

SCOPE OF AMC JOBS, ASSISTANCE IN COAL FEEDING JOBS OF CHP (CHP FOR UNIT # 3,4)

1. **Job Description** : Annual Maintenance contract (AMC) Jobs for CHP (CHP for Unit # 3,4) comprising
 - a. Mechanical Maintenance (for list of jobs refer Annexure – 1.1.1)
 - b. Electrical Maintenance (For list of jobs refer Annexure – 1.2.1)
 - c. Equipment Cleaning (For List of Jobs refer Annexure – 1.3.1)
 - d. Assistance in coal feeding jobs (for details of jobs Annexure 1.4)

The above AMC shall be job based contract & shall not have any minimum quantity or amount assurance & the detailed scope as under:

2. **Contractor's scope**
 - a. **Supply of maintenance consumables** e.g.
 - i. welding electrodes (6013 & 7018) of approved make (ESAB, ADVANI, L&T, MODI, D&H Scheron)
 - ii. Primer & Painting material
 - iii. Industrial gases
 - iv. Cleaning solvents, DP Test kits etc.
 - b. **Deployment of skilled Persons** in adequate no.s & of requisite skill level for carrying out the jobs. The deployed maintenance gang should must have the following persons as mentioned below i.e.
 - i. Millwright fitter (one no.)
 - ii. Master Electrician (two)
 - iii. Dozer mechanic (one)
 - iv. Fabricator (one)
 - v. Belt jointer (Two)
 - vi. Electrical Supervisor (Two)
 - vii. Instrumentation Supervisor (one)
 - viii. Mechanical Supervisor (four No.s)
 - ix. Equipment Cleaning Supervisor (Four No.s)

The key persons of the AMC gang shall have approval of the EIC. The contractor shall also comply the statutory qualifying requirements of persons.

The agency shall deploy adequate no.s of experienced, qualified supervisors for ensuring the jobs are conducted in safe, planned manner for sustenance of the system.

- c. **Arrangement of tools tackles**: Necessary tools tackles shall be arranged by the contractor. The list of tools tackles (not an exhaustive list) is mentioned in Annexure – 2, exclusions of purchaser supplied tools shall apply.

The calibration as required, certification, of the lifting tools tackles by statutory third party agency shall be done at regular interval at his own cost. The defective tools shall be quickly replaced by good ones.

- d. **All Enabling Jobs** shall be deemed to be considered in the scope of the contractor as required for execution of the job at no additional cost e.g. Scaffolding / staging / de-staging as required shall be done by the agency, scaffolding material shall be supplied by the purchaser. Drive alignment requirement shall be treated as part of the job where required. Removal / fixing of guards etc. are also part of the mechanical jobs as required.
Structural steel required for staging shall be supplied by the purchaser. Fixing & removal shall be done with consumables, labour at no additional cost.
- e. **In plant movement of spares, material, scrap etc.:** The contractor shall provide operator/driver for the purchaser owned Bobcat, Hydra, front end Loader, Truck & shall be used free of cost for usage of jobs at purchaser's premises, for AMC jobs of CHP System. The fuel, maintenance of the vehicles shall be borne by the purchaser including the cost of spares & consumables. The operators as mentioned above shall have valid license & fulfilment of statutory requirements as deemed fit at the time of execution of the job. The purchaser shall bear the statutory obligations pertaining to the mentioned equipments.
- f. All waste products shall be cleared & disposed at its designated location or as advised by the EIC or his representative.
- g. **Compliance to Purchaser's EHS norms & other statutory obligations** shall be done by the contractor during the tenure of the contract with adequate documentary evidence which shall be presented as and when asked.
- h. **Provide all requisite PPE** to the workmen shall be supplied to the persons deployed for AMC jobs.
- i. The agency shall **indemnify the purchaser** against any eventuality by producing a suitable indemnity bond, valid through the contract period.
- j. **Accommodation** of the engaged persons, their in plant movement shall be arranged by the contractor.
- k. The persons working in maintenance (mechanical & Electrical), equipment cleaning shall be different from the crew assisting in coal feeding.
- l. The supervisors (Mechanical, Electrical & equipment cleaning) shall apply for permit to work (PTW) in SAP system for jobs in their respective shifts & areas.

3. Purchaser's scope :

- a. Supply of spares, consumables (all those material which are going into the equipment and be a part of it) e.g. special purpose electrodes other than 6013 & 7018 grade.
- b. Arrange tools tackles (Refer annexure – 2). The calibration, maintenance, replacement of purchaser supplied tools tackles shall be done by the purchaser.
- c. Supply of paint in painting job (primer, painting material by the contractor)

- d. Issue (& renewal) of work permit, energy isolations etc.
- e. Any external assistance needed for the maintenance of the equipments e.g. from OEM Expert, machine shop related jobs (inside or outside plant premises)
- f. General illumination, area lighting etc.
- g. Predictive maintenance of equipments with equipment & crew .

4. Defect dilution period

- a. The defect dilution period for the maintenance jobs in general shall be six months from the date of completion. Problems if any arising during defect dilution period shall be attended on cost free basis to the purchaser (only spares shall be provided by the Purchaser)

5. Penalty for damages to the purchaser's properties, and generation loss due to CHP

- a. Damages to the purchaser's properties, attributed to the contractor though caused inadvertently shall attract penalty. e.g.
 - i. Damage (tearing of conveyor belt)
 - ii. Damage to equipment(s)
- b. Generation loss due to improper maintenance, specifically attributed to the contractor shall attract penalty.
- c. Generation loss due to no coal in bunker

Penalty of Rs. 100000 (One Lakh) for first instance, Rs. 500000 (Five Lakh) for second and subsequent Instance shall be charged to the contractor for damage to the purchaser's property in case they are not fixed within three days of the damage.

- 6. Liquidated Damages (LD)** shall be imposed in case the contractor fails to mobilise site within 30 days from issue of LOI / PO / NTP, whichever is later, at 0.25% per week of the annual basic contract value with a cap of 10% max.

The Total LD charges shall be capped at 10% of the annual basic value of the contract.

- 7. Security deposit:** The agency shall submit amount equivalent to 2.5% of the annual basic value of the contract by DD / BG within 15 days of receipt of LOI / PO. Balance 05% of the annual basic value of the contract shall be collected from the party in next consecutive monthly RA bills. The security deposit money shall be returned to the party without interest at the end of the contract.

8. **Payment terms :** Monthly RA bill of completed jobs during the month with 100% applicable taxes & duties shall be paid within 30 days of submitting certified bill with EIC.
- a. The item cost apportioning of the conveyor cleaning jobs (Refer Annexure 1.3, Item No.1.01 to 1.20) will be as under

Sl. No.	Item Description	Cost apportioning (%)
a	Cleaning of conveyor parts e.g. Gear box, fluid coupling, motor, Head pulleys & head end snub pulley, OBMS, seal & deck plates, walk ways, debris chutes, Tail pulley & tail end snub pulley	50
b	Cleaning of transfer houses , cleaning of all floors & stair cases	40
c	Cleaning of take up floors , cleaning of take up & bend pulleys	10

- b. The contractor shall claim bills only for the items which have been completed during the billing period.

9. **Contract Period :**

- a. The period of the contract shall be three and half years from the LOI / PO / NTP (Notice to proceed) date, whichever is later, however the initial PO shall be issued for eighteen months and the same shall be renewed annually subject to satisfactory performance of the preceding year.

10. **Price bid format**

- a. The price bid format for
- i. Mechanical jobs (Refer Annexure 1.1.1) Attached
 - ii. Electrical Jobs (Refer Annexure 1.2.1) Attached
 - iii. Equipment Cleaning jobs (Refer Annexure 1.3.1) Attached
 - iv. Assistance in Coal feeding Jobs (Refer Annexure 1.4.1) attached
- b. The contractor shall make thorough assessment of the CHP System (CHP for Unit # 3,4) before participating in the bid. It will be deemed treated that the bidder has make thorough assessment of the system.

