MAIN ANNEXURE

Price Annexure: Schedule of Price Break up for BMC of Boiler & Auxiliary for Phase-1 & Phase-2-Year 2017-19				
Part No.	Description	Unit.	Total Cost as per Annexure A1& B1 for Phase-1 for two years	Total Cost as per Annexure A2 & B2 for Phase-2 for two years
	Refer Annexure		**Annexure A1/B1**	**Annexure A2/B2**
A	Pressure Parts	Rs.	16489046	11963106
B	SA Fan / PA fan	Rs.	692670	855006
C	ID Fan	Rs.	431682	373976
D	Lube Oil Units & Scanner Air Fan	Rs.	227626	232474
E	Blowers	Rs.	944088	912468
F	Bed Ash Conveying System	Rs.	3546108	3493756
G	Lignite / Limestone Feeding System	Rs.	7369254	4735406
H	E.S.P.	Rs.	1085000	1226166
I	Duct/Damper/NMEJ/MEJ	Rs.	4355134	4952150
J	Fuel Firing System.	Rs.	467524	701652
K	Valves	Rs.	894994	1048856
L	Soot Blower	Rs.	1521478	1779962
M	Fuel Oil Handling	Rs.	211484	129420
N	Emergency Boiler Feed Pump	Rs.	120402	129162
O	Hoist	Rs.	76276	193992
P	External Cleanings	Rs.	477786	477786
Q	Vortex Finder	Rs.	3369594	3369594
Row1	Total Cost for both year	Rs.	42280146	36574932
Row2	Total Cost for First year (50% of Row1)	Rs.	21140073	18287466
Row3	Total Cost for Second year (Row1- Row2)	Rs.	21140073	18287466
Row4	Escalation on Total Cost Second year (5% on Row3)	Rs.	1057004	914373
Row5	Total 2nd Year cost including Escalation (Row{3+4})	Rs.	22197077	19201839
Row6	Final Total cost before Service charge & service tax(Row1+5)	Rs.	43337150	37489305
Row8	Grand Total Estimated cost (Rounded off)	Rs.	8,08,26,455	
Row9	Unforeseen Cost Estimation for Two year	Rs.	2000000	
	Refer Annexure		**Annexure B3**	
Row10	Unforeseen Cost Estimation for First year (50% of Row9)	Rs.	1000000	
Row11	Unforeseen Cost Estimation for Second year (Row9- Row10)	Rs.	1000000	
Row12	Escalation on Unforeseen Cost Second year 5% on Row11	Rs.	50000	
Row13	Total 2nd Year cost including Escalation Row{11+12}	Rs.	1050000	
Row14	Final unforeseen cost before Service charge & service tax Row10 + Row 13	Rs.	2050000	
Row15	Grand Total Estimated cost (including unforeseen -Rounded off Row{8+14})	Rs.	8,28,76,455	
Row16	Service Charges/Profit [To be Quote as Percentage on "Sum of all cost-i.e.8,28,76,455" by Vendor in online price bid only]	%	__+X/-Y_%	
Row17	Total before tax **[Row15 + X or (-Y)% of Row15]**	Rs.	**[Row15 + X or (-Y)% of Row15] = ____Rs**	
Row18	Applicable taxes **[15% of Row 17]**		_15_% (Prevailing tax: 15% service tax)	
Row19	Final Contract value including taxes		**(Row17 + Row18)=** _____Rs.	

Annexure A1

Schedule of Price Break up for BMC of Boiler & Auxiliary for Unit 1 & 2(Phase-1)

Year 2017-19

Part No.	Description	Unit.	Total Cost for Phase-1
A	Pressure Parts	Rs.	1,64,89,046
B	SA Fan / PA fan	Rs.	6,92,670
C	ID Fan	Rs.	4,31,682
D	Lube Oil Units & Scanner Air Fan	Rs.	2,27,626
E	Blowers	Rs.	9,44,088
F	Bed Ash Conveying System	Rs.	35,46,108
G	Lignite / Limestone Feeding System	Rs.	73,69,254
H	E.S.P.	Rs.	10,85,000
I	Duct/Damper/NMEJ/MEJ	Rs.	43,55,134
J	Fuel Firing System.	Rs.	4,67,524
K	Valves	Rs.	8,94,994
L	Soot Blower	Rs.	15,21,478
M	Fuel Oil Handling	Rs.	2,11,484
N	Emergency Boiler Feed Pump	Rs.	1,20,402
O	Hoist	Rs.	76,276
P	External Cleanings	Rs.	4,77,786
Q	Vortex Finder	Rs.	33,69,594
Row1	Total Cost for both year	Rs.	4,22,80,146
Row2	Total Cost for First year (50% of Row1)	Rs.	2,11,40,073
Row3	Total Cost for Second year (Row1- Row2)	Rs.	2,11,40,073
Row4	Escalation on Total Cost Second year 5% on Row3	Rs.	10,57,004
Row5	Total 2nd Year cost including Escalation Row{3+4}	Rs.	2,21,97,077
Row6	Final Total cost before Service charge & service tax Row1 + Row 5	Rs.	4,33,37,150

Refer Annexure B1 for Detail like list of activity in each part (A to Q), name of each activity, scope of work for each activity ,Nature of work, Unit of measurement, Estimated biannual Quantity, First year rate etc…..

Annexure B1

Detail Price Schedule for BMC of Boiler & Auxiliary for Unit 1 & 2(Phase-1)-

Year 2017-19

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1. Scaffolding							
1	Erection of scaffolding and platform inside combustor, from grate to roof of the combustor I.e height upto 32 mtr. Size of combustor is 7.5 meter X 12.5 meter and 32 meter height (one entire combustor considered as one no.). Layher all round scaffolding materials to be provided by GIPCL. Combustor grate is 6.5 meter elevation from ground level.	Erection of M/s. Layher make (Ring & wedge type) scaffolding and platform inside combustor from combustor nozzle Grate level to roof of the combustor I.e upto 32 mtr. (Scaffolding shall be given by GIPCL). GA drawing of Boiler is attached.	BD	No.	2	293619	587238
2	Erection of scaffolding and platform inside combustor from combustor grate to 15 meter elevation, at any one corner or any one wall of Combustor. Size of scaffolding is 6 meter x 6 meter upto 15 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform along with hand railing at different elevation & proper climbing approach as ladder as per instruction of E-I-C. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	6	29700	178200

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Erection of scaffolding and platform inside combustor above 15 mtr elevation on the scaffolding erected as per S NO 1.2. (per meter height). Rate applicable is per meter height. Scaffolding materials in the scope of contractor.	Erect the scaffloding above 15.5mtr elevation as per instruction of E-I-C, on the already erected scaffolding as per S No 1.2Make the platform at different elevation along with hand railing at different elevation as per instruction of E-I-C.	BD	Per Mtr.	2	2160	4320
4	Erection of scaffolding in combustor windbox. Size of scaffolding - 12mx7mx2m.(One entire windbox considered as one no.). Scaffolding materials in the scope of contractor.	Shift scaffolding material from store to site. Erect scaffolding. Make proper plateform at diiferent elevation.as per instruction of EIC. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	10	9240	92400
5	Erection of scaffolding in FBHE Bundle chamber/Empty chamber/Seal pot / for Miscelleneous work Size of scaffolding - 2mx2mx3m .Scaffolding materials in the scope of contractor.	Shift scaffolding material from store to site. Erect scaffolding. Make proper plateform at diiferent elevations as per instruction of EIC. Scaffolding erected may be require to adjust for refractory works as per instruction of EIC. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	24	660	15840

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Erection of scaffolding in economiser hopper Size of scaffolding - 2mx2mx3m. Scaffolding materials in the scope of contractor.	Shift necessary scaffolding material. Make proper scaffolding & platform as per instruction of EIC. Remove the scaffolding.	BD	No.	2	660	1320
7	Erection of scaffloding for seal pot to cyclone roof. Size of scaffolding - around 10.5 mtr. elevation to cyclone roof at around 40 mtr elevation. Cyclone diameter at bottom is approx. 2 M and at top is approx. 8.8 M. Scaffolding materials in the scope of contractor. Make proper platform at different elevation.	Erection of scaffloding for seal pot to cyclone roof. Size of scaffolding - around 10.5 mtr. elevation to cyclone roof at around 40 mtr elevation. Cyclone diameter at bottom is approx. 2 M and at top is approx. 8.8 M. Scaffolding materials in the scope of contractor. Make proper platform at different elevation.	BD	No.	2	88094	176188
8	Erection of scaffolding for Miscelleneous work. Upto 6 meter height. Size - length 3mx breadth 6m, height 6 m is considered as one no of scaffolding erection.Scaffolding materials in the scope of contractor.	Erect the scaffolding outside the boiler up to 6 meter height as per instruction of E-I-C. Make proper approach and platform as per instruction of E-IC.Dismantle the scaffolding & shift material to store.	BD	No.	300	5508	1652400

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
9	Erection of scaffolding for Miscelleneous work. above 6 meter height on the scaffolding erected as per S. No. 1.8. (per mtr. height). Rate applicable is per meter height. Scaffolding materials in the scope of contractor.	Erect the scaffolding outside the boiler above 6 meter height as per instruction of E-I-C on the already erected scaffolding as per S. No. 1.8. Make proper approach and platform as per instruction of EIC. Dismantle the scaffolding & shift material to store.	BD	Per Meter	100	918	91800
10	Erection of cantilever type scaffolding at different locations. Size of scaffolding is 3meter X 5 meter cantilever length X 6 meter height. Scaffolding materials in the scope of contractor.	Shift the scaffloding material to location. The scaffloding will be cantiliver type.Height of the scaffloding 6 mtr up/down.(approx) The said scaffloding needs to extended @ 5 mtr from the opening.Dismantle the scaffolding & shift material to store.	BD	No.	4	45000	180000
11	Erection of scaffolding and platform inside combustor for SUBs Repairing/Replacement. Size: 3 meter length X 3 meer width X 4 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform as per instruction of E-I-C for SUBs repairing/Replacement work. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No	6	1980	11880

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Erection of scaffolding at Slant Portoin of Seal Pot from inside of Combuster. Size: 5 mete length X 1 meter widthX 6 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform as per instruction of E-I-C for for refractory application work Finally dismantle and shift the scaffolding material to store after work completion.	BD	No	20	1650	33000
2. Boiler Tube Repairs					0	0	0

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Attending tube leakages upto first 10 joints in one frequency (irrerpective of total no. of joints) in Combuster waterwall/Steam cooled walls/FBHE Water walls /Economiser/ Evoparator coil/ Hanger tubes/ Loose tubes / Spray water piping.Note : Material is carbon steel & low alloy steel i.e. upto (SA 209 T1) grade. Any other tube leakage observed in hydro test is also included in first 10 joints.Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.	Inspect and identify the exact location of tube leakage. Lift / lower / pull the coils if required for tube repair. Make necessary cutting of duct/steam cooled wall/water wall for pulling out coils. Clean the tubes for thickness measurement as per instructions of EIC. Cut the tubes by grinding m/cs, hacksaw m/cs. Edge prepare the joint. Prepare the spool piece of required size. Fit up the joint with clearence from Engineer I/C. Root weld with TIG and subsequent by MMAW. Carry out boiler hydrotest. Repair the defect observed in radiography / hydrotest. Any other tube leakage observed in hydro test is also included in first 10 joints. Normalise all earlier cutting as per instruction of E-I-C.Flush grind joints from hot side. Make necessary licening with state Boiler inspector.Including Fins welding.. Minimum 2Prressure part fitter,2 IBR welders with grinders and helpers required during BTL.	BD	One unit	24	60000	1440000
14	Welding of each additional joint beyond 10 joints as mentioned in para 2.1	--- do ---	BD	No.	2400	1400	3360000

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
15	Attending tube leakages upto first 10 joints in one frequency (irrerpective of total no. of joints) in FBHE coils viz. RH-1,SH 2, in Back pass viz SH 1B, RH-2, SH-3 and its hanger tubes, loose tubes . Note : Material is SA 209 T11 and above grade. Argon purging / Nitrogen purging and Pre and Post heat treatment to be done for T-91 material and Alloy steel material.Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.Any other tube leakage observed in hydro test is also included in first 10 joints.	Inspect and identify the exact location of tube leakage. Lift / lower / pull the coils if required for tube repair. Make necessary cutting of duct/steam cooled wall/water wall for pulling out coils. Clean the tubes for thickness measurement as per instructions of EIC. Cut the tubes by grinding m/cs, hacksaw m/cs. Edge prepare the joint. Prepare the spool piece of required size. Fit up of joint shall be checked by EIC. Root weld with TIG and subsequent by SMAW. stress relieved the welded joint if required. Carry out boiler hydrotest. Repair the defect observed in radiography / hydrotest. Any other tube leakage observed in hydro test is also included in first 10 joints.Normalise all earlier cutting as per instruction of E-I-C.Flush grind joints from hot side. licening with state Boiler inspector.Including Fins welding....Minimum 2 IBR welders with grinders and helpers required during BTL.	BD	One unit	6	60000	360000
16	Welding of each additional joint beyond 10 joints as mentioned in para 2.2	--- do ---	BD	No.	100	1600	160000

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
17	Welding of HP joint in steam/ water line upto 100 mm dia and upto a maximum thickness of 18 mm.(including joints for replacement of valves) Note : It includes pre and post weld HT wherever required.	Carry out welding of joint in supply tubes/Riser tubes/headers/connecting link etc.for attending any leakage/modification/inspection/replacement of pipes etc. works. This will includes removal/application of insulation along with sheeting. Preheat/post heat treatment as per the material specification & instructions of E-I/C. Assist hydro test.	BD	Per Joint	4	3000	12000
18	Welding of HP joint in steam/ water line from above 100 mm dia to 200 mm dia and upto a maximum thickness of 25 mm.(including joints for replacement of valves) Note : It includes pre and post weld HT wherever required.	--- do ---	BD	Per Joint	4	7500	30000
19	Attending tube leakage by metal buildup on pinhole,crack upto first 5 nos. in one frequency for all material & sizes of tube. Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.	Inspect and identify the exact location of tube leakage. Do DP test. Grind the damaged tube as per instruction of E-I/C. Attend the leakage by metal build up by TIG welding and/or SMAW as per instruction of E-I-C. Smoothen the surface by Flush grinding as instructions of EIC. Ensure that tube joint withstands in Hydro test.	BD	No.	24	10368	248832

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
20	Build up of boiler tube. (build up of 25mm x 50mm = 1 build-up) For SA 209 T1 tubes.	Clean the eroded tube as per instructions of EIC (By grinding or buffing). Carry out thickness measurement. Build-up the eroded tube by TIG and / Or SMAW. Do DP test.Smoothen the surface by Flush grinding as instructions of EIC. Ensure that tube joint withstands in Hydro test.	BD	No.	2000	123	246000
21	Build up of boiler tube. (build up of 25mm x 50mm = 1 build-up) For T11,T22,T91 grade tubes	--- do ---	BD	No.	40	123	4920
22	FBHE Bundle chamber coil assy installation	Make suitable arrangement for coil assy lifting (that includes fabrication of structure and shifting of chain pulley block etc. Revival of dummy coil assy and placing the the new or repaired coil in position as instruction of E-I-C.(per Coil Assy). One coil assembly consists of 6 nos. tubes. Excluding weld joints.	BD	No.(per coil assembly)	4	35889	143556
23	Radiography of welded joints. Tubes upto dia 58 mm , header stub up to 150 mm dia	Radiograph the welded joint after getting clearance from E-I-C. Develop the film in the dark room.Check for any welding defect. Dark room will be provided by GIPCL.Contractor has to bring the radiography source of sufficient capacity so that all the joints to be radiograhed will be covered by the source. Contractor has to make necessary safety measures like area corridoring while taking the radiogarphy.	BD	Per inch Length of Film	1500	80	120000

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
24	FBHE Bundle chamber coil assy removal and tubes plugging	Cutting and Removing the damage coil assy from position as instruction of E-I-C. One coil assembly consists of 6 nos. tubes. Plugging of tubes at inlet & outlet by High Pressure joint (IBR welding). Total of 12 nos. plugging in one coil assembly.	BD	Per Coil	12	28137	337644
25	Shielding of boiler tube in Backpass Material : SS . Length of shield up to 1.0 meter	Shift material from store to site. Clean the tube to be shielded. Remove damaged shield if any. Fix new one, clamp and weld. Clamp should be provided at every 250mm pitch	BD	Per shield	2000	129	258000
26	Fins fit up, fins welding and flush grinding of welding from hot side and buttering of joints of two fins by welding from cold side.	Prepare the edge to the tubes where fin to be welded. Fin fit up between tubes. Weld by SMAW on Hot side & cold side i.e 2 sides at hot face and 2 side at cold face. Flush grind weld area from Hot side. buttering of joints of two fins by welding from cold side. Thickness of fins is 8 mm. Welding to be carried out by E 7018 welding electrode.	BD	Per meter length of welding	16000	208	3328000
27	Welding in windboxes of combustor / FBHE / Seal pot. Size - 300 mm welding length is consideres as 1 No	Clean the place to be welded, Cut & edge prepare the material. Then weld by MMAW on both sides (Hot side & cold side). Carry out the LPI on the weld joint and ensure the leak proofness.	BD	No	50	242	12100
28	Opening and closing of Drum Manhole doors Both side Manhole door is considered as 1 No.	Ensure proper cooling. Open both manhole doors. Inspect drum internally. Replace the gaskets and close the man hole doors.	BD	No	4	1448	5792

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
29	Inspection and cleaning of drum internal	Ensure proper cooling. Open both manhole doors. Install exhaust fan at one end for forced cooling. Inspect all drum internals namely, cyclone separators, driers, pipings etc, Take necessary precaution to prevent foreign material falling inside drum/drum opening. Remove all drum internals (turboseprator assy. 60 nos. and screen type drier-30 nos.) Replace/repair damage bolts, nuts etc. Clean all internals and refix. Box up the manhole door. Above work is consoder as one no.	BD	NO.	4	12308	49232
30	Repair / replacement of cassette baffle in Backpass Material: SS	Shift material from store to site. Clean the coils. Remove the old cassette baffles with new ones. Clamp and weld. Repair the damaged ones if required and re-position the fallen ones.	BD	No.	100	365	36500
31	Replacement/Repair of cap of nozzle in Combustors,FBHE,Seal pot and Ash coolers.(SS material)	Remove the damage nozzle cap by grinding the welded portion. Weld new nozzle cap by welding a bolt plate on it. Do LPI. Rectify the defect found in LPI. Weld the nozzle cap damage portion if required	BD	No.	1000	244	244000
32	Combustor guide pipe dummy.	Remove the damage nozzle cap by grinding the welded portion. Welding a bolt plate on it for dummy of guide pipe.	BD	NO	600	120	72000
33	Replacement/Repair of nozzle assembly (i.e guide pipe and cap with bolt) in Combustors,FBHE,Seal pot and Ash coolers.(SS material)	Remove the nozzle assly. from position by grinding or gauging. Edge prepare the surface.Assemble the guide pipe, cap and bolt. Put the new nozzle assly. Make alignment of nozzle. Carry out welding. Do LPI. Rectify the the defect found in LPI.	BD	No.	600	350	210000

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
34	Impulse pipe repair / replacement up to 16 mm dia of SS material.	Remove the damaged portion by cutting. Replace new pipeline by TIG/SMAW welding as per E-I-C. Check for any leakage by charging. Repair the joint if required.	BD	Per Mtr.	2	609	1218
35	Erection / Replacement of pipeline in drain and vent piping (Pre.160Kg/sq.cm) Max. 3" dia. MOC: CS.	Remove the damged portion of pipe. Erect new pipe line by TIG/SMAW welding as per instruction of EIC. MOC: CS / alloy steel. Support to be provided along with clamp if required.	BD	Per Mtr.	4	1461	5844
36	Erection / Replacement of pipeline in drain and vent piping (Pre.40 kg/sq.cm) Max. 2" dia.	--- do ---	BD	Per Mtr.	22	1461	32142
3.Insulation:					0	0	0
37	Removal and Application of insulation and sheeting of 50mm thickness for one layer.	Remove sheet cladding and insulation of marked portion only as per instructions of E-I-C. Apply insulation with proper hook/washer welding and apply sheeting.	BD	Per Sq. Mtr.	4000	270	1080000
38	Removal and Application of insulation and sheeting of two layers of 50mm or one layer of 100mm thickness for one layer.	--- do ---	BD	Per Sq. Mtr.	2000	363	726000
39	Removal and Application of insulation and sheeting of threo layers of 50mm or one layer of 100mm + one layer of 50mm thickness for one layer.	--- do ---	BD	Per Sq. Mtr.	500	484	242000
40	Only Aluminum sheeting	Remove old damage sheeting. Apply new sheeting and screw finishing as per E-I-C.	BD	Per Sq. Mtr.	500	122	61000
4. Opening and closing of manhole door					0	0	0

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
41	Brick Type.	Open the manhole door by opening bolts & nuts. Remove wool,bricks and rope. Replace damaged ones and put new rope and Box up	BD	No.	200	484	96800
42	Clamp type	Open manhole door.Replace rope with new one. Box up.	BD	No.	200	61	12200
43	Bolted type.	Open manhole door.replaced rope with new one. Box up.	BD	No.	300	183	54900
44	Erection and welding of anchors of all sizes and type(SS).	Erection and welding of anchors as per the instruction of E-I-C.	BD	No.	3200	37	118400
45	Ground inspection of Boiler pressure parts in presence of Boiler Inspector	The contractor is to liasion with the boiler inspector and arrange the visit of Boiler inspector for ground inspection of boiler pressure parts.Get certification from Boiler inspector.Shift the material at designated place for ground inspection as per the instructions of Engineer I/C. After completion of ground inspection, shift the material to warehouse/site as per the instructions of Engineer I/C.	BD	No	2	25000	50000

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
46	Conducting of hydrotest in presence of Boiler inspector	The contractor is to liasion with the boiler inspector for hydraulic test and arrange the visit of Boiler inspector for renewal of license.During the Hydraulic test, ontractor has to clean the area nearby drum, combustor manholes, Backpass manholes,C to C & COD manholes.Make sufficient arrangement of lighting inside the combustor, backpass.Make sufficient arrangement of Torches for checking.Gag the safety valves as per instructions of E-I-C. The contractor is to make necessary arrangement for conducting HT like Pump readiness,pressure parts coil cleaning, backpass, combustor m/h door etc.If required, assist in safety valve floating in presence of boiler inspector.Submit the radiogarhy reports , tube replacement report,etc as per instructions of E-I/C.Submit all necessary statutory documents like permission for high pressure works,welder validity certificates, licences , etc .Remove the Gag after completion of Hyd Test.	BD	No.	4	30000	120000
47	Inspection of Combustor Pent House/ Back Pass Pent House and arresting Flue gas/Bed materials leakages. Comb. Pent house and backpass pent house quantity to be considered separately.	Check throughly for any leakages and arrest Flue gas/Bed materials leakages by Seal box / welding / Castable refractory application.	BD	No.	2	12847	25694

Annexure B1

Phase-1 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
48	Drum/CBD / IBD tank gauge glass replacement / Cleaning	Isolate the gauge glass, remove the gauge from position if required, repair / replace damaged parts or clean the gauge glass and box up. Carry out charging of gauge glass.	BD	No.	2	1935	3870
49	Tube thickness/metal spray thickness measurement assistant.	Providing manpower for assisting tube thickness/metal spray thickness measurement on round the clock basis. (2 semi-skilled labour for one shift of 8 hrs)	BD	Per shift	10	974	9740
50	Inspection and Rectification of CLH hangers	Throughly clean the hanger support. Note down any abnormality.Rectify the problem as per instructions of E I/C. Apply the molyspary as per instructions of E I/C.Note down the cold & hot readings.	BD	No.	128	606	77568
51	Drum/CBD/IBD tank M/H door opening or for leakage attending work.	Open the door as per the instuction given by EIC by opening of all the bolts of manhole door and remove the gasket. Clean the gasket area. Carry out the inspection work / Idenitfy the leakage. Fix a new gasket and refix the bolts and close the manhole door.	BD	No.	2	724	1448
52	Comb. nozzles cleaning	Comb.nozzles dechocking & cleaning as per instruction of E-I-C.(total 740 nos)	BD	Per unit	4	13895	55580
53	FBHE / Seal pot & Ash coolers nozlles cleaning	Nozzles dechocking & cleaning as per instruction of E-I-C.(total 100 nos)	BD	Per unit	4	2870	11480
						SUB TOTAL	**16489046**

Annexure B1

Phase-1 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Overhauling of SA/PA Fan during annual shut down	Ensure isolation from Mech/Elect. side. Decouple the fan from motor.Dismantle DE & NDE bearing housing after removing all oil and water connections. Dismantle the bearing , clean it throughly and carry out DP test of white metal and ensure proper bonding with parent metal. Repalce the bearing if required. Check side oil/top oil clearences.Check axial float reading of thrust bearing and ensure as per design value. Check air/oil hoses of fan & motor. Repair/replace any damage hoses. Clean the lub oil unit externally, clean the filters, coolers etc. Check lub oil pump. Replace lub oil pump if require.Clean the oil return view glass internally. Attend any oil/water leakages. Clean the impeller & fan casing, check for any damages & rectify. Apply anti-corrosive paint on casing internal surfaces. Remove the dust from it. Check impeller clearances/impeller overlap etc.Check the coupling between fan & motor. If required, replace it . Grease the coupling halves.check the coupling bolts & replace ,if damaged. Check & tighten all foundation bolts.Check the alignment of fan with motor & rectify if alignment is disturbed. Box up & assist trial run of Fan.Remove all tools, tackles & clean the surrounding area.	PM	Each Fan	16	30833	493328

Annexure B1

Phase-1 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
2	Servicing/Overhauling of IGV assembly.	Open the manhole doors. Manually operate the IGV.If required, delink the IGV from power cylinder. Adjust the flap if required. Grease IGV Links,Position the guide ring if required. Repair/replace damaged parts of IGV assy like bearing, flap, gland,etc. Remove the entire IGV link assy. if required.Service each link assy.Give IGV trial for full open/full close position in manual as well as pneumatic operation. Close the manholes & normalise.	PM	No.	16	3242	51872
3	IGV link assy./IGV flap /guide ring / Link shaft bearing/ gland removal or repair. (Any-1)	Open the manhole doors. Check for any damage link assy. / flap/bearing/gland packing.Replace with new one.if required. Check IGV for full operation. Box up.	BD	No.	20	905	18100
4	Delinking/Linking of IGV mechanisam.	I) For delinking :- Delink the IGV mechanisam from power cylinders or electrical actuator. Manually fix the position of the IGV as per instruction of E-I-C. Lock the IGV in position by welding. II) For Linking:- Remove the lock of IGV after work is complete. Link the IGV with power cyliners or electrical actuator.	BD	No.	8	453	3624
5	coupling and decoupling for other work	De couple the both halves of coupling as per the requirement for facilitating other work and couple after completion of work.	BD	No.	2	1201	2402

Annexure B1

Phase-1 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Replacement of DE/NDE bearing	Dismantle bearing housing after removing all oil and water connections.Dismantle the bearing and place the new bearing, carry out blue matching if required. Bearing clearance needs to be corrected by scrubbing if required. Box up the bearing.Restore all hose connections. Do alignment with motor.	BD	Each bearing	4	10529	42116
7	DE/NDE bearing inspection.	Open the top cover /top half of the bearing. Inspect bearings for clearances/damage etc. Box up.If required replace as per sr. no.6.	BD	Each bearing	2	1506	3012
8	Assistant for Balancing of Impellar/Fan	Providing manpower for assisting balancing of fan/motor. This includes welding of trial/final weight.	BD	Each Fan	4	4333	17332
9	Coupling repair / replacement	Decouple the motor.Remove both half of coupling. Change with new coupling. Align properly, Grease the coupling.Box up.	BD	No.	2	2097	4194
10	Manhole door opening and closing for Inspection	Open the man holedoor of impeller & IGV.Inspect the impeller & IGV.Close the manhole doors.	BD	No.	4	481	1924
11	Vibration measurement Assistance.	Supply manpower for assisting vibration measurement to GIPCL EIC for all category rotating equipment viz.ID Fan/SA Fan/PA Fan/Blowers/Emeregency Boiler feed pump etc.. One Semiskilled labor shall be required.	BD	Per Equipment	4	61	244
12	SA/PA fans alignment	SA/PA fans alignment work. Carryout alighnment work as per the direction of EIC and incorporate any correction.	BD	per fan	6	9087	54522
						SUB TOTAL	**692670**

Annexure B1

Phase-1 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Internal checkings of fan and internal cleaning of impeller	Open manhole doors,Check for Plates/blades. Clean the impeller. Box up	PM	Each fan	8	1201	9608
2	Servicing of IGV	Open the manhole doors. Manually operate the IGV. Check for IGV for full open/ full close. Adjust the flap if required. Grease IGV Links,Position the guide ring if required, repair/replace damaged parts. Remove the entire IGV link assy. if required.Service each link assy. Restore to normal.	PM	Each fan	10	6058	60580

Annexure B1

Phase-1 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Servicing of ID fan	Ensure isolation from Mech/Elect. side. Decouple the fan from motor.Dismantle DE & NDE bearing housing after removing all oil and water connections. Dismantle the bearing , clean it throughly and carry out DP test of white metal and ensure proper bonding with parent metal. Repalce the bearing if required. Check side oil/top oil clearences.Check axial float reading of thrust bearing and ensure as per design value. Check air/oil hoses of fan & motor. Repair/replace any damage hoses. Clean the lub oil unit externally, clean the filters, coolers etc. Check lub oil pump. Replace lub oil pump if require.Clean the oil return view glass internally. Attend any oil/water leakages. Clean the impeller & fan casing, check for any damages & rectify. Apply anti-corrosive paint on casing internal surfaces. Remove the dust from it.Check impeller clearances/impeller overlap etc.Check the coupling between fan & motor. If required, replace it . Grease the coupling halves.check the coupling bolts & repace ,if damaged. Check & tighten all foundation bolts.Check the alignment of fan with motor & rectify if alignment is disturbed. .Box up & assist trial run of Fan.Remove all tools, tackles & clean the surrounding area.	PM	Each Fan	8	18072	144576

Annexure B1

Phase-1 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Hydraulic coupling oil leakages attending.	Check for Oil leak/leaks from HC and its connected piping, connector,flanges, etc. Clean the leakage area, attend the Leakage and Box-up.	BD	Each fan	2	1201	2402
5	Hydraulic test of oil coolers (One cooler)	Isolate from water side. Dismantle the cooler,take out bundle assly out side the cooler, clean the cooler internal surfaces and tube bundle internally/externally.Box up tube bundle by replacing O-ring/gasket etc.Carry out HT of cooler. Check for tube puncture. Plug the puncture tubes. Box-up. Charge the cooler and ensure leak proofness. Normalise system. Clean surrounding area.	BD	per cooler	2	5935	11870
6	IGV link assy./IGV flap /guide ring / Link shaft bearing/ gland removal or repair. (any-1)	Open the manhole doors. Check for any damage link assy. / flap/bearing/gland packing.Replace with new one.if required. Check IGV for full operation. Box up.	BD	No.	2	1201	2402
7	Delinking / Linking of Hydraulic coupling (HC)scoop or IGV.	I) For delinking:-Delink the HC scoop or IGV from the pneumatic actuator. Position the scoop/IGV as per instruction of E-I-C. Lock the scoop/IGV by welding if required.II) For Linking:- Remove the lock. Link the scoop/ IGV to power cylinder.	BD	No.	4	122	488
8	Alignment of hydraulic coupling with Fan.	Decouple the fan with hydraulic coupling. Check alignment. Do alignment if required. Check coupling bolts. Replace if required. Grease the coupling .Box-up the coupling. Assist trial run.	BD	No.	6	6354	38124
9	Alignment of hydraulic coupling with motor.	-- do --	BD	No.	6	6354	38124

Annexure B1

Phase-1 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Replacement of DE/NDE bearing	Dismantle bearing housing after removing all oil and water connections.Dismantle the bearing and place the new bearing, carry out blue matching if required. Box up the bearing. Note bearing clearances.	BD	Each brg	2	8750	17500
11	DE/NDE bearing inspection.	Open the top cover /top half of the bearing. Inspect bearings for clearances/damage etc. Note bearing clearance. Box up.If required replace as per sr. no.10	BD	Each bearing	2	1201	2402
12	De-coupling and coupling	De couple the both halves of coupling as per the requirement for facilitating other work and couple after completion of work.	BD	No.	2	846	1692
13	Checking of Coupling or Greasing of coupling	De couple the both halves of coupling..Check the condition of coupling bolts (Repair/replace if required). Grease the coupling .Tighten the coupling bolts..	BD			1254	0
14	Coupling repair / replacement	Decouple the HC from Fan & motor side.Remove both half of coupling. Change with new coupling. Align properly, Grease the coupling.Box up. Assist trial run.	BD	No.	2	5364	10728
15	Assistant for Balancing of Impellar/Fan	Providing manpower for assisting balancing of fan/motor. This includes welding of trial/final weight. Correctness of alignment. Inspection of bearings etc.	BD	Each Fan	2	4333	8666
16	Manhole door opening and closing for Inspection	Open the Manhole door, inspect the volute casing and Box-up Manhole door.	BD	No.	2	453	906
17	Replacement of bearing cooling water nipple	Open the side cover of bearing housing.Identify the damaged nipple with new one.Internal cleaning of bearing.Oil top up after boxup of bearing and external cleaning.	BD	Each brg	2	453	906
18	Manhole door leakage arresting.	Arrest the air leakage through manhole door by sodium silicate application on line.	BD	No.	8	453	3624

Annexure B1

Phase-1 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
19	Hydraulic coupling Overhauling as per the direction of expert engr.	Decouple the HC from Fan & Motor side. Open the top half of the HC. Remove lub oil / water connecting pipe line from HC. Shift the internals of HC to work shop. Dismantle the entire HC as per insruction of EIC. Check for any damage internals. Replace the damage parts. Replace bearings. Check lub oil pump, replace if require. Check oil condition , replace entire oil if require. Box up and align with fan & motor. Assist trial run.	BD	No.	2	38542	77084
20	Alignment of id fan	ID fans alignment with Motor/alighn and correct coupling between motor and fan	BD	Each Fan	0	6354	0
						SUB TOTAL	**431682**

Annexure B1

Phase-1 **Part-D** **Lube Oil Units & Scanner Air Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of scanner air fan	Inspect DE /NDE bearings. Check alignment. Check the Pulley Condition. Replace if required.Clean the suction strainer.Greasing of DE/NDE bearings. Box up.Clean the auxillary.	PM	Each	0	543	0
2	External cleaning of scanner air fan.	Clean the fan with compressed air.	PM	No.	0	244	0
3	Lub oil sample collection	Open the plug/flange/valve of the lub oil tank/bearing/HC etc. Collect the sample. Submit it to C& L Laboratory. Box up.	PM	No.	200	122	24400
4	Attending Leakage of oil from lub oil system of tank and pipes	Identify the leakage . Tighten the flanges, replace the gasket if required. Do welding if required.	BD	No.	60	362	21720
5	Lub oil pump servicing	Dismantle pump. Inspect bearings/gears of pump/Relief valve etc. Repair / replace bearings/gears/relief valve if required. Box up.Assist trial run.	BD	No.	6	961	5766
6	Oil topping in ID fan HC lube oil tank	Check oil level in hydrulic tank. Fill the oil up to the	BD	No.	4	362	1448
7	Replacement of coupling of LOP	Check coupling. Repair/replace bush/coupling. Align the pump. Box up. Assist trial run.	BD	No.	10	481	4810
8	Oil topping of lube oil in ID fan bearings	Check lub oil level in bearings. Fill the oil up to normal level. Clean the area.	BD	No.	24	181	4344
9	Oil topping in PA/SA fan	Check lub oil level in tank. Fill the oil up to the normal level. Clean the area.	BD	No.	150	181	27150
10	Filter cleaning of lube oil unit of SA and PA fan	Remove the filter. Clean with air/petrol/diesel. Restore.	OM	No.	50	362	18100
11	Cooler Hydro test of PA,SA fans and EBFPs.	Dimantle cooler assembly. Carry out hydro test of cooler. Plug any coil if found leaking. Clean cooler.Replace gasket , o-ring, seals etc. Box up. Assist charging of coolers.	BD	No.	24	1922	46128

Annexure B1

Phase-1 **Part-D** **Lube Oil Units & Scanner Air Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	New oil Filling/Replacement upto 350 litres	Drain complete oil from tank. Clean the tank & view glass after oil draining. Fill the tank with new oil up to normal level. Box up. Clean the area.	BD	No.	8	1442	11536
13	New oil Filling/Replacement more than 350 litres	….DO …	BD	Once	4	1922	7688
14	Pump not developing pressure	Adjust the releif valve.Attend leakage of oil if any and restore.	BD	Each	4	362	1448
15	Replacement of lub oil pump.	Decouple the pump. Remove all connecting piping and fittings.Replaced with new one. Align and couple it. Assist trial run.	BD	No.	10	721	7210
16	Replacements of relief valve of lub oil pump / lub oil system	Isolate the system. Replaced with new relief valve.Assist trial run. Adjust relief valve if required.	BD	No.	2	721	1442
17	Valve repair / relacements of lub oil system. Water and oil side. Max up to 1 inch size.	Check for leakage /passing of valve. Attend the leakage/passing problem. Replace the valve if required.	BD	No.	4	543	2172
18	Lub oil Filter replacements.	Remove the filter element from the casing. Replace with new one.	BD	No.	4	362	1448
19	Sight glass / flow indicator cleaning/replacements. Water and oil side.	Replace/ repair the sight glass / flow indicator with new one.Ensure leakproofness of valve.	BD	No.	14	543	7602
20	Flexible hose replacements. Water / oil side.	Replace hose with new one. Check for no-leackage.	BD	No.	24	362	8688
21	Replacement of DE/NDE Bearing of Scanner Air Fan	Decouple. Dismantle the damaged bearing.Replace new ones.Lubricate. Align with motor and install V-Belts.	BD	Each	2	724	1448
22	Replcements of belts/alignment of scanner air fan.	Remove the belt guard. Replaced the set of belts. Adjust the tension , align properly. Fix the belts guard.	BD	Set	2	362	724

Annexure B1

Phase-1 **Part-D** **Lube Oil Units & Scanner Air Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
23	Replacements of suction strainer of scanner air fan.	Remove the strainer by opening of bolts. Replace the strainer with new one. Fix new gasket & box up.	BD	No.	2	362	724
24	ID fan bearings oil leakage attending.	Check for any leakage.attend leak as per E-I-C	BD	No.	16	721	11536
25	Bearing NDE & DE leakage arresting - water & oil side.	Check for leakages from the bearings. Attend the same.	BD	No.	14	721	10094
						SUB TOTAL	**227626**

Annexure B1

Phase-1 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Suction duct cleaning.	Open the man hole doors, Clean the duct with scapping / cleaning tools & tackles.collect all material at ground floor. Joint inspection carried out By GIPCL Engineer Incharge. Scrap the same Box up man holed door	BD	No.	2	13319	26638
2	Suction Stainers cleaning of LT Blower	Unlock the strainer casing. Remove the fabric strainer. , replace it or Clean the fabric as well as internals of strainer with compressed air. Box up.	PM	No.	120	420	50400
3	Suction Stainers cleaning of HT blower	*_Do_*	PM	No.	240	481	115440
4	PM of LT blower	Clean the suction stainers. Check oil level/condition. Top up the oil or replace as per instruction of EIC. Attend leakages if any.Check belt tension, adjust/replace belts set if require.Check the lobe condition varify clearances.rotate blower manually and identify any abnormalities if any.Check and varify condition of pulley by belt guage Clean the blower unit. Check speed sensing disc, replace if require. Check the foundation bolt for tightness.Clean the oil view glass and replace if found damage.	PM	No.	60	1322	79320
5	PM of HT blower	_Do_	PM	No.	144	1502	216288
6	Decouple/ coupling of HT blower with motor. (belt drive) or Belt replacement of HT blower	Remove the belt guard.Loosen the belt by lifting mechanism of motor using screw jack/hydraulic jack. Remove belt from pulley. Check alignment of motor and blower pulley. Correct alignment if required. Refix/replace the belt & adjust belt tension. Refix belt guard. Assist trial run.	BD	No.	8	601	4808

Annexure B1

Phase-1 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Decouple/ coupling of LT blower with motor. (belt drive) or Belt replacement of LT blower	_Do_	BD	No.	8	481	3848
8	Repair/replacement of pulley	Decouple the blower with motor. Loosen the belt by lifting mechanism of motor using screw jack/hydraulic jack. Check pulley for any damage. Remove the pulley from position. Repair the pulley as per instruction of EIC. Replace the pulley if require. Refix the pulley.Replace the belt if damaged or refix the belts. Box up & assist trial run.	BD	No.	34	721	24514
9	Suction strainer filter element repair/ replacements	Remove the strainer from the position. Repair/replace if any internals found damage I.e filter element, sponge element etc. Box up the strainer.	BD	No.	4	749	2996
10	Oil top up /replacements in the gear box of blower	Check the oil condition/colour visually. Refill/Top up /replace oil as per E-I-C.	BD	No	150	181	27150
11	Oil level indicator sight glass cleaning/repair / replacements	Drain the oil from the gear box to oil pot. Remove sight glass. Clean it, refix it properly. Fill removed oil again still normal oil level	BD	No	16	272	4352
12	Repair/replacements of MEJ at discharge of blower	Remove the MEJ from the position. Inspect for any damage. Repair if possible by welding. Or replaced with new one. Place in position. Check for leakage.	BD	No	2	1506	3012

Annexure B1

Phase-1 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Blower assy. Replacements	Remove the belt guard, belts, pulley,suction strainer and connected pipe line. Take out the blower and put it to workshop/maintenance area/Hoist area/Vehicle. Bring new blower from Maintenace bay/Hoist/Vehicle to blower room and then Place the new blower.align blower on platform.insert seam plate if required between leg of blower and platform. Check the pulley, belt, suction strainer & replace if required.Clean the suction strainer Normalise the system and assist trial run.	BD	No.	20	9191	183820
14	Belt guard removal and refixing.	Remove the belt guard, inspect for speed sensing flap/belts/pulley refix it.	BD	No.	70	300	21000
15	Servicing of blower	Shift blower from site to workshop. Open the gear box, inspect for damage of bearings, gears, lobes etc. Repair / replace if reqd. Adjust the clearence as per E-I-C/supervisor. Box up and Normalise.Assist trial run of blower.	BD	No.	4	12977	51908
16	Speed sensor flap repair/Replacement	Inspect the speed sensing disc.Reair/replace the same if necessary. Fabricate the sensor plate if require.	BD	No.	4	484	1936
17	Servicing of safety valves in blower discharge line.	Dismantle the safety valve and service the same as per instructions of EIC.Replace any damage internals. Box up.	BD	No.	4	1922	7688
18	Replacement of Oil seal at DE drive shaft.	Remove the drive pulley and open the end cover of drive side. Install new Oil seal and Box-up	BD	No.	40	1198	47920
19	Servicing of NRV in Blower discharge line.	Dismantle the NRV and service the NRV. Fabricate the flap of NRV. Replace the flap of the NRV if required.Box up.	BD	No.	10	968	9680

Annexure B1

Phase-1 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
20	Oil leakage arresting from blower	Identify the leakage. Clean area of leakage. Attend the leakage as per EIC.	BD	No.	30	601	18030
21	Suction Filter Replacement	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (Bed Ash , Sealpot blowers)	BD	No.	20	362	7240
22	Suction Filter Replacement	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	BD	No.	80	407	32560
23	Assist trail run /Obsrvation of running Blower	Assist trail run /Obsrvation of running of Blower post repair/attending defect / Under Visual inspection as per instuction by one unskilled labour per hour assistance at blower room	BD	Per Hour	60	59	3540
						SUB TOTAL	**944088**

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1.Bed ash Conveyor							0
1	PM of bed ash conveyor.	Open the top cover plates. Check chain flight , pin, circlip etc. Check the damage/worn out plates. as per instruction of EIC, Replace or Straightened the bent links by heating and hammering . Clean the drive mechanisam. Check for wear of driving mechanisam. Check oil level in gear box. Lubricate the drive chain, bearings. Inspect bearings, sprockets, . Take trial run. Adjust chain tension if required And submit Pm report immediately to Engineer in-charge	PM	No.	96	1442	138432
2	Lubrication of bed ash conveyer	Bed ash conveyor all bearing greasing, Gear box oil level checking and top-up if required etc…..	PM	No.	288	362	104256
3	Greasing of driving chain	Remove the chain guard. Clean the chain & Apply grease.Place the chain guard.	PM	No.	24	183	4392
4	Clear out conveyor jam.	Open the conveyor top plates. Bottom plates at tail end of conveyor. Remove any foreign material/bed material. Made conveyor free. Check damage link. Replaced damage link. Adjust chain tension if required. Box up the conveyor & take trial run.	BD	No.	100	481	48100
5	Drive Sprocket replacements.	Decouple the drive. Open the top plates at drive station. Remove the chain guard. Replace/buildup the wearout sprocket and grind to original profile. Normalise the conveyor.	BD	No.	2	4399	8798
6	Idler replacements of bed ash conveyor NDE side. Size: OD-400mm & 60mm width.	Open the top cover plate. Delink chain from idler. Remove the bearings. Replace the idler. Box up bearings. Normalise the conveyors.	BD	No.	2	1682	3364

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Driving double roller chain repair / replacements.	Open the chain guard. Remove the double roller chain. Replace if found damaged. Adjust the chain tension and align it. Normalise the conveyor	BD	No.	4	1201	4804
8	Shear pin replacements.	Open the chain guard. Remove the damaged shear pin. Replaced with new one. Fix the chain guard.	BD	No.	40	226	9040
9	Bearings inspection DE & NDE side (Any-1)	Open the top half of the bearing. Inspect the bearing. Lubricate and box up.	BD	No.	4	481	1924
10	Bearings replacements DE & NDE side (Any-1)	Open the bearing plummer block. Replace the bearing with new one & lubricate. Box up.	BD	No.	4	1442	5768
11	Plummer block repair / replacements DE / NDE (Any-1)	Remove the plummer block from shaft. Replace with new one.	BD	No.	4	2163	8652
12	Shaft seal replacements	Remove the bearings with plummer block. Replace shaft seal and labyrinth seal with new one.	BD	No.	2	1201	2402
13	Tail end shaft replacements	Remove the top cover. Dismantle the plummer block. Remove the sprocket halves. Replace the new shaft. Normalize as per E-I-C. Take trial run.	BD	No.	2	3907	7814
14	Drive end shaft replacements	Remove the top cover.Dismantle the plummer block. Remove the sprocket halves. Replace the new shaft. Normalize as per E-I-C. Take trial run.	BD	No.	2	5891	11782
15	Conveyor chain flight replacements	Open the cover plate. Remove the circlip and pin of chain flight. Replace with new one. Normalise the conveyor	BD	No.	1500	226	339000
16	Chain flight reclamation	Identify the damage flights. Straighten the bent flight by heating / pressing. Weld the plate of broken flight after necessary edge prepration.	BD	No.	600	602	361200

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
17	Filling of refractory between wear plate and casing (gap 50mm, Height - 150mm).	As per instruction of E-I-C, prepare refractory mix and fill in the gap & cure it.	BD	Meter	10	1201	12010
18	Chain tension adjustment	Loosen the tail end. Adjust the chain tension as per E-I-C. Tighten the tail end.	BD	No.	4	181	724
19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	4	181	724
20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	362	1448
21	Guide rail replacements. Size: 50mm width,16mm thick,8m length	Open the top & bottom cover plate. Remove the chain. Inspect for guide rail. Replaced with new one.length of guide rail @2meter in 4 location.	BD	No.	4	5423	21692
22	Replacement of motor end small sprocket of duplex roller chain.	Open the Drive chain guard.Remove the drive chain.Remove the worn-out sprocket and replace with new.	BD	No.	4	1746	6984
23	Replacement of Conveyor end bigger sprocket of duplex roller chain.	Open the Drive chain guard.Remove the drive chain.Remove the worn-out sprocket and replace with new.	BD	No.	4	3902	15608
24	Dismantling and refixing of Drive Motor (Geared)	Drain the oil from Gear box. Dismantle the drive motor and install new motor .Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	4	1205	4820
25	Repair/replacement of wear plates.	Identify damaged wear plate & remove the plate from conveyor.Fabricate the plate as per EIC. Repair/replace the plate as per EIC. Box up.	BD	Per Sq. mtr	50	1694	84700
26	Replacement of drive end gear box.	Drain the oil. Remove the motor. Remove the gear box from the position. Replace the gear box woth new one.. Place it position. TOP up the oil. Fix its drive sprocket and drive chain in position. Box up.	BD	No.	2	6609	13218
27	Servicing of gear box.	Drain the oil. Remove the motor. Dismantle the gear box.	BD	No.	2	3845	7690
2. Rotary air lock feeder 10 TPH / 32 TPH					0	0	0

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
28	Preventive maintenance of Rotary Air Lock Feeder	Isolate the Airlock feeder. Clean the annular space between casing and rotor. Grease the bearings. Check the oil level and top-up if necessary. Check the condition of oil seal . Check gland leakage	PM	No.	48	453	21744
29	Lubrication of bed ash rotary air lock feeder	bed ash rotary air lock feeder all bearing greasing, Gear box oil level checking and top-up if required etc…..	PM	No.	288	181	52128
30	Replacement of bed material / ash cooler feeders.	Isolate the feeder, remove the feeder, replace new, restore.	BD	No.	2	2419	4838
31	Rotary air lock feeder DE/NDE bearing replacements (any-1)	Remove the motor.Replace the bearings and Box-up.	BD	No.	2	721	1442
32	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	10	362	3620
33	Oil seal replacement of RALF	Drain the oil from the gear box. Remove the motor. Replace the oil seal from the gear box. Place the motor and fill the oil in gear box.	BD	No.	4	905	3620
34	Servicing of Rotary air lock feeder..	Drain the oil from the gear box. Remove the motor. Removed the gear box. Service the rotor assy and gear box. Normalise.	BD	No.	4	3604	14416
35	RALF jam clear out.	Hand rotate the feeder for mechanical jamming. Made it free. If reqd. follow the step as in sr, no. 2.6.	BD	No.	30	122	3660
36	Lubrication of gear box.	Check for oil level in gear box. Fill oil or totally replace	BD	No.	4	453	1812
37	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	457	1828
3. Ash cooler					0	0	0

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
38	Choking removal of ash cooler spiese valve to ash cooler line/spiese valve mouth.	Remove the ash cooler drain valve/spiese valve sight glass. Carried out pocking through valve /sight glass opening. Carry out hammering of the line if required. Clear chockage. Normalise.	BD	No.	500	721	360500
39	Repair / replacemetns of grate drain valve / wind box drain valve.(Up to 150NB)	Remove the valve from position.Dismentle the valve. Clean it.Freeness checking. Assemble the valve. Replace gasket/bolts/nut with new one & box up.	BD	No.	10	905	9050
40	Cleaning of Ash cooler EC/BC	Open the manhole door of ash cooler Empty chamber /	BD	Per	6	0	0
41	Choking removal of ash cooler bundle chamber / empty chamber grate drain (Any-1)	Open grate drain valve,check flow of bed material. De chock the line if required till evacuation of chamber.close the valve	BD	No.	1500	543	814500
4. Bed ash conveying line.					0	0	0
42	Choking removal of conveying line from I/A bin to bed material silo.	Clear the chock by applying air. Normalise it.	BD	No.	28	453	12684
5.Bag Filter cleaning system					0	0	0
43	Servicing of Bag filter /Replacement of all bags in bag filter	Open the cover of bag filter. Remove the bag filter. Remove bags from the filter. Clean the bags with service air or replace bag if require. Clean the perging lines and check for air coming from all perging line .Box up.	PM	No	4	2403	9612
44	PM of dust extration Fan.	Check the alignment. Inspect coupling/Bearings. Replace if found damage. Align properly. Box up. Take trial run.	PM	No.	8	481	3848
45	Replacements of air hose of filter cleaning system.	Isolate the air supply. Replace the hose with new one.	BD	No.	2	453	906

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
46	Repair / replacements of NMEJ of dust extraction fan.	Remove / dismantle the damaged NMEJ. Repair / replace as per instruction of E-I-C.	BD	No.	4	1201	4804
47	Dust extraction fan coupling replacements.	Open the cover. Decouple fan. Replace coupling with new one. Align the fan & box up.	BD	No.	2	601	1202
48	Dust extraction fan replacements.	Decouple from motor. Remove the bearings. Open the casing plate. Replace the entire fan with new one. Box up the fan.	BD	No.	2	17945	35890
49	Bearing replacement	Open the bearing cover. Check condition of the bearing. Change with new one. Box up.	BD	No.	2	1682	3364
50	Damper servicing	Open the damper. Check flap of the damper. Repair/replace the damper. Box up.	BD	No.	2	841	1682
51	Bed material Draining from FBHE BC/EC	Open the grate drain valve. Drain the chamber as per requirement and Remove chocking if any . Close the valve.	BD	No.	960	240	230400
52	Bed material Draining from Combustor.	Open the grate drain valve. Drain the combuster as per requirement and Remove chocking if any . Close the valve.	BD	No.	40	754	30160
53	Bed material filling in grate drain of Combustor/FBHE Empty chamber & Bundle chamber.(Any-1)	Issue bed material from store. Close grate drain valve. Open manhole door. Fill bed material from inside grate drain line.	BD	No.	60	272	16320
54	Chocking clearing of Bed material filling line from bed ash silo to combustor/Chocking clearing of PA windbox conveying line	Check the line for chock up.Hammer the line & pocking.If chock up not cleaned, cut the pocket or open the flange , do pocking and welding the cut pocket or refix the flange. After removal of chock up normalise the system.	BD	No.	150	453	67950

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
55	Combustor spiess valve to ash cooler line/PA windbox conveying line leakage attending	Identify the leakage,apply sodium silicate or do welding as per E-I-C.	BD	No.	200	484	96800
56	PA wind box bed material conveying line Pipe/T piece replacement.	Identify the damage pipe. Check thickness of pipe. Replace damage portion of pipe with new one. End connection of pipe may be Welded or Bolted. Pipe Size Dia.150x15 t mm.	BD	Per Mtr.	10	1149	11490
57	Mixing nozzle replacement in PA coveying line	Replace the damage nozzle and put new nozzle by welding and bolting	BD	No	8	1149	9192
58	Bed material leakage attending online in combustor,waterwall,Ash coolers,NMEJ	Open the insulation.Identify the leakage attending the leakage on line by applying.sodium silicateand ceramic wool. Refixing of insulation	BD	No	500	362	181000
59	Bed ash silo.Intermediate ash bin level checking.	Open the man hole door. Check the level of ash in bunker/silo.	BD	No.	50	94	4700
60	Bed Ash Conveyors discharge line Inpection	Open the Door & Remove the foreign materials from the disharge line grill. Door box up.	BD	NO	0	304	0
61	Bed Ash Conveyor gear box coupling repair/replacement	Bed ash Conveyor gear box coupling repair/replacement as per instruction of E-I-C.	BD	NO	0	1201	0

Annexure B1

Phase-1 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
62	Ash Cooler Bundle Chamber coil remove and its coil and nozzle cleaning	Make scaffolding erction work for proper working approch, Insulation removing and external cleaning Make necessary arrangement for removing of bundle chamber coil, ACW line dismentling, cutting / removing of all fastner of bundle chamber coil flange, remove the coil by jacking / pushing / pulling method from its position, Coil tube cleaning and inspection, take the Hydro test and check coil tube, if any coil tubes identified in hydro test so repaire / replace of coil tubes as per EIC, Baffle plate check and repaired as per EIC, All bed material removing from bundle chamber and clean the nozzle with its hole, check the all nozzle by blower air / Manual air from its wind box, Bundle chamber coil flange clean and new gasket / rope fitting, Bundle chamber coil inserting work and all fastner fitting work and normalising the all arrengement, ACW line fitting work, Insulation application work	BD	No.	2	150800	301600
						SUB TOTAL	**3546108**

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1. Lignite Conveyor							
1	Conveyor link Sprockets (Both side) replacement. Phase-2	Decouple the drive. Open the top plates.Decouple the chain link . Replace sprocket.Couple the link .Normalise the conveyor.Assist trial run.	OM	No.	0	7692	0
2	Chain tension adjustments.	Check chain looseness. Loosen the tail end bracket. Adjust the chain by tightening the bolts as per E-I-C.Tighten the tail end bracket.	OM	No.	10	300	3000
3	Greasing of DE / NDE bearings of conveyors, chain compensation bearings, flow indicator bearings.Total no of bearings - 8 per conveyor	Clean the bearings. Apply the grese with pressure. Remove the additional graese from bearings from outside.	PM	per conveyor	200	226	45200
4	Greasing of driving chain	Remove the chain guard. Apply grease with oil mixture.Place the chain guard.	PM	No.	48	183	8784

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Servising/Overhauling of Lignite conveyors.	Ensure Isolaion of the conveyor from bunker. Open the cover plates of lignite conveyor. Remove the complete lignite from conveyor length. Remove the entire chain from conveyor & Clean the groove. Check for any damage of guide rail. Adjust if required or repair/replace the rail. Inspect all the bearings, replace if required. Check sprocket condition and change if required. Check the idler at tail end. Fix in position if found dislodged or replace if required. Lubricate the conveyor drive chain and bearings. Inspect the bassalt liners & repair/replace as per instructions of Engr I/C. Inspect the lingnite chain link & repair/replace as per instructions of E-I/C. Check the drive chain & repair/replace, if required. Align the gear box with conveyor. Normalise the system. Assist trial run.	PM	No.	10	61374	613740
6	Lignite conveyor chain link inspection	Open the drive end covers. Remove the lignite. Inspect the link pin/flighted link for damage.Replace the damage link.Adjust the chain tension if required. Box up.	PM	No.	500	272	136000
7	Shear Pin replacement	Adjust the hole of sprocket,replace the shear pin.Fit circlip on both sides of shear pin.Restore to normal. (1 no. shear pin in Phase-I & 2 nos. shear pin in Phase-II)	BD	Nos.	124	136	16864

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Replacement of entire chain link of conveyor.	Ensure Isolation of the conveyor from bunker. Open the cover plate and remove lignite from conveyor. Remove the entire chain from position. Clean the groove of the conveyor. Place the entire chain link assy. Normalise the bunker gates.Box up and assist trial run.Adjust the chain tension during trial run.	BD	Nos.	4	17009	68036
9	Removal of one link of drag link chain by drive end inspection	Isolate the lignite feeder from lignite bunker. Open feeder cover. Remove the lignite from drive end of the conveyor. Remove/Replace one link of conveyor chain.Adjust chain tension.Restore.	BD	per link	200	605	121000
10	Inspection of lignite conveyor assembly for conveyor breakdown	Ensure Isolation of the lignite feeder from lignite bunker. Open feeder cover plates at 3-4 places from drive to tail end of conveyor.Remove the lignite conveyor from drive to tail end. Clean the grooves.Check the complete conveyor links. Note the damages.Check the circlip & replace the damaged one. check & replace the shear pin.Adjust chain tension . Restore.Assist the trial run.	BD	No	32	3352	107264
11	Replacement of chain link of conveyor as per noted defect in S No 1.10 as above .	Shift the new link from store to site.Remove the damaged chain links & replace it with new one.	BD	per link	750	1259	944250
12	Main drive -Gear box mechanism Repacement	Decouple the motor assembly of driving gear box. Repair/replace assembly. Align the gear box with motor. Restore to normal.	BD	No.	2	2097	4194

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Idler/shaft replacements of lignite conveyor NDE side.Size of shaft :- OD 120 mm & length @ 2 meter, Size of idler:-436 mm OD & width 60 mm	Open the top cover plate. Decouple the chain link . Remove the shaft end seals.Remove the bearings.Remove the shaft & idler. Replace or repair the idler / shaft / beraing, shaft end seals; if required.Put the shaft & idler in position. Fit the bearings & do greasing. Normalise the conveyors.Assist trial run.	BD	No.	6	7692	46152
14	Sprocket cleaner repair / replacements	Open the top cover plate. Remove the chain links. Remove the sprocket cleaner. Normalise the conveyors.	BD	No.	8	1201	9608
15	Driving chain tripple rollar repair / replacements.	Open the chain guard. Remove the tripple roller chain. Replaced if damage. Adjust the chain tension and aligned it. Normalise the conveyor	BD	No.	8	1201	9608
16	Bearing replacements of lignite conveyors, DE / NDE side.(any-1)	Open the bearing plummer block. Replace the bearing with new one.	BD	No.	8	1498	11984
17	Bearing Inspection of Lignite conveyor DE/NDE.(any-1)	Open the bearing plummer block. Inspect the bearing in detail and inform condition to Engineer in charge.After instruction of engineer in charge box up the bearing.	BD	No.	8	453	3624
18	Basalt lining / refractory application in the lignite conveyors.	Open the cover plate of conveyors. Identified the damaged liner portion. Remove the chain flights. Apply refractory / basalt lining as per E-I-C	BD	Sq. meter	2	2523	5046
19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	14	634	8876
20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place tne cover.	BD	No.	4	181	724
21	Lignite flow indicator adjustments.	Open the cover plate of conveyor. Adjust the flap of flow indicator. Box up	BD	No.	8	453	3624

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
22	Repair / replacements of flow indicator shaft & its bearings	Open the cover plate. Remove the shaft from position.Check the bearings & replace if required. Repair/replace the shaft . Box up	BD	No.	8	1201	9608
23	Assistant for Lignite bunker chocking removal.	Open the cover plate of lignite conveyor at front and rear side of bunker. Check for jamming of bunker.Lignite may be required to remove from the tail end/drive end. Box up the conveyor plate after ensuring smooth flow of lignite.	BD	No.	60	961	57660
24	Lignite Conveyor supervision during rainy season (2 semiskilled labour per 12 hours shift is considered as 1 shift)	2 persons are to be deployed for each conveyor to check the lignite flow. Open the cover plate at drive end.Contineouly observe the conveyor .Any abnormality in lignite flow observed , immediately inform to Control Room Desk Operator & Lock the emergency push button at local. Rectify the defect or otherwise inform to Boiler dept E-I/C.	BD	shift	100	2163	216300
25	Dismantling and refixing of Drive Motor (Geared)	Drain the oil from Gear box. Dismantle the drive motor and install new motor .Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	4	1741	6964
26	Conveyor drive chain tension adjustment	Remove the drive chain guard.Adjust the tension as per EIC instruction,Normalise the system	BD	No.	4	601	2404

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
27	DE shaft replacement. Shaft Size 120 mm OD & Length-2 meter	Open the cover plate. Decouple the conveyor link. Decouple the conveyor from gear box by removing the drive chain. Remove the driven sprocket fitted on shaft. Remove both the bearings. Remove both side shaft end seals. Remove the shaft. Check the bearing, drive chain, sprocket, end seals, drive chain & replace if required. Replace the shaft. Refix the end seals, bearings, sprocket. Fit the chain. Align the conveyor & gear box. take the trial in conveyor link decoulple condition & after sucessful trial couple the conveyor link, adjust chain tension.	BD	No.	2	10671	21342
28	Lig. Conveyor Flywheel hub gap setting	Lig. Conveyor Flywheel hub gap setting as per instruction of E-I-C.	BD	No	0	181	0
29	Lig. Conveyor Flywheel hub repairing/Replacement	Lig. Conveyor Flywheel hub repairing/Replacement as per instruction of E-I-C.	BD	No	0	2108	0
30	Lig. Conveyor Flow Adjustment	Lig. Conveyor Flow Adjustment as per instruction of E-I-C.	BD	No	12	181	2172
31	Lig. Conveyor Scrapper repairing/replacement	Lig. Conveyor Scrapper repairing/replacement as per instruction of E-I-C.	BD	No	4	1506	6024
32	Lig. Conveyor gear box coupling repair/replacement	Lig. Conveyor gear box coupling repair/replacement as per instruction of E-I-C.	BD	No	0	453	0
2. Lignite rotary air lock feeder.					0	0	0

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
33	Overhauling/Servising of Lignite RALF	Isolate the system. Remove geared motor, gear box, clutch assy., Open inspection cover and dismatle the entire feeder. Inspect for any damage parts viz. bearings, shaft sleeve, sealing strip, casing sleeve, bucket, rotor of feeder as well as scraper etc. Replace any damaged internals if required. Check for clearences. Carry out lubrication of gear box as well as bearings. Assemble as per E-I-C. Assist trial run.	PM	No.	10	42452	424520
34	Greasing of DE / NDE bearings of rotor, scrapper assy. Of lignite RALF.	Clean the bearings. Apply the grease with pressure. Clean the excess grease from outside.	PM	No.	200	453	90600
35	Shaft stuffing box leakage arresting.	Tighten the SINGLE shaft seals of scraper and rotor shaft as per instruction of EIC. Clean the area.	BD	No.	200	543	108600
36	Lig. RALF Shaft stuffing box seal/gland replacements.(Single side)	Remove the gland follower of any one shaft seals. Remove the all old galnd packing. Placed the new gland packing. Tighten the gland follower. Clean the all area.	BD	No.	50	240	12000
37	Lubrication of gear box.	Open the gear box. Drain the old oil/grease. Refill / replaced the new oil / grease.	BD	No.	30	453	13590
38	Clearing RALF jamm.	Rotate rotary air lock feeder manually through coupling, Open the top cover plate. Inspect feeder from inside for any foreign material, remove if any, Put mixture of bed material with water from top, hand rotate for 2 to 3 revolution and make free. Box up.	BD	No.	300	1198	359400
39	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	242	968

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
40	Repair of NMEJ betn feeder and conveyors. Size 1mx2m	pull the top of the lignite conveyor. Remove the expansion joint, replaced with new one. Box up	BD	No.	2	1054	2108
41	On line leackage arresting of NMEJ/MEJ betn feeder and seal pot.	Clean the area properly. Check for any leakage of flue gas of bed material. Apply sodium silicate with refractory, ceramic wool mixture. Make necessary arrangements to hold mixture using plates etc. Arrest leakage.	BD	No.	4	1054	4216
42	Dismantling and refixing of RALF Drive Motor (Geared)	Drain the oil from Gear box. Decouple the drive motor and install new motor .Couple the drive motor & align it.Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	4	1048	4192
43	Replacement of Sealing strips for Rotor / Scrapeer	Isolate the RALF. Open the manhole door remove all damaged sealing strips by cutting / grinding. Replace with new sealing strips as per EIC. Check the clearance between casing and rotor. Box up and check for free rotation of the feeder	BD	Set	4	1810	7240
44	Replacement of shaft sleeve	Isolate the feeder. Dismantle the feeder by removing gear box, motor, clutch assy, remove the bearings, shaft protection sleeves and replace with new one, check the clearances, check the condition of bearing and replace if required box up and check for free rotation as per EIC	BD	No.	4	6581	26324
45	Replacement of Oil seal	Isolate the feeder, drain the oil dismantle the gear box replace the damaged oil seal, box up the gear box check for leakages as per EIC.	BD	No.	4	961	3844
46	Lignite RALF gear box Leakage attending	Identify the leakage. Replace flange gasket or oil plug if required.	BD	No.	4	304	1216

