same should be renewed on each successive relevant date in subsequent years.

23 LIMITATION OF LIABILITY

- 23.1 Clause 41 of GCC stands modified to the extent that the liability on account of the following shall not be limited for the following:
- i) In the event of breach of any Applicable Law;
 - ii) In the event of fraud, willful misconduct or illegal or unlawful acts, or gross negligence of the Contractor or any person acting on behalf of the Contractor; or
 - iii) In the event of acts or omissions of the Contractor which are contrary to the most elementary rules of diligence which a conscientious Contractor would have followed in similar circumstances; or
 - iv) In the event of any claim or loss or damage arising out of infringement of Intellectual Property; or
 - v) For any damage to any third party, including death or injury of any third party caused by the Contractor or any person or firm acting on behalf of the Contractor in executing the Works
- 23.2 Neither Party shall be liable to the other Party for any kind of indirect or consequential loss or damage including, loss of use, loss of profit, loss of production or business interruption which is connected with any claim arising under the Contract.
- 23.3 The final payment by the Employer/Consultant in pursuance of the Contract terms shall not mean release of the Contractor from all of his liabilities under the Contract. The Contractor shall be liable and committed under this contract to fulfil all his liabilities and responsibilities, till the time of release of contract performance guarantee by the Employer/Consultant.

24 **METHODOLOGY FOR PROCESSING TERMINATION FOR DEFAULT:**

- a. Any material breach in contractual obligations shall be dealt on mutual discussion basis, so as to correct breach. In case of failure to correct the breach, EIL/ Owner shall initiate Termination action as per the contract.
- b. In case of non-submission of CPBG within the period stipulated, required CPBG amount along with interest for the delayed period shall be recovered from the first RA bill / first Milestone payment, onwards, on proportionate basis, till full recovery.

However, in case, if the contractor submits CPBG before the first RA bill, then interest shall be recovered from the first RA bill, for the delayed period beyond the period stipulated for CPBG.

KLL having full rights to not accept CPBG after the specified time for submission and to initiate action on non-performance/poor performance.
- c. In case of non-submission of CPBG within one month beyond the period stipulated for it, coupled with non-mobilization / non-performance within the period stipulated for the same, the Termination action along with other contractual penal provisions shall be initiated, as per the contract provisions.
- d. Further, in case of submission of CBPG within scheduled period, but Contractor being at default in terms of Contract, a) above shall be applicable.
- e. In case of occurrence of any of the above specified events, contractor shall be understood to have defaulted and the EIL/ Owner shall have the right to terminate the contract, at its sole and absolute discretion by issuing a Show Cause notice of 15 calendar days to the Contractor, stating the reason and the intention of EIL/ Owner to terminate the Contract and to take other penal actions in terms of the contract including extant policy for Suspension/ Banning of EIL/ Owner.
- f. The Contractor may also request for a personal hearing.
- g. EIL/ Owner based on the contractor's response to the Show Cause Notice and the personal hearing, shall decide the action regarding Termination and/ or Suspension / Banning or otherwise
- h. The decision taken as above shall apply to both Termination as well as Suspension / Banning."

Further to above, In case contract/ Purchase order awarded for the tendered work have to be terminated due to Contractor's/ supplier's default and a separate enquiry / tender have to be floated to get the remaining/ complete work executed, such defaulting Contractor/ supplier will not be considered for enquiries/ tenders issued for the refloated works of same project.

	PAYMENT TERMS (ANNEXURE-1 TO SCC)
A.	<u>FOR INDIGENOUS SUPPLIERS:</u>
1.	Supply:
1.1.	<p>TERMS OF PAYMENT</p> <p>The following shall be read in conjunction with Article 21 of GCC (Goods)</p> <p>1.1 90% of invoice value including transportation with taxes and duties will be paid progressively on receipt of material at site. Invoice will be processed after submission of</p> <ul style="list-style-type: none"> i) Inspection release note by Purchaser/Purchaser's agency. ii) Copy of LR/GR, iii) Packing List, iv) Dispatch instruction/clearance by Purchaser/Purchaser's agency. The agency as per GST Act/Law shall be raised in the name of Office -in-charge, KLL as per PO. <p>1.2 Balance 10% amount of Invoice value shall be paid 30 within days of acceptance of complete materials at storage yard against submission of Claim Advice/ Supplementary Invoice along with: Confirmation by Purchaser/Purchaser's agency receipt of documents as specified in Vendor Data Requirement in MR.</p> <p>2. THE INVOICE SHALL BE MADE AFTER ADJUSTING THE FOLLOWING:</p> <p>2.1. PRS pursuant to GCC – GOODS, Clause 26.0 and SCC (Goods) – Clause 10.0, if applicable.</p> <p>3. MODE OF PAYMENT</p> <p>Payment will be released through E-payment as detailed in ITB clause 20.</p> <p>4. DEDUCTION AT SOURCE</p> <p>4.1. Purchaser will release the payment to the Seller after effecting deductions as per applicable law in force.</p> <p>4.2. Purchaser will release payments to the Contractor after offsetting all dues to the Purchaser payable by the Contractor under the Contract.</p> <p>5. PAYING AUTHORITY:</p> <p>In-charge, F&A Department, Konkan LNG Limited, AT & Post Anjanwel, Taluka Guhagar, Dist. Ratnagiri: 415634, Maharashtra</p>

ANNEXURE- II TO SCC

[On the Letter-head of Contractor]

NO CLAIM CERTIFICATE

We, _____, a company incorporated under the laws of India/ a Consortium between * ___ and * ___ (name of Consortium partners to be inserted)/ a Partnership Firm consisting of * ___ and * ___ (name of Partners to be inserted)/ a Sole Proprietorship (as the case may be), having its registered office at _____ and carrying on business under the name and style M/s. _____ were awarded the contract by GAIL (India) Ltd. in reference to Tender No. _____ dated _____ (“Contract”).

After completion of the above-said Work under the contract, we have scrutinized all our claims, contentions, disputes, issues and we hereby confirm that after adjusting all payments received by us against our R.A. Bills, our balance entitlement under the Contract is to a sum of Rs. _____ (Rupees _____ only) as per our Final Bill dated _____ towards full and final settlement of all our claims, dues, issues and contentions from GAIL (India) Ltd.

We confirm and declare that with the receipt of aforesaid monies, all our claims, dues, disputes, differences between M/s. _____ and GAIL (India) Ltd. under and with reference to said Contract stands fully and finally settled.

We further absolve GAIL (India) Ltd. from all liabilities present or future arising directly or indirectly out of the Contract.

We further confirm that the present settlement has been arrived at after mutual negotiations and is freely and fairly entered into between the parties. There is no economic duress or any other compulsion on us in entering into this settlement.

Signature with Seal of contractor

Dated :

INDEMNITY BOND

WHEREAS GAIL (India) Ltd. (hereinafter referred to as “GAIL”) which expression shall, unless repugnant to the context include its successors and assigns, having its registered office at 16, Bhikaiji, Cama Place, R.K. Puram, New Delhi 110066 has entered into a contract with M/s *___ (hereinafter referred to as the “Contractor”) which expression shall unless repugnant to the context include its representatives, successors and assigns, having its registered office at *___ and on the terms and conditions as set out, inter-alia in the [mention the work order/LOA/Tender No.] and various documents forming part thereof, hereinafter collectively referred to as the ‘CONTRACT’ which expression shall include all amendments, modifications and / or variations thereto.

GAIL has also advised the Contractor to execute an Indemnity Bond in general in favour of GAIL indemnifying GAIL and its employees and Directors including Independent Directors from all consequences which may arise out of any prospective litigation or proceedings filed or may be initiated by any third party, including any Banker / financial institution / worker(s) / vendor(s)/ sub-contractor(s) etc. who may have been associated or engaged by the Contractor directly or indirectly with or without consent of GAIL for above works.

NOW, THEREFORE, in consideration of the promises aforesaid, the Contractor hereby irrevocably and unconditionally undertakes to indemnify and keep indemnified GAIL and all its employees, Directors, including Independent Directors, from and against all/any claim(s), damages, loss, which may arise out of any litigations/ liabilities that may be raised by the Contractor or any third party against GAIL under or in relation to this contract. The Contractor undertakes to compensate and pay to GAIL and/or any of its employees, Directors including Independent Directors, forthwith on demand without any protest the amount claimed by GAIL for itself and for and on behalf of its employees, Directors including Independent Directors together with direct/indirect expenses including all legal expenses incurred by them or any of them on account of such litigation or proceedings.

AND THE CONTRACTOR hereby further agrees with GAIL that:

(i) This Indemnity shall remain valid and irrevocable for all claims of GAIL and/or any of its employees and Directors including Independent Directors arising out of said contract with respect to any such litigation / court case for which GAIL and/or its employees and Directors including Independent Directors has been made party until now or here-in-after.

(ii) This Indemnity shall not be discharged/revoked by any change/ modification/amendment/assignment of the contract or any merger of the Contractor with other entity or any change in the constitution/structure of the Contractor’s firm/Company or any conditions thereof including insolvency etc. of the Contractor, but shall be in all respects and for all purposes binding and operative until any/all claims for payment of GAIL are settled by the Contractor and/or GAIL discharges the Contractor in writing from this Indemnity.

The undersigned has full power to execute this Indemnity Bond for and on behalf of the Contractor and the same stands valid.

SIGNED BY :

For [Contractor]
Authorised Representative

Place:

Dated:

Witnesses:

1.

2

PREAMBLE TO PRICE SCHEDULE	
RFQ NO:	SM/B861-000-EX-MR-6001/02
ITEM:	HEAT EXCHANGER (PLATES-GASKETTED)
1	Bidder shall indicate single price of all five items in GeM portal considering Supply+ Transportation+GST. Prices quoted in GeM portal shall be considered for evaluation.
2	Quoted price shall be inclusive of prices for raw materials sourced outside India and to be incorporated in the finished product sourced from India - Detailed break up shall be furnished in Price Schedule Form A1.
3	All material shall be delivered at designated warehouse as indicated in the MR.
4	Two Years Operation and Maintenance Spares must be quoted by the bidder strictly as per the Price Schedule Form-A3 and shall upload in GeM Portal in Financial Part, Further bidder to submit the unpriced copy of the same along with the unpriced bid. Prices quoted by the bidder for Two Years Operation and Maintenance Spares shall not be considered for evaluation purpose.
5	<i>Taxes & Duties shall be quoted under Price Schedule Form - A2.</i>

DETAILS OF BUILT-IN-CIF VALUE OF IMPORT CONTENT (RAW MATERIALS) (INDIAN BIDDER)										
RFQ:	SM/B861-000-EX-MR-6001/02									FORM A1
ITEM:	HEAT EXCHANGER (PLATES-GASKETTED)									
NAME OF BIDDER:										
S no.	For Item no./ Sl . No. as per price schedule format	DESCRIPTION			CIF value of Import Content included in quoted supply prices (INR)	RATE OF CUSTOM DUTY INCLUDED IN QUOTED FOT DESPATCH POINT PRICES				
		Description of Imported items	Unit of Measurement	Quantity		CUSTOM TARRIF NO.	BASIC CUSTOMS DUTY (%)	EDU. CESS ON CUSTOMS DUTY (%)	IGST ON CUSTOM DUTY AND ED. CESS (%)	TOTAL CUSTOM DUTY (%)
1										
2										
3										
a.	Bidder to specify whether rates has been quoted considering Merit rates as specified in ITB (Yes / No):									
b.	If reply to S no. a) is 'No', please indicate the reasons:									
Note:										
1	Bidder to furnish the above details separatly for each item S. No. of MR.									
2	Bidder has to ensure that currency quoted in this format shall be same with the currency quoted in the main price schedule format.									
3	Un-priced copy shall be furnished exactly duplicate of price schedule duly indicating rate of duties except for CIF value.									
4	The CIF Value(s) indicated by the vendor shall be deemed to be the maximum value(s) for the purpose of payment of variation in Basic Custom Duty and Customs Education Cess.									

RFQ:	SM/B861-000-EX-MR-6001/02		FORM A2
ITEM:	HEAT EXCHANGER (PLATES-GASKETTED)		
NAME OF BIDDER: M/s _____			
NAME OF BIDDER *			
OFFER REFERENCE *			
CONTACT PERSON *			
MOBILE NO *			
ADDRESS FOR FUTURE CORRESPONDENCE *			
TEL NO *			
FAX NO *			
EMAIL ID *			
	BID DETAILS * :-	SELECT APPROPRIATE OPTION	
1	Dispatch point price from where material shall be dispatched		
2	FREIGHT CHARGES IN %AGE INCLUDED IN QUOTED SINGLE PRICE IN GEM PORTAL		
3	GST Registration Number		
4	HSN/SAC Code for Goods/ Services		
5	Applicable rate of GST on supply		
5 (i)	Applicable rate of IGST on Interstate supply		Extra @.....
5 (ii)	Applicable rate of CGST & SGST/UTGST on Intrastate Supply		In case of Intrastate supply, rate of IGST mentioned above at 4(i) shall be divided into CGST & SGST/UTGST equally for evaluation and ordering.
6	GST applicable extra on Freight Charges (In case not quoted, GST on freight shall be considered as Not Applicable)		Extra @.....
OTHER DETAILS / CONFIRMATION:			
7	WE CONFIRM THAT WE ARE NOT BANNED OR DELISTED OR BLACK LISTED BY ANY GOVERNMENT DEPARTMENT/ PUBLIC SECTOR ON DUE DATE OF SUBMISSION OF BID.		CONFIRMED, NOT BANNED
8	WE CONFIRM THAT WE ARE NOT UNDER LIQUIDATION, COURT RECEIVERSHIP OR SIMILAR PROCEEDINGS.		CONFIRMED
9	Whether Micro or Small Enterprise		
10	WHETHER MSE IS OWNED BY SC/ST ENTREPRENEUR(S).		
11	WE CONFIRM COMPLIANCE TO COMMERCIAL TERMS & CONDITIONS AS PER ENQUIRY DOCUMENT WITHOUT ANY RESERVATION.		CONFIRMED

Form - A3 to Price Schedule Format

(For 2 Years Spares of normal operation & maintenance)

RFQ NO. SM/B861-000-EX-MR-6001/02

ITEM: HEAT EXCHANGER (PLATES-GASKETTED)

NAME OF BIDDER: M/s _____

S.No	Description	UNIT SUPPLY PRICE INCLUDING PACKING AND FORWARDING (IN INR)	FREIGHT PERCENTAGE IN
------	-------------	---	-----------------------

Unit rates for two years operation and maintenance spares

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			

NOTES:

1 The prices for these spares shall be valid upto Guarantee/Warranty period of main Equipment/Item.

2 Bidder to submit unit Prices for supply and freight for each items. GST on Supply and Freight of 2 Years O&M Spares shall be applicable as per GST of supply and Freight of Main equipment.

3 KLL/EIL reserves the right to select and order any of the spares out of above list within the validity period as mentioned above.

4 Bidder shall recommend quantity of two years operation and maintenance spares in above mentioned format.

Material Requisition (Top Sheet)

Item Description : HEAT EXCHANGER (PLATES-GASKETTED)	
Item Code : 01CH	Destination : As per Commercial Documents
Item Category : I	Delivery Period : As per Commercial Documents

Requisition Number (Always quote this Number given below as reference)

B861	000	EX	MR	6001	C			
Job No.	Unit/ Area	Main Cost Centre	Doc. Code	Sr. No.	Rev.	12/07/2024	80	42
						Date	Divn.	Dept.
						Originator		

Notes :

1. This sheet is a record of all the Revisions of this Requisition.
2. Vendor shall note the item category and shall submit his offer in line with the requirements included in attached 'Instructions to Vendors'.
3. The nature of the Revision is briefly stated in the 'Details' column below, the Requisition in its entirety shall be considered for contractual purposes.

Rev.	Date	Prepared By	Checked By	Approved By	Details
A	01/05/2024	Patel Ronakkumar Rameshbhai	Pankaj Kumar Prasad	Tarun Kumar	ISSUED FOR BIDS
B	08/05/2024	Patel Ronakkumar Rameshbhai	Pankaj Kumar Prasad	Tarun Kumar	ISSUED FOR BIDS
C	12/07/2024	Patel Ronakkumar Rameshbhai	Pankaj Kumar Prasad	Tarun Kumar	ISSUED FOR BIDS

This is a system generated approved document and does not require signature.

Sr. No.	Tag No./Item Code/ [ID.No.]	Description	Quantity	Delivery Location
01.00		Supply of Gasketed Type Plate & Frame exchangers in accordance with PDS, spec., drgs, codes, std specifications etc. The scope shall include following as a minimum :Thermal (including hydraulic) & mechanical design, detailed engineering including preparation of datasheets, mechanical fabrication drg, etc. procurement of all materials and bought out components, Supply of all materials, fabrication, assembly at shop, stage wise & final inspection by TPIA (NOTE-1), testing, NDT,PWHT (if required),Hydrotesting, Cleanin,Pickling & Passivation, surface preparation, primer application and finish painting (final coat i.e. erection/field paint), insulation, packing seaworthy packing with N2 purging & forwarding, Statutory approvals, Supply of mandatory & commissioning spares, special tools required for maintenance & operation, if any. all cleats, wherever required. Performance, design, material & workmanship guarantees, Complete documentationany, other item required for safe & smooth operation		
▶ 01.001	A1 700-EP-1001 A	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	1 Nos	
▶ 01.002	A1 700-EP-1001 B	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	1 Nos	
▶ 01.003	A1 700-EP-1001 C	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	1 Nos	
▶ 01.004	A1 700-EP-1001 D	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	1 Nos	
▶ 01.005	A1 700-EP-1001 E	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	1 Nos	
02.00		Deleted		
03.00		Transportation from Vendors work/ shop to site for the following as per Commercial documents & enclosed specifications.		
▶ 03.001	A1 {03}700-EP-1001 A	For Item SL. No. 01.001	1 No	
▶ 03.002	A1 {03}700-EP-1001 B	For Item SL. No. 01.002	1 No	
▶ 03.003	A1 {03}700-EP-1001 C	For Item SL. No. 01.003	1 No	
▶ 03.004	A1 {03}700-EP-1001 D	For Item SL. No. 01.004	1 No	
▶ 03.005	A1 {03}700-EP-1001 E	For Item SL. No. 01.005	1 No	
04.00		Deleted		

Sr. No.	Tag No./Item Code/ [ID.No.]	Description	Quantity	Delivery Location
05.00 05.001		Two Years Operation and Maintenance Spares Itemized price list for additional Two Years Operation and Maintenance Spares (over and above mandatory / commissioning spares), as per vendor recommendation.	1 Lot	
06.00		Deleted		
07.00		Deleted		
08.00		Deleted		
09.00		Drawings and documents as per attached Vendor Data requirement for all supplies and services covered above in Sr.Nos.1.00 to Sr.No.8.00	Lot	
10.00		Deleted		
11.00		Deleted		
12.00		Deleted		
13.00		Deleted		
14.00		Deleted		
15.00		Deleted		
16.00		Deleted		
17.00		Deleted		
18.00		Deleted		
19.00		Deleted		
20.00		Deleted		
21.00		Deleted		
22.00		Deleted		
23.00		Deleted		
24.00		Deleted		
25.00		Deleted		
31.00		Deleted		
32.00		Deleted		

- ▶ Bidder shall quote prices in EIL Price Schedule except for Sr.No.09.00. Price for documentation is implied to be included in the prices quoted against Sr.No. 01.00 to Sr.No. 32.00

Vendor to note that the numbers given in square '[]' and curly '{} ' brackets are not for their use and meant for store purpose only. Items shall be tagged as per main equipment Tag No. only.

Note:

Bidder to note that one fixed price is to be quoted for grouped items. The groups of items are identified by A1, where A1 indicates one group and so on.

Grouped items shall not be split ordered.

Clause Related
Supply
1. COST OF THIRD PARTY INSPECTION SHALL BE CONSIDERED IN QUOTED PRICE BY THE BIDDER.

List of Attachments						
Sr. No.	Document Title	Document No.	Revision			
			Rev.	Rev.	Rev.	Rev.
			Date	Date	Date	Date
LIST OF ATTACHMENT						
1.	LIST OF ATTACHMENTS FOR HEAT EXCHANGER (PLATES-GASKETTED)	B861-80-42-LL-6001	A			
			22/04/2024			

LIST OF ATTACHMENTS FOR HEAT EXCHANGER (PLATES-GASKETTED)

A	22/04/2024	ISSUED AS JOB SPECIFICATION	RP	RG	TK
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

S. No.	Documents Title	Documents No.	Rev.	Remarks
JOB SPECIFICATION				
1.	Technical Compliance Statement	B861-80-42-TCL-6001	A	
2.	Scope of Work & Supply for PLATE & FRAME HEAT EXCHANGERS (GASKETTED)	B861-80-42-SS-6001	A	
3.	Job Specification for PLATE & FRAME HEAT EXCHANGERS (GASKETTED)	B861-80-42-SP-6001	A	
4.	HTD - JOB SPECIFICATIONS	B861-700-80-45-SP-0001	B	
5.	Job specification for surface preparation and protective coating	B861-000-06-42-PLS-01	0	
6.	JOB SPECIFICATION FOR INSULATION OF PIPING AND EQUIPMENT	B861-000-06-43-IL-S001	0	
7.	Site Specific Seismic spectra	B861-000-16-54-DB-0001	0	
VENDOR DATA REQUIREMENTS				
8.	VENDOR DATA REQUIREMENTS FOR PROTECTIVE COATINGS	B861-000-6-42-VDR-PLS0001	0	
9.	Vendor Data Requirements	B861-000-80-42-VDR-6001	A	
DATASHEET/P&ID				
10.	PROCESS DATA SHEET FOR ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW)	B861-700-02-42-DS-1401	3	
11.	P&ID FOR EGW - MW PLATE HEAT EXCHANGER, 700-EP-1001 A	B861-02-42-700-1111	A	
12.	P&ID FOR EGW - MW PLATE HEAT EXCHANGER, 700-EP-1001 B	B861-02-42-700-1112	A	
13.	P&ID FOR EGW - MW PLATE HEAT EXCHANGER, 700-EP-1001 C	B861-02-42-700-1113	A	
14.	P&ID FOR EGW - MW PLATE HEAT EXCHANGER, 700-EP-1001 D	B861-02-42-700-1114	A	
15.	P&ID FOR EGW - MW PLATE HEAT EXCHANGER, 700-EP-1001 E	B861-02-42-700-1115	A	
STANDARD SPECIFICATIONS				
16.	Standard specification for plate type heat exchangers.	6-15-0008		
17.	Specification for quality management system requirements from bidders	6-78-0001		
18.	Specification for Documentation Requirement from Suppliers	6-78-0003		
STANDARD INSPECTION TEST PLAN				

19.	ITP for plate type heat exchangers (PHE)	6-81-0144		
STANDARDS				
20.	Earthing Lug	7-15-0016		
21.	Name plate for shell & tube heat exchanger	7-15-0017		
22.	Allowable nozzle loads	7-12-0038		

TECHNICAL COMPLIANCE STATEMENT

A	08/04/2024	ISSUED FOR BIDS	RP	PKP	TK
Rev. No	Date	Purpose	Prepared By	Checked By	Approved By

TECHNICAL COMPLIANCE STATEMENT

(TO BE SIGNED BY VENDOR'S PRINCIPAL CORPORATE LEVEL SIGNATORY ON COMPANY LETTERHEAD)

I, ON BEHALF OF M/s _____ CONFIRM THAT THE PROPOSAL OF -----
-----QUOTED BY M/s _____ **FOR EPCM Services for Ambient Air
Heating System at KLL PROJECT AT KLL LNG TERMINAL , ANJANWEL OF M/S
KONKAN LNG LIMITED** AGAINST MATERIAL REQUISITION /TENDER/PACKAGE No. -----
----- IS IN TOTAL COMPLIANCE TO THE FOLLOWING

- A. SCOPE OF SUPPLY AND WORK
- B. PROCESS DATA SHEETS
- C. BATTERY LIMIT/INTERFACE REQUIREMENTS
- E. TECHNICAL AMENDMENT IF APPLICABLE
- F. ANY OTHER DOCUMENT ATTACHED AS PART OF MR

**AS WELL AS ALL THE TECHNICAL SPECIFICATION AND NO DEVIATION, VARIATION OR
RESERVATION WHATSOEVER HAS BEEN MENTIONED IN THE TECHNICAL OFFER.** IT IS
FURTHER AGREED THAT THE TECHNICAL DETAILS FURNISHED IN OUR OFFER WILL BE
REVIEWED BY EIL/KLL DURING DETAILED ENGINEERING STAGE AFTER ORDER AND ANY
CHANGE REQUIRED TO MEET THE REQUIREMENTS OF ENQUIRY SCOPE AND SPECIFICATION
INCLUDING AMENDMENT(S) (IF ANY) WILL BE INCORPORATED BY US WITHOUT ANY PRICE
AND TIME IMPLICATION.

(SIGNATURE WITH SEAL)

**SCOPE OF WORK AND SUPPLY
FOR
PLATE & FRAME HEAT EXCHANGERS
(GASKETTED)**

A	08/04/2024	ISSUED WITH BIDS	RP	PKP	TK
Rev.No	Date	Purpose	Prepared by	Checked by	Approved by

SCOPE OF WORK AND SUPPLY

Bidder's scope of work and supply shall include the following:

- Thermal (including hydraulic) design
- Mechanical design (including Calculation of loadings data for civil design of Foundation and Technological structures).
- Detailed engineering including preparation of mechanical datasheets / Fabrication drawing, etc.
- Supply of all materials.
- Manufacture, procurement of all materials and bought out components, fabrication, assembly, stage-wise & final inspection, NDT, PWHT (if required), testing, Chemical cleaning including passivation, surface preparation, primer application and finish painting (final coat i.e. erection/field paint), insulation, sea worthy packing and forwarding, transportation to site etc.
- Statutory approvals, if any.
- Supply of following Mandatory spares (For Nozzles with Blind Flange):
Gaskets - 400%
Bolting - 20% (Minimum 4 Studs and 8 Nuts per Nozzle)
- Supply of commissioning spares (recommended by bidder).
- Vendor shall submit recommended list of spare parts for first two years of normal operation & maintenance (**Separate item wise quote**) & provide the same if required by Client
- Supply of special tools & tackles like Ratchet type spanner, torque wrench, bolt tensioner etc. as per specifications or as recommended by bidder, if any
- Vendor to provide specific maintenance instructions.
- Insulation, Piping & structural cleats, wherever required.
- Supply of Insulating material, fire proofing materials wherever required.
- Vendor shall supply all first fill consumables required for equipment during commissioning and performance guarantee test runs.
- Performance, Design, Material & Workmanship guarantees.
- Complete documentation including as built dossier, operating & periodic maintenance manual, QAP etc.
- Any other requirement specified in requisition/ job specifications or required for safe & smooth operation of the equipment.
- Any other item required for safe & smooth operation.

EQUIPMENT SCHEDULE

SL.NO	ITEM NO.	QUANTITY
		NO.OF UNITS
1.	700-EP-1001 A/B/C/D/E	FIVE

NOTES:

1. The submission of prices by vendor shall be construed to mean that he has confirmed compliance with all technical specification of the corresponding item (s).

JOB SPECIFICATION FOR PLATE & FRAME HEAT EXCHANGERS (GASKETTED)

A	08/04/2024	ISSUED FOR BIDS	RP	PKP	TK
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

1.0 SCOPE

- 1.1 This specification covers the supply of the Plate & Frame heat exchangers (Gasketted-type) in accordance with Process Data Sheets, this specification, Codes, standard specifications etc. listed in requisition. Scope of work and supply shall be as per Doc. No.B861-80-42-SS-6001.
The requirement specified here are supplementary requirement over and above EIL standard specification for plate type heat exchanger 6-15-0008.

2.0 GENERAL

2.1 Codes (In addition to those specified in spec. # 6-15-0008)

ASME Section II
ASME Section V

All Codes referred to in various general specifications & EIL Spec # 6-15-0008, and not included above, also form a part of this specification; latest editions apply.

2.2 Deviations

Bidder shall note that this is a ZERO DEVIATION bid, therefore Licensor's/EIL specifications shall be complied with by vendor in totality. No deviations shall be permitted from licensor's/EIL specifications. Any comments or requirements stipulated by licensor/EIL during the vendor document review based on their experience and as per the requirements of requisition shall be binding on the Vendor without any extra cost and time.

2.3 Conflict

In case of conflict between this specification and other specifications, Codes and data sheets, most stringent requirements shall apply. Same shall be referred to EIL/Owner for clarification and the decision of EIL/ Owner shall be final & binding on Vendor, without any cost & delivery implications. Generally the order of precedence shall be as follows:

- a) Statutory requirements, if any
- b) Process datasheet
- c) Job specification
- d) EIL Specifications
- e) Codes and standards specified.

2.4 Safety

It is the intent of Owner that operational hazards are reduced to a minimum. Vendor shall use sound engineering judgment to complete an installation that will perform the required process function without compromising this aspect.

2.5 Vendor Documentation

2.5.1 Master document index

Master document index with submission date must be submitted within 15 days after award of contract. Following order of submission of documents must be adhered to:

- i) Master document index with schedule of submissions.
- ii) Thermal data sheet
- iii) Mechanical design calculations
- iv) Mechanical Data sheets/drawings.

2.5.2 Mechanical Data sheets

Vendor shall prepare Mechanical Data sheets, which includes the following basic features as a minimum:

- i) Design Data
- ii) Complete dimensions; size, location & orientation of nozzles, support details, etc.
- iii) Material of construction of all components along with their sizes and thickness
- iv) Any specific feature, requirements relating to the equipment.

EIL/Owner shall review these data sheets. Comments, if any, shall be complied with. EIL's review/ approval of Vendor's documents shall not relieve the Vendor of his responsibilities to supply equipment as per requisition.

All drawings/documents submitted to EIL shall be legible and of good quality. Illegible drawings/documents shall be returned back without EIL review and any delay in approval of such drawings/documents shall be to Vendor's account.

3.0 OTHER REQUIREMENTS

3.1 Wind, seismic and Anchor bolt design shall be as follows:

a) Seismic load

Seismic forces shall be based on the recommendations of seismic design basis document EIL Doc. No. B861-000-16-54-DB-0001. (ISSUED AS GUIDE) attached with requisition.

b) Wind load

Wind loads shall generally be as per IS: 875. The basic wind speed of the site is taken as 47(HOLD) m/s.

Values of coefficients shall be as:

Drag coefficient for cylindrical vessels shall be 0.7 minimum.

Drag coefficient for spherical vessel shall be 0.6 minimum.

Risk Coefficient k1 : 1

Terrain Factor k2 : Category 3 For units and 2 For offsite

Topography Factor k3 : 1

A contingency factor of 1.1 shall be applied to wind pressure.

c) Anchor bolt design

- Material of anchor bolts/nuts: IS 2062 Fe 250 Grade B (Mild steel)
- Grade of concrete is M30 for foundations and superstructure conforming to IS:456:2000
Permissible bearing Stress in concrete is 12 N/mm² (Limit state) for M30.
- Maximum Permissible stresses in mild steel bolts of property class 4.6 (IS:1367-1967) shall be:

Axial Tension 120 N/mm²

Shear 80 N/mm²

- Min. Anchor bolt size shall be M24 (anchor bolt size specified is exclusive of corrosion allowance).
- 1 mm corrosion allowance shall be considered on the anchor bolts.

d) Foundation Loads

All parameters required for design of foundation such as wind shear and moment at base, seismic shear and moment at base, anchor bolt size and numbers, location, erection weight, operating weight, hydro test weight etc. shall be furnished by vendor.

3.5 Refer clause 5.1.7 of spec. 6-15-0008, cold rolled 2B finished plates shall be used.

3.6 SS plates shall be of SA240 specification.

3.7 Design shall be such that separation of plates doesn't occur due to deposition of hard scales at inlet ports.

3.5 **Nozzle connections shall be WNRF type, projected as indicated in the bottom picture of Fig 5 of API-667. Nozzles shall be set in type connections. All process nozzles connected to piping shall be designed for the nozzle loads indicated in the document 7-12-0038 (instead of loads specified in API-667) Loads specified in this specification are tentative, which shall be treated as minimum design loads. But final calculated loads shall be passed on to the vendor for designing the nozzles. If actual nozzle loads exceed the above values, the same will be communicated to the successful bidder after the placement of an order for compliance without cost & delivery implications.**

Local load analysis of process nozzles and nozzle junction shall be carried out as per WRC 107 and WRC 297 or Nozzle PRO (FEM analysis) if required.

- 3.6 If torquing of bolts is required, the vendor shall provide torquing procedures.
- 3.7 Vendor shall be responsible for the compatibility of gasket material & glue, selected for specified fluids and design conditions.
- 3.8 The vendor shall state the anticipated life of the proposed gaskets in the specified service and in storage. Special requirements for gasket storage to maintain gasket shelf-life shall be specified.
- 3.9 Clause no. 4.1.7 & 4.2.2 of specification no. 6-15-0008 shall be ignored. MOC shall be as per PDS. ~~Nozzle / Flange material shall be the same as that of frame material i.e. CS.~~ All the material shall be of ASME specification.
- 3.10 Please refer to Clause 7.7.1 of API 667 Part 1/ISO15547-1, connections shall be bolted and shall be of flanged design. However, Flanges shall be weld neck forged flanges. Other types of flanges are not acceptable.
- 3.11 The port/Nozzle size shall be equal to / nearest to the connection size given in EIL Process Data Sheets. Where the port/Nozzle size is not equal to the connection size, vendor shall provide extended type of nozzles with reducer & flange.
- 3.12 Vendor to ignore the spares indicated in Clause No. 6.1 & 6.2 of EIL spec 6-15-0008.
- 3.13 In addition to clause no. 4.5.1 of specification 6-15-0008, SS or higher alloy T-section can also be bolted to the upper carrying bar.
- 3.14 In addition to clause no. 4.5.2 of specification 6-15-0008, the lower carrying bar can also be bolted to the fixed cover and carrying bar support column.
- 3.15 The nozzles shall be flanged and projected type with a provision of a flanged 1-1/2" connection on each nozzle blinded with studs nuts and gaskets. Vendor to ignore clause no. 4.8.1 of EIL Std. spec. 6-15-0008.
- 3.16 Exchanger shall be provided with vent and drain connection as per P&ID / PDS. If not shown in P&ID / PDS; Separate vent and drain will not be provided if vented / drained by process/other nozzles. Exchangers shall be provided with vent and drain connection of 40 NB nozzle with blind flange and for clad exchangers, minimum size of vent and drain nozzle connection shall be 50 NB LWN.
- 3.17 ~~Heat exchanger fabrication drawings shall be submitted to the licensor for review. Any comment from the licensor shall be taken care by vendor without any cost & delivery implication.~~
- 3.18 ~~Personnel protection insulation (25 mm) is indicated in PDS to protect against hot operating surfaces. Personnel protection through sheet application may be accepted. The same shall be in the Vendor's scope.~~

4.0 INSPECTION

All materials including those used for internals shall be procured with stage-wise inspection.

Stage-wise and final inspection of equipment and its components shall be carried out by following:

- a. ~~For Foreign Vendors: Stagemise & final inspection of the equipment including all components and internals shall be carried out by third party inspection agency. Quoted price shall include for the same.~~
- b. ~~For indigenous Vendors: EIL shall be inspection agency for equipments and its indigenous components. In case internals/forging/plates etc. are procured from abroad, the inspection shall be carried out by third party inspection agency. Quoted price shall include charges for the TPIA. Charges for EIL inspection to be borne by the OWNER.~~
- a. **For indigenous Vendors: Stage wise & final inspection as per approved QAP by TPIA. Final testing of the items shall be witnessed by EIL. QAP/ITP shall be reviewed by vendor/TPIA and approved by EIL. IRN/IC issued by TPIA and to be endorsed by EIL. EIL reserves the right to carry out stage wise inspection along with TPIA as and when required based on the criticality of the equipment if decided during QAP/ITP approval stage. The quoted price shall include charges for the TPIA. Charges for EIL Witness (at final Inspection) are to be borne by the OWNER.**
- b. For acceptable Third-party inspection agencies (TPIA), refer to commercial documents.
- c. Virtual Monitoring for critical fabricated Equipment

"EIL / OWNER would review the actual job progress at place of fabrication/Manufacturing shop as & when desired or on monthly basis.

Vendor shall have provisions for showing live feed of job status / Work in progress at place of fabrication / shop floor for the ordered equipment by use of high resolution cameras / helmet cameras or any suitable electronic device during virtual progress review. Recording of the job status (in soft) shall be captured & submitted to EIL / Owner after each review.

Vendor shall ensure that requisite facilities to show virtual job progress/ Work in Progress are available at their manufacturing shop/place of fabrication and in case these are not available same shall be installed within one month of award".

4.2 The Purchaser/EIL and Licensor also reserve the right to inspect the equipments at any time during fabrication and at final stage before dispatch and witness the testing.

4.3 During inspection, material certificates, shop test data, certificates for bought out components and other relevant information shall be furnished and testing done as required so as to ascertain that the specifications and quality is complied with. Original mill test certificates for all raw materials for pressure parts to be submitted to the inspection agency for acceptance. This supersedes para-2 of clause 8.2 of standard spec. 6-15-0008.

- 4.4 Positive material identification (PMI) - Vendor shall ensure that all alloy steel and stainless steel material are properly identified and finally check tested by a PMI analyzer before dispatch of equipment as per EIL Specification 6-81-0001. Any comments by EIL/Owner shall be complied-with without time & cost implication.
- 4.5 In addition to stamping, the specifications & manufactures symbol as specified in ASME material specifications, on one of the ends the size of the stud shall be clearly punch marked. Similarly the nuts shall have the size punch marked on one of the faces. In case of tapped hole the size shall be punch marked near the hole without disturbing the gasket seating area. Further for all alloy/SS metallurgy bolts & nuts shall also be identified by distinct color marking at the stud end/bolt side face.
- 4.6 Vendor shall carry out various tests as per applicable codes/standards. Any or all test including hydro test shall be witnessed at Purchaser's option by its authorized representative.

The presence of the authorized inspector shall not reduce the obligation of fabricator to carry out his own tests and controls. Should any component and / or material be found not in compliance with requirements specified, the authorized inspector shall be entitled to reject them even if such non-compliance has not been evidenced in course of inspection or tests.

5.0 PAINTING

All external surfaces, except gasket faces and machined surfaces, shall be primer and finish painted. Surfaces to be painted shall be prepared for painting by removing loose mill scale, rust, oil, grease and other films or substances harmful to the adhesion of paint by an approved method such as shot blast cleaning.

Surface preparation, shop primer, and finish paint (Final coat i.e field/erection paint) shall be done at Vendor shop only prior to dispatch of the equipment as per enclosed painting/coating specification B861-000-06-42-PLS-01, attached elsewhere in the requisition. Additionally; the Vendor shall supply touch-up paint for repair at the site.

6.0 GUARANTEE

The Supplier shall be completely responsible for the compliance to Process Data sheet, Specifications requirement, Code requirements, Mechanical & Thermal design (including hydraulic), performance, detailing, fabrication, materials, and workmanship of the exchangers as per the stipulations of the requisition and its attachments. In this regard, it may be noted that review by Employer/PMC shall not relieve the Supplier of his responsibility of meeting all requirements and ensuring satisfactory performance of the equipment. Performance guarantee shall be as per process datasheets enclosed with requisition Vendor shall upon notice from purchaser make good at his own expense all defects found during the guarantee period expeditiously. Guarantee period shall be as per GPC of Employer.

7.0 TRANSPORTATION

Equipment shall be transported to site in single piece.

Transportation of equipment shall be governed by commercial documents/ conditions.

8.0 PROTECTION AND DISPATCH

After completion of all testing and inspection, the inside of complete equipment shall be thoroughly drained and dried out. Equipment shall be completely dried by passing air for sufficient time until no further increase in relative humidity of outgoing air is observed. Dry out shall be done simultaneously on both Hot & Cold sides. After drying, the equipment shall be purged and filled with dry N₂ at 0.25 kg/cm². The equipment shall be provided with pressure gauge to monitor N₂ pressure, and ½" non-return valve. All threaded holes, other than tell-tale holes for testing, shall be suitably protected with steel bar plugs. All nozzles not provided with blind flange shall be provided with steel covers, temporary gaskets and bolts.

ADDITIONAL REQUIREMENT

FOR

**ETHYLENE GLYCOL WATER-METHANOL WATER
EXCHANGER**

**ITEM NO: 700-EP-1001 A/B/C/D/E
(GASKETED PLATE HEAT EXCHANGER)**

AMBIENT AIR HEATING SYSTEM

KLL, ANJANWEL

B	19.04.2024	ISSUED AS MR INPUT	AS	KMB	SS
A	04.04.2024	ISSUED AS MR INPUT	AS	KMB	SS
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

1. Vendor is required to carry out thermal design and supply plate heat exchangers for Item No. 700-EP-1001 A/B/C/D/E, based on M/s EIL latest process datasheet doc. no. B861-700-02-42-DS-1401.
2. The plate heat exchangers are to be sized for the fluid flow rates and heat duty, for all the cases as specified in latest M/s EIL process data sheet.
3. Vendor to ensure area overdesign margin for fouling resistance as per API 667 (formerly API 662-1).
4. Data requirement from vendor:
 - 4A). Data required along with offer:
 - i. Type of exchanger
 - ii. LMTD
 - iii. Overall clean and fouled heat transfer coefficient.
 - iv. Both side calculated pressure drops.
 - v. Plate size (width x thickness)
 - vi. No of plates.
 - vii. No. of channels for each side flow.
 - viii. Material of construction of plates with corrosion allowance
 - ix. Effective surface area (plane) per plate.
 - x. Chevron angle.
 - 4B). Data required at post order stage:
 - 4B.1) Vendor to submit completely filled in thermal data sheet for plate exchanger as per API 662 Part-1. The thermal datasheet must be in line with latest process datasheet and should include the following data on and above the data specified in Process Data sheet
 - i. Type of exchanger
 - ii. LMTD
 - iii. Overall clean and fouled heat transfer coefficient.
 - iv. Both side calculated pressure drop
 - v. Plate size (width x thickness)
 - vi. No of plates.
 - vii. No. of channels for each side flow.
 - viii. Material of construction of plates with corrosion allowance
 - ix. Effective surface area (plane) per plate.
 - x. Chevron angle.
 - xi. Average velocity of hot & cold fluid between plates
 - xii. Vendor to note that calculated pressure drop at full fouled condition must not exceed the maximum allowable pressure drop, as specified in process datasheet.
 - xiii. Flow directions of hot and cold liquors (counter-current / co-current).
 - xiv. Schematic diagram showing in and out flows.
 - xv. All the notes specified in the process datasheet

- 4B.2) Thermal calculations sheets.

5. Performance Guarantee:

Vendor is required to guarantee the performance of the exchanger w.r.t. design heat duty and pressure drop as per M/s EIL latest process datasheet doc. no. B861-700-02-42-DS-1401.

JOB SPECIFICATION FOR SURFACE PREPARATION AND PROTECTIVE COATING

0	16/04/24	Issued as Job Specification	JATIN	SAHIL	SRIDHAR
Rev. No	Date	Purpose	Prepared by	Checked by	Approved by

Abbreviations:

AS	:	Alloy Steel
ASTM	:	American Society for Testing and Materials
AWWA	:	American Water Works Association
CS	:	Carbon Steel
DFT	:	Dry Film Thickness
GI	:	Galvanized Iron
ID	:	Internal Diameter
ISO	:	International Organization for Standardization
LTCS	:	Low temperature Carbon Steel
MS	:	Mild Steel
MR	:	material requisition
NB	:	Nominal Bore
NA	:	Not applicable
OD	:	Outside Diameter
OSHA	:	Occupational Safety and Health Act
RCC	:	Reinforced Cement Concrete
RH	:	Relative humidity
SS	:	Stainless Steel
SOR	:	Schedule of Rate
SSPC	:	Steel Structure Painting Council
WFT	:	Wet Film Thickness

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1.0 GENERAL

- 1.1 This technical specification shall be applicable for the work covered by the contract and without prejudice to the provisions of various international codes of practice, standard specifications etc. It is understood that the CONTRACTOR shall carry out the work in all respects with the best quality of materials and workmanship and in accordance with the best engineering practice and instructions of Engineer-In-Charge.
- 1.2 Wherever it is stated in the specification that a specific material is to be supplied or a specific work is to be done, it shall be deemed that the same shall be supplied or carried out by the CONTRACTOR. Any deviation from this standard without written deviation permit from appropriate authority will result in rejection of the job.
- 1.3 This specification covers the requirement for protective coating for new construction.
- 1.4 The selected environmental classification for atmospheric environments is C5 (very high durability), as specified in ISO 12944-2. This classification is designed for coastal exposure and incorporates the requirements for industrial areas with aggressive atmospheres.

2.0 SCOPE

- 2.1 Scope of work covered in the specification shall include, without being limited to, the following:

This specification defines the requirements for surface preparation, selection and application of primers and paints on external surfaces of equipment, vessels, machinery, piping, ducts, steel structures, external & internal protection of storage tanks for all services and chimneys, if any. The items listed in the heading of tables of paint systems are indicative only. However, the CONTRACTOR is fully responsible for carrying out all the necessary painting, coating and lining job on external and internal surfaces as per the tender requirement.

2.2 Extent of work

- 2.2.1 The following surfaces and materials shall require shop, pre-erection and field painting:

- All un-insulated carbon steel and alloy steel equipment like vessels, columns, storage tanks, exchangers, parts of boilers etc.
- All un-insulated carbon steel and low alloy plant and related piping, fittings and valves (including painting of identification marks), furnace ducts and stacks.
- All insulated carbon steel, alloy steel and stainless steel parts of equipment, vessels, boilers, chimneys, stacks, piping and steam piping and other insulated items present, if any.
- All items contained in a package unit.

- All structural steel work, pipes, structural steel supports, walkways, handrails, ladders, platforms etc.
- Flare lines, external surfaces of MS chimney with or without refractory lining and internal surfaces of MS chimney without refractory lining.
- Identification of colour bands on all piping, as required, including insulated aluminum clad, galvanized, SS and nonferrous piping.
- Identification lettering/ numbering on all painted surfaces of equipment/piping insulated aluminum clad, galvanized, SS and non-ferrous piping.
- Marking / identification signs on painted surfaces of equipment and piping including hazardous service.
- Supply of all primers, paints and all other materials required for painting (other than OWNER supplied materials)
- Application of pre-erection/fabrication and shop primer.
- Repair work of damaged pre-erection/ fabrication and shop primer and weld joints in the field/site before and after erection.
- All CS piping, equipment, storage tanks and internal surfaces of RCC tanks in ETP plant.
- Quality control, testing and inspection during all stages of work (surface preparation, application of coating and testing of applied coating).

2.2.2 The following surfaces and materials shall not require painting in general. However, if there is any specific requirement by the OWNER, the same shall be painted as per the relevant specifications:

- a. Un-insulated austenitic stainless steel.
- b. Plastic and/or plastic coated materials.
- c. Non-ferrous materials like aluminum, Ni alloys, galvanized steel.

In general Galvanized steel doesn't require painting. However if painting is required due to OWNERs instructions, contractual or for colour coding requirement then coating system in Table 4.0 shall be followed.

2.3 Unless otherwise instructed, final paint coating (i.e. application of field primer, intermediate and top coats) on pre-erection/ shop primed equipment shall be applied at site, only after all welding, testing on systems are completed as well as after completion of steam purging.

3.0 REFERENCE CODES & STANDARDS

3.1 Without prejudice to the provision of clause 1.1 above and the detailed specifications of the contract, latest editions of the following codes and standards are applicable for the work covered by this contract:

International Organization for Standardization (ISO):

ISO 12944: Corrosion Protection of steel Structures by Protective Paint System

ISO 1461: Hot dip galvanized coatings on fabricated iron and steel articles — Specifications and test methods.

ISO 8501-1/ SIS-05 59 00: Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness— Part 1: Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings

ISO 8502-3: Preparation of steel substrates before application of paints and related products -Tests for the assessment of surface cleanliness - Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method)

ISO 8502-9: Preparation of steel substrates before application of paints and related products — Tests for the assessment of surface cleanliness — Part 9: Field method for the conductometric determination of water-soluble salts

ISO 2808: Paints and varnishes - Determination of film thickness

ISO 2811: Paints and varnishes — Determination of density\

National Association for Corrosion Engineer (NACE):

NACE RP 0287: Field Measurement of Surface Profile of Abrasive Blast-Cleaned Steel Surfaces Using a Replica Tape

NACE SP 0198: Control of Corrosion under Thermal Insulation and Fireproofing Materials

NACE SP 0188: Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Substrates

Steel Structures Painting Council (SSPC)

SSPC SP: surface preparation methods.

SSPC Painting manual Vol.1 Good Painting practices

SSPC Painting manual Vol.1 Systems & specification

SSPC VIS 1: Guide and Reference Photographs for Steel Surfaces Prepared by Dry Abrasive Blast Cleaning

SSPC AB1: Mineral and Slag Abrasives

SSPC PA 2: Measurement of Dry Paint Thickness with Magnetic Gauges

American Society for Testing and Materials (ASTM):

ASTM Volume 6.01: Paint - Tests for Chemical, Physical, and Optical Properties; Appearance

ASTM Volume 6.03: Paint -- Pigments, Polymers, Resins, Naval Stores, Cellulosic Esters, and Ink Vehicles

ASTM D6677-18: Standard Test Method for Evaluating Adhesion by Knife

ASTM D5894-16: Standard Practice for Cyclic Salt Fog/UV Exposure of Painted Metal, (Alternating Exposures in a Fog/Dry Cabinet and a UV/Condensation Cabinet)

ASTM D870-15: Standard Practice for Testing Water Resistance of Coatings Using Water Immersion

ASTM D2485-18: Standard Test Methods for Evaluating Coatings for High Temperature Service

ASTM D2247-15: Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity

ASTM D4417-21: Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel

ASTM D4541-22: Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

ASTM D4060-19: Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser

ASTM D4752-20: Standard Practice for Measuring MEK Resistance of Ethyl Silicate (Inorganic) Zinc-Rich Primers by Solvent Rub

ASTM D638: Standard Test Method for Tensile Properties of Plastics

ASTM D4940-15: Standard Test Method for Conductimetric Analysis of Water Soluble Ionic Contamination of Blast Cleaning Abrasives

ASTM D4285-83: Standard Test Method for Indicating Oil or Water in Compressed Air

ASTM D543-21: Standard Practices for Evaluating the Resistance of Plastics to Chemical Reagents

ASTM C868-02: Standard Test Method for Chemical Resistance of Protective Linings

ASTM G8-96: Standard Test Methods for Cathodic Disbonding of Pipeline Coatings

ASTM B117-19: Standard Practice for Operating Salt Spray (Fog) Apparatus

ASTM D1475-13: Standard Test Method for Density of Liquid Coatings, Inks, and Related Products

ASTM D823-18: Standard Practices for Producing Films of Uniform Thickness of Paint, Coatings and Related Products on Test Panels

ASTM D2369-10 (2015): Standard Test Method for Volatile Content of Coatings

ASTM D1640/D1640M-14(2018): Standard Test Methods for Drying, Curing, or Film Formation of Organic Coatings

ASTM D522/D522M-17: Standard Test Methods for Mandrel Bend Test of Attached Organic Coatings

ASTM D968-17: Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive

ASTM D1044-13: Standard Test Method for Resistance of Transparent Plastics to Surface Abrasion

ASTM D1849-95 (2019): Standard Test Method for Package Stability of Paint

ASTM D2247-15: Standard Practice for Testing Water Resistance of Coatings in 100 % Relative Humidity

ASTM D5146-10(2019): Standard Guide to Testing Solvent-Borne Architectural Coatings

RAL CLASSIC: Color matching system

General notes for clause 3.0

The CONTRACTOR shall arrange, at his own cost, to keep a set of latest edition of above mentioned standards and codes at site. The paint manufacturers' instructions shall be followed as far as practicable at all times for the best results. Particular attention shall be paid to the following:

- a. Instructions for storage to avoid exposure as well as extremes of temperature.
- b. Surface preparation prior to painting shall be followed as per Table-4 to 11 of this standard.

- c. Mixing and thinning.
- d. Application, recommended limit on time intervals in between coats & DFT.

4.0 EQUIPMENT

- 4.1 All tools, brushes, rollers, spray guns, blast material, hand power tools for cleaning, all equipment, scaffolding materials, shot & grit blasting equipment, air compressors etc. required shall be suitable for the work and shall be arranged by the CONTRACTOR in sufficient quantity at the site. The manufacturers test certificates / data sheets for all the above mentioned items shall be reviewed by Engineer-In-Charge at site before start of the work.
- 4.2 All paint spraying equipment, including mixers, shall be thoroughly cleaned before mixing of new materials. All coating materials shall be mixed and thoroughly stirred in accordance with the instructions of the paint Manufacturer. Sufficient agitation to maintain good mixing shall be applied until the product is used. If air is entrapped in the product during mixing/stirring, sufficient time should be allowed for the air bubbles to escape before application. Only thinners specified by the paint Manufacturer shall be used.

5.0 SURFACE PREPARATION, SHOP PRIMER / COATING APPLICATION, REPAIR AND DOCUMENTATION

5.1 General

- 5.1.1 In order to achieve the maximum durability, one or more of the following methods of surface preparation shall be followed, depending on condition of surface to be painted and as instructed by the Engineer-In-Charge.
 - a. Abrasive blast cleaning
 - b. Mechanical or power tool cleaning
- 5.1.2 Mill scale, rust, rust scale and foreign matter shall be removed fully to ensure that a clean and dry surface is obtained. Unless otherwise specified, surface preparation shall be done as per provisions of relevant tables given elsewhere in this specification. Before surface preparation by blast cleaning, the surface shall be cleaned to remove all grease, oil etc. as per SSPC-SP-1.
- 5.1.3 Irrespective of whether external or internal surface to be coated, blast cleaning shall not be performed where dust can contaminate surfaces undergoing such cleaning or during humid weather conditions having humidity >85%. In case of internal coating of storage tanks, dehumidifier shall be used to control humidity level below 60%. Dehumidifier should depress the dew point of air in the enclosed space, sufficient enough so as to maintain it 3°C below the metal substrate temperature during entire period of blasting and coating application. During the interval time between application of primer coat and subsequent intermediate and top coats or between blast cleaning

completion and start of application of primer coat, dehumidifier unit should be in continuous operation to ensure that no condensation occurs on the substrate.

5.1.4 The Engineer in-Charge shall have the right to disallow usage of dehumidifier if the performance is not meeting the specified requirements. Under such circumstances, the CONTRACTOR shall remove the equipment and replace the same with another equipment to provide satisfactory results without any additional cost to the OWNER.

5.1.5 Irrespective of the method of surface preparation, the first coat of primer must be applied by airless spray/ air assisted conventional spray as recommended by the paint manufacturer, on dry surface. This should be done immediately and in any case within 4 hours of cleaning of the surface. However, at times of unfavorable weather conditions, the Engineer-In-Charge shall have the liberty to control the time period, at his sole discretion and/or to insist on re-cleaning before primer application is taken up. In general, during unfavorable weather conditions, blasting and painting shall be avoided as far as practicable.

5.1.6 The external surface of RCC chimney to be painted shall be dry and clean. Any loose particle of sand, cement, aggregate etc. shall be removed by scrubbing with soft wire brush. Acid etching with 10-15% HCl solution for about 15 minutes shall be carried out. The surface must be thoroughly washed with water to remove acid and loose particles and then dried completely before application of paint.

5.2 Procedure for surface preparation

5.2.1 Air blast cleaning with abrasives

The surfaces shall be blast cleaned using one of the abrasives listed below and at an appropriate distance & angle depending on nozzle size maintaining constant velocity and pressure. The quality of abrasives shall be free from contaminants and impurities and shall meet the requirements of SSPC AB1. The compressed air shall be free from moisture and oil. On completion of blasting operation, the blasted surface shall be clean and free from any scale or rust.. Blast cleaning shall not be done outdoors in bad weather without adequate protection. If there is dew on the metal surface, it shall be cleaned. If possible, a vacuum collector shall be installed to collect and recycle the abrasives.

The surface roughness profile for carbon steel and low alloy steels to be coated shall be in accordance with the written recommendations of the paint Manufacturer and shall be measured as per ASTM D4417, method B. When not specified by the paint Manufacturer or otherwise specified in this specification, the surface roughness profile shall be between 40 μm and 70 μm for coatings up to thickness 500 μm and between 70 μm and 125 μm for coating systems over 500 μm thickness. In all cases, the surface roughness shall have a sharp angular profile.

If stainless steel, hot dip galvanised or non-ferrous metal surfaces are to be painted then blast cleaning shall be carried out by sweep blasting, using a fine non-iron containing abrasive.

On galvanised surfaces, the zinc layer shall not be damaged; a smooth uniform surface roughness shall be achieved. No defects such as break through or crisping of the zinc

layer shall occur. The surface roughness shall be in the range of 20 µm to 30 µm or as agreed with the paint Manufacturer.

Abrasives for use in blast cleaning steels shall be in accordance with ISO 8504-2. Test methods shall be in accordance with the tests specified in the ISO 11125 and ISO 11127 series for metallic and non-metallic abrasives respectively. Each batch of abrasive should be tested to check that the abrasive meets the requirements as specified in the relevant ISO standard.

The conductivity of non-metallic abrasives to be used for stainless steels shall be maximum 15 mS/m. For all other non-metallic abrasives, the conductivity shall not exceed 25 mS/m.

OWNER/PMC shall approve the use of alternative abrasive materials.

Abrasives specification

Type	Generic Name	Standard
Metallic	Iron grit	ISO 11124-2
	Steel grit	ISO 11124-3
Natural mineral	Staurolite	ISO 11126-9
	Garnet	ISO 11126-10
Synthetic mineral	Coal slag	ISO 11126-4
	Aluminum oxide	ISO 11126-7

Selection of abrasives

Steel or iron grit is commonly used as recyclable abrasives. When steel shot is used, it shall be used together with steel grit. The shot content of such a mix shall not exceed 67 %. For blasting stainless steel, non-(free) iron containing abrasive shall be used, e.g. Garnet or aluminium oxide.

Abrasives used for blast cleaning shall be free from oil, grease, moisture, chloride contamination etc. and shall have crystalline silica not more than 1%.

5.2.2 Mechanical or power tool cleaning

Power tool cleaning shall be done by mechanical striking tools, chipping hammers, grinding wheels or rotating steel wire- brushes. Excessive burnish of the surface shall be avoided as it can reduce paint adhesion. On completion of cleaning, the detached rust, mill scale etc. shall be removed by clean rags and /or washed by water/steam and thoroughly dried with compressed air jet before application of paint.

5.3 Non-compatible shop coat primer

For equipment on which application of total protective coating (primer + intermediate + top coat) is carried out at shop, compatibility of finish coat with primer should be checked with the paint manufacturer. If the shop coat is in satisfactory condition showing no major defect upon arrival at site, the shop coat shall not be removed.

5.4 Shop coated equipment (coated with primer & finishing coat) should not be repainted unless paint is damaged. Repair of primer shall be carried out as per Table-3 of paint

systems depending upon the compatibility of paint. Intermediate and final coats over repaired primer shall be as per applicable tables mentioned in this specification.

- 5.5 Shop primed equipment and surfaces will only be 'spot cleaned' in damaged areas by means of power tool brush cleaning or hand tool cleaning and then spot primed before applying one coat of field primer, unless otherwise specified. If shop primer is not compatible with field primer, then shop coated primer should be completely removed before application of selected paint system for a particular environment.
- 5.6 For package units/equipment, shop primer/ coating system should be as per the paint system given in this specification. However, manufacturers' standard can be followed after review by EIL/OWNER but shall adhere to the minimum DFT specified in ISO-12944-5; C5 (Very high durability). In this case, guarantee of the coating system lies with package/Original equipment manufacturer. For system under insulation, minimum guidelines as per NACE RP 0198 shall be followed.

5.7 Coating procedure and application

All coatings shall be applied by airless/ air assisted spray except for the following special cases with prior approval from Engineer-in-charge, where application can be carried out by brush subject to suitability of the application of the paint product by brush.

- Spot repair
- Stripe coating on edges
- Small bore parts not suitable for spray application

Irregular surfaces such as sharp edges, welds, small brackets, and interstices may stripe coated to ensure specified DFT is achieved. Paint manufacturer recommendation should be followed before deciding for brush application.

- 5.7.1 Surface shall not be coated in rain, wind or in an environment where injurious airborne elements exist, when the steel surface temperature is less than 3 °C above dew point, when the relative humidity is greater than 85%, when the temperature is below 10°C and when the ambient/substrate temperature is below the paint manufacturers recommended temperature of application and curing. De-humidifier equipment shall be used to control RH and Dew point. The paint application shall not be done when the wind speed exceeds 20 km per hour.
- 5.7.2 Blast cleaned surface shall be coated with complete application of primer as soon as practicable but in no case later than 4 hours the same day.
- 5.7.3 To the maximum extent practicable, each coat of paint shall be applied as a continuous film with uniform thickness and free of probes. Any spots or areas missed in application shall be re-coated and permitted to dry before the next coat is applied. Applied paint should have the desired wet film thickness specified by manufacturer.

5.7.4 Each coat shall be in proper state of cure or dryness before the application of succeeding coat. Material shall be considered dry for re-coating when an additional coat can be applied without the development of any detrimental film irregularities such as lifting or loss of adhesion of the under coat. Manufacturer's instructions shall be followed for inter coat interval.

5.7.5 When the successive coat of the same colour have been specified, alternate coat shall be tinted, when practical, sufficiently to produce enough contrast to indicate the complete coverage of the surface. The tinting material shall be compatible with the material underneath and shall not be detrimental to its service life and shall be recommended by the original paint manufacturer.

5.7.6 Airless spray application shall be in accordance with steel structure paint manual Vol.1 & Vol.2 by SSPC, USA

5.7.7 Brush application of paint shall be in accordance with the following:

- a. Brushes shall be of a style and quality that will enable proper application of paint.
- b. Round or oval brushes are most suitable for rivets, bolts, irregular surfaces, and rough/pitted steel. Wide flat brushes are suitable for large flat areas but they shall not have width over 5 inches.
- c. Paint shall be applied into all corners.
- d. Any runs or sags shall be brushed out.
- e. There shall be a minimum of brush marks left in the applied paint.
- f. Surfaces not accessible to brushes shall be painted by spray, daubers, or sheepskin.

5.7.8 For each coat, the painter should know the WFT corresponding to the specified DFT and standardize the paint application technique to achieve the desired WFT. This has to be ensured in the qualification trial.

5.8 Drying of coated surfaces

5.8.1 No coat shall be applied until the preceding coat has dried. The material shall be considered dry for re-coating when another coat can be applied without the development of any film irregularities such as lifting or loss of adhesion of undercoats. Drying time of the applied coat should not exceed maximum specified for it as a first coat. If this exceeds, the paint material has possibly deteriorated or mixing is faulty.

5.8.2 No paint shall be force dried under conditions which will cause chalking, wrinkling, blistering formation of pores, or detrimentally affect the conditions of the paint.

5.8.3 No drier shall be added to paint on the job unless specifically called for in the manufacturers' specification for the paint.

5.8.4 Paint shall be protected from rain, condensation, contamination, snow and freezing until dried to the fullest extent practicable.

5.9 Spot repair of damaged primer

5.9.1 Where pre-erection/shop primer has been damaged at isolated localized spots during handling and transportation or after erection / welding, its repair shall be done as given below and as per the Table-3 of this specification.

5.9.2 Surface preparation: Quickly remove the primer from damaged area by mechanical scraping and emery paper conforming to SSPC-SP-3 to expose the white metal. Blast clean the surface, if possible. Feather the primed surface, over the intact adjacent surface surrounding the damaged area, by emery paper.

Primer coating: One coat of F-8/F-9/F-12 shall be applied (as per the applicable design temperature and in conjunction with Table-3) wherever damage was observed on pre-erection / pre fabrication or shop primer.

5.9.3 If damaged areas are found to be extensive and spread over large areas (as required by Engineer-in charge), then entire pre-erection/pre-fabrication/shop primer shall be removed by blasting to achieve SSPC-SP-10 and entire blasted surface shall be primed again with F-8/ F-9 or F-12, as applicable, for the intended design temperature. (See note of Table-3). If the prepared surface lies adjacent to a sound coated surface, the surface preparation shall overlap the coated surface by at least 50mm. The remainder of existing coated surface shall be properly protected with shields or screens to prevent any possible damage to the coating.

5.10 Assessment of painting requirement

The paint system to be applied for a specific job shall be arrived at sequentially as given below:

- Identify the environment from area classification details and choose the appropriate table.
- Identify the design temperature from the technical documents.
- Identify the specific field paint system and surface preparation requirement from the above identified table and temperature range.
- Identify the shop priming requirement from based on compatibility of the above paint system.
- Identify the need of repair of shop primer and execute as per Table-3.

5.11 Documentation / records

5.11.1 A written quality plan with procedure for qualification trials and for the actual work including test and inspection plan & procedure for approval before start of work.

5.11.2 Daily progress report with details of weather conditions, particular of applications, no. of coats and type of materials applied, anomalies, progress of work versus program.

- 5.11.3 Results of measurement of temperatures, relative humidity, surface profile, film thickness, holiday detection, adhesion tests with signature of appropriate authority.
- 5.11.4 Particulars of surface preparation and paint application during trials and during the work.
- 5.11.5 Details of non-compliance, rejects and repairs.
- 5.11.6 Type of testing equipment and calibration.
- 5.11.7 Code and batch numbers of paint materials used.

The coating applicator must maintain a job record consisting of all the information as per 5.11.2 -5.11.7 above as well as the approved procedure of work (5.11.1 above). The job record consisting of information in accordance to 5.11.2 – 5.11.7 shall be entered on daily basis and should be daily signed by Engineer-in-charge.

TABLE-1: SURFACE PREPARATION STANDARDS

Sl. No.	GRADE OF SURFACE CLEANLINESS	VARIOUS INTERNATIONAL STANDARDS (EQUIVALENT)		
		ISO 8501-1/ SIS-05 59 00	SSPC, USA	NACE, USA
1	Solvent cleaning	-	SSPC-SP-1	-
2	Manual or hand tool cleaning	St 2	SSPC-SP-2	-
3	Mechanical or power tool cleaning	St 3	SSPC-SP-3	-
4	White metal	Sa 3	SSPC-SP-5	NACE No.1
5	Near white metal	Sa 2½	SSPC-SP-10	NACE No.2
6	Commercial Blast	Sa 2	SSPC-SP-6	NACE No.3
7	Brush-off Blast for SS, galvanized steel and non-ferrous metals	-	SSPC-SP-16	-

6.0 PAINT MATERIALS

Typical characteristics and codes of various paint materials used in this specification are as follows.

TABLE-2: PAINT MATERIALS
(Refer to *general notes* at the end of this table)

DESCRIPTION	P-6	P-7	P-4
Technical name	Epoxy Zinc Phosphate Primer	Cold Galvanizing product	Etch Primer/Wash Primer
Type and composition	Two component polyamine cured epoxy resin medium, pigmented with zinc phosphate.	One pack synthetic resin based zinc galvanizing containing min 92% of electrolytic zinc dust of 99.95% purity.	Two pack polyvinyl butyral resin medium cured with phosphoric acid solution pigmented with zinc tetroxy chromate.
Volume solids % Minimum	49	37	9
DFT per coat, μ	40-50	40-50	8-10
Theoretical covering capacity in m^2 /coat/ litre	9.8-12.2	3.4-4.4 m^2 /kg	9.0-11.2

Weight per litre in Kg/litre	1.4±0.05	2.67 kg at 15 ^o C	1.2±0.05
Touch dry at 30 ^o C (max.)	30 min.	10 min.	2 hrs.
Hard dry at 30 ^o C (max.), hrs	8	24	24
Over-coating interval, hrs	Min. 8	Min. 4	Min. 4-6
Pot life at 30 ^o C for two component paints, hrs	6 - 8	NA	NA
Adhesion (ASTM D 4541)	>7	NA	NA
Temperature resistance (min) ° C (ASTM D 2485) *Note 8	80 (Method A)	50 (Method A)	NA

TABLE- 2: PAINT MATERIALS (Contd.)

DESCRIPTION	F-2	F-3	F-6A/B	F-6C
Technical name	Acrylic Polyurethane finish paint	Chlorinated rubber based finish paint	Epoxy-High Build coating	Solvent less epoxy coating
Type and composition	Two-pack aliphatic isocyanate cured acrylic finish paint (free of alkyd/polyester resins).	Single pack Plasticized chlorinated rubber based medium with chemical and weather resistant pigments.	F-6A Two-Pack Aromatic polyamine cured epoxy resin medium suitably pigmented. F-6B: polyamide cured epoxy resin medium suitably pigmented with MIO.	Two pack, cured with Amine Adduct; catalyzed epoxy resin suitably pigmented

Volume Solids % Minimum.	40	36	57	98
DFT per coat, μ	30-40	30-40	100-125	250-500
Theoretical covering capacity in m^2 /coat/litre	10-13.3	9-12	4.6-5.7	2-3.9
Weight per liter in Kg/litre	1.15 \pm 0.03	1.15 \pm 0.03	1.42 \pm 0.03	1.40 \pm 0.03
Touch dry at 30 C (max)	30 min.	30 min.	3 hrs	3 hrs
Hard dry at 30 $^{\circ}$ C (max.), hrs	8	8	16	16
Full cure at 30 $^{\circ}$ C (for immersion/ high temperature service)	NA	NA	5 days	5 days
Over-coating Interval, hrs	Min.12.	Min. Overnight	Min. Overnight Max. 5 days	Min. 8. Max. 48
Pot life (approx.) at 30 $^{\circ}$ C for two component paints, hrs	5-8	NA	3-6	0.5
Adhesion (ASTM D 4541)	>5	>4	>7	>8
Abrasion Resistance (ASTM D4060) For 1000 g load	<300 mg /1000 cycles/CS17 or <100 mg /1000 cycles/CS10	NA	NA	NA
Temperature resistance (min.) $^{\circ}$ C (ASTM D 2485) *Note 8	80 (Method A)	60 (Method A)	80 (Method A)	120 (Method A)

TABLE- 2: PAINT MATERIALS (Contd.)

DESCRIPTION	F-7	F-8	F-9 (primer)	F-11	F-12
Technical name	High build coal tar epoxy coating.	Self-priming type surface tolerant high build epoxy coating (complete rust control Coating)	Inorganic zinc silicate Coating	Heat resistant synthetic medium based two pack Aluminum Paint suitable up to 250°C dry temp.	Heat resistant silicone Aluminum Paint suitable up to 540°C dry temp.
Type & composition	Two pack polyamide cured epoxy resin blended with coal tar medium, suitably pigmented	Two pack epoxy resin based suitable pigmented and capable of adhering to manually prepared surface and old coating.	A two pack air drying self curing solvent based inorganic zinc silicate coating with minimum 80% zinc content on dry film. The final cure of the dry film shall pass the MEK rub test as per ASTM D4752.	Heat resistant synthetic medium based two pack Aluminum paint suitable up to 250°C.	Single pack silicone resin based medium with Aluminum flakes.
Volume Solids % Minimum.	62	75	57	35	18
DFT per coat in μ	100-125	100-125	65-75	15-20	15-20
Theoretical covering capacity in M ² /coat/ litre	5-6.2	6-7.5	7.6-8.8	17.5-23.3	9-12
Weight per liter in Kg/litre	1.40±0.03	1.41±0.03	2.3±0.03	0.95±0.03	1.00±0.03
Touch dry at 30°C (maximum), hrs	4	3	0.5	3	0.5
Hard dry at 30°C (maximum), hrs	48	24	12	12	24

Full cure 30°C (for immersion /high temperature service)	5 days	5 days	NA	NA	NA
Over-coating interval, hrs	Min. 24 hrs max.5days	Min. 10	Min. 12 hrs at 20°C & 50% RH	Min. 24	Min. 24
Pot life at 30°C for two component Paints, hrs	4-6	1.5	4-6	NA	NA
Adhesion MPa (ASTM D 4541)	>5	>5	>5	NA	NA
Temperature resistance (min.) ° C (ASTM D 2485) *Note 8	80 (Method A)	80 (Method A)	400 (Method B)	250 (Method A)	540 (Method B)

TABLE- 2: PAINT MATERIALS (Contd.)

DESCRIPTION	F-14	F-15	F-16	F-17	F-20
Technical name	Polyamine cured coal tar epoxy	Two-component Epoxy phenolic coating cured with Polyamine adduct hardener	Inert polymeric matrix coating suitable for under insulation for CS and SS.	Novolac epoxy phenolic coating cured with Polyamine adduct hardener	Glass flake reinforced vinyl ester coating.
Type & composition	Specially formulated polyamine cured coal tar epoxy suitable for application under insulation	Two pack ambient temperature curing epoxy phenolic coating system suitable for application under insulation	Suitable for high temperature service and under insulation coating for CS, alloy steel and SS	Novolac epoxy phenolic coating cured with Polyamine adduct hardener	Two component glass flake filled vinyl ester lining for under immersion services up to 90 deg. C.
Volume Solids % Minimum.	67	67	50	98	98

DFT per coat in microns	100-125	75-100	100-125	300-450	500-600
Theoretical covering capacity in M ² /coat/ litre	5.4-6.7	6.7-8.9	4-5	2.2-3.3	1.6-2
Weight per liter in Kg/litre (mix paint)	1.45±0.03	1.65±0.03	>1.3	1.7	>1.2
Touch dry at 30°C (max) , hrs	4	3	1	2	2
Hard dry at 30°C (max), hrs	24	24	16	24	4
Full cure 30°C (for immersion / high temp service)	168 hrs (7 days)	168 hrs (7 days)	NA	168 hrs (7 days)	96 hrs (4 days)
Over-coating interval	Min. 6 hrs Max.5 days	Min. 36 hrs Max.21 days	Min.6 hrs Max. Not applicable	Min. 16 hrs Max.21 days	Min. 4 hrs Max.3 days
Pot life at 30°C, hrs (for two component paints)	4	4-6	1	1	50 min-1 hr
Adhesion, MPa (ASTM D 4541)	>6	>7	NA	>8	>7, Tensile strength >20N/mm ² (ASTM D 638)
Temperature resistance (min.) ° C (ASTM D 2485) *Note 8 & 9	125 (Method A)	150 (Method A)	650 (Method B)	150 (Method A)	90 (Method A)

General notes for TABLE-2:

- Covering capacity and DFT achieved per coat depends on method of application. Covering capacity specified above is theoretical. For estimation of actual quantity of

- paints required, include the losses during application. Minimum specified DFT should be maintained in any case.
2. All primers and finish coats should be ambient temperature curing and air drying unless otherwise specified.
 3. All paints shall be applied in accordance with manufacturer's instructions for surface preparation, intervals, curing and application. The surface preparation, quality and workmanship should be ensured. Wherever a deviation is noticed from the specification in manufacturer data sheet, more stringent one between the data sheet and the specification shall prevail e.g. if this specification recommends Sa 2 ½ and the manufacturer data sheet requires Sa3, the surface preparation shall be done as per Sa 3. However in another case if this specification requires the surface preparation of Sa 2 ½ and the manufacturer data sheet recommends only Sa 2 as minimum, the surface preparation shall be done as per Sa 2 ½.
 4. Technical data sheets for all paints shall be supplied at the time of submission of quotations.
 5. Higher specific gravity of F-9 is also acceptable.
 6. Internationally recognized & acceptable testing method shall be used for lab testing wherever testing standards are not mentioned.
 7. Touch dry, hard dry, pot life, full cure period, & over coating interval shall be as per manufacturer's data sheets and no testing is required. Slight variation in the values of these parameters along with weight per liter may be permissible with the discretion of engineer-in-charge only.
 8. Temperature resistance tests (ASTM D2485) shall be carried out for minimum required temperature resistance indicated.
 9. Wherever ASTM D 2485 method B is applicable, test results of the panels subjected to salt spray (ASTM B 117) after muffle furnace exposure shall be submitted for pre-qualification purpose.
 10. F-6A shall be suitable for immersion services in line with recommendations in tables-7
 11. F-6C shall be suitable for immersion services of hydrocarbons and DM water (in line with recommendations in table-7)
 12. F-7 shall be suitable for immersion service of hydrocarbons & underground service up to 80 Deg C minimum.
 13. F-14 shall be suitable for under insulation service up to 125 Deg C.
 14. F-15 shall be suitable for high temperature immersion & under insulation services in line with recommendations from table-6 to 11.
 15. F-17 shall be suitable for high temperature immersion service and underground services as recommended in table-7 to 8.

7.0 COATING SYSTEMS

Coating systems (primers, finish paints etc.) based on area classification/environments/applications are tabulated in Table-4 to Table-9. Repair of pre-erection/pre-fabrication & shop priming after erection/ welding shall be done as per Table-3.

TABLE-3: REPAIR OF PRE-ERECTION/PRE-FABRICATION OR SHOP PRIMER AFTER ERECTION/WELDING

(For all un-insulated CS, LTCS & low alloy steel items in all environments)

Sl. No.	Design Temp. in °C	Surface Preparation	Coating System	Total DFT in Microns (min.)	Remarks
3.1	-45 to 80	SSPC-SP-3	1 coat of F-8 @ 125 μ DFT/coat	125	See Note-1 below and clause 5.9.3
3.2	81 to 400	SSPC-SP-3	1 coat of F-9 @ 65-75 μ DFT/coat	65-75	
3.3	401 to 550	SSPC-SP-3	1 coat of F-12 @ 20 μ DFT/coat	20	

Notes for Table-3:

- 1: The application and repair of pre-erection/pre-fabrication or shop primer given in above tables shall be done for all the items to be painted. In case the damages of primer are severe and spread over large area, entire primer shall be removed by blasting to achieve SSPC-SP-10 and surfaces to be primed again with F-8/ F-9 or F-12 as applicable.

TABLE-4: COATING SYSTEM FOR GI ITEMS

(Refer clause 2.2.2)

Sl. No.	Design Temp. in °C	Coating System	Total DFT in Microns (min.)	Remarks
4.1	Up to 60	Hot Dip Galvanizing to 80-85 microns (575-610 gm./m ²) as per ISO 1461, surface preparation as per SSPC SP 16 & ISO 12944-4 & + 1 coat of F-6B @ 100μ DFT/coat + 1 coat of F-2 @ 40 microns DFT/coat	140μ of finish coat (excluding the thickness of galvanizing)	Special primers like etch primer may also be considered for coating on galvanized surfaces

General notes for Table-4:

1. No galvanized specimen shall have thickness less than 80 microns.
2. Repair of the damaged areas of galvanized coatings due to welding during erection shall be carried out as per recommended practice ISO 1461, using cold galvanizing spray process. Organic paint systems are not acceptable for the repair.

3. After repair of damaged galvanized coating by cold galvanization (P-7), the repaired area shall be top coated with paint system as given in table-4 above (i.e. 1 coat of F-6B @ 100 μ DFT/coat + 1 coat of F-2 @ 40 μ DFT/coat).
4. Galvanized gratings don't require painting in general until otherwise specified elsewhere or as per the requirement of the OWNER. Galvanized items may require painting to meet the colour coding requirement of the OWNER. Contractor has to ensure the applicable colour coding prior to application of coating as per this clause.

TABLE-5: COATING SYSTEM FOR CORROSIVE AREAS (PROCESS UNITS, COOLING TOWER, DM, CPP AND OFFSITES)

(For all un-insulated above ground CS, LTCS & low alloy steel piping, equipment, structures, valves, vessels & columns, furnace stacks etc.)

Sl. No.	Design Temp. °C	Surface Preparation & Pre-erection/Shop Primer	Coating System		Total DFT in Microns (min.)	Remarks
			Primer	Finish Coat		
5.1	-45 to -15	SSPC-SP-10; 1coat of F-9 @ 65-75 μ DFT/ coat	-	-	65-75	
5.2	-16 to 80	SSPC-SP-10; 1coat of F-9 @ 65-75 μ DFT/ coat	1 coat of P-6 @ 40 μ DFT/ coat	2 coats of F-6B @ 100 μ DFT/coat + 1 coat of F-2 @ 40 μ DFT/coat (2x100 + 40= 240)	345-355	a)No over coating on F-9 is allowed b) F-12 shall be ambient temperature curing type
5.3	81 to 400	SSPC-SP-10; 1coat of F-9 @ 65-75 μ DFT/ coat	-	2 coats of F-12 @ 20 μ DFT/coat 2x20=40	105-115	
5.4	400-540	SSPC-SP-10; 2 coats of F-12 @ 20 μ DFT/coat	-	2 coats of F-12 @ 20-25 μ DFT/coat (2x20=40)	80	Surface profile for this coating system shall be 20-30 μ m

NOTES for TABLE-5:

1. The list of items given in the heading of the above table is not exhaustive. There may be more items for a particular contract where these specifications are used. The CONTRACTOR is fully responsible for completing painting including prefabrication primer for all the items supplied and fabricated as per tender document and scope of work.
2. If the application of pre-erection/pre-fabrication/shop primer has already been completed, the same shall not be repeated in the field. In case the damages to the primer coat are severe and spread over large areas, the Engineer-In-Charge may decide & advise re-blasting and re-application of the primer coat. Repair of pre-fabrication/pre-erection primer, if required, shall be done as per Table-3.
3. Flare line within unit or offsite areas shall be coated as per clause 5.3 of Table-5.
4. For external surface of RCC Chimney, 2 coats of F-6 B@ 100 μ DFT/coat to obtain a total DFT of 200 μ shall be applied after proper surface preparation as per guidelines in clause 5.1.6.

TABLE-6: EXTERNAL COATING SYSTEMS FOR CARBON STEEL AND LOW ALLOY STEEL STORAGE TANKS

Sl. No.	Design Temp. in °C	Surface Preparation	Coating system (Note-1)		Total DFT in Microns (min.)	Remarks
			Primer	Finish Coat		
6.1	All external surfaces of shell, wind girders, appurtenances, roof tops of all above ground tank including top side of external and internal floating roof and associated external structural works.					
6.1.1	-14 to 80	SSPC-SP-10	1coat of F-9 @ 65-75 μ DFT/coat + 1coat of P-6 @ 40 μ DFT/ coat	2 coats of F-6B @ 100 μ DFT /coat + 1 coat of F-2 @ 40 μ DFT/ coat	345-355	
6.1.2	81 to 150	SSPC-SP-10	1 coat of F-15 primer @ 80 μ DFT/ coat + 1 coat of F-15 intermediate coat @ 80 μ DFT/coat	1 coat of F-15 finish coat @80 μ DFT/ coat + 1coat of F-2 @ 40 μ DFT/ coat	280	-

6.1.3	151 to 400	SSPC-SP-10	1coat of F-9 @ 65-75 μ DFT/coat	2 coats of F-12 @20 μ DFT/ coat or 1 coat of F-16 @ 125 μ DFT / coat	105- 115 or 190- 200	
6.2	External surfaces of bottom plate (in contact with soil) for all storage tanks.					
6.2.1	-14 to 80	SSPC-SP-10	1 coat of F-9 @ 65-75 μ DFT/ coat	3 coats of F-7@ 100 μ DFT/coat (3x100=300)	365- 375	F-7 should be suitable for immersion service
6.2.2	81 to 150	SSPC-SP-10	1 coat of F-17 primer @ 400 μ DFT/ coat	1 coat of F-17 finish coat @ 400 μ DFT/ coat	800- 825	-
6.3	For underside of the bottom plate (not in contact with soil) (in case tank is not lifted during PWHT) (Note- 2)					
6.3.1	-29 to 400	SSPC SP-10	1 coat of F-16 @ 125 μ	1 coat of F-16 @ 125 μ	250- 300	This coating system is also applicable for temperature ranges not covered in 8.2 above

Notes for TABLE-6:

1. All paint coating application including primer for tanks shall be carried out at field after erection and completion of entire welding.
2. For underside of bottom plate as per clause no.6.3.1:
 - a) Painting shall be carried out before laying the bottom plate for tanks with non-Post Weld Heat Treatment (PWHT).
 - b) For tanks with PWHT, painting shall be carried out after PWHT.
 - c) In case tank is not lifted during PWHT then painting shall be applied before laying the bottom plate.

TABLE-7: INTERNAL COATING SYSTEMS FOR CARBON STEEL AND LOW ALLOY STORAGE TANKS

Sl. No.	Design Temp. in °C	Surface Preparation	Coating system		Total DFT in Microns (min.)	Remarks
			Primer	Finish Coat		
7.1	Potable, Raw & Fire water All internal surfaces but not limited to internal surfaces of shell for full height, bottom plate, accessories, roof and roof structures of cone and dome roof tanks etc.					
7.1.1	-14 to 60	SSPC-SP-10	1 Coat of F-6A @ 100 μ DFT/coat	2 Coats of F-6A @ 100μ DFT/ Coat (2x100=200)	300	-
7.2	De-mineralized (DM) water & Condensates etc.: All internal surfaces but not limited to internal surfaces of shell for full height, bottom plate, accessories, roof and roof structures of cone and dome roof tanks etc.					
7.2.1	-14 to 60	SSPC-SP-10	1 Coat of F-6A @ 100μ DFT/coat	2 coats of F-6C @ 200μ DFT/ coat (2x200=400)	500	Single coat of F-6C @ 400 μ is also acceptable
7.2.2	61 to150	SSPC-SP-10	1 coat of F-15 primer @ 80μ DFT/ coat	1 coat of F-15 intermediate coat @ 80μ DFT/coat + 1 coat of F-15 finish coat @ 80μ DFT/ coat (80+80=160)	240	-
7.3	Hydrochloric acid (HCl) 10 %: All internal surfaces but not limited to internal surfaces of shell for full height, bottom plate, accessories, roof and roof structures of cone and dome roof tanks etc.					
7.3.1	-14 to 60	SSPC-SP-10	1 Coat of clear two component solvent free vinyl ester primer @ 100μ DFT/ Coat	2 Coats of F-20 @ 500μ DFT/ Coat	1100	-
7.4	Alkalis up to 50 % concentration: All internal surfaces but not limited to internal surfaces of shell for full height, bottom plate, accessories, roof and roof structures of cone and dome roof tanks etc.					
7.4.1	Up to 60°C	SSPC-SP-10	1 coat of F-15 primer @ 80μ DFT/ coat	2 Coats of F-6 A @ 100μ DFT/coat (2x100=200)	280	-
7.5	Other Corrosive liquids and chemicals All internal surfaces but not limited to internal surfaces of shell for full height, bottom plate, accessories, roof and roof structures of cone and dome roof tanks etc.					

7.5.1	Up to 150°C	SSPC-SP-10	-	1 coat of F-17 @ 375µ DFT/coat	375-425	-
7.6	Ethylene glycol tanks: Internal shell-full height, bottom plate, underside of roof and all accessories					
7.6.1	All	SSPC-SP10	-	3 coats of vinyl chloride co-polymer @ 75µ /Coat; (3x75=225)		-

TABLE-8: COATING SYSTEMS FOR EXTERNAL SIDE OF UNDERGROUND CARBON STEEL PLANT PIPING AND VESSELS

Sl. No.	Design Temp. in °C	Surface Preparation & Shop Primer	Coating system		Total DFT in Micro ns (min.)	Remarks
			Surface Preparation & Primer	Finish Coat		
8.1	Underground carbon steel plant piping					
For underground piping in Firewater service						
8.1.1	25 to 65	-	SSPC-SP-10; 1 coat of synthetic fast drying primer 25 @µ DFT/ coat	1 layer of coal tar tape coating @ 2mm +1 coat of synthetic fast drying primer 25 @µ DFT/ coat + 1 layer of coal tar tape coating @ 2mm /layer as per EIL Std. Spec. 6-79- 0011	4 mm	The primer DFT is not measurable. Reconciliation primer shall be done by coverage of maximum 10 sq.m/litre.
For all underground piping in other service lines						
8.1.2	25 to 80	-	As per document B861-000-06-42-PLS-04	3layer polyethylene (3LPE) coating as per document B865-000-06-42-PLS-04		
For all underground plant piping						
8.1.3	81 to 150	-	SSPC-SP-10; 1 coat of F-17 primer @400 µ DFT/ coat	1 coat of F-17 @ 400 DFT/coat	800	Note-1
8.2	External side of underground storage vessels					

8.2.1	-45 to 80	SSPC-SP-10; 1 coat of F-9 @ 65-75 μ DFT/ coat	-	3 coats of F-7 @ 100 μ DFT/coat	365- 375	-
8.2.2	81 to 150	SSPC-SP-10	1 coat of F-17 primer @400 μ DFT/ coat	1 coat of F-17 @400 μ DFT/ coat	800	Note-1

Notes for TABLE-8:

1. This coating system can be used for the lines/equipment/vessels which have operating temperature between ambient and 150 °C (normal operating temperature) with occasional rise in the temperature up to 200 °C

TABLE-9: COATING SYSTEMS FOR UNDER INSULATION (ALL UNIT AREAS & OFFSITES)

(For insulated piping, equipment, storage vessels, tanks, columns etc. of CS, LTCS, Alloy steel & stainless steels in all environments.)

Sl. No.	Design Temp. °C	Surface Preparation & Pre-erection/Shop Primer	Coating system		Total DFT Microns (min.)	Remarks
			Primer	Finish paint		
9.1	Carbon steel, LTCS and Alloy steel Piping, Storage tanks, Vessels, Equipment etc.					
9.1.1	-45 to 125	SSPC-SP-10; 1coat of F-15 @ 75 μ DFT/coat	None	2 coats of F-15 @75 μ DFT/coat	225	Note 1
9.1.2	126 to 450	SSPC-SP-10; 1 coat of F-16 @ 125 μ DFT/coat	None	1 coat F-16 @ 125 μ DFT/coat	250	
9.2	Stainless Steel, Duplex Stainless steel, Super Duplex stainless steel & Piping, Tanks, Vessels & Equipment etc.					
9.2.1	-45 to 125	SSPC-SP-16; (15-25 μ surface profile) 1 coat of F-15 @75 μ DFT/coat	None	2 coats of F-15 @75 μ DFT/coat	225	

9.2.2	126 to 650	SSPC-SP-16; (15-25 μ surface profile) 1 coat of F-16 @125 μ DFT/coat	None	1 coat of F-16 @125 μ DFT/coat	250	Note 1
9.3	Cyclic service of CS, LTCS, SS, & Alloy Steels (Note-1)					
9.3.1	-45 to 150 (Note-1)	SSPC-SP-10 For CS, LTCS & low Alloy steel. SSPC-SP-16 for SS; (15-25 μ surface profile) 1 coat of F-15 @75 μ DFT/coat	None	2 coats of F-15 @75 μ DFT/coat	225	Note-2&3
9.3.2	-180 to 650	SSPC-SP-10 for CS, LTCS & Alloy steel. SSPC-SP-16 for SS (15-25 μ surface profile) 1 coat of F-16 @ 125 μ DFT/coat	None	1 coat of F-16 @ 125 μ DFT/coat	250	-

Notes

1. Coating system for any other design temperature range not covered in Sr. No. 9.1 & Sr. No. 9.2 shall be as per Sr. No. 9.3.2.
2. In case of overlapping of cyclic temperature ranges as mentioned in 9.3.1 and 9.3.2 then clause 9.3.1 shall be followed.
3. Alternatively, for this temperature range, 1 coat of F-17 @ 400 μ is also acceptable.

General notes for TABLE-9:

1. "Cyclic Service" is characterized by rapid or periodical temperature fluctuation or temperature cycles or as defined in the process datasheet.
2. The blasting abrasives for SS and alloy steels shall be aluminum oxide or garnet only.
3. The coating system applicable for any other temperature range shall be reviewed if it is encountered.

GENERAL NOTES FOR TABLE: 5 TO 9

1. For uninsulated or insulated items, scope of surface preparation, application of primers to finish coat including repair shall be as per applicable contractual documents like SOR, MR, and PR etc.

8.0 STORAGE & HANDLING

- 8.1 All paints and painting materials shall be stored in rooms only which are to be arranged by CONTRACTOR and approved by Engineer-In-Charge for the purpose. All necessary precautions shall be taken to prevent fire. The storage building shall preferably be separate from adjacent building. A signboard bearing the word "PAINT STORAGE- NO NAKED LIGHT-HIGHLY INFLAMMABLE" shall be clearly displayed outside. Manufacturers' recommendation shall be followed for storage and handling of paint materials.

9.0 COLOUR CODE

The colour coding system as per Annexure-1 of this specification shall be followed.

9.1 Identification

The system of colour coding consists of a ground colour and secondary colour bands superimposed over the ground colour. The ground colour identifies the basic nature of the service and secondary colour band over the ground colour distinguishes the particular service. The ground colour shall be applied over the entire length of the un-insulated pipes. For insulated lines, ground colour shall be provided as per specified length and interval to identify the basic nature of service and secondary colour bands to be painted on this specified length to identify the particular service. Above colour code is applicable for both unit and offsite pipelines.

9.2 Ground colour

On un-insulated pipes, the entire pipe has to be painted in ground colour. On metal clad insulated lines, minimum 2 m long portion should be painted.

9.3 Colour bands

9.3.1 Location of colour bands:

- a. At battery limits.
- b. Intersection points & change of direction points in piping.
- c. Midway of piping section, near valves, across culverts.
- d. At 50 m interval on long stretch pipes.
- e. At starting and termination points.

9.3.2 Minimum width:

<u>NB</u>	<u>Width</u>
3" and below	75 mm
Above 3" to 6"	NB X 25 mm

Above 6" to 12"	NB X 18 mm
Above 12"	NB X 15 mm

For insulated pipes, NB indicates OD of the insulation.

Sequence: Colour bands shall be arranged in sequence as shown above and the sequence follows the direction of flow. The width of the 1st Band to 2nd band is 4:1.

Wherever deemed required by process department or safety, pipes handling hazardous substances will be given hazard marking of 30 mm wide diagonal stripes of black and golden yellow as per IS : 2379.

9.4 Identification markings on equipment/piping

Equipment tag numbers shall be stenciled/neatly painted using normal 'Arial' lettering style on all equipment and piping (both insulated & un-insulated) after completion of all paint works. Lettering colour shall be either black or white, depending upon the background, so as to obtain good contrast.

Operations group shall specify the location of the marking.

Size of the marking shall be as follows:

Columns, vessels, heaters	:	150 mm
Pumps and other M/e-machinery	:	50 mm
Piping	:	OD / 2 with maximum 100 mm
Storage tanks	:	(as per drawings)

9.5 Colour coding for control valve

a) Carbon steel body	:	Light grey
Alloy steel body	:	Canary yellow
Stainless steel body	:	Natural

b) The actuator of the control valve shall be painted as:

Direct action (open on-air failure) valves	:	Green
Reverse acting (close on-air failure) valves	:	Red

The painting status shall be comprehensively updated every 6 months for compliance.

10.0 IDENTIFICATION OF VESSELS, PIPING ETC.

10.1 Equipment number shall be stenciled in black or white on each vessel, column, equipment & machinery (insulated or un-insulated) after painting. Line number in black or white shall be stenciled on all the piping of more than one location as directed by Engineer-In-Charge. Size of letter printed shall be as below:

Column & vessels	:	150 mm (high)
Pump, compressor & other machinery	:	50 mm (high)
Piping	:	40-150 mm

10.2 Identification of storage tanks

The storage tanks shall be marked as detailed in the drawing.

11.0 QUALITY CONTROL, INSPECTION AND TESTING

- 11.1 All painting materials including primers and thinners brought to site by CONTRACTOR for application shall be procured directly from manufactures as per specifications and shall be accompanied by manufacturers' test certificates. Paint formulations without certificates are not acceptable (see section 13.0 & 14.0).
- 11.2 The CONTRACTOR must produce test certificate from pre-qualified paint manufacturer for various tests as detailed out in section 14.0 of this document. The Engineer-In-Charge shall have the right to test wet samples of paint at random for verifying quality of paint supplied. CONTRACTOR shall arrange to have such tests, when required by Engineer-in-Charge, performed at his cost at any one of the NABL accredited laboratories.

Samples for the test will be drawn at random in presence Engineer-In-Charge or his representations. Following tests to be carried out if called for by Engineer-in-Charge:

- Specific Gravity
- % solids by weight (% zinc content in case of inorganic or organic zinc primer)
- Drying time (touch dry & full curing)
- Adhesion
- Storage stability (pot life)

Test methods for above tests shall be as per relevant ASTM or ISO Standard.

- 11.3 The painting work shall be subject to inspection by Engineer-In-Charge at all times. In particular, following stage-wise inspection will be performed and CONTRACTOR shall offer the work for inspection and approval of every stage before proceeding with the next stage. The record of inspection shall be maintained in the registers. Stages of inspection are as follows:
- a) Surface preparation
 - b) Primer application
 - c) Each coat of paint

Following tests are to be carried out during surface preparation:

- Test for presence of oil/grease and contamination

The steel substrate after degreasing as per SSPC-SP-1 shall be tested as per following procedure to validate absence of oil and grease contamination:

- a) Visual inspection - continue degreasing until all visible signs of contamination are removed.
- b) Conduct a solvent evaporation test by applying several drops or a small splash of residue-free tri-chloromethane on the suspect area especially pitting, crevice corrosion areas or depressed areas. An evaporation ring formation is indicative of oil and grease contamination. Continue degreasing and inspection till test is passed.
 - Tests for surface finish of blasted surface shall be done by visual inspection using SSPC-VIS1. Clear cellophane tape test as per ISO 8502-3 shall be used to confirm absence of dust on blasted surface. Checks shall be done on each component at least once per 200 m² of blasted surface and a minimum of 3 checks per shift.
 - Test for presence of soluble salt as per method ISO 8502-9. Maximum allowable salt content shall be considered 20 mg/m². Checks shall be done on each component at least once per 200 m² of blasted surface and minimum of 3 checks per shift. In case salt exceeds specified limit, the contaminated surface shall be cleaned by method as per Annexure-C of ISO 12944-4 (water cleaning). After cleaning, surface shall be retested for salt after drying.

Blast Profile Measurement: (In-Process testing during actual production before application coating)

The angular profile depth measurement shall be done by profile tape as per method ASTM D 4417 method B (Profile depth gauge micrometer). Spot measurement shall be carried out every 15m² of blasted surface. At each spot three measurements shall be taken over an area of 10 cm² and average of measurements to be recorded and reported. If profile is less than specified range, blasting shall continue till greater specified depth profile is achieved.

Tests for blasting media, blasting air

Blasting Media (For every fresh batch of media and one random test during blasting)

Blasting Media shall be visually inspected for absence of contamination and debris using 10 X magnification.

- a) Inspection for the absence of oil contamination shall be conducted using following procedure :
 - Fill a small clean 200 ml bottle half full of abrasive.
 - Fill the bottle with potable water, cap and shake the bottle.
 - Inspect water for oil film/slick. If present, the blasting media is not to be used.
- b) Soluble salt contamination if suspected shall be verified by method ASTM D 4940. If present, media to be replaced.
- c) Clean blasting equipment, especially pot and hoses, and then replace blasting media and retest.

Test for Blasting Air (Once Daily before start of blasting and once at random during blasting)

The air for blasting shall be free from moisture and oil. The compressor air shall be checked for oil and water contamination per ASTM D 4285.

In addition to above, record should include type of shop primer already applied on equipment e.g. zinc silicate or zinc rich epoxy or zinc phosphate. Any defect noticed during the various stages of inspection shall be rectified by the CONTRACTOR to the entire satisfaction of Engineer-In-Charge before proceeding further. Irrespective of the inspection, repair and approval at intermediate stages of work, CONTRACTOR shall be responsible for rectifying any defects found during final inspection/guarantee period/defect liability period as defined in general conditions of the contract. Dry film thickness (DFT) shall be checked and recorded after application of each coat and extra coat of paint should be applied to make-up the DFT specified without any extra cost to OWNER, the extra coat should have prior approval of Engineer-in-charge.

11.4 Final inspection of finished coating shall consist of the following:

- 1) **Coating dry film thickness check:** DFT measurement shall be as per ISO 2808. Type II electromagnetic gauges should be used for ferrous substrates. DFT gauge calibration, number of measurement shall be as per SSPC-PA-2. Measured DFT shall be within + 10% of the dry film thickness, specified in the specifications.
- 2) **Adhesion testing:** Adhesion of the primer to the steel substrate and inter-coat adhesion of the subsequent coat(s) after curing for at least a week after application of the topcoat shall be examined by a knife test in accordance with ASTM D6677. For the knife test, if the rating is better than 8, the adhesion is considered acceptable. The adhesion is destructive and tested areas shall be repaired afterward using the spot repair procedure. Alternatively, the applicator may perform the adhesion test on a steel panel coated using the same surface preparation and coating application procedure as the work piece. Adhesion testing shall be carried out for each component at least once per 200 m² of coated surface.
- 3) **Holiday detection check:** Holiday testing shall be conducted in accordance with NACE SP0188. For immersion services, 100% of coated area shall be inspected for holidays. For atmospheric exposure, 10% of coated area which must include weld seams, corners and edges to be holiday tested. Voltage at which test is to be carried out will depend upon DFT of coating being tested and shall be as per NACE SP0188. Any holiday is unacceptable and should be marked and repaired immediately.

The CONTRACTOR shall arrange for spot checking of paint materials for specific gravity, glow time (ford cup) and spreading rate.

12.0 GUARANTEE

The CONTRACTOR shall guarantee that the chemical and physical properties of paint materials used are in accordance with the specifications contained herein/to be provided during execution of work.

13.0 QUALIFICATION CRITERIA OF PAINTING CONTRACTOR/SUB-CONTRACTOR

Painting CONTRACTOR who is awarded any job for EIL, Projects under this standard must have necessary equipment, machinery, tools and tackles for surface preparation, paint application and inspection. The CONTRACTOR must have qualified, trained and experienced surface preparator, paint applicator, inspector and supervisors. The CONTRACTOR supervisor, inspector, surface preparator and paint applicator must be conversant with the standards referred in this specification.

14.0 QUALIFICATION/ACCEPTANCE CRITERIA FOR PAINT COATING SYSTEM

14.1 Pre-qualification of paint coating manufacturer and his products

Paint manufacturer meeting the following requirements shall be considered by the CONTRACTOR for supply of the paint products.

- Manufacturer should have been in continuous business of paint coating formulation and manufacturer for at least past 5 years.
- Manufacturer should possess past experience of supplying his products to hydrocarbon, petrochemical, fertilizer. Chemical processing industry or offshore platforms in the past 5 years.
- Coating manufacturer should have supplied at least 10000 litre of an individual product to hydrocarbon, petrochemical, fertilizer. Chemical processing industry or offshore platforms.
- The manufacturer's manufacturing procedure & QA/QC system shall meet ISO 9001 requirements and preferably should possess ISO 14000 certificate.
- The Quality control set up should be manned by qualified paint technologists whose bio data should be sent along with quality control organization chart.

CONTRACTOR shall procure the paint materials from the qualified manufacturer meeting above requirements and after obtaining prequalification testing approval as per requirements mentioned in clause 15.2 below.

14.2 Pre-Qualification Testing procedure:

The paint manufacturer engaged by the mechanical contractor shall carry out the tests in NABL accredited government laboratories like national test house (NTH), as a part of qualification. Paint manufacturer shall provide the paint samples to laboratory for testing of the parameters mentioned in Table-2 (typical characteristics) and Table-15 (tests on coating systems) of this specification. The testing laboratory will confirm the compliance of the paint material with respect to the acceptance criteria mentioned in the respective tables. Contractor shall furnish these test certificates along with all necessary supporting documents/information to EIL for approval/ acceptance. The paint manufacturer will be qualified and approved by EIL for supply of paints after review/assessment of the submissions made by the contractor. Test certificates which are more than 3 years old will not be considered. Paint manufacturers are advised to carryout pre-qualification testing accordingly for paints supply to EIL projects

TABLE-14: PRE-QUALIFICATION TESTING

SYSTEM No.	COATING SYSTEM	REFERENCE CLAUSE (from table-3 to 12)	TOTAL DFT μ (min)
1.	F-9+P6+F6B+F2	5.2	345
2.	F12+F12+F12+F12	5.4	80
3.	F15+F15+F15	7.2.2	240
4.	F16+F16	9.3.2	250
5.	F17	7.5.1	375
6.	F8	3.1	125
7.	F20+F20	7.3.1	1100
8.	F6A+F6C+F6C	7.2.1	500
9.	F6A+F6A+F6A	7.1.1	300

S. No.	TEST	FOR SYSTEM NUMBER	DURATION	ACCEPTANCE CRITERIA
1.	<u>Cyclic Test</u> Salt Spray : 72 hrs. Drying in air: 16 hrs. UV-A340 nm weather meter: 80 hrs. One cycle: 168 hrs. (25 cycles at 168 hrs. each cycle) (ASTM D5894)	1	4200 hrs	Shall pass. No chalking, cracking, flaking, blistering or peeling shall be observed.
2.	Chemical Resistance Test (ASTM D543)			
2a.	10% & 40% NaOH	3,5,7 & 9* *H ₂ SO ₄ solution pH = 5.0 to 5.5 for system 9	1000 hrs	Shall pass. No cracking, discoloration, blistering, peeling or softening of film shall be observed.
2b.	5% H ₂ SO ₄		168 hrs	
2c.	Xylene		4 weeks	
2d.	Acetone		4 weeks	
2e.	Ethanol		4 weeks	
2f.	Kerosene		4 weeks	
2g.	Sea water		2000 hrs	
3.	Immersion in DM/DI water @90° (ASTM C868)	3,5 & 7	30 days	No softening, blistering or film damage.
4.	Resistance to DM water using water immersion. (ASTM D870)	8	2000 hrs	Shall pass. No chalking,

				cracking, flaking, blistering or peeling.
5.	100% Humidity Test (ASTM D2247)	1 to 9 (except system-2)	1440 hrs	Shall pass
6.	Thermal Shock Resistance Test; 5 cycles @ 30 minutes in furnace at 120 ° C and 15 minutes in water after quenching in water for each cycle. (ASTM D2485 method A)	2,3 & 4 (For system-2, testing to be done after heating the panels at 175°C for 2 hrs.)	-	Shall pass
7.	Cathodic Disbondment Test (ASTM G8 @60°C)	3 & 5	-	Shall pass

Each coating product to be qualified shall be identified by the Specific gravity of base and curing agent (ISO 2811). The identification shall be carried out on the batch, which is used for the pre-qualification testing.

14.3 Information to be furnished during delivery of paint materials:

CONTRACTOR along with delivery of paint material has to furnish following information from paint manufacturer to EIL for acceptance/approval of products:

a) Batch test certificates:

Along with paint products delivery to site from the pre-qualified coating manufacturer, CONTRACTOR has to produce test certificate (from paint manufacturer) for each category of product for the following test items. All test results must mention clearly the batch no. and category of product tested. Tests to be conducted for following properties:

- Specific Gravity
- % solids by weight (% zinc content in case of inorganic or organic zinc primer)

b) Product information sheet/ technical data sheet for each category of product.

The contractor shall be fully responsible for the quality of the paints products as per prequalification testing. After the paint materials are supplied to site, the supplier shall organize random sampling and testing in a NABL laboratory as per discretion

of the Engineer-in-charge. Failing to meet the specified quality requirements may cause rejection of the paint products.

15.0 METHOD OF SAMPLING & DISPATCH FOR LABORATORY TESTING

(Pre-Qualification tests (sec. 14.2), Batch testing (sec. 14.3) and Inspection testing (sec. 11.0))

15.1 Samples of coating materials should be submitted to the laboratory in sealed containers with batch no. and test certificate on regular format of manufacturer's testing laboratory.

15.2 All test panels should be prepared by testing laboratory. Surface preparation for a system shall be done in accordance with this specification. For individual products testing, minimum shall be Sa 2.5. Colour photographs of test panels should be taken before and after the test and should be enclosed along with test report. Sample batch no. and manufacturer's test certificate should be enclosed along with the report. Test report must contain details of observation and rusting if any, as per the testing code.

15.3 Manufacturers should intimate EIL, details of sample submitted for testing, name of testing agency, date, and contact personnel of the testing agency.

ANNEXURE-1: COLOUR CODE

DABHOL LNG PROJECT

TITLE	PAINTING AND COATING SPECIFICATION	REV	DATE	PAGE NO.
DOCUMENT	6732-000-MW-SP-7403-00	C4	06.10.00	11 OF 24

TABLE 2 - Colour Coding for Piping

FLUID	MAIN COLOUR	BAND	STRIPE
LNG	Ochre 08C35 RAL 1002 10YR7/6	None	None
Natural Gas Vapour incl. Vent	Ochre 08C35 RAL 1002 10YR7/6	Primrose 10E53 RAL 1018 6.25Y8.5/13	None
Seawater	Olive 12D45 RAL 6025 2.5GY4/6	None	None
Seawater - Fire	Olive 12D45 RAL 6025 2.5GY4/6	Fire Red 04E53 RAL 3000 7.5R4.5/16	None
Service Water	Olive 12D45 RAL 6025 2.5GY4/6	Terracotta 04D45 RAL 3011 7.5R3/10	None
Service Water - Fire	Olive 12D45 RAL 6025 2.5GY4/6	Terracotta 04D45 RAL 3011 7.5R3/10	Fire Red 04E53 RAL 3000 7.5R4.5/16
Cooling Water -Methanol/Glycol	Chocolate Brown 06C39 RAL 8003 7.5YR3/6	Pure White 00E55 RAL 9003 N9.5	Sky Blue 18E53 RAL 5015 10B4/10
Heating Water -Methanol/Glycol	Chocolate Brown 06C39 RAL 8003 7.5YR3/6	Pure White 00E55 RAL 9003 N9.5	Terracotta 04D45 RAL 3011 7.5R3/10
Potable Water	Olive 12D45 RAL 6025 2.5GY4/6	Sky Blue 18E53 RAL 5015 10B4/10	None
Plant Air	Light Blue 20E51 RAL 5012 5PB6/10	None	None
Instrument Air	Light Blue 20E51 RAL 5012 5PB6/10	Emerald Green 14E53 RAL 6032 5G5/10	None
Nitrogen	Ochre 08C35 RAL 1002 10YR7/6	Fire Red 04E53 RAL 3000 7.5R4.5/16	None
Drains (Effluent)	Pitch Black 00E53 RAL 9005 N1.5	None	None
Drains (Hydrocarbons)	Pitch Black 00E53 RAL 9005 N1.5	Primrose 10E53 RAL 1018 6.25Y8.5/13	None
Lube/Seal Oil	Chocolate Brown 06C39 RAL 8003 7.5YR3/6	Emerald Green 14E53 RAL 6032 5G5/10	None

DABHOL LNG PROJECT

TITLE	PAINING AND COATING SPECIFICATION	REV	DATE	PAGE NO.
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TABLE 3 - Colour Coding for Structures, Tanks and Equipment

SERVICE

COLOUR

Primary Steel Structures and Pipe-Racks
Pipe Supports and Embedments

Pale Olive 12D43
No RAL Equivalent
2.5GY6/8

Concrete Frames of Buildings

Cloud-White 22B15
RAL 9002
10PB9/1

Pipe-Bridges and other Primary Structure
passing over Roads

Brick Red 04E51
RAL 2012
7.5R6/12

LNG Tank Roof*

Pure Bright White 00E55
RAL 9010
N9.5

Secondary Structure, Walkways, Grating

Granite 00A05
RAL 7004
N7

Masonry Cladding for Buildings

Cream-White 08C31
RAL 1014
10YR9/2

Steel Cladding for Buildings

Sea-Grey 20C37
RAL 5023
5PB5/6

Roof Cladding for Buildings

Cloud-White 22B15
RAL 9002
10PB9/1

Fire Water Tank

Arctic Blue 18E50
RAL 5024
7.5B6/8

*Painted in accordance with Whessoe LGA specification 6732-000-WHME-PR-9549-00 Project Painting Requirements. Note that the steel tank walls are left in their primed state, and not painted further.

DABHOL LNG PROJECT

TITLE	PAINING AND COATING SPECIFICATION	REV	DATE	PAGE NO.
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Valves, Non-Cryogenic*

As final stripe for piping component, see Table 2 - e.g Fire Red 04E53 for firewater

Mechanical and Electrical Equipment**

For repair use Cloud-White 22B15 or Cream-White 08C31 as suitable

Fire Hydrants, Control Panels, Extinguisher Panels, Doors

Fire Red 04E53
RAL 3000
7.5R4.5/16

Electrical Panels and Doors (site-painted)**

Pottery Orange 06E51
RAL 2003
2.5YR7/11

Medical Equipment, First Aid Boxes and Panels, Doors

Emerald Green 14E53
RAL 6032
5G5/10

Washing and Hygiene Station Doors

Sky Blue 18E53
RAL 5015
10B4/10

*Cryogenic valves are supplied with 100 μ barrier coat - no further painting required. Carbon steel valves are supplied with epoxy primer only, and require painting to comply with system 6, complete with colour coat.

**Mechanical and electrical equipment is supplied pre-coated at manufacturer with manufacturer standard 'off-white' to specification 6732-000-ME-SP-5211-00 Specification for Surface Preparation and Painting of Equipment; no further painting is required.

NOTE: this colour scheme does not cover any requirement for notices and signs required to comply with safety or traffic regulations in force. The Contractor must apply such notices and signs as are required by local law.

JOB SPECIFICATION FOR INSULATION OF PIPING AND EQUIPMENT



CLIENT : KONKAN LNG LIMITED

PROJECT : EPCM SERVICES FOR AMBIENT AIR HEATING SYSTEM

Rev. No	Date	Purpose	Prepared by	Checked by	Approved by
0	22.04.2024	ISSUED FOR TENDER	RB	PP	PS

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1.0 INTRODUCTION

1.1 Scope

This specification outlines the minimum technical criteria for the design of insulation system, materials & thickness and application guidelines to detail engineering contractor for insulation to equipment, and associated piping for Ambient Air heating system for LNG regasification at Anjanwel, Taluka - Guhagar, District Ratnagiri, Maharashtra, India, of M/s Konkan LNG Ltd (KLL).

Based on the brief outline of the insulation system and materials provided in this specification, the contractor shall develop appropriate thermal insulation system required for various piping, equipments etc. for the desired service conditions specified in process design conditions. The details of the insulation system and information related to materials and ancillaries shall be submitted to EIL/KLL for review/approval.

Aspects for HSE for execution of the insulation job shall be separately addressed by the contractor meeting requirements of health, safety and environment practices of KLL

1.2 Reference Standard

The following standard shall form a part of this specification:

CINI	CINI manual for industrial insulation
ASTM C165	Measuring Compressive properties of thermal insulations
ASTM C177	Standard test method for Steady-state heat flux measurements & thermal transmission properties by means of the 'guarded-hot-plate' apparatus
ASTM C303	Standard test method for Density and dimensions of preformed block and board type thermal insulation
ASTM C390	Standard criteria for Sampling and acceptance of preformed thermal insulation lots
ASTM C518	Standard test method for Steady-state thermal transmission properties by means of the heat flow meter apparatus
ASTM C553	Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial & Industrial Applications
ASTM C591	Standard specification for Unfaced preformed rigid cellular polyisocyanurate thermal insulation
ASTM C871	Standard test methods for Chemical analysis of thermal insulation materials for leachable chloride, fluoride, silicate and sodium ions
ASTM E84	Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM E96	Standard test methods for Water vapor transmission of materials
ASTM C1767	Standard specification for stainless steel jacketing for insulation

1.3 Document precedence

In the event of conflicting requirements noticed, the contractor shall notify EIL/ KLL and obtain resolution before proceeding. The order of precedence shall be

- This specification
- Engineering design basis given in tender
- Industry codes and standards
- Application procedure/ quality plan prepared by the contractor

2.0 ASPECTS OF COLD INSULATION

2.1 Objective

- Conserve refrigeration /limit heat gain
- Prevent/ control surface condensation and ice formation
- Personal protection from cold burn

2.2 General Requirements

- Insulation system shall be designed for prevention of water in any form entering into the insulation. Materials for cold insulation shall have closed cellular structure with zero or negligible water vapour permeance.
- To prevent ingress of water or water vapour through the insulation or joints, an appropriate vapour barrier system shall be used.
- In the event of water ingress, if any through insulation joints or otherwise, it shall be prevented from propagating into larger area. For this, insulation is sub divided into compartments by using vapor stop at pipe supports.
- Piping/ equipments in cold service condition shall undergo contraction/ expansion during thermal cycling. Insulation system shall be provided suitable contraction joints at certain intervals with suitable resilient fibrous materials.
- The materials (insulation and ancillaries) proposed to be used for insulation shall have proven track record in other similar projects.

3.0 COLD INSULATION SYSTEM

Insulation system shall consist of single/ multi layer insulation blocks fixed with adhesives, joint sealants, protected from moisture/ water ingress by vapour barrier, vapour stop and covered with a weather protection jacket. Typically, insulation system for cold and dual temperature service shall consist of the following:

- Insulation material (preformed block insulation)
- Vapour barrier and vapour stop- Primary vapour barrier, secondary vapour barrier and Vapour stop
- Adhesive
- Joint sealant
- Weather protection jacket
- Under insulation painting

Typical insulation materials/ ancillaries for PIR insulation system:

Insulation type	Cold service	
	ambient to (-) 50 deg C	(-) 51 to (-) 183 deg C
Base insulation material	PIR	
Primary vapour barrier	Chlorosulfonated polyethylene rubber (hypalon) based mastic	
Secondary vapour barrier	Not required	Multiplex foil
Vapour stop	Two pack butyl rubber based elastomeric mastic	
Joint sealant	Mastic type	
Weather protection Jacket	Stainless steel (SS-316)	

3.1 Insulation types

The insulation requirement code which indicates type of insulation is as follows:

Insulation Type	Description
CC	Cold Conservation Insulation (PIR)
SC	Surface Condensation Insulation
H	Heat Conservation Insulation
CPP	Cold Personal protection
HPP	Hot Personnel Protection Insulation

3.2 Insulation material, thickness & extent of insulation

In general, insulation material for cold conservation shall be PIR insulation.

Number of Layers

Unless otherwise specified,

- Single layer insulation may be used for lining thickness < 75mm
- For thickness between 75-150mm, insulation shall be used in two layers
- For thickness >150mm, insulation shall be used in 3 or more layers

3.2.1. Preformed Polyisocyanurate Rigid Foam (PIR)

PIR rigid foam shall be preformed into free rise buns made from HCFC free chemicals and then cut into required shape/ pipe sections using a CNC machine. Material shall be chemically inert, moisture free, rot and vermin proof, not disintegrate, settle, and change its form or composition in a detrimental way while in service. The pipe sections shall be fabricated in two halves, moulded pipe sections made from chemicals in batch process is not acceptable. PIR rigid foam shall conform to general classification of ASTM C591 Grade-2 Type-III and meet the following specification:

Characteristics		Value	Remarks
Temperature range of use		(-) 183 to (+) 149 °C	
Bulk density (kg/m ³), ASTM-C302/ ASTM -D1622, min.		48	Batch test (Note-2)
Closed Cell content (%), ASTM D-6226 Procedure-2, min.		90	
Chloride content (ppm) ASTM C 871, Procedure 2, max.		60	
pH (ASTM C 871)		6-7	
Water vapour transmission (ng/Pa-s-m), ASTM E-96 method-A at 23°C & 50% RH, max.		4.4	
Compressive strength at 10% deformation (kPa), ASTM D 1621, min.		310	
Dimensional stability, % linear change 1 week exposure, max.	70 ± 2 deg.C, 97 + 3% RH	4	Type test (Note-3)
	-40 ± 3 deg.C, ambient RH	1	
	100 ± 2 deg.C, ambient RH	2	
Flame spread Index (ASTM E84), max.		25	
Tensile Strength (kPa) at (-)165°C, ASTM D-1623, min.		265	
Linear thermal expansion coefficient (-)165°C to 23 deg C (ASTM D-696), max.		70 x10 ⁻⁶ /K	
E-modulus, at (-)165°C (MPa) ASTM-D1623, max.		16	
Poisson's ratio		0.4	
Cryogenic Thermal Stress Resistance (CTSR) (Note-1)		≥ 1.5	
Thermal conductivity of 180 days aged sample at mean temp (W/mK) ASTM C-177, max.	(+)10 deg C	0.027	
	(-) 17 deg C	0.029	
	(-) 73 deg C	0.026	
	(-)101 deg C	0.020	

Note-1: $CTSR = \sigma_t \times (1-\delta) / (E \times \alpha \times \Delta T) \geq 1.5$, where

σ_t = the average value of the tensile strength

δ = the Poisson's ratio of the insulation material

E = the average value of the tensile modulus

α = the average linear thermal expansion coefficient of the insulation materials

ΔT = the temperature difference between service temperature and ambient

CTSR and relevant properties to be evaluated/applicable, where temperature is below -50°C.

Note-2: Supplier shall provide test certificate for each production Batch.

Note-3: Type test certificate no older than 2 years from date of issuance of PO shall be acceptable

3.2.2. Pipe Supports

Pipe supports shall be supplied in high density PUF pipe sections suitable for cradle type pipe cold support, conforming to minimum technical specification given below. Thickness of the PUF pipe supports shall be same the piping insulation for each layer. Density of PUF and length of the sections shall be as per relevant standard referred or appended elsewhere in the tender.

Characteristics		Types		Remarks
Bulk Density(kg/m ³) (ASTM D1622) min.		240	320	Batch test (Note-1)
Compressive Strength, MPa at 23°C in all directions, (ASTM D 1621) min.		3.0	6.0	
Closed Cell content, % , (ASTM D 6226 procedure-2		95		
Water Vapour Permeability, g/m ² .h ASTM E-96 method-A at 23°C and 50% RH, min.		0.8		
Water absorption % (by Volume) max.(ASTM D2842)		5		
Thermal conductivity (ASTM C177) W/mK, max.	at +20°C	0.040	0.050	Type test (Note-2)
	at 0°C	0.036	0.046	
	at -40°C	0.034	0.044	
	at -80°C	0.031	0.040	
Tensile Strength, MPa at 23°C in all directions (ASTM D 1623) min.		3.0	4.9	
Linear Coefficient of thermal expansion max./°K (ASTM D 696) between 23°C and -165°C		70x10 ⁻⁶		
Chlorides, ppm, (ASTM C 871, procedure 2)		60		
pH values, (ASTM C 871)		6-7		
Combustibility / fire resistance, ASTM E84		FSI < 25		

Note-1: Supplier shall provide test certificate for each production Batch.

Note-2: Type test certificate no older than 3 years from date of issuance of PO shall be acceptable.

Note-3: Unless otherwise specified, PUF pipe supports 240 kg/m³ may be used for 12 inches NB or below and 320 kg/m³ shall be used for above 12 inches NB.

3.2.3. Expansion / Contraction Joints

Contraction joints shall be provided in the insulation. At contraction joint location, provision shall be made in the metal cladding to accommodate contraction of pipe or vessel. Typical contraction joint requirements are specified below:

- a) Contraction joints shall be provided at regular intervals depending on pipe or vessel material contraction/expansion co-efficient and design temperature. Unless otherwise specified, contraction joints shall be provided in all insulations exposed to (-) 40°C and below at intervals of 6m on straight run of pipes or vessels.
- b) Contraction joints in horizontal vessel insulation shall be close to support points while on vertical pipes & vessels, the same shall be provided at support ring location and at an interval of 4.0m straight run. Both longitudinal and circumferential joints in insulation shall be staggered.
- c) A contraction joint shall consist of 12mm gap in the Insulation, loosely packed with filler material (refer section painting & ancillaries) to a depth of 6mm less than the adjacent insulation thickness. The outer 6 mm shall be filled up with Joint Sealer and finished smooth with adjacent insulation surface and applied a butyl rubber membrane overlapping 75mm onto adjacent insulations (after the sealer has cured).

3.2.4. Extent Of Insulation

- a) Cold insulation applied to piping/ equipments shall also be extended to all attachments and projections such as structural supports, pipe supports/ hangers, instrument lead lines, branch lines like vents, drains and instrument connections etc. up to a length of at least four (4) times the insulation thickness or 300mm whichever is greater. Insulation system and thickness same as the main piping/ equipments shall be applied over the extensions.
- b) Insulation thickness of valves and fittings shall be same as that of the adjoining piping.
- c) All flanged joints, manhole covers, etc. shall be cold insulated with removable box insulation.
- d) Items like bonnet of valves above the packing glands, display like nameplates, stampings, inspection code etc. shall be specially designed and insulated so that the display is not covered by insulation.

3.3 Vapour barrier & Vapour stop

All cold insulations shall have a thick mastic coating (min 1.5mm when dry) as 'primary vapour barrier' applied over external surface of the insulation underneath weather barrier jacket (cladding).

Insulation below minus (-) 50°C, shall have an additional membrane layer ~50 micron (secondary vapour barrier) between the outermost layer and next insulating layer.

All cold insulations shall have a 'vapour stop' across insulation thickness at regular intervals. This is a thick mastic (min 1mm when dry) applied at insulation terminations at both sides of pipe supports.

3.3.1 Primary Vapour Barrier

Primary Vapour barrier is a very important component in cold insulation. All cold insulations, irrespective of insulation type and service temperature shall have thick mastic (min 1.5mm when dry) 'Primary Vapour Barrier' over outermost insulation layer, underneath weather barrier jacket (cladding).

Primary vapour barrier shall be chlorosulfonated polyethylene (hypalon) rubber based fire retardant elastomeric polymer mastic, compatible with base insulation, stable in the range

of minus (-)40 to (+)100°C. The mastic is applied in two coats reinforced with glass fiber cloth sandwiched between two coats. When cured, the film shall be durable, have good tensile strength and puncture resistance, shall not wrinkle or crack when exposed to the limiting temperatures for 3 hours.

3.3.2 Secondary Vapour Barrier

Secondary vapour barrier shall be a three-layer laminated foil (~50-micron thickness) made of aluminium & polyester (25µ aluminum foil sandwiched between two 12µ polyester films). Materials shall have following characteristics:

Characteristics	Values
Service temperature range (°C)	-60 to 120
Volumetric mass (kg/dm ³)	1.93
Tensile Strength, MPa	100
Yield Strength, N/cm	70
Tear resistance, g/mm	400
Water Vapour Permeability, ASTM E96 Procedure E , 37.8°C, 90% RH) , g/m ² .h.mm.Hg	10x 10 ⁻⁶

3.3.3 Vapour Stop

Vapour stops are used in cold insulation with an objective to create containment so that in the event the insulation is damaged, water ingresses if any remains in that containment zone. Vapour stop is applied across the insulation thickness at regular intervals and stops such propagation. In piping, vapour barrier needs to be used on both sides of pipe support, for equipment / vessels, it shall be applied at support locations, where chances of crack is more due to differential movement of vessel and support structures.

Vapour stop is a thick mastic (min 1.5 mm when dry) similar to primary vapour barrier with improved flexibility, tensile strength and cryogenic resistance. It is a two component butyl rubber based elastomeric mastic suitable for temperature range of minus (-) 196 to (+)82°C, shall be suitable for application to PIR foam. The mastic is applied in two coats reinforced with glass fiber cloth sandwiched between two coats. When cured, the film shall be durable, have good tensile strength and puncture resistance, shall not wrinkle or crack when exposed to the limiting temperatures for 3 hours.

3.4 PU-adhesive

High density PUF pipe supports shall be installed to the pipe with a PU adhesive. Adhesives shall be essentially compatible with the base insulation material and suitable for the temperature range to which it is exposed.

Typical technical requirement of PU adhesive shall meet the following characteristics given below

Application temperature	Characteristics
Ambient to (-) 50 deg C	Synthetic rubber/ resin based or Thermo setting two component solvent free urethane based, suitable for the temperature range to which it is exposed, have average 38% volume solid as per ASTM D1644 and Leachable chlorides max 90 ppm as per ASTM C871

3.5 Joint sealant

3.5.1. Joint sealant for joints of insulation blocks

The joint sealant for joints between insulation blocks shall be compatible with the base insulation material and suitable for the temperature range to which it is exposed. Typical material and technical requirement for PUR/PIR insulation system is specified below

General Characteristics	Combustibility/ fire resistance	Water vapour permeance (max)
Average 82% volume solid as per ASTM D2369	Flame spread and fuel contribution negligible when used as 3.2 mm wide sealant between joints of incombustible insulation blocks	Negligible when measured across 3.2 mm wide sealant between joints of impermeable insulation blocks

3.5.2. Joint sealant for joints of metal cladding

The technical requirement and typical material for joint sealant of stainless-steel metal cladding is specified below.

General Characteristics	Combustibility/ fire resistance	Water vapour permeance (max)
Average 52% volume solid as per ASTM C461	FSI (flame spread index) ≤ 20 as per ASTM E-84, tested on a 6.3mm inorganic reinforced cement board with DFT ~2mm	0.0092 metric perms (as per ASTM F-1249 with DFT 2.8mm)

3.5.3. Sealing tape for secondary vapour barrier

Sealing tape shall be a three layer laminated foil (~50 micron thickness) made of aluminium & polyester (25 μ aluminum foil sandwiched between two 12 μ polyester films. Material shall have following properties.

Total thickness exclusive of adhesive layer	50 μ m
Temperature range	+120°C to -45°C
Volumetric mass	1.93 kg / dm ³
Water vapour permeability in acc. with ASTM E 96, procedure E (37.8°C, 90% R.H.)	Max. 10.10-6 g / (m ² .h.mmHg)

3.6 WEATHER PROTECTION JACKET

Unless otherwise mentioned, cladding shall be of stainless steel as per ASTM A167 / A240 type 316 with polysurlyn lamination on inside surface. Cladding metal sheets shall have minimum thickness as below:

Item	Insulation O.D (mm)	Thickness (SWG)
Pipe, Vessels and equipment	< 500	26
Pipe, Vessels and equipment	> 500	24
Valves, flanges and foot traffic areas	-	22

3.7 Painting & Ancillaries

3.7.1 Under Insulation Painting

Equipments and piping shall be protected from corrosion by providing appropriate painting under insulation, as per applicable painting specification for the project.

3.7.2 Materials for Contraction Joint

The material to be used in the contraction joints shall be light weight fiber glass blanket. The material shall have the following properties:

Properties	Values
Density (kg/m ³), ASTM D1622	32
Compressive strength (kPa), at 10% deformation at 24°C, ASTM C165	0.230
Thermal conductivity (W/mK) at 25°C, max, ASTM C177	0.055
Leachable chlorides content (mg/kg), max, ASTM C-871	10
pH, ASTM C-871	6-10.5

3.7.3 Glass Cloth / Fabric

The glass cloth to be used for vapour barrier/ vapor stop reinforcement shall be prepared from E-glass and open weave 10 mesh. Glass Cloth having glass fibre thickness of 5 mils, 18x12 threads per 25mm and weight 80g/m² or in case of synthetic fabric same shall have weight 30g/m² and 20x10 threads per 25mm.

3.7.4 Adhesive Synthetic Type

The tape used to secure the inner layers of insulation shall be by pressure sensitive glass fiber reinforced tape. The tape shall have the following characteristics:

- i) Materials: Glass fibre-reinforced synthetic tape
- ii) Dimensions: width min.50mm and thickness min. 0.27mm.
- iii) Adhesiveness: 210gr/mm²

Adhesive tapes shall be spaced as follows:

To Secure Insulation	Spacings (mm)
OD of insulation Upto 250mm (10 inch).	300
Over 250mm (10 inch).	200

3.7.5 Bands

Band to secure last layer of insulation materials shall be stainless steel to ASTM A-167 Type 316. Banding to secure the weatherproof jacketing shall be stainless steel to ASTM A-167 Type 316. The band shall be 20 mm width x 24 SWG.

3.7.6 Butyl Rubber Sheet

Butyl rubber membrane, comply to ISO 188-aging and of thickness 1.2 and width 20 mm shall be used as flexible covering over contraction joint for weather barrier.

4.0 GENERAL REQUIREMENTS

4.1 Hydro test

Insulation shall be applied on vessels, heat exchangers, piping and other equipment only after successful completion of hydrostatic test. In case insulation work starts before

completion of hydrostatic test, all welded and mechanical joints shall be left exposed for testing and subsequently insulated after successful completion of the hydrostatic test.

4.2 Insulation Thickness

Thickness of insulation shall be as given in the line list and data sheets. However, the contractor shall prepare a list of insulation thickness for various temp. and get approval from EIL/ KLL.

The insulation thickness shall be calculated for anti-sweat condition based on given ambient temperature, humidity wind velocity specified in datasheet/ design basis. In absence of sufficient information, following design conditions shall be used for insulation thickness calculation:

- a) Ambient temperature 39 degree C
- b) Humidity 85%
- c) Wind velocity 1m/ sec
- d) Permissible max heat gain 25 W/m²
- e) Surface emissivity 0.9

The insulation thickness may be calculated in a computerized program as per ISO 12241. Insulation thickness of valves and fittings shall be same as that of the adjoining piping.

The thickness of the insulation on equipment heads shall be the same as that on the cylindrical parts.

Refer Annexures for typical insulation thickness for various temperature ranges.

4.3 Cold personal protection

Personnel protection insulation shall be used if normal operating temperature is lower than -7°C and if the surface is in area accessible to personnel. Personnel protection shall be provided within 2.5 m vertical or 1 m horizontal from the periphery of platform, walkways, or ladders. Above -7°C, personal protection shall be provided with metal caging.

The metal cage / guards, wherever used for personnel protection shall typically be placed at a gap from the surface as given below:

Pipe / Equipment dimension	Gap to be maintained from cold surface (mm)
Pipe diameter up to 6 inches	50
Pipe diameter greater than 6 inch but less than 10 inch	75
Pipe diameter greater than 10 inch	100
Equipment / vessels	100

4.4 Hot personal protection

Exposed surfaces of piping, equipment/ vessels above 65°C in normal or even for a short-term operation, where insulation is not a requirement from heat conservation or process point of view, but in approachable range of operating and maintenance personnel, shall be protected from accidental touch for human safety by appropriate personnel protection. Extent of personnel protection may be decided by the field construction personnel using the criteria that exposed surfaces within 600mm horizontally and / or 2100mm vertically of a normal access of walkways or adjacent to handrails, platforms travelled by personnel shall be protected as minimum. Metal cage / guards may be used for personnel protection for 65 to 175°C. Insulation shall be used for personnel protection for 176°C and above.

The metal cage / guards, wherever used for personnel protection shall typically be placed at a gap from the surface as given below:

Pipe / Equipment dimension	Gap to be maintained from hot surface (mm)
Pipe diameter up to 6 inches	50
Pipe diameter greater than 6 inch but less than 10 inch	75
Pipe diameter greater than 10 inch	100
Equipment / vessels	100

4.5 Extent of Insulation

Items requiring insulation shall be as per specified in the piping line schedule/ and equipment/vessel/heat exchanger data sheets.

All attachments and projections such as vessel supports, structural steel attached to vessels, piping hanger supports, instrument load lines, branch lines like vents, drains and instrument connections connected directly to cold insulated piping, vessels and equipment, shall be cold insulated upto a distance at 4 times the adjoining insulation thickness.

All flanges joints, valves, fittings, etc. shall be cold insulated with removable box insulation. When pumps and compressors are to be insulated, thermal breaks shall be provided to isolate the base from the steel or concrete foundation.

4.6 Co-ordination with other agencies

Insulation contractor shall work in close co-ordination with the erection contractor. Wherever temporary supports are provided the insulation contractor shall remove these and provide the necessary insulating supports.

5.0 STORAGE

5.1 Insulation materials should be stored in covered shed. Ancillary materials like adhesives have limited shelf life, hence procurement and storage shall be planned. Materials shall be stored properly to protect damage from adverse environments, such as humidity, moisture, rain, dust, dirt, sand, mud, salt air, etc.

5.2 Insulation material slabs and sections shall be stored on a flat surface in a horizontal position. Insulation material shall never be stacked directly on the ground, but stored on platforms.

5.3 Specific instruction from manufacturer, if any for handling & storage must be followed with due importance to material safety data, health and safety recommendations.

6.0 APPLICATION AND QUALITY CONTROL

General

The insulation system needs to be installed in dry condition. The contractor shall be responsible for developing a detailed application procedure specific to the lining system and materials concerning for different area. Minimum technical requirements specific to some typical applications are given in this specification as a guideline and information. The detail insulation application procedure shall be approved by EIL/KLL prior to start up of work.

6.1 Surface Preparation and Under Insulation Coating / Wrapping

Ingress of rain water and corrosive products or condensation of water vapour in the insulation may cause severe CUI (corrosion under insulation) and ESCC,

The surfaces of piping, vessels & equipments valves etc. on which cold insulation is to be applied shall be free of dust, loose paint or any other foreign matter. The surface irregularities shall be filled up with the approved filler. Anticorrosive coating/ under

insulation coating shall be applied over the carbon/Alloy Steel surfaces to be insulated and allowed to dry before application of insulation. Paint system shall be as per applicable for the project.

Austenitic stainless steel especially 300 and 400 series are susceptible for external stress corrosion cracking (ESCC). For to avoid ESCC in stainless steel as an alternative of coating, 0.1mm thick aluminium foil can be wrapped with an overlap of 50mm. Overlap joint shall be sealed with barium chromate sealer or self- adhesive (chloride free) aluminum tape at the edge of foil. Foil shall be secured in position either by pressure sensitive tape or aluminium band.

6.2 Application of Primary Vapour Barrier

Cold insulation shall essentially have a thick mastic coating (min 1.2mm when dry) as 'primary vapour barrier' applied over external surface of the insulation underneath weather barrier jacket (cladding). The mastic shall be applied in two coats reinforced with glass fiber cloth to obtain the specified dry film thickness.

Primary vapour barrier mastic shall be supplied in two sheds. One shed shall be used for the first coat and the other shed for second coat. The first coat shall be applied to a wet thickness that contributes half of the required thickness by trowel or other method as may be specified by the supplier to a smooth finish by covering the insulation joints. At insulation terminations, including those at flanges, the primary vapour barrier shall extend at least 75 mm beyond the edges of the insulated section onto adjacent uninsulated equipment/piping.

The fabric (glass cloth) shall be embedded in the wet tack layer such that no wrinkles are formed and all joints have a minimum overlap of at least 50 mm. Apply the second coat (of other shed) after a time gap recommended by the mastic supplier (usually within 2 hours) to a smooth finish fully embedding the fabric and to the required thickness to obtain required DFT. When cured, the layer shall be durable and have good dry film strength and puncture resistance. Minimum technical requirement for primary vapour barrier is specified below. The total dry layer thickness shall conform to the layer thickness specified by the supplier. There shall not be any cracks, holes, thin spots or open joints in the vapour barrier, which shall be applied such that no part of the insulation material is uncovered. The connections with protrusions and in corners shall be carefully finished.

6.3 Application of Secondary Vapour Barrier

At an operating temperature of -50°C or below, in addition to primary vapour barrier, the multiplex foil as a secondary vapour barrier shall be applied between the outermost layer and the next insulation layer. The foil shall be cut to size correctly and shall be installed with dots of adhesive at the surface, tightly stretched and without air inclusions. The joint shall be sealed with multiplex tape of aluminium/polyester.

6.4 Application of Expansion / Contraction Joints

When specified on a pipe line or vessel drawing or where deemed necessary to allow movement and contraction of the pipe or vessel without producing random cracking of the insulation, contraction joints shall be provided in the insulation. At contraction joint location, provision shall be made in aluminium cladding to accommodate contraction of pipe or vessel. The following steps shall be taken:

- i) Both longitudinal and circumferential joints in insulation shall be staggered.
- ii) Contraction joints shall be provided at an interval depending on pipe or vessel material contraction/expansion co-efficient and temperature. Unless otherwise

specified contraction joints shall be provided at an interval of 6.0m on straight run of pipes or vessels operating at temperatures (-) 40°C & below.

- iii) Contraction joints in horizontal vessel insulation shall be close to support points while on vertical pipes & vessels, the same shall be provided at support ring location and at an interval of 4.0m straight run.
- iv) A contraction joint shall consist of 12mm gap in the Insulation with staggered joints, compressed (minimum compression 50%) with resilient blanket, butyl rubber at the vapor barrier joint and sliding weather barrier sheet at the jacketing joint.
- v) The butyl rubber sheet will be centrally positioned and bonded by compatible adhesive and secured on both sides by stainless steel bands.

6.5 Insulation Support Rings – Vertical Sections

Insulation supports for piping shall be, supplied and installed by the Contractor as per spacing in accordance with the contraction joints table for the following conditions.

- a) Vertical pipe – 2.5 m and longer.
- b) Inclination pipe – (45° and over) 2.5 m and longer.
- c) Vertical and Inclination pipe with flange and valve.

Design and MOC of insulation support ring shall be submitted to EIL/KLL for approval. In general MOC of insulation support ring shall be SS-304 and for other service MOC of support ring shall be same as that of MOC of piping.

6.6 Vapor stops

Vapor stops shall be provided at each termination or interruption in the continuity of insulation and vapour barrier. Vapour stops shall be installed to the full depth of thickness of that layer and to a minimum distance of 50 mm between each layer at all pipe support locations, insulation support rings, contraction joints, and at all changes in configuration such as elbows/flanges/valves/ reducers, etc.

6.7 Application – Piping

Insulation shall be applied only after ensuring that piping to be insulated is properly installed, supported and tested.

Piping surface shall be cleaned of loose rust, mill scale, grease, dust or any other foreign contaminants. The Insulation shall be applied to pipes in half round sections in reasonably handy sizes.

Joint sealer shall be applied to the ends and edges of all sections for sealing all longitudinal and circumferential joints. Adhesive shall be applied evenly and the half sections shall be closely buffed to each other both longitudinally and circumferentially.

All the insulation layers except the final shall be secured in position by pressure sensitive adhesive tape at an interval of 300 mm upto 10 inch OD of insulation and 200 mm for above 10 inch OD of insulation while the final layer shall first be secured with SS bands at an interval of 225 mm. Bands shall be staggered on successive layers. Insulation of piping shall be stopped short of flanges to allow for withdrawal of bolts for fittings, the insulation shall be completed by applying cut segments of the same insulation sections used for pipe.

Any crack or irregularities in the external surfaces of insulation sections shall be filled up by applicable filler material.

Contraction joints shall be provided at specified interval.

Primary vapour barrier shall be applied on the outside face of the last layer of insulation and secondary barrier shall be applied on the last layer but one, just before the final layer of insulation.

Stainless steel jacketing shall be installed around the insulation. The design for water tight cladding (water shielded, drain holes etc.) shall be used. All the cladding shall have at least 50 mm overlap joints at their termination edges and joints shall be sealed with suitable metal sealant. Final jacketing details shall be defined by the insulation contractor.

Valves, flanges etc. if any, shall be wrapped by rockwool blanket with PVC foil on the inner side and SS-foil on the outer side. A metal box shall be positioned and secured to encase the valves/ flanges etc. Space inside the metal box shall be injected with PIR/PUR foam to a minimum density of 40 kg/m³. Jacketing details shall be as defined by the insulation contractor.

6.8 Application –Vessel and equipment

Insulation shall be applied to the shell using broken joint method, starting with alternate one half- and full-length curve segments or flat blocks beveled to fit. On Vertical or equipment, the application of insulation shall start at the insulation support and proceed upward, and on vertical vessels/equipment, the application shall start at one end and proceed circumferentially and horizontally. Insulation segments shall be made as large as possible to minimize the number of joints. The inner layer of insulation shall be bonded to the vessel with the applicable adhesive. Subsequent layers of insulation shall be bonded to the preceding layer, with applicable adhesive.

The joint sealer shall be applied to the ends and edges of all sections, including those in the inner most layers to seal all joints. Care shall be taken to ensure that the adhesive is evenly spread over the entire surface of application and the insulation is closely butted to each other both longitudinally and circumferentially.

All the insulation layers except the final shall be secured in position by pressure sensitive adhesive tape at an interval of 225mm, while the final layer shall first be secured with SS bands at an interval of 225 mm. Bands shall be staggered on successive layers. Vapour barrier shall be applied over the insulation as outlined herein this specification.

Vapor barrier shall be protected by stainless steel jacketing. Metal jacketing shall have an overlap of min. 50mm along the longitudinal and circumferential. Metal jacketing shall be secured in position by metallic band on the shell at a max. Pitch of 425mm

7.0 HSE REQUIREMENT

The contractor responsible for the insulation installation shall be fully conversant and meet the HSE requirements of KLL. The contractor shall strictly adhere to safety instructions and MSDS requirements of the insulation/ ancillary products and application. The insulation contractor shall provide adequate personnel protection and safety gears like hand gloves, masks, spectacles etc. as necessary for compliance to MSDS safety requirements to the workmen on the job.

8.0 VENDOR DATA REQUIREMENT

POST ORDER STAGE THE CONTRACTOR SHALL SUBMIT

- Manufacturer's datasheet and Compliance datasheet for the insulation and ancillaries materials
- Application procedures; quality assurance plan of insulation materials and application, inspection & test plan for supply and application.
- Name of the insulation application contractor and bio data of the personnel responsible for insulation supervision, inspection and quality control

- d) List of equipments tools and tackles to be mobilized during the execution of the job
- e) Copies of all physical and chemical test certificates (duly endorsed by the inspection agency) for insulation and ancillaries materials
- f) Quality assurance plan of insulation materials from the manufacturer

Annexure-1

Table-1: Cold conservation (CC Type : PIR) Insulation Thickness (Heat gain 25 W/m²) with 85 % RH

INSULATION THICKNESS REQUIRED (mm) FOR TEMP. RANGE (°C)												
Nominal Pipe Dia. (Inch)	Amb.	14	-5	-20	-35	-50	-65	-80	-95	-110	-125	-140
	15	-4	-19	-34	-49	-64	-79	-94	-109	-124	-139	-165
1/2	25	25	40	50	50	60	60	70	70	80	80	90
3/4	25	25	40	50	60	60	60	70	80	90	90	100
1	25	25	50	50	60	70	70	80	90	100	100	110
1 1/2	25	50	50	60	70	70	80	90	100	110	110	120
2	25	50	50	60	70	70	80	90	110	120	120	130
3	25	50	60	70	80	80	90	100	120	130	130	140
4	25	50	60	70	80	80	90	100	120	130	140	150
6	25	50	60	70	80	90	100	110	130	140	150	160
8	25	50	60	70	80	90	100	110	130	140	150	160
10	25	50	60	70	80	90	100	110	130	140	150	160
12	25	60	70	80	90	100	110	120	140	150	160	160
14	25	60	70	80	90	100	110	120	140	150	160	170
16	25	60	70	80	90	100	110	120	140	150	160	170
18	25	60	70	80	90	100	110	120	140	150	160	170
20	25	60	70	80	90	110	120	130	150	160	170	180
24	25	60	70	80	100	110	120	130	150	160	170	180
Above	25	60	70	80	100	110	120	130	150	160	170	180

Table-2: Surface Condensation (SC type : PIR) Insulation Thickness (Heat gain 25 W/m²) with 85 % RH

INSULATION THICKNESS REQUIRED (mm) FOR TEMP. RANGE (°C)												
Nominal Pipe Dia. (Inch)	Amb. 15	14 -4	-5 -19	-20 -34	-35 -49	-50 -64	-65 -79	-80 -94	-95 -109	-110 -124	-125 -139	-140 -165
1/2	25	25	25	25	40	40	40	50	50	50	50	60
3/4	25	25	40	40	40	50	50	65	65	65	65	75
1	25	25	40	40	50	50	50	65	65	70	70	75
1 1/2	25	25	40	50	50	50	65	65	65	70	70	80
2	25	25	40	50	50	65	65	65	80	80	80	90
3	25	25	40	50	65	65	80	80	90	90	90	100
4	25	40	40	50	65	65	65	80	90	90	100	115
6	25	40	50	50	65	65	80	80	90	90	115	115
8	25	40	50	65	65	65	80	90	90	100	115	125
10	25	40	50	65	65	80	90	90	100	100	125	140
12	25	40	50	65	80	80	90	100	100	100	140	140
14	25	40	50	65	80	80	100	100	115	115	140	150
16	40	40	65	65	80	90	100	100	115	115	150	165
18	40	40	65	80	90	90	100	100	115	115	150	165
20	40	50	65	80	90	90	100	115	115	125	165	175
24	40	50	65	80	90	100	110	115	125	125	165	175
Above	40	50	65	80	90	100	110	115	125	140	165	175

Table-3: Cold Personal protection (CPP type: PIR) Insulation Thickness

INSULATION THICKNESS REQUIRED (mm) FOR TEMP. RANGE (°C) (-7°C to -165°C)			
Nominal Pipe Dia. (Inch)	Inner layer	Outer Layer	Total thickness
1/2	25	25	50
3/4	25	25	50
1	25	25	50
1 1/2	30	30	60
2	30	30	60
3	30	30	60
4	30	40	70
6	30	40	70
8	30	40	70
10	30	40	70
12	30	40	70
14	40	40	80
16	40	40	80
18	40	40	80
20	40	50	90
24	40	50	90
Above	40	50	90

Table-4: Heat Conservation (H- type: PIR) Insulation Thickness

INSULATION THICKNESS REQUIRED (mm) FOR TEMP. RANGE (°C) (Ambient to 90°C)	
Nominal Pipe Dia. (Inch)	Total thickness (mm)
1/2	25
3/4	25
1	25
1 1/2	25
2	25
3	25
4	25
6	25
8	25
10	30
12	30
14	30
16	30
18	30
20	30
24	30
Above	30

SITE SPECIFIC SEISMIC SPECTRA

PROJECT : AMBIENT AIR HEATING SYSTEM, DABHOL
OWNER : KONKAN LNG LIMITED
CONSULTANT : ENGINEERS INDIA LIMITED
JOB NO. : B861

Rev. No	Date	Purpose	Prepared by	Reviewed by	Approved by
0	03/05/2024	ISSUED FOR IMPLEMENTATION	MBA	GGSA	SVRS

SITE SPECIFIC SEISMIC SPECTRA

Site specific seismic spectrum is generated in accordance with Section 7 of IS 1893 (Part 4): 2024 for 10% probability of exceedance in 50 years for different damping values. The design horizontal seismic coefficient shall be estimated in accordance with Clause no. 7.3.1 of IS 1893 (Part 4) using spectral acceleration coefficient presented below.

Spectral Acceleration Coefficients (S_a/g) for 10% probability of exceedance in 50 years:

Spectral Acceleration Coefficients (S_a/g) for 5% damping for 10% probability of exceedance in 50 years in the horizontal direction shall be based on the following equation. The spectral acceleration values for different damping ratio are presented in Figure 1 and Table 1.

S_a/g (damping: 5%)	$= 0.17$	for $0.00 < T < 0.01$ sec
	$= 0.142 + 2.833T$	for $0.00 < T < 0.10$ sec
	$= 0.425$	for $0.10 < T < 0.8$ sec
	$= \frac{0.34}{T}$	for $0.8 < T < 6.00$ sec
	$= \frac{2.04}{T^2}$	for $6.0 < T < 10.00$ sec

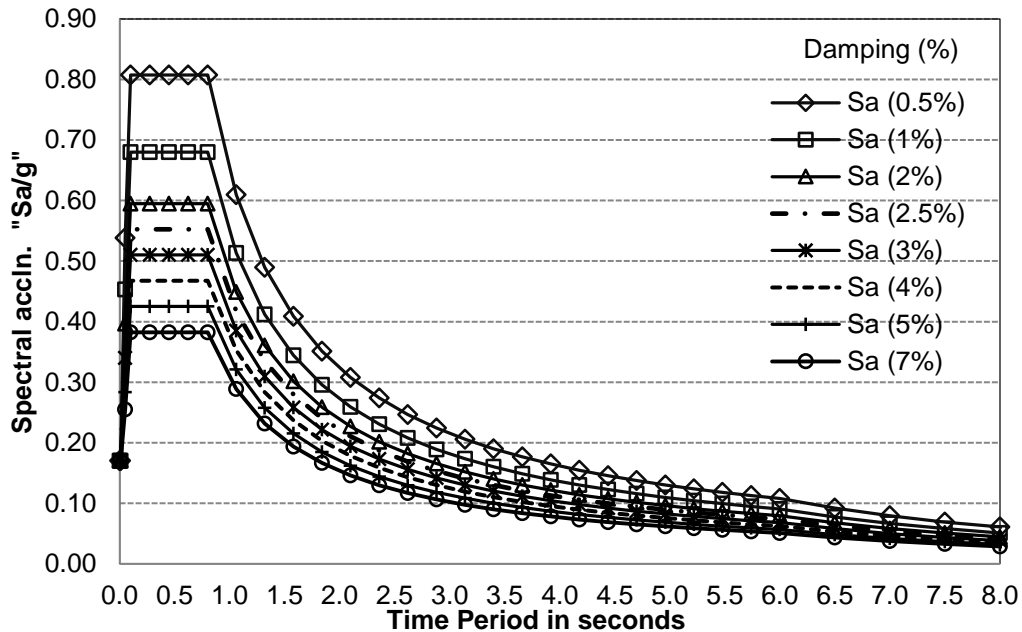


Figure 1: Site specific seismic spectra for 10% probability of exceedance in 50 years

Table 1: Spectral Acceleration Coefficients (S_a/g) for Design Basis Earthquake (DBE)

Time Period (sec)	Percentage of critical damping							
	0.5	1.0	2.0	2.5	3.0	4.0	5.0	7.0
0.000	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
0.010	0.170	0.170	0.170	0.170	0.170	0.170	0.170	0.170
0.050	0.538	0.453	0.397	0.368	0.340	0.312	0.283	0.255
0.100	0.808	0.680	0.595	0.553	0.510	0.468	0.425	0.383
0.275	0.808	0.680	0.595	0.553	0.510	0.468	0.425	0.383
0.450	0.808	0.680	0.595	0.553	0.510	0.468	0.425	0.383
0.625	0.808	0.680	0.595	0.553	0.510	0.468	0.425	0.383
0.800	0.808	0.680	0.595	0.553	0.510	0.468	0.425	0.383
1.060	0.609	0.513	0.449	0.417	0.385	0.353	0.321	0.289
1.320	0.489	0.412	0.361	0.335	0.309	0.283	0.258	0.232
1.580	0.409	0.344	0.301	0.280	0.258	0.237	0.215	0.194
1.840	0.351	0.296	0.259	0.240	0.222	0.203	0.185	0.166
2.100	0.308	0.259	0.227	0.210	0.194	0.178	0.162	0.146
2.360	0.274	0.231	0.202	0.187	0.173	0.158	0.144	0.130
2.620	0.247	0.208	0.182	0.169	0.156	0.143	0.130	0.117
2.880	0.224	0.189	0.165	0.153	0.142	0.130	0.118	0.106
3.140	0.206	0.173	0.152	0.141	0.130	0.119	0.108	0.097
3.400	0.190	0.160	0.140	0.130	0.120	0.110	0.100	0.090
3.660	0.177	0.149	0.130	0.121	0.111	0.102	0.093	0.084
3.920	0.165	0.139	0.121	0.113	0.104	0.095	0.087	0.078
4.180	0.155	0.130	0.114	0.106	0.098	0.089	0.081	0.073
4.440	0.145	0.123	0.107	0.100	0.092	0.084	0.077	0.069
4.700	0.137	0.116	0.101	0.094	0.087	0.080	0.072	0.065
4.960	0.130	0.110	0.096	0.089	0.082	0.075	0.069	0.062
5.220	0.124	0.104	0.091	0.085	0.078	0.072	0.065	0.059
5.480	0.118	0.099	0.087	0.081	0.074	0.068	0.062	0.056
5.740	0.113	0.095	0.083	0.077	0.071	0.065	0.059	0.053
6.000	0.108	0.091	0.079	0.074	0.068	0.062	0.057	0.051
6.500	0.092	0.077	0.068	0.063	0.058	0.053	0.048	0.043
7.000	0.079	0.067	0.058	0.054	0.050	0.046	0.042	0.037
7.500	0.069	0.058	0.051	0.047	0.044	0.040	0.036	0.033
8.000	0.061	0.051	0.045	0.041	0.038	0.035	0.032	0.029
8.500	0.054	0.045	0.040	0.037	0.034	0.031	0.028	0.025
9.000	0.048	0.040	0.035	0.033	0.030	0.028	0.025	0.023
9.500	0.043	0.036	0.032	0.029	0.027	0.025	0.023	0.020
10.000	0.039	0.033	0.029	0.027	0.024	0.022	0.020	0.018

NOTES:

1. For methodology of calculation of seismic forces and other seismic design criteria, refer latest revisions of the following codes:
IS 1893 (Part 1): 2016 General provisions and buildings
IS 1893 (Part 4): 2024 Industrial structures including stack-like structures
2. All parameters shall be in accordance with the above-mentioned codes.
3. When cylindrical storage tanks are designed as per API 650/620 using site-specific design methods, the percentage of critical damping and response reduction shall be taken in accordance with the respective design codes.

VENDOR DATA REQUIREMENTS FOR PROTECTIVE COATINGS-B861-000-EX-MR- 6001

0	22-APR-2024	ISSUED FOR BIDS	JATIN	SAHIL	SS
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

VENDOR DATA REQUIREMENTS

The following drawings/documents marked "✓" shall be furnished by the bidder.

COATING SYSTEMS

S. N O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
1.	Schedule of Vendor Documents		✓		✓	
2.	Painting Scheme / Schedule/specifications (Including particulars of surface conditions, surface preparation and coating system etc. and inspection).		✓		✓	
3.	Paint manufacturer's Credentials/PTR (Past Track record)			✓	✓	
4.	Paint Pre-qualification Certificates as per the specifications.		✓		✓	
5.	Paint datasheets and Material safety Datasheets (MSDS)		✓		✓	
6.	GA Drawing of the equipment for which the painting schedule is proposed		✓		✓	

Notes :

- "TICK" denotes applicability.
- Post order, drawing / document review shall commence only after approval of Document Control Index (DCI).
- All post order documents shall be submitted / approved through EIL eDMS portal.
- Final documentation shall be submitted in hard copy (Six prints) and soft (two CDs/DVDs) in addition to submission through EIL eDMS.
- Refer - 6-78-0001: Specification for quality management system from Bidders.
- Refer - 6-78-0002: Specification for documentation requirements from Contractors.
- Refer - 6-78-0003: Specification for documentation requirement from Suppliers.
- All drawings & documents shall be submitted in A4 or A3 paper sizes. Documents in higher paper size shall be submitted in exceptional circumstances or as indicated in the MR/Tender.
- Post order- The schedule of drawing / data submission shall be mutually agreed between EIL & the bidder / contractor / supplier during finalization of Document Control Index (DCI).

VENDOR DATA REQUIREMENTS FOR HEAT EXCHANGER (PLATES-GASKETTED)

A	24-APR-2024	ISSUED FOR BIDS	RP	PKP	TK
Rev. No.	Date	Purpose	Prepared by	Checked by	Approved by

VENDOR DATA REQUIREMENTS

The following drawings/documents marked "✓" shall be furnished by the bidder.

S. N. O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
1.	Thermal design calculation			✓	✓	
2.	Commissioning, operating & maintenance instructions				✓	
3.	Datasheets as per API 662 (SI units) completed by the vendor		✓		✓	
4.	Equipment detail drawings with the location of connections & supports, materials, Nozzle allowable forces, moments or movements, Anchor Bolt Details			✓	✓	
5.	Commissioning spares list			✓	✓	
6.	Special tools & tackles required for maintenance and operation (Recommended by the Bidder)	✓		✓	✓	
7.	Additional recommended spares for two years of operation and maintenance			✓	✓	
8.	Foundation loading diagrams			✓	✓	
9.	Mechanical design calculations including wind, seismic, nozzle load and lifting			✓	✓	
10.	Complete parts list including materials			✓	✓	
11.	Mandatory spare parts list			✓	✓	
12.	Inspection and testing plan (@)			✓	✓	
13.	Manufacturers data reports including manufacturing certificates required as per the codes				✓	
14.	Equipment detail drawings corrected to show actual ¿AS BUILT dimensions¿				✓	
15.	Mill test certificates of all materials showing location, heat number, chemical analysis, and physical properties. (@)				✓	
16.	Welding qualification procedures QW 483, Q 484 (@)				✓	
17.	Reports of tests made on welded sections, if any such tests are made (@)				✓	
18.	Reports of radiographic examination and certificates for the results of any required magentic particle / liquid penetrant test or any other test (@)				✓	

**VENDOR DATA REQUIREMENTS
FOR
HEAT EXCHANGER (PLATES-GASKETTED)**

S. N. O.	DESCRIPTION	WITH BID	POST ORDER			REMARKS
			FOR REVIEW	FOR RECORD	WITH DATA BOOK (FINAL)	
19.	Pyrometer charts and other detailed records of heat treatment (post-weld, normalizing, heating for forming etc.). (@)				✓	
20.	Hydro test / pneumatic / other test reports (@)				✓	
21.	Approving agency's certificate (@)				✓	
22.	Nameplate rubbings (@)				✓	
23.	Method of packaging with a sketch showing anchorage etc.				✓	
24.	Instructions for storage at site, installation and erection				✓	

Notes :

- "TICK" denotes applicability.
- Post order, drawing / document review shall commence only after approval of Document Control Index (DCI).
- All post order documents shall be submitted / approved through EIL eDMS portal.
- Final documentation shall be submitted in hard copy (Six prints) and soft (two CDs/DVDs) in addition to submission through EIL eDMS.
- Refer - 6-78-0001: Specification for quality management system from Bidders.
- Refer - 6-78-0003: Specification for documentation requirement from Suppliers.
- All drawings & documents shall be submitted in A4 or A3 paper sizes. Documents in higher paper size shall be submitted in exceptional circumstances or as indicated in the MR/Tender.
- Post order- The schedule of drawing / data submission shall be mutually agreed between EIL & the bidder / contractor / supplier during finalization of Document Control Index (DCI).
- "@" indicates submission of documents to Inspection Agency.
- Bill of Material shall form part of the respective drawing.

PLATE & FRAME HEAT EXCHANGER

Document No.
B861-700-02-42-DS-1401
Rev. No. **3**
Page **1** of **4**

PROCESS DATA SHEET

PROJECT	EPCM Services for Ambient Air Heating System at KLL		CLIENT	KONKAN LNG LIMITED	
UNIT	EXISTING PROCESS AREA		JOB NO.	B861	UNIT NO. 700
ITEM NO	700-EP-1001 A/B/C/D/E				
SERVICE	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW) (NOTE-7)				
MOUNTING					
CASE	CASE-2				
OPERATING CONDITION	SHELL SIDE		TUBE SIDE		
FLUID HANDLED	EGW (36 WT%) (HOT SIDE)		MW (30 WT%) (COLD SIDE)		
FLOW RATE		IN	OUT	IN	OUT
TOTAL	KG/HR	2570000	2570000	2000000	2000000
VAPOUR	KG/HR				
LIQUID	KG/HR	2570000	2570000	2000000	2000000
STEAM	KG/HR				
WATER	KG/HR				
NON CONDENSABLE	KG/HR				
OPERATING TEMPERATURE	DEG C	16	2	(-)1.28	15.0
OPERATING PRESSURE	KG/CM2 G	13.9		5.0-7.5	
LIQUID PROPERTIES @ OPERATING TEMP & PRESS					
DENSITY	KG/M3	1053	1058	962.5	955.5
VISCOCITY	CP	2.75	4.4	3.65	2.0
SPECIFIC HEAT	KCAL/KG DEG C	0.853	0.843	0.926	0.947
THERMAL CONDUCTIVITY	KCAL/M HR DEG C	0.374	0.36	0.355	0.371
SURFACE TENSION (IF 2PHASE)	DYNES/CM				
VAPOUR PROPERTIES @ OPERATING TEMP & PRESS					
MOLECULAR WEIGHT					
DENSITY	KG/M3				
VISCOCITY	CP				
SPECIFIC HEAT	KCAL/KG DEG C				
THERMAL CONDUCTIVITY	KCAL/M HR DEG C				
DATA FOR BOILING SERVICES					
CRITICAL TEMPERATURE	DEG C				
CRITICAL PRESSURE	BAR				
ALLOWABLE PRESSURE DROP	BAR	1.5			
VELOCITY LIMIT(IF ANY)	M/S				
FOULING RESISTANCE	HR M2 DEG C/KCAL				NOTE-4
HEAT DUTY	MM KCAL/HR				30.5 (35.45 MW)
HEATING CURVE DATA ATTACHED					NO
IF YES,DATASHEET NO					
COOLING CURVE DATA ATTACHED					NO
IF YES,DATASHEET NO					
OVER CAPACITY FACTOR					
BOTH FLOW & DUTY	% of Normal				
ONLY FLOW	% of Normal				
ONLY DUTY	% of Normal				
SURFACE AREA					

3	22-APR-2024	REVISED AS MARKED	MS	JKS	SS
2	19-APR-2024	REVISED AND REISSUED FOR ENGINEERING	MS	JKS	SS
1	04-APR-2024	Re-issued For Engineering	MS	JKS	SS
0	01-APR-2024	Issued For Engineering	MS	JKS	SS
A	20-MAR-2024	Issued For Comments	DR	JKS	SS
Rev. No.	Date	Purpose	Prepared By	Reviewed By	Approved By

**PLATE & FRAME
HEAT EXCHANGER**

Document No.
B861-700-02-42-DS-1401

Rev. No. **3**

Page **2** of **4**

PROCESS DATA SHEET

PROJECT	EPCM Services for Ambient Air Heating System at KLL		CLIENT	KONKAN LNG LIMITED	
UNIT	EXISTING PROCESS AREA		JOB NO.	B861	UNIT NO. 700
ITEM NO	700-EP-1001 A/B/C/D/E				
SERVICE	ETHYLENE GLYCOL WATER (EGW) - METHANOL WATER (MW) (NOTE-7)				
MOUNTING					
CASE	CASE-1				
OPERATING CONDITION	SHELL SIDE		TUBE SIDE		
FLUID HANDLED	EGW (36 WT%) (HOT SIDE)		MW (30 WT%) (COLD SIDE)		
FLOW RATE		IN	OUT	IN	OUT
TOTAL	KG/HR	2570000	2570000	2000000	2000000
VAPOUR	KG/HR				
LIQUID	KG/HR	2570000	2570000	2000000	2000000
STEAM	KG/HR				
WATER	KG/HR				
NON CONDENSABLE	KG/HR				
OPERATING TEMPERATURE	DEG C	18	2	(-)4.4	14.2
OPERATING PRESSURE	KG/CM2 G	13.9		5.0-7.5	
LIQUID PROPERTIES @ OPERATING TEMP & PRESS					
DENSITY	KG/M3	1052	1058	963.8	955.8
VISCOCITY	CP	2.46	4.4	3.96	2.08
SPECIFIC HEAT	KCAL/KG DEG C	0.853	0.843	0.922	0.946
THERMAL CONDUCTIVITY	KCAL/M HR DEG C	0.378	0.36	0.353	0.37
SURFACE TENSION (IF 2PHASE)	DYNES/CM				
VAPOUR PROPERTIES @ OPERATING TEMP & PRESS					
MOLECULAR WEIGHT					
DENSITY	KG/M3				
VISCOCITY	CP				
SPECIFIC HEAT	KCAL/KG DEG C				
THERMAL CONDUCTIVITY	KCAL/M HR DEG C				
DATA FOR BOILING SERVICES					
CRITICAL TEMPERATURE	DEG C				
CRITICAL PRESSURE	BAR				
ALLOWABLE PRESSURE DROP	BAR	1.5			
VELOCITY LIMIT(IF ANY)	M/S				
FOULING RESISTANCE	HR M2 DEG C/KCAL				NOTE-4
HEAT DUTY	MM KCAL/HR	34.85	(40.5 MW)		
HEATING CURVE DATA ATTACHED					NO
IF YES,DATASHEET NO					
COOLING CURVE DATA ATTACHED					NO
IF YES,DATASHEET NO					
OVER CAPACITY FACTOR					
BOTH FLOW & DUTY	% of Normal				
ONLY FLOW	% of Normal				
ONLY DUTY	% of Normal				
SURFACE AREA					

3	22-APR-2024	REVISED AS MARKED	MS	JKS	SS
2	19-APR-2024	REVISED AND REISSUED FOR ENGINEERING	MS	JKS	SS
1	04-APR-2024	Re-issued For Engineering	MS	JKS	SS
0	01-APR-2024	Issued For Engineering	MS	JKS	SS
A	20-MAR-2024	Issued For Comments	DR	JKS	SS
Rev. No.	Date	Purpose	Prepared By	Reviewed By	Approved By

PLATE & FRAME HEAT EXCHANGER

Document No.
B861-700-02-42-DS-1401

Rev. No. **3**

Page **3** of **4**

PROCESS DATA SHEET

PROJECT	EPCM Services for Ambient Air Heating System at KLL		CLIENT	KONKAN LNG LIMITED	
UNIT	EXISTING PROCESS AREA		JOB NO.	B861	UNIT NO. 700
CONSTRUCTION DATA					
DESIGN TEMPERATURE	DEG C	(-)25/65			
DESIGN PRESSURE	BARG	25			
MATERIAL OF CONSTRUCTION DETAILS					
SHELL AND SHELL COVER	NOTE-2				
TUBES	NOTE-2				
TUBE SHEETS	NOTE-2				
CHANELL & CHANNEL COVER	NOTE-2.				
BAFFLES	NOTE-2				
INSULATION DETAILS		TYPE	THICKNESS, MM		
SHELL	HOTSIDE: SC (NOTE-5)		50	3	
CHANNEL COVER	COLD SIDE: SC (NOTE-5)		65	3	
IS THE EXCHANGER SUBJECTED TO					
PRESSURE CYCLING	NO				
THERMAL CYCLING	NO				
STEAMING REQUIREMENT(IF ANY)	NO				
IF YES					
PRESSURE	BAR				
TEMPERATURE	DEG C				
IS DESIGN FOR IBR CODE REQUIRED	NO				

NOZZLES AND CONNECTIONS DETAILS

S.No.	Mark Size	Mark Num	Rating	Mark Service	Rev
1	24 IN	1	300#	HOT SIDE INLET	
2	24 IN	1	300#	HOT SIDE OUTLET	
3	24 IN	1	300#	COLD SIDE INLET	
4	24 IN	1	300#	COLD SIDE OUTLET	

3	22-APR-2024	REVISED AS MARKED	MS	JKS	SS
2	19-APR-2024	REVISED AND REISSUED FOR ENGINEERING	MS	JKS	SS
1	04-APR-2024	Re-issued For Engineering	MS	JKS	SS
0	01-APR-2024	Issued For Engineering	MS	JKS	SS
A	20-MAR-2024	Issued For Comments	DR	JKS	SS
Rev. No.	Date	Purpose	Prepared By	Reviewed By	Approved By

Format No, 3-0241-1004 Rev. 1

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This is a system generated datasheet from PDSIS

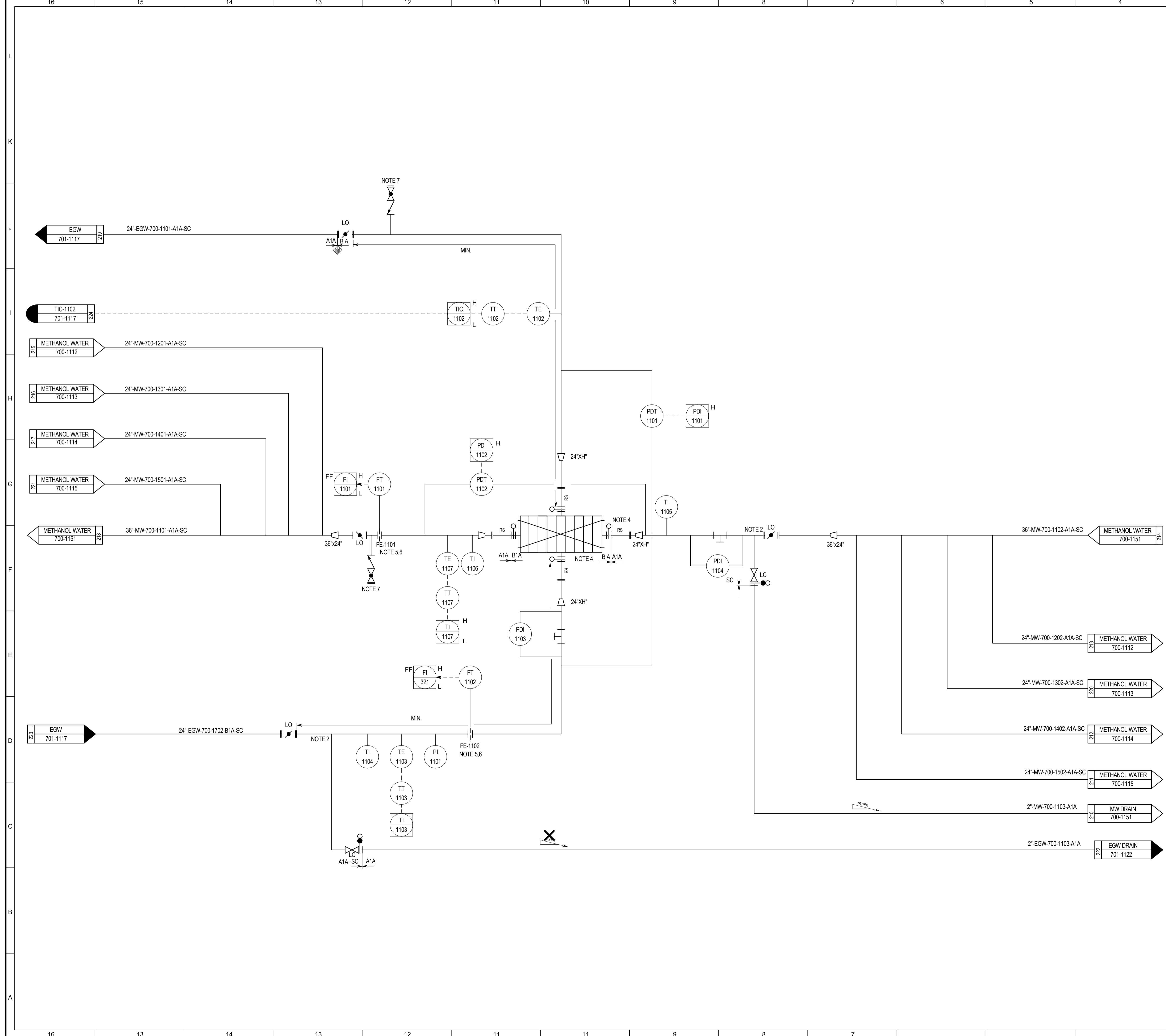
PROJECT	EPCM Services for Ambient Air Heating System at KLL	CLIENT	KONKAN LNG LIMITED
UNIT	EXISTING PROCESS AREA	JOB NO.	B861
		UNIT NO.	700

NOTES:

1	REFER BASIC ENGINEERING DESIGN BASIS AND P&ID NO: B861-02-42-700-1111 TO B861-02-42-700-1115 FOR DETAILS
2	THE MATERIAL OF CONSTRUCTION AND CORROSION ALLOWANCE ARE AS FOLLOWS: PLATE - SS316 L FRAME - KCS + 1.5 MM CA NOZZLE - SS316 L GASKET - BY VENDOR
3	VENDOR TO CONFIRM THE NUMBER AND SIZE OF NOZZLES AND PROVIDE ADDITIONAL NOZZLES IF NECESSARY TO ENSURE THE SMOOTH STARTUP, NORMAL OPERATION, SHUTDOWN AND MAINTANANCE OF THE EXCHANGER.
4	VENDOR TO ENSURE AREA OVERDESIGN MARGIN FOR FOULING RESISTANCE FOR PHE AS PER API-667
5	VENDOR TO CONFIRM REQUIREMENT AND PROVIDE INSULATION ON PLATE HEAT EXCHANGER TO AVOID SURFACE CONDENSATION.
6	DELETED
7	TYPE: GASKETED PLATE HEAT EXCHANGER


3	22-APR-2024	REVISED AS MARKED	MS	JKS	SS
2	19-APR-2024	REVISED AND REISSUED FOR ENGINEERING	MS	JKS	SS
1	04-APR-2024	Re-issued For Engineering	MS	JKS	SS
0	01-APR-2024	Issued For Engineering	MS	JKS	SS
A	20-MAR-2024	Issued For Comments	DR	JKS	SS
Rev. No.	Date	Purpose	Prepared By	Reviewed By	Approved By

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- NOTES:
- FOR GENERAL NOTES, SYMBOLS AND PIPING DETAILS SEE DWG. B861-02-42-001-1191/1192.
 - EGW/MW DRAINING ARRANGEMENT TO BE DONE AT BOTTOM OF THE PIPING.
 - ALL EGW/MW LINES TO BE CONSIDERED WITH SURFACE CONDENSATION INSULATION.
 - REMOVABLE SPOOL TO BE PROVIDED FOR CHEMICAL CLEANING/FLUSHING.
 - CLAMP ON TYPE ORFICE FLOW METER.
 - STRAIGHT LENGTH REQUIREMENT AT UPSTREAM AND DOWNSTREAM OF FLOW METER SHALL BE AS PER VENDOR REQUIREMENT.
 - UTILITY CONNECTION TO BE PROVIDED AT TOP POINT OF PIPING IN MW/EGW LINES.

संख्या No.	तिथि DATE	संशोधन REVISIONS	डॉन DRN	द्वारा BY	जाँच CHKD	अनुमोदित APPD.
A	18.04.24	ISSUED FOR COMMENTS	GSB	DR/MS	JKS	SS

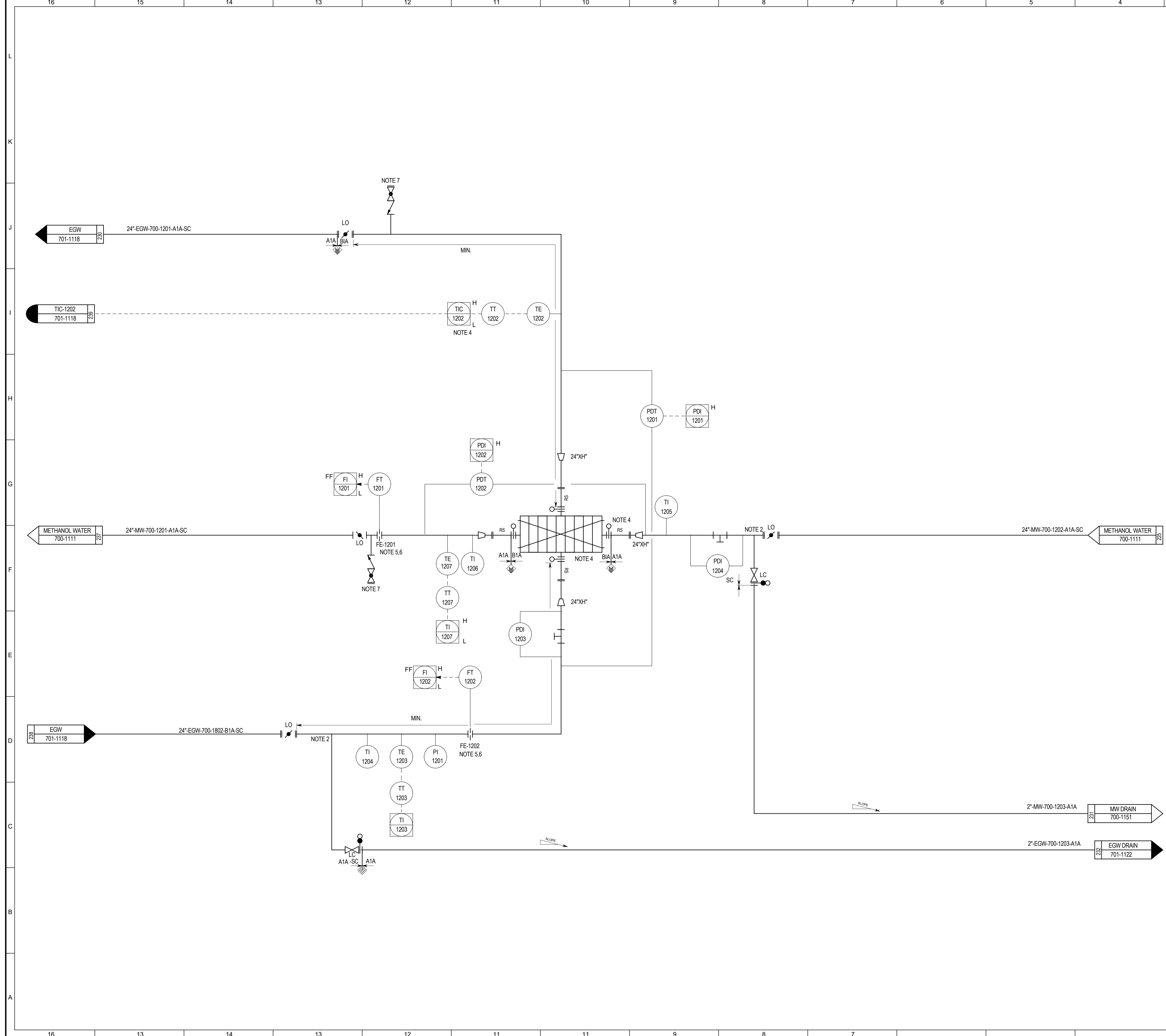

ENGINEERS INDIA LIMITED
(A Govt. of India Undertaking)


कोंकण एल एन जी लिमिटेड
KONKAN LNG LIMITED
EPCM SERVICES FOR AMBIENT AIR HEATERS AT KLL LNG TERMINAL

पाइपिंग एण्ड इंस्ट्रुमेंटेशन डायग्राम
PIPING AND INSTRUMENTATION DIAGRAM
EGW - MW PLATE HEAT EXCHANGER,
700-EP-1001 A

अनुमाप SCALE	कार्य संख्या JOB NO.	विभाग DEPT.	अनुभाग SECTN.	इकाई UNIT	आरेख संख्या DWG. No.	संशोधन REV.
1:1	B861	02	42	700	1111	A

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- NOTES:
1. FOR GENERAL NOTES, SYMBOLS AND PIPING DETAILS SEE DWG. B861-02-42-001-1191/1192.
 2. EGWMW DRAINING ARRANGEMENT TO BE DONE AT BOTTOM OF THE PIPING.
 3. ALL EGWMW LINES TO BE CONSIDERED WITH SURFACE CONDENSATION INSULATION.
 4. REMOVABLE SPOOL TO BE PROVIDED FOR CHEMICAL CLEANING/FLUSHING.
 5. CLAMP ON TYPE ORFICE FLOW METER.
 6. STRAIGHT LENGTH REQUIREMENT AT UPSTREAM AND DOWNSTREAM OF FLOW METER SHALL BE AS PER VENDOR REQUIREMENT.
 7. UTILITY CONNECTION TO BE PROVIDED AT TOP POINT OF PIPING IN MW/EGW LINES.

संख्या	तिथि	संशोधन	डॉन	द्वारा	जाँच	अनुमोदित
No.	DATE	REVISIONS	DRN	BY	CHKD	APPD.

इंजिनियर्स
इंडिया लिमिटेड
(भारत सरकार का उपक्रम)

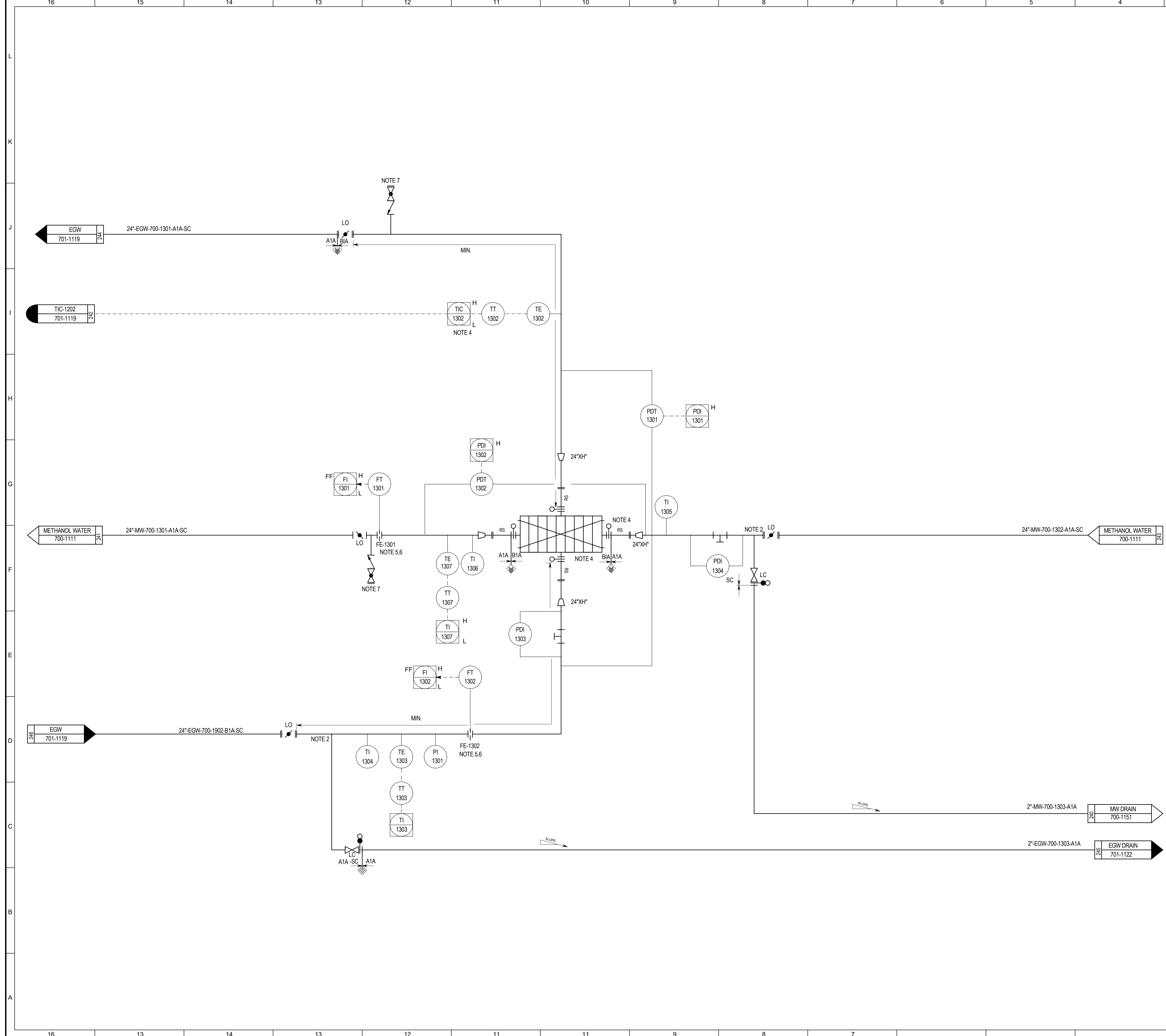
ENGINEERS INDIA LIMITED
(A Govt. of India Undertaking)

कॉकण एल एन जी लिमिटेड
KONKAN LNG LIMITED
EPCM SERVICES FOR AMBIENT AIR HEATERS
AT KLL LNG TERMINAL

पाइपिंग एण्ड इंस्ट्रुमेंटेशन डायग्राम
PIPING AND INSTRUMENTATION DIAGRAM
EGW - MW PLATE HEAT EXCHANGER,
700-EP-1001 B

अनुमाप	कार्य संख्या	विभाग	अनुभाग	इकाई	आरेख संख्या	संशोधन
SCALE	JOB NO.	DEPT.	SECTN.	UNIT	DWG. No.	REV.
1:1	B861	02	42	700	1112	A


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- NOTES:
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 2. EGWMW DRAINING ARRANGEMENT TO BE DONE AT BOTTOM OF THE PIPING.
 3. ALL EGWMW LINES TO BE CONSIDERED WITH SURFACE CONDENSATION INSULATION.
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 6. STRAIGHT LENGTH REQUIREMENT AT UPSTREAM AND DOWNSTREAM OF FLOW METER SHALL BE AS PER VENDOR REQUIREMENT.
 7. UTILITY CONNECTION TO BE PROVIDED AT TOP POINT OF PIPING IN MW/EGW LINES.

संख्या No.	तिथि DATE	संशोधन REVISIONS	डॉन DRN	द्वारा BY	जाँच CHKD	अनुमोदित APPD.
A	18.04.24	ISSUED FOR COMMENTS	GSB	DR/MS	JKS	SS

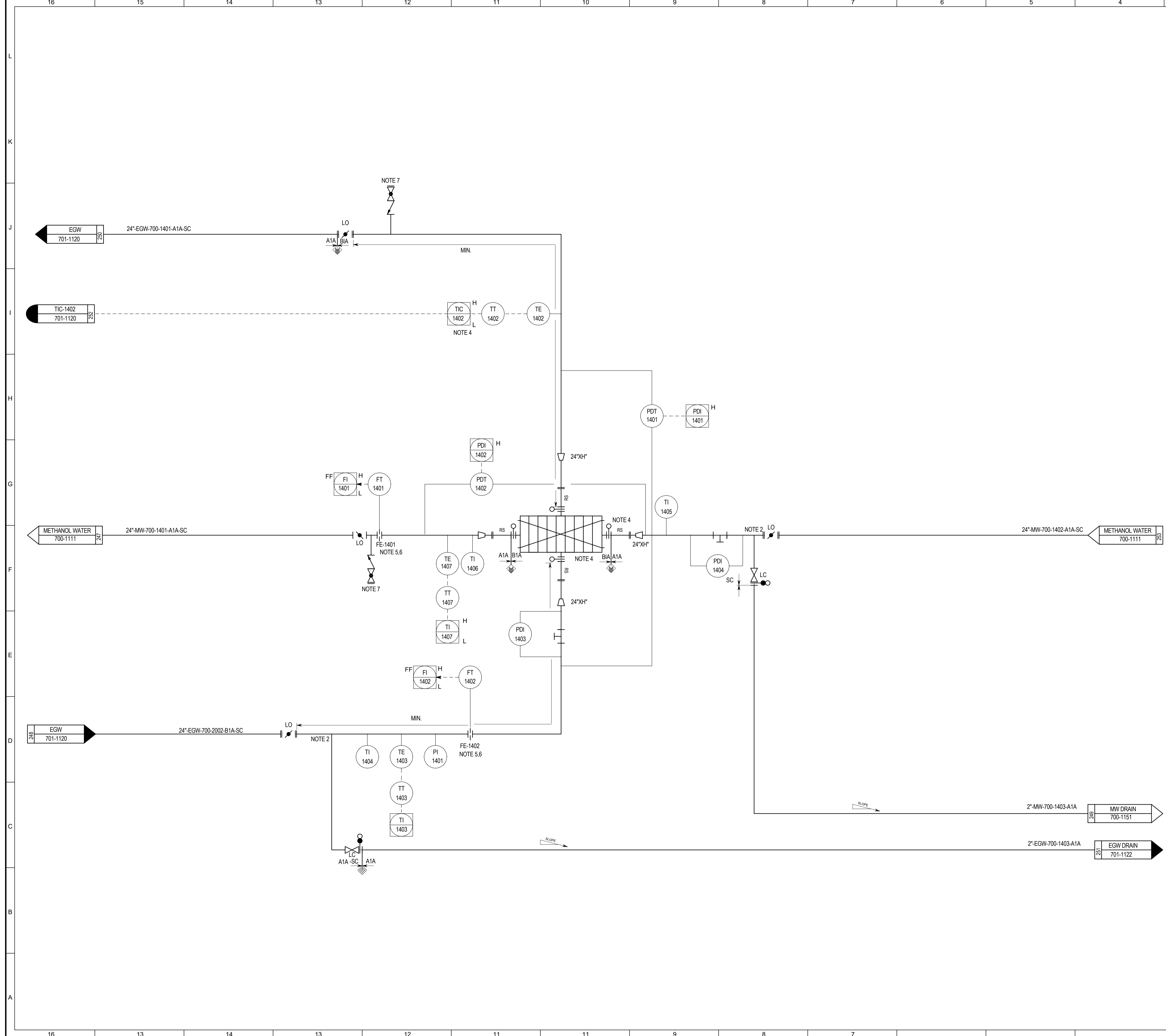

ENGINEERS INDIA LIMITED
(A Govt. of India Undertaking)


कोंकण एल एन जी लिमिटेड
KONKAN LNG LIMITED
 EPCM SERVICES FOR AMBIENT AIR HEATERS AT KLL LNG TERMINAL

पाइपिंग एण्ड इंस्ट्रुमेंटेशन डायग्राम
PIPING AND INSTRUMENTATION DIAGRAM
EGW - MW PLATE HEAT EXCHANGER,
700-EP-1001 C

अनुमाप SCALE	कार्य संख्या JOB NO.	विभाग DEPT.	अनुभाग SECTN.	इकाई UNIT	आरेख संख्या DWG. No.	संशोधन REV.
1:1	B861	02	42	700	1113	A

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- NOTES:
1. FOR GENERAL NOTES, SYMBOLS AND PIPING DETAILS SEE DWG. B861-02-42-001-1191/1192.
 2. EGWMW DRAINING ARRANGEMENT TO BE DONE AT BOTTOM OF THE PIPING.
 3. ALL EGWMW LINES TO BE CONSIDERED WITH SURFACE CONDENSATION INSULATION.
 4. REMOVABLE SPOOL TO BE PROVIDED FOR CHEMICAL CLEANING/FLUSHING.
 5. CLAMP ON TYPE ORFICE FLOW METER.
 6. STRAIGHT LENGTH REQUIREMENT AT UPSTREAM AND DOWNSTREAM OF FLOW METER SHALL BE AS PER VENDOR REQUIREMENT.
 7. UTILITY CONNECTION TO BE PROVIDED AT TOP POINT OF PIPING IN MW/EGW LINES.

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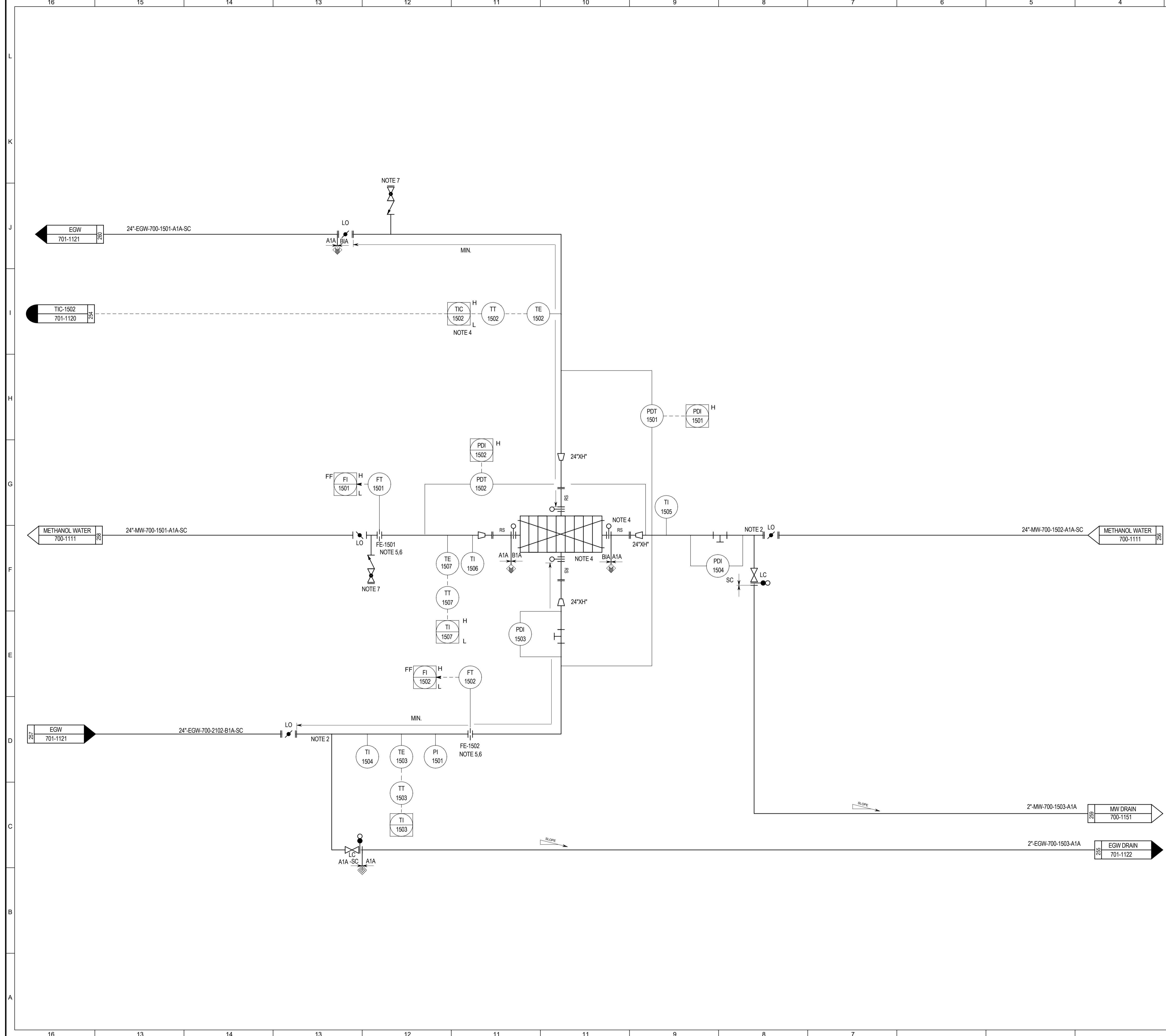

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PIPING AND INSTRUMENTATION DIAGRAM
EGW - MW PLATE HEAT EXCHANGER,
700-EP-1001 E

अनुमाप SCALE	कार्य संख्या JOB NO.	विभाग DEPT.	अनुभाग SECTN.	इकाई UNIT	आरेख संख्या DWG. No.	संशोधन REV.
	B861	02	42	700	1115	A

प्लेट टाइप हीट एक्सचेंजर्स के लिए मानक विनिर्देश

STANDARD SPECIFICATION FOR PLATE TYPE HEAT EXCHANGERS

5	24.02.22	REVISED AND RE-ISSUED AS STANDARD SPECIFICATION	 NSK	KA	NK	SM
4	26.11.15	REVISED AND RE-ISSUED AS STANDARD SPECIFICATION	KA	KJH	RKT	SC
3	20.11.09	REVISED AND RE-ISSUED AS STANDARD SPECIFICATION	KA	PK	AKM	N.DUARI
2	26.03.04	REVISED AND RE-ISSUED AS STANDARD SPECIFICATION	JV	PK	SSA	SKG
1	08.05.89	REVISED AND RE-ISSUED AS STANDARD SPECIFICATION	RKA	BSG	VKM	RCPC
Rev. No	Date	Purpose	Prepared by	Checked by	Standards Committee Convenor	Standards Bureau Chairman
Approved by						

Abbreviations:

API	: American Petroleum Institute
ASME	: American Society of Mechanical Engineers
ASTM	: American Society for Testing & Materials
BQ	: Boiler Quality
CS	: Carbon Steel
IS	: Indian Standards
ISO	: International Organisation for Standardisation
PMI	: Positive Material Identification
PPM	: Parts Per Million
SS	: Stainless Steel
UST	: Ultrasonic Examination
WRC	: Welding Research Council

Static Equipment Standards Committee

Convener : Mr. Nalin Kumar

Members : Mr. K. Anjaneyulu
Mr. Tarun Kumar (Emp. No. A328)
Mr. Anish Trehan
Mr. P V Satyanarayana
Mr. Tarun Khurana
Mr. Saikat Chakraborty
Mr. Srikanth Karanam
Mr. Ayush Mathur (Projects)
Mr. S Ghosal (SMMS)
Mr. Avdhesh Agrawal (SCM)



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1.0 SCOPE

This Specification defines minimum general requirements governing design, materials, fabrication, inspection, testing, drawing & documentation and packing of Plate heat exchangers.

2.0 GENERAL

In order to receive due consideration, Supplier shall quote in strict accordance with this and other applicable codes/specifications. Alternatives may be submitted at the option of the Supplier, provided such alternatives are clearly indicated and quoted as additions or deductions to the basic bid.

3.0 CODES

The latest editions of below mentioned standards / codes shall be complied:

- ASME Boiler and Pressure Vessel Code Sec. VIII Div.I.
Equipment outside the formal scope of the ASME Code because of size or pressure rating shall conform to Code requirements and this specification. However, Code stamp is not required.
- API 662 ISO15547
- ASME Section II Part A, C, D Materials
- ASME Section V Non Destructive examination
- ASME Section IX Welding and Brazing Qualification
- ASME B1. 1 Screw threads
- ASME B 16.5 Steel pipe flanges and flanged fittings.
- ASME B16. 11 Forged Steel fittings, Socket Welding Threaded.
- WRC 107 and WRC 537

4.0 DESIGN

4.1. General

- 4.1.1. The heat exchanger unit shall consist of gasketed plates supported in frame capable of being opened and closed. The frame provides structural support and the pressure containment for the gasketed plates and consist of fixed cover, movable cover, upper and lower carrying bars, closing studs/nuts and carrying bars support columns.
- 4.1.2. The design shall be such as to enable cleaning by mechanical, chemical means or back flushing, if possible.
- 4.1.3. The frame shall be designed to permit future installation of 20% additional plates.
- 4.1.4. The unit shall be designed for full pressure in each stream with no pressure on other stream.
- 4.1.5. Lifting lugs to handle the exchanger shall be provided. These shall be designed for twice the maximum exchanger dry weight.
- 4.1.6. All SS or other corrosion resistant, weld deposits/cladding shall be minimum 3 mm and all SS corrosion resistant cladding/deposit/ material welded shall be stabilized/low carbon grades.
- 4.1.7. All gasket-seating faces shall have weld deposits. Liners are also acceptable.
- 4.1.8. Design shall be such that separation of plates do not occur due to deposition of hard scales at inlet

ports.

- 4.1.9. Wind and seismic loads shall be considered in accordance with relevant standards, unless otherwise specified.

4.2. Process Design

- 4.2.1. The cleanliness factor for fouling is to be specified by Supplier.
- 4.2.2. CS components in contact with fluid shall have a corrosion allowance of 3 mm minimum.
- 4.2.3. Flow induced vibration at all specified operating conditions shall be prevented by properly considering the effects of the fluid velocity, pressure drop, viscosity and plate support techniques.

4.3. Heat Transfer Plates

- 4.3.1. The minimum thickness of plate shall be 0.6 mm.
- 4.3.2. Plates shall be fully supported from the top carrying bar and guided only by the bottom bar with reinforced slots integral with the plate.
- 4.3.3. The plate pattern shall be such as to ensure adequate metal-to-metal plate contact points to provide rigidity. The exchanger shall be designed with one type pattern. Care should be taken to have good flow distribution to eliminate dead zone.

4.4. Covers

Fixed cover is the primary stationary end of the plate heat exchanger. All nozzles shall preferably be located on fixed cover.

4.5. Carrying Bars

- 4.5.1. The upper carrying bar shall be welded or bolted to fixed cover and carrying bar support column. A SS 'T' section is welded to the upper carrying bar to provide mounting member for the plates of the plate pack. A smooth surface shall be provided for the roller bearing carrying groove for the whole length of the carrying bar. Carrying bar shall be designed to support 1.5 times the weight of flooded exchanger, movable cover, tie rods, nuts and nozzles.
- 4.5.2. The lower carrying bar shall be either welded or bolted to fixed cover and carrying bar support column. It shall be sheathed in stainless steel on those three surfaces in contact with the plates and is a guide bar only, for the plates.

4.6. Tie Bar, Studs & Nuts

- 4.6.1. The closing studs and nuts bearing against fixed and movable cover close the gasketed plate pack. The end support plate and movable head shall be designed to allow packing of plate assembly by means of the torque wrench.
- 4.6.2. Slotted holes for the tie bars shall be uniformly distributed around the periphery of the covers. The slot shoulders shall be spot faced.
- 4.6.3. Min. diameter of rod bars shall be 19mm. Nuts with washers shall be provided at both ends.

4.7. Gasket

- 4.7.1. Gaskets shall be provided to contain the liquids between plates and to separate the liquids where

they flow through the headers formed by the holes or ports in the plates when plates are assembled in a plate pack. Gaskets shall be single piece and shall be compressed to achieve metal-to-metal contact between plates. Gasket and gasket grooves shall be designed to facilitate positioning of plates.

- 4.7.2. An adhesive compound compatible with the gasket material and having a thickness to ensure bond strength between plates and gaskets shall be applied to the plate gasket groove surface. Gasket plate surface shall be thoroughly cleaned by means of solvent cleaning or electropolishing or any other suitable means (sand blasting shall not be used) sand blasting and dried before application of adhesive. Emery cloth or abrasive powder shall not be used to clean out gasket groove.
- 4.7.3. All gaskets shall be identical except, end plates and head.
- 4.7.4. Relieving grooves shall be provided in the outside gasket in those locations where internal gasket also is used to avoid cross contamination of liquid without external evidence.
- 4.7.5. Portholes not feeding passes between plates shall be fully gasketed and vented to the atmosphere.

4.8. Nozzles

- 4.8.1. The nozzles shall be flanged and projected type with a provision of a flanged 1½" connection on each nozzle blinded with studs and nuts and gaskets. Integral flanges are also acceptable.
- 4.8.2. Design should be such as to provide venting & draining of each stream through main nozzles.
- 4.8.3. Nozzles on movable cover shall be provided with 90° long radius elbow to facilitate opening of plate pack without disturbing piping.
- 4.8.4. The nozzle size shall be equal to the size given in Process datasheet/P&ID. Where different size is required by Supplier, then Supplier shall provide reducer / expander as applicable.
- 4.8.5. All process nozzles connected to piping shall be designed for nozzle loads given in the requisition. If not provided in the requisition, nozzle loads as given in API 662 shall be applied. Local load analysis of process nozzles and nozzle junction shall be carried out as per WRC 107 and WRC 537.

4.9. Foundation Loads

- 4.9.1. All parameters required for design of support such as wind shear and moment at base, size, number and locations of anchor bolt, erection weight, operating weight, hydrotest weight etc shall be furnished by bidder.

4.10. Torquing of Bolts

- 4.10.1. If torquing of bolts is required, Supplier shall provide torquing procedure.

5.0 MATERIALS

5.1 Plates

- 5.1.1. CS BQ plates shall be SA 516 or better.
- 5.1.2. The carbon content of CS BQ plates shall not exceed 0.23%.

- 5.1.3. CS BQ plates to specification SA 516 shall be in the normalized condition.
- 5.1.4. Plates having thickness 16 mm to 50mm (both inclusive) shall be UST as per SA 435.
- 5.1.5. For thickness above 50mm, UST shall be carried out as per SA 578 with acceptance standard of level-B. UST shall be done after the specified heat treatment of plates.
- 5.1.6. CS plates above 50mm in thickness shall also meet the following additional requirements:
- Vacuum treatment as per the supplementary requirement S 1 of SA-20.
 - Charpy V-notch test as per the supplementary requirement SS specification SA-20. Test temperature and

Acceptance Criteria : As per table A2.15 of SA20.
Orientation of test bar: Transverse to the direction of rolling.
- 5.1.7. SS plates shall be to SA 480 specification. All SS plates shall be either hot rolled annealed and pickled and shall have No.1 finish on both sides and cold rolled with 2B finish.
- 5.1.8. Plates representative of each heat shall be intergranular corrosion tested as per ASTM A-262 practice E or EN ISO 3651-2A for all 300 series SS materials.

5.2 Forgings

- 5.2.1 Flanges shall be forged weld neck type.
- 5.2.2 CS forgings shall be SA-105 or better for nozzle flanges and SA-266 Cl. II or IV or better for other pressure forgings.
- 5.2.3 The carbon content of CS forgings shall not exceed 0.23%.

5.3 Pipes

- 5.3.1 The pipes shall be seamless.
- 5.3.2 The CS pipes shall be SA-106 or better.
- 5.3.3 The carbon content of CS pipes shall not exceed 0.23%.

5.4 Gaskets

- 5.4.1 Suitable material for the gasket shall be used and the same shall be specified in the bid. Supplier shall indicate in his bid his experience with the proposed gasket material in similar service conditions.
- 5.4.2 Supplier shall indicate the anticipated life of the proposed gasket in the specified service and in storage. Special requirements for gasket storage to maintain gasket shelf life shall be specified.

5.5 Bolting

Bolting shall consist of continuously threaded bolts conforming to ASTM A 193-B7 with nuts in accordance with ASTM A 194-2H, unless otherwise specified.

5.6 Materials for Non-Pressure Parts

- a. CS materials for non-pressure parts welded to pressure parts shall be BQCS.
- b. CS materials for non-pressure parts not welded to pressure parts shall be SA- 283/tested quality or equivalent.

5.7 Nameplate

Each equipment shall be provided with a SS name plate which shall be attached by SS rivets to CS (5 thick) bracket welded to cover. Letters shall be stamped & shall include project, Purchaser, equipment number, fluids circulated, design pressure, design temperature, hydraulic test pressure, corrosion allowance, equipment weight empty and full of liquid and other relevant data. Size and font of letters shall be 60 points on Verdana Bold.

6.0 SPARES

6.1 Following shall be supplied as mandatory spares, unless otherwise specified. Supplier shall include the cost of mandatory spares in the base price:

- 400% nozzle gaskets
- 20% studs/nuts with minimum 4 studs/8 nuts for nozzles.

6.2 Unless otherwise specified following commissioning Spares shall be provided by Supplier where gaskets are in Supplier's scope and cost to be included in base price:

- Gaskets - 100%

6.3 Two sets of any special tools required for maintenance and operation of this equipment e.g. torque wrench shall be supplied by Supplier. The list of such special tools will be furnished along-with bid. Cost of same shall be included in base price.

6.4 Supplier shall advise on the desirability of the optional extra spares in addition to quantities indicated above for two years of operation and maintenance.

7.0 TESTING

7.1 After completion of assembly, equipment shall be given hydro test at test pressure limits (differential pressure) for 30 minutes minimum. Also the mechanical strength of the frame shall be tested by raising the pressure on both sides equivalent to test pressure (1.3 times the design pressure). No leakage or distortion shall be permitted.

7.2 Minimum water temperature for hydro testing shall not be lower than 15°C (60°F).

7.3 The chloride content in water for hydro testing shall not exceed 25 PPM when the exchanger contains solid or lined SS.

7.4 DP/MP test on plates /welds.

8.0 INSPECTION

8.1 Exchanger shall be inspected during fabrication and upon final completion to ensure the compliance

of codes, specifications and attachments.

- 8.2 All materials and accessories required for the fabrication of the Plate Heat Exchanger shall be supplied by the Supplier unless otherwise stated.
- 8.3 All materials procured from outside India shall be inspected by reputed Third Party Inspection agency and the cost of the Inspection Agency shall be borne by Supplier. Mill test certificates alone shall not be sufficient.
- 8.4 PMI shall be performed for alloy materials as per EIL standard specification 6-81-0001.
- 8.5 The complete exchanger shall be trial assembled at shop. Dimensions and alignment check shall be conducted and results recorded.

9.0 PROTECTION AND DESPATCH

- 9.1 After final hydro test the equipment shall be drained, dried and cleaned thoroughly of all grease, loose scale, rust, flux and weld spatter both internally and externally.
- 9.2 All flange opening shall be provided with steel covers 3mm thick with minimum 8-5/16" bolting to protect during shipment.
- 9.3 Each tapped boss shall be provided with forged steel plug at least 76 mm (3 inch) long. Plug shall be of same material as boss. Each reinforcing pad test hole shall be fitted with plug.
- 9.4 Each exchanger shall be individually crated in entirety to prevent damage during shipment, transit and storage at site.

10.0 GUARANTEE

Unless otherwise specified in General Purchase Conditions (GPC) regarding guarantee, the following shall govern:

The Supplier shall guarantee the equipment for design, materials, workmanship and specified performance for a period as specified in GPC. Defects/short falls, if any, shall be made good by the Supplier at his cost by repair and/or replacement without any delay.

11.0 SUPPLIER DATA REQUIREMENT

The fabrication drawings and other documents shall be submitted in accordance with the requisition/bid document. EIL's review of documents shall not relieve Supplier of his responsibility in any manner.

बोलीकर्ता से गुणवत्ता प्रबंधन
प्रणाली अपेक्षाओं हेतु विनिर्देश

SPECIFICATION FOR QUALITY
MANAGEMENT SYSTEM
REQUIREMENTS FROM BIDDERS

2	12.06.20	General Revision	 QMS Standards Committee	 QMS Standards Committee	SKB	SKS
1	12.03.15	General Revision	QMS Standards Committee	QMS Standards Committee	MPJ	SC
0	04.06.09	Issued as Standard Specification	QMS Standards Committee	QMS Standards Committee	SCT	ND
Rev. No	Date	Purpose	Prepared by	Checked by	Standards Committee Convener	Standards Bureau Chairman
Approved by						

Abbreviations:

ISO	-	International Organization for Standardization
MR	-	Material Requisition
PO	-	Purchase Order
PR	-	Purchase Requisition
QMS	-	Quality Management System

QMS Standards Committee

Convener: Mr. S.K. Badlani

Members: Mr. Sanjay Mazumdar (Engg.)
Mr. R.K. Singh (SCM)
Mr. B. Biswas (SCM)
Mr. Ravindra Kumar (Const.)
Mr. Vinod Kumar (CQA)
Mr. Swapnil Vaishnav (Projects)

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1.0 SCOPE

This specification establishes the Quality Management System requirements to be met by BIDDER for following purpose:

- QMS requirements to be met by suppliers / contractors after award of work / during contract execution.

2.0 DEFINITIONS

2.1 Bidder

For the purpose of this specification, the word “BIDDER” means the person(s), firm, company or organization who is under the process of being contracted by EIL / Owner for delivery of some products (including service). The word is considered synonymous to supplier, contractor or vendor.

2.2 Project Quality Plan

Document tailored from Standard Quality Management System Manual of BIDDER, specifying how the quality requirements of the project will be met.

2.3 Owner

Owner means the owner of the project for which services / products are being purchased and includes their representatives, successors and assignees.

3.0 REFERENCE DOCUMENTS

6-78-0002	Specification for Documentation Requirements from Contractors
6-78-0003	Specification for Documentation Requirements from Suppliers

4.0 QUALITY MANAGEMENT SYSTEM – GENERAL

Unless otherwise agreed with EIL / Owner, the BIDDER proposed quality system shall fully satisfy all relevant requirements of ISO 9001 “Quality Management Systems – Requirements.” Evidence of compliance shall be current certificate of quality system registration to ISO 9001 or a recent compliance audit recommending registration from a certification agency. The quality system shall provide the planned and systematic control of all quality related activities for execution of contract. Implementation of the system shall be in accordance with BIDDER’S Quality Manual and PROJECT specific Quality Plan.

5.0 QUALITY SYSTEM REQUIREMENTS

5.1 BIDDER shall prepare and submit for review / record, Project Quality Plan / Quality Assurance Plan for contracted scope / job. The BIDDER’S Quality Plan shall address all of the applicable elements of ISO 9001, identify responsible parties within BIDDER’S organization, for the implementation / control of each area, reference the applicable procedures used to control / assure each area, and verify the documents produced for each area. The Project Quality Plan shall necessarily define control or make reference to the relevant procedures, for design and engineering, purchase, documentation, record control, bid evaluation, inspection, production / manufacturing, preservation, packaging and storage, quality control at construction site, pre-commissioning, commissioning and handing over (as applicable) in line with contract requirement and scope of work.

- 5.2** BIDDER shall identify all specified or implied statutory and regulatory requirements and communicate the same to all concerned in his organization and his sub contractor's organization for compliance.
- 5.3** BIDDER shall deploy competent and trained personnel for various activities for fulfillment of PO / contract. BIDDER shall arrange adequate infrastructure and work environment to ensure that the specification and quality of the deliverable are maintained.
- 5.4** BIDDER shall do the quality planning for all activities involved in delivery of order. The quality planning shall cover as minimum the following:
- Resources
 - Product / deliverable characteristics to be controlled.
 - Process characteristics to ensure the identified product characteristics are realized
 - Identification of any measurement requirements, acceptance criteria
 - Records to be generated
 - Need for any documented procedure
- The quality planning shall result into the quality assurance plan, inspection and test plans (ITPs) and job procedures for the project activities in the scope of bidder. These documents shall be submitted to EIL / Owner for review / approval, before commencement of work.
- 5.5** Requirements for sub-ordering of outsourced items / sub-contracting / purchasing of services specified in MR / contract / tender shall be adhered to. In general all outsourced items will be from approved vendors of EIL. Wherever requirements are not specified, or approved sub vendors do not exist, the sub-contractor shall establish and maintain a system for purchasing / sub-contracting to ensure that purchased product / service conforms to specified requirements in concurrence with EIL / Owner. Criteria for selection of sub-contractor, evaluation, re-evaluation, maintenance of purchasing data and verification of purchased product (sub-contractor services), constitute important components of this requirement.
- 5.6** BIDDER shall plan and carry production and service provision under controlled conditions. Controlled conditions shall include, as applicable
- a) the availability of information that describes the characteristics of the product
 - b) the availability of work instructions
 - c) the use of suitable equipment
 - d) the availability and use of monitoring and measuring devices
 - e) the implementation of monitoring and measurement
 - f) the implementation of release, delivery and post-delivery activities
- 5.7** BIDDER shall validate any processes for production and service provision where resulting output cannot be verified by subsequent monitoring and measurement. This includes any process where deficiencies become apparent only after the product is in use or service has been delivered.
- 5.8** BIDDER shall establish a system for identification and traceability of product / deliverable throughout product realization. Product status with respect to inspection and testing requirements shall be identified.

- 5.9** BIDDER shall identify, verify, protect and safeguard EIL / Owner property (material / document) provided for use or incorporation into the product. If any Owner / EIL property is lost, damaged or otherwise found to be unsuitable for use, this shall be reported to the EIL / Owner.
- 5.10** BIDDER shall ensure the conformity of product / deliverable during internal processing and delivery to the intended destination. Requirements mentioned in the MR/ tender shall be adhered to.
- 5.11** BIDDER shall establish system to ensure that inspection and testing activities are carried out in line with requirements. Where necessary, measuring equipment shall be calibrated at specified frequency, against national or international measurement standards; where no such standard exists, the basis used for calibration shall be recorded. The measuring equipment shall be protected from damage during handling, maintenance and storage.
- 5.12** BIDDER shall ensure effective monitoring, using suitable methods, of the processes involved in production and other related processes for delivery of the scope of contract.
- 5.13** BIDDER shall monitor and measure the characteristics of the product / deliverable to verify that product requirement has been met. The inspection (stage as well as final) by BIDDER and EIL / Owner personnel shall be carried out strictly as per the approved ITPs or ITPs forming part of the contract. Product release or service delivery shall not proceed until the planned arrangements have been satisfactorily completed, unless otherwise approved by relevant authority and where applicable by Owner / EIL.
- 5.14** BIDDER shall establish and maintain a documented procedure to ensure that the product which does not conform to requirements is identified and controlled to prevent its unintended use or delivery
- 5.15** All non-conformities (NCs) / deficiencies found by the BIDDER'S inspection / surveillance staff shall be duly recorded, including their disposal action shall be recorded and resolved suitably. Effective corrective actions shall be implemented by the BIDDER so that similar NCs including deficiencies do not recur. The BIDDER shall take appropriate actions to address the Risks and Opportunities in the project.
- 5.16** All deficiencies noticed and reported by EIL / Owner shall be analyzed by the BIDDER and appropriate corrective actions shall be implemented. BIDDER shall intimate EIL / Owner of all such corrective action implemented by him.
- 5.17** BIDDER should follow the standards, specifications and approved drawings. Concessions / Deviations shall be allowed only in case of unavoidable circumstances. In such situations Concession / deviation request must be made by the BIDDER through online system of EIL eDMS. URL of EIL eDMS is <http://edocx.eil.co.in/vportal>.
- 5.18** BIDDER shall have documented procedure for control of documents.
- 5.19** All project records shall be carefully kept, maintained and protected for any damage or loss until the project completion, then handed over to EIL / Owner as per contract requirement (Refer Specification Nos. 6-78-0002 - Specification for Documentation Requirements from Contractors and 6-78-0003 - Specification for Documentation Requirements from Suppliers), or disposed as per relevant project procedure.

6.0 AUDITS

BIDDER shall plan and carry out the QMS audit for the job. Quality audit programme shall cover design, procurement, construction management and commissioning as applicable including activities carried out by sub-vendors and sub-contractors. This shall be additional to the certification body surveillance audits carried out under BIDDER'S own ISO 9001 certification scheme.

The audit programmes and audit reports shall be available with bidder for scrutiny by EIL / Owner. EIL or Owner's representative reserves the right to attend, as a witness, any audit conducted during the execution of the WORKS.

In addition to above, EIL, Owner and third party appointed by EIL / Owner may also perform Quality and Technical compliance audits. BIDDER shall provide assistance and access to their systems and sub-contractor / vendor systems as required for this purpose. Any deficiencies noted shall be immediately rectified by BIDDER.

7.0 DOCUMENTATION REQUIREMENTS

BIDDER shall submit following QMS documents immediately after award of work (Within one week) for record / review by EIL / Owner/ TPIA, as applicable.

- Organization chart (for complete organization structure and for the project)
- Project Quality Plan / Quality Assurance Plan
- Job specific Inspection Test Plans, if not attached with PR
- Job Procedures
- Inspection / Test Formats

In addition to above QMS documents, following documentation shall be maintained by the BIDDER for submission to EIL / Owner on demand at any point of time during execution of the project.

- Quality Manual
- Certificate of approval for compliance to ISO: 9001 standard
- Procedure for Control of Non-conforming Product
- Procedure for Control of Documents
- Sample audit report of the QMS internal and external audits conducted during last one year
- Customer satisfaction reports from at least 2 customers,
- Project QMS audit report
- Technical audit reports for the project
- Corrective action report on the audits

Documents as specified above are minimum requirements. BIDDER shall submit any other document / data required for completion of the job as per EIL / Owner instructions.

आपूर्तिकर्ताओं से प्रलेखन
अपेक्षाओं हेतु विनिर्देश

SPECIFICATION FOR
DOCUMENTATION REQUIREMENTS
FROM SUPPLIERS

2	12.06.20	General Revision	<i>Aind</i> QMS Standards Committee	<i>197</i> QMS Standards Committee	SKB	<i>Sh</i> SKS
1	12.03.15	General Revision	QMS Standards Committee	QMS Standards Committee	MPJ	SC
0	04.06.09	Issued as Standard Specification	QMS Standards Committee	QMS Standards Committee	SCT	ND
Rev. No	Date	Purpose	Prepared by	Checked by	Standards Committee Convener	Standards Bureau Chairman
Approved by						

Abbreviations:

DCI	-	Document Control Index
eDMS	-	Electronic Document Management System
FOA	-	Fax of Acceptance
IC	-	Inspection Certificate
IRN	-	Inspection Release Note
ITP	-	Inspection and Test Plan
LOA	-	Letter of Acceptance
MR	-	Material Requisition
PO	-	Purchase Order
PR	-	Purchase Requisition
PVC	-	Polyvinyl Chloride
QAP	-	Quality Assurance Plan
QMS	-	Quality Management System
RPO	-	Regional Procurement Office
TPIA	-	Third Party Inspection Agency
URL	-	Universal Resource Locator
V-Portal-	-	Vendor Portal

QMS Standards Committee

Convener: Mr. S.K. Badlani

Members: Mr. Sanjay Mazumdar (Engg.)
Mr. R.K. Singh (SCM)
Mr. B. Biswas (SCM)
Mr. Ravindra Kumar (Const.)
Mr. Vinod Kumar (CQA)
Mr. Swapnil Vaishnav (Projects)

CONTENTS

Clause	Title	Page No.
1.0	SCOPE	4
2.0	DEFINITIONS	4
3.0	REFERENCE DOCUMENTS	4
4.0	DOCUMENTATION REQUIREMENTS	4

Attachments

Format for completeness of Final Documentation : Format No. 3-78-0004

1.0 SCOPE

This specification establishes the Documentation Requirements from Suppliers.

All documents / data against the PO / PR / MR shall be developed and submitted to EIL / Owner by the suppliers for review / records, in line with this specification.

2.0 DEFINITIONS

2.1 Supplier

For the purpose of this specification, the word “SUPPLIER” means the person(s), firm, company or organization who has entered into a contract with EIL / Owner for delivery of some products (including service). The word is considered synonymous to bidder, contractor or vendor.

2.2 Owner

Owner means the owner of the project for which services / products are being purchased and includes their representatives, successors and assignees.

3.0 REFERENCE DOCUMENTS

6-78-0001 Specification for Quality Management System Requirements from Bidders

4.0 DOCUMENTATION REQUIREMENTS

4.1 Order Acknowledgement and Assigning Project Manager

After placement of order, Supplier shall acknowledge order through V-Portal within 7 days of receipt of FOA / PO. Supplier shall assign a Project Manager for that order through online portal and provide requisite details. Project Manager details shall include e-mail address, mailing address, mobile/telephone nos., fax nos. and name of Project Manager. All the system generated emails pertaining to that order shall be sent to the assigned Project Manager.

4.2 Documents / Data to be submitted by the Supplier

4.2.1 The Supplier shall submit the documents and data against the PO / PR / MR as per the list given in respective PO / PR / MR.

4.2.2 Review of the supplier drawings / documents by EIL would be only to review the compatibility with basic designs and concepts and in no way absolve the supplier of his responsibility / contractual obligation to comply with PR requirements, applicable codes, specifications and statutory rules / regulations. Any error / deficiency noticed during any stage of manufacturing / execution / inspection/ installation shall be promptly corrected by the supplier without any time and cost implications, irrespective of comments on the same were received from EIL during the drawing review stage or not.

4.2.3 Unless otherwise specified, submission of documents for Review / Records shall commence as follows from the date of Fax of Intent / Letter of Intent / Fax of Acceptance (FOA) / Letter of Acceptance (LOA):

QMS	- 1 week
Document Control Index	- 2 weeks
Other Documents / Drawings	- As per approved Document Control Index

4.2.4 Documents as specified in PO / PR / MR are minimum requirements. Supplier shall submit any other document / data required for completion of the job as per EIL / Owner instructions.

4.3 Style and Formatting

4.3.1 All Documents shall be in ENGLISH language and in M.K.S System of units.

4.3.2 Before forwarding the drawings and documents, contractor shall ensure that the following information are properly mentioned in each drawing:

Purchase Requisition Number
Name of Equipment / Package
Equipment / Package Tag No.
Name of Project
Client
Drawing / Document Title
Drawing / Document No.
Drawing / Document Revision No. and Date

4.4 Review and Approval of Documents by Supplier

4.4.1 The Drawing / Documents shall be reviewed, checked, approved and duly signed / stamped by supplier before submission. Revision number shall be changed during submission of the revised supplier documents and all revisions shall be highlighted by clouds. Whenever the supplier require any sub-supplier drawings to be reviewed by EIL, the same shall be submitted by the supplier duly reviewed, approved and stamped by the supplier. Direct submission of sub-supplier's drawings without contractor's / suppliers' approval shall not be entertained.

4.5 Document Category

4.5.1 Review Category

Following review codes shall be used for review of supplier Drawings / Documents:

Review Code 1	-	No comments. Proceed with Manufacture / Fabrication as per the document.
Review Code 2	-	Proceed with Manufacture / Fabrication as per commented document. Revised document required.
Review Code 3	-	Document does not conform to basic requirements as marked. Resubmit for review.
R	-	Document is retained for Records. Proceed with Manufacturing / Fabrication as per PR / Tender requirements.
V	-	Void

4.6 Methodology for Submission of Documents to EIL/Owner

4.6.1 Document Control Index (DCI)

Supplier shall create and submit Document Control Index (DCI) for review based on PO / PR / MR along with schedule date of submission of each drawing / document on EIL Vendor Portal. The DCI shall be specific with regard to drawing / document no. and the exact title. Proper sequencing of the drawings / documents should be ensured in schedule date of submission.

4.6.2 Submission of Drawings / Documents / Data

Drawings / documents, data and DCI shall be uploaded on the EIL Vendor Portal as per approved DCI. The detailed guidelines for uploading documents on EIL Vendor Portal are available on following URL

<http://edocx.eil.co.in/vportal>

4.6.3 Statutory Approvals

Wherever approval by any statutory body is required to be taken by Supplier, the Supplier shall submit copy of approval by the authority to EIL.

4.6.4 Manufacturing Schedule

Supplier shall prepare manufacturing schedule for the order, with key milestone activities (such as document submission, sub ordering, manufacturing, Inspection, dispatches, etc) to meet delivery as per FOA / PO terms. Supplier shall submit manufacturing schedule to concerned Regional Procurement Office (RPO) of EIL / Owner for review within 2 weeks from date of FOA / PO.

4.6.5 Schedule and Progress Reporting

Supplier shall submit monthly progress (MPR) report and updated procurement, engineering, manufacturing status, Inspection and dispatch status (schedule vs. actual) and highlight constraints, if any, along with action plan for mitigation, to the concerned Regional Procurement Office (RPO) of EIL / Owner by 1st week of every month., First MPR shall be submitted within 2 weeks from FOA / LOA. In case of exigencies, EIL / Owner can ask for report submission as required on weekly / fortnightly / adhoc basis depending upon supply status and supplier shall furnish such reports promptly without any price implication. Format for progress report shall be submitted by the Supplier during kick off meeting or within 2 weeks of receiving FOA / LOA, whichever is earlier.

4.7 Inspection and Testing

4.7.1 Quality Assurance Plan / Inspection and Test Plan

If Inspection and test plans (ITP) are attached with MR / PR same shall be followed along with additional tests requirement (if any) mentioned in MR/ PR. However for cases wherein EIL Standard ITPs not available / have not been attached with MR / PR, Supplier shall submit within one week of receiving FOA / LOA, the Quality Assurance Plan for inspection & testing at various stages of production, quality control records for critical bought out items / materials and site assembly & testing as may be applicable to the specific order and obtain approval from concerned Regional procurement Office of EIL / third party inspection agency, as applicable.

For Package equipment contracts, the supplier shall prepare a list of items / equipment and their inspection categorization plan for all items included in the scope of supply immediately after receipt of order and obtains approval for the same from EIL. The items shall be categorized into different categories depending upon their criticality for the scope of inspection of TPIA and / or EIL.

4.7.2 **Inspection Requisition:**

Supplier shall perform internal inspection as per ITP/ approved QAP at their works based on approved documents / drawings. Upon satisfactory internal inspection, supplier shall raise inspection call to concerned Regional Procurement Office (RPO) of EIL / TPIA / Owner with advance notice as per contract along with Internal test reports.

All changes w.r.t. PR shall be recorded through agreed variations or Concessions & Deviations. Conflict, if any, between PR / Job specifications and approved drawings, shall be brought to the notice of EIL / owner by the supplier / contractor. Decision of EIL / owner will be binding on the supplier and to be complied without time and cost implications.

Identified bought out items/ raw material shall be procured under TPIA as per ITP.

4.7.3 **Inspection Release Note (IRN)/ Inspection Certificate (IC)**

IRN / IC shall be issued by EIL Inspector / third party inspection agency on successful inspection, review of test reports / certificates as per specifications & ITP / agreed quality plan (as applicable) and only after all the drawings / documents as per DCI are submitted and are accepted under review code-1 or code R. Supplier shall ensure that necessary documents / manufacturing and test certificates are made available to EIL / TPIA as and when desired.

Note 1: Non fulfilling above requirement shall result into appropriate penalty or with- holding of payment as per conditions of PO / PR / MR.

Note 2: For items where IRN/IC is issued by TPIA, supplier to ensure that following as a minimum must be mentioned by TPIA in IRN / IC

- a) PR document number
- b) List of drawings / documents with EIL approval code
- c) Tests witnessed, documents reviewed
- d) Compliance statement by TPIA that product meets the requirement as specified in EIL PR, standard specifications, Inspection Test Plan / QAP and approved documents.

4.8 **Transportation Plan**

Transportation Plan for Over Dimensional Consignments (ODC), if any, shall be submitted within 2 weeks of receiving FOA / LOA, for approval. Consignment with parameters greater than following shall be considered as over dimensional.

Dimensions: 4 meters width x 4 meters height x 20 meters length

Weight : 32 MT

Dimensions and weight provided above are inclusive of all nozzles, attachments, transportation saddles etc.

Physical Rout survey for ODC movement shall be submitted to EIL within 8 weeks of receiving FOA / LOA.

4.9 Dispatch Details

Upon receipt of IRN / IC from EIL inspector / TPIA, supplier shall dispatch items within 2 days. Supplier shall submit dispatch details to concerned RPO of EIL / Owner within a day of dispatch. Dispatch details shall include Lorry Receipt (LR) number / Dispatch Number, Transporter Name, Date of dispatch, Packing list, Invoice copy etc.

4.10 Final Documentation

4.10.1 Supplier shall prepare final documents in line with VDR (Vendor Document Requirements) attached with PR/Tender. A copy of final document along with filled in Format for Completeness of Final Documentation (Format No. 3-78-0004) to be submitted to EIL Inspector / TPIA for review & approval within 2 weeks from dispatch. Upon receipt of EIL/TPIA endorsement on Completeness of Final Documents, supplier shall submit soft / hard copies of Final documents to EIL / Owner in requisite quantity as per PO / PR details, along with covering letter. A copy of covering letter to be submitted to the concerned Regional Procurement Office (RPO) of EIL/Owner.

4.10.2 As Built Drawings

Minor Shop changes made by Supplier after approval of drawings under 'Code 1' by EIL and deviations granted through online system ,if any, shall be marked in hard copies of drawings which shall then be stamped 'As-built' by the supplier. These 'As-built' drawings shall be reviewed and stamped by EIL Inspector / TPIA. Supplier shall prepare scanned images files of all marked – up 'As – built' drawings. Simultaneously Supplier shall incorporate the shop changes in the native soft files of the drawings also.

4.10.3 Packing / Presentation of Final Documents

Final Documents shall be legible photocopies in A4, A3 size only. Drawings will be inserted in plastic pockets (both sides transparent, sheet thickness minimum 0.1 mm) with an extra strip of 12 mm wide for punching so that drawings are well placed.

Final Documentation shall be bound in Hard board Plastic folder(s) of size 265 mm x 315 mm (10¹/₂ inch x 12¹/₂ inch) and shall not be more that 75 mm thick. It may be of several volumes and each volume shall have a volume number, index of volumes and index of contents of that particular volume. Where number of volumes are more, 90mm thickness can be used. Each volume shall have top PVC sheet of minimum 0.15 mm thick duly fixed and pressed on folder cover and will have 2 lever clip. In case of imported items documents, 4 lever clip shall also be accepted. All four corners of folders shall be properly metal clamped. Indexing of contents with page numbering must be incorporated by supplier. Spiral/Spico bound documents shall not be acceptable. As mentioned above, books should be in hard board plastic folders with sheets punched and having 2/4 lever clips arrangement.

Each volume shall contain on cover a Title Block indicating package Equipment Tag No. & Name, PO / Purchase Requisition No., Name of Project and Name of Customer. Each volume will have hard front cover and a reinforced spine to fit thickness of book. These spines will also have the title printed on them. Title shall include also volume number (say 11 of 15) etc.

4.10.4 Submission of Soft Copies

Supplier shall submit to EIL, the scanned images files as well as the native files of drawings / documents, along with proper index.

In addition to hard copies, Supplier shall submit soft copies of all the final drawings and documents in pen drive or any other specified medium with proper identification tag, all text documents prepared on computer, scanned images of all important documents (not available

as soft files), all relevant catalogues, manuals available as soft files (editable copies of drawings/text documents, while for catalogues / manuals / proprietary information and data, PDF files can be furnished).

All the above documents shall also be uploaded on the EIL Vendor Portal and if applicable on Client Server also.

4.10.5 **Completeness of Final Documentation**

Supplier shall get the completeness of final documentation verified by EIL / TPIA, as applicable, and attach the Format for Completeness of Final Documentation (Format No. 3-78-0004) duly signed by EIL Inspector or TPIA as applicable to the final document folder.

COMPLETENESS OF FINAL DOCUMENTATION

Name of Supplier/Contractor :
 Customer :
 Project :
 EIL's Job No. :
 Purchase Order No./
 Contract No. :

 Purchase Requisition No./
 Tender No. : Rev. No. :

 Name of the Work/ Equipment :
 Tag. No. :
 Supplier's / Contractor's Works :
 Order No. :

Certified that the Engineering Documents / Manufacturing & Test Certificates submitted by the supplier (as per Index sheet mentioned in Annexure-1) are complete in accordance with the Vendor Data Requirements of Purchase Requisition / Tender.

Signature	:	.....	Signature	:	.....
Date	:	.....	Date	:	.....
Name	:	.....	Name	:	.....
Designation	:	.....	Designation	:	.....
Department	:	.....	Department	:	.....

Supplier / Contractor

EIL / TPIA

प्लेट टाइप हीट एक्सचेंजर के लिए
निरीक्षण व परीक्षण योजना

INSPECTION AND TEST PLAN
FOR
PLATE TYPE HEAT EXCHANGERS (PHE)

2	15.05.2020	REVISED AND RE-ISSUED	SK	CS	RKS	SKS
1	09.09.13	REVISED AND RE-ISSUED	TKK	RKS	SCG	DM
0	18.05.11	Issued for Implementation	TV	SCG	AKC	DM
Rev. No.	Date	Purpose	Prepared by	Checked by	Convenor Standards Committee	Chairman Standards Bureau
					Approved by	

Abbreviations:

AS/CS/SS	:	Alloy Steel/Carbon Steel/Stainless Steel	MRT	:	Mechanical Run Test
CEIL	:	Certification Engineers International Limited	NDT	:	Non Destructive Testing
CIMFR	:	Central Institute of Mining & Fuel Research	NPSH	:	Net Positive Suction Head
CE	:	Carbon Equivalent	PO	:	Purchase Order
DFT	:	Dry Film Thickness	PESO	:	Petroleum Explosive Safety Organization
DPT	:	Dye Penetrant Testing	PQR	:	Procedure Qualification Record
DHT	:	De-hydrogen Heat Treatment	PR	:	Purchase Requisition
ERTL	:	Electronics Regional Test Laboratory	PMI	:	Positive Material Identification
FCRI	:	Fluid Control Research Institute	PWHT	:	Post Weld Heat Treatment
HT	:	Heat Treatment	RT	:	Radiography Testing
HIC	:	Hydrogen Induced Cracking	SSCC	:	Sulphide Stress Corrosion Cracking
ITP	:	Inspection and Test Plan	TC	:	Test Certificate
IP	:	Ingress Protection	TPI or TPIA	:	Third Party Inspection Agency
IHT	:	Intermediate Heat Treatment	UT	:	Ultrasonic Testing
IC	:	Inspection Certificate	VDR	:	Vendor Data Requirement
IGC	:	Inter Granular Corrosion	WPS	:	Welding Procedure Specification
MPT/MT	:	Magnetic Particle Testing	WPQ	:	Welders Performance Qualification
MTC	:	Material Test Certificate			

Inspection Standards Committee

Convenor: Mr. R.K. Singh

Members:

Mr. Rajesh Sinha
Mr. Chandrashekhar
Mr. Mahendra Mittal

Mr. Himangshu Pal
Mr. Avdhesh Agrawal

Mr. R. Muthuramalingam (RPO Representative)
Mr. P V Satyanarayana (Engg. Representative)

1.0 SCOPE:

This Inspection Test Plan covers the minimum testing requirements of Plate type Heat Exchangers (Both Gasketed & Welded Type)

2.0 REFERENCE DOCUMENTS:

PO/PR/ Standards referred there in/ Job specifications /Approved documents.

3.0 INPECTION AND TEST REQUIREMENTS:

SL. NO.	STAGE/ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/ TPIA
1.0	PROCEDURE						
1.1	Hydrostatic Test, NDT, Heat Treatment & Other Procedures (as applicable)	Documented Procedure	100%	Procedures	----	H	R
1.2	Weld Plan & NDT Plan	As per PR/ Purchase Specification/ Applicable codes	100%	Procedure documents	-	H	R – CS A-AS/SS/ CLAD
1.3	WPS, PQR & WPQ	Welding Parameters & Qualification Record	100%	WPS, PQR & WPQ	-	H	W- New R-Existing
2.0	MATERIAL PROCUREMENT						
2.1	Plates, Pipes, Forgings, Heat transfer plates, Fittings, Fasteners, Gaskets, etc (As applicable) (Note – 3)	Chemical, Mechanical, Heat Treatment, NDT and other applicable properties	100%	Mill TC	H	H	R

INSPECTION AND TEST PLAN
FOR
PLATE TYPE HEAT EXCHANGERS

SL. NO.	STAGE/ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/ TPIA
2.2	Tie Bars, Studs/ Nuts, Gaskets & other materials for non pressure parts	Chemical, Mechanical, Heat Treatment, NDT and other applicable properties	100%	Mill TC	H	R	R
3.0	IN PROCESS INSPECTION						
3.1	Material Identification for pressure part	Verification of marking & correlation with TC	100%	Material Test Certificate	-	H	H
3.2	Material Identification for non pressure part	Verification of marking & correlation with TC	100%	Material Test Certificate	-	H	-
3.3	Welding	Welding Parameters as per WPS / PQR	100%	Inspection Reports	-	H	-
3.4	Inspection of welded joints / Weld deposits (as applicable)	Visual	100%	Test Report	---	H	-
3.5	NDT (as applicable)	Defects	100%	NDT Reports / RT Film	---	H	R
3.6	PWHT (as applicable)	Heat treatment cycle	100%	HT Chart	---	H	R
4.0	FINAL INSPECTION						
4.1	Visual & Dimensional Inspection	Visual, Dimensions & Completeness of assembly	100%	Inspection Report	---	H	H
4.2	PMI Check as applicable	Chemical Check / Alloying elements	As per purchase specification	Inspection Report	---	H	RW

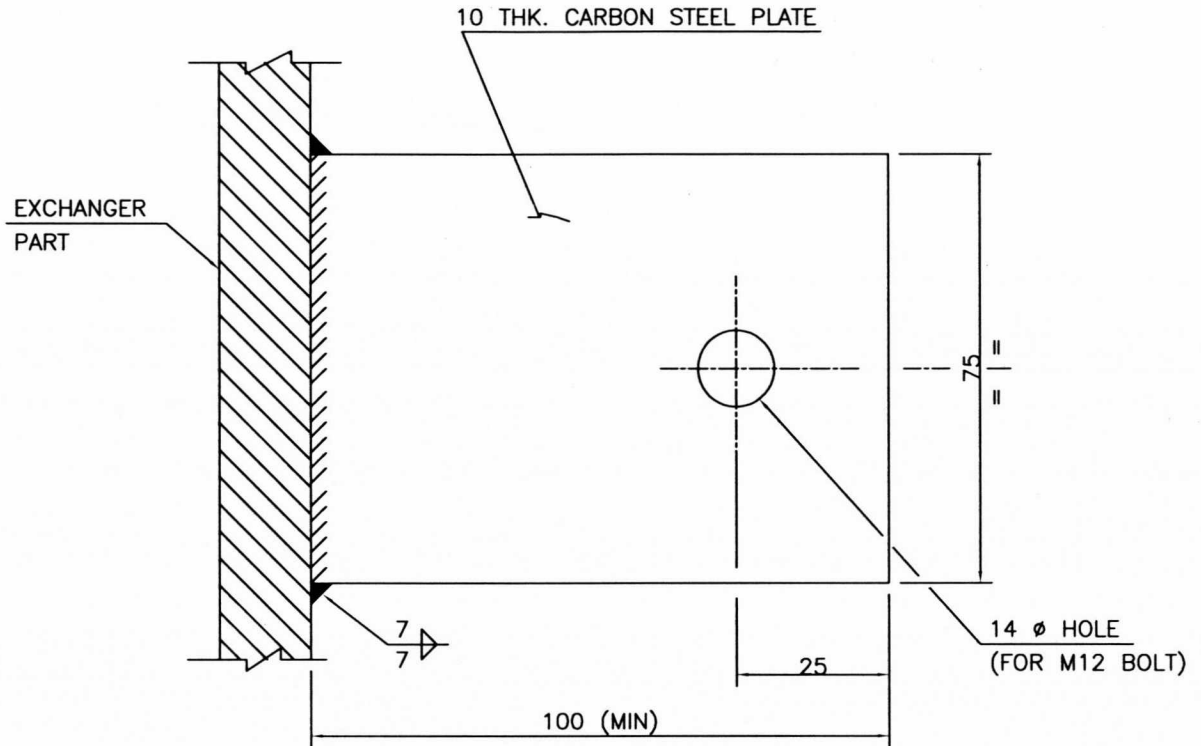
INSPECTION AND TEST PLAN
FOR
PLATE TYPE HEAT EXCHANGERS

SL. NO.	STAGE/ACTIVITY	CHARACTERISTICS	QUANTUM OF CHECK	RECORD	SCOPE OF INSPECTION		
					SUB SUPPLIER	SUPPLIER	EIL/ TPIA
4.3	Pressure Test (Hydrostatic, Pneumatic, Helium, as applicable)	Leak check	100%	Test Report	---	H	H
4.4	Draining & Drying	Dryness & Cleanliness	100%	Inspection Report	---	H	-
5.0	PAINTING						
5.1	Final painting (As applicable)	Visual inspection (after surface preparation and final painting for workmanship, uniformity) DFT check	100%	Inspection report	-	H	-
5.2	Pickling & Passivation for SS Parts	Visual Inspection for Workmanship	100%	Inspection Report	---	H	-
5.3	Ferroxyl test (as applicable)	Fe pick-up check	100%	Inspection report	-	W	RW
6.0	DOCUMENTATION AND IC						
6.1	Final stamping, review of inspection documents and issue of IC	Verifying stamping details and review of inspection documents	100%	IC / Inspection reports	-	H	H
6.2	Final documents as per PR	Verification & compilation of inspection & test records for submission to customer	100%	Final dossier	-	H	H

Legend: A-Approval, H- Hold (Do not proceed without approval), P-Perform, RW - Random Witness (As specified or 10% (min.1 no. of each size and type of Bulk item)), R-Review, W-Witness (Give due notice, work may proceed after scheduled date).

NOTES (as applicable):

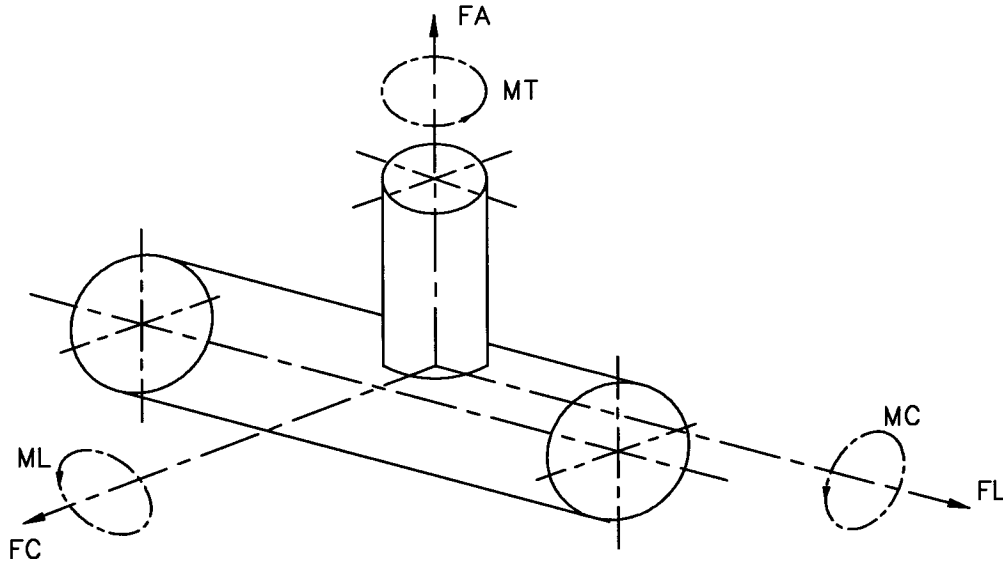
1. This document describes the generic test requirements. Any additional test or Inspection scope if specified in contract documents shall also be applicable. (unless otherwise agreed upon)
2. Acceptance Norms for all the activities shall be as per PO/PR/STANDARDS referred there in /Job Specification /Approved Documents.
3. Third Party Certifications shall be as per EN 10204 Type 3.2 for Clad Plates, CS Plate (NACE/H2/HIC), Forgings, Fittings, Heat transfer plates and all AS & SS materials. TPIA shall be arranged by supplier. Certifications shall be as per EN 10204 Type 3.1 for CS Pipes, CS Plates (non-NACE/H2/HIC), Gaskets and Fasteners.
4. For EPC jobs, all inspection shall be carried out by TPIA, unless notified otherwise.



NOTES: -

1. ALL DIMENSIONS ARE IN mm UNLESS STATED OTHERWISE.
2. DO NOT WELD EARTHING LUGS TO PRESSURE PARTS. IF REQUIRED, TAKE PRIOR APPROVAL OF COMPANY.
3. EARTHING LUG TO PROTRUDE OUT OF INSULATION, WHEREVER REQUIRED.
4. ALL EXCHANGERS TO BE FITTED WITH 2 EARTHING LUGS.
5. LOCATION OF EARTHING LUGS :-
 - (i) FOR VERTICAL EXCHANGER WITH 2 LUG SUPPORTS :- ON BOTH LUG SUPPORTS AT VERTICAL WEB.
 - (ii) FOR VERTICAL EXCHANGER WITH 3 LUG SUPPORTS :- ON ANY TWO AT VERTICAL WEB.
FOR VERTICAL EXCHANGER WITH 4 LUG SUPPORTS :- ON ANY TWO DIAMETRICALLY OPPOSITE AT VERTICAL WEB.
 - (iii) FOR HORIZONTAL EXCHANGER :- ONE ON CENTRAL WEB OF EACH SADDLE SUPPORT.
 - (iv) EARTHING LUG SHOULD BE LOCATED SUCH THAT IT WILL NOT FOUL WITH ANCHOR BOLT DURING ERECTION.
6. EARTHING LUG SHOULD BE PAINTED / GALVANISED.

6	16.11.2022	REVISED AND REISSUED AS STANDARD	NS	TK	NK	SM
5	20.03.2018	REVISED AND REISSUED AS STANDARD	JIT SINGH	SK/KJH	RKT	RN
4	30.09.2011	REVISED AND REISSUED AS STANDARD	JS	RKT	AKM/SC	DM
Rev. No.	Date	Purpose	Prepared by	Checked by	Stds. Committee Convener	Stds. Bureau Chairman
						Approved by



NOTES: -

1. THIS STANDARD COVERS ALLOWABLE NOZZLE LOADS FOR PRESSURE VESSELS & COLUMNS ONLY.
2. EACH PROCESS NOZZLE OF VESSELS SHALL BE ANALYZED FOR THE LOADS PROVIDED IN THIS STANDARD.
3. THESE LOADS SHALL BE CONSIDERED TO BE ACTING SIMULTANEOUSLY WITH INTERNAL/EXTERNAL DESIGN PRESSURE. ALLOWABLE STRESS SHALL BE AS PER APPLICABLE DESIGN CODE.
4. STRESS CALCULATIONS SHALL BE CARRIED OUT AS PER WRC BULLETIN NO. 107/297. WRC 107 SHALL BE USED FOR NOZZLES ON DISHED ENDS AND WRC 297 SHALL BE USED FOR NOZZLES ON CYLINDRICAL SHELL.
5. IN CASE OF FAILURE DUE TO WRC, FEM ANALYSIS / PD 5500 ANALYSIS CAN BE CARRIED OUT TO ESTABLISH THE ADEQUACY OF PROVIDED CONFIGURATION.

1	20 06 2019	REAFFIRMED AND REISSUED AS STANDARD	DP	JK	KJH	RKT
0	31 07 14	ISSUED AS STANDARD	GCP	KA	RKT	SC
Rev No	Date	Purpose	Prepared by	Checked by	Stds Committee Convener	Stds Bureau Chairman
						Approved by

CARBON STEEL AND LOW ALLOY STEEL EQUIPMENTS
 (CLASS 150 AND CLASS 300)

NOZZLE SIZES (DN)	FA (Kgf)	FL (Kgf)	FC (Kgf)	MT (Kgf-m)	ML (Kgf-m)	MC (Kgf-m)
50	135	200	200	50	40	30
80	202	300	300	112	90	67
100	270	400	400	200	160	120
150	405	600	600	450	360	270
200	540	800	800	800	640	480
250	675	1000	1000	1250	1000	750
300	810	1200	1200	1800	1440	1080
350	945	1400	1400	2450	1960	1470
400	1080	1600	1600	3200	2560	1920
450	1215	1800	1800	4050	3240	2430
500	1350	2000	2000	5000	4000	3000
600	1620	2400	2400	7200	5760	4320
650	1755	2600	2600	8450	6760	5070
700	1890	2800	2800	9800	7840	5880
750	2025	3000	3000	11250	9000	6750
800	2160	3200	3200	12800	10240	7680
850	2295	3400	3400	14450	11560	8670
900	2430	3600	3600	16200	12960	9720
950	2565	3800	3800	18050	14440	10830
1000	2700	4000	4000	20000	16000	12000
1050	2835	4200	4200	22050	17640	13230
1100	2970	4400	4400	24200	19360	14520
1150	3105	4600	4600	26450	21160	15870
1200	3240	4800	4800	28800	23040	17280
1250	3375	5000	5000	31250	25000	18750
1300	3510	5200	5200	33800	27040	20280
1350	3645	5400	5400	36450	29160	21870
1400	3780	5600	5600	39200	31360	23520
1450	3915	5800	5800	42050	33640	25230
1500	4050	6000	6000	45000	36000	27000

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0	31 07 2014	ISSUED AS STANDARD	GCP	KA	RKT SC	
Rev No	Date	Purpose	Prepared by	Checked by	Stds Committee Convener	Stds Bureau Chairman
					Approved by	

CARBON STEEL AND LOW ALLOY STEEL EQUIPMENTS
(CLASS 600 AND ABOVE)

NOZZLE SIZES (DN)	FA (Kgf)	FL (Kgf)	FC (Kgf)	MT (Kgf-m)	ML (Kgf-m)	MC (Kgf-m)
50	168	250	250	62	50	37
80	253	375	375	140	112	84
100	337	500	500	250	200	150
150	506	750	750	562	450	337
200	675	1000	1000	1000	800	600
250	843	1250	1250	1562	1250	937
300	1012	1500	1500	2250	1800	1350
350	1181	1750	1750	3062	2450	1837
400	1350	2000	2000	4000	3200	2400
450	1518	2250	2250	5062	4050	3037
500	1687	2500	2500	6250	5000	3750
600	2025	3000	3000	9000	7200	5400
650	2193	3250	3250	10562	8450	6337
700	2362	3500	3500	12250	9800	7350
750	2531	3750	3750	14062	11250	8437
800	2700	4000	4000	16000	12800	9600
850	2868	4250	4250	18062	14450	10837
900	3037	4500	4500	20250	16200	12150
950	3206	4750	4750	22562	18050	13537
1000	3375	5000	5000	25000	20000	15000
1050	3543	5250	5250	27562	22050	16537
1100	3712	5500	5500	30250	24200	18150
1150	3881	5750	5750	33062	26450	19837
1200	4050	6000	6000	36000	28800	21600
1250	4218	6250	6250	39062	31250	23437
1300	4387	6500	6500	42250	33800	25350
1350	4556	6750	6750	45562	36450	27337
1400	4725	7000	7000	49000	39200	29400
1450	4893	7250	7250	52562	42050	31537
1500	5062	7500	7500	56250	45000	33750

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STAINLESS STEEL EQUIPMENTS
(ALL CLASSES)

NOZZLE SIZES (DN)	FA (Kgf)	FL (Kgf)	FC (Kgf)	MT (Kgf-m)	ML (Kgf-m)	MC (Kgf-m)
50	135	200	200	50	40	20
80	202	300	300	112	90	45
100	270	400	400	200	160	80
150	405	600	600	450	360	180
200	540	800	800	800	640	320
250	675	1000	1000	1250	1000	500
300	810	1200	1200	1800	1440	720
350	945	1400	1400	2450	1960	980
400	1080	1600	1600	3200	2560	1280
450	1215	1800	1800	4050	3240	1620
500	1350	2000	2000	5000	4000	2000
600	1620	2400	2400	7200	5760	2880
650	1755	2600	2600	8450	6760	3380
700	1890	2800	2800	9800	7840	3920
750	2025	3000	3000	11250	9000	4500
800	2160	3200	3200	12800	10240	5120
850	2295	3400	3400	14450	11560	5780
900	2430	3600	3600	16200	12960	6480
950	2565	3800	3800	18050	14440	7220
1000	2700	4000	4000	20000	16000	8000
1050	2835	4200	4200	22050	17640	8820
1100	2970	4400	4400	24200	19360	9680
1150	3105	4600	4600	26450	21160	10580
1200	3240	4800	4800	28800	23040	11520
1250	3375	5000	5000	31250	25000	12500
1300	3510	5200	5200	33800	27040	13520
1350	3645	5400	5400	36450	29160	14580
1400	3780	5600	5600	39200	31360	15680
1450	3915	5800	5800	42050	33640	16820
1500	4050	6000	6000	45000	36000	18000

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