SPECIAL CONDITIONS OF THE CONTRACT

- a. The item rates shall be firm during the tenure of the contract irrespective of fluctuation of statutory minimum wages, price of various commodities & consumables etc.
- b. Annual Price escalation of 05% shall be allowed against inflation over the preceding year rate over the basic price, except that the rates shall remain firm during the contract period. However the first price escalation shall come into effect after 18 months from the LOI / PO / NTP date, whichever is later, thereafter on completion of the year
- c. The PO for the contract shall be initially issued for 18 months, renewed annually thereafter on successful, satisfactory execution of the preceding year.
- d. All applicable taxes shall be paid extra by the purchaser.
- e. Vehicle for movement of tools tackles, contractor persons etc. shall be arranged by the contractor at his own cost.
- f. Damages to the purchaser supplied tools tackles, property shall be recovered at penal rates.
- g. The consumables covered under the scope of the contractor if supplied by the purchaser in order not to hamper the job, they shall attract penal rate of 1.5 times the actual cost.
- h. There shall not be any special rate for the jobs carried out during odd hours, holidays etc.
- i. The quantity mentioned in the contract may vary during the tenure of the contract.
- j. Any job pertaining to AMC of CHP which has not been specifically mentioned in the list, shall also be executed by the agency at mutually agreed derived rate on actual man power engagement basis.
- k. The agency shall ensure that non receipt of payment from the purchaser for up to two months at any stage of the contract shall not affect the job in any manner including timely disbursement of wages to his employees.
- l. The agency shall pass on input tax credit in GST regime on actual basis to the purchaser.

ANNEXURE – 1.4

ASSISTANCE IN COAL FEEDING TO CHP SYSTEM (CHP FOR UNIT # 3,4)

1. **Job Description:** Assistancess in Coal feeding at CHP (CHP meant for Unit # 3,4) by deploying persons on round the clock (three shift) basis at requisite locations.
2. **Scope of job (contractor) :** Manning of personnel at requisite locations of CHP refer as per Annexure – 3 in all three shifts in order to ensure that the bunkers are at least 50% full (never below 40%) all the time by
 - a. **Deployment of persons** with requisite qualification & skill level (refer Annexure -3), the deployed persons shall have approval of the EIC of the purchaser or his representative. The no.s of persons mentioned in the list (Refer Annexure) are the minimum no.s for deployment, additional deployment of persons may be required to suite site conditions (occasionally or otherwise) shall be arranged by the party at no extra cost.
 - b. **Maintain reserve pool of persons** with requisite qualification & skill level as mentioned above so that manning can be done 24 x 7 x 365 /366 of the CHP system in accordance with statutory labour laws.
 - c. **Overall supervision of the contractor deployed persons** in each shift and also in General shift.
 - d. **Provide PPE & safety harnesses** to the persons deployed as per EHS norms of the Purchaser at requisite interval during the currency of the contract.
 - e. **Compliance of statutory obligations, purchaser's EHS norms** shall be followed in toto and necessary documentary evidence shall be produced to the competent authorities of the purchaser / statutory body as advised from time to time.
 - f. **Indemnify the purchaser** against any unforeseen incident by producing suitable indemnity bond valid through the contract period.
 - g. **Provide operational tools.** (Refer Annexure - 2) for tools tackles to be provided by the contractor.
 - h. **Documentation & maintain relevant operational records** shall be done as per advise of the EIC or his representative.
3. **Purchaser's Scope:** The following jobs shall lye with the purchaser
 - a. Maintenance of CHP equipments including supply of spares & consumables
 - b. Calibration, testing, maintenance of tools tackles, test equipments in purchaser's scope.
 - c. The purchaser shall make arrangement for the training & familiarisation of the system for the persons for a period of about one week.
 - d. Maintenance cost of the CHP system including supply of spares, consumables etc. shall be borne by the purchaser, the exclusion shall apply to the contractor supply tools tackles, equipments.
4. **Measurement of quantity:** The coal handled quantity shall be taken from Main Control Room (MCR) / CHP Control room. The quantity certification shall be done by the EIC & figure so decided by the purchaser shall be final & binding.

5. Penalty shall be imposed on the contractor for

- a. Wrong operation specifically attributed to the contractor leading to generation loss due to no coal / less coal in the bunker
- b. Damages to the CHP & allied system of the purchaser specifically attributed to the contractor

The penalty for each incident shall be Rs. 100000 (One Lakh) to Rs. 500000 (Five Lakhs) depending on the severity of the incident, repetitive natured ones. The discretion of the EIC in imposing penalty shall be final. The contractor however shall be given opportunity to vouch for waiver of the penalty through suitable documentary evidence.

The total penalty & LD shall be capped at 10% of the monthly average order value (basic price)

6. Tentative Execution Quantity & Price Bid format (Also Refer Annexure – 1.4.1)

Sl. No.	Item Description	UOM	Quantity	Unit Cost (Rs.)	Total Cost (Rs.)
a	Charges for providing assistance in coal feeding during COD period (minimum monthly support amount)	Months	6		
b	Charges for assisting in coal feeding during Post COD Period (First year), (Exclusive of applicable taxes)	MT	6600000		
c	Charges for assisting in coal feeding during Post COD Period (Second year), (Exclusive of applicable taxes)	MT	7500000		
d	Charges for assisting in coal feeding during Post COD Period (Third year), (Exclusive of applicable taxes)	MT	7500000		

Note : Price escalation shall be applicable as per clause 7 (a), (b), (c) & (d)

PRICE BID FORMAT - MECHANICAL JOBS IN COAL HANDLING PLANT

ANNEXURE - 1.1.1

Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
1.0	CONVEYOR SYSTEM										
1.1	Skirt board segment rubber replacement (running meter.)	mtr	500	1000	1500	1500					
1.2	Skirt board rubber segment adjustment (running meter.)	mtr	50	100	700	700					
1.3	Adjustment of primary scrapper	No	300	600	600	600					
1.4	Replacement of complete primary Scrapper blade	No	5	20	30	30					
1.5	Adjustment of secondary scrapper	No	300	600	600	600					
1.6	Replacement of complete secondary scrapper blade	No	5	20	30	30					
1.7	Back plate sealing with segment rubber	No	25	50	50	50					
1.8	Replacement of idlers (CI / RI / SACI / SARI)	No	200	400	1000	1000					
1.9	Repair of idlers (CI / RI / SACI / SARI)	No	100	200	200	200					
1.10	Idler frame replacement (any)	No	50	100	200	300					
1.11	Offline repair of Idler frame	No	50	100	200	300					
1.12	Belt sway adjustment / Training of conveyor belt (both with & without load)	No	30	60	200	300					
1.13	Guide roller Replacement	No	25	50	50	50					
1.14	Guide roller frame fabrication & roller fitting	No	10	20	50	50					
1.15	Guide roller frame repair	No	10	20	50	50					
1.16	Any drive pulley repair/replacement.	No	3	5	10	10					
1.17	Any non-drive pulley repair/ replacement	No	5	10	10	10					
1.18	Replacement of seal plate or deck plate.	No	50	100	200	400					
1.19	Replacement / Replacement of HGTU Trolley / Trolley wheel\	No	1	1	1	1					
1.20	Handling of Take up Counter weight (both loading & unloading)	MT	200	400	400	400					
1.21	Take up (including take up guide) rectification of any CHP conveyor	No	3	5	10	10					
1.22	Rail line alignment of shuttle/ reversible feed conveyors.	mtr	50	100	100	100					
1.23	Belt replacement of Coal Sampler unit.	No	1	2	2	2					
1.24	Clearing of mechanical jamming of coal sampler crusher	No	5	10	20	20					
1.25	Repair and replacement of self cleaning / Impact idler	No	25	50	100	100					
1.26	Inspection conveyor belts for healthiness (small conveyor, Belt length < 300 mtrs)	No	132	264	264	264					
1.27	Inspection conveyor belts for healthiness (Large conveyor, Belt Length > 300 mtrs)	No	120	240	240	240					
1.28	Replacement of wire rope (HGTU)	mtrs	100	200	200	200					
1.29	Replacement of rope Pulley (HGTU)	No.s	3	5	5	5					
1.30	Inspection with minor repair of Chutes by patch welding (patch size below 200 mm x 200 mm)	No.s	175	350	500	500					
1.31	Repairing of chutes (Replacement of damaged chute segment)	MT	10	10	20	20					
1.32	Repair / replace of Conveyor guards	MT	1	2	4	4					
1.33	Misc. structural repair jobs at Conveyor	MT	5	10	10	10					

