Annexure-A1

PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A		**Scaffolding Erection**						
A	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.	1.00	7,44,544.00	7,44,544.00
A	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.	7.00	53,696.00	3,75,872.00
A	3	Erection of scaffolding and platform inside combustor above 15 mtr elevation on the scaffolding erected as per S NO 2. (per meter height). Rate applicable is per meter height. Scaffolding materials in the scope of contractor.	Erect the scaffloding above 15 mtr elevation as per instruction of E-I-C, on the already erected scaffolding as per S No 2 Make the platform at different elevation along with hand railing at different elevation as per instruction of E-I-C.	BD	Per Mtr.	1.00	3,904.00	3,904.00
A	4	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 GIPCL. Scaffolding material will be issued subject to availibility of the material and decision of E-I-C.	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.	2.00	26,845.00	53,690.00
A	5	Erection of scaffolding and platform inside combustor above 15 mtr elevation on the scaffolding erected as per S NO 4. (per meter height). Rate applicable is per meter height. Scaffolding materials in the scope of GIPCL. Scaffolding material will be issued subject to availibility of the material and decision of E-I-C.	Erect the scaffloding above 15 mtr elevation as per instruction of E-I-C, on the already erected scaffolding as per S No 4. Make the platform at different elevation along with hand railing at different elevation as per instruction of E-I-C.	BD	Per Mtr.	2.00	1,953.00	3,906.00
A	6	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.	7.00	16,707.00	1,16,949.00
A	7	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.	28.00	1,358.00	38,024.00
A	8	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.	1.00	1,193.00	1,193.00
A	9	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.	1.00	1,10,556.00	1,10,556.00
A	10	Erection of scaffolding for Miscelleneous work at outside area. Upto 6 meter height. 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	Per Cubic Meter	3,000.00	105.00	3,15,000.00

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PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	11	Erection of scaffolding for Miscelleneous work. above 6 meter height on the scaffolding erected as per S. No. 10 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. 10. Make proper approach and platform as per instruction of EIC. Dismantle the scaffolding & shift material to store.	BD	Per Cubic Meter	50.00	118.00	5,900.00
A	12	Erection of scaffolding for Miscelleneous work at outside area. Upto 6 meter height. Scaffolding materials in the scope of GIPCL. Scaffolding material will be issued subject to availibility of the material and decision of E-I-C.	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	Per Cubic Meter	2,080.00	47.00	97,760.00
A	13	Erection of scaffolding for Miscelleneous work. above 6 meter height on the scaffolding erected as per S. No. 12 Scaffolding materials in the scope of contractor.Scaffolding materials in the scope of GIPCL. Scaffolding material will be issued subject to availibility of the material and decision of E-I-C.	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. 12. Make proper approach and platform as per instruction of EIC. Dismantle the scaffolding & shift material to store.	BD	Per Cubic Meter	53.00	60.00	3,180.00
A	14	Erection of cantilever type scaffolding in combustor to approach combustor roof from cyclone opening. 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.	2.00	77,013.00	1,54,026.00
A	15	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	20.00	4,074.00	81,480.00
A	16	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 GIPCL. Scaffolding material will be issued subject to availibility of the material and decision of E-I-C.	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	1.00	1,789.00	1,789.00
A	17	Erection of scaffolding at Slant Portoin of Seal Pot from inside of Combuster. Size: 5 meter 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	24.00	3,395.00	81,480.00
A	18	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 by weld joints OR tube metal build up OR existing weld joint repair etc...Note : Material is carbon steel & low alloy steel i.e. upto (SA 209 T1) grade. Any other tube leakage observed during Hydrotest to be attended by weld joints OR tube metal build up OR existing weld joint repair 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 liasoning with state Boiler inspecting authority. Minimum 1 IBR approved welder, 01 pressure part fitter, 01 grinder, 01 gas cutter and 02 helpers required during boiler tube leakages upto 10 nos. HP weld joints. If, nos. of weld joints are more than 10 nos. and GIPCL E-I-C intimate to mobilize additional gange consists of 1 IBR approved welder, 01 pressure part fitter, 01 grinder, 01 gas cutter and 02 helpers, contractor shall mobilize additional gang seperately within 24 Hrs. If additional gang is not mobilized after intimation from GIPCL, only 60% payment of this clause shall be paid.	BD	One unit	27.00	1,09,604.00	29,59,308.00