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
47	Lignite RALF gear box replacements	Drain the oil from drain plug. Remove the motor & gear box from position. Issue new gear box from store and place in position. Lubricate the gear box. Fit the motor, replace coupling if required. Align gear box with motor. Assist trial.	BD	No.	6	2108	12648
48	Lignite RALF clutch servicing	Dismantle the clutch assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	No.	50	1086	54300
49	Lignite RALF clutch assy. Replacement.	Isolate the feeder. Remove the clutch assy. Using screw jack, hydraulic jack with puller. Check the shaft for any dent etc. Make it proper and fixed new clutch assy after adjusting key on the shaft. Assist trial run of feeder.	BD	No.	50	1141	57050
50	Lig. RALF Clutch torque setting	Lig. RALF Clutch torque setting as per instruction of E-I-C.	BD	No	100	272	27200
51	Lig. RALF Inspection	Lig. RALF Inspection for abnormal sound. Inspection door to be opened & work to be carried out /Cleaning of Srapper & Bucket as per instruction of E-I-C.	BD	No	50	1498	74900
52	Lig RALF Scraper shaft replacement	Isolate the feeder. Remove the clutch assy. Using screw jack, hydraulic jack with puller. Remove the motor & gear box from position. Remove the damaged scraper shaft from its position. Check the bearings of scraper shaft and oil seal. Replace the scraper shaft as per instruction of E-I-C. replace bearing and oil seal if required. box up the feeder. Lubricate the gearbox and bearing. Take trial run.	BD	No	4	21226	84904
3. Master Fuel trip valve.					0		0
53	Spindle gate lubrication.	Open the cover. Clean the spindle, Lubricate the spindle with grease. Box up.	PM	No.	4	453	1812

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
54	Manual operation of the MFT.	Open /close the MFT manually as per instruction of EIC.	BD	Once Operation	50	449	22450
55	Internal cleaning of MFT	Open the top flange of MFT cover plates. Remove the bed material by applying air. Clean the entire empty chamber area. Ensure purge/service air pressure & flow. Box up.	BD	No.	10	601	6010
56	Overhauling/Servising of MFT	Decouple the master fuel trip from electrical actuator & remove the spindle nut. Remove the cover plate. Remove the MFT plate along with spindle. Decouple the plate from spindle. Dismantle the entire gate. Check for damage internals viz. sealing rope, accenders, bearings, spindle nut, etc. Replace/repair any damaged internals. Replace the MFT plate, spindle if required. Ensure purge/service air pressure & flow. Box up. Ensure the free manual operation of MFT for full open/full close position. Assist for the limit switch setting with electrical dept. Assist trial run.	PM	No.	16	12686	202976
57	Opening/closing of lignite bunker gate.	Open/close the lignite bunker gates as per requirements.	BD	Once Operation	100	374	37400
58	Lignite bunker gate servicing.	Remove the spindles of gate. Clean the gear pairs, nut & bearings. Check freeness of gate. Box up.	BD	No.	40	1201	48040
59	MFT spindle nut replacements	Open the cover of MFT. Remove the spindle. Remove nut & box up after replacing nut.	BD	No.	16	749	11984

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
60	Bunker inspection & its liner plate(Polymer or SS 310) repairing/ replacement	Ensure that bunker is completely empty. Ensure electrical isolation of lignite conveyor. Open all bunker outlet gates. Make proper approach for inspection. Inspect the liners on all sides of bunker plate. Repair/replace as per E -I/C. Liner size is @ 1x2 meter. Remove the scrap. Normalise the system.	BD	No.	100	25439	2543900
4. Limestone air lock feeder. 10 TPH.					0		0
61	PM of Lime stone RALF	Isolate the Airlock feeder. Clean the annular space between casing and rotor. Grease the bearings. Check the oil level and top-up if necessary. Check the condition of oil seal and replace if necessary. Tighten the gland or replace the gland, if required.	PM	No.	48	599	28752
62	Replacement of limestone air lock feeders.	Isolate the feeder. Remove the motor & Gear box. Remove the feeder & replace it with new feeder. Fit the gear box & motor. Normalise & assist trial run.	BD	No.	2	2097	4194
63	Rotary air lock feeder DE/NDE bearing replacements (any-1)	Remove the motor. Replace the bearing using proper tools and tackles. Install new bearing. Normalise & assist trial run	BD	No.	2	599	1198
64	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	50	481	24050
65	Oil seal replacement of RALF	Drain the oil from the gear box. Remove the motor. Replaced the oil seal from the gear box. Place the motor and fill the oil in gear box.	BD	No.	4	481	1924
66	Servising/ Overhauling of RALF.	Drain the oil from the gear box. Remove the motor. Remove the gear box. Remove the rotar assy. Place the new rotar assy. Normalise.	BD	No.	4	2396	9584

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
67	RALF jamm clear out./Flow establishment of limestone.	Hand rotate the feeder for mechanical jammimg. Open the top inspection door if required. Check for any foreign material. Made it free. Check for Flow through feeder from inspection hole. Carry out hammering of bunker if required to establish the flow.	BD	No.	500	407	203500
68	Greasing of DE / NDE bearing of RALF.	Open the DE / NDE bearing cover. Grease properly. Box up	BD	No.	8	181	1448
69	Lubrication of gear box.	Check for oil level in gear box. Fill oil or totally replaced the oil as per E-I_C.	BD	No.	8	181	1448
70	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	181	724
71	Limestone gearbox overhauling.	Remove the gear box from position. Dismantle the gear box. Replace damage part and box up.	BD	No.	2	1198	2396
72	Limestone feeder flow checking	Check the feeder for flow of limestone by opening plug. Rotate feeder in both direction. Do hammering of limestone bunker if required. Normalise.	BD	No.	8	362	2896
73	Limestone feeder Gear box view glass replacement.	Drain the oil. Replace the view glass. Oil top up and box up.	BD	No.	4	362	1448
74	Limestone bunker level checking	Open the manhole door. Check the level of bunker. Box up.	BD	No.	4	181	724
75	Limestone bunker gate servicing.	Remove the spindles of gate. Clean the nut & bearings. Check freeness of gate. Box up.	BD	No.	10	599	5990
76	Opening/closing of limestone bunker gate.	Open/close the limestone bunker gates as per requirements.	BD	Once Operation	2	181	362
77	Lime Stone RALFs Gland leakage arresting	Lime Stone RALFs Gland leakage arresting by gland tightening	BD	NO	20	226	4520

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
78	Lig. Conveyor Idler repairing work.	Carry out the welding work on Damaged portion of the Sprocket/Idler as per instruction of EIC.	BD	NO	8	1817	14536
79	Lig. Conveyor Guide rail repairing/replacement work.	Carry out the lig. Conveyor guid rail replacement/repairing as per EIC. Carry out the side casing plate repairing/replacement , if required. Welding per meter length consider as a one quantity.	BD	Per meter	60	1211	72660
80	Lig. Conveyor Bottom portion link removal work.	Delink the chain and remove bottom portion link from the lignite conveyor and carry out groove cleaning work as per instruction of EIC. After complition of the grrove cleaning insert the bottom part of the coveyor, box up the conveyor and take trial.	BD	per bottom portion links	16	11451	183216
81	Lignite conveyor Gear Box Servicing work.	Dismantle the gear box assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	NO	4	6389	25556
82	Lignite RALF Gear Box Servicing work.	Dismantle the gear box assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	NO	8	2409	19272
83	Lignite conveyor gear box to motor alignment work.	Decouple the gear box and motor , carry out alignment work and coupled the gear box and motor.	BD	NO	4	968	3872
84	Conveyor link Sprocket blade replacement. Phase-1-(Single/one side)	Isolate the conveyor. Open cover plate. Decouple th	BD	NO	12	360	4320
85	Replacements of NMEJ betn feeder and conveyors. Size 1mx2m	Replacement of NMEJ between feeder and conveyor as per EIC	BD	NO	2	5212	10424

Annexure B1

Phase-1 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
86	Lig RALF Scraper shaft repair.	Repair of scraper shaft as per EIC	BD	NO	4	968	3872
87	Single side Gland replacement of Lime RALF	Remove the gland follower of any one shaft seals. Remove the all old galnd packing. Placed the new gland packing. Tighten the gland follower. Clean the all area.	BD	NO	4	481	1924
						SUB TOTAL	**7369254**

Annexure B1

Phase-1 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	CRM /ERM/GDRM oil top up.	Check for oil level/condition, Oil top up/replace if reqd.	BD	No.	20	122	2440
2	PM of CRM /ERM/ GDRM gear box.	Clean the ERM/CRM/GDRM (Any one) gear box externally open the Motor/Gear box flange, inspect the internals.Check for any leakage from oil seal, view glass and if required attend the same.	PM	No.	192	543	104256
3	Replacement of emitting electrode. ONE ELE-1 QTY	Remove the wire snapped electrode. Inspect for tension / worn out emmitting electrode. Replace new electrode using stretching tool divice only to ensure required tension. Box up.	BD	No.	250	91	22750
4	Replacement of shaft insulators for emmitting rapping mechanism	Decouple the motor gear box assembly. Remove the cover plate.. Replace the insulator .	BD	No.	4	961	3844
5	Alignment of collecting / emmitting gear box.	Align the collecting / emmitting gear box assembly with the rapping mechanism shaft.	BD	No.	4	721	2884
6	Servicing of collecting / emmitting rapping gear box.	Un load damaged gear box from site and shift it to maintenance area/ work shop. Dismantle whole gear box as per standard maintenance practice or instruction of E-I/C.Identify the damaged,wear & tear parts and hand over list to E-I/C. Issue required spare from ware house. install new parts/spare in existing gear box assemble gear box for ready for install/replace and tagged the same and shift it to site/warehouse/spare assembly area	BD	No.	6	1922	11532

Annexure B1

Phase-1 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Replacemetns of gear box of emmitting / collecting rapping.	Un laod damage gear box from position and shift same to spare assembly area/ware house / work shop.Issue new gear box and shift it from spare assembly area/ware house / work shop to site and install it in position and couple it with existing gearbox/motor/rapping system.	BD	No.	4	3510	14040
8	Field internal inspection for dead shot.One field-1qty	Receipt of key from engineer in charge .Open man hole door as per instruction of E-I/C , open the manhole door, Do the earthing as per strandard procedure. Install safety mechanism as per engineer in charge.Check the field for any abnormalitities or for dead shot and mark the same . Give the list of finding to E I/C. Normalize the field and handover key to GIPCL E I/C.(Must engage 4 ESP known manpower with properly charged high beam torch with all required PPEs)	BD	No.	20	2396	47920
9	Replacements of CRM / ERM coupling.	decouple the gear box, replace the coupling with new one, Align and couple.	BD	No.	4	1442	5768
10	ESP casing/hopper manhole door open/leakage attending	Open the manhole door. Attend the leakages by rope fixing or appliying sodium silicate, plate welding in the door. Box up.	BD	No	14	1504	21056
11	Removal of collecting plate	Identify the damaged plate. Remove the damaged plate after confirmation from GIPCL E I/C.	BD	No	100	1205	120500
12	ESP & APH hoppers drian dechocking work	Open the door of hopper as per instruction of E-I-C. Remove the foreign materials from ESP & APH hoppers drain. Door box up.	BD	No.	8	1198	9584

Annexure B1

Phase-1 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	ESP GD screen Deflector/dummy plate Fixing/removal	ESP GD screen Deflector/Dummy plate fixing and/or removing from primary & secondery screen as per chart / instuction of engineer in-charge	BD	No.	400	183	73200
14	Plain/Fix Bearing Replacement/Repairing	On identification of defect,Removing/Repairing of Existing plain/Fix bearing,Install new plain bearing.Includes Seam adjusting,Aligning,Bolting,tack welding and assist trail run.	BD	No.	60	484	29040
15	Hammer Replacement	Replacement of inner arm &/or outer arm of Rapping mecahnism .Includes removing of existing Hammer from rapping shaft and replace it with new one,Tacking,Angle positioning ,Confirm hitting to correct spot on trail.	BD	No.	300	602	180600
16	Shock Pad Replacement	Replacement of Shock pad. Includes Cutting of existing shock pad bolt,install new shock pad & tacking/locking bolt.Confirm hitting to correct spot on trail.	BD	No.	400	183	73200
17	GD screen /hopper baffles Replacement/repairing	Replacement/installation on new GD screen including joining with existing GD screen	BD	No.	30	1980	59400

Annexure B1

Phase-1 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
18	Replacement of support insulator	After identification of defect of support insulator , open top door of respective support insulator and open flange cover also. Remove old damaged support insulator and scap from support insulator chamber. Clean chamber. Shift new support insulator from ware house to site. Open nut from load carring stud, remove washer plate.Carry out load on temporarily J bolt fix support insulator,re install washer plate and transfer load on new support insulator.Remove J bolts. Normalize the system/chamber varify internal of ESP post repair and on confirmation box up system	BD	No.	20	5394	107880
19	Replacement of Shaft insulator	Replacement of Shaft insulator	BD	No.	4	899	3596
20	Locking of CE	Locking of CE with shock bar if instructed by engineer in charge.	BD	No.	20	242	4840
21	Re-positioning of Collecting Electrode	reposition/removal of Collecting Electrode	BD	No.	150	721	108150
22	Repair of collecting plate	On identification of defect The affected / damage plate need to be either lock with shock bar or with casing as per instruction of E I/C. Through welding/ bolting or by installing flats in between damage CE to shock bar to individual CES.	BD	No.	100	484	48400

Annexure B1

Phase-1 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
23	Locking of row of CE (1 row = 6 Ces)	Some time whole six CE need to locked with shock bar through single pipe/flat in case 3 CE locking cost consider for whole one row. Provide post at two ends and support to linear pipe/flat by post.Linear pipe/flat must be locked with CE at junction point	BD	No. of row	40	753	30120
						SUB TOTAL	**1085000**

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Servicing of ESP / IDGates (Inlet / outlet).	Clean & Grease the driving chain. Operate the gate & check for full open/ full close. Overhauling of gear box. Check the condition of all the sealing strips fand replace if required. Replace the bearings, chain, sprockets if required. Trail operation with limit switch setting in-co-ordination with electrical / C & I people. Scraping and painting of gate. Apply of lubricant dry molycote. (Supply of Molycote on GIPCL scope)	PM	No.	32	8846	283072
2	Servicing of ESP gates gear boxes.	Remove the electrical actuator. Clean the old grease from gear box. Check for damage of bearings, internals etc. Replace the damage internals if required. Apply new grease & box up.	PM	No.	2	6424	12848
3	Repair of NMEJ in PA/SA duct	Identify the damage NMEJ faric cloth. Remove bolts of damage cloth area. Patch up the fabric cloth as per instruction of E-I-C. Check for any leakage of air. Hot tighten the bolts.	BD	Each	2	2423	4846
4	Replacement of NMEJ assembly in PA/SA duct.Size: Circumferential length of NMEJ up to 6 meter	Remove the fabric cloth by removing bolts. Fix the new NMEJ clothes as per instruction of E-I-C.. Check for air leakage. Hot tighten the bolts.	BD	Each	10	8846	88460
5	Replacement of NMEJ assembly in PA/SA duct.Size: Circumferential length of NMEJ more than 06 Meter and up to 10 meter	-- Do --	BD	Each	20	12847	256940

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Replacement of casing and duct plate up to 6 mm thick	Shift material from store to site. Inspect the duct wall for wear. Patch with MS plate of 3.15 mm / 6.0 mm thickness as per E-I-C. for baffles the plate shoud be as per actual profile only.	BD	MT	30	18000	540000
7	Repair / replacements of Metallic Expansion Joints (MEJ) in blower air line. Max. dia 405 mm (Flanged)	Lock the blower air pipe. Loosen the flange joints of Mettalic expansion joints. Remove the MEJ. Fixed new one by fixing rope at flanges. Normalise the air pipe. Check for any air leakage. Hot tighten the bolts.	BD	No.	2	3534	7068
8	Internal cleaning of combustor to cyclone Non Metallic Expansion Joints (NMEJ) at bottom portion. Length-@ 4.5 meter	Inspect the expansion joints. Dismantle the bottom portion of the expansion joint Check for ingress of bed material. Clean the material if any. Repair for damage if any. Fill the missing insulation material properly including anchor welding and boxup.	BD	No	16	1448	23168
9	Internal cleaning of cyclone to back pass NMEJ at bottom portion. Length - @5 meter	-- Do --	BD	No.	8	1448	11584

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster & Dust trap. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stud welding for dust trap installation. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the new Dust trap, Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	8	38333	306664
11	Replacement of cross over duct to second pass NMEJ Width 400 mm Size: 5636 x 5236 mm2	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	4	23042	92168

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Replacement of Cyclone outlet circular NMEJ. Size: Dia 4.54 Meter	Clean the peripheral are around NMEJ. Dismantle the entire NMEJ by cutting the bolts. nos of bolts. Remove outer fabrics and cermic bolster. Clean the gap inbetween the flanges, stuff the ceramic wool in between the flange gaps as in entire perheral length as per the instruction of EIC, erect the new NMEJ along with bolster. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C.NOTE:Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	2	6424	12848
13	Replacement of Cyclone to Seal pot NMEJ. Size: Dia 2.50 Meter	Clean the peripheral are around NMEJ. Dismantle the entire NMEJ by cutting the bolts. nos of bolts. Remove outer fabrics and cermic bolster. Clean the gap inbetween the flanges, stuff the ceramic wool in between the flange gaps as in entire perheral length as per the instruction of EIC, erect the new NMEJ along with bolster. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C.NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	4	8846	35384

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
14	NMEJ patch up work.. Locations : C to C,Backpass inlet, COD inlet NMEJ, Seal pot , Air duct NMEJ., Flue gas duct NMEJ.	Clean the periheral area around NMEJ. Identify leakage. Apply sodium silicate with ceramic wool. Jacking at leakage are for supporting of applied ceramic wool. If required make seal box with 3 to 6 mm M.S plate at punctured area. Fill with sodium silicate. Normalise. Check for flue gas leakage. Hot tighten the bolts.	BD	No.	16	7681	122896
15	Combustor to Cyclone / Back pass inlet NMEJ wool stuffing. Size: 6575 x 4518 mm2	Clean the bed material from inside the NMEJ. Stuff the ceramic wool. Box up.	BD	No.	10	724	7240
16	Blower line flange joint leakage attending	Identify the leakages in blower line. Remove insulation. Replace rope of flange joints. Do welding if required.	BD	No.	4	1096	4384
17	Freeness checking of dampers.	Check damper for mechanical jamming. Made damper free & Lubricate the linkages by applying dry molycote. Open & close the damper. Assist trial run.	BD	No.	10	599	5990
18	Attend leakage in air/flue gas duct by welding only. Running meter of welding.	Grind the damaged welding .Attend leakage by welding with 6013 welding electrode with minimum two runs with 6-8 mm fillet	BD	meter	150	228	34200
19	Removal and re erection of wind box drain pipes. Size; up to 150 NB & 2 meter length.	Remove the drain pipes of wind box hoppers as per EIC requirement and re erect after completion of activity	BD	Per pipe.	4	606	2424
20	Opening & Closing of ESP & ID duct gate	Make necessary arrangement and open and close the gate manually as per instruction of E-I-C	BD	No.	4	1211	4844

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
21	Internal repair of MEJ in ESP and ID duct	Identify the leakages.Wool stuffing of the MEJ leakage area.Sealing it with a 3 mm plate as per instruction of E-I-C.Duct size is 3mX6m(approx)	BD	No.	4	2423	9692
22	Fabrication of steel structure work (including transportation of steel from store yard)	Shift steel of proper size from store to site. Fabricate platforms/ approaches etc. as per E-I-C at site.	BD	Each Tonne	20	18000	360000
23	Cyclone seal box fabrication at Hot spot area Size: 900 X 500 X 250 mm of 6/8mm IS 2062 M.S plate	First apply sodium silicate and ceramic wool on hot spot.Fabricate plate of suitable size and weld plate on cyclone shell maintain gap @150-200mm between shell and plate. Prepare refractory mix as per E-I/C. fill in the gap. If required proper jacking to be done to arrest leakage.	BD	No.	60	6424	385440
24	APH Tubes (size 50.8mmx2mm thick/4mm thick) / Dummy / Sleeves Work	Shifting of dummy (size 46ODX50MM LENGTH) / Sleeve (size 46ODX500MM LENGTH) material to site. Insert Dummy / Sleeve as per instruction of E-I-C . Both sides dummy / sleeve of one tube consider as a one no. quantity. After completion of jobs, Balance materials to be shifted in store.	BD	Per tube	1600	60	96000

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
25	APH Tubes (size 50.8mmx2mm thick/4mm thick) Mapping Work. No of tubes in each block are as follow: 1) Primary air tubes block - 3219 tubes in ph1 and 3875 tubes in Ph2 2) Secondary air tubes block - 4329 tubes in ph1 and 5375 tubes in Ph2 3) FBHE air block - 154 X 5 tubes (For FBHE, 5 nos. of block is considered as one block)	APH SA/PA & FBHE blocks tubes mapping with ID fans running. One block is considered as One no. quantity.	BD	Per Block	120	899	107880
26	PA/SA damper servicing work.	Carry out the damper servicing work, check it's open and close movement , coorect if any gap observed in between plates. Check all the link elements repair/replaced if required. Greasing of all the link assembly. Decoupled and coupled with actuator if required. Take trail run.	PM	NO	36	3534	127224
27	Plate patch up work on Cyclone and COD duct.	Shifting of material from store. Prepare the material as per requirement (as per EIC),Repaire of cyclone & COD plate by new plate patch up on onl plate	BD	Sq. Meter	20	1683	33660

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
28	Repaire / Replacement of gap flange / Retainer plate / flange of NMEJ	Shifting of material from store. Prepare the material as per requirement (as per EIC and drawing), Repaire / Replacement of gap flange / Retainer plate / NMEJ flange of NMEJ (200 mm width /30 mm thickness Gap flange, up to 16 mm thick of NMEJ Bolster and Fabric flange.	BD	Per Meter	80	1439	115120
29	Replacement of Combustor to Cyclone NMEJ Fabric Width 900 mm. Size:6575 x 4518 mm2 (Only fabric some portion of NMEJ)	Dismantle the required size of NMEJ by cutting the bolts as per EIC of M 20 X 80. Remove outer fabrics,Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps in required length.Erect the NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tightening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	50	897	44850
30	Replacement of Combustor to Cyclone NMEJ fabric and Bolster Width 900 mm. Size:6575 x 4518 mm2 (Only Fabric and Bolster some Portion)	Dismantle the required size of NMEJ by cutting the bolts as per EIC of M 20 X 80. Remove outer fabrics and Bolster,Clean the gap inbetween the flanges, measure the gap.Stuff the ceramic wool in between the flange gaps in required length.Erect the NMEJ Fabric and Bolster. Joining of NMEJ by heating m/c.Check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	60	1425	85500

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
31	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2 (Only some portion of NMEJ fabric, Bolster and Dust trap)	Dismantle the required size NMEJ by cutting the bolts.Remove outer fabrics, cermic bolster & Dust trap. Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps. Erect the new Dust trap, Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tightening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	60	2137	128220
32	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2 (Entire NMEJ of fabric and Bolster, without Dust trap)	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster with out Dust trap. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	NO	4	37940	151760

Annexure B1

Phase-1 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
33	Replacement of cross over duct to second pass NMEJ Width 400 mm Size: 5636 x 5236 mm2 (Only some portion of NMEJ fabric, Bolster/Ceramic wool)	Dismantle the required size of NMEJ by cutting the bolts. Remove outer fabrics, cermic bolster/Ceramic wool. Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps.Erect the Bolster/Ceramic wool & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	40	1069	42760
34	Replacement of casing and duct plate up to 16 mm thick at COD/cyclone/ Cto C etc……	Shift material from store to site. Inspect the duct wall for wear.Remove damage/oxodized and Replace with MS plate of up to 16.0 mm thickness as per E-I-C.	BD	MT	30	27000	810000
						SUB TOTAL	**4355134**

Annexure B1

Phase-1 **Part-J** **Fuel Firing System.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Propane tank safety valve servicing assistance	Assist for safety valve servising as per following.Isolate the safety valve from tank. Remove it from position. Carry out testing of safety valve with nitrogen gas. Adjust pressure if require. Box up.	BD	No.	2	856	1712
2	Start up Burner (SUB) gun cleaning.	Isolate the fuel and steam, air line valve. Remove the hoses from the gun. Remove the gun. Clean with diesel / air. Tag the clean gun,install same as reaquired to set up, Assist trail run.Identify defect if any during trail.	BD	No.	74	961	71114
3	Bed Lance (BL) gun cleaning.	Isolate the fuel and steam, air line valve. Remove the hoses from the gun. Remove the gun. Clean with diesel / air. Tag the clean gun,install same as reaquired to set up, Assist trail run.Identify defect if any during trail.	BD	No.	250	841	210250
4	Replacements of hoses of SUB / BL.	Isolate the fuel, steam, air, gas supply. Replace the hose with new one. Assist trail run ,Check for any leakage.	BD	No.	30	601	18030
5	SUB Block removal and refixing. Elevation of SUB is at 10.5 meter in front & rear wall of boiler.OD of sub block- 1.5 meter & length of SUB assy 2 meter.	A)For Removal :- Remove the all hose connections of SUB after isolating supply. Remove the oil gun from SUB block. Remove the SUB block, use chain pulley block for removal of block. Clean the diffuser of SUB. Box up. B) For refixing :- Put the SUB block in position by chain pulley block. Fit the gun in the block. Connect all hose connections. Tighten flange of SUB block. Charge the oil/steam lines & check for leakage, attend the leakage. assist trial run. Note :- This activity is to be carried out in boiler hot conditions. utmost care is to be taken & necessary PPEs should beutilised while working.	BD	No.	34	1198	40732

Annexure B1

Phase-1 **Part-J** **Fuel Firing System.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Clear out SUB gun jamming	Check for advance / retaract motion of SUB gun.Identify of jamming if any and rectify the same.Assist trail advance / retaract motion.	BD	No.	2	240	480
7	Repair / replacements of gas regulating valve.	Remove the valve from skid. (Flange joint) Open the valve, Check for any damage to seat, disc etc. Replaced if reqd. or replaced the valve with new one.	BD	No.	2	968	1936
8	Repair / replacements of steam, air, fuel oil atomising and trip valve of SUB / BL control station. Size:- Upto 1.5".	Remove the valve from skid. (Flange joint) Open the valve, Check for any damage to seat, disc etc. Replace if reqd. or replace the valve with new one.	BD	No.	8	968	7744
9	Strainer (Oil, steam, air) cleaning from SUB / BL control station.	Open the strainer, clean the element with diesel , air. Box up.	BD	No.	8	721	5768
10	Strainer (Oil , Steam , air) replacements from SUB / BL control station.	Replace the strainer with new one.	BD	No.	4	362	1448
11	Steam, oil leakage arresting from the SUB / BL control station skid.	Identify the leakage, remove insulation if reqd. Tighten the flange, replace gasket if reqd.	BD	No.	30	721	21630
12	Pressure adjustment of valve	Adjust the pressure of steam/oil/air.Open the cover of the valve. Adjust bolt asper E-I-C.	BD	No.	6	63	378
13	Bed Lance guide pipe cleaning.	Remove the bed lance from position. Clear the chocking of guide pipe. Fixed the Bed lance.	BD	No.	74	181	13394

Annexure B1

Phase-1 **Part-J** **Fuel Firing System.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
14	Servising/Overhauling of SUB assembly	Isolate the SUB assembly. Remove the all hose connections.Remove the gun from SUB assy.Remove the SUB block from position by chain block.Dismentle the SUB block. Clean all the parts by diesel.Check the guide pipe, retract assy, diffuser plate .Repair/replace as per instructions of E-I/C.Check all hose & its connectors . Replace if required. Check the gun & clean it. Replace the gun/tip /nozzle if required.Assemble the SUB block & make ready as standby.	BD	No.	12	3386	40632
15	Open /close wind box drain valve.	Open the wind box drain valve. Remove the bed material from wind box. Close the valve.	BD	No.	10	122	1220
16	Primary air Hose Inspection/Replacement	Remove the hose from position. Check for any foreign material inside the hose. Clean the bed material with compressed air.Replace the hose if required. Box up.	BD	No.	18	481	8658
17	Barrel & Diffuser Installation	Make proper platform as per requirement for work. Barrel & Diffuser Installation Work		No.	0	3534	0
18	Propane tank Hydro test.	Assist for Hydro Test as per following. Open the vent of the tank. Remove residual propane from tank. Flush tank with water. Open the manhole door. Clean internally. Carry out hydro test. Normalise the system. Fill up the propane in the tank.	BD	No.	2	7689	15378
19	Propane pump Servising	Ensure isolation of pump. Open the cover. Remove belt set.Dismentle the pump. Clean the internals. Inspect internals & replace the damaged parts. Assemble pump.Replace belt if necessary.Align the belt. Box up.Assist trial run.	BD	No.	2	3510	7020
						SUB TOTAL	**467524**

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Replacement of LP valves upto 2" size (800 Class and below)	Remove the damaged valve from position, make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	14	1452	20328
2	Servicing of LP valves upto 2" size (800 Class and below)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	10	487	4870
3	Replacement of LP valves above 2" upto 8" size (800 Class and below)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	16	1817	29072
4	Servicing of LP valves above 2" upto 8" size (800 Class and below)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	20	968	19360
5	Gland tightening of valves up to 3" size of various class for water, steam, oil and air applications	Clean the bolts and gland follower, apply cleaner,Tighten the gland follower tightening bolts to the maximum possible extend to arrest the gland leakage. Tighten both the bolts uniformly, apply dry moly spray.	BD	No.	100	122	12200
6	Gland tightening of valves above 3" size of various class for water, steam, oil and air applications	Clean the bolts and gland follower, apply cleaner,Tighten the gland follower tightening bolts to the maximum possible extend to arrest the gland leakage. Tighten both the bolts uniformly, apply dry moly spray on the bolts.	BD	No.	30	183	5490

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Gland replacement of LP valves upto 2" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	20	365	7300
8	Gland replacement of LP valves above 2" size upto 6".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	10	731	7310
9	Gland replacement of HP valves upto 2" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	24	244	5856
10	Gland replacement of HP valves above 2" size upto 6".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	14	548	7672
11	Gland replacement of HP valves above 6" size upto 12".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	10	731	7310

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Gland replacement of HP valves above 12" to 16" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	4	1461	5844
13	Replacement of HP valves upto 3" size (1500# and above)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	14	1575	22050
14	Servicing of HP valves upto 3" size (1500# and above)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	40	731	29240
15	Replacement of HP valves more than 3" to 8" size (1500# and above)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	6	2628	15768
16	Servicing of HP valves more than 3" to 6" size and any mode of operation (1500# and above)	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	10	968	9680
17	Servicing of HP valves from 6" to 10"size and any mode of operation (1500# and above)	-- Do --	BD	No.	4	3423	13692

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
18	Servicing of HP valves 10" above to 16" size and any mode of operation (1500# and above)	-- Do --	BD	No.	4	4423	17692
19	Servicing of Safety and Safety relief valves in Drum, Main steam line, HRH, CRH.Line Size:12",14",16"	Make proper approach by scaffolding / platforms. Dismantle the valve entierly, repair / replace the damaged parts, clean the valve internals properly. Lap the seat and body, box up the valve. Check for no leakage, passing and normal operation. Assist in floating of the safety valve as per EIC	BD	No.	4	12847	51388
20	Servicing of Safety valve in Soot blower steam line and CBD tank. Size - up to 3'	-- Do --	BD	No.	4	3423	13692
21	Gaging of Safety valves	Remove the Manual poping lever and erect the Safety valve Gag as per EIC. After completion of HT remove the gag and restore the manual lever	BD	No.	24	365	8760
22	Installation of Hydro static plug in Safety valves	Isolate the valve Dismantle the safety valve without disturbing the setting, Remove the seat and replace the Hydro static plug and box up. After completion of HT restore the original seat as per EIC	BD	No.	2	726	1452

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
23	Setting/POP up of Safety valves	Remove the manual poping lever and adjust the Spring compression adjustment nut, Lower adjustment ring and upper adjustment ring as per Instruction of EIC. Repeat the process till the safety valve is set at the design pressures or POP up the safety valve manually by proper arrangement as per E-I-C.	BD	No.	12	968	11616
24	Servicing of Knife edge gate valve of various mode of operation	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the straightness of the plate rectify if required, check the surface of the plate rectify if required from impressions, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	20	731	14620
25	Choking/Jamming clearout of Knife edge valves	Isolate the valve, loosen the Gland bolts and free the valve by slight hammering as per EIC	BD	No.	80	365	29200
26	Servicing of Butterfly valve Size 150-250 Nb of various mode of operation	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the seat for damage repair / replace as per requirement, check the rubber seal ring repair / replace as per requirement, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	2	1211	2422

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
27	Servicing of Ball valve of various mode of operation up to 150NB size	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the ball for external surface damage repair / replace as per requirement, check the sealing ring repair / replace as per requirement, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	4	365	1460
28	Gland replacement of Spiess valves	Isolate the valve from sealing air side, Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage	BD	No.	10	548	5480
29	Cooling water hose replacement for Spiess valve	Isolate the valve from cooling water side, remove the damaged cooling water hoses and replace it with new ones as per EIC. Charge the cooling water and check for no leakage.	BD	No.	8	484	3872
30	Removal / refixing of spiese valve assy./Replacement work	Remove the cooling water hoses from spiese valve. Remove the spiess valve assly from position. Remove any foreign material from inside and checking of bed ash discharge line for any chock up. If line is chocked clear it by pocking. Position spiess valve assly. Carry out alignment with brick.Normalise the system.	BD	No.	20	8846	176920
31	Manual operation of spiese valve.	Open/close the spiese valve manually as per EIC.	BD	Once operation	74	242	17908

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
32	Replacement of valves handle upto 4"	Remove the valve handle from position. Replace with new one.	BD	No.	10	365	3650
33	Servicing/Overhauling of combustor Spiess valve assembly. Size: OD- 80mm, Legth: 2.5 meter.	Isolate the valve from cooling water and seal air side, remove the cooling water, seal air hoses. Remove complete assly of spiess valve from position. Dismentle spiess valve shaft from body. Check the condition, ovality of shaft, condition cone. Remove the damaged shaft and replace with the new one if require. Cleaning of shaft sleeve & replaced gland packing. Build up cone with special electrode as per instruction of EIC. Box up & align the valve as per EIC .Connect the cooling water, seal air hoses. Check for no leakage, passing and normal operation	BD	No.	14	6424	89936

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
34	Servicing/Overhauling of FBHE/Seal pot Spiess valve assembly. Size:OD-135mm, Legth: 3.5 meter.	Isolate the valve from cooling water and seal air side, remove the cooling water, seal air hoses. Remove complete assly of spiess valve from position. Dismentle spiess valve shaft from body. Check the condition, ovality of shaft, condition cone. Remove the damaged shaft and replace with the new one if require. Cleaning of shaft sleeve & replaced gland packing. Build up cone with special electrode as per instruction of EIC. Box up & align the valve as per EIC .Connect the cooling water, seal air hoses. Check for no leakage, passing and normal operation	BD	No.	14	8846	123844
35	Freeness checking of various size of gate and globe valves: Size- upto 3"	Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by opening and closing of valve.	BD	No.	200	122	24400
36	Freeness checking of various size of gate and globe valves: Size- above 3" upto 16"	Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by opening and closing of valve.	BD	No.	30	484	14520
37	Assistance for attending online leakage of valves /pipe line etc.	Make necessary approach for attending on line leakage. Make necessary connection of air etc. Assist the online leakage attending team. Normalise. 01 no. equal to 04 hours work of 01 Fiiter, 01 Welder/Grinder & 02 Helpers.	BD	No.	20	950	19000

Annexure B1

Phase-1 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
38	Servicing of Control valve upto 3" size	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	6	1935	11610
39	Cleaning of valves up to 3" size	External cleaning of valves by manually and with spray.It should be cleaned properly without any dust	BD	No.	30	122	3660
40	Cleaning of valves above 3" size	External cleaning of valves by manually and with spray.It should be cleaned properly without any dust	BD	No.	30	183	5490
41	Steam trap replacement	Steam trap replacement along with end piping to neares trench,include cutting,fitting,bending,Socket welding of 15NB/25NB line	BD	No.	20	968	19360
						SUB TOTAL	**894994**

Annexure B1

Phase-1 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM OF Soot blower.	Clean the soot blower assembly & area by cotton cloth ,kerocine.Check the rotary & traverse gear box freeness & Lubricate the rotary & traverse gear box. Lubricate the both travelling carraige assy.Adjust the chain tension of both motor & if required , replace the chain. Check for gland / gasket leakage from travelling carriage, puppet valve & replace it if required. Do check of puppet valve operation by forward-retract .Check the lance feed tube for any damage/bending & inform to Engineer I/C and .Check the steam blowingstrip & repair/replace/tighten , if required. Check advance - retract motion manually.Replace gland packing if instructed.	PM	No.	384	601	230784
2	Assistance for soot blowing	One person is required for checking of all soot blower during operation per shift per boiler. The above activity will be done in both boilers in three shifts a day. The person also required to identify any problem of soot blower during operation. Same problem may be attended later.	PM	No.	3000	296	888000
3	Chain tension adjustments of rotary and traverse motor.	Check for chain tension. Adjust the chain tension with the help of gear box adjustments.Clear the area.	BD	No.	8	91	728
4	Drive chain repair / replacements of rotary and transverse motor.	Remove the chain. Add additional link or replace with new one.Clear the area.	BD	No.	8	481	3848

Annexure B1

Phase-1 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Gear box servicing of rotary / transverse motor.	De clutch/couple the gear box. Drain the oil from the gear box.Remove the motor. Dismantle the gear box. Inspect the internals and handover list of spare required . Replace the damaged parts . Service the gear box.Lubricate gear box.. Box up.	BD	No.	4	1922	7688
6	Replacements of rotary / transverse gear box assy.	Declutch the gear box. Remove the damaged gear box. Place new one. Align it, adjust the chain tension. Fill the oil in gear box.	BD	No.	4	599	2396
7	Oil seal replacements of rotary / transverse gear box	Drain the oil. Remove the motor. Replaced the damaged oil seal. Box up.	BD	No.	4	300	1200
8	Lubrication of rotary / transeverse gear box, chain of jack shaft, drive chain, travelling carraige assy. Etc.	Fill the oil / change the oil from gear box. Grease the chain, travelling carraige assy. As per E-I-C.	BD	No.	10	240	2400
9	Decoupling / Coupling of rotary / transverse motor	Declutch the both gear box. Decouple the gear box from motor. Box up.	BD	No.	4	150	600
10	Jack shaft chain replacements/ repair.	Declutch the both drive. Remove the chain from jack shaft. Repair / replaced as per E-IC	BD	No.	2	449	898

Annexure B1

Phase-1 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
11	Travelling carraige assy Servicing.	Dismantle the carraige assy. Inspect for any damage to worm gear/ worm wheel or any other parts.hand over the list of spare required to restore TC.Issues apre from ware house and install same in existing assembly. transfer the TC to ware house/work shop /location for re installation at site.Post repair tagged the same for further identification/ c-ordination.	BD	No.	8	3386	27088
12	Travelling carraige assy Replacement	Remove the carraige assy as per standrad procedure. Install new assembly .normalize poppet valve assembly and take manual trail.	BD	No.	10	3386	33860
13	Travelling carraige assy. Gland packing replacements	Remove the worn out gland. Replaced the gland. Tighten the gland as per E-I-C.	BD	No.	74	360	26640
14	Puppet valve gland packing replacements	Replace the gland packing. Adjust the valve pressure.	BD	No.	32	240	7680
15	Puppet valve servicing.	Remove the puppet valve from the position. Dummy with the flange. Service the puppet valve for stem. Gland packing etc.	BD	No.	4	721	2884
16	Puppet valve pressure adjustments	Adjust the pressure as per E-I-C.	BD	No.	32	61	1952
17	Puppet valve replacements.	Replace the puppet valve with new one. Adjust the pressure as per E-I-C. replace gaskets if required	BD	No.	10	484	4840
18	Steam blowing bar (strip) replacements.	Remove the damaged strip (blowing bar) Check during operation.	BD	No.	10	240	2400

Annexure B1

Phase-1 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
19	Lance tube replacement	Remove the lance from position. Fix new lance in position. Align lance in carraige assy. Box up. Assist trial run.	BD	No.	24	4375	105000
20	Puppet valve plug replacement.	Check puppet valve plug thread. If found damage tap new thread. Fix new plug. Box up.	BD	No.	6	60	360
21	gasket replacement of Poppet valve	Isolate the system from steam side remove the damaged gasket and replace with new one charge the line and check for any leakage.	BD	No.	48	899	43152
22	Lance/Feed pipe Replacement	Removal of Lance/Feed pipe from existing soot blower Assembly by removing SBV head Assembly ,Install new feedpipe/Lance & SBV Head Assembly.normalize	BD	No.	20	6354	127080
						SUB TOTAL	**1521478**

Annexure B1

Phase-1 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of fuel oil pump (Transfer / unloading) Screw type Pump.	Check alignment of pump, correct if required. Check the coupling,bearing condition. Replace if required.Lubricate the bearings. Clean the suction strainer.Box-up.Assist trial run. Adjust pressure of pump if required.	PM	No.	28	487	13636
2	PM of pump in drain oil tank (Transfer / unloading) Gear Pump.	--Do--	PM	No.	4	365	1460
3	Steam trap servicing.	Isolate the trap. Dis assemble the trap. Clean it / replaced element if required . Box up.	OM	No.	10	244	2440
4	Repair/ servicing of steam coil heater	Dismantle the coil. Check for damaged.Plug the damaged tubes.Replace if necessary.Take hydraulic test of heater coil. Boxup	BD	No.	2	4423	8846
5	Gasket replacement in Steam coil heater.	Remove the pipe connection from steam heater. Remove the flange of the heater. Put new gasket & Box up.	BD	No.	10	1211	12110
	Assistance to Electrical for removal & fitting of Electric Coil Heater	After removal of electrical connections by electrical dept., remove the coil bundle of electric oil heater , & after clearence from electrical dept fit the heater coil in position.	BD	No.	2	4423	8846
6	Replacement of coupling & Alignment (Transfer / unloading pump)	Decouple the coupling and replace if required. Align and couple.	BD	No.	4	2423	9692

Annexure B1

Phase-1 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Servicing of pump / replacement of pump	Decouple the pump from motor. Take the motor out for pump dismentaling. Remove the bearing, mechanical seals. Dismentle the pump & check all internals. Replace/repair the damaged internals. Check the both DE & NDE bearing, mech seal ,its washer, etc & replace if required. Box up the pump, bearing,mech seals. Lubricate the bearing. Ensure the freeness of pump by manual operation. Replace the coupling, if required. Fit the motor & align with pump. assist trial run.and replace if required. Align and couple. Clean the area & remove the scrap.	BD	No.	4	7609	30436
8	Pressure adjustments of pump.	Adjust the pressure relief valve as per E-I-C.	BD	No.	2	244	488
9	Steam leakage arresting from heater skid.	Arrest the leackage from the flange, strainer flange. Tighten it or replaced the gasket as per E-I-C. Clean the drain oil / water from the skid.	BD	No.	4	1211	4844
10	Fuel oil leakage arresting from pump skid and heater skid.	Clean the area.Arrest the leakages from the flange, strainer flanges. Tighten it or replace the gasket as per E-I-C. Clean the drain oil / water from the skid.	BD	No.	10	1211	12110
11	Steam strainer cleaning from Pump skid and Heater skid.	Isolate the strainer. Remove the filter elements. Clean with diesel / air. Box up.Clean the area.	BD	No.	4	548	2192
12	Fuel oil strainer cleaning from Pump skid and Heater skid.	Isolate the strainer. Remove the filter elements. Clean with diesel / air. Box up.Clean the area.	BD	No.	40	968	38720
14	Replacement of oil valve upto 3" size.	Isolate the system. Cut the damage valve. Replace the valve with new one.	BD	No.	4	1211	4844

Annexure B1

Phase-1 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
15	Attending gland leakages of valves upto NB 3"	Tighten the glands. Replace if necessary	BD	No.	16	484	7744
16	Replacement of Mechanical Seal of the pump.	Carry out replacement of the mechanical seal as per instruction of EIC. This includes Decoupled the pump and motor, dismentled the Mech. Seal and replaced , align the pump and motor and coupled it and take trial run. One no. mech. Seal replacement consider as a one no. quantity.	BD	No.	12	4423	53076
						SUB TOTAL	**211484**

Phase-1

Phase-1 **Part-N** **Emergeny Boiler Feed Pump**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of Pump	Ensure isolation of pump, Thoroughly clean the pump skid, gear box and sorroundong parts.check for all bolts tightness, check coupling bolt tightnes.Check for any other abnormalities and ensure its healthyness. Check lube oil and ensure its quality and lub-oil level. Clean surroung area and return the permit.	PM	No.	4	697	2788
2	Providing assistant for Diesel Engine servicing.	Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Throughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Replace the engine oil, fuel filters, air filters, oil filters. Fill up the coolent in the radiator. Check condition of radiator fan belt & alternator belt. Box up the entire equipment. Assist trial run.	PM	Per day per Helper	4	458	1832
3	PM of EBFP Lube Oil Unit	Tighten the flanges. Check for any abnormalities. Check for oil level / oil quality. If necessary replace / top up. Cleaning of strainer / oil coolers. Box up.	OM	No.	4	697	2788
4	PM of Working oil / lub oil cooler	Isolate cooler from water and oil side. Drain oil in the empty barrel. Clean the water box	BD	No.	4	1860	7440
5	Replacement of Gear box.	Decouple the gear box from pump as well as engine side. Remove old gear box and place new one. Carry out alignment with pump & engine.	BD	No.	2	7305	14610
6	Diesel engine radiator fan replacement.	Open the cover of radiator fan. Remove the old belt by adjusting pulley of fan. Fix the new belt set. Adjust the pulley. Box up. Assist trial run.	BD	No.	2	1395	2790
7	Assistance for Inter/after cooler of Diesel engine replacement.	Providing manpower for assisting supplier representative for replacement of inter/after cooler of engine from position. Carry out hydro test of cooler after removal. Replace the cooler if found damage. Box up the engine.	BD	No.	2	4931	9862

Phase-1

Phase-1 **Part-N** **Emergeny Boiler Feed Pump**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Topping of Diesel in EBFP Fuel tank	Shift the diesel barrel from stores and top the oil in fuel oil tank to the level as per EIC	BD	No.	14	876	12264
9	Topping of Lub oil in Lub oil tank	Shift the Lub oil barrel from stores and top the oil in fuel oil tank to the level as per EIC	BD	No.	4	175	700
10	Lub oil replacement.	Remove the old oil from lub oil tank completely. Clean the tank from inside. Clean the view glass. Fill the tank as per instruction of EIC.	BD	No.	2	1401	2802
11	Fuel(diesel) replacement.	Remove the diesel from tank completely. Clean the tank from inside. Clean the view glass. Fill the tank as per instruction of EIC.	BD	No.	10	2559	25590
12	Lub oil filter cleaning	Isolate the lub oil filter from oil side and clean the filter which is choked. After cleaning charge the lub oil filter and check for any leakage attend if any	BD	No.	4	350	1400
13	EBFP pump suction strainer cleaning	Isolate the strainer from water side. Remove the bucket type strainer.Clear all debris fom strainer assy .check the strainer & replace if damaged or clean the strainer. Replace the flange gasket.Put the strainer in position & Box up.	BD	No.	4	1395	5580
14	EBFP mechanical seal replacement NDE side	Isolate the pump from mechanical side. Drain the pump. Remove mechanical seal. Replace with new one. Box up & Normalise.	BD	No.	2	6146	12292
15	EBFP mechanical seal replacement DE side	Isolate the pump from mechanical side. Drain the pump.Remove the coupling. Remove mechanical seal. Replace with new one. Box up & Normalise.	BD	No.	2	7305	14610
16	Servising of Mechanical Seal	Dismantle the seal. Replace damaged parts. Assemble the seal.	BD	No.	2	1527	3054
						SUB TOTAL	**120402**

Annexure B1

Phase-1 **Part-O** **Hoist**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection & PM of Hoist	Clean the hoist by cotton cloth. Carry out greasing of bearings,gear box, pulley and load hook, rollers as per instruction of E-I-C.Lubricate the hoist wire rope. Check the hoist for verical & horizontal direction of operation.Check the brake.Note the defects & correct it. Clean the travelling beam with blowing of air.	PM	No.	56	731	40936
2	Servicing of Hoist	Dismantling of hoist parts. Identify the damaged & replace if required.Assemble the Hoist with proper lubrication. Complete inspection of hoist. Carry out hoist servicing work as per instruction of EIC. After complete servicing/ inspection take a trial for the hoist.	BD	NO	10	3534	35340
						SUB TOTAL	**76276**

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
A) FANS							
1	Inspection and external cleaning of PA fan ,its lub oil unit, IGV & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole lube oil units, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
2	Inspection and external cleaning of SA fan ,its lub oil unit & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole lube oil units, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
3	Inspection and external cleaning of ID fan ,its hydraulic coupling unit & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole Hydraulic coupling unit, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
B) Valve Station					0	0	0

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection and external cleaning of Drain Header 1&2 Station. It consists of around 40 -nos valves upto 2" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the Drain header area .remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544
2	Inspection and external cleaning of valves station at drum level and 33 mtr elevation. It consists of 15 nos valves upto 2" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the Drum area & 33 meter valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544
3	Inspection/ Cleaning of RH attemperator, SH attemperator & Soot blower Control valves station It consists of 30 -nos valves upto 2.5" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Inspection/ Cleaning of Combustor species valve / FBHE to ash cooler Speciss valve station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	Per Valve	36	183	6588
5	Inspection/ Cleaning of FBHE Speciss valve station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	Per Valve	48	183	8784
C) Bed Ash, Lignite, Limestone					0	0	0

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Lignite conveyors system Inspection and external cleaning. Lignite conveying system of one unit consists of two nos of lignite conveyor & its drive mechanism, two nos of lignite rotary air lock feeder with drive mechanism, two nos of master fuel trip(MFT) valves and two nos NMEJ between MFT and seal pot.	Throughly clean the conveyor system as defind external	PM	Per Unit	22	974	21428

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
2	Inspection and external cleaning of Limestone Bunker & Limestone RALF It consists of Two nos Limestone Bunker, four nos of Limestone Rotary Air Lock feeders,Two nos of Feeder discharge valve in one unit	Clean the entire system with air pressure & cooton cloths, remove all the dirt, oil, grease, ash, foreign material. Clean the top cover plate of bunker and its area, clean the air lock feeder/its discharge valves & its surrounding area, check for any abnormality or limestone leakages & attend it and inform to E-I-C. Box up all inspection doors with applying rope if found open. Shift the scrap to scrap yard.	PM	per unit	22	731	16082
3	Inspection and external cleaning of Bed Ash Conveying system, intermediate ash bin. It consists of two nos bed ash conveyor, two nos ashcooler, two nos of rotary air lock feeder, intermediate ash bin	Clean the entire system with air pressure & cooton cloths, remove all the dirt, oil, grease, ash, foreign material. Clean the platform between two ash cooler & top cover plate of intermediate ash bin and its area & its surrounding area, check for any abnormality or bed ash leakages & inform to E-I-C. Box up all inspection doors with applying rope if found open. Shift the scrap to scrap yard.	PM	Per Unit	22	731	16082
D) NMEJ, Boiler					0	0	0

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection and external cleaning of Combustor to Cyclone NMEJ & its cyclone roof	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work. Clean the entire perpheral area and surrounding are by air. Check for any damages/leakages & if found immidiately inform to E-I-C.Shift the scrap to scrap yard.	PM	No.	44	731	32164
2	Inspection and external cleaning of backpass NMEJ & its Cross over duct Roof	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work. Clean the entire perpheral area and surrounding are by air. Check for any damages/leakages & if found immidiately inform to E-I-C.Shift the scrap to scrap yard.	PM	No.	44	731	32164
3	Inspection and external cleaning/Inspection of Buck stay of combustor / backpass . One buckstay consists of Front,rear, left & right side of combustor/backpass Size of combustor-12mx7m size of Backpass -10mx6m	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work.Remove the metallic scrap, insulation scrap.Clear the buckstay by air blowing . Shift the scrap to scrap yard.	PM	Per Buckstay	100	731	73100

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Inspection and Cleaning of BL/SUB skid station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves . Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard. One skid station is considered as 01 No.	PM	No.	128	247	31616
5	Inspectionand Cleaning of FO control station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard. One skid station is considered as 01 No.	PM	No.	16	365	5840
E) ESP,EBFP,					0	0	0
1	Inspection and external cleaning of EBFP, gear box & its engine	Inspection and Inspection and external cleaning of EBFP/gear box /engine of EBFP and surrounding area. Remove oil, dirt, metallic scarp, insulation scarp and shift to scrap yard.Note the defects and inform it to E-I/C.	PM	NO	16	731	11696
F) Blower,Duct,Damper					0	0	0

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection and external of LT/HT blower Knife Gate valve station in discharge line It consists of @ 22(11 HT+11 LT) Nos of KGV upto 250 Nb. i.e 22 nos of valve station is considered as one unit.	Inspection, Cleaning and greasing of Knife Gate valve station externally.check for any abnormality and inform to E-I-C.	PM	Per Unit	8	731	5848
2	Cleaning and greasing of Control / Isolation dampers in air ducting	Inspection, Cleaning and greasing of Control / Isolation dampers externally.check for any abnormality and inform to E-I-C.	PM	Per damper	72	244	17568
G) BOP /OTHER					0	0	0
1	Inspection and external cleaning of fuel oil pump station. It consists 3 nos FO unloading pumps. i.e. it is considered as one no.	clean of all areas as stated in FO pump house station. Remove dirt, oil, metallic scarp etc. Clean all valves in oil-steam line & apply moly spray, check for any leakages & inform to E-I-C.Shift the scrap to scrap yard..	PM	No	10	731	7310

Annexure B1

Phase-1 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
2	Inspection and external cleaning of fuel oil pump station. It consists of 4nos FO transfer pumps, 4 FO steam heater, One electrical heater. i.e. it is considered as one no.	clean of all areas as stated in FO pump house station. Remove dirt, oil, metallic scarp etc. Clean all valves in oil-steam line & apply moly spray, check for any leakages & inform to E-I-C.Shift the scrap to scrap yard..	PM	No	12	1096	13152
3	Painting of structure, hopper, tank, cyclone etc.	Clean the surface thoroughly with wire brush, buffing wheel/emery paper, grinding etc. Apply the two coats of primar as per instruction of E-I-C and two coats of paint.	BD	Sq. meter	100	731	73100
						SUB TOTAL	477786

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Vortex finder ring removing	Make necessary arrangement for locking of collapsed / hanging vortex finder ring by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder ring by cutting rod/plasma cutting. Removal of cut pieces of vortex finder either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, Shifting of all debris / scrap from site to the scrap yard. All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder ring.	**BD**	**No.**	2	76805	153610
2	Vortex finder Eccentric sleeve removing	Make necessary arrangement for locking of collapsed / hanging vortex finder Eccentric Sleeve by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder Eccentric Sleeve by cutting rod/plasma cutting. Removal of cut pieces of vortex finder either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder Eccentric Sleeve. Shifting of all debris / scrap from site to the scrap yard.	**BD**	**No.**	2	45461	90922

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Vortex finder Support removing (Total 20 nos. Support)	Make necessary arrangement for locking of hanging vortex finder Support by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder Support by cutting rod/plasma cutting/ Grinding from Cyclone casing duct at cyclone top. Removal of cut pieces of vortex finder support from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder Support (Total 20 nos. Support) Shifting of all debris / scrap from site to the scrap yard.	**BD**	**No.**	2	35474	70948

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Vortex Finder Support , Ring, and Eccentric Sleeve removing	Make necessary arrangement for locking of collapsed / hanging vortex finder ring, Support and Eccentric Sleeve by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder ring, support and Eccentric Sleeve by cutting rod/plasma cutting/grinding . Removal of cut pieces of vortex finder support, ring and Eccentric sleeve either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) or Cyclone Casing duct in the scope of contractor,cut the cyclone casing plate for removing of vortex finder Ring, support and Eccentric Sleeve in three / two pieces from cyclone cylinderical protion if required, All Counsumables in contractor scope for arrangement, cutting and removing of complete vortex finder ring, Support & Sleeve Shifting of all debris / scrap from site to the scrap yard.	**BD**	**No.**	2	160037	320074

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Vortex Finder Ring Erection	Shifitng of new vortex finder Ring at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting and cut the cyclone casing plate for insertion of vortex finder Ring in three / two pieces from cyclone cylinderical protion. Fix the vortex finder Ring as per E-I-C and Drawing. Do full welding of vortex finder ring , and welding of stiffners as per EIC and drawing. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder ring **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	**BD**	**No.**	2	96896	193792

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Vortex Finder Support Erection (Total 20 nos. Support)	Shifitng of new vortex finder Support at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting for insertion of vortex finder Support from cyclone. Check and repair / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Fix the vortex finder Support as per E-I-C and Drawing. Do full welding (Inside and Out side) of vortex finder Support with Cyclone duct, and welding of stiffners as per EIC. Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder support. (Total 20 nos. Support) **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	**BD**	**No.**	2	57667	115334

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Vortex Finder Eccentric Sleeve Erection	Shifitng of new vortex finder Eccentric Sleeve at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting and cut the cyclone casing plate for insertion of vortex finder Eccentric Ring in three / two pieces from cyclone cylinderical protion. Fix the vortex finder Eccentric Sleeve as per E-I-C and drawing. Do full welding of vortex finder Eccentric Sleeve with RIng of Vortex finder , and welding of stiffners as per EIC. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder Eccentric Sleeve. **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	**BD**	**No.**	2	72672	145344

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Vortex Finder Support , Ring, and Eccentric Sleeve Replacement	Shifitng of new vortex finder ring, supports along with eccentric sleeve at site (Approx. height 35 mtrs). Make necessary arrangement for locking of collapsed / hanging vortex finder ring , support , and eccentric sleeve by providing chain blocks to keep it in fixed position. Dismantle the old vortex finder ring, supports (20 nos.) and eccentric sleeve by cutting rod / Plasma cutting machine. Check and repaire / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Make necessary arrangement for lifting and cut the cyclone casing plate for new insertion / old removing of vortex finder support , ring and eccentric sleeve from cyclone cylinderical protion. Fix the new supports (20 nos.) as per E-I-C and Drawing. After fixing of all support fix the vortex finder ring and eccentric sleeve as per E-I-C and Drawing. Do full welding of vortex finder ring, supports, stiffners and eccentric sleeve as per EIC and Drawing. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, replacement of complete vortex finder Eccentric Sleeve, ring and support **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	**BD**	**No.**	2	397779	795558

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
9	Vortex Finder Eccentric Sleeve, Ring and Support Strenghning / Repairing / Reclamanation	Make necessary arrangement for Vortex finder Eccentric sleeve , ring and Support strenghning, repairing, reclamanation. Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder support, ring along with eccentric sleeve. Checking of vortex finder ring, all supports and eccentric sleeve for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder Eccentric Sleeve, ring and support. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	**BD**	**No.**	8	106855	854840

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Vortex Finder Supprt Strenghning / Repairing / Reclamanation (Total 20 nos. Support)	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder supports. Checking of vortex finder all supports for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder support. (Total 20 nos. Support). Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	**BD**	**No.**	2	30530	61060
11	Vortex Finder Ring Strenghning / Repairing / Reclamanation	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder ring. Checking of vortex finder ring for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder ring. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	**BD**	**No.**	2	30530	61060

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Vortex Finder Eccentric Sleeve Strenghning / Repairing / Reclamanation	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder eccentric sleeve. Checking of vortex finder eccentric sleeve for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder Eccentric Sleeve. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	**BD**	**No.**	2	30530	61060

Annexure B1

Phase-1 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Vortex Finder Support , Ring, and Eccentric Sleeve Erection	Shifitng of new vortex finder ring, supports along with eccentric sleeve at site (Approx. height 35 mtrs). Check and repair / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Make necessary arrangement for lifting and cut the cyclone casing plate for new insertion of vortex finder support , ring and eccentric sleeve from cyclone cylinderical protion. Fix the new supports (20 nos.) as per E-I-C and Drawing. After fixing of all support fix the vortex finder ring and eccentric sleeve as per E-I-C and Drawing. Do full welding of vortex finder, supports, stiffners and eccentric sleeve. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. Cutting electrodes and other consumables to be arranged by party. Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	**BD**	**No.**	2	222996	445992
						SUB TOTAL	**3369594**

Annexure A1: Summary

Schedule of Price Break up for BMC of Boiler & Auxiliary for Unit 1 & 2(Phase-1)

Year 2017-19

Part No.	Description	Unit.	Total Cost for Phase-1
A	Pressure Parts	Rs.	1,64,89,046
B	SA Fan / PA fan	Rs.	6,92,670
C	ID Fan	Rs.	4,31,682
D	Lube Oil Units & Scanner Air Fan	Rs.	2,27,626
E	Blowers	Rs.	9,44,088
F	Bed Ash Conveying System	Rs.	35,46,108
G	Lignite / Limestone Feeding System	Rs.	73,69,254
H	E.S.P.	Rs.	10,85,000
I	Duct/Damper/NMEJ/MEJ	Rs.	43,55,134
J	Fuel Firing System.	Rs.	4,67,524
K	Valves	Rs.	8,94,994
L	Soot Blower	Rs.	15,21,478
M	Fuel Oil Handling	Rs.	2,11,484
N	Emergency Boiler Feed Pump	Rs.	1,20,402
O	Hoist	Rs.	76,276
P	External Cleanings	Rs.	4,77,786
Q	Vortex Finder	Rs.	33,69,594
Row1	Total Cost for both year	Rs.	4,22,80,146
Row2	Total Cost for First year (50% of Row1)	Rs.	2,11,40,073
Row3	Total Cost for Second year (Row1- Row2)	Rs.	2,11,40,073
Row4	Escalation on Total Cost Second year 5% on Row3	Rs.	10,57,004
Row5	Total 2nd Year cost including Escalation Row{3+4}	Rs.	2,21,97,077
Row6	Final Total cost before Service charge & service tax Row1 + Row 5	Rs.	4,33,37,150

Annexure A2

Schedule of Price Break up for BMC of Boiler & Auxiliary for Unit 3 & 4(Phase-2)

Year 2017-19

Part No.	Description	Unit.	Total Cost for Phase-2
A	Pressure Parts	Rs.	1,19,63,106
B	SA Fan / PA fan	Rs.	8,55,006
C	ID Fan	Rs.	3,73,976
D	Lube Oil Units & Scanner Air Fan	Rs.	2,32,474
E	Blowers	Rs.	9,12,468
F	Bed Ash Conveying System	Rs.	34,93,756
G	Lignite / Limestone Feeding System	Rs.	47,35,406
H	E.S.P.	Rs.	12,26,166
I	Duct/Damper/NMEJ/MEJ	Rs.	49,52,150
J	Fuel Firing System.	Rs.	7,01,652
K	Valves	Rs.	10,48,856
L	Soot Blower	Rs.	17,79,962
M	Fuel Oil Handling	Rs.	1,29,420
N	Emergency Boiler Feed Pump	Rs.	1,29,162
O	Hoist	Rs.	1,93,992
P	External Cleanings	Rs.	4,77,786
Q	Vortex Finder	Rs.	33,69,594
Row1	Total Cost for both year	Rs.	3,65,74,932
Row2	Total Cost for First year (50% of Row1)	Rs.	1,82,87,466
Row3	Total Cost for Second year (Row1- Row2)	Rs.	1,82,87,466
Row4	Escalation on Total Cost Second year 5% on Row3	Rs.	9,14,373
Row5	Total 2nd Year cost including Escalation Row{3+4}	Rs.	1,92,01,839
Row6	Final Total cost before Service charge & service tax Row1 + Row 5	Rs.	3,74,89,305

Refer Annexure B2 for Detail like list of activity in each part (A to Q), name of each activity, scope of work for each activity ,Nature of work, Unit of measurement, Estimated biannual Quantity, First year rate etc…..

Annexure B2

Detail Price Schedule for BMC of Boiler & Auxiliary for Unit 3 & 4(Phase-2)-

Year 2017-19

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1.							
1	Erection of scaffolding and platform inside combustor, from grate to roof of the combustor I.e height upto 32 mtr. Size of combustor is 7.5 meter X 12.5 meter and 32 meter height (one entire combustor considered as one no.). Layher all round scaffolding materials to be provided by GIPCL. Combustor grate is 6.5 meter elevation from ground level.	Erection of M/s. Layher make (Ring & wedge type) scaffolding and platform inside combustor from combustor nozzle Grate level to roof of the combustor I.e upto 32 mtr. (Scaffolding shall be given by GIPCL). GA drawing of Boiler is attached.	BD	No.	0	293619	0
2	Erection of scaffolding and platform inside combustor from combustor grate to 15 meter elevation, at any one corner or any one wall of Combustor. Size of scaffolding is 6 meter x 6 meter upto 15 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform along with hand railing at different elevation & proper climbing approach as ladder as per instruction of E-I-C. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	2	29700	59400

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Erection of scaffolding and platform inside combustor above 15 mtr elevation on the scaffolding erected as per S NO 1.2. (per meter height). Rate applicable is per meter height. Scaffolding materials in the scope of contractor.	Erect the scaffloding above 15.5mtr elevation as per instruction of E-I-C, on the already erected scaffolding as per S No 1.2Make the platform at different elevation along with hand railing at different elevation as per instruction of E-I-C.	BD	Per Mtr.	4	2160	8640
4	Erection of scaffolding in combustor windbox. Size of scaffolding - 12mx7mx2m.(One entire windbox considered as one no.). Scaffolding materials in the scope of contractor.	Shift scaffolding material from store to site. Erect scaffolding. Make proper plateform at diiferent elevation.as per instruction of EIC. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	16	9240	147840
5	Erection of scaffolding in FBHE Bundle chamber/Empty chamber/Seal pot / for Miscelleneous work Size of scaffolding - 2mx2mx3m .Scaffolding materials in the scope of contractor.	Shift scaffolding material from store to site. Erect scaffolding. Make proper plateform at diiferent elevations as per instruction of EIC. Scaffolding erected may be require to adjust for refractory works as per instruction of EIC. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No.	34	660	22440

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Erection of scaffolding in economiser hopper Size of scaffolding - 2mx2mx3m. Scaffolding materials in the scope of contractor.	Shift necessary scaffolding material. Make proper scaffolding & platform as per instruction of EIC. Remove the scaffolding.	BD	No.	4	660	2640
7	Erection of scaffloding for seal pot to cyclone roof. Size of scaffolding - around 10.5 mtr. elevation to cyclone roof at around 40 mtr elevation. Cyclone diameter at bottom is approx. 2 M and at top is approx. 8.8 M. Scaffolding materials in the scope of contractor. Make proper platform at different elevation.	Erection of scaffloding for seal pot to cyclone roof. Size of scaffolding - around 10.5 mtr. elevation to cyclone roof at around 40 mtr elevation. Cyclone diameter at bottom is approx. 2 M and at top is approx. 8.8 M. Scaffolding materials in the scope of contractor. Make proper platform at different elevation.	BD	No.	2	88094	176188

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Erection of scaffolding for Miscelleneous work. Upto 6 meter height. Size - length 3mx breadth 6m, height 6 m is considered as one no of scaffolding erection.Scaffolding materials in the scope of contractor.	Erect the scaffolding outside the boiler up to 6 meter height as per instruction of E-I-C. Make proper approach and platform as per instruction of E-IC.Dismantle the scaffolding & shift material to store.	BD	No.	300	5508	1652400
9	Erection of scaffolding for Miscelleneous work. above 6 meter height on the scaffolding erected as per S. No. 1.8. (per mtr. height). Rate applicable is per meter height. Scaffolding materials in the scope of contractor.	Erect the scaffolding outside the boiler above 6 meter height as per instruction of E-I-C on the already erected scaffolding as per S. No. 1.8. Make proper approach and platform as per instruction of EIC. Dismantle the scaffolding & shift material to store.	BD	Per Meter	100	918	91800
10	Erection of cantilever type scaffolding at different locations. Size of scaffolding is 3meter X 5 meter cantilever length X 6 meter height. Scaffolding materials in the scope of contractor.	Shift the scaffloding material to location. The scaffloding will be cantiliver type.Height of the scaffloding 6 mtr up/down.(approx) The said scaffloding needs to extended @ 5 mtr from the opening.Dismantle the scaffolding & shift material to store.	BD	No.	4	45000	180000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
11	Erection of scaffolding and platform inside combustor for SUBs Repairing/Replacement. Size: 3 meter length X 3 meer width X 4 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform as per instruction of E-I-C for SUBs repairing/Replacement work. Finally dismantle and shift the scaffolding material to store after work completion.	BD	No	30	1980	59400
12	Erection of scaffolding at Slant Portoin of Seal Pot from inside of Combuster. Size: 5 mete length X 1 meter widthX 6 meter height. Scaffolding materials in the scope of contractor.	Shift scaffolding material to site. Erect scaffolding. Make proper platform as per instruction of E-I-C for for refractory application work Finally dismantle and shift the scaffolding material to store after work completion.	BD	No	20	1650	33000
2.					0		0

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Attending tube leakages upto first 10 joints in one frequency (irrerpective of total no. of joints) in Combuster waterwall/Steam cooled walls/FBHE Water walls /Economiser/ Evoparator coil/ Hanger tubes/ Loose tubes / Spray water piping.Note : Material is carbon steel & low alloy steel i.e. upto (SA 209 T1) grade. Any other tube leakage observed in hydro test is also included in first 10 joints.Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.	Inspect and identify the exact location of tube leakage. Lift / lower / pull the coils if required for tube repair. Make necessary cutting of duct/steam cooled wall/water wall for pulling out coils. Clean the tubes for thickness measurement as per instructions of EIC. Cut the tubes by grinding m/cs, hacksaw m/cs. Edge prepare the joint. Prepare the spool piece of required size. Fit up the joint with clearence from Engineer I/C. Root weld with TIG and subsequent by MMAW. Carry out boiler hydrotest. Repair the defect observed in radiography / hydrotest. Any other tube leakage observed in hydro test is also included in first 10 joints. Normalise all earlier cutting as per instruction of E-I-C.Flush grind joints from hot side. Make necessary licening with state Boiler inspector.Including Fins welding.. Minimum 2Prressure part fitter,2 IBR welders with grinders and helpers required during BTL.	BD	One unit	24	60000	1440000
14	Welding of each additional joint beyond 10 joints as mentioned in para 2.1	--- do ---	BD	No.	1000	1400	1400000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
15	Attending tube leakages upto first 10 joints in one frequency (irrerpective of total no. of joints) in FBHE coils viz. RH-1,SH 2, in Back pass viz SH 1B, RH-2, SH-3 and its hanger tubes, loose tubes . Note : Material is SA 209 T11 and above grade. Argon purging / Nitrogen purging and Pre and Post heat treatment to be done for T-91 material and Alloy steel material.Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.Any other tube leakage observed in hydro test is also included in first 10 joints.	Inspect and identify the exact location of tube leakage. Lift / lower / pull the coils if required for tube repair. Make necessary cutting of duct/steam cooled wall/water wall for pulling out coils. Clean the tubes for thickness measurement as per instructions of EIC. Cut the tubes by grinding m/cs, hacksaw m/cs. Edge prepare the joint. Prepare the spool piece of required size. Fit up of joint shall be checked by EIC. Root weld with TIG and subsequent by SMAW. stress relieved the welded joint if required. Carry out boiler hydrotest. Repair the defect observed in radiography / hydrotest. Any other tube leakage observed in hydro test is also included in first 10 joints.Normalise all earlier cutting as per instruction of E-I-C.Flush grind joints from hot side. licening with state Boiler inspector.Including Fins welding....Minimum 2 IBR welders with grinders and helpers required during BTL.	BD	One unit	6	60000	360000
16	Welding of each additional joint beyond 10 joints as mentioned in para 2.2	--- do ---	BD	No.	200	1600	320000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
17	Welding of HP joint in steam/ water line upto 100 mm dia and upto a maximum thickness of 18 mm.(including joints for replacement of valves) Note : It includes pre and post weld HT wherever required.	Carry out welding of joint in supply tubes/Riser tubes/headers/connecting link etc.for attending any leakage/modification/inspection/replacement of pipes etc. works. This will includes removal/application of insulation along with sheeting. Preheat/post heat treatment as per the material specification & instructions of E-I/C. Assist hydro test.	BD	Per Joint	30	3000	90000
18	Welding of HP joint in steam/ water line from above 100 mm dia to 200 mm dia and upto a maximum thickness of 25 mm.(including joints for replacement of valves) Note : It includes pre and post weld HT wherever required.	--- do ---	BD	Per Joint	4	7500	30000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
19	Attending tube leakage by metal buildup on pinhole,crack upto first 5 nos. in one frequency for all material & sizes of tube. Getting Permission from Directors of Boilers during Pressure parts breakdown for Conducting of internal hydrotest.	Inspect and identify the exact location of tube leakage. Do DP test. Grind the damaged tube as per instruction of E-I/C. Attend the leakage by metal build up by TIG welding and/or SMAW as per instruction of E-I-C. Smoothen the surface by Flush grinding as instructions of EIC. Ensure that tube joint withstands in Hydro test.	BD	No.	30	10368	311040
20	Build up of boiler tube. (build up of 25mm x 50mm = 1 build-up) For SA 209 T1 tubes.	Clean the eroded tube as per instructions of EIC (By grinding or buffing). Carry out thickness measurement. Build-up the eroded tube by TIG and / Or SMAW. Do DP test.Smoothen the surface by Flush grinding as instructions of EIC. Ensure that tube joint withstands in Hydro test.	BD	No.	2000	123	246000
21	Build up of boiler tube. (build up of 25mm x 50mm = 1 build-up) For T11,T22,T91 grade tubes	--- do ---	BD	No.	50	123	6150

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
22	FBHE Bundle chamber coil assy installation	Make suitable arrangement for coil assy lifting (that includes fabrication of structure and shifting of chain pulley block etc. Revival of dummy coil assy and placing the the new or repaired coil in position as instruction of E-I-C.(per Coil Assy). One coil assembly consists of 6 nos. tubes. Excluding weld joints.	BD	No.(per coil assembly)	4	35889	143556
23	Radiography of welded joints. Tubes upto dia 58 mm , header stub up to 150 mm dia	Radiograph the welded joint after getting clearance from E-I-C. Develop the film in the dark room.Check for any welding defect. Dark room will be provided by GIPCL.Contractor has to bring the radiography source of sufficient capacity so that all the joints to be radiograhed will be covered by the source. Contractor has to make necessary safety measures like area corridoring while taking the radiogarphy.	BD	Per inch Length of Film	800	80	64000
24	FBHE Bundle chamber coil assy removal and tubes plugging	Cutting and Removing the damage coil assy from position as instruction of E-I-C. One coil assembly consists of 6 nos. tubes. Plugging of tubes at inlet & outlet by IBR welding. Total of 12 nos. plugging in one coil assembly.	BD	Per Coil	12	28137	337644
25	Shielding of boiler tube in Backpass Material : SS . Length of shield up to 1.0 meter	Shift material from store to site. Clean the tube to be shielded. Remove damaged shield if any. Fix new one, clamp and weld. Clamp should be provided at every 250mm pitch	BD	Per shield	2000	129	258000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
26	Fins fit up, fins welding and flush grinding of welding from hot side and buttering of joints of two fins by welding from cold side.	Prepare the edge to the tubes where fin to be welded. Fin fit up between tubes. Weld by SMAW on Hot side & cold side i.e 2 sides at hot face and 2 side at cold face. Flush grind weld area from Hot side. buttering of joints of two fins by welding from cold side. Thickness of fins is 8 mm. Welding to be carried out by E 7018 welding electrode.	BD	Per meter length of welding	8000	208	1664000
27	Welding in windboxes of combustor / FBHE / Seal pot. Size - 300 mm welding length is consideres as 1 No	Clean the place to be welded, Cut & edge prepare the material. Then weld by MMAW on both sides (Hot side & cold side). Carry out the LPI on the weld joint and ensure the leak proofness.	BD	No	200	242	48400
28	Opening and closing of Drum Manhole doors Both side Manhole door is considered as 1 No.	Ensure proper cooling. Open both manhole doors. Inspect drum internally. Replace the gaskets and close the man hole doors.	BD	No	4	1448	5792

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
29	Inspection and cleaning of drum internal	Ensure proper cooling. Open both manhole doors. Install exhaust fan at one end for forced cooling. Inspect all drum internals namely, cyclone separators, driers, pipings etc, Take necessary precaution to prevent foreign material falling inside drum/drum opening. Remove all drum internals (turboseprator assy. 60 nos. and screen type drier-30 nos.) Replace/repair damage bolts, nuts etc. Clean all internals and refix. Box up the manhole door. Above work is consoder as one no.	BD	NO.	4	12308	49232
30	Repair / replacement of cassette baffle in Backpass Material: SS	Shift material from store to site. Clean the coils. Remove the old cassette baffles with new ones. Clamp and weld. Repair the damaged ones if required and re-position the fallen ones.	BD	No.	20	365	7300
31	Replacement/Repair of cap of nozzle in Combustors,FBHE,Seal pot and Ash coolers.(SS material)	Remove the damage nozzle cap by grinding the welded portion. Weld new nozzle cap by welding a bolt plate on it. Do LPI. Rectify the defect found in LPI. Weld the nozzle cap damage portion if required	BD	No.	1000	244	244000
32	Combustor guide pipe dummy.	Remove the damage nozzle cap by grinding the welded portion. Welding a bolt plate on it for dummy of guide pipe.	BD	NO	600	120	72000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
33	Replacement/Repair of nozzle assembly (i.e guide pipe and cap with bolt) in Combustors,FBHE,Seal pot and Ash coolers.(SS material)	Remove the nozzle assly. from position by grinding or gauging. Edge prepare the surface.Assemble the guide pipe, cap and bolt. Put the new nozzle assly. Make alignment of nozzle. Carry out welding. Do LPI. Rectify the the defect found in LPI.	BD	No.	700	350	245000
34	Impulse pipe repair / replacement up to 16 mm dia of SS material.	Remove the damaged portion by cutting. Replace new pipeline by TIG/SMAW welding as per E-I-C. Check for any leakage by charging. Repair the joint if required.	BD	Per Mtr.	4	609	2436
35	Erection / Replacement of pipeline in drain and vent piping (Pre.160Kg/sq.cm) Max. 3" dia. MOC: CS.	Remove the damged portion of pipe. Erect new pipe line by TIG/SMAW welding as per instruction of EIC. MOC: CS / alloy steel. Support to be provided along with clamp if required.	BD	Per Mtr.	24	1461	35064
36	Erection / Replacement of pipeline in drain and vent piping (Pre.40 kg/sq.cm) Max. 2" dia.	--- do ---	BD	Per Mtr.	20	1461	29220
3.Ins					0		0
37	Removal and Application of insulation and sheeting of 50mm thickness for one layer.	Remove sheet cladding and insulation of marked portion only as per instructions of E-I-C. Apply insulation with proper hook/washer welding and apply sheeting.	BD	Per Sq. Mtr.	2000	270	540000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
38	Removal and Application of insulation and sheeting of two layers of 50mm or one layer of 100mm thickness for one layer.	--- do ---	BD	Per Sq. Mtr.	600	363	217800
39	Removal and Application of insulation and sheeting of threo layers of 50mm or one layer of 100mm + one layer of 50mm thickness for one layer.	--- do ---	BD	Per Sq. Mtr.	500	484	242000
40	Only Aluminum sheeting	Remove old damage sheeting. Apply new sheeting and screw finishing as per E-I-C.	BD	Per Sq. Mtr.	500	122	61000
4.					0		0
41	Brick Type.	Open the manhole door by opening bolts & nuts. Remove wool,bricks and rope. Replace damaged ones and put new rope and Box up	BD	No.	250	484	121000
42	Clamp type	Open manhole door.Replace rope with new one. Box up.	BD	No.	250	61	15250
43	Bolted type.	Open manhole door.replaced rope with new one. Box up.	BD	No.	350	183	64050
44	Erection and welding of anchors of all sizes and type(SS).	Erection and welding of anchors as per the instruction of E-I-C.	BD	No.	2400	37	88800

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
45	Ground inspection of Boiler pressure parts in presence of Boiler Inspector	The contractor is to liasion with the boiler inspector and arrange the visit of Boiler inspector for ground inspection of boiler pressure parts.Get certification from Boiler inspector.Shift the material at designated place for ground inspection as per the instructions of Engineer I/C. After completion of ground inspection, shift the material to warehouse/site as per the instructions of Engineer I/C.	BD	No	2	25000	50000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
46	Conducting of hydrotest in presence of Boiler inspector	The contractor is to liasion with the boiler inspector for hydraulic test and arrange the visit of Boiler inspector for renewal of license.During the Hydraulic test, ontractor has to clean the area nearby drum, combustor manholes, Backpass manholes,C to C & COD manholes.Make sufficient arrangement of lighting inside the combustor, backpass.Make sufficient arrangement of Torches for checking.Gag the safety valves as per instructions of E-I-C. The contractor is to make necessary arrangement for conducting HT like Pump readiness,pressure parts coil cleaning, backpass, combustor m/h door etc.If required, assist in safety valve floating in presence of boiler inspector.Submit the radiogarhy reports , tube replacement report,etc as per instructions of E-I/C.Submit all necessary statutory documents like permission for high pressure works,welder validity certificates, licences , etc .Remove the Gag after completion of Hyd Test.	BD	No.	6	30000	180000

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
47	Inspection of Combustor Pent House/ Back Pass Pent House and arresting Flue gas/Bed materials leakages. Comb. Pent house and backpass pent house quantity to be considered separately.	Check throughly for any leakages and arrest Flue gas/Bed materials leakages by Seal box / welding / Castable refractory application.	BD	No.	10	12847	128470
48	Drum/CBD / IBD tank gauge glass replacement / Cleaning	Isolate the gauge glass, remove the gauge from position if required, repair / replace damaged parts or clean the gauge glass and box up. Carry out charging of gauge glass.	BD	No.	2	1935	3870
49	Tube thickness/metal spray thickness measurement assistant.	Providing manpower for assisting tube thickness/metal spray thickness measurement on round the clock basis. (2 semi-skilled labour for one shift of 8 hrs)	BD	Per shift	10	974	9740
50	Inspection and Rectification of CLH hangers	Throughly clean the hanger support. Note down any abnormality.Rectify the problem as per instructions of E I/C. Apply the molyspary as per instructions of E I/C.Note down the cold & hot readings.	BD	No.	128	606	77568
51	Drum/CBD/IBD tank M/H door opening or for leakage attending work.	Open the door as per the instuction given by EIC by opening of all the bolts of manhole door and remove the gasket. Clean the gasket area. Carry out the inspection work / Idenitfy the leakage. Fix a new gasket and refix the bolts and close the manhole door.	BD	No.	4	724	2896

Annexure B2

Phase-2 **Part-A** **Pressure Parts**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
52	Comb. nozzles cleaning	Comb.nozzles dechocking & cleaning as per instruction of E-I-C.(total 740 nos)	BD	Per unit	20	13895	277900
53	FBHE / Seal pot & Ash coolers nozlles cleaning	Nozzles dechocking & cleaning as per instruction of E-I-C.(total 100 nos)	BD	Per unit	14	2870	40180
						SUB TOTAL	**11963106**

Annexure B2

Phase-2 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Overhauling of SA/PA Fan during annual shut down	Ensure isolation from Mech/Elect. side. Decouple the fan from motor.Dismantle DE & NDE bearing housing after removing all oil and water connections. Dismantle the bearing , clean it throughly and carry out DP test of white metal and ensure proper bonding with parent metal. Repalce the bearing if required. Check side oil/top oil clearences.Check axial float reading of thrust bearing and ensure as per design value. Check air/oil hoses of fan & motor. Repair/replace any damage hoses. Clean the lub oil unit externally, clean the filters, coolers etc. Check lub oil pump. Replace lub oil pump if require.Clean the oil return view glass internally. Attend any oil/water leakages. Clean the impeller & fan casing, check for any damages & rectify. Apply anti-corrosive paint on casing internal surfaces. Remove the dust from it. Check impeller clearances/impeller overlap etc.Check the coupling between fan & motor. If required, replace it . Grease the coupling halves.check the coupling bolts & replace ,if damaged. Check & tighten all foundation bolts.Check the alignment of fan with motor & rectify if alignment is disturbed. Box up & assist trial run of Fan.Remove all tools, tackles & clean the surrounding area.	PM	Each Fan	20	30833	616660

Annexure B2

Phase-2 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
2	Servicing/Overhauling of IGV assembly.	Open the manhole doors. Manually operate the IGV.If required, delink the IGV from power cylinder. Adjust the flap if required. Grease IGV Links,Position the guide ring if required. Repair/replace damaged parts of IGV assy like bearing, flap, gland,etc. Remove the entire IGV link assy. if required.Service each link assy.Give IGV trial for full open/full close position in manual as well as pneumatic operation. Close the manholes & normalise.	PM	No.	16	3242	51872
3	IGV link assy./IGV flap /guide ring / Link shaft bearing/ gland removal or repair. (Any-1)	Open the manhole doors. Check for any damage link assy. / flap/bearing/gland packing.Replace with new one.if required. Check IGV for full operation. Box up.	BD	No.	20	905	18100
4	Delinking/Linking of IGV mechanisam.	I) For delinking :- Delink the IGV mechanisam from power cylinders or electrical actuator. Manually fix the position of the IGV as per instruction of E-I-C. Lock the IGV in position by welding. II) For Linking:- Remove the lock of IGV after work is complete. Link the IGV with power cyliners or electrical actuator.	BD	No.	8	453	3624
5	coupling and decoupling for other work	De couple the both halves of coupling as per the requirement for facilitating other work and couple after completion of work.	BD	No.	4	1201	4804
6	Replacement of DE/NDE bearing	Dismantle bearing housing after removing all oil and water connections.Dismantle the bearing and place the new bearing, carry out blue matching if required. Bearing clearance needs to be corrected by scrubbing if required. Box up the bearing.Restore all hose connections. Do alignment with motor.	BD	Each bearing	6	10529	63174

Annexure B2

Phase-2 **Part-B** **SA Fan / PA fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	DE/NDE bearing inspection.	Open the top cover /top half of the bearing. Inspect bearings for clearances/damage etc. Box up.If required replace as per sr. no.6.	BD	Each bearing	10	1506	15060
8	Assistant for Balancing of Impellar/Fan	Providing manpower for assisting balancing of fan/motor. This includes welding of trial/final weight.	BD	Each Fan	4	4333	17332
9	Coupling repair / replacement	Decouple the motor.Remove both half of coupling. Change with new coupling. Align properly, Grease the coupling.Box up.	BD	No.	2	2097	4194
10	Manhole door opening and closing for Inspection	Open the man holedoor of impeller & IGV.Inspect the impeller & IGV.Close the manhole doors.	BD	No.	10	481	4810
11	Vibration measurement Assistance.	Supply manpower for assisting vibration measurement to GIPCL EIC for all category rotating equipment viz.ID Fan/SA Fan/PA Fan/Blowers/Emeregency Boiler feed pump etc.. One Semiskilled labor shall be required.	BD	Per Equipment	14	61	854
12	SA/PA fans alignment	SA/PA fans alignment work. Carryout alighnment work as per the direction of EIC and incorporate any correction.	BD	per fan	6	9087	54522
						SUB TOTAL	**855006**

Annexure B2

Phase-2 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Internal checkings of fan and internal cleaning of impeller	Open manhole doors,Check for Plates/blades. Clean the impeller. Box up	PM	Each fan	8	1201	9608
2	Servicing of IGV	Open the manhole doors. Manually operate the IGV. Check for IGV for full open/ full close. Adjust the flap if required. Grease IGV Links,Position the guide ring if required, repair/replace damaged parts. Remove the entire IGV link assy. if required.Service each link assy. Restore to normal.	PM	Each fan	12	6058	72696

Annexure B2

Phase-2 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Servicing of ID fan	Ensure isolation from Mech/Elect. side. Decouple the fan from motor.Dismantle DE & NDE bearing housing after removing all oil and water connections. Dismantle the bearing , clean it throughly and carry out DP test of white metal and ensure proper bonding with parent metal. Repalce the bearing if required. Check side oil/top oil clearences.Check axial float reading of thrust bearing and ensure as per design value. Check air/oil hoses of fan & motor. Repair/replace any damage hoses. Clean the lub oil unit externally, clean the filters, coolers etc. Check lub oil pump. Replace lub oil pump if require.Clean the oil return view glass internally. Attend any oil/water leakages. Clean the impeller & fan casing, check for any damages & rectify. Apply anti-corrosive paint on casing internal surfaces. Remove the dust from it.Check impeller clearances/impeller overlap etc.Check the coupling between fan & motor. If required, replace it . Grease the coupling halves.check the coupling bolts & repace ,if damaged. Check & tighten all foundation bolts.Check the alignment of fan with motor & rectify if alignment is disturbed. .Box up & assist trial run of Fan.Remove all tools, tackles & clean the surrounding area.	PM	Each Fan	10	18072	180720

Annexure B2

Phase-2 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Hydraulic coupling oil leakages attending.	Check for Oil leak/leaks from HC and its connected piping, connector,flanges, etc. Clean the leakage area, attend the Leakage and Box-up.	BD	Each fan	0	1201	0
5	Hydraulic test of oil coolers (One cooler)	Isolate from water side. Dismantle the cooler,take out bundle assly out side the cooler, clean the cooler internal surfaces and tube bundle internally/externally.Box up tube bundle by replacing O-ring/gasket etc.Carry out HT of cooler. Check for tube puncture. Plug the puncture tubes. Box-up. Charge the cooler and ensure leak proofness. Normalise system. Clean surrounding area.	BD	per cooler	0	5935	0
6	IGV link assy./IGV flap /guide ring / Link shaft bearing/ gland removal or repair. (any-1)	Open the manhole doors. Check for any damage link assy. / flap/bearing/gland packing.Replace with new one.if required. Check IGV for full operation. Box up.	BD	No.	2	1201	2402
7	Delinking / Linking of Hydraulic coupling (HC)scoop or IGV.	I) For delinking:-Delink the HC scoop or IGV from the pneumatic actuator. Position the scoop/IGV as per instruction of E-I-C. Lock the scoop/IGV by welding if required.II) For Linking:- Remove the lock. Link the scoop/ IGV to power cylinder.	BD	No.	0	122	0
8	Alignment of hydraulic coupling with Fan.	Decouple the fan with hydraulic coupling. Check alignment. Do alignment if required. Check coupling bolts. Replace if required. Grease the coupling .Box-up the coupling. Assist trial run.	BD	No.	0	6354	0
9	Alignment of hydraulic coupling with motor.	-- Do --	BD	No.	0	6354	0

Annexure B2

Phase-2 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Replacement of DE/NDE bearing	Dismantle bearing housing after removing all oil and water connections.Dismantle the bearing and place the new bearing, carry out blue matching if required. Box up the bearing. Note bearing clearances.	BD	Each brg	2	8750	17500
11	DE/NDE bearing inspection.	Open the top cover /top half of the bearing. Inspect bearings for clearances/damage etc. Note bearing clearance. Box up.If required replace as per sr. no.10	BD	Each bearing	2	1201	2402
12	De-coupling and coupling	De couple the both halves of coupling as per the requirement for facilitating other work and couple after completion of work.	BD	No.	0	846	0
13	Checking of Coupling or Greasing of coupling	De couple the both halves of coupling..Check the condition of coupling bolts (Repair/replace if required). Grease the coupling .Tighten the coupling bolts..	BD		2	1254	2508
14	Coupling repair / replacement	Decouple the HC from Fan & motor side.Remove both half of coupling. Change with new coupling. Align properly, Grease the coupling.Box up. Assist trial run.	BD	No.	2	5364	10728
15	Assistant for Balancing of Impellar/Fan	Providing manpower for assisting balancing of fan/motor. This includes welding of trial/final weight. Correctness of alignment. Inspection of bearings etc.	BD	Each Fan	4	4333	17332
16	Manhole door opening and closing for Inspection	Open the Manhole door, inspect the volute casing and Box-up Manhole door.	BD	No.	4	453	1812
17	Replacement of bearing cooling water nipple	Open the side cover of bearing housing.Identify the damaged nipple with new one.Internal cleaning of bearing.Oil top up after boxup of bearing and external cleaning.	BD	Each brg	4	453	1812

Annexure B2

Phase-2 **Part-C** **ID Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
18	Manhole door leakage arresting.	Arrest the air leakage through manhole door by sodium silicate application on line.	BD	No.	8	453	3624
19	Hydraulic coupling Overhauling as per the direction of expert engr.	Decouple the HC from Fan & Motor side. Open the top half of the HC. Remove lub oil / water connecting pipe line from HC. Shift the internals of HC to work shop. Dismantle the entire HC as per insruction of EIC. Check for any damage internals. Replace the damage parts. Replace bearings. Check lub oil pump, replace if require. Check oil condition , replace entire oil if require. Box up and align with fan & motor. Assist trial run.	BD	No.	0	38542	0
20	Alignment of id fan	ID fans alignment with Motor/alighn and correct coupling between motor and fan	BD	Each Fan	8	6354	50832
						SUB TOTAL	**373976**

Annexure B2

Phase-2 **Part-D** **Lube Oil Units & Scanner Air Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of scanner air fan	Inspect DE /NDE bearings. Check alignment. Check the Pulley Condition. Replace if required.Clean the suction strainer.Greasing of DE/NDE bearings. Box up.Clean the auxillary.	PM	Each	8	543	4344
2	External cleaning of scanner air fan.	Clean the fan with compressed air.	PM	No.	8	244	1952
3	Lub oil sample collection	Open the plug/flange/valve of the lub oil tank/bearing/HC etc. Collect the sample. Submit it to C& L Laboratory. Box up.	PM	No.	200	122	24400
4	Attending Leakage of oil from lub oil system of tank and pipes	Identify the leakage . Tighten the flanges, replace the gasket if required. Do welding if required.	BD	No.	60	362	21720
5	Lub oil pump servicing	Dismantle pump. Inspect bearings/gears of pump/Relief valve etc. Repair / replace bearings/gears/relief valve if required. Box up.Assist trial run.	BD	No.	6	961	5766
6	Oil topping in ID fan HC lube oil tank	Check oil level in hydrulic tank. Fill the oil up to the norm	BD	No.	0	362	0
7	Replacement of coupling of LOP	Check coupling. Repair/replace bush/coupling. Align the pump. Box up. Assist trial run.	BD	No.	10	481	4810
8	Oil topping of lube oil in ID fan bearings	Check lub oil level in bearings. Fill the oil up to normal level. Clean the area.	BD	No.	24	181	4344
9	Oil topping in PA/SA fan	Check lub oil level in tank. Fill the oil up to the normal level. Clean the area.	BD	No.	150	181	27150
10	Filter cleaning of lube oil unit of SA and PA fan	Remove the filter. Clean with air/petrol/diesel. Restore.	BD	No.	50	362	18100
11	Cooler Hydro test of PA,SA fans and EBFPs.	Dimantle cooler assembly. Carry out hydro test of cooler. Plug any coil if found leaking. Clean cooler.Replace gasket , o-ring, seals etc. Box up. Assist charging of coolers.	BD	No.	24	1922	46128
12	New oil Filling/Replacement upto 350 litres	Drain complete oil from tank. Clean the tank & view glass after oil draining. Fill the tank with new oil up to normal level. Box up. Clean the area.	BD	No.	8	1442	11536
13	New oil Filling/Replacement more than 350 litres	….DO …	BD	Once	4	1922	7688
14	Pump not developing pressure	Adjust the releif valve.Attend leakage of oil if any and restore.	BD	Each	4	362	1448

Annexure B2

Phase-2 **Part-D** **Lube Oil Units & Scanner Air Fan**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
15	Replacement of lub oil pump.	Decouple the pump. Remove all connecting piping and fittings.Replaced with new one. Align and couple it. Assist trial run.	BD	No.	10	721	7210
16	Replacements of relief valve of lub oil pump / lub oil system	Isolate the system. Replaced with new relief valve.Assist trial run. Adjust relief valve if required.	BD	No.	2	721	1442
17	Valve repair / relacements of lub oil system. Water and oil side. Max up to 1 inch size.	Check for leakage /passing of valve. Attend the leakage/passing problem. Replace the valve if required.	BD	No.	4	543	2172
18	Lub oil Filter replacements.	Remove the filter element from the casing. Replace with new one.	BD	No.	4	362	1448
19	Sight glass / flow indicator cleaning/replacements. Water and oil side.	Replace/ repair the sight glass / flow indicator with new one.Ensure leakproofness of valve.	BD	No.	14	543	7602
20	Flexible hose replacements. Water / oil side.	Replace hose with new one. Check for no-leackage.	BD	No.	24	362	8688
21	Replacement of DE/NDE Bearing of Scanner Air Fan	Decouple. Dismantle the damaged bearing.Replace new ones.Lubricate. Align with motor and install V-Belts.	BD	Each	2	724	1448
22	Replcements of belts/alignment of scanner air fan.	Remove the belt guard. Replaced the set of belts. Adjust the tension , align properly. Fix the belts guard.	BD	Set	2	362	724
23	Replacements of suction strainer of scanner air fan.	Remove the strainer by opening of bolts. Replace the strainer with new one. Fix new gasket & box up.	BD	No.	2	362	724
24	ID fan bearings oil leakage attending.	Check for any leakage.attend leak as per E-I-C	BD	No.	16	721	11536
25	Bearing NDE & DE leakage arresting - water & oil side.	Check for leakages from the bearings. Attend the same.	BD	No.	14	721	10094
						SUB TOTAL	**232474**

Annexure B2

Phase-2 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Suction duct cleaning.	Open the man hole doors, Clean the duct with scapping / cleaning tools & tackles.collect all material at ground floor. Joint inspection carried out By GIPCL Engineer Incharge. Scrap the same Box up man holed door	BD	No.	2	13319	26638
2	Suction Stainers cleaning of LT Blower	Unlock the strainer casing. Remove the fabric strainer. , replace it or Clean the fabric as well as internals of strainer with compressed air. Box up.	PM	No.	100	420	42000
3	Suction Stainers cleaning of HT blower	*_Do_*	PM	No.	300	481	144300
4	PM of LT blower	Clean the suction stainers. Check oil level/condition. Top up the oil or replace as per instruction of EIC. Attend leakages if any.Check belt tension, adjust/replace belts set if require.Check the lobe condition varify clearances.rotate blower manually and identify any abnormalities if any.Check and varify condition of pulley by belt guage Clean the blower unit. Check speed sensing disc, replace if require. Check the foundation bolt for tightness.Clean the oil view glass and replace if found damage.	PM	No.	72	1322	95184
5	PM of HT blower	_Do_	PM	No.	144	1502	216288
6	Decouple/ coupling of HT blower with motor. (belt drive) or Belt replacement of HT blower	Remove the belt guard.Loosen the belt by lifting mechanism of motor using screw jack/hydraulic jack. Remove belt from pulley. Check alignment of motor and blower pulley. Correct alignment if required. Refix/replace the belt & adjust belt tension. Refix belt guard. Assist trial run.	BD	No.	8	601	4808

Annexure B2

Phase-2 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Decouple/ coupling of LT blower with motor. (belt drive) or Belt replacement of LT blower	_Do_	BD	No.	8	481	3848
8	Repair/replacement of pulley	Decouple the blower with motor. Loosen the belt by lifting mechanism of motor using screw jack/hydraulic jack. Check pulley for any damage. Remove the pulley from position. Repair the pulley as per instruction of EIC. Replace the pulley if require. Refix the pulley.Replace the belt if damaged or refix the belts. Box up & assist trial run.	BD	No.	8	721	5768
9	Suction strainer filter element repair/ replacements	Remove the strainer from the position. Repair/replace if any internals found damage I.e filter element, sponge element etc. Box up the strainer.	BD	No.	10	749	7490
10	Oil top up /replacements in the gear box of blower	Check the oil condition/colour visually. Refill/Top up /replace oil as per E-I-C.	BD	No	150	181	27150
11	Oil level indicator sight glass cleaning/repair / replacements	Drain the oil from the gear box to oil pot. Remove sight glass. Clean it, refix it properly. Fill removed oil again still normal oil level	BD	No	28	272	7616
12	Repair/replacements of MEJ at discharge of blower	Remove the MEJ from the position. Inspect for any damage. Repair if possible by welding. Or replaced with new one. Place in position. Check for leakage.	BD	No	4	1506	6024

Annexure B2

Phase-2 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Blower assy. Replacements	Remove the belt guard, belts, pulley,suction strainer and connected pipe line. Take out the blower and put it to workshop/maintenance area/Hoist area/Vehicle. Bring new blower from Maintenace bay/Hoist/Vehicle to blower room and then Place the new blower.align blower on platform.insert seam plate if required between leg of blower and platform. Check the pulley, belt, suction strainer & replace if required.Clean the suction strainer Normalise the system and assist trial run.	BD	No.	14	9191	128674
14	Belt guard removal and refixing.	Remove the belt guard, inspect for speed sensing flap/belts/pulley refix it.	BD	No.	40	300	12000
15	Servicing of blower	Shift blower from site to workshop. Open the gear box, inspect for damage of bearings, gears, lobes etc. Repair / replace if reqd. Adjust the clearence as per E-I-C/supervisor. Box up and Normalise.Assist trial run of blower.	BD	No.	6	12977	77862
16	Speed sensor flap repair/Replacement	Inspect the speed sensing disc.Reair/replace the same if necessary. Fabricate the sensor plate if require.	BD	No.	4	484	1936
17	Servicing of safety valves in blower discharge line.	Dismantle the safety valve and service the same as per instructions of EIC.Replace any damage internals. Box up.	BD	No.	12	1922	23064
18	Replacement of Oil seal at DE drive shaft.	Remove the drive pulley and open the end cover of drive side. Install new Oil seal and Box-up	BD	No.	10	1198	11980
19	Servicing of NRV in Blower discharge line.	Dismantle the NRV and service the NRV. Fabricate the flap of NRV. Replace the flap of the NRV if required.Box up.	BD	No.	8	968	7744

Annexure B2

Phase-2 **Part-E** **Blowers**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
20	Oil leakage arresting from blower	Identify the leakage. Clean area of leakage. Attend the leakage as per EIC.	BD	No.	30	601	18030
21	Suction Filter Replacement	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (Bed Ash , Sealpot blowers)	BD	No.	22	362	7964
22	Suction Filter Replacement	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	BD	No.	80	407	32560
23	Assist trail run /Obsrvation of running Blower	Assist trail run /Obsrvation of running of Blower post repair/attending defect / Under Visual inspection as per instuction by one unskilled labour per hour assistance at blower room	BD	Per Hour	60	59	3540
						SUB TOTAL	**912468**

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1.Bed ash Conveyor							
1	PM of bed ash conveyor.	Open the top cover plates. Check chain flight , pin, circlip etc. Check the damage/worn out plates. as per instruction of EIC, Replace or Straightened the bent links by heating and hammering . Clean the drive mechanisam. Check for wear of driving mechanisam. Check oil level in gear box. Lubricate the drive chain, bearings. Inspect bearings, sprockets, . Take trial run. Adjust chain tension if required And submit Pm report immediately to Engineer in-charge	PM	No.	88	1442	126896
2	Lubrication of bed ash conveyer	Bed ash conveyor all bearing greasing, Gear box oil level checking and top-up if required etc…..	PM	No.	288	362	104256
3	Greasing of driving chain	Remove the chain guard. Clean the chain & Apply grease.Place the chain guard.	PM	No.	40	183	7320
4	Clear out conveyor jam.	Open the conveyor top plates. Bottom plates at tail end of conveyor. Remove any foreign material/bed material. Made conveyor free. Check damage link. Replaced damage link. Adjust chain tension if required. Box up the conveyor & take trial run.	BD	No.	100	481	48100
5	Drive Sprocket replacements.	Decouple the drive. Open the top plates at drive station. Remove the chain guard. Replace/buildup the wearout sprocket and grind to original profile. Normalise the conveyor.	BD	No.	4	4399	17596
6	Idler replacements of bed ash conveyor NDE side. Size: OD-400mm & 60mm width.	Open the top cover plate. Delink chain from idler. Remove the bearings. Replace the idler. Box up bearings. Normalise the conveyors.	BD	No.	2	1682	3364

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Driving double roller chain repair / replacements.	Open the chain guard. Remove the double roller chain. Replace if found damaged. Adjust the chain tension and align it. Normalise the conveyor	BD	No.	4	1201	4804
8	Shear pin replacements.	Open the chain guard. Remove the damaged shear pin (02 nos). Replaced with new one (02 nos). Fix the chain guard.	BD	Set	118	226	26668
9	Bearings inspection DE & NDE side (Any-1)	Open the top half of the bearing. Inspect the bearing. Lubricate and box up.	BD	No.	10	481	4810
10	Bearings replacements DE & NDE side (Any-1)	Open the bearing plummer block. Replace the bearing with new one & lubricate. Box up.	BD	No.	10	1442	14420
11	Plummer block repair / replacements DE / NDE (Any-1)	Remove the plummer block from shaft. Replace with new one.	BD	No.	4	2163	8652
12	Shaft seal replacements	Remove the bearings with plummer block. Replace shaft seal and labyrinth seal with new one.	BD	No.	2	1201	2402
13	Tail end shaft replacements	Remove the top cover. Dismantle the plummer block. Remove the sprocket halves. Replace the new shaft. Normalize as per E-I-C. Take trial run.	BD	No.	2	3907	7814
14	Drive end shaft replacements	Remove the top cover.Dismantle the plummer block. Remove the sprocket halves. Replace the new shaft. Normalize as per E-I-C. Take trial run.	BD	No.	2	5891	11782
15	Conveyor chain flight replacements	Open the cover plate. Remove the circlip and pin of chain flight. Replace with new one. Normalise the conveyor	BD	No.	1500	226	339000
16	Chain flight reclamation	Identify the damage flights. Straighten the bent flight by heating / pressing. Weld the plate of broken flight after necessary edge prepration.	BD	No.	700	602	421400

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
17	Filling of refractory between wear plate and casing (gap 50mm, Height - 150mm).	As per instruction of E-I-C, prepare refractory mix and fill in the gap & cure it.	BD	Meter	20	1201	24020
18	Chain tension adjustment	Loosen the tail end. Adjust the chain tension as per E-I-C. Tighten the tail end.	BD	No.	10	181	1810
19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	14	181	2534
20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	362	1448
21	Guide rail replacements. Size: 50mm width,16mm thick,8m length	Open the top & bottom cover plate. Remove the chain. Inspect for guide rail. Replaced with new one.length of guide rail @2meter in 4 location.	BD	No.	4	5423	21692
22	Replacement of motor end small sprocket of duplex roller chain.	Open the Drive chain guard.Remove the drive chain.Remove the worn-out sprocket and replace with new.	BD	No.	4	1746	6984
23	Replacement of Conveyor end bigger sprocket of duplex roller chain.	Open the Drive chain guard.Remove the drive chain.Remove the worn-out sprocket and replace with new.	BD	No.	4	3902	15608
24	Dismantling and refixing of Drive Motor (Geared)	Drain the oil from Gear box. Dismantle the drive motor and install new motor .Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	4	1205	4820
25	Repair/replacement of wear plates.	Identify damaged wear plate & remove the plate from conveyor.Fabricate the plate as per EIC. Repair/replace the plate as per EIC. Box up.	BD	Per Sq. mtr	24	1694	40656
26	Replacement of drive end gear box.	Drain the oil. Remove the motor. Remove the gear box from the position. Replace the gear box woth new one.. Place it position. TOP up the oil. Fix its drive sprocket and drive chain in position. Box up.	BD	No.	2	6609	13218

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
27	Servicing of gear box.	Drain the oil. Remove the motor. Dismantle the	BD	No.	2	3845	7690
2. Rotary air lock feeder 10 TPH / 32 TPH					0	0	0
28	Preventive maintenance of Rotary Air Lock Feeder	Isolate the Airlock feeder. Clean the annular space between casing and rotor. Grease the bearings. Check the oil level and top-up if necessary. Check the condition of oil seal . Check gland leakage	PM	No.	48	453	21744
29	Lubrication of bed ash rotary air lock feeder	bed ash rotary air lock feeder all bearing greasing, Gear box oil level checking and top-up if required etc…..	PM	No.	288	181	52128
30	Replacement of bed material / ash cooler feeders.	Isolate the feeder, remove the feeder, replace new, restore.	BD	No.	2	2419	4838
31	Rotary air lock feeder DE/NDE bearing replacements (any-1)	Remove the motor.Replace the bearings and Box-up.	BD	No.	2	721	1442
32	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	10	362	3620
33	Oil seal replacement of RALF	Drain the oil from the gear box. Remove the motor. Replace the oil seal from the gear box. Place the motor and fill the oil in gear box.	BD	No.	4	905	3620
34	Servicing of Rotary air lock feeder..	Drain the oil from the gear box. Remove the motor. Removed the gear box. Service the rotor assy and gear box. Normalise.	BD	No.	4	3604	14416
35	RALF jam clear out.	Hand rotate the feeder for mechanical jamming. Made it free. If reqd. follow the step as in sr, no. 2.6.	BD	No.	50	122	6100
36	Lubrication of gear box.	Check for oil level in gear box. Fill oil or totally	BD	No.	4	453	1812
37	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	457	1828
3. Ash cooler					0	0	0

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
38	Choking removal of ash cooler spiese valve to ash cooler line/spiese valve mouth.	Remove the ash cooler drain valve/spiese valve sight glass. Carried out pocking through valve /sight glass opening. Carry out hammering of the line if required. Clear chockage. Normalise.	BD	No.	400	721	288400
39	Repair / replacemetns of grate drain valve / wind box drain valve.(Up to 150NB)	Remove the valve from position.Dismentle the valve. Clean it.Freeness checking. Assemble the valve. Replace gasket/bolts/nut with new one & box up.	BD	No.	24	905	21720
40	Cleaning of Ash cooler	Open the manhole door of ash cooler Empty	BD	Per	12	0	0
41	Choking removal of ash cooler bundle chamber / empty chamber grate drain (Any-1)	Open grate drain valve,check flow of bed material. De chock the line if required till evacuation of chamber.close the valve	BD	No.	1200	543	651600
4. Bed ash conveying line.					0	0	0
42	Choking removal of conveying line from I/A bin to bed material silo.	Clear the chock by applying air. Normalise it.	BD	No.	28	453	12684
5.Bag Filter cleaning system					0	0	0
43	Servicing of Bag filter /Replacement of all bags in bag filter	Open the cover of bag filter. Remove the bag filter. Remove bags from the filter. Clean the bags with service air or replace bag if require. Clean the perging lines and check for air coming from all perging line .Box up.	PM	No	10	2403	24030
44	PM of dust extration Fan.	Check the alignment. Inspect coupling/Bearings. Replace if found damage. Align properly. Box up. Take trial run.	PM	No.	0	481	0
45	Replacements of air hose of filter cleaning system.	Isolate the air supply. Replace the hose with new one.	BD	No.	2	453	906
46	Repair / replacements of NMEJ of dust extraction fan.	Remove / dismantle the damaged NMEJ. Repair / replace as per instruction of E-I-C.	BD	No.	0	1201	0

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
47	Dust extraction fan coupling replacements.	Open the cover. Decouple fan. Replace coupling with new one. Align the fan & box up.	BD	No.	0	601	0
48	Dust extraction fan replacements.	Decouple from motor. Remove the bearings. Open the casing plate. Replace the entire fan with new one. Box up the fan.	BD	No.	0	17945	0
49	Bearing replacement	Open the bearing cover. Check condition of the bearing. Change with new one. Box up.	BD	No.	0	1682	0
50	Damper servicing	Open the damper. Check flap of the damper. Repair/replace the damper. Box up.	BD	No.	0	841	0
51	Bed material Draining from FBHE BC/EC	Open the grate drain valve. Drain the chamber as per requirement and Remove chocking if any . Close the valve.	BD	No.	1360	240	326400
52	Bed material Draining from Combustor.	Open the grate drain valve. Drain the combuster as per requirement and Remove chocking if any . Close the valve.	BD	No.	40	754	30160
53	Bed material filling in grate drain of Combustor/FBHE Empty chamber & Bundle chamber.(Any-1)	Issue bed material from store. Close grate drain valve. Open manhole door. Fill bed material from inside grate drain line.	BD	No.	100	272	27200
54	Chocking clearing of Bed material filling line from bed ash silo to combustor/Chocking clearing of PA windbox conveying line	Check the line for chock up.Hammer the line & pocking.If chock up not cleaned, cut the pocket or open the flange , do pocking and welding the cut pocket or refix the flange. After removal of chock up normalise the system.	BD	No.	200	453	90600
55	Combustor spiess valve to ash cooler line/PA windbox conveying line leakage attending	Identify the leakage,apply sodium silicate or do welding as per E-I-C.	BD	No.	250	484	121000

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
56	PA wind box bed material conveying line Pipe/T piece replacement.	Identify the damage pipe. Check thickness of pipe. Replace damage portion of pipe with new one. End connection of pipe may be Welded or Bolted. Pipe Size Dia.150x15 t mm.	BD	Per Mtr.	20	1149	22980
57	Mixing nozzle replacement in PA coveying line	Replace the damage nozzle and put new nozzle by welding and bolting	BD	No	8	1149	9192
58	Bed material leakage attending online in combustor,waterwall,Ash coolers,NMEJ	Open the insulation.Identify the leakage attending the leakage on line by applying.sodium silicateand ceramic wool. Refixing of insulation	BD	No	400	362	144800
59	Bed ash silo.Intermediate ash bin level checking.	Open the man hole door. Check the level of ash in bunker/silo.	BD	No.	50	94	4700
60	Bed Ash Conveyors discharge line Inpection	Open the Door & Remove the foreign materials from the disharge line grill. Door box up.	BD	NO	16	304	4864
61	Bed Ash Conveyor gear box coupling repair/replacement	Bed ash Conveyor gear box coupling repair/replacement as per instruction of E-I-C.	BD	NO	8	1201	9608

Annexure B2

Phase-2 **Part-F** **Bed Ash Conveying System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
62	Ash Cooler Bundle Chamber coil remove and its coil and nozzle cleaning	Make scaffolding erction work for proper working approch, Insulation removing and external cleaning Make necessary arrangement for removing of bundle chamber coil, ACW line dismentling, cutting / removing of all fastner of bundle chamber coil flange, remove the coil by jacking / pushing / pulling method from its position, Coil tube cleaning and inspection, take the Hydro test and check coil tube, if any coil tubes identified in hydro test so repaire / replace of coil tubes as per EIC, Baffle plate check and repaired as per EIC, All bed material removing from bundle chamber and clean the nozzle with its hole, check the all nozzle by blower air / Manual air from its wind box, Bundle chamber coil flange clean and new gasket / rope fitting, Bundle chamber coil inserting work and all fastner fitting work and normalising the all arrengement, ACW line fitting work, Insulation application work	BD	No.	2	150800	301600
						SUB TOTAL	**3493756**

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1. Lignite Conveyor							
1	Conveyor link Sprockets (Both side) replacement. Phase-2	Decouple the drive. Open the top plates.Decouple the chain link . Replace sprocket.Couple the link .Normalise the conveyor.Assist trial run.	OM	No.	4	7692	30768
2	Chain tension adjustments.	Check chain looseness. Loosen the tail end bracket. Adjust the chain by tightening the bolts as per E-I-C.Tighten the tail end bracket.	OM	No.	200	300	60000
3	Greasing of DE / NDE bearings of conveyors, chain compensation bearings, flow indicator bearings.Total no of bearings - 8 per conveyor	Clean the bearings. Apply the grese with pressure. Remove the additional graese from bearings from outside.	PM	per conveyor	200	226	45200
4	Greasing of driving chain	Remove the chain guard. Apply grease with oil mixture.Place the chain guard.	PM	No.	48	183	8784

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Servising/Overhauling of Lignite conveyors.	Ensure Isolaion of the conveyor from bunker. Open the cover plates of lignite conveyor. Remove the complete lignite from conveyor length. Remove the entire chain from conveyor & Clean the groove. Check for any damage of guide rail. Adjust if required or repair/replace the rail. Inspect all the bearings, replace if required. Check sprocket condition and change if required. Check the idler at tail end. Fix in position if found dislodged or replace if required. Lubricate the conveyor drive chain and bearings. Inspect the bassalt liners & repair/replace as per instructions of Engr I/C. Inspect the lingnite chain link & repair/replace as per instructions of E-I/C. Check the drive chain & repair/replace, if required. Align the gear box with conveyor. Normalise the system. Assist trial run.	PM	No.	8	61374	490992
6	Lignite conveyor chain link inspection	Open the drive end covers. Remove the lignite. Inspect the link pin/flighted link for damage.Replace the damage link.Adjust the chain tension if required. Box up.	PM	No.	400	272	108800
7	Shear Pin replacement	Adjust the hole of sprocket,replace the shear pin.Fit circlip on both sides of shear pin.Restore to normal. (1 no. shear pin in Phase-I & 2 nos. shear pin in Phase-II)	BD	Nos.	400	136	54400

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Replacement of entire chain link of conveyor.	Ensure Isolation of the conveyor from bunker. Open the cover plate and remove lignite from conveyor. Remove the entire chain from position. Clean the groove of the conveyor. Place the entire chain link assy. Normalise the bunker gates.Box up and assist trial run.Adjust the chain tension during trial run.	BD	Nos.	4	17009	68036
9	Removal of one link of drag link chain by drive end inspection	Isolate the lignite feeder from lignite bunker. Open feeder cover. Remove the lignite from drive end of the conveyor. Remove/Replace one link of conveyor chain.Adjust chain tension.Restore.	BD	per link	150	605	90750
10	Inspection of lignite conveyor assembly for conveyor breakdown	Ensure Isolation of the lignite feeder from lignite bunker. Open feeder cover plates at 3-4 places from drive to tail end of conveyor.Remove the lignite conveyor from drive to tail end. Clean the grooves.Check the complete conveyor links. Note the damages.Check the circlip & replace the damaged one. check & replace the shear pin.Adjust chain tension . Restore.Assist the trial run.	BD	No	16	3352	53632
11	Replacement of chain link of conveyor as per noted defect in S No 1.10 as above .	Shift the new link from store to site.Remove the damaged chain links & replace it with new one.	BD	per link	750	1259	944250
12	Main drive -Gear box mechanism Repacement	Decouple the motor assembly of driving gear box. Repair/replace assembly. Align the gear box with motor. Restore to normal.	BD	No.	4	2097	8388

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Idler/shaft replacements of lignite conveyor NDE side.Size of shaft :- OD 120 mm & length @ 2 meter, Size of idler:-436 mm OD & width 60 mm	Open the top cover plate. Decouple the chain link . Remove the shaft end seals.Remove the bearings.Remove the shaft & idler. Replace or repair the idler / shaft / beraing, shaft end seals; if required.Put the shaft & idler in position. Fit the bearings & do greasing. Normalise the conveyors.Assist trial run.	BD	No.	6	7692	46152
14	Sprocket cleaner repair / replacements	Open the top cover plate. Remove the chain links. Remove the sprocket cleaner. Normalise the conveyors.	BD	No.	8	1201	9608
15	Driving chain tripple rollar repair / replacements.	Open the chain guard. Remove the tripple roller chain. Replaced if damage. Adjust the chain tension and aligned it. Normalise the conveyor	BD	No.	8	1201	9608
16	Bearing replacements of lignite conveyors, DE / NDE side.(any-1)	Open the bearing plummer block. Replace the bearing with new one.	BD	No.	8	1498	11984
17	Bearing Inspection of Lignite conveyor DE/NDE.(any-1)	Open the bearing plummer block. Inspect the bearing in detail and inform condition to Engineer in charge.After instruction of engineer in charge box up the bearing.	BD	No.	8	453	3624
18	Basalt lining / refractory application in the lignite conveyors.	Open the cover plate of conveyors. Identified the damaged liner portion. Remove the chain flights. Apply refractory / basalt lining as per E-I-C	BD	Sq. meter	2	2523	5046
19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	50	634	31700
20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place tne cover.	BD	No.	4	181	724
21	Lignite flow indicator adjustments.	Open the cover plate of conveyor. Adjust the flap of flow indicator. Box up	BD	No.	8	453	3624

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
22	Repair / replacements of flow indicator shaft & its bearings	Open the cover plate. Remove the shaft from position.Check the bearings & replace if required. Repair/replace the shaft . Box up	BD	No.	8	1201	9608
23	Assistant for Lignite bunker chocking removal.	Open the cover plate of lignite conveyor at front and rear side of bunker. Check for jamming of bunker.Lignite may be required to remove from the tail end/drive end. Box up the conveyor plate after ensuring smooth flow of lignite.	BD	No.	60	961	57660
24	Lignite Conveyor supervision during rainy season (2 semiskilled labour per 12 hours shift is considered as 1 shift)	2 persons are to be deployed for each conveyor to check the lignite flow. Open the cover plate at drive end.Contineouly observe the conveyor .Any abnormality in lignite flow observed , immediately inform to Control Room Desk Operator & Lock the emergency push button at local. Rectify the defect or otherwise inform to Boiler dept E-I/C.	BD	shift	100	2163	216300
25	Dismantling and refixing of Drive Motor (Geared)	Drain the oil from Gear box. Dismantle the drive motor and install new motor .Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	6	1741	10446
26	Conveyor drive chain tension adjustment	Remove the drive chain guard.Adjust the tension as per EIC instruction,Normalise the system	BD	No.	4	601	2404

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
27	DE shaft replacement. Shaft Size 120 mm OD & Length-2 meter	Open the cover plate. Decouple the conveyor link. Decouple the conveyor from gear box by removing the drive chain. Remove the driven sprocket fitted on shaft. Remove both the bearings. Remove both side shaft end seals. Remove the shaft. Check the bearing, drive chain, sprocket, end seals, drive chain & replace if required. Replace the shaft. Refix the end seals, bearings, sprocket. Fit the chain. Align the conveyor & gear box. take the trial in conveyor link decoulple condition & after sucessful trial couple the conveyor link, adjust chain tension.	BD	No.	4	10671	42684
28	Lig. Conveyor Flywheel hub gap setting	Lig. Conveyor Flywheel hub gap setting as per instruction of E-I-C.	BD	No	50	181	9050
29	Lig. Conveyor Flywheel hub repairing/Replacement	Lig. Conveyor Flywheel hub repairing/Replacement as per instruction of E-I-C.	BD	No	8	2108	16864
30	Lig. Conveyor Flow Adjustment	Lig. Conveyor Flow Adjustment as per instruction of E-I-C.	BD	No	8	181	1448
31	Lig. Conveyor Scrapper repairing/replacement	Lig. Conveyor Scrapper repairing/replacement as per instruction of E-I-C.	BD	No	4	1506	6024
32	Lig. Conveyor gear box coupling repair/replacement	Lig. Conveyor gear box coupling repair/replacement as per instruction of E-I-C.	BD	No	4	453	1812
2. Lignite rotary air lock feeder.					0	0	0

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
33	Overhauling/Servising of Lignite RALF	Isolate the system. Remove geared motor, gear box, clutch assy., Open inspection cover and dismatle the entire feeder. Inspect for any damage parts viz. bearings, shaft sleeve, sealing strip, casing sleeve, bucket, rotor of feeder as well as scraper etc. Replace any damaged internals if required. Check for clearences. Carry out lubrication of gear box as well as bearings. Assemble as per E-I-C. Assist trial run.	PM	No.	10	42452	424520
34	Greasing of DE / NDE bearings of rotor, scrapper assy. Of lignite RALF.	Clean the bearings. Apply the grease with pressure. Clean the excess grease from outside.	PM	No.	200	453	90600
35	Shaft stuffing box leakage arresting.	Tighten the SINGLE shaft seals of scraper and rotor shaft as per instruction of EIC. Clean the area.	BD	No.	200	543	108600
36	Lig. RALF Shaft stuffing box seal/gland replacements.(Single side)	Remove the gland follower of any one shaft seals. Remove the all old galnd packing. Placed the new gland packing. Tighten the gland follower. Clean the all area.	BD	No.	50	240	12000
37	Lubrication of gear box.	Open the gear box. Drain the old oil/grease. Refill / replaced the new oil / grease.	BD	No.	40	453	18120
38	Clearing RALF jamm.	Rotate rotary air lock feeder manually through coupling, Open the top cover plate. Inspect feeder from inside for any foreign material, remove if any, Put mixture of bed material with water from top, hand rotate for 2 to 3 revolution and make free. Box up.	BD	No.	300	1198	359400
39	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	242	968

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
40	Repair of NMEJ betn feeder and conveyors. Size 1mx2m	pull the top of the lignite conveyor. Remove the expansion joint, replaced with new one. Box up	BD	No.	2	1054	2108
41	On line leackage arresting of NMEJ/MEJ betn feeder and seal pot.	Clean the area properly. Check for any leakage of flue gas of bed material. Apply sodium silicate with refractory, ceramic wool mixture. Make necessary arrangements to hold mixture using plates etc. Arrest leakage.	BD	No.	4	1054	4216
42	Dismantling and refixing of RALF Drive Motor (Geared)	Drain the oil from Gear box. Decouple the drive motor and install new motor .Couple the drive motor & align it.Fill Oil in gear box. Ensure no oil leakages from the Gear box.	BD	No.	4	1048	4192
43	Replacement of Sealing strips for Rotor / Scrapeer	Isolate the RALF. Open the manhole door remove all damaged sealing strips by cutting / grinding. Replace with new sealing strips as per EIC. Check the clearance between casing and rotor. Box up and check for free rotation of the feeder	BD	Set	4	1810	7240
44	Replacement of shaft sleeve	Isolate the feeder. Dismantle the feeder by removing gear box, motor, clutch assy, remove the bearings, shaft protection sleeves and replace with new one, check the clearances, check the condition of bearing and replace if required box up and check for free rotation as per EIC	BD	No.	4	6581	26324
45	Replacement of Oil seal	Isolate the feeder, drain the oil dismantle the gear box replace the damaged oil seal, box up the gear box check for leakages as per EIC.	BD	No.	4	961	3844
46	Lignite RALF gear box Leakage attending	Identify the leakage. Replace flange gasket or oil plug if required.	BD	No.	4	304	1216

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
47	Lignite RALF gear box replacements	Drain the oil from drain plug. Remove the motor & gear box from position. Issue new gear box from store and place in position. Lubricate the gear box. Fit the motor, replace coupling if required. Align gear box with motor. Assist trial.	BD	No.	6	2108	12648
48	Lignite RALF clutch servicing	Dismantle the clutch assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	No.	50	1086	54300
49	Lignite RALF clutch assy. Replacement.	Isolate the feeder. Remove the clutch assy. Using screw jack, hydraulic jack with puller. Check the shaft for any dent etc. Make it proper and fixed new clutch assy after adjusting key on the shaft. Assist trial run of feeder.	BD	No.	50	1141	57050
50	Lig. RALF Clutch torque setting	Lig. RALF Clutch torque setting as per instruction of E-I-C.	BD	No	300	272	81600
51	Lig. RALF Inspection	Lig. RALF Inspection for abnormal sound. Inspection door to be opened & work to be carried out /Cleaning of Srapper & Bucket as per instruction of E-I-C.	BD	No	50	1498	74900
52	Lig RALF Scraper shaft replacement	Isolate the feeder. Remove the clutch assy. Using screw jack, hydraulic jack with puller. Remove the motor & gear box from position. Remove the damaged scraper shaft from its position. Check the bearings of scraper shaft and oil seal. Replace the scraper shaft as per instruction of E-I-C. replace bearing and oil seal if required. box up the feeder. Lubricate the gearbox and bearing. Take trial run.	BD	No	0	21226	0
3. Master Fuel trip valve.					0		0

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
53	Overhauling/Servising of MFT	Decouple the master fuel trip from electrical actuator & remove the spindle nut. Remove the cover plate. Remove the MFT plate along with spindle. Decouple the plate from spindle. Dismantle the entire gate. Check for damage internals viz. sealing rope, accenders, bearings, spindle nut, etc. Replace/repair any damaged internals. Replace the MFT plate, spindle if required. Ensure purge/service air pressure & flow. Box up. Ensure the free manual operation of MFT for full open/full close position. Assist for the limit switch setting with electrical dept. Assist trial run.	PM	No.	20	12686	253720
54	Spindle gate lubrication.	Open the cover. Clean the spindle, Lubricate the spindle with grease. Box up.	PM	No.	64	453	28992
55	Manual operation of the MFT.	Open /close the MFT manually as per instruction of EIC.	BD	Once Operation	40	449	17960
56	Internal cleaning of MFT	Open the top flange of MFT cover plates. Remove the bed material by applying air. Clean the entire empty chamber area. Ensure purge/service air pressure & flow. Box up.	BD	No.	24	601	14424
57	Opening/closing of lignite bunker gate.	Open/close the lignite bunker gates as per requirements.	BD	Once Operation	100	374	37400
58	Lignite bunker gate servicing.	Remove the spindles of gate. Clean the gear pairs, nut & bearings. Check freeness of gate. Box up.	BD	No.	50	1201	60050
59	MFT spindle nut replacements	Open the cover of MFT. Remove the spindle. Remove nut & box up after replacing nut.	BD	No.	16	749	11984

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
60	Bunker inspection & its liner plate(Polymer or SS 310) repairing/ replacement	Ensure that bunker is completely empty. Ensure electrical isolation of lignite conveyor. Open all bunker outlet gates. Make proper approach for inspection. Inspect the liners on all sides of bunker plate. Repair/replace as per E -I/C. Liner size is @ 1x2 meter. Remove the scrap. Normalise the system.	BD	No.	4	25439	101756
4. Limestone air lock feeder. 10 TPH.					0		0
61	PM of Lime stone RALF	Isolate the Airlock feeder. Clean the annular space between casing and rotor. Grease the bearings. Check the oil level and top-up if necessary. Check the condition of oil seal and replace if necessary. Tighten the gland or replace the gland, if required.	PM	No.	64	599	38336
62	Replacement of limestone air lock feeders.	Isolate the feeder. Remove the motor & Gear box. Remove the feeder & replace it with new feeder. Fit the gear box & motor. Normalise & assist trial run.	BD	No.	2	2097	4194
63	Rotary air lock feeder DE/NDE bearing replacements (any-1)	Remove the motor. Replace the bearing using proper tools and tackles. Install new bearing. Normalise & assist trial run	BD	No.	2	599	1198
64	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	50	481	24050
65	Oil seal replacement of RALF	Drain the oil from the gear box. Remove the motor. Replaced the oil seal from the gear box. Place the motor and fill the oil in gear box.	BD	No.	4	481	1924
66	Servising/ Overhauling of RALF.	Drain the oil from the gear box. Remove the motor. Remove the gear box. Remove the rotar assy. Place the new rotar assy. Normalise.	BD	No.	4	2396	9584

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
67	RALF jamm clear out./Flow establishment of limestone.	Hand rotate the feeder for mechanical jammimg. Open the top inspection door if required. Check for any foreign material. Made it free. Check for Flow through feeder from inspection hole. Carry out hammering of bunker if required to establish the flow.	BD	No.	200	407	81400
68	Greasing of DE / NDE bearing of RALF.	Open the DE / NDE bearing cover. Grease properly. Box up	BD	No.	8	181	1448
69	Lubrication of gear box.	Check for oil level in gear box. Fill oil or totally replaced the oil as per E-I_C.	BD	No.	8	181	1448
70	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	181	724
71	Limestone gearbox overhauling.	Remove the gear box from position. Dismantle the gear box. Replace damage part and box up.	BD	No.	2	1198	2396
72	Limestone feeder flow checking	Check the feeder for flow of limestone by opening plug. Rotate feeder in both direction. Do hammering of limestone bunker if required. Normalise.	BD	No.	8	362	2896
73	Limestone feeder Gear box view glass replacement.	Drain the oil. Replace the view glass. Oil top up and box up.	BD	No.	4	362	1448
74	Limestone bunker level checking	Open the manhole door. Check the level of bunker. Box up.	BD	No.	4	181	724
75	Limestone bunker gate servicing.	Remove the spindles of gate. Clean the nut & bearings. Check freeness of gate. Box up.	BD	No.	14	599	8386
76	Opening/closing of limestone bunker gate.	Open/close the limestone bunker gates as per requirements.	BD	Once Operation	4	181	724
77	Lime Stone RALFs Gland leakage arresting	Lime Stone RALFs Gland leakage arresting by gland tightening	BD	NO	20	226	4520
					0	0	0

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
78	Lig. Conveyor Idler repairing work.	Carry out the welding work on Damaged portion of the Sprocket/Idler as per instruction of EIC.	BD	NO	8	1817	14536
79	Lig. Conveyor Guide rail repairing/replacement work.	Carry out the lig. Conveyor guid rail replacement/repairing as per EIC. Carry out the side casing plate repairing/replacement , if required. Welding per meter length consider as a one quantity.	BD	Per meter	40	1211	48440
80	Lig. Conveyor Bottom portion link removal work.	Delink the chain and remove bottom portion link from the lignite conveyor and carry out groove cleaning work as per instruction of EIC. After complition of the grrove cleaning insert the bottom part of the coveyor, box up the conveyor and take trial.	BD	per bottom portion links	8	11451	91608
81	Lignite conveyor Gear Box Servicing work.	Dismantle the gear box assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	NO	4	6389	25556
82	Lignite RALF Gear Box Servicing work.	Dismantle the gear box assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	NO	8	2409	19272
83	Lignite conveyor gear box to motor alignment work.	Decouple the gear box and motor , carry out alignment work and coupled the gear box and motor.	BD	NO	4	968	3872
					0	0	0
84	Conveyor link Sprocket blade replacement. Phase-1 (Single/one side)	Isolate the conveyor. Open cover plate. Decouple the chain link. Replace the damaged sprocket blade. Normalise the conveyor.Assist trial run.	BD	NO	0	360	0
85	Replacements of NMEJ betn feeder and conveyors. Size 1mx2m	Replacement of NMEJ between feeder and conveyor as per EIC	BD	NO	2	5212	10424

Annexure B2

Phase-2 **Part-G** **Lignite / Limestone Feeding System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
86	Lig RALF Scraper shaft repair.	Repair of scraper shaft as per EIC	BD	NO	4	968	3872
87	Single side Gland replacement of Lime RALF	Remove the gland follower of any one shaft seals. Remove the all old galnd packing set. Placed the new gland packing set. Tighten the gland follower. Clean the all area.	BD	NO	4	481	1924
						SUB TOTAL	**4735406**

Annexure B2

Phase-2 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	CRM /ERM/GDRM oil top up.	Check for oil level/condition, Oil top up/replace if reqd.	BD	No.	20	122	2440
2	PM of CRM /ERM/ GDRM gear box.	Clean the ERM/CRM/GDRM (Any one) gear box externally open the Motor/Gear box flange, inspect the internals.Check for any leakage from oil seal, view glass and if required attend the same.	PM	No.	240	543	130320
3	Replacement of emitting electrode. ONE ELE-1 QTY	Remove the wire snapped electrode. Inspect for tension / worn out emmitting electrode. Replace new electrode using stretching tool divice only to ensure required tension. Box up.	BD	No.	50	91	4550
4	Replacement of shaft insulators for emmitting rapping mechanism	Decouple the motor gear box assembly. Remove the cover plate.. Replace the insulator .	BD	No.	10	961	9610
5	Alignment of collecting / emmitting gear box.	Align the collecting / emmitting gear box assembly with the rapping mechanism shaft.	BD	No.	10	721	7210
6	Servicing of collecting / emmitting rapping gear box.	Un load damaged gear box from site and shift it to maintenance area/ work shop. Dismantle whole gear box as per standard maintenance practice or instruction of E-I/C.Identify the damaged,wear & tear parts and hand over list to E-I/C. Issue required spare from ware house. install new parts/spare in existing gear box assemble gear box for ready for install/replace and tagged the same and shift it to site/warehouse/spare assembly area.	BD	No.	6	1922	11532

Annexure B2

Phase-2 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Replacemetns of gear box of emmitting / collecting rapping.	Un laod damage gear box from position and shift same to spare assembly area/ware house / work shop.Issue new gear box and shift it from spare assembly area/ware house / work shop to site and install it in position and couple it with existing gearbox/motor/rapping system.	BD	No.	4	3510	14040
8	Field internal inspection for dead shot.One field-1qty	Receipt of key from engineer in charge .Open man hole door as per instruction of E-I/C , open the manhole door, Do the earthing as per strandard procedure. Install safety mechanism as per engineer in charge.Check the field for any abnormalitities or for dead shot and mark the same . Give the list of finding to E I/C. Normalize the field and handover key to GIPCL E I/C.(Must engage 4 ESP known manpower with properly charged high beam torch with all required PPEs)	BD	No.	40	2396	95840
9	Replacements of CRM / ERM coupling.	decouple the gear box, replace the coupling with new one, Align and couple.	BD	No.	4	1442	5768
10	ESP casing/hopper manhole door open/leakage attending	Open the manhole door. Attend the leakages by rope fixing or appliying sodium silicate, plate welding in the door. Box up.	BD	No	24	1504	36096
11	Removal of collecting plate	Identify the damaged plate. Remove the damaged plate after confirmation from GIPCL E I/C.	BD	No	150	1205	180750
12	ESP & APH hoppers drian dechocking work	Open the door of hopper as per instruction of E-I-C. Remove the foreign materials from ESP & APH hoppers drain. Door box up.	BD	No.	8	1198	9584

Annexure B2

Phase-2 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	ESP GD screen Deflector/dummy plate Fixing/removal	ESP GD screen Deflector/Dummy plate fixing and/or removing from primary & secondery screen as per chart / instuction of engineer in-charge	BD	No.	400	183	73200
14	Plain/Fix Bearing Replacement/Repairing	On identification of defect,Removing/Repairing of Existing plain/Fix bearing,Install new plain bearing.Includes Seam adjusting,Aligning,Bolting,tack welding and assist trail run.	BD	No.	60	484	29040
15	Hammer Replacement	Replacement of inner arm &/or outer arm of Rapping mecahnism .Includes removing of existing Hammer from rapping shaft and replace it with new one,Tacking,Angle positioning ,Confirm hitting to correct spot on trail.	BD	No.	300	602	180600
16	Shock Pad Replacement	Replacement of Shock pad. Includes Cutting of existing shock pad bolt,install new shock pad & tacking/locking bolt.Confirm hitting to correct spot on trail.	BD	No.	400	183	73200
17	GD screen /hopper baffles Replacement/repairing	Replacement/installation on new GD screen including joining with existing GD screen	BD	No.	30	1980	59400

Annexure B2

Phase-2 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
18	Replacement of support insulator	After identification of defect of support insulator , open top door of respective support insulator and open flange cover also. Remove old damaged support insulator and scap from support insulator chamber. Clean chamber. Shift new support insulator from ware house to site. Open nut from load carring stud, remove washer plate.Carry out load on temporarily J bolt fix support insulator,re install washer plate and transfer load on new support insulator.Remove J bolts. Normalize the system/chamber varify internal of ESP post repair and on confirmation box up system.	BD	No.	20	5394	107880
19	Replacement of Shaft insulator	Replacement of Shaft insulator	BD	No.	4	899	3596
20	Locking of CE	Locking of CE with shock bar if instructed by engineer in charge.	BD	No.	20	242	4840
21	Re-positioning of Collecting Electrode	reposition/removal of Collecting Electrode	BD	No.	150	721	108150
22	Repair of collecting plate	On identification of defect The affected / damage plate need to be either lock with shock bar or with casing as per instruction of E I/C. Through welding/ bolting or by installing flats in between damage CE to shock bar to individual CES.	BD	No.	100	484	48400

Annexure B2

Phase-2 **Part-H** **E.S.P.**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
23	Locking of row of CE (1 row = 6 Ces)	Some time whole six CE need to locked with shock bar through single pipe/flat in case 3 CE locking cost consider for whole one row. Provide post at two ends and support to linear pipe/flat by post.Linear pipe/flat must be locked with CE at junction point	BD	No. of row	40	753	30120
						SUB TOTAL	**1226166**

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Servicing of ESP / IDGates (Inlet / outlet).	Clean & Grease the driving chain. Operate the gate & check for full open/ full close. Overhauling of gear box. Check the condition of all the sealing strips fand replace if required. Replace the bearings, chain, sprockets if required. Trail operation with limit switch setting in-co-ordination with electrical / C & I people. Scraping and painting of gate. Apply of lubricant dry molycote. (Supply of Molycote on GIPCL scope)	PM	No.	32	8846	283072
2	Servicing of ESP gates gear boxes.	Remove the electrical actuator. Clean the old grease from gear box. Check for damage of bearings, internals etc. Replace the damage internals if required. Apply new grease & box up.	PM	No.	2	6424	12848
3	Repair of NMEJ in PA/SA duct	Identify the damage NMEJ faric cloth. Remove bolts of damage cloth area. Patch up the fabric cloth as per instruction of E-I-C. Check for any leakage of air. Hot tighten the bolts.	BD	Each	4	2423	9692
4	Replacement of NMEJ assembly in PA/SA duct.Size: Circumferential length of NMEJ up to 6 meter	Remove the fabric cloth by removing bolts. Fix the new NMEJ clothes as per instruction of E-I-C.. Check for air leakage. Hot tighten the bolts.	BD	Each	6	8846	53076
5	Replacement of NMEJ assembly in PA/SA duct.Size: Circumferential length of NMEJ more than 06 Meter and up to 10 meter	-- Do --	BD	Each	6	12847	77082

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Replacement of casing and duct plate up to 6 mm thick	Shift material from store to site. Inspect the duct wall for wear. Patch with MS plate of 3.15 mm / 6.0 mm thickness as per E-I-C. for baffles the plate shoud be as per actual profile only.	BD	MT	30	18000	540000
7	Repair / replacements of Metallic Expansion Joints (MEJ) in blower air line. Max. dia 405 mm (Flanged)	Lock the blower air pipe. Loosen the flange joints of Mettalic expansion joints. Remove the MEJ. Fixed new one by fixing rope at flanges. Normalise the air pipe. Check for any air leakage. Hot tighten the bolts.	BD	No.	4	3534	14136
8	Internal cleaning of combustor to cyclone Non Metallic Expansion Joints (NMEJ) at bottom portion. Length-@ 4.5 meter	Inspect the expansion joints. Dismantle the bottom portion of the expansion joint Check for ingress of bed material. Clean the material if any. Repair for damage if any. Fill the missing insulation material properly including anchor welding and boxup.	BD	No	16	1448	23168
9	Internal cleaning of cyclone to back pass NMEJ at bottom portion. Length - @5 meter	-- Do --	BD	No.	16	1448	23168

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster & Dust trap. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stud welding for dust trap installation. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the new Dust trap, Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	8	38333	306664
11	Replacement of cross over duct to second pass NMEJ Width 400 mm Size: 5636 x 5236 mm2	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	6	23042	138252

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Replacement of Cyclone outlet circular NMEJ. Size: Dia 4.54 Meter	Clean the peripheral are around NMEJ. Dismantle the entire NMEJ by cutting the bolts. nos of bolts. Remove outer fabrics and cermic bolster. Clean the gap inbetween the flanges, stuff the ceramic wool in between the flange gaps as in entire perheral length as per the instruction of EIC, erect the new NMEJ along with bolster. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C.NOTE:Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	2	6424	12848
13	Replacement of Cyclone to Seal pot NMEJ. Size: Dia 2.50 Meter	Clean the peripheral are around NMEJ. Dismantle the entire NMEJ by cutting the bolts. nos of bolts. Remove outer fabrics and cermic bolster. Clean the gap inbetween the flanges, stuff the ceramic wool in between the flange gaps as in entire perheral length as per the instruction of EIC, erect the new NMEJ along with bolster. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C.NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	No.	2	8846	17692

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
14	NMEJ patch up work.. Locations : C to C,Backpass inlet, COD inlet NMEJ, Seal pot , Air duct NMEJ., Flue gas duct NMEJ.	Clean the periheral area around NMEJ. Identify leakage. Apply sodium silicate with ceramic wool. Jacking at leakage are for supporting of applied ceramic wool. If required make seal box with 3 to 6 mm M.S plate at punctured area. Fill with sodium silicate. Normalise. Check for flue gas leakage. Hot tighten the bolts.	BD	No.	14	7681	107534
15	Combustor to Cyclone / Back pass inlet NMEJ wool stuffing. Size: 6575 x 4518 mm2	Clean the bed material from inside the NMEJ. Stuff the ceramic wool. Box up.	BD	No.	24	724	17376
16	Blower line flange joint leakage attending	Identify the leakages in blower line. Remove insulation. Replace rope of flange joints. Do welding if required.	BD	No.	14	1096	15344
17	Freeness checking of dampers.	Check damper for mechanical jamming. Made damper free & Lubricate the linkages by applying dry molycote. Open & close the damper. Assist trial run.	BD	No.	24	599	14376
18	Attend leakage in air/flue gas duct by welding only. Running meter of welding.	Grind the damaged welding .Attend leakage by welding with 6013 welding electrode with minimum two runs with 6-8 mm fillet	BD	meter	300	228	68400
19	Removal and re erection of wind box drain pipes. Size; up to 150 NB & 2 meter length.	Remove the drain pipes of wind box hoppers as per EIC requirement and re erect after completion of activity	BD	Per pipe.	10	606	6060
20	Opening & Closing of ESP & ID duct gate	Make necessary arrangement and open and close the gate manually as per instruction of E-I-C	BD	No.	10	1211	12110

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
21	Internal repair of MEJ in ESP and ID duct	Identify the leakages.Wool stuffing of the MEJ leakage area.Sealing it with a 3 mm plate as per instruction of E-I-C.Duct size is 3mX6m(approx)	BD	No.	4	2423	9692
22	Fabrication of steel structure work (including transportation of steel from store yard)	Shift steel of proper size from store to site. Fabricate platforms/ approaches etc. as per E-I-C at site.	BD	Each Tonne	10	18000	180000
23	Cyclone seal box fabrication at Hot spot area Size: 900 X 500 X 250 mm of 6/8mm IS 2062 M.S plate	First apply sodium silicate and ceramic wool on hot spot.Fabricate plate of suitable size and weld plate on cyclone shell maintain gap @150-200mm between shell and plate. Prepare refractory mix as per E-I/C. fill in the gap. If required proper jacking to be done to arrest leakage.	BD	No.	200	6424	1284800
24	APH Tubes (size 50.8mmx2mm thick/4mm thick) / Dummy / Sleeves Work	Shifting of dummy (size 46ODX50MM LENGTH) / Sleeve (size 46ODX500MM LENGTH) material to site. Insert Dummy / Sleeve as per instruction of E-I-C . Both sides dummy / sleeve of one tube consider as a one no. quantity. After completion of jobs, Balance materials to be shifted in store.	BD	Per tube	1600	60	96000

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
25	APH Tubes (size 50.8mmx2mm thick/4mm thick) Mapping Work. No of tubes in each block are as follow: 1) Primary air tubes block - 3219 tubes in ph1 and 3875 tubes in Ph2 2) Secondary air tubes block - 4329 tubes in ph1 and 5375 tubes in Ph2 3) FBHE air block - 154 X 5 tubes (For FBHE, 5 nos. of block is considered as one block)	APH SA/PA & FBHE blocks tubes mapping with ID fans running. One block is considered as One no. quantity.	BD	Per Block	120	899	107880
26	Manhole Door fabrication and erection work. Size up to 600 mm X 600 mm X 300 mm	Fabrication and erection of manhole door with bolted cover from 6/8 mm thick MS plate..	BD	No.	10	1559	15590
27	PA/SA damper servicing work.	Carry out the damper servicing work, check it's open and close movement , coorect if any gap observed in between plates. Check all the link elements repair/replaced if required. Greasing of all the link assembly. Decoupled and coupled with actuator if required. Take trail run.	PM	NO	60	3534	212040
28	Plate patch up work on Cyclone and COD duct.	Shifting of material from store. Prepare the material as per requirement (as per EIC),Repaire of cyclone & COD plate by new plate patch up on onl plate	BD	Sq. Meter	20	1683	33660

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
29	Repaire / Replacement of gap flange / Retainer plate / flange of NMEJ	Shifting of material from store. Prepare the material as per requirement (as per EIC and drawing), Repaire / Replacement of gap flange / Retainer plate / NMEJ flange of NMEJ (200 mm width /30 mm thickness Gap flange, up to 16 mm thick of NMEJ Bolster and Fabric flange.	BD	Per Meter	80	1439	115120
30	Replacement of Combustor to Cyclone NMEJ Fabric Width 900 mm. Size:6575 x 4518 mm2 (Only fabric some portion of NMEJ)	Dismantle the required size of NMEJ by cutting the bolts as per EIC of M 20 X 80. Remove outer fabrics,Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps in required length.Erect the NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tightening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	50	897	44850
31	Replacement of Combustor to Cyclone NMEJ fabric and Bolster Width 900 mm. Size:6575 x 4518 mm2 (Only Fabric and Bolster some Portion)	Dismantle the required size of NMEJ by cutting the bolts as per EIC of M 20 X 80. Remove outer fabrics and Bolster,Clean the gap inbetween the flanges, measure the gap.Stuff the ceramic wool in between the flange gaps in required length.Erect the NMEJ Fabric and Bolster. Joining of NMEJ by heating m/c.Check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	60	1425	85500

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
32	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2 (Only some portion of NMEJ fabric, Bolster and Dust trap)	Dismantle the required size NMEJ by cutting the bolts.Remove outer fabrics, cermic bolster & Dust trap. Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps. Erect the new Dust trap, Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tightening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	40	2137	85480
33	Replacement of Combustor to Cyclone NMEJ. Width 900 mm. Size:6575 x 4518 mm2 (Entire NMEJ of fabric and Bolster, without Dust trap)	Dismantle the entire NMEJ by cutting the bolts. nos of bolts - @350 nos of M 20 X 80. Remove outer fabrics, cermic bolster with out Dust trap. Clean the gap inbetween the flanges, measure the gap & rectify the flange if required. Stuff the ceramic wool in between the flange gaps in entire peripheral length. erect the Bolster & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	NO	2	37940	75880

Annexure B2

Phase-2 **Part-I** **Duct/Damper/NMEJ/MEJ**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
34	Replacement of cross over duct to second pass NMEJ Width 400 mm Size: 5636 x 5236 mm2 (Only some portion of NMEJ fabric, Bolster/Ceramic wool)	Dismantle the required size of NMEJ by cutting the bolts. Remove outer fabrics, cermic bolster/Ceramic wool. Clean the gap inbetween the flanges, measure the gap. Stuff the ceramic wool in between the flange gaps.Erect the Bolster/Ceramic wool & NMEJ Fabric. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. NOTE: Engage sufficient skilled manpower/resources & manpower has to work on round the clock to bring the unit as earliest as possible.	BD	Per Meter	40	1069	42760
35	Replacement of casing and duct plate up to 16 mm thick at COD/cyclone/ Cto C etc……	Shift material from store to site. Inspect the duct wall for wear.Remove damage/oxodized and Replace with MS plate of up to 16.0 mm thickness as per E-I-C.	BD	MT	30	27000	810000
						SUB TOTAL	**4952150**

Annexure B2

Phase-2 **Part-J** **Fuel Firing System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Propane tank safety valve servicing assistance	Assist for safety valve servising as per following.Isolate the safety valve from tank. Remove it from position. Carry out testing of safety valve with nitrogen gas. Adjust pressure if require. Box up.	BD	No.	0	856	0
2	Start up Burner (SUB) gun cleaning.	Isolate the fuel and steam, air line valve. Remove the hoses from the gun. Remove the gun. Clean with diesel / air. Tag the clean gun,install same as reaquired to set up, Assist trail run.Identify defect if any during trail.	BD	No.	100	961	96100
3	Bed Lance (BL) gun cleaning.	Isolate the fuel and steam, air line valve. Remove the hoses from the gun. Remove the gun. Clean with diesel / air. Tag the clean gun,install same as reaquired to set up, Assist trail run.Identify defect if any during trail.	BD	No.	300	841	252300
4	Replacements of hoses of SUB / BL.	Isolate the fuel, steam, air, gas supply. Replace the hose with new one. Assist trail run ,Check for any leakage.	BD	No.	30	601	18030
5	SUB Block removal and refixing. Elevation of SUB is at 10.5 meter in front & rear wall of boiler.OD of sub block- 1.5 meter & length of SUB assy 2 meter.	A)For Removal :- Remove the all hose connections of SUB after isolating supply. Remove the oil gun from SUB block. Remove the SUB block, use chain pulley block for removal of block. Clean the diffuser of SUB. Box up. B) For refixing :- Put the SUB block in position by chain pulley block. Fit the gun in the block. Connect all hose connections. Tighten flange of SUB block. Charge the oil/steam lines & check for leakage, attend the leakage. assist trial run. Note :- This activity is to be carried out in boiler hot conditions. utmost care is to be taken & necessary PPEs should beutilised while working.	BD	No.	40	1198	47920

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Clear out SUB gun jamming	Check for advance / retaract motion of SUB gun.Identify of jamming if any and rectify the same.Assist trail advance / retaract motion.	BD	No.	20	240	4800
7	Repair / replacements of gas regulating valve.	Remove the valve from skid. (Flange joint) Open the valve, Check for any damage to seat, disc etc. Replaced if reqd. or replaced the valve with new one.	BD	No.	2	968	1936
8	Repair / replacements of steam, air, fuel oil atomising and trip valve of SUB / BL control station. Size:- Upto 1.5".	Remove the valve from skid. (Flange joint) Open the valve, Check for any damage to seat, disc etc. Replace if reqd. or replace the valve with new one.	BD	No.	16	968	15488
9	Strainer (Oil, steam, air) cleaning from SUB / BL control station.	Open the strainer, clean the element with diesel , air. Box up.	BD	No.	30	721	21630
10	Strainer (Oil , Steam , air) replacements from SUB / BL control station.	Replace the strainer with new one.	BD	No.	4	362	1448
11	Steam, oil leakage arresting from the SUB / BL control station skid.	Identify the leakage, remove insulation if reqd. Tighten the flange, replace gasket if reqd.	BD	No.	98	721	70658
12	Pressure adjustment of valve	Adjust the pressure of steam/oil/air.Open the cover of the valve. Adjust bolt asper E-I-C.	BD	No.	6	63	378
13	Bed Lance guide pipe cleaning.	Remove the bed lance from position. Clear the chocking of guide pipe. Fixed the Bed lance.	BD	No.	80	181	14480

Phase-2 **Part-J** **Fuel Firing System**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
14	Servising/Overhauling of SUB assembly	Isolate the SUB assembly. Remove the all hose connections.Remove the gun from SUB assy.Remove the SUB block from position by chain block.Dismentle the SUB block. Clean all the parts by diesel.Check the guide pipe, retract assy, diffuser plate .Repair/replace as per instructions of E-I/C.Check all hose & its connectors . Replace if required. Check the gun & clean it. Replace the gun/tip /nozzle if required.Assemble the SUB block & make ready as standby.	BD	No.	28	3386	94808
15	Open /close wind box drain valve.	Open the wind box drain valve. Remove the bed material from wind box. Close the valve.	BD	No.	16	122	1952
16	Primary air Hose Inspection/Replacement	Remove the hose from position. Check for any foreign material inside the hose. Clean the bed material with compressed air.Replace the hose if required. Box up.	BD	No.	36	481	17316
17	Barrel & Diffuser Installation	Make proper platform as per requirement for work. Barrel & Diffuser Installation Work		No.	12	3534	42408
18	Propane tank Hydro test.	Assist for Hydro Test as per following. Open the vent of the tank. Remove residual propane from tank. Flush tank with water. Open the manhole door. Clean internally. Carry out hydro test. Normalise the system. Fill up the propane in the tank.	BD	No.	0	7689	0
19	Propane pump Servising	Ensure isolation of pump. Open the cover. Remove belt set.Dismentle the pump. Clean the internals. Inspect internals & replace the damaged parts. Assemble pump.Replace belt if necessary.Align the belt. Box up.Assist trial run.	BD	No.	0	3510	0
						SUB TOTAL	**701652**

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Replacement of LP valves upto 2" size (800 Class and below)	Remove the damaged valve from position, make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	30	1452	43560
2	Servicing of LP valves upto 2" size (800 Class and below)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	10	487	4870
3	Replacement of LP valves above 2" upto 8" size (800 Class and below)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	10	1817	18170
4	Servicing of LP valves above 2" upto 8" size (800 Class and below)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	20	968	19360
5	Gland tightening of valves up to 3" size of various class for water, steam, oil and air applications	Clean the bolts and gland follower, apply cleaner,Tighten the gland follower tightening bolts to the maximum possible extend to arrest the gland leakage. Tighten both the bolts uniformly, apply dry moly spray.	BD	No.	100	122	12200
6	Gland tightening of valves above 3" size of various class for water, steam, oil and air applications	Clean the bolts and gland follower, apply cleaner,Tighten the gland follower tightening bolts to the maximum possible extend to arrest the gland leakage. Tighten both the bolts uniformly, apply dry moly spray on the bolts.	BD	No.	40	183	7320

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measure ment (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Gland replacement of LP valves upto 2" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	20	365	7300
8	Gland replacement of LP valves above 2" size upto 6".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	20	731	14620
9	Gland replacement of HP valves upto 2" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	150	244	36600
10	Gland replacement of HP valves above 2" size upto 6".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	24	548	13152
11	Gland replacement of HP valves above 6" size upto 12".	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	20	731	14620
12	Gland replacement of HP valves above 12" to 16" size.	Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage,apply dry moly spary on the bolts.	BD	No.	4	1461	5844

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Replacement of HP valves upto 3" size (1500# and above)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	24	1575	37800
14	Servicing of HP valves upto 3" size (1500# and above)	Dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve. Check for no leakage, passing and normal operation.	BD	No.	50	731	36550
15	Replacement of HP valves more than 3" to 8" size (1500# and above)	Remove the damaged valve from position make neccssary edge preparation and weld the new valve in position. Check for no leakage.	BD	No.	10	2628	26280
16	Servicing of HP valves more than 3" to 6" size and any mode of operation (1500# and above)	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	14	968	13552
17	Servicing of HP valves from 6" to 10"size and any mode of operation (1500# and above)	-- Do --	BD	No.	4	3423	13692
18	Servicing of HP valves 10" above to 16" size and any mode of operation (1500# and above)	-- Do --	BD	No.	4	4423	17692

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
19	Servicing of Safety and Safety relief valves in Drum, Main steam line, HRH, CRH.Line Size:12",14",16"	Make proper approach by scaffolding / platforms. Dismantle the valve entierly, repair / replace the damaged parts, clean the valve internals properly. Lap the seat and body, box up the valve. Check for no leakage, passing and normal operation. Assist in floating of the safety valve as per EIC	BD	No.	4	12847	51388
20	Servicing of Safety valve in Soot blower steam line and CBD tank. Size - up to 3'	-- Do --	BD	No.	4	3423	13692
21	Gaging of Safety valves	Remove the Manual poping lever and erect the Safety valve Gag as per EIC. After completion of HT remove the gag and restore the manual lever	BD	No.	24	365	8760
22	Installation of Hydro static plug in Safety valves	Isolate the valve Dismantle the safety valve without disturbing the setting, Remove the seat and replace the Hydro static plug and box up. After completion of HT restore the original seat as per EIC	BD	No.	2	726	1452
23	Setting/POP up of Safety valves	Remove the manual poping lever and adjust the Spring compression adjustment nut, Lower adjustment ring and upper adjustment ring as per Instruction of EIC. Repeat the process till the safety valve is set at the design pressures or POP up the safety valve manually by proper arrangement as per E-I-C.	BD	No.	12	968	11616

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
24	Servicing of Knife edge gate valve of various mode of operation	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the straightness of the plate rectify if required, check the surface of the plate rectify if required from impressions, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	50	731	36550
25	Choking/Jamming clearout of Knife edge valves	Isolate the valve, loosen the Gland bolts and free the valve by slight hammering as per EIC	BD	No.	50	365	18250
26	Servicing of Butterfly valve Size 150-250 Nb of various mode of operation	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the seat for damage repair / replace as per requirement, check the rubber seal ring repair / replace as per requirement, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	2	1211	2422
27	Servicing of Ball valve of various mode of operation up to 150NB size	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Check the ball for external surface damage repair / replace as per requirement, check the sealing ring repair / replace as per requirement, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	10	365	3650

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
28	Gland replacement of Spiess valves	Isolate the valve from sealing air side, Remove the gland follower and remove the entire gland packing set. Clean the sprindle and gland follower and replace with new gland packing set and box up. Check for no leakage	BD	No.	10	548	5480
29	Cooling water hose replacement for Spiess valve	Isolate the valve from cooling water side, remove the damaged cooling water hoses and replace it with new ones as per EIC. Charge the cooling water and check for no leakage.	BD	No.	8	484	3872
30	Removal / refixing of spiese valve assy./Replacement work	Remove the cooling water hoses from spiese valve. Remove the spiess valve assly from position. Remove any foreign material from inside and checking of bed ash discharge line for any chock up. If line is chocked clear it by pocking. Position spiess valve assly. Carry out alignment with brick.Normalise the system.	BD	No.	16	8846	141536
31	Manual operation of spiese valve.	Open/close the spiese valve manually as per EIC.	BD	Once operation	30	242	7260
32	Replacement of valves handle upto 4''	Remove the valve handle from position. Replace with new one.	BD	No.	10	365	3650

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
33	Servicing/Overhauling of combustor Spiess valve assembly. Size: OD- 80mm, Legth: 2.5 meter.	Isolate the valve from cooling water and seal air side, remove the cooling water, seal air hoses. Remove complete assly of spiess valve from position. Dismentle spiess valve shaft from body. Check the condition, ovality of shaft, condition cone. Remove the damaged shaft and replace with the new one if require. Cleaning of shaft sleeve & replaced gland packing. Build up cone with special electrode as per instruction of EIC. Box up & align the valve as per EIC .Connect the cooling water, seal air hoses. Check for no leakage, passing and normal operation	BD	No.	14	6424	89936
34	Servicing/Overhauling of FBHE/Seal pot Spiess valve assembly. Size:OD-135mm, Legth: 3.5 meter.	Isolate the valve from cooling water and seal air side, remove the cooling water, seal air hoses. Remove complete assly of spiess valve from position. Dismentle spiess valve shaft from body. Check the condition, ovality of shaft, condition cone. Remove the damaged shaft and replace with the new one if require. Cleaning of shaft sleeve & replaced gland packing. Build up cone with special electrode as per instruction of EIC. Box up & align the valve as per EIC .Connect the cooling water, seal air hoses. Check for no leakage, passing and normal operation	BD	No.	20	8846	176920
35	Freeness checking of various size of gate and globe valves: Size- upto 3"	Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by opening and closing of valve.	BD	No.	400	122	48800

Annexure B2

Phase-2 **Part-K** **Valves**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
36	Freeness checking of various size of gate and globe valves: Size- above 3" upto 16"	Check the valve for jamming. Made free if required. Lubricate the spindle of valve. Assist trial run of valve by opening and closing of valve.	BD	No.	50	484	24200
37	Assistance for attending online leakage of valves /pipe line etc.	Make necessary approach for attending on line leakage. Make necessary connection of air etc. Assist the online leakage attending team. Normalise. 01 no. equal to 04 hours work of 01 Fiiter, 01 Welder/Grinder & 02 Helpers.	BD	No.	10	950	9500
38	Servicing of Control valve upto 3" size	Remove the actuator, dismantle the entire valve, repair / replace all damaged parts and gland packings, clean the valve internals properly, Lap the seat for perfect sealing, box up the valve and re-erect the actuator. Check for no leakage, passing and normal operation	BD	No.	16	1935	30960
39	Cleaning of valves up to 3" size	External cleaning of valves by manually and with spray.It should be cleaned properly without any dust	BD	No.	20	122	2440
40	Cleaning of valves above 3" size	External cleaning of valves by manually and with spray.It should be cleaned properly without any dust	BD	No.	20	183	3660
41	Steam trap replacement	Steam trap replacement along with end piping to neares trench,include cutting,fitting,bending,Socket welding of 15NB/25NB line	BD	No.	10	968	9680
						SUB TOTAL	**1048856**

Annexure B2

Phase-2 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of soot blower.	Clean the soot blower assembly & area by cotton cloth ,kerocine.Check the rotary & traverse gear box freeness & Lubricate the rotary & traverse gear box. Lubricate the both travelling carraige assy.Adjust the chain tension of both motor & if required , replace the chain. Check for gland / gasket leakage from travelling carriage, puppet valve & replace it if required. Do check of puppet valve operation by forward-retract .Check the lance feed tube for any damage/bending & inform to Engineer I/C and .Check the steam blowingstrip & repair/replace/tighten , if required. Check advance -retract motion manually.Replace gland packing if instructed.	PM	No.	704	601	423104
2	Assistance for soot blowing	One person is required for checking of all soot blower during operation per shift per boiler. The above activity will be done in both boilers in three shifts a day. The person also required to identify any problem of soot blower during operation. Same problem may be attended later.	PM	No.	2500	296	740000
3	Chain tension adjustments of rotary and traverse motor.	Check for chain tension. Adjust the chain tension with the help of gear box adjustments.Clear the area.	BD	No.	8	91	728
4	Drive chain repair / replacements of rotary and transverse motor.	Remove the chain. Add additional link or replace with new one.Clear the area.	BD	No.	8	481	3848