PRICE BID FORMAT - MECHANICAL JOBS IN COAL HANDLING PLANT

ANNEXURE - 1.1.1

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Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
SECTION-II											
2.0	CONVEYOR DRIVE SYSTEM										
2.100	Non Drive Pulley Bearing Replacement (both the bearings)	sets	6	20	40	40					
2.101	Non Drive Pulley Plummer Block with / without bearing	sets	6	20	40	40					
2.102	Drive pulley Bearing Replacement (both the bearings)	sets	3	5	10	15					
2.103	Drive pulley Plummer Block with / without bearing	sets	1	2	10	15					
2.201	Hold back replacement in Gear box	No	2	4	5	5					
2.202	Repair of Hold back of Gear box	No	2	4	5	5					
2.203	complete Overhauling of Gearboxes in CHP system (with /	No	1	2	30	40					
2.204	Replacement of input pinion with matching gear in gear box	No	1	2	5	10					
2.205	Replacement of intermediate gear (1st stage) , shaft &	No	1	1	5	10					
2.206	Replacement of intermediate gear (2nd stage) , shaft &	No	1	1	5	10					
2.207	Replacement of Output shaft with matching gear	No	1	1	5	10					
2.208	Minor Overhauling of gear box (cleaning, oil replacement,	No	5	10	60	100					
2.209	Overhauling/servicing/replacement of lube oil pumps of	No	1	1	20	40					
2.210	Oil seal / diaphragm replacement of Gear box	No	2	4	20	40					
2.211	Replacement of Gear box casing	No	0	0	0	0					
2.212	Complete gear box replacement of any conveyor	No	1	1	2	4					
2.213	Input shaft bearing replacement of gear box	No	1	2	20	30					
2.214	Output shaft bearing replacement of gear box	No	1	1	5	10					
2.215	Gear coupling replacement	No	1	2	15	20					
2.216	Overhauling/repair of fluid coupling	No	1	2	10	20					
2.217	Replacement of fluid coupling	No	1	2	5	10					
2.218	Oil seal replacement of fluid coupling	No	3	5	5	10					
2.219	Alignment of drives of any CHP conveyors (both)	No	4	8	5	10					
2.220	Oil leakage rectification in Gear boxes	No	3	5	5	10					
2.221	Replacement of cooling fan of gearbox of conveyor	No	3	5	5	10					
2.222	Replacement of pin bush of coupling between motor and	No	3	5	5	10					
2.223	Replacement of pin bush of coupling between gearbox and	No	3	5	5	10					
2.224	Take up trolley overhauling (HGTU)	No	1	2	5	10					
2.225	Replacement /Re-fixing of level gauge of gearboxes and	No	1	2	5	10					
2.226	Thruster brake drum replacement	No	2	4	10	10					
2.227	Overhauling/servicing/replacement of lube oil pumps of	No	1	1	10	10					
2.228	Reconditioning of pulley shaft	No	1	1	10	10					

PRICE BID FORMAT - MECHANICAL JOBS IN COAL HANDLING PLANT

ANNEXURE - 1.1.1

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Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	SECTION-III										
3.0	CONVEYOR BELTS										
3.100	Belt overlap joint (hot vulcanizing)	No	3	5	10	15					
3.101	Belt overlap joint (cold joint)	No	3	5	20	30					
3.102	Belt laying with pulling in running meter	mtr	500	1000	2000	3000					
3.103	Removal and re-fixing of conveyor hoods	Nos	5	10	20	30					
3.104	Belt patching with cold solution.	m2	3	5	50	50					
3.105	Pulley lagging of drive pulleys, head end snub pulley	m2	5	10	20	20					
3.106	Pulley lagging of non drive pulleys	m2	10	20	50	50					
3.107	Over band magnetic separator belt replacement	No	1	2	5	5					
3.108	Rectification of belt folding	No	1	2	5	5					
3.110	Hot spot vulcanising	m2	3	5	10	20					
3.111	Cold Spot Vulcanising	m2	3	5	10	20					
	SECTION-IV										
4.0	TRANSFER HOUSE										
4.1	Over band magnetic separator over-hauling	No	3	6	10	10					
4.2	Bearing replacement of over band magnetic separator	No	3	6	10	10					
4.3	Pulley replacement/repair of over band magnetic separator	No	3	6	6	6					
4.4	Angle fitting of OBMS (all the angles)	set	1	1	4	4					
4.5	Replacement of flap gate actuators.	No	1	2	4	4					
4.7	Flap gate actuator gear replacement	No	1	1	4	4					
4.8	Square bar rails removal and re-fixing of rails inside chute	mtr	10	20	30	30					
4.10	complete Replacement segment at impact zone	MT	5	10	30	30					
4.12	Overhauling of Flap Gate Actuator	No.	1	2	5	5					
4.13	Replacement of deflector plate in chute	No.	3	5	20	20					
	SECTION-V										
5.0	TRH SYSTEM										
5.1	Paddle feeder Arm replacement	sets	1	2	10	10					
5.2	Paddle feeder blade liners replacement	sets	1	2	10	10					
5.3	Paddle feeder blade arm repair	No	1	2	10	10					
5.4	Overhauling of PCRD/CCRD gearbox of paddle feeder.	No	1	2	3	5					
5.5	Overhauling of PCRD/CCRD of paddle feeder.	No	1	2	3	5					
5.6	Rail clamp repair/over hauling	No	10	20	20	20					
5.7	Rail line alignment of paddle feeder.	Joint	5	10	20	20					
5.8	Overhauling of servomotor.	No	1	1	3	4					
5.9	Cleaning of paddle feeder wheel jamming.	No	3	5	20	20					
5.10	Gear coupling replacement of Paddle feeders	No	1	1	3	5					
5.11	Propeller shaft replacement of paddle feeder	No	1	1	3	5					
5.12	Drive shaft replacement of Paddle feeder	No	1	1	3	5					
5.13	Travel wheel bearing replacement of paddle feeder	No	2	4	5	5					
5.14	Paddle wheel Bearing Replacement	No	1	2	5	5					
5.15	Overhauling of brake of travel drive of PF	No	1	2	5	5					
5.16	Overhauling of planetary gearbox of PF	No	1	1	2	2					
5.17	Adjustment/replacement of Contorq of PCRD of PF	No	1	1	2	2					
5.18	Overhauling/ Servicing of planetary gearbox of PF	No	1	1	2	2					

PRICE BID FORMAT - MECHANICAL JOBS IN COAL HANDLING PLANT

ANNEXURE - 1.1.1

Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	<u>SECTION-VI</u>										
6.0	<u>CRUSHING SYSTEM</u>										
6.1	Missing hammers/one hammer replacement	No	10	20	30	30					
6.2	Kick-off plate replacement	No	1	3	5	5					
6.3	Complete hammer ring replacement	Set	1	15	15	15					
6.4	Screen plate replacement (upper & lower)	No	1	4	8	8					
6.5	Breaker plate replacement	No	1	2	8	8					
6.6	Crusher drive bearing replacement	No	1	2	4	4					
6.7	Replacement/ repair of Crusher rotor and alignment	No	1	1	1	1					
6.8	Grizzly feeder drive bearing/Non-drive bearing	No	2	4	8	8					
6.9	Grizzly feeder counter weight replacement	No	1	1	1	1					
6.10	Grizzly feeder shaft replacement	No	1	2	4	4					
6.11	Plates fixing on Grizzly feeder tray	No	1	2	4	4					
6.12	Crusher liners replacement	MT	1	2	4	4					
6.13	Non-drive bearing replacement of crusher	No	1	2	4	4					
6.14	Counter weight repair/replacement of any VF	No	1	1	1	1					
6.15	Oil seal replacement of any VF	No	1	2	4	4					
6.16	Rack & Pinion gates opening closing by chain block/Hook	No	5	10	10	10					
6.17	Overhauling of Rack & Pinion gate	No	1	1	2	2					
6.18	Crusher fluid coupling replacement	No	1	1	2	2					
6.19	Crusher fluid coupling overhauling	No	1	1	2	2					
6.20	Crusher hydraulic cover opening and closing for each	No	10	20	20	20					
6.21	Oil seal replacement of fluid coupling in crusher	No	1	2	4	4					
6.22	Oil seal replacement of gearbox of crusher	No	1	2	4	4					
6.23	Replacement of cooling fan of gearbox of crusher	No	1	1	4	4					
6.24	Replacement of bearing of auto coal sampler crusher	No	1	1	2	2					
6.25	Grizzly feeder spring replacement (1 set=2 nos.)	Set	1	1	1	1					
6.26	Cardon sharft replacement of vibrating feeder	No	1	2	8	8					
6.27	Bearing housing replacement of Grizzly feeder	No	2	4	16	16					
	<u>SECTION-VII</u>										
7.0	<u>STACKER-RECLAIMER</u>										
7.1	Seal kit replacement of hydraulic system in stacker	No	2	2	2	2					
7.2	Stacker /Reclaimer bucket teeth replacement	No	5	10	80	80					
7.3	Hard facing of tips of bucket teeth	No	25	50	80	80					
7.4	S/R Hydraulic cylinder replacement	No	2	2	2	2					
7.5	S/R Hydraulic cylinder repair & re-fixing	No	1	1	2	2					
7.6	Overhauling of PCRD/ CCRD gearboxes of stacker	No	1	1	2	2					
7.7	Overhauling of PCRD/CCRD of S/R	No	1	1	2	2					
7.8	gauging, Rail line alignment of stacker-reclaimer, tightening of rail	mtrs	250	500	1000	1000					
7.9	Overhauling of grease dozing system of travel/slewing	No	1	1	2	2					
7.10	Overhauling of grease pump of travel/slewing drive	No	1	1	2	2					
7.11	Oil leakage rectification in planetary geartrain of travel	No	1	1	1	1					
7.12	Overhauling of Gearbox of slewing drive of S/R	No	1	1	1	1					
7.13	Adjustment/Replacement of Contorq of PCRD/CCRD of	No	1	1	1	1					
7.14	Applying of cadmium compound slewing gear and pinions	No	1	2	2	2					
7.15	Bearing replacement of hydrullic cylinder of S/R	No	1	1	2	2					