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	19	Welding of each additional joint beyond 10 joints including build up as mentioned in para 18	--- do ---	BD	No.	4,323.00	2,297.00	99,29,931.00
A	20	Attending tube leakages upto first 10 joints in one frequency (irrerpective of total no. of joints) OR tube metal build up OR existing weld joint repair etc..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. lisioning with state Boiler inspecting authority. During boiler tube leakage: Minimum 1 IBR approved welder, 01 pressure part fitter, 01 grinders, 01 gas cutter and 02 helpers required upto 10 nos. HP weld joints. If, nos. of weld joints are more than 10 nos. and GIPCL E-I-C intimate to mobilize additional gange consists of 1 IBR approved welder, 01 pressure part fitter, 01 grinders, 01 gas cutter and 02 helpers, contractor shall mobilize additional gang seperately within 24 Hrs. If additional gang is not mobilized after intimation from GIPCL, only 60% payment of this clause shall be paid.	BD	One unit	2.00	1,16,646.00	2,33,292.00
A	21	Welding of each additional joint beyond 10 joints including build up as mentioned in para 20	do	BD	No.	107.00	2,596.00	2,77,772.00
A	22	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 Inch-Dia	50.00	1,355.00	67,750.00
A	23	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 Inch-Dia	50.00	1,695.00	84,750.00
A	24	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.	3,500.00	255.00	8,92,500.00
A	25	Build up of boiler tube. (build up of 25mm x 50mm = 1 build-up) For T11,T22,T91 grade tubes	do	BD	No.	11.00	245.00	2,695.00
A	26	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)	1.00	54,464.00	54,464.00

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PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	27	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	1,500.00	145.00	2,17,500.00
A	28	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	2.00	46,751.00	93,502.00
A	29	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	791.00	223.00	1,76,393.00
A	30	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. For Annual Overhauling: In combustor, fins welding & flush grinding shall be completed within 32+4 Hrs. after completion of combustor water wall weld joints. If all fins welding with flush grinding not completed within 32+4 Hrs. only 90% of total fins welding payment shall be made by GIPCL to contractor.	BD	Per meter length of welding	21,400.00	335.00	71,69,000.00
A	31	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	110.00	417.00	45,870.00
A	32	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	2.00	2,504.00	5,008.00
A	33	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.	4.00	21,364.00	85,456.00
A	34	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.	49.00	948.00	46,452.00
A	35	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.	692.00	432.00	2,98,944.00
A	36	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	396.00	208.00	82,368.00

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PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	37	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.	692.00	755.00	5,22,460.00
A	38	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.	1.00	1,051.00	1,051.00
A	39	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.	149.00	2,527.00	3,76,523.00
A	40	Erection / Replacement of pipeline in drain and vent piping (Pre.40 kg/sq.cm) Max. 2" dia.	-DO-	BD	Per Mtr.	21.00	2,465.00	51,765.00
A	41	Welding HP joints in economizer: Re-welding of Existing weld joint of economizer bank to bank connecting vertical tubes. Surface cleaning of existing weld joint with grinder / buffing and TIG or SMAW welding on existing weld joint. Size of tube: 38.1 OD X 4.5 mm thick. Materialof tube is carbon steel (SA 210 Gr.A1) grade.Conducting of internal hydrotest.	Welding HP joints in economizer: Re-weldingr of Existing weld joint of economizer bank to bank connecting vertical tubes. Surface cleaning of existing weld joint with grinder / buffing and TIG or SMAW welding on existing weld joint. Size of tube: 38.1 OD X 4.5 mm thick. Materialof tube is carbon steel (SA 210 Gr.A1) grade.Conducting of internal hydrotest.	BD	Per Joint	11.00	600.00	6,600.00
A	42	Convective (back-pass) roof sealing work by installing expansion sheet.	Remove damaged expansion sheet. Cleaning of area. Welding of new scalopped bar with roof tubes & front wall tubes for welding of expnasion sheet on scalloped bar. Expnasion sheet (SS310) welding with scallopped bar at both side. Stuffing of ceramic wool inside expansion sheet. Length of expansion sheet is @ 10 meter & width @ 600 mm.	BD	per meter length of sheet	12.00	9,177.00	1,10,124.00
A	43	Insertion of SS310 pipe (OD 45-50 mm X 3 mm thick and length 6.5 meter) over pressure parts tube (OD 38.1 mm X 7 thick) during replacement of pressure parts tubes and welding at one side of tube.	shifting of SS pipe to 38 meter elevation. Insertion of SS310 pipe (OD 45-50 mm X 3 mm thick) over pressure parts tube (OD 38.1 mm X 7 thick) during replacement of pressure parts tubes and welding at one side of tube	BD	NO	25.00	407.00	10,175.00
A		**Insulation :**				0.00	-	-
A	44	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.	1,800.00	567.00	10,20,600.00
A	45	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.	3,200.00	702.00	22,46,400.00
A	46	Removal and Application of insulation and sheeting of three layers of 50mm or one layer of 100mm + one layer of 50mm thickness for one layer.	-- do --	BD	Per Sq. Mtr.	200.00	857.00	1,71,400.00
A	47	Removal and Application of insulation and sheeting of four layers of 50mm or two layer of 50 mm + one layer of 100 mm thickness for one layer.	-- do --	BD	Per Sq. Mtr.	41.00	958.00	39,278.00
A	48	Only Aluminum sheeting	Remove old damage sheeting. Apply new sheeting and screw finishing as per E-I-C.	BD	Per Sq. Mtr.	9.00	210.00	1,890.00
A		**Opening and closing of manhole doors.**				0.00	-	-
A	49	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.	296.00	951.00	2,81,496.00
A	50	Clamp type	Open manhole door.Replace rope with new one. Box up.	BD	No.	198.00	119.00	23,562.00
A	51	Bolted type.	Open manhole door.replaced rope with new one. Box up.	BD	No.	445.00	359.00	1,59,755.00
A	52	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.	4,623.00	70.00	3,23,610.00