Annexure B2

Phase-2 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Gear box servicing of rotary / transverse motor.	De clutch/couple the gear box. Drain the oil from the gear box.Remove the motor. Dismantle the gear box. Inspect the internals and handover list of spare required . Replace the damaged parts . Service the gear box.Lubricate gear box. Box up.	BD	No.	4	1922	7688
6	Replacements of rotary / transverse gear box assy.	Declutch the gear box. Remove the damaged gear box. Place new one. Align it, adjust the chain tension. Fill the oil in gear box.	BD	No.	4	599	2396
7	Oil seal replacements of rotary / transverse gear box	Drain the oil. Remove the motor. Replaced the damaged oil seal. Box up.	BD	No.	4	300	1200
8	Lubrication of rotary / transeverse gear box, chain of jack shaft, drive chain, travelling carraige assy. Etc.	Fill the oil / change the oil from gear box. Grease the chain, travelling carraige assy. As per E-I-C.	BD	No.	24	240	5760
9	Decoupling / Coupling of rotary / transverse motor	Declutch the both gear box. Decouple the gear box from motor. Box up.	BD	No.	4	150	600
10	Jack shaft chain replacements/ repair.	Declutch the both drive. Remove the chain from jack shaft. Repair / replaced as per E-IC	BD	No.	2	449	898

Annexure B2

Phase-2 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
11	Travelling carraige assy Servicing.	Dismantle the carraige assy. Inspect for any damage to worm gear/ worm wheel or any other parts.hand over the list of spare required to restore TC.Issues apre from ware house and install same in existing assembly. transfer the TC to ware house/work shop /location for re installation at site.Post repair tagged the same for further identification/ c-ordination.	BD	No.	16	3386	54176
12	Travelling carraige assy Replacement	Remove the carraige assy as per standrad procedure. Install new assembly .normalize poppet valve assembly and take manual trail.	BD	No.	10	3386	33860
13	Travelling carraige assy. Gland packing replacements	Remove the worn out gland. Replaced the gland. Tighten the gland as per E-I-C.	BD	No.	74	360	26640
14	Puppet valve gland packing replacements	Replace the gland packing. Adjust the valve pressure.	BD	No.	48	240	11520
15	Puppet valve servicing.	Remove the puppet valve from the position. Dummy with the flange. Service the puppet valve for stem. Gland packing etc.	BD	No.	24	721	17304
16	Puppet valve pressure adjustments	Adjust the pressure as per E-I-C.	BD	No.	22	61	1342
17	Puppet valve replacements.	Replace the puppet valve with new one. Adjust the pressure as per E-I-C. replace gaskets if required	BD	No.	22	484	10648
18	Steam blowing bar (strip) replacements.	Remove the damaged strip (blowing bar) Check during operation.	BD	No.	14	240	3360

Annexure B2

Phase-2 **Part-L** **Soot Blower**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
19	Lance tube replacement	Remove the lance from position. Fix new lance in position. Align lance in carraige assy. Box up. Assist trial run.	BD	No.	60	4375	262500
20	Puppet valve plug replacement.	Check puppet valve plug thread. If found damage tap new thread. Fix new plug. Box up.	BD	No.	6	60	360
21	gasket replacement of Poppet valve	Isolate the system from steam side remove the damaged gasket and replace with new one charge the line and check for any leakage.	BD	No.	50	899	44950
22	Lance/Feed pipe Replacement	Removal of Lance/Feed pipe from existing soot blower Assembly by removing SBV head Assembly ,Install new feedpipe/Lance & SBV Head Assembly.normalize	BD	No.	20	6354	127080
						SUB TOTAL	**1779962**

Annexure B2

Phase-2 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of fuel oil pump (Transfer / unloading) Screw type Pump.	Check alignment of pump, correct if required. Check the coupling,bearing condition. Replace if required.Lubricate the bearings. Clean the suction strainer.Box-up.Assist trial run. Adjust pressure of pump if required.	PM	No.	28	487	13636
2	PM of pump in drain oil tank (Transfer / unloading) Gear Pump.	--Do-	PM	No.	4	365	1460
3	Steam trap servicing.	Isolate the trap. Dis assemble the trap. Clean it / replaced element if required . Box up.	OM	No.	10	244	2440
4	Repair/ servicing of steam coil heater	Dismantle the coil. Check for damaged.Plug the damaged tubes.Replace if necessary.Take hydraulic test of heater coil. Boxup	BD	No.	2	4423	8846
5	Gasket replacement in Steam coil heater.	Remove the pipe connection from steam heater. Remove the flange of the heater. Put new gasket & Box up.	BD	No.	8	1211	9688
6	Assistance to Electrical for removal & fitting of Electric Coil Heater	After removal of electrical connections by electrical dept., remove the coil bundle of electric oil heater , & after clearence from electrical dept fit the heater coil in position.	BD	No.	0	4423	0
7	Replacement of coupling & Alignment (Transfer / unloading pump)	Decouple the coupling and replace if required. Align and couple.	BD	No.	4	2423	9692

Annexure B2

Phase-2 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Servicing of pump / replacement of pump	Decouple the pump from motor. Take the motor out for pump dismentaling. Remove the bearing, mechanical seals. Dismentle the pump & check all internals. Replace/repair the damaged internals. Check the both DE & NDE bearing, mech seal ,its washer, etc & replace if required. Box up the pump, bearing,mech seals. Lubricate the bearing. Ensure the freeness of pump by manual operation. Replace the coupling, if required. Fit the motor & align with pump. assist trial run.and replace if required. Align and couple. Clean the area & remove the scrap.	BD	No.	2	7609	15218
9	Pressure adjustments of pump.	Adjust the pressure relief valve as per E-I-C.	BD	No.	2	244	488
10	Steam leakage arresting from heater skid.	Arrest the leackage from the flange, strainer flange. Tighten it or replaced the gasket as per E-I-C. Clean the drain oil / water from the skid.	BD	No.	4	1211	4844
11	Fuel oil leakage arresting from pump skid and heater skid.	Clean the area.Arrest the leakages from the flange, strainer flanges. Tighten it or replace the gasket as per E-I-C. Clean the drain oil / water from the skid.	BD	No.	10	1211	12110
12	Steam strainer cleaning from Pump skid and Heater skid.	Isolate the strainer. Remove the filter elements. Clean with diesel / air. Box up.Clean the area.	BD	No.	4	548	2192
13	Fuel oil strainer cleaning from Pump skid and Heater skid.	Isolate the strainer. Remove the filter elements. Clean with diesel / air. Box up.Clean the area.	BD	No.	10	968	9680
14	Replacement of oil valve upto 3" size.	Isolate the system. Cut the damage valve. Replace the valve with new one.	BD	No.	4	1211	4844

Annexure B2

Phase-2 **Part-M** **Fuel Oil Handling**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
15	Attending gland leakages of valves upto NB 3"	Tighten the glands. Replace if necessary	BD	No.	16	484	7744
16	Replacement of Mechanical Seal of the pump.	Carry out replacement of the mechanical seal as per instruction of EIC. This includes Decoupled the pump and motor, dismentled the Mech. Seal and replaced , align the pump and motor and coupled it and take trial run. One no. mech. Seal replacement consider as a one no. quantity.	BD	No.	6	4423	26538
						SUB TOTAL	**129420**

Annexure B2

Phase-2 **Part-N** **Emergeny Boiler Feed Pump**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Binnual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	PM of Pump	Ensure isolation of pump, Thoroughly clean the pump skid, gear box and sorroundong parts.check for all bolts tightness, check coupling bolt tightnes.Check for any other abnormalities and ensure its healthyness. Check lube oil and ensure its quality and lub-oil level. Clean surroung area and return the permit.	PM	No.	4	697	2788
2	Providing assistant for Diesel Engine servicing.	Providing manpower for assisting supplier representative to carry out servicing of diesel engine. Throughly clean equipment / base from oil and dirt. Check the tightness of all bolts of casing, foundation, etc. Replace the engine oil, fuel filters, air filters, oil filters. Fill up the coolent in the radiator. Check condition of radiator fan belt & alternator belt. Box up the entire equipment. Assist trial run.	PM	Per day per Helper	4	458	1832
3	PM of EBFP Lube Oil Unit	Tighten the flanges. Check for any abnormalities. Check for oil level / oil quality. If necessary replace / top up. Cleaning of strainer / oil coolers. Box up.	OM	No.	4	697	2788
4	PM of Working oil / lub oil cooler	Isolate cooler from water and oil side. Drain oil in the empty barrel. Clean the water box	BD	No.	4	1860	7440
5	Replacement of Gear box.	Decouple the gear box from pump as well as engine side. Remove old gear box and place new one. Carry out alignment with pump & engine.	BD	No.	2	7305	14610
6	Diesel engine radiator fan replacement.	Open the cover of radiator fan. Remove the old belt by adjusting pulley of fan. Fix the new belt set. Adjust the pulley. Box up. Assist trial run.	BD	No.	2	1395	2790

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Binnual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Assistance for Inter/after cooler of Diesel engine replacement.	Providing manpower for assisting supplier representative for replacement of inter/after cooler of engine from position. Carry out hydro test of cooler after removal. Replace the cooler if found damage. Box up the engine.	BD	No.	2	4931	9862
8	Topping of Diesel in EBFP Fuel tank	Shift the diesel barrel from stores and top the oil in fuel oil tank to the level as per EIC	BD	No.	24	876	21024
9	Topping of Lub oil in Lub oil tank	Shift the Lub oil barrel from stores and top the oil in fuel oil tank to the level as per EIC	BD	No.	4	175	700
10	Lub oil replacement.	Remove the old oil from lub oil tank completely. Clean the tank from inside. Clean the view glass. Fill the tank as per instruction of EIC.	BD	No.	2	1401	2802
11	Fuel(diesel) replacement.	Remove the diesel from tank completely. Clean the tank from inside. Clean the view glass. Fill the tank as per instruction of EIC.	BD	No.	10	2559	25590
12	Lub oil filter cleaning	Isolate the lub oil filter from oil side and clean the filter which is choked. After cleaning charge the lub oil filter and check for any leakage attend if any	BD	No.	4	350	1400
13	EBFP pump suction strainer cleaning	Isolate the strainer from water side. Remove the bucket type strainer.Clear all debris fom strainer assy .check the strainer & replace if damaged or clean the strainer. Replace the flange gasket.Put the strainer in position & Box up.	BD	No.	4	1395	5580
14	EBFP mechanical seal replacement NDE side	Isolate the pump from mechanical side. Drain the pump. Remove mechanical seal. Replace with new one. Box up & Normalise.	BD	No.	2	6146	12292
15	EBFP mechanical seal replacement DE side	Isolate the pump from mechanical side. Drain the pump.Remove the coupling. Remove mechanical seal. Replace with new one. Box up & Normalise.	BD	No.	2	7305	14610

Phase-2 **Part-N** **Emergeny Boiler Feed Pump**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Binnual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
16	Servising of Mechanical Seal	Dismantle the seal. Replace damaged parts. Assemble the seal.	BD	No.	2	1527	3054
						SUB TOTAL	**129162**

Annexure B2

Phase-2 **Part-O** **Hoist**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection & PM of Hoist	Clean the hoist by cotton cloth. Carry out greasing of bearings,gear box, pulley and load hook, rollers as per instruction of E-I-C.Lubricate the hoist wire rope. Check the hoist for verical & horizontal direction of operation.Check the brake.Note the defects & correct it. Clean the travelling beam with blowing of air.	PM	NO	72	731	52632
2	Servicing of Hoist	Dismantling of hoist parts. Identify the damaged & replace if required.Assemble the Hoist with proper lubrication. Complete inspection of hoist. Carry out hoist servicing work as per instruction of EIC. After complete servicing/ inspection take a trial for the hoist.	BD	NO	40	3534	141360
						SUB TOTAL	**193992**

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
A) FANS							
1	Inspection and external cleaning of PA fan ,its lub oil unit, IGV & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole lube oil units, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
2	Inspection and external cleaning of SA fan ,its lub oil unit & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole lube oil units, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
3	Inspection and external cleaning of ID fan ,its hydraulic coupling unit & ACW valves	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc.Clean the whole Hydraulic coupling unit, check for any oil, water, air leakages & inform to E-I-C. Clean the complete foundation of fan, motor & its bottom floor, clean the all valves & apply dry moly spray on foundation bolts & valves stem. clean fans & motor, Inspection and external cleaning of IGV and greasing, bearings.Shift the scrap to scrap yard.	PM	Per Fan	24	731	17544
B) Valve Station					0	0	0

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection and external cleaning of Drain Header 1&2 Station. It consists of around 40 -nos valves upto 2" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the Drain header area .remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544
2	Inspection and external cleaning of valves station at drum level and 33 mtr elevation. It consists of 15 nos valves upto 2" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the Drum area & 33 meter valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544
3	Inspection/ Cleaning of RH attemperator, SH attemperator & Soot blower Control valves station It consists of 30 -nos valves upto 2.5" size is considered as one no.	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	No	24	731	17544

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Inspection/ Cleaning of Combustor species valve / FBHE to ash cooler Speciss valve station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	Per Valve	36	183	6588
5	Inspection/ Cleaning of FBHE Speciss valve station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,apply dry molyspray on its stem. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard.	PM	Per Valve	48	183	8784
C) Bed Ash, Lignite, Limestone					0	0	0

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Lignite conveyors system Inspection and external cleaning. Lignite conveying system of one unit consists of two nos of lignite conveyor & its drive mechanism, two nos of lignite rotary air lock feeder with drive mechanism, two nos of master fuel trip(MFT) valves and two nos NMEJ between MFT and seal pot.	Throughly clean the conveyor system as defind external	PM	Per Unit	22	974	21428
2	Inspection and external cleaning of Limestone Bunker & Limestone RALF It consists of Two nos Limestone Bunker, four nos of Limestone Rotary Air Lock feeders,Two nos of Feeder discharge valve in one unit	Clean the entire system with air pressure & cooton cloths, remove all the dirt, oil, grease, ash, foreign material. Clean the top cover plate of bunker and its area, clean the air lock feeder/its discharge valves & its surrounding area, check for any abnormality or limestone leakages & attend it and inform to E-I-C. Box up all inspection doors with applying rope if found open. Shift the scrap to scrap yard.	PM	per unit	22	731	16082

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Inspection and external cleaning of Bed Ash Conveying system, intermediate ash bin. It consists of two nos bed ash conveyor, two nos ashcooler, two nos of rotary air lock feeder, intermediate ash bin	Clean the entire system with air pressure & cooton cloths, remove all the dirt, oil, grease, ash, foreign material. Clean the platform between two ash cooler & top cover plate of intermediate ash bin and its area & its surrounding area, check for any abnormality or bed ash leakages & inform to E-I-C. Box up all inspection doors with applying rope if found open. Shift the scrap to scrap yard.	PM	Per Unit	22	731	16082
D) NMEJ, Boiler					0	0	0
1	Inspection and external cleaning of Combustor to Cyclone NMEJ & its cyclone roof	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work. Clean the entire perpheral area and surrounding are by air. Check for any damages/leakages & if found immidiately inform to E-I-C.Shift the scrap to scrap yard.	PM	No.	44	731	32164
2	Inspection and external cleaning of backpass NMEJ & its Cross over duct Roof	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work. Clean the entire perpheral area and surrounding are by air. Check for any damages/leakages & if found immidiately inform to E-I-C.Shift the scrap to scrap yard.	PM	No.	44	731	32164

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Inspection and external cleaning/Inspection of Buck stay of combustor / backpass . One buckstay consists of Front,rear, left & right side of combustor/backpass Size of combustor-12mx7m size of Backpass -10mx6m	This activity is to be carried out in hot condition, so utmost care to be taken while doing the work.Remove the metallic scrap, insulation scrap.Clear the buckstay by air blowing . Shift the scrap to scrap yard.	PM	Per Buckstay	100	731	73100
4	Inspection and Cleaning of BL/SUB skid station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves . Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard. One skid station is considered as 01 No.	PM	No.	128	247	31616
5	Inspectionand Cleaning of FO control station	This activity is to be carried out in running unit, so utmost care to be taken while doing the work and dont disturb any valves or cable etc. Clean all valves ,. Clean the valve station area .Remove all dirt, dust, oil, grease, insulationn scrap, metallic scrap, etc. Note the defects and inform it to E-I/C. Shift the scrap to scrap yard. One skid station is considered as 01 No.	PM	No.	16	365	5840
E)EBFP					0	0	0

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Inspection and external cleaning of EBFP, gear box & its engine	Inspection and Inspection and external cleaning of EBFP/gear box /engine of EBFP and surrounding area. Remove oil, dirt, metallic scarp, insulation scarp and shift to scrap yard.Note the defects and inform it to E-I/C.	PM	NO	16	731	11696
F) Blower,Duct,Damper						0	
1	Inspection and external of LT/HT blower Knife Gate valve station in discharge line It consists of @ 22(11 HT+11 LT) Nos of KGV upto 250 Nb. i.e 22 nos of valve station is considered as one unit	Inspection, Cleaning and greasing of Knife Gate valve station externally.check for any abnormality and inform to E-I-C.	PM	Per Unit	8	731	5848
2	Cleaning and greasing of Control / Isolation dampers in air ducting	Inspection, Cleaning and greasing of Control / Isolation dampers externally.check for any abnormality and inform to E-I-C.	PM	Per damper	72	244	17568
G) BOP /OTHER					0	0	0
1	Inspection and external cleaning of fuel oil pump station. It consists 2 nos FO unloading pumps. i.e. it is considered as one no.	clean of all areas as stated in FO pump house station. Remove dirt, oil, metallic scarp etc. Clean all valves in oil-steam line & apply moly spray, check for any leakages & inform to E-I-C.Shift the scrap to scrap yard..	PM	No	10	731	7310

Annexure B2

Phase-2 **Part-P** **External Cleaning**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
2	Inspection and external cleaning of fuel oil pump station. It consists of 2nos FO transfer pumps, 2 FO steam heater, One electrical heater. i.e. it is considered as one no.	clean of all areas as stated in FO pump house station. Remove dirt, oil, metallic scarp etc. Clean all valves in oil-steam line & apply moly spray, check for any leakages & inform to E-I-C.Shift the scrap to scrap yard..	PM	No	12	1096	13152
3	Painting of structure, hopper, tank, cyclone etc.	Clean the surface thoroughly with wire brush, buffing wheel/emery paper, grinding etc. Apply the two coats of primar as per instruction of E-I-C and two coats of paint.	BD	Sq. meter	100	731	73100
						SUB TOTAL	**477786**

Annexure B2

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
1	Vortex finder ring removing	Make necessary arrangement for locking of collapsed / hanging vortex finder ring by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder ring by cutting rod/plasma cutting. Removal of cut pieces of vortex finder either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, Shifting of all debris / scrap from site to the scrap yard. All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder ring.	BD	No.	2	76805	153610
2	Vortex finder Eccentric sleeve removing	Make necessary arrangement for locking of collapsed / hanging vortex finder Eccentric Sleeve by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder Eccentric Sleeve by cutting rod/plasma cutting. Removal of cut pieces of vortex finder either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder Eccentric Sleeve. Shifting of all debris / scrap from site to the scrap yard.	BD	No.	2	45461	90922

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
3	Vortex finder Support removing (Total 20 nos. Support)	Make necessary arrangement for locking of hanging vortex finder Support by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder Support by cutting rod/plasma cutting/ Grinding from Cyclone casing duct at cyclone top. Removal of cut pieces of vortex finder support from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) in the scope of contractor, All Counsumables in contractor scope for arrangement, cutting and removing complete vortex finder Support (Total 20 nos. Support) Shifting of all debris / scrap from site to the scrap yard.	BD	No.	2	35474	70948

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
4	Vortex Finder Support , Ring, and Eccentric Sleeve removing	Make necessary arrangement for locking of collapsed / hanging vortex finder ring, Support and Eccentric Sleeve by providing chain blocks to keep it in fixed position. Cut the damaged vortex finder ring, support and Eccentric Sleeve by cutting rod/plasma cutting/grinding . Removal of cut pieces of vortex finder support, ring and Eccentric sleeve either from the cyclone manhole door (Approx. EL 32.0 mtrs) or from the seal pot manhole door (Approx. EL 11.0 mtrs) or Cyclone Casing duct in the scope of contractor,cut the cyclone casing plate for removing of vortex finder Ring, support and Eccentric Sleeve in three / two pieces from cyclone cylinderical protion if required, All Counsumables in contractor scope for arrangement, cutting and removing of complete vortex finder ring, Support & Sleeve Shifting of all debris / scrap from site to the scrap yard.	BD	No.	2	160037	320074

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
5	Vortex Finder Ring Erection	Shifitng of new vortex finder Ring at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting and cut the cyclone casing plate for insertion of vortex finder Ring in three / two pieces from cyclone cylinderical protion. Fix the vortex finder Ring as per E-I-C and Drawing. Do full welding of vortex finder ring , and welding of stiffners as per EIC and drawing. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder ring **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	BD	No.	2	96896	193792

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
6	Vortex Finder Support Erection (Total 20 nos. Support)	Shifitng of new vortex finder Support at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting for insertion of vortex finder Support from cyclone. Check and repair / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Fix the vortex finder Support as per E-I-C and Drawing. Do full welding (Inside and Out side) of vortex finder Support with Cyclone duct, and welding of stiffners as per EIC. Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder support. (Total 20 nos. Support) **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	BD	No.	2	57667	115334

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
7	Vortex Finder Eccentric Sleeve Erection	Shifitng of new vortex finder Eccentric Sleeve at site (Approx. height 35 mtrs) from store. Make necessary arrangement for lifting and cut the cyclone casing plate for insertion of vortex finder Eccentric Ring in three / two pieces from cyclone cylinderical protion. Fix the vortex finder Eccentric Sleeve as per E-I-C and drawing. Do full welding of vortex finder Eccentric Sleeve with RIng of Vortex finder , and welding of stiffners as per EIC. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, erection of complete vortex finder Eccentric Sleeve. **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	BD	No.	2	72672	145344

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
8	Vortex Finder Support , Ring, and Eccentric Sleeve Replacement	Shifitng of new vortex finder ring, supports along with eccentric sleeve at site (Approx. height 35 mtrs). Make necessary arrangement for locking of collapsed / hanging vortex finder ring , support , and eccentric sleeve by providing chain blocks to keep it in fixed position. Dismantle the old vortex finder ring, supports (20 nos.) and eccentric sleeve by cutting rod / Plasma cutting machine. Check and repaire / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Make necessary arrangement for lifting and cut the cyclone casing plate for new insertion / old removing of vortex finder support , ring and eccentric sleeve from cyclone cylinderical protion. Fix the new supports (20 nos.) as per E-I-C and Drawing. After fixing of all support fix the vortex finder ring and eccentric sleeve as per E-I-C and Drawing. Do full welding of vortex finder ring, supports, stiffners and eccentric sleeve as per EIC and Drawing. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. All Counsumables in contractor scope for arrangement, replacement of complete vortex finder Eccentric Sleeve, ring and support **Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.**	BD	No.	2	397779	795558

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
9	Vortex Finder Eccentric Sleeve, Ring and Support Strenghning / Repairing / Reclamanation	Make necessary arrangement for Vortex finder Eccentric sleeve , ring and Support strenghning, repairing, reclamanation. Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder support, ring along with eccentric sleeve. Checking of vortex finder ring, all supports and eccentric sleeve for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder Eccentric Sleeve, ring and support. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	BD	No.	8	106855	854840

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
10	Vortex Finder Supprt Strenghning / Repairing / Reclamanation (Total 20 nos. Support)	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder supports. Checking of vortex finder all supports for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder support. (Total 20 nos. Support). Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	BD	No.	2	30530	61060
11	Vortex Finder Ring Strenghning / Repairing / Reclamanation	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder ring. Checking of vortex finder ring for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder ring. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	BD	No.	2	30530	61060

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
12	Vortex Finder Eccentric Sleeve Strenghning / Repairing / Reclamanation	Shifing of new plates of SANDVIK 253MA material to site for repair/strengthening work of vortex finder eccentric sleeve. Checking of vortex finder eccentric sleeve for any damage, bend and erosion. Repair the same by cutting, streightening, welding, built-up and additional plate patch-up as per E-I-C. make require size of stiffner plate from SANDVIK 253 MA plate and weld as per EIC.All Counsumables in contractor scope for arrangement, repairing, strenghtning, reclamanation of complete vortex finder Eccentric Sleeve. Scrap material to be shifted to scrap yard Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	BD	No.	2	30530	61060

Phase-2 **Part-Q** **Vortex Finder**

Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
13	Vortex Finder Support , Ring, and Eccentric Sleeve Erection	Shifitng of new vortex finder ring, supports along with eccentric sleeve at site (Approx. height 35 mtrs). Check and repair / replacement of the burn/damaged plate of cyclone for fixing of new vortex finder Supports. Make necessary arrangement for lifting and cut the cyclone casing plate for new insertion of vortex finder support , ring and eccentric sleeve from cyclone cylinderical protion. Fix the new supports (20 nos.) as per E-I-C and Drawing. After fixing of all support fix the vortex finder ring and eccentric sleeve as per E-I-C and Drawing. Do full welding of vortex finder, supports, stiffners and eccentric sleeve. Revival of cyclone casing plate by full welding (inside & outside). Scrap material to be shifted to scrap yard. Cutting electrodes and other consumables to be arranged by party. Note: Special welding electrodes Sandvik 22.12 HTR and E307-16 shall be provided by GIPCL.	BD	No.	2	222996	445992
						SUB TOTAL	**3369594**

Annexure A2: Summary

Schedule of Price Break up for BMC of Boiler & Auxiliary for Unit 3 & 4(Phase-2)

Year 2017-19

Part No.	Description	Unit.	Total Cost for Phase-2
A	Pressure Parts	Rs.	1,19,63,106
B	SA Fan / PA fan	Rs.	8,55,006
C	ID Fan	Rs.	3,73,976
D	Lube Oil Units & Scanner Air Fan	Rs.	2,32,474
E	Blowers	Rs.	9,12,468
F	Bed Ash Conveying System	Rs.	34,93,756
G	Lignite / Limestone Feeding System	Rs.	47,35,406
H	E.S.P.	Rs.	12,26,166
I	Duct/Damper/NMEJ/MEJ	Rs.	49,52,150
J	Fuel Firing System.	Rs.	7,01,652
K	Valves	Rs.	10,48,856
L	Soot Blower	Rs.	17,79,962
M	Fuel Oil Handling	Rs.	1,29,420
N	Emergency Boiler Feed Pump	Rs.	1,29,162
O	Hoist	Rs.	1,93,992
P	External Cleanings	Rs.	4,77,786
Q	Vortex Finder	Rs.	33,69,594
Row1	Total Cost for both year	Rs.	3,65,74,932
Row2	Total Cost for First year (50% of Row1)	Rs.	1,82,87,466
Row3	Total Cost for Second year (Row1- Row2)	Rs.	1,82,87,466
Row4	Escalation on Total Cost Second year 5% on Row3	Rs.	9,14,373
Row5	Total 2nd Year cost including Escalation Row{3+4}	Rs.	1,92,01,839
Row6	Final Total cost before Service charge & service tax Row1 + Row 5	Rs.	3,74,89,305

Annexure B3

Phase-1		unforeseen work	Execution of unforeseen work				
Sr. No.	Name of activity	Scope of Work	Nature Of Work	Unit of Measurement (UOM)	Biannual Quantity (A)	First Year Rate (Rs.) Per UOM (B)	Total Price (AXB)
A	B	C	D	E	G	H	I
1	Mill Right fitter , IBR Welder-During Normal Duty	Execution of unforeseen work	Unforeseen work	Per Day	280	1000	280000
2	Piping fitter, Structural fitter, Mechanical fitter-During Normal Duty	Execution of unforeseen work	Unforeseen work	Per Day	280	800	224000
3	Welder, cutter, Rigger, grinder, Refractory breaker operator, Painter, Electrician-During Normal Duty	Execution of unforeseen work	Unforeseen work	Per Day	280	760	212800
4	Helper-During Normal Duty	Execution of unforeseen work	Unforeseen work	Per Day	600	700	420000
5	Mill Right fitter , IBR Welder-Additional duty	Execution of unforeseen work	Unforeseen work	Per HR	840	250	210000
6	Piping fitter, Structural fitter, Mechanical fitterAdditional duty	Execution of unforeseen work	Unforeseen work	Per HR	840	200	168000
7	Welder, cutter, Rigger, grinder, Refractory breaker operator, Painter, Electrician-Additional duty	Execution of unforeseen work	Unforeseen work	Per HR	840	190	159600
8	Helper-Additional duty	Execution of unforeseen work	Unforeseen work	Per HR	1860	175	325500
						SUB TOTAL	**1999900**

For Final Cost consideration say 20,00,000 (20 Lakhs)

Note 1:Rates as given above shall include cost of all manpower,Vehicle, equipment consumables (except free issue materials by GIPCL) labor, supervision, tools and tackles, transport,Safety and statutory compliance, mobilization, Contingency expenditure and supervision charges etc. and such other cost are not specifically mentioned herein but will be incurred by the contractor for the satisfactory and timely completion of the work.

Note 2: (21) For First Year, Percentage quoted by the parties shall also remain applicable on this rate "COLUMN-H" also. (22) For Second year, Rate applicable will escalated by 5% of first year Work order rate.(23) Variation in minimum wage rates (as per SECTION-A / INSTRUCTIONS TO BIDDERS) is also applicable to above.

Note 3: The quantities specified are estimated and for tendering purpose only. Payment will be made, based on actual work done as certified by Engineer-in-charge of GIPCL and inline with Clause-26 of "INSTRUCTIONS TO BIDDERS & CONDITIONS OF CONTRACT"

Price Annexure: Schedule of Price Break up for BMC of Boiler & Auxiliary for Phase-1 & Phase-2-Year 2017-19				
Part No.	Description	Unit.	Total Cost as per Annexure A1& B1 for Phase-1 for two years	Total Cost as per Annexure A2 & B2 for Phase-2 for two years
	Refer Annexure		**Annexure A1/B1**	**Annexure A2/B2**
A	Pressure Parts	Rs.	16489046	11963106
B	SA Fan / PA fan	Rs.	692670	855006
C	ID Fan	Rs.	431682	373976
D	Lube Oil Units & Scanner Air Fan	Rs.	227626	232474
E	Blowers	Rs.	944088	912468
F	Bed Ash Conveying System	Rs.	3546108	3493756
G	Lignite / Limestone Feeding System	Rs.	7369254	4735406
H	E.S.P.	Rs.	1085000	1226166
I	Duct/Damper/NMEJ/MEJ	Rs.	4355134	4952150
J	Fuel Firing System.	Rs.	467524	701652
K	Valves	Rs.	894994	1048856
L	Soot Blower	Rs.	1521478	1779962
M	Fuel Oil Handling	Rs.	211484	129420
N	Emergency Boiler Feed Pump	Rs.	120402	129162
O	Hoist	Rs.	76276	193992
P	External Cleanings	Rs.	477786	477786
Q	Vortex Finder	Rs.	3369594	3369594
Row1	Total Cost for both year	Rs.	42280146	36574932
Row2	Total Cost for First year (50% of Row1)	Rs.	21140073	18287466
Row3	Total Cost for Second year (Row1- Row2)	Rs.	21140073	18287466
Row4	Escalation on Total Cost Second year (5% on Row3)	Rs.	1057004	914373
Row5	Total 2nd Year cost including Escalation (Row{3+4})	Rs.	22197077	19201839
Row6	Final Total cost before Service charge & service tax(Row1+5)	Rs.	43337150	37489305
Row8	Grand Total Estimated cost (Rounded off)	Rs.	8,08,26,455	
Row9	Unforeseen Cost Estimation for Two year	Rs.	2000000	
	Refer Annexure		**Annexure B3**	
Row10	Unforeseen Cost Estimation for First year (50% of Row9)	Rs.	1000000	
Row11	Unforeseen Cost Estimation for Second year (Row9- Row10)	Rs.	1000000	
Row12	Escalation on Unforeseen Cost Second year 5% on Row11	Rs.	50000	
Row13	Total 2nd Year cost including Escalation Row{11+12}	Rs.	1050000	
Row14	Final unforeseen cost before Service charge & service tax Row10 + Row 13	Rs.	2050000	
Row15	Grand Total Estimated cost (including unforeseen -Rounded off Row{8+14})	Rs.	8,28,76,455	
Row16	Service Charges/Profit [To be Quote as Percentage on "Sum of all cost-i.e.8,28,76,455" by Vendor in online price bid only]	%	__+X/-Y_%	
Row17	Total before tax **[Row15 + X or (-Y)% of Row15]**	Rs.	**[Row15 + X or (-Y)% of Row15] = ____Rs**	
Row18	Applicable taxes **[15% of Row 17]**		_15_% (Prevailing tax: 15% service tax)	
Row19	Final Contract value including taxes		**(Row17 + Row18)=** _____Rs.	