PRICE BID FORMAT - MECHANICAL JOBS IN COAL HANDLING PLANT

ANNEXURE - 1.1.1

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Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	<u>SECTION-VIII</u>										
8.0	<u>BUNKER SYSTEM</u>										
8.1	Overhauling of PCRD/CCRD gearboxes of Traveling	No	1	1	2	2					
8.2	Overhauling of PCRD/CCRD of Traveling Tripper.	No	1	1	2	2					
8.3	Gauging, Rail line alignment of traveling tripper, tightening	mtrs	150	300	300	300					
8.4	Travel wheel bearing replacement of traveling tripper	No	1	2	4	4					
8.5	Overhauling of travel drive gearbox	No	1	2	4	4					
8.6	Adjustment/Replacement of contorq of PCRD of traveling	No	1	2	4	4					
	<u>SECTION-IX</u>										
9.0	<u>HYDRAULIC SYSTEM</u>										
9.1	Hose pipe replacement	No	5	10	15	15					
9.2	Repair/replacement of Hydraulic pump.	No	1	2	2	2					
9.3	Repair/replacement/overhauling of Hydraulic valves.	No	3	6	10	10					
9.4	Oil leakage rectification in Hydraulic system	No	3	5	10	10					
9.5	Overhauling of hydraulic oil pumps	No	1	3	3	3					
9.6	Oil filter replacement	No	5	10	10	10					
9.7	Overhauling of servomotor	No	1	1	1	1					
9.8	Replacement of servo/hydraulic motor	No.	1	1	1	1					
	<u>SECTION-X</u>										
10.0	<u>Dust Extraction system</u>										
10.1	Overhauling of DE fans	No	1	2	6	6					
10.2	Bearing replacement of DE (both)	No	1	2	6	6					
10.3	V' Belt of DE replacement	sets	1	2	10	10					
10.4	V-grooved pulley replacement	No	1	1	2	2					
10.5	Bellow Replacement of DE	Mtr	1	2	4	4					
10.6	Air lock feeder gearbox servicing	No	1	2	4	4					
10.7	Sprocket replacement in air lock feeder	No	1	2	4	4					
10.8	Clearing of jamming of cyclone separators	No.	5	10	10	10					
	<u>SECTION-XI</u>										
11.0	<u>Ventilation system</u>										
11.1	Ventilation fans overhauling.	No	10	20	30	30					
11.2	Filter replacement of U.A.F/ventilation system	set	1	1	7	7					
11.3	V' Belt of ventilation fan replacement	set	3	5	20	20					
11.4	V-grooved pulley replacement	No	1	1	2	2					
11.5	Bellow Replacement of Ventilations	Mtr	1	1	10	10					
11.6	Overhauling of ventilator.	No	1	1	1	1					
11.7	Cleaning of Ventilation air distribution grills	No	25	50	50	50					
11.8	DE/NDE bearing replacement of Ventillation Fan	No	5	10	10	10					

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Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	SECTION-XII										
12.0	Pump system										
12.1	Flange gasket replacement.	No	3	5	20	30					
12.2	Valve wheel replacement.	No	1	1	10	10					
12.3	Replacement-repair of valves up to 100NB.	No	10	20	20	20					
12.4	Replacement-repair of valves above 100NB	No	5	10	20	20					
12.5	Alignment of pumps up to 15 Kws.	No	3	5	20	20					
12.6	Alignment of pumps above 15 Kws.	No	3	5	20	20					
12.7	Pipe line laying up to 100 NB per meter		0								
12.7.a	Above ground laying < 100 NB	mtr	150	300	600	700					
12.7.b	Under ground laying (wrapping coating excluded) < 100 NB	mtr	50	100	100	100					
12.8	Pipe line laying above 100 NB per meter										
12.8.a	Above ground laying > 100 NB	mtr	150	300	500	500					
12.8.b	Under ground laying (wrapping coating excluded) > 100 NB	mtr	50	100	100	100					
12.9	Spray nozzle replacement (Plain water)	No	50	100	300	300					
12.10	Spray nozzle cleaning(30 nos.as one unit)	Unit	3	5	300	300					
12.11	Sprinkler nozzle replacement at stock pile area	No	2	3	20	20					
12.12	Pump suction strainer cleaning	No	1	2	10	10					
12.13	Overhauling of horizontal pumps up to 25 Kws.	No	1	1	5	5					
12.14	Overhauling of horizontal pumps above 25 Kws.	No	1	1	2	2					
12.15	Overhauling of sump pumps up to 10 KW.	No	5	10	10	10					
12.16	Overhauling of sump pumps/submersible pump above 10	No	3	5	10	10					
12.17	Servicing of lubrication system of sump pumps	No	2	3	5	5					
12.18	Lifting of Impeller of sump pump	No	3	5	5	5					
12.19	Bearing replacement of any horizontal pumps	No	1	1	5	5					
12.20	Repair of auto sprinklers	No	3	5	5	5					
12.21	Replacement of coupling rubber/love joy coupling of pump	No	3	5	5	5					
12.22	Gland replacement	No	3	5	5	5					
12.23	Leakage Rectification of water line										
12.23.a	Above ground laying	No	1	2	5	5					
12.23.b	Under ground laying	No	1	2	5	5					
12.24	Replacement of expansion below	No	1	1	5	5					
12.25	Replacement of back pull out assembly	No	1	1	5	5					
	SECTION-XIII										
13.0	LIFTING DEVICES SYSTEM										
13.1	Overhauling with Load testing of Hoist upto 5T	No	5	10	10	10					
13.2	Overhauling with Load testing of Hoist 5T to 10T	No	5	10	10	10					
13.3	Overhauling with Load testing of Hoist above 10T	No	1	2	10	10					
13.4	Overhauling/servicing of any hoists	No	1	2	20	20					
13.5	Pulley bearing replacement of any hoist	No	1	2	20	20					
13.6	Replacement of hoist ropes	mtrs	50	100	200	200					
13.7	Overhauling of Cranes up to 15 T	No	5	10	20	20					
13.8	Overhauling of Cranes above 15 T	No	5	10	20	20					
13.9	Servicing of suspended magnet chain pully block	No	1	2	2	2					

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ANNEXURE - 1.1.1

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Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price(Rs)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	SECTION-XIV										
	MISCLENNIOUS WORKS										
14.0											
14.1	Welding with special purpose electrodes (electrode in	run mtr	100	200	500	500					
14.2	Welding with general purpose electrodes (electrode in	run mtr	250	500	500	500					
14.3	Gas cutting per meter	run mtr	250	500	500	500					
14.4	Painting in two coats (only paint in purchaser's scope)	m2	100	200	1000	1000					
14.5	Bolts tightening 20 nos. as one unit	Unit	50	100	200	200					
14.6	Shortening/replacement of chains	No	1	2	5	5					
14.7	Liner replacement of thruster brake	No	1	2	10	10					
14.8	Brake shoe replacement of mechanical brakes	No	1	2	10	10					
14.9	Overhauling/replacement of gear motors	No	1	2	10	10					
14.11	Coupling guard fixing/ removal works	No	10	20	10	10					
14.12	Oil replacement of gearbox/fluid couplings/oil tank (up to	Unit	5	10	10	10					
14.13	Replacement of wire rope in winch drive.	run mtr	50	100	100	100					
14.14	V' Belt tension adjustment	set	3	5	20	20					
14.15	Hand railing fitting	run mtr	25	50	100	100					
14.16	Labeling of equipment (upto 6" letter size)	No	50	100	200	200					
14.17	Labeling of equipment (above 6" letter size)	No	50	100	200	200					
14.18	Overhauling of scoop coupling	No	5	10	20	20					
14.19	Grease renewal in any bearings of	No	25	50	50	50					
14.20	Grease renewal in any bearings of auxillary system	No	100	200	50	50					
14.21	Fabrication & erection (per MT)	MT	50	100	100	100					
14.22	Adjustment of thruster brakes	No	10	20	20	20					
14.23	Fixing of roofing/floors sheet	sq.mt	100	200	200	200					
14.24	Replacement of gratings	sq.mt	5	10	200	200					
14.25	Laying of Hume pipes including pipe cost.	RM	5	10	10	10					
14.26 a	Earth excavation (manual)	Cum	10	20	20	20					
14.26 b	Back filling of earth	Cum	10	20	20	20					
14.27	Erection of scaffolding	m3	250	500	1000	1000					
14.28	Preventive maintenance of bull dozer/Bobcat/Hydra	No.s									
14.281	Preventive Maint. Of Dozer	No.s	12	24	24	24					
14.282	Preventive Maint. Of Hydra	No.s	6	12	12	12					
14.283	Preventive Maint. Of Bob Cat	No.s	6	12	12	12					
14.284	Preventive Maint. Of Pay Loader	No.s	6	12	12	12					
14.29	Making of Concrete pedestal/Floor concrete	CUM	10	20	20	20					
14.30	Up center rectification of any conveyor pulley	No	3	5	5	5					
14.31	Concrete floor cutting	Sqmtr	10	20	20	20					
14.35	Lubricating of wire rope	Mtr	500	1000	1000	1000					
	Total										

(GST will be extra as applicable)

ANNEXURE - 1.2.1

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
1.0	3.3 KV HT Motor										
1.01	Complete overhauling of motor	No	1	5	12	12					
1.02	Changing/Serviceing of Both side bearing &accs. Of motor	No	1	5	12	12					
1.03	Changing/Serviceing of DE side bearing &accs. Of motor	No	1	5	12	12					
1.04	Changing/Serviceing of NDE side bearing &accs. Of motor	No	1	5	12	12					
1.05	Removal &Shifting of motor from foundation to shed	No	1	5	12	12					
1.06	Shifting of motor from shed& fixing on foundation	No	1	5	12	12					
1.07	Shutdown maintenance works on motor	No	6	12	100	100					
2.0	415 Volt, 90 KW & above motor										
2.01	Complete overhauling of motor	No	1	10	15	15					
2.02	Changing/Serviceing of Both side bearing &accs. Of motor	No	1	10	15	15					
2.03	Changing/Serviceing of DE side bearing &accs. Of motor	No	1	10	15	15					
2.04	Changing/Serviceing of NDE side bearing &accs. Of motor	No	1	10	15	15					

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
2.05	Removal & Shifting of motor from foundation to shed		1	10	15	15					
2.06	Shifting of motor from shed & fixing on foundation	No	1	10	15	15					
2.07	Shutdown maintenance works on motor	No	10	10	55	55					
3.0	415 Volt, 45 kw & above but less than 90kw motor										
3.01	Complete overhauling of motor	No	1	20	20	20					
3.02	Changing/Serviceing of Both side bearing & accs. Of motor	No	1	20	20	20					
3.03	Changing/Serviceing of DE side bearing & accs. Of motor	No	1	20	20	20					
3.04	Changing/Serviceing of NDE side bearing & accs. Of motor	No	1	20	20	20					
3.05	Removal & Shifting of motor from foundation to shed		1	20	20	20					
3.06	Shifting of motor from shed & fixing on foundation	No	1	20	20	20					
3.07	Shutdown maintenance works on motor	No	10	10	40	40					
4.0	415 Volt, 20 kw & above but less than 45 kw motor										
4.01	Complete overhauling of motor	No	1	20	30	30					
4.02	Changing/Serviceing of Both side bearing & accs. Of motor	No	1	20	30	30					
4.03	Changing/Serviceing of DE side bearing & accs. Of motor	No	1	20	30	30					
4.04	Changing/Serviceing of NDE side bearing & accs. Of motor	No	1	20	30	30					
4.05	Removal & Shifting of motor from foundation to shed		1	20	30	30					

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
4.06	Shifting of motor from shed & fixing on foundation	No	1	20	30	30					
4.07	Shutdown maintenance works on motor	No	15	30	85	85					
5.0	415 Volt, 5 kw & above but less than 20 kw motor										
5.01	Complete overhauling of motor	No	5	20	30	30					
5.02	Changing/Serviceing of Both side bearing & accs. Of motor	No	1	20	30	30					
5.03	Changing/Serviceing of DE side bearing & accs. Of motor	No	1	20	30	30					
5.04	Changing/Serviceing of NDE side bearing & accs. Of motor	No	1	20	30	30					
5.05	Removal & Shifting of motor from foundation to shed		1	20	30	30					
5.06	Shifting of motor from shed & fixing on foundation	No	1	20	30	30					
5.07	Shutdown maintenance works on motor	No	35	70	230	230					
6.0	415 Volt, Below 5 KW motor										
6.01	Complete overhauling of motor	No	4	8	40	40					
6.02	Shifting & Reinstallation of motor	No	3	5	15	15					
7.0	Miscellaneous Jobs										
7.01	Misc. Fabrication works	kg	500	1000	2000	2000					
7.02	Serviceing of thruster brake	No	7.5	15	40	40					
7.03	Replacement of thruster brake	No	2.5	5	10	10					

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
7.04	Assistance in Belt Weigher Servicing & Calibration	No	10	20	40	40					
7.05	Replacement & Servicing of pull Cord Switch /Welding Socket/Belt sway switch	No	50	100	600	600					
9.00	Preventive maintenance of local electrical panel	No	100	200	300	400					
10.00	Preventive maintenance of Modules/breakers of MCC	No	150	300	400	400					
11.00	Preventive maintenance of LT Transformers (3.3 KV/415 V)		1	2	12	12					
12.00	Preventive maintenance of HT Transformers (11 KV/3.3 KV)		1	2	2	2					
13.00	Trouble shooting in control panel/MCC										
13.01	Trouble shooting in control panel of MCC/stacker cum reclaimer/PLC(Rectification of all types of electrical & field instrumentation and PLC related faults)including control circuit checking, PLC rectification ,RIO panel faults)	EA	500	1000	800	800					
13.02	Adjustment of CGL make 3.3KV HT breaker rack in and rack out mechanism	EA	50	100	100	100					
13.03	Replacement of vacuum bottle in CGL make 3.3KV HT indoor breaker.	EA	5	10	10	10					
13.04	Changing of 3.3KV Bus duct jumper	EA	10	20	20	20					
13.05	Trouble shooting in CGL make 3.3KV HT breakers	EA	50	100	100	100					
13.06	Trouble shooting in C&S make LT breakers	EA	100	200	200	200					

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
13.07	Trouble shooting in Stacker cum reclaimer PCRD limitswitch for smooth travel of Stacker cum reclaimer	EA	36	72	72	72					
13.08	Trouble shooting in Stacker cum reclaimer CRD limitswitch for smooth travel of Stacker cum reclaimer	EA	36	72	72	72					
13.09	Trouble shooting in Battery charger	EA	60	120	120	120					
13.10	Communication establishment between RIO panels and PLC/HMI	EA	100	200	200	200					
13.11	Battery bank terminal cleaning,measurement of specific gravity of each cell,Acid/DM water top up wherever require.	EA	6	12	12	12					
13.12	Checking of Battery cell voltage and cells specific gravity of a battery bank of 220VDC supply	EA	6	12	12	12					
13.13	Adjustment of field device and its proper fixing. (ex-Limit switch,cam switch etc)	EA	360	720	720	720					
13.14	Fault tracing of different electrical & instrument faults(conveyor,stacker cum reclaimer,track hopper,paddle feeder) using schnieder make PLC and its testing	EA	360	720	720	720					
13.15	Taking Schnieder make PLC back up monthly.(both stacker and control room PLC)	EA	6	12	12	12					
13.16	Minor logic modification in schnieder make PLC and its testing.	EA	6	12	12	12					
13.17	Establishment of communication between different field device with PLC through RIO panel. (ex-ABB VFD drive,rexroth power pack,energy meter,pressure transducer,switch,transducer etc)	EA	6	12	12	12					
13.18	Oil top up in 11KV/3.3KV transformer	Ltr	1000	2000	2000	2000					
13.19	Loop checking between 8MVA transformer marshalling box and HT breaker.		3	6	6	6					
13.20	Replacement upto 225A ABB make VFD drive including dismental from panel and refixing of its new with complete setting	EA	1	3	3	3					
13.21	Checking of hydraulic pressure switch,pressure transducer,pressure gauge and its setting and calibration	EA	30	60	60	60					
13.22	Changing of C&S make LT breaker mechanism with new one.	EA	6	12	12	12					
13.23	Changing of CGL make 3.3KV HT breaker closing coil, tripping coil and breaker limit switch.	EA	6	12	12	12					

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
14.0	Cabling										
14.01	Laying of Cable including Survey & transportation from store with loading and unloading										
14.02	6.6 KV Gr. XLPE Insulated Al. Conductor Armoured Cable(1CX1000sq.mm./3CX400sq.mm/3CX300sq.mm/3CX240sq.mm)	100Mtr	2.5	5	10	10					
14.03	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 1000 sq. mm/3.5C x 400 sq. mm/3C x 300 sq. mm/1C x 630 sq. mm)	100Mtr	2.5	5	10	10					
14.04	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 240 sq. mm/3.5C x150 sq. mm/3C x 150sq. mm/1C x 240sq. mm/2Cx120sq.mm)	100Mtr	2.5	5	10	10					
14.05	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 120sq. mm/3.5C x70sq. mm/3C x 70sq. mm/3.5C x 35sq. Mm/3Cx35sq.mm/2Cx35sq.mm)	100Mtr	5	10	20	20					
14.06	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(4C x 16sq. mm/3C x16sq. mm/2C x 16sq. mm/4C x 4sq. Mm(Cu)/3Cx10sq.mm/3Cx6sq.mm/2Cx6sq.mm)	100Mtr	2.5	5	10	20					
14.07	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(2C x 1.5 sq.mm/2C x 2.5 sq.mm/3C x 1.5 sq.mm/3C x 2.5 sq.mm/4C x 2.5 sq.mm/5C x 2.5 sq.mm/7C x 2.5 sq.mm)	100Mtr	15	30	30	50					
14.08	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(9C x 2.5 sq.mm/10C x 2.5 sq.mm/12C x 2.5 sq.mm/14C x 2.5 sq.mm/16C x 2.5 sq.mm/19C x 2.5 sq.mm)	100Mtr	1	2	5	10					
14.09	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(27C x 1 sq.mm/19C x 1 sq.mm/16C x 1 sq.mm/14C x 1 sq.mm/10P x 0.8 sq.mm/7P x 0.8 sq.mm/6P x 0.8 sq.mm/12P x 0.8sq.mm)	100Mtr	0.5	1	1	1					
14.10	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(10C x 1sq.mm/9Cx1sq.mm/7C x 1sq.mm/4Cx1sq.mm/3C1sq.mm/2Cx1sq.mm/5C1sq.mm/4Px1sq.mm/2Px1 sq.mm/1Px1sq.mm/5Px0.8sq.mm/3Px0.8sq.mm/2Px0.8sq.mm/1Px0.8sq. mm/4Px0.5sq.mm/2Px0.5sq.mm/1Px0.5sq.mm/4Px0.9sq.mm/2Px0.9sq.m m) 16P x 0.5 sq.mm/12P x 0.5 sq.mm/12P x 1 sq.mm/8P x 0.5 sq.mm/50P x 0.9 sq.mm/20P x 0.9 sq.mm/10P x 0.9 sq.mm)	100Mtr	0.5	1	1	1					

	Job Description	UOM	Quantity			Unit Job Rate (Rs.)	Price (Rs.)					
			COD 06 months	1st Yr.	2nd Yr.		3rd Yr.	COD 06 months	1st Yr.	2nd Yr.	3rd Yr.	
	Electrical Maintenance											
	Cable Termination both ends including elastimould connector, if required(One Set = Two ends)											
14.11	6.6 KV Gr. XLPE Insulated Al. Conductor Armoured Cable(1CX1000sq.mm./3CX400sq.mm/3CX300sq.mm/3CX240sq.mm)	set	0.5	1	2	4						
14.12	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 1000 sq. mm/3.5C x 400 sq. mm/3C x 300 sq. mm/1C x 630 sq. mm (Cu))	set	0.5	1	2	4						
14.13	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 240 sq. mm/3.5C x150 sq. mm/3C x 150sq. mm/1C x 240sq. Mm/ 2CX120sq.mm)	set	0.5	1	2	4						
14.14	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 120sq. mm/3.5C x70sq. mm/3C x 70sq. mm/3.5C x 35sq. Mm/ 3Cx35sq.mm/2Cx35sq.mm)	set	2.5	5	20	30						
14.15	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(4C x 16sq. mm/3C x16sq. mm/2C x 16sq. mm/4C x 4sq. Mm(Cu)/ 3Cx10sq.mm/3Cx6sq.mm/2Cx6sq.mm)	set	5	10	30	50						
14.16	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(2C x 1.5 sq.mm/2C x 2.5 sq.mm/3C x 1.5 sq.mm/3C x 2.5 sq.mm/4C x 2.5 sq.mm/5C x 2.5 sq.mm/7C x 2.5 sq.mm)	set	5	10	20	30						
14.17	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(9C x 2.5 sq.mm/10C x 2.5 sq.mm/12C x 2.5 sq.mm/14C x 2.5 sq.mm/16C x 2.5 sq.mm/19C x 2.5 sq.mm)	set	2.5	5	10	20						
14.18	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(27C x 1 sq.mm/19C x 1 sq.mm/16C x 1 sq.mm/14C x 1 sq.mm/10P x 0.8 sq.mm/7P x 0.8 sq.mm/6P x 0.8 sq.mm/12P x 0.8sq.mm)	set	1	2	5	5						

	Job Description	UOM	Quantity			Unit Job Rate (Rs.)	Price (Rs.)					
			COD 06 months	1st Yr.	2nd Yr.		3rd Yr.	COD 06 months	1st Yr.	2nd Yr.	3rd Yr.	
	Electrical Maintenance											
14.19	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(10C x 1sq.mm/9Cx1sq.mm/7C x 1sq.mm/4Cx1sq.mm/3C1sq.mm/2Cx1sq.mm/5C1sq.mm/4Px1sq.mm/2Px1sq.mm/1Px1sq.mm/5Px0.8sq.mm/3Px0.8sq.mm/2Px0.8sq.mm/1Px0.8sq.mm/4Px0.5sq.mm/2Px0.5sq.mm/1Px0.5sq.mm/4Px0.9sq.mm/2Px0.9sq.mm) 16P x 0.5 sq.mm/12P x 0.5 sq.mm/12P x 1 sq.mm/8P x 0.5 sq.mm/50P x 0.9 sq.mm/20P x 0.9 sq.mm/10P x 0.9 sq.mm)	set	0.5	1	1	1						
	Cable jointing											
14.20	6.6 KV Gr. XLPE Insulated Al. Conductor Armoured Cable(1CX1000sq.mm./3CX400sq.mm/3CX300sq.mm/3CX240sq.mm)	No	10	20	10	10						
14.21	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 1000 sq. mm/3.5C x 400 sq. mm/3C x 300 sq. mm/1C x 630 sq. mm (Cu))	No	0.5	1	2	2						
14.22	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 240 sq. mm/3.5C x150 sq. mm/3C x 150sq. mm/1C x 240sq. Mm/ 2CX120sq.mm)	No	0.5	1	2	4						
14.23	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 120sq. mm/3.5C x70sq. mm/3C x 70sq. mm/3.5C x 35sq. Mm/ 3Cx35sq.mm/2Cx35sq.mm)	No	0.5	1	2	4						
14.24	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(4C x 16sq. mm/3C x16sq. mm/2C x 16sq. mm/4C x 4sq. Mm(Cu)/ 3Cx10sq.mm/3Cx6sq.mm/2Cx6sq.mm)	No	0.5	1	2	4						
14.25	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(2C x 1.5 sq.mm/2C x 2.5 sq.mm/3C x 1.5 sq.mm/3C x 2.5 sq.mm/4C x 2.5 sq.mm/5C x 2.5 sq.mm/7C x 2.5 sq.mm)	No	0.5	1	2	4						
14.26	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(9C x 2.5 sq.mm/10C x 2.5 sq.mm/12C x 2.5 sq.mm/14C x 2.5 sq.mm/16C x 2.5 sq.mm/19C x 2.5 sq.mm)	No	0.5	1	2	4						

	Job Description	UOM	Quantity			Unit Job Rate (Rs.)	Price (Rs.)				
			COD 06 months	1st Yr.	2nd Yr.		3rd Yr.	COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
14.27	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(27C x 1 sq.mm/19C x 1 sq.mm/16C x 1 sq.mm/14C x 1 sq.mm/10P x 0.8 sq.mm/7P x 0.8 sq.mm/6P x 0.8 sq.mm/12P x 0.8sq.mm)	No	0.5	1	1	1					
14.28	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(10C x 1sq.mm/9Cx1sq.mm/7C x 1sq.mm/4Cx1sq.mm/3C1sq.mm/2Cx1sq.mm/5C1sq.mm/4Px1sq.mm/2Px1 sq.mm/1Px1sq.mm/5Px0.8sq.mm/3Px0.8sq.mm/2Px0.8sq.mm/1PX0.8sq. mm/4Px0.5sq.mm/2Px0.5sq.mm/1Px0.5sq.mm/4Px0.9sq.mm/2Px0.9sq.m m) 16P x 0.5 sq.mm/12P x 0.5 sq.mm/12P x 1 sq.mm/8P x 0.5 sq.mm/50P x 0.9 sq.mm/20P x 0.9 sq.mm/10P x 0.9 sq.mm)	No	0.5	1	1	1					
	Fault cable tracing, dismantling, rerolling, shifting from site to store with loading and unloading										
14.29	6.6 KV Gr. XLPE Insulated Al. Conductor Armoured Cable(1CX1000sq.mm. /3CX400sq.mm/3CX300sq.mm/3CX240sq.mm)	100Mtr	2.5	5	5	5					
14.30	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 1000 sq. mm/3.5C x 400 sq. mm/3C x 300 sq. mm/1C x 630 sq. mm/3C x 300 sq. mm)	100Mtr	2.5	5	5	5					
14.31	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 240 sq. mm/3.5C x 150 sq. mm/3C x 150sq. mm/1C x 240sq. mm/3C x 150 sq. mm)	100Mtr	2.5	5	5	5					
14.32	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(1C x 120sq. mm/3.5C x 70sq. mm/3C x 70sq. mm/3.5C x 35sq. Mm/ 3Cx35sq.mm/2Cx35sq.mm)	100Mtr	2.5	5	5	5					
14.33	650/1100 Volt grade PVC insulated Al./Cu. Conductor armoured LT Power cable(4C x 16sq. mm/3C x 16sq. mm/2C x 16sq. mm/4C x 4sq. Mm(Cu)/ 3Cx10sq.mm/3Cx6sq.mm/2Cx6sq.mm)	100Mtr	2.5	5	5	5					
14.34	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(2C x 1.5 sq.mm/2C x 2.5 sq.mm/3C x 1.5 sq.mm/3C x 2.5 sq.mm/4C x 2.5 sq.mm/5C x 2.5 sq.mm/7C x 2.5 sq.mm)	100Mtr	2.5	5	5	5					
14.35	650/1100 V gradw PVC insulated Cu. Conductor armored control cable(9C x 2.5 sq.mm/10C x 2.5 sq.mm/12C x 2.5 sq.mm/14C x 2.5 sq.mm/16C x 2.5 sq.mm/19C x 2.5 sq.mm)	100Mtr	2.5	5	5	5					

	Job Description	UOM	Quantity			Unit Job Rate (Rs.)	Price (Rs.)					
			COD 06 months	1st Yr.	2nd Yr.		3rd Yr.	COD 06 months	1st Yr.	2nd Yr.	3rd Yr.	
	Electrical Maintenance											
14.36	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(27C x 1 sq.mm/19C x 1 sq.mm/16C x 1 sq.mm/14C x 1 sq.mm/10P x 0.8 sq.mm/7P x 0.8 sq.mm/6P x 0.8 sq.mm/12P x 0.8sq.mm)	100Mtr	2.5	5	5	5						
14.37	650/1100 V gradw PVC insulated Cu. Conductor armored Inst. / tel. cable(10C x 1sq.mm/9Cx1sq.mm/7C x 1sq.mm/4Cx1sq.mm/3Cx1sq.mm/2Cx1sq.mm/5C1sq.mm/4Px1sq.mm/2Px1sq.mm/1Px1sq.mm/5Px0.8sq.mm/3Px0.8sq.mm/2Px0.8sq.mm/1PX0.8sq.mm/4Px0.5sq.mm/2Px0.5sq.mm/1Px0.5sq.mm/4Px0.9sq.mm/2Px0.9sq.m m) 16P x 0.5 sq.mm/12P x 0.5 sq.mm/12P x 1 sq.mm/8P x 0.5 sq.mm/50P x 0.9 sq.mm/20P x 0.9 sq.mm/10P x 0.9 sq.mm)	100Mtr	2.5	5	5	5						
	Erection of Cable trays											
14.38	600 mm ladder type/450 mm perforated type/300 mm perforated type cable tray.	100mtr	2.5	5	5	5						
14.39	150 mm perforated type cable tray.	100mtr	2.5	5	5	5						
	Erection of Cable trays cover with its clamp fixing											
14.40	600 mm ladder type/450 mm perforated type/300 mm wide cable tray cover	100mtr	2.5	5	5	5						
14.41	150 mm wide cable tray cover	100mtr	2.5	5	5	5						
	Dressing of Cable											
14.42	600mm/450mm wide cable trays	1mtr	15	30	50	100						
14.43	300 mm/150mm wide cable tray	1mtr	15	30	50	100						
	Erection of Junction box											
14.44	150 x 150 x 100mm,300 x 250 x 150mm,300 x 200 x 100 mm,450 x 250 x 100mm	No	5	10	5	5						
14.45	600 x 300 x 150mm,600 x 300 x 100mm,800 x 400 x 150 mm,800 x 550 x 150mm	No	5	10	5	5						

	Job Description	UOM	Quantity				Unit Job Rate (Rs.)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
	Electrical Maintenance										
	Miscellaneous jobs and Civil Jobs related to cabling										
14.46	Fabrication and erection of MS structural steel including Hardware, consumables, welding etc. for support arrangement of cable tray etc. including transportation from store to site.	KG	25	50	200	500					
14.47	Excavation, soil covering, back filling, ramming for burying cable Direct on soil	cum	50	100	50	100					
14.48	Installation & laying of bricks for 1000 nos	100Nos	5	10	5	5					
15.0	Lighting		0								
15.01	Checking of electrical circuit & replacement/rectification of Lighting system(70 W /125/ W/150/250 W HPSV/HPMV/MH well Glass type Lamps & Accessories)	No	150	300	500	800					
15.02	Checking of electrical circuit & replacement/rectification of Tube Light & accessories	No	25	50	50	100					
15.03	Checking of electrical circuit & replacement/rectification of Sky Flood light	No	25	50	50	50					
15.04	Checking of electrical circuit & replacement/rectification of High Bay light	No	50	100	50	50					
15.05	Checking of electrical circuit & replacement/rectification of Boundary Flood Light High Bay light	No	25	50	50	50					
15.06	Checking of electrical circuit & replacement/rectification of street light	No	25	50	50	50					
15.07	Laying and fixing of casing capping in surface by help of drilling hole and fitted with ceiling grip as directed by engineer in charge	10mtr	25	50	50	20					
15.08	Laying of wires/cables in side casing capping	10mtr	50	100	50	20					
15.09	Laying and fixing of GI Conduit in surface by help of drilling hole and fitted with ceiling grip as directed by engineer in charge.	10mtr	50	100	50	20					
15.10	Laying of wires/cables in side GI Conduit	10mtr	50	100	50	20					

PRICE BID FORMAT FOR EQUIPMENT CLEANING IN COAL HANDLING PLANT

(ANNEXURE - 1.3.1)

Sl. No.	Location/ Area	UOM	Quantity				Unit Rate (Rs)	Price (Rs.)			
			COD 06 months	1st Yr.	2nd Yr.	3rd Yr.		COD 06 months	1st Yr.	2nd Yr.	3rd Yr.
1	Cleaning of Conveyors										
1.01	Conveyor BC - 11A / 11B	No.s	26	52	52	52					
1.02	Conveyor BC - 12A / 12B	No.s	26	52	52	52					
1.03	Conveyor BC - 13A / 13B	No.s	26	52	52	52					
1.04	Conveyor BC - 14A / 14B	No.s	26	52	52	52					
1.05	Conveyor BC - 15A / 15B	No.s	26	52	52	52					
1.06	Conveyor BC - 16A / 16B	No.s	26	52	52	52					
1.07	Conveyor BC - 17A / 17B	No.s	26	52	52	52					
1.08	Conveyor BC - 18A / 18B	No.s	26	52	52	52					
1.09	Conveyor BC - 19A / 19B	No.s	26	52	52	52					
1.10	Conveyor BC - 20A / 20B	No.s	26	52	52	52					
1.11	Conveyor BC - 21A / 21B	No.s	26	52	52	52					
1.12	Conveyor BC - 21A / 21B	No.s	26	52	52	52					
1.13	Conveyor BC - 22A / 22B	No.s	26	52	52	52					
1.14	Conveyor BC - 23A / 23B	No.s	26	52	52	52					
1.15	Conveyor BC - 24A / 24B	No.s	26	52	52	52					
1.16	Conveyor BC - 25A / 25B	No.s	26	52	52	52					
1.17	Conveyor BC - 26	No.s	26	52	52	52					
1.18	Conveyor BC - 27 (Emergency Reclaim Conveyor)	No.s	26	52	52	52					
1.20	Stacker Reclaimer Conveyor	No.s	26	52	52	52					
2	Cleaning of conveyor drains										
2.01	Conveyor BC - 11A / 11B	No.s	15	30	30	30					
2.02	Stacker Reclaimer conveyor	No.s	15	30	30	30					
2.03	Conveyor BC - 27 (Emergency Reclaim Conveyor)	No.s	30	15	15	15					
3	Cleaning of Floors beneath the Conveyors at Ground										
3.01	Conveyor BC - 12A / 12B	No.s	20	40	40	40					
3.02	Conveyor BC - 13A / 13B	No.s	20	40	40	40					
3.03	Conveyor BC - 14A / 14B	No.s	5	10	10	10					
3.04	Conveyor BC - 15A / 15B	No.s	23	45	45	45					
3.05	Conveyor BC - 16A / 16B	No.s	23	45	45	45					
3.06	Conveyor BC - 16A / 16B	No.s	23	45	45	45					
3.07	Conveyor BC - 17A / 17B	No.s	23	45	45	45					
3.08	Conveyor BC - 18A / 18B	No.s	23	45	45	45					
3.09	Conveyor BC - 19A / 19B	No.s	23	45	45	45					
3.10	Conveyor BC - 20A / 20B	No.s	23	45	45	45					
3.10	Conveyor BC - 26	No.s	15	30	40	45					

ANNEXURE - 2

Exclusive (not exhaustive) list of tools tackles to be maintained by the AMC contractor at CHP. The maintenance (claibration , testing , replacing against damged ones as per statutory requirements / OPGC EHS Norms) shall be done by the contractor. The purchaser shall have exclusive right of inspection, rejection of tools tackles at any point of time

Any other tools-tackles specifically not covered in this list of contractors scope but needed for execution of the job shall be deemed to considered in contractors scope, exclusion shall apply to purchaser supplied ones mentioned below.

LIFTING TOOLS - TACKLES (Contractor)

Sl. No.	Item Description	UOM	Qty.
1.01	Chanin Block - 10 T, 30 mtr lift	No.s	2
1.02	Chanin Block - 10 T, 10 mtr lift	No.s	2
1.03	Chanin Block - 5 T, 30 mtr lift	No.s	2
1.04	Chanin Block - 5 T, 20 mtr lift	No.s	2
1.05	Chanin Block - 2 T, 20 mtr lift	No.s	2
1.06	Huk Chuk - 5 T	No.s	2
1.07	Huk Chuk - 3 T	No.s	1
1.08	Hydraulic Jack - 100 T	No.s	2
1.09	Hydraulic Jack - 50 T	No.s	2
1.1	D Shackle - 20 T capacity	No.s	8
1.11	D Shackle - 10 T capacity	No.s	8
1.12	D Shackle - 5 T capacity	No.s	4
1.13	Turn Buckle - 5T	No.s	4
1.14	Rope Sling - 20 T - 10 mtr	No.s	4
1.15	Rope Sling - 20 T - 6 mtr	No.s	2
1.16	Rope Sling - 10 T - 10 mtr	No.s	4
1.17	Rope Sling - 10 T - 6 mtr	No.s	2
1.18	Rope Sling - 5 T - 10 mtr	No.s	4
1.19	Rope Sling - 5 T - 6 mtr	No.s	2
1.20	Web Sling - 10T - 6 mtr	No.s	2
1.21	Web Sling - 5 T - 6 mtr	No.s	2
1.22	Wire rope x 16 mm dia	mtr	700
1.23	Torque Wrench 500 Nmtr	No.s	1
1.24	Torque Wrench 1300 Nmtr	No.s	1
1.25	20 T rope pulley	No.s	6
1.26	10 T rope pulley	No.s	6
1.27	5 T rope pulley	No.s	6

Measuring Instruments List (Contractor)

Sl. No.	Item Description	UOM	Qty.
2.01	Dial Gauge (LC - 0.01)	No.s	4
2.02	Magnetic Stand for Dial Gauge	No.s	4
2.03	Vernier - 600 mm	No.s	1
2.04	Vernier - 300 mm	No.s	1
2.05	Steel Scale - 600 mm	No.s	2
2.06	30 mtr measuring tape	No.s	2
2.07	Contact less temperature measuring instrument	No.s	2

Electrical Instruments List (Contractor)

Sl. No.	Item Description	UOM	Qty.
3.01	24 V DC rectifier (Light)	No.s	4
3.02	Extension boards with ELCB / RCCB	No.s	16
3.03	Portable Blowers	No.s	4
3.04	Digital Megger - 1 G ohm	No.s	1
3.05	Multimeter	No.s	4

Safety Harness List (Contractor)

Sl. No.	Item Description	UOM	Qty.
4.01	Full Body Harness with cushioning arrangement (ISI Standard)	No.s	20
4.02	Fall Back Arresotor	No.s	4
4.03	Wire rope for making life line	Lot	1

Equipments List

5.01	3 Phase portable welding transformer	No.s	4
5.02	3 Phase welding transformer	No.s	4
5.03	Single Phase portable welding Transformer	No.s	4
5.04	DG welding transformer	No.s	1
5.05	Magnetic Drilling M/c (up to 32 mm dia drill)	No.s	2

Tools Tackles, Equipments, Safety Harnesses in Purchaser's scope

6.01	Arc Flash Suite (50 Kcal/m ²)	No.s	4
6.02	Walky Talky	sets	30
6.03	Multigas detector	set	2
6.04	Dynamometer (30 T)	No.s	1
6.05	Hydra (17 T Capacity) (without operator)	No.s	1
6.06	Bobcat (without operator)	No.s	1
6.07	Scaffolding material	Lot	1
6.08	Fire hose reels	Lot	1
6.09	Hot vulcanising M/c	No.s	2
6.10	Fire extinguishers	Lot	1

ANNEXURE - 3

DEPLOYMENT OF PERSONS FOR ASSISTANCE IN COAL FEEDING AT CHP SYSTEM

SL. No.	Location (CHP System)	Designation	Per Shift manning in No.s	Qualification
1	Track Hopper MCC Room	Electrician	1	ELC - 3
2	Track Hopper MCC Room	Jr. Electrician	1	ELC - 4
3	CHP Main Control Room	Sr. Electrician	1	ELC - 2
4	CHP Main Control Room	Jr. Electrician	1	ELC - 4
5	Stacker - Reclaimer / Emergency Reclaim hopper	Sr. Operator	1	STC - 1
6	Stacker - Reclaimer / Emergency Reclaim hopper	Jr. Operator	1	ELC - 4
7	Track Hopper (above ground)	Operator	1	OP - 2
8	Paddle Feeder operation	Operator	2	OP - 1
9	Crusher House	Operator	2	OP - 1
10	Crusher House	Jr. Operator	1	OP - 2
11	Bunker Floor	Operator	2	OP - 1
12	Bunker Floor	Jr. Operator	2	OP - 2
13	TP - 16, TP - 17 & TP - 18	Operator	1	OP - 2
14	Dozer Opeator	Sr. Operator	1	DZ - 1
15	CHP Bunker MCC Room	Instrumentation	1	INS - 3
16	CHP Bunker MCC Room	Jr. Electrician	1	ELC - 4
17	Shift Supervisor	Supervisor	1	SV - 1
			21	

Total Manning in all four shifts		84
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18	Field Supervisor (general shift)	Supervisor	1	FS - 1
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Total Manning - 85

QUALIFYING CRITERIA FOR DEPLOYED PERSONS

a	ITI Electrical with minimum 15 years experience, LT License	ELC - 1
b	ITI Electrical with minimum 08 years experience, LT License	ELC - 2
c	ITI Electrical with minimum 04 years experience, LT License	ELC - 3
c	ITI Electrical	ELC - 4
d	ITI Electrical with minimum 10 years experience in stacker operation	STC - 1
e	ITI Electrical or Fitter with minimum 4 years experience in operation of CHP equipments	OP - 1
f	ITI Fitter	OP - 2
g	Dozer Operator with Heavy vehicle License, minimum experience of 03 years (Operation & minor repairing)	DZ - 1
h	Operation Helper (Weigh bridge Control Room Operatotion, Misc. jobs)	OH - 1
i	Diploma (or Degree) in Mechanical/Electrical with four years working experience	SV - 1 / FS - 1
j	ITI Instrumentation with 4-6 years experience	INS - 3

May please be noted that the qualifying criteria shall be relaxed in case of competent & deserving candidates.