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PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	53	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	1.00	40,513.00	40,513.00
A	54	Conducting of hydrotest in presence of Boiler inspector or inspection of boiler in presence of boiler inspector for extension of existing certificate	The contractor is to liasion with the boiler inspector for hydraulic test or extension of existing certificate 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 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 Hydro Test.	BD	No.	4.00	61,288.00	2,45,152.00
A	55	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.	2.00	22,313.00	44,626.00
A	56	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.	1.00	3,347.00	3,347.00
A	57	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	26.00	1,683.00	43,758.00
A	58	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.	21.00	1,046.00	21,966.00
A	59	Drum/CBD/IBD tank M/H door opening & closing for leakage attending or other 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.	1.00	1,252.00	1,252.00
A	60	Comb. nozzles cleaning	Comb.nozzles dechocking & cleaning as per instruction of E-I-C.	BD	per nozzle	792.00	32.00	25,344.00
A	61	FBHE / Seal pot & Ash coolers nozzles cleaning	Nozzles dechocking & cleaning as per instruction of E-I-C.	BD	per nozzle	107.00	46.00	4,922.00
						0.00	-	-
A	62	Mobilization of additional manpower for presure part work for forced shutdown of unit as per instruction of GIPCL EIC	GIPCL E-I-C intimate to mobilize additional gange consists of 1 IBR approved welder, 01 pressure part fitter, 01 grinders, 01 gas cutter and 04 helpers, contractor shall mobilize additional gang seperately within 24 Hrs. Activity to be consider only if, complete mentioned gang mobilized.Partial mobilization not to be consider.	BD	No.	4.00	45,507.00	1,82,028.00
A	63	Bed material Leakage inspection	Pressure part area inspection for bed material leakage (i.e area include Combustor ww, FBHE ww, sealpot etc.)	PM	No.	40.00	421.00	16,840.00

Annexure-A1

PART - A1 : Pressure Parts

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
A	64	Sox point dechoking work	Sox point to be clean and dechoked at ID fan discharge.	BD	No.	43.00	310.00	13,330.00
A	65	Fabrication of pressure part bends up to OD 57mm	Fabrication of Bend tube up to Dia 57 mm. To fabricate the Bend tube preparation of Spool length with filling the sand inside the tube and tube to be temporery dummied by welding. Cold or Hot bending to be carried out as per EIC instruction. After bending, tube to be normalised (i.e removal of temporery dummied and cleaning of tubes.	BD	No.	250.00	948.00	2,37,000.00
A	66	FBHE Coil SS Sleeve/tube support welding	FBHE coil's sleeve/tube support welding as per EIC. New SS sleeve/tube support to be weld during replacement of coils tubes. Sleeve to sleeve to be weld each other and tube support to be weld with new tubes.	BD	No.	107.00	1,270.00	1,35,890.00
A	67	Welding of HP joint in steam/ water line from above 250 mm dia to 610 mm dia and upto a maximum thickness of 32 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, Edge preparation etc.Preheat/post heat treatment as per the material specification & instructions of E-I/C. Assist hydro test.	BD	No.	1.00	37,729.00	37,729.00
A	69	Binding of Safety Net in combustor	shifting of safety net to combustor. Binding of safety net in combustor as per instruction of S-I-C for protection agaisnt fall of refractory or any other material from cyclones or other area	BD	No.	13.00	745.00	9,685.00
		Part-A1: Total						**3,13,22,279.00**

Annexure-A1

Part-B1: PA Fans / SA Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
B	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	No.	**8**	53,616.00	4,28,928.00
B	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.	**8**	5,632.00	45,056.00
B	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.	**12**	1,782.00	21,384.00
B	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.	**10**	892.00	8,920.00
B	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.	6	2,080.00	12,480.00
B	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	No.	2	18,292.00	36,584.00
B	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	No.	4	3,206.00	12,824.00
B	8	Assistant for Balancing of Impellar/Fan	Providing manpower for assisting balancing of fan/motor. This includes welding of trial/final weight.	BD	No.	3	3,347.00	10,041.00
B	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	3,632.00	7,264.00

Annexure-A1

Part-B1: PA Fans / SA Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
B	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.	9	831.00	7,479.00
B	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.	PM	No.	2	105.00	210.00
B	12	SA/PA fans alignment work	SA/PA alignment alignmet work.Carryout alignment work as per direction of EIC and incorporate any correction.Assist the couple /decouple trial run.	BD	No.	**16**	7,272.00	1,16,352.00
B	13	SA/PA fans alignment checking work	Ensure the Elec/Mech isoaltion.Decouple the fan and motor.Check the alignment of fan and motor and take alignment reading and coupling gap.Couple the fan and motor or do alignment as per sr.no-12 and direction of EIC.	BD	No.	4	1,664.00	6,656.00
B	14	Coupling Removal/Re installation work for motor replacement work	Ensure the Elec/Mech isolation,Decouple the fan/motor and remove the motor foundation bolt and coupling half. Re-install the coupling half in motor and re install the foundation bolt.Align the fan and motor. Assist the trail run of fan couple and decouple trial.Clean the surrounding area.	BD	No.	2	7,781.00	15,562.00
B	15	Motor foundation bolt Removal/Re-installation work	Ensure the Elec/Mech isolation, Remove the foundation bolt to facilitate the work and Re-install the foundation bolt as per the direction of EIC.	BD	No.	2	5,187.00	10,374.00
B	16	SA/PA Fan Impeller cleaning work	Open the MHD of the impeller , Do the cleaning of the Impeller as per instruction of EIC , Closed the MHD.	BD	No.	9	1,945.00	17,505.00
		Part-B1: Total						**7,57,619.00**

Annexure-A1

PART - C1 : ID Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
C	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	12	2,365.00	28,380.00
C	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	5	10,523.00	52,615.00
C	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	6	31,420.00	1,88,520.00

Annexure-A1

PART - C1 : ID Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
C	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	4	2,078.00	8,312.00
C	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	1	10,303.00	10,303.00
C	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	2,078.00	4,156.00
C	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	239.00	956.00
C	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.	4	11,048.00	44,192.00
C	9	Alignment of hydraulic coupling with motor.	-- do --	BD	No.	4	11,048.00	44,192.00
C	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	15,196.00	30,392.00
C	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	2,078.00	4,156.00

Annexure-A1

PART - C1 : ID Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
C	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	1,464.00	2,928.00
C	13	Checking of Coupling or Greasing of coupling	De couple the both halves of coupling.Check alignment.Correct the alignment if required.Check the condition of coupling bolts (Repair/replace if required). Grease the coupling .Tighten the coupling bolts..	BD	No.	2	2,171.00	4,342.00
C	14	Coupling repair / replacement	Decouple the HC from Fan & motor side.Remove both half of coupling. Change with new coupling. Match properly, Grease the coupling.Box up. Assist trial run.	BD	No.	2	9,324.00	18,648.00
C	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	3,347.00	6,694.00
C	16	Manhole door opening and closing for Inspection	Open the Manhole door, inspect the volute casing and Box-up Manhole door.	BD	No.	2	782.00	1,564.00
C	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	782.00	1,564.00
C	18	Manhole door leakage arresting.	Arrest the air leakage through manhole door by sodium silicate application on line.	BD	No.	4	782.00	3,128.00
C	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	66,940.00	1,33,880.00
C	20	Alignment of id fan phase-2	ID fan alignment with Motor.Align and correct coupling between motor and fan.	BD	Per	0	-	-

Annexure-A1

PART - C1 : ID Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
C	21	ID Fans alignment checking work	Ensure the Elec/Mech isoaltion.Decouple the fan/motor.Check the alignment of fan/motor and take reading alignment and coupling gap.Couple the fan/motor or do alignment as per sr.no-20 and direction of EIC.	BD	Per.	4	1,664.00	6,656.00
C	22	Coupling Removal/Re installation work for motor replacement work	Ensure the Elec/Mech isolation,Decouple the fan from motor and remove the motor foundation bolt and coupling half and Re-install the coupling half in motor and re install the foundation bolt. Assist the trail run of fan couple/ decouple condition .Clean the surrounding area.	BD	No.	2	8,747.00	17,494.00
C	23	Motor foundation bolt Removal/Re-installation work	Ensure the Elec/Mech isolation, Remove the all foundation bolts to facilitate the work and Re- install the foundation bolts as per the direction of EIC.	BD	No.	2	5,783.00	11,566.00
		Part-C1: Total						**6,24,638.00**

Annexure-A1

Part-D1: Lube Oil Units Scanner Air Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
D	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	1	940.00	940.00
D	2	External cleaning of scanner air fan.	Clean the fan with compressed air.	PM	No.	1	421.00	421.00
D	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.	48	210.00	10,080.00
D	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.	15	712.00	10,680.00
D	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.	4	1,664.00	6,656.00
D	6	Oil topping in ID fan HC lube oil tank	Check oil level in hydrulic tank. Fill the oil up to the normal level. Clean the area.	BD	No.	6	627.00	3,762.00
D	7	Replacement of coupling of LOP	Check coupling. Repair/replace bush/coupling. Align the pump. Box up. Assist trial run.	BD	No.	6	831.00	4,986.00
D	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.	34	357.00	12,138.00
D	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.	116	357.00	41,412.00
D	10	Filter cleaning of lube oil unit of SA and PA fan	Remove the filter. Clean with air/petrol/diesel. Restore.	BD	No.	51	712.00	36,312.00
D	11	Cooler Hydro test of PA,SA,ID fans and EBFPs.	Dimantle cooler assembly. Carry out hydro test of cooler. Plug any coil if found leaking. Clean cooler assembly completely.Replace gasket , o-ring, seals etc. Box up. Assist charging of coolers.	BD	No.	12	3,326.00	39,912.00

Annexure-A1

Part-D1: Lube Oil Units Scanner Air Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
D	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.	6	2,496.00	14,976.00
D	13	New oil Filling/Replacement more than 350 litres	….DO …	BD	Once	2	3,326.00	6,652.00
D	14	Pump not developing pressure	Adjust the releif valve.Attend leakage of oil if any and restore.	BD	Each	2	627.00	1,254.00
D	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.	4	1,247.00	4,988.00
D	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	1,247.00	2,494.00
D	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	940.00	3,760.00
D	18	Lub oil Filter replacements.	Remove the filter element from the casing. Replace with new one.	BD	No.	9	627.00	5,643.00
D	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.	17	940.00	15,980.00
D	20	Flexible hose replacements. Water / oil side.	Replace hose with new one. Check for no-leackage.	BD	No.	17	627.00	10,659.00
D	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	1	1,252.00	1,252.00
D	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	1	627.00	627.00

Annexure-A1

Part-D1: Lube Oil Units Scanner Air Fans

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
D	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.	1	627.00	627.00
D	24	Arresting leakage from DE / NDE Bearing - oil side.	Check for any leakage.attend leak as per E-I-C	BD	No.	9	1,247.00	11,223.00
D	25	Arresting leakage from DE / NDE Bearing - water side.	Check for leakages from the bearings. Attend the same.	BD	No.	9	1,247.00	11,223.00
		Part-D1: Total						**2,58,657.00**

Annexure-A1

Part-E1: Blowers

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
E	1	Blower common suction duct cleaning work (HT side blower duct & LT side blower duct)	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	23,164.00	46,328.00
E	2	Blower suction Stainers cleaning of LT Blower (Bed Ash , Sealpot blowers)	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.	44	728.00	32,032.00
E	3	Blower suction Stainers cleaning of HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge 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.	140	831.00	1,16,340.00
E	4	PM of LT blower (Bed Ash , Sealpot blowers)	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..rotate blower manually and identify any abnormalities if any.Check and varify condition of pulley by belt guard Clean the blower unit. Check speed sensing disc, replace/repair if require. Check the foundation bolt for tightness.Clean the oil view glass and replace if found damage.	PM	No.	40	1,496.00	59,840.00
E	5	PM of HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge 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..rotate blower manually and identify any abnormalities if any.Check and varify condition of pulley by belt guard Clean the blower unit. Check speed sensing disc, replace/repair if require. Check the foundation bolt for tightness.Clean the oil view glass and replace if found damage.	PM	No.	80	2,744.00	2,19,520.00
E	6	Decouple/ coupling of HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower) with motor. (belt drive)	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.	21	1,040.00	21,840.00
E	7	Decouple/ coupling of LT (Bed Ash , Sealpot blowers) blower with motor. (belt drive) or *Belt replacement of LT blower*	-do-	BD	No.	7	831.00	5,817.00
E	8	Repair/replacement of pulley HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	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. Do tapping of pulley for sensor plate fixing at blower pulley if required.	BD	No.	15	1,871.00	28,065.00
E	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.	6	1,296.00	7,776.00
E	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	544	357.00	1,94,208.00
E	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	32	469.00	15,008.00
E	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 leackage.	BD	No	2	2,604.00	5,208.00

Annexure-A1

Part-E1: Blowers

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
E	13	Blower assy. Replacements HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	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. Note :	BD	No.	24	15,963.00	3,83,112.00
E	14	Belt guard removal and refixing.	Remove the belt guard, inspect for speed sensing flap/belts/pulley refix it.	BD	No.	75	593.00	44,475.00
E	15	Servicing of blower LT (Bed Ash , Sealpot blowers)	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. (Retension of manpower 0830AM-0130AM Next day in Two shift / One shift based on urgency inline with work insruction)	BD	No.	4	17,804.00	71,216.00
E	16	Speed sensor flap repair/Replacement	Inspect the speed sensing disc.Reair/replace the same if necessary. Fabricate the sensor plate if require. It include activity E14.	BD	No.	6	951.00	5,706.00
E	17	Servicing of safety valves in blower discharge line in case of major breakdown / Dislocation of assembly for dismantaling + Assembly required	Dismantle the safety valve and service the same as per instructions of EIC.Replace any damage internals. Box up.	BD	No.	3	3,326.00	9,978.00
E	18	Replacement of Oil seal at DE drive shaft. HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	Remove the drive pulley and open the end cover of drive side. Install new Oil seal and Box-up	BD	No.	15	2,360.00	35,400.00
E	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.	5	1,904.00	9,520.00
E	20	Oil leakage arresting (from blower through pasting of sealant at flange joint / thread joint etc…)	Identify the leakage. Clean area of leakage. Attend the leakage as per EIC through pasting of sealant	BD	No.	19	1,040.00	19,760.00
E	21	Suction Filter Replacement LT blower (Bed Ash , Sealpot blowers)	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (Bed Ash , Sealpot blowers)	BD	No.	7	627.00	4,389.00
E	22	Suction Filter Replacement HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	Removal of Existing Suction Filter from Blower Assembly & install new suction filter (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	BD	No.	25	703.00	17,575.00
E	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	45	117.00	5,265.00
E	24	Servicing of blower HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge 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. (Retension of manpower each day 0830AM-0130AM Next day in Two shift / extended shift based on urgency inline with work insruction).	BD	No.	4	29,671.00	1,18,684.00

Annexure-A1

Part-E1: Blowers

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
E	25	Belt replacement- HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	Inspect blower belt gurad assembly on intimation by engineer-in charge, verification of failure of belt.Receipt MIV from EIC ,collect belt from ware house,open belt guard,remove old belt (send them to scrap yard) , install new belt , check freeness of both pulley before and after instllation of belt.check tightness of belt ,verify belt alignment do alteration if alignment is not ok ,verify sensing of zero speed switch, box up belt guards, iremove all tools tackles / manpower from site and inform to EIC	BD	No.	30	1,673.00	50,190.00
E	26	Belt replacement- LT blower (Bed Ash , Sealpot blowers)	Inspect blower belt gurad assembly on intimation by engineer-in charge, verification of failure of belt.Receipt MIV from EIC ,collect belt from ware house,open belt guard,remove old belt (send them to scrap yard) , install new belt , check freeness of both pulley before and after instllation of belt.check tightness of belt ,verify belt alignment do alteration if alignment is not ok ,verify sensing of zero speed switch, box up belt guards, iremove all tools tackles / manpower from site and inform to EIC	BD	No.	18	1,045.00	18,810.00
E	27	discharge damper inspection & minor repair for any defect- Insitu / Preventive Maintenance / minor Overhauling	Inspect Discharge damper assembly on intimation by engineer-in charge, verification of defect ,inform to EIC , Work to be carried out as per EIC`s instruction	BD	No.	10	727.00	7,270.00
E	28	discharge damper replacement work / Major Repair Overhauling including dislocation of damper , total dismantaling , assembly , refixing.	Inspect Discharge damper assembly on intimation by engineer-in charge for Major Repair / OH ,submit assesment for work inform to EIC , Work to be carried out as per EIC`s instruction	BD	No.	5	4,600.00	23,000.00
E	29	Servicing of safety valves in blower discharge line. Insitu / Preventive Maintenance / minor Overhauling	Inspect Safety valve assembly on intimation by engineer-in charge for Verify defect , asses the defect and plan work to repair the sameWork to be carried out as per EIC`s instruction	BD	No.	6	1,673.00	10,038.00
E	30	Check the lobe condition varify clearances HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	Check the lobe condition varify clearances HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	BD	No.	10	1,040.00	10,400.00
E	31	Check the lobe condition varify clearances LT blower (Bed Ash , Sealpot blowers)	Check the lobe condition varify clearances LT blower (Bed Ash , Sealpot blowers)	BD	No.	6	831.00	4,986.00
E	32	Repair/replacement of pulley LT blower (Bed Ash , Sealpot blowers)	Repair/replacement of pulley LT blower (Bed Ash , Sealpot blowers)	BD	No.	6	831.00	4,986.00
E	33	Blower assy. Replacements LT blower Bed Ash , Sealpot blowers)	Blower assy. Replacements LT blower Bed Ash , Sealpot blowers)	BD	No.	8	7,982.00	63,856.00
E	34	Replacement of Oil seal at DE drive shaft. LT blower (Bed Ash , Sealpot blowers)	Replacement of Oil seal at DE drive shaft. LT blower (Bed Ash , Sealpot blowers)	BD	No.	8	1,180.00	9,440.00
E	35	Semi Servicing of blower HT blower (FBHE BC , FBHE EC, Ash cooler and Seal & Purge blower)	Shift blower from site to workshop. Pasting at Flanges (Oil case to side cover plate-both side) including internal ring / oil seal replacement/ gasket replacement.Box up and Normalise.Assist trial run of blower.	BD	No.	3	8,901.00	26,703.00
E	36	Semi Servicing of blower LT blower (Bed Ash , Sealpot blowers)	Shift blower from site to workshop. Pasting at Flanges (Oil case to side cover plate-both side) including internal ring / oil seal replacement/ gasket replacement.Box up and Normalise.Assist trial run of blower.	BD	No.	3	5,340.00	16,020.00
		Part-E1: Total						**17,22,761.00**

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	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.	55	2,840.00	1,56,200.00
F	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.	178	712.00	1,26,736.00
F	3	Greasing of driving chain	Remove the chain guard. Clean the chain & Apply grease.Place the chain guard.	PM	No.	10	316.00	3,160.00
F	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.	32	947.00	30,304.00
F	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.	3	7,635.00	22,905.00
F	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	2,911.00	5,822.00
F	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.	3	2,078.00	6,234.00
F	8	Shear pin replacements.	Open the chain guard. Remove the damaged shear pin. Replaced with new one. Fix the chain guard.	BD	No.	50	444.00	22,200.00
F	9	Bearings inspection DE & NDE side (Any-1)	Open the top half of the bearing. Inspect the bearing. Lubricate and box up.	BD	No.	7	831.00	5,817.00
F	10	Bearings replacements DE & NDE side (Any-1)	Open the bearing plummer block. Replace the bearing with new one & lubricate. Box up.	BD	No.	2	2,496.00	4,992.00

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	11	Plummer block repair / replacements DE / NDE (Any-1)	Remove the plummer block from shaft. Replace with new one.	BD	No.	2	3,743.00	7,486.00
F	12	Shaft seal replacements	Remove the bearings with plummer block. Replace shaft seal and labyrinth seal with new one.	BD	No.	2	2,078.00	4,156.00
F	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.	1	6,786.00	6,786.00
F	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.	1	10,236.00	10,236.00
F	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.	742	444.00	3,29,448.00
F	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.	296	1,042.00	3,08,432.00
F	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	1	2,078.00	2,078.00
F	18	Chain tension adjustment	Loosen the tail end. Adjust the chain tension as per E-I-C. Tighten the tail end.	BD	No.	4	313.00	1,252.00
F	19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	4	313.00	1,252.00
F	20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	627.00	2,508.00
F	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.	20	9,414.00	1,88,280.00
F	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.	2	3,020.00	6,040.00
F	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	6,770.00	27,080.00

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	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	2,085.00	8,340.00
F	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	49	2,930.00	1,43,570.00
F	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	11,481.00	22,962.00
F	27	Servicing of gear box.	Drain the oil. Remove the motor. Dismantle the gear box. Inspection internal and Identify damaged spares. Repair/service the gear box as per instruction of E-I-C. Place it position. TOP up the oil. Fix its drive sprocket and drive chain in position. Box up.	BD	No.	2	6,654.00	13,308.00
F	**2. Rotary air lock feeder 10 TPH / 32 TPH**					0	-	-
F	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.	25	890.00	22,250.00
F	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.	8	313.00	2,504.00
F	30	Replacement of bed material / ash cooler feeders.	Isolate the feeder, remove the feeder, replace new, restore.	BD	No.	2	4,184.00	8,368.00
F	31	Rotary air lock feeder DE/NDE bearing replacements (any-1)	Remove the motor.Replace the bearings and Box-up.	BD	No.	2	1,247.00	2,494.00
F	32	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	6	627.00	3,762.00
F	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	1,566.00	6,264.00
F	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	6,235.00	24,940.00

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	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.	7	210.00	1,470.00
F	36	Lubrication of gear box.	Check for oil level in gear box. Fill oil or totally replace the oil as per E-I_C.	BD	No.	4	782.00	3,128.00
F	37	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	790.00	3,160.00
F	**3. Ash cooler**					0	-	-
F	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.	214	1,419.00	3,03,666.00
F	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.	27	1,566.00	42,282.00
F	40	Cleaning of Ash cooler EC/BC grate. (any-1)	Open the manhole door of ash cooler Empty chamber / Bundle chamber. Clean the EC/BC grate manually. Establish air flow through nozzles.Box up.	BD	Per Chamber	4	-	-
F	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	1,069.00	16,03,500.00
F	**4. Bed ash conveying line.**					0	-	-
F	42	Choking removal of conveying line from I/A bin to bed material silo.	Clear the chock by applying air. Normalise it.	BD	No.	10	890.00	8,900.00
F	**5.Filter cleaning system**					0	-	-
F	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	9,122.00	36,488.00
F	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	-	-

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	45	Replacements of air hose of filter cleaning system.	Isolate the air supply. Replace the hose with new one.	BD	No.	2	782.00	1,564.00
F	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	-	-
F	47	Dust extraction fan coupling replacements.	Open the cover. Decouple fan. Replace coupling with new one. Align the fan & box up.	BD	No.	0	-	-
F	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	-	-
F	49	Bearing replacement	Open the bearing cover. Check condition of the bearing. Change with new one. Box up.	BD	No.	0	-	-
F	50	Damper servicing	Open the damper. Check flap of the damper. Repair/replace the damper. Box up.	BD	No.	0	-	-
F	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.	544	471.00	2,56,224.00
F	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.	74	1,489.00	1,10,186.00
F	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.	80	469.00	37,520.00
F	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.	415	890.00	3,69,350.00
F	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.	296	951.00	2,81,496.00
F	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.	100	2,260.00	2,26,000.00

Annexure-A1

Part-F1: Bed Ash Conveying System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
F	57	Mixing nozzle replacement in PA coveying line	Replace the damage nozzle and put new nozzle by welding and bolting	BD	No	4	1,987.00	7,948.00
F	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	600	712.00	4,27,200.00
F	59	Bed ash silo.Intermediate ash bin level checking.	Open the man hole door. Check the level of ash in bunker/silo.	BD	No.	8	162.00	1,296.00
F	60	Bed Ash Conveyors discharge line Inpection	Open the Door & Remove the foreign materials from the disharge line grill. Door box up.	BD	NO	1	526.00	526.00
F	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	-	-
		Part-F1: Total						**52,60,070.00**

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	1	Conveyor link Sprockets (Both side) replacement.	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	7,781.00	31,124.00
G	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.	4	593.00	2,372.00
G	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	278	444.00	1,23,432.00
G	4	Greasing of driving chain	Remove the chain guard. Apply grease with oil mixture.Place the chain guard.	PM	No.	56	316.00	17,696.00
G	5	Servising/Overhauling of Lignite conveyors.	Ensure Isolation 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/brackets. Adjust if required or repair/replace the rail/bracket.check the conveyor casing for leakages and replace the casing plate/top cover plate(Material: MS/SS). 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.	6	1,00,707.00	6,04,242.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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.	214	535.00	1,14,490.00
G	7	Shear Pin replacement	Adjust the hole of sprