MATERIAL DETAILS

Sr. No.	Material Code	Material Description	UOM	Specification	Quantity
1	101540518748	Rothe Erde Roller bearing slewing ring, Drawing No: 191.36.3100.000.41.1522, Dimensions: 03576/02899X0215 mm, Weight: 4184 Kg.Material:21816150	NO	Roller Bearing Slewing Ring Make: Hoesch Rothe Erde Drawing No 191.36.3100.000.41.1522 DRWING NO (Amendment): 191.36.3100.000.41.1521"DD" Dimensions: 03576/02899x0215mm Weight: 4184Kg. Material: 21816150 (42CrMo4V) Application: MAMC make S/R#2 of CHP#1-4, MTPS, DVC. HSFG bolt M30x280 ¿ 60 nos. & HSFG bolt M30x290 ¿ 60 nos	1.0000
2	101540518756	Automatic grease lubrication System-II Container capacity: 140liter Discharge capacity 150cc/min @ Maximum working pressure 125kg/cm2 , Low level & High level Switches & 2 HP Elec. Motor, In line Grease filter, Pipes & Fittings.	SET	Roller Bearing Slewing Ring Make: Hoesch Rothe Erde Drawing No 191.36.3100.000.41.1522 DRWING NO (Amendment): 191.36.3100.000.41.1521"DD" Dimensions: 03576/02899x0215mm Weight: 4184Kg. Material: 21816150 (42CrMo4V) Application: MAMC make S/R#2 of CHP#1-4, MTPS, DVC. HSFG bolt M30x280 ¿ 60 nos. & HSFG bolt M30x290 ¿ 60 nos	1.0000

WORK DETAILS

Sr. No.	Task Code	Description of Work	Frequency/ Quantity	UOM	Completion Period(In Days)
1	Replacement/SlewBearing & LubSys./S&R/CHP#1-4	Replacement job of Slew Bearing and Erection & Commissioning job of Auto Lubrication System.	1.0000	NO	90

Scope of Work for Procurement, Replacement, Installation & Commissioning of Slew Bearing & Auto Lubrication System of Stacker cum Reclaimer at CHP#1-4, MTPS, DVC

A. SUPPLY PART

Sl no	Item Description	UOM	Quantity	Remarks
1.	Roller Bearing Slewing Ring Make: Hoesch Rothe Erde Drawing No 191.36.3100.000.41.1522 DRWING NO (Amendment): 191.36.3100.000.41.1521"DD" Dimensions: 03576/02899x0215mm Weight: 4184Kg. Material: 21816150 (42CrMo4V) Application: MAMC make S/R#2 of CHP#1-4, MTPS, DVC. HSFG bolt M30x280 – 60 nos. & HSFG bolt M30x290 – 60 nos	Set	1	Indicative Drawing is attached herewith
2.	Automatic grease lubrication System-II for MAMC make Stacker Reclaimer.	Set	1	Indicative Drawing is attached herewith

1. Vendor should supply the Roller Bearing Slewing Ring (Make - Hoesch Rothe Erde) & Auto lubrication system for Roller Bearing Slewing Ring identical & suitable in place of original one, supplied by MAMC make Stacker Reclaimer and shall also stand guarantee for its one-to-one replacement.
2. Delivery: Within 8 months from date of Purchase order.

B. SERVICE PART

SL. NO	ITEM DESCRIPTION	UOM	QUANTITY	REMARKS
1.	Replacement job of Slew Bearing and Erection & Commissioning job of Auto Lubrication System.	No	1	

Scope of work for Replacement & Re-commissioning of Roller Bearing Slewing Ring for MAMC make Stacker Reclaimer of CHP#1-4, MTS, DVC

a. Fabrication for temporary support for Boom Conveyor structure and counterweight boom.
b. Disconnection of permanent power supply with the machine after supporting the boom conveyer and counterweight boom by the temporary support.

c. Removal of some counterweights, if required.
d. Dismantling of toothed rim by taking out the permanent bolt.
e. Lifting the upper part of the machine by using number of heavy-duty jacks as required.
f. Making of jack pads as required.
g. After lifting, placement of additional support over temporary support.
h. Locking of the machine from side of the machine by fabricating additional support.
i. Checking bearing support structure.
j. Thorough cleaning of the area as per requirement.
k. Old bearing replacement and new bearing erection.
l. Release of the Jacks for placement of the upper part for adjusting all temporary support.
m. Bolting of all toothed rim and slew ring by maintaining the torque.
n. Dismantling of temporary support.
o. Re-commissioning of the machine.

Dismantling of associated parts like (but not limited to) fasteners, toothed rim, grease piping assembly, central chute, tray, all type of consumables, tools and machines required to carry out this job shall also be in the scope of contractor.

After removal of old slewing ring roller bearing, checking of base must be done to ascertain proper finish of surface. In Case any distortion/defect is observed it must be rectified suitably (by machining/ application of epoxy compound to be brought by contractor) before placement of new slew bearing. This shall be completely in the scope of agency and no extra payment shall be made for this. After installation, alignment, and HSFG Fasteners tightening and reinstallation of dismantled parts to be done by Agency.

Scope of work for Erection & Commissioning of Automatic grease lubrication System-II (of Roller Bearing Slewing Ring) for MAMC make Stacker Reclaimer of CHP#1-4, MTS, DVC

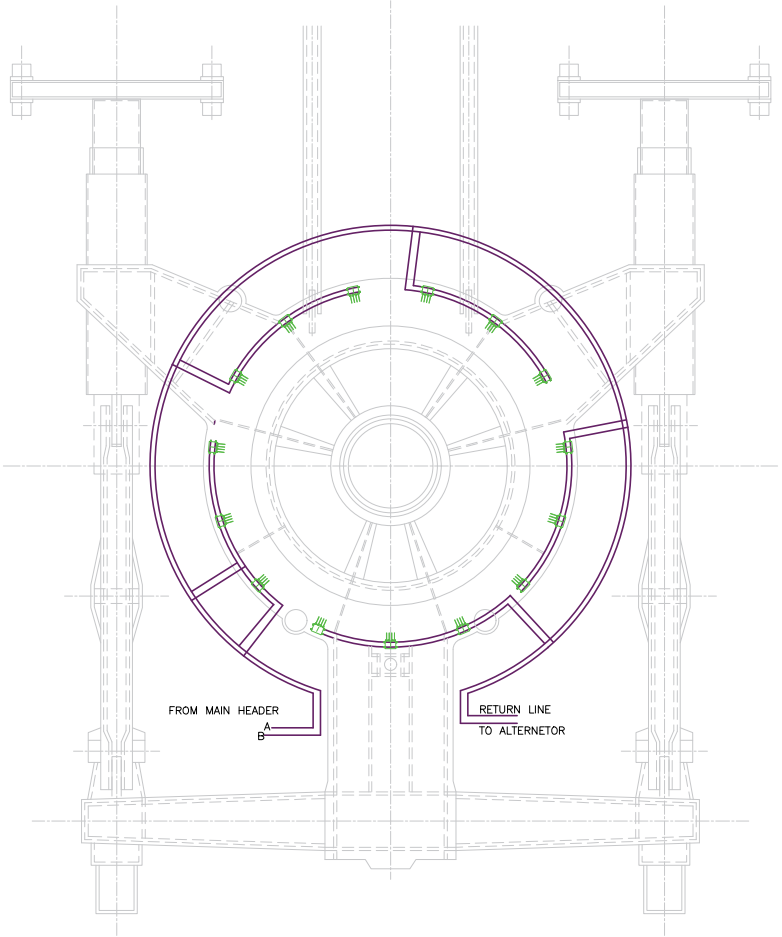
a. Dismantling of old / Existing Lubricating System
b. Necessary Platform fabrication / modification of existing platform
c. Complete Erection & commissioning of lubrication system in Slew Bearing of Stacker Reclaimer
d. Supply of consumable Excluding lubricant will be scope of vendors.
e. All Tools, Tackles, Manpower & Machine required for the replacement and Commissioning is in vendor scope.

Others scope of Vendors:

1. Necessary Platform / Bracket for Mounting the Pumps
2. Bracket / Base Frame for mounting the Electrical Panels, if any.
3. Angles and Channels for Mounting the Dose Feeders.
4. Welding and Gas cutting facilities including consumables.
5. Supporting Bracket for Pipeline wherever required.
6. Lubricant required for Flushing, Testing and Commissioning.
7. Lifting Equipment like High-capacity Hydraulic Jacks, Manual Hoists, D Shackles, Wire Ropes, High-Capacity Slings etc with proper and valid load test certificates and All Tools and Tackles related to lifting of structures like D Shackles, Wire Ropes, High Capacity Sling etc. shall be brought by the agency for execution of the job. All special Tools & Plants required for the work will be in the scope of Vendor.

8. Welding machines with RCCB of suitable rating & All Welding Electrodes required for Job and all other consumables like gas cutting accessories with Flash back arrestor etc required for completion of job shall be in scope of agency.
9. Vendor must provide helper / worker / welder / gas cutter during the erection and Commissioning of system.
10. All personal protective equipment shall be provided by the contractor to the labours. Properly Insulated cables, Power Extension boards with RCCB and supply plug shall be brought by contractor for execution of the job.
11. Agency will be solely responsible for the safety of the workmen engaged in the work.
12. Supply of total power & control cables including MCC, PLC etc and arrange of Local Control Supply panel are in Vendors Scope.
13. Laying & termination of power & control cables are in vendor's scope.
14. Shifting of materials from store to site will be in vendor's scope.
15. Dismantling of old / existing system and shifting of old system to scrap yard.
16. Cleaning of Slew Bearing area.
17. All pre commissioning checks has to be carried out by the contractor after installation of Slew Bearing and Auto Lubrication System in Presence of and as per directions of DVC representatives. Contractor shall provide necessary manpower for the same.
18. Workmen Compensation Policy/ESI payments shall be under the contractor for the period of work. If any accidental happens, same shall be resolved / Settled by the contractor itself. DVC shall not be any way involved.
19. Invoice shall be processed in first and final bill submitted by the contractor only after the completion of work.

Testing & Commissioning of Slewing Mechanism: After the commissioning of slewing mechanism, it shall be integrated with the present control systems and its auto lubrication system with requisite protection and interlocks as per operational requirements. The integration of Slewing mechanism with Control System of Stacker Reclaimer#2 shall be done by DVC but vendor has to provide all necessary support for carrying out the same. Subsequent to that, system shall be subjected to continuous running on no load for 04 Hours (Four Hours) and observations recorded, on success of which commissioning protocols will be made.



BILL OF MATERIAL

Sl. No.	NAME	Qty of Material in Group - II	Qty of Material in Group - III	Size	Mat.	Specification and Other Data
1	MOTORISED GREASE PUMP	1 NO				CAG150H140H, LOOP TYPE ALTERNATOR
2	MOTORISED GREASE PUMP		1 NO			CAG150H70H, LOOP TYPE ALTERNATOR
3	GREASE FILTER	2 NOS	2 NOS		FILTER ELEMENT - S.S. MESH SIZE - 40 micron	LGF - 2
4	CONTROL PANEL	1 NO	1 NO			2TH - 3672E
5	4 OUTLET DOSE FEEDER WITH PAD AND SCREW	15 NOS			STEEL	0.5 - 2 CC DISCHARGE / STROKE TYPE: DF - 41
6	2 OUTLET DOSE FEEDER WITH PAD AND SCREW	6 NOS	5 NOS		STEEL	0.5 - 2 CC DISCHARGE / STROKE TYPE: DF - 21
7	One OUTLET DOSE FEEDER WITH PAD AND SCREW		2 NOS		STEEL	0.5 - 2 CC DISCHARGE / STROKE TYPE: DF - 11
8	GREASE HEADER STEEL PIPE 20 NB	70 M	120 M			SCH - 40, SEAMLESS
9	BRANCH LINE 3/8" O/D BUNDY TUBE	65 M	25M			
10	DELIVERY LINE 1/4" O/D BUNDY TUBE	50 M	15 M			
11	1/4" i/d hose with both end 1/4" o/d stand pipe		4 NOS	750 MM		SAE 100 R2
12	ST. CONNECTOR	2	2	3/8" BSP X 5/8" OD		
13	TUBE	2 M	2 M	5/8" OD		IS: 1239
15	ST. CONNECTOR	4	4	1/2" BSP X 5/8" O/D	STEEL	
16	EQU. TEE 20 NB (S.W)	4	2			
17	SPL. TEE 20 NB X 20 NB X 3/8" BSP	14	6			
18	ST. CONNECTOR	60	30	3/8" BSP X 3/8" BSP		3 TH - 2318
19	TUBE CONNECTOR	8		3/8" O/D		IS: 1239
20	ST. CONNECTOR	84	22	1/4" BSP X 1/4" O/D		3 TH - 2318/7
21	ST. CONNECTOR	60	2	M 10 X 1 1/4" O/D	M.S	
22	REDUCING BUSH		2	M 16 X 1.5 X 1/4" BSP	M.S	
23	2 - WAY CLAMP WITH PAD & SCREW	20	55	3/4" NB		3 TH - 2409/16
24	1-WAY CLIP WITH PAD & SCREW	25	10	3/8" O/D	M.S.	3 TH - 2403/7
25	1-WAY CLIP WITH PAD & SCREW	20	7	5/16" O/D	M.S.	3 TH - 2403/6
26	UNION	16	8	20 NB	STEEL	IS: 1239
27	PLUG 3/8" B.S.P.T	18	6		STEEL	IS: 1239
28	PLUG 3/4" B.S.P	2	2		STEEL	IS: 1239
29	SOCKET 3/4"	2	2		STEEL	IS: 1239
30	ELBOW 20 NB	6	6		STEEL	IS: 1239
31	FOUNDATION BOLT WITH NUT & WASHER	2 SETS			STEEL	4 TH 2376 a
32	CONNECTING BUSH	2	2		STEEL	

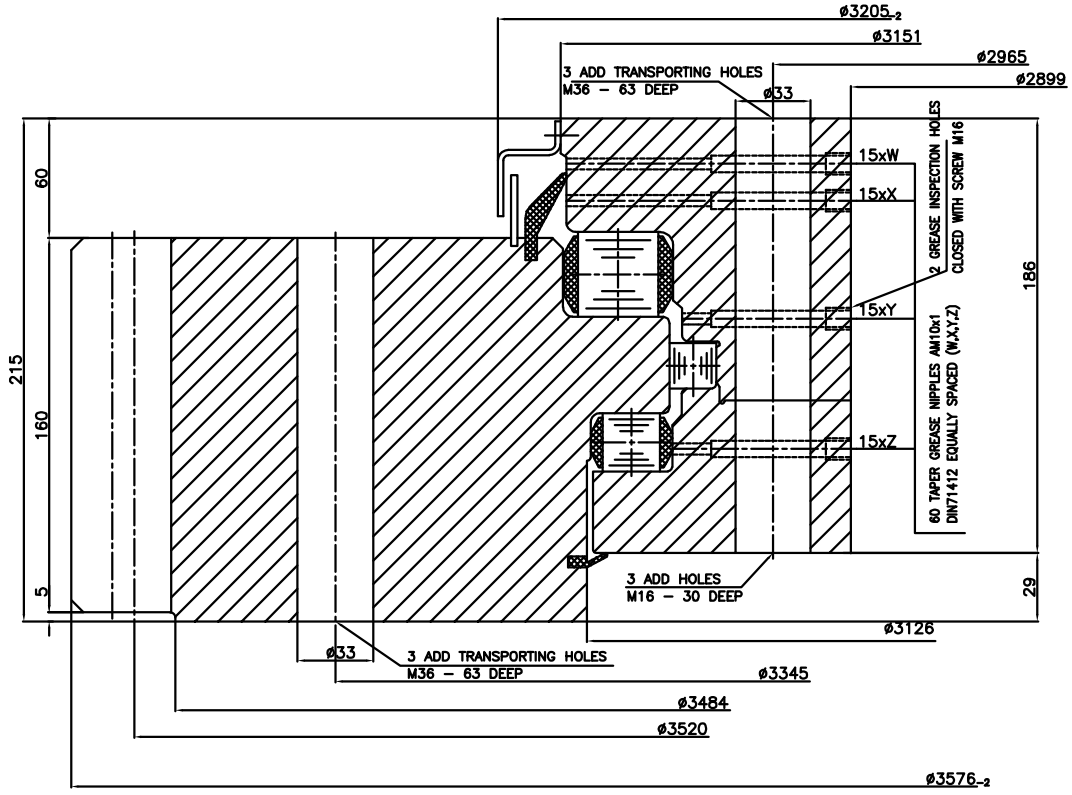
Automatic Greasing Point for Slew Bearing (Group - II)						
SL. NO	Greasing Point	Qty.	Connection Thread	Bearing No	No of Connection per Item	Total no of Connection
1	Slew Bearing	1	M 10x1		4x15	60
2	Slew Gear box	2	AR 1/8"		4	8
3	Lower Bearing og Two Luffing Cylinder	2	R 1/4"		2	4
					Total Points =	72
Automatic Greasing Point for Bucket Wheel (Group - III)						
1	Bucket Wheel	2	R 1/4"	23148cck/w33	1	2
2	Bucket Wheel drive Gear box	1	R 1/8"		3	3
3	Upper Bearing og Two Luffing Cylinder	2	R 1/4"	GE 180 TA-2RS	2	4
4	Boom Pivot Bearing	2	M 16x1.5	GE 200 TA - 2RS	1	2
					Total Points =	11

MEJIA THERMAL POWER STATION, CHP#1-4, MTPS, DVC

TITLE: C.G.L. SYSTEM FOR STACKERCUM RECLAIMER - SLEW BRG. & BUCKET WHEEL (GROUP - II & III)

DRAWN BY: SANJOY KUMAR GHOSH

SCALE: NTS



GEARING DATA				
		Wheel Externel Gear	Pinion External Gear	unit
Module	mn	20,000	20,000	mm
Number of Teeth	Z	176	20	
Addendum Modification	xm	10,000	10,000	mm
Addendum reduction	km	-2000.0000	-7.0000	mm
Tooth width	b	160	165	mm
Gearing Quality	DIN	12de	10c	
Upper / Lower deviation	Ase / Asi	-0,540/-1,080	-0,330/-0,440	mm
Tooth width wk over k teeth	wk	"1266,006 -0.506 k = 21"	k=0	mm
Theoritical Center Distance	Aa	1,979,306	"0,280 -0,280"	mm
Pressure angle	α	20°	20°	
Helix angle	β	0.0000	0.0000	
Basic rack tooth profile		DIN 867: 1986	DIN 867: 1986	

DAMODAR VALLEY CORPORATION

ROLLER BEARING SLWING RING

MAKE: ROTHE ERDE | Material: Rings - 42CRMO4V

DRWING NO: 191.36.3100.000.41.1522

DRWING NO (Amendment): 191.36.3100.000.41.1521"DD"

DRWN: S.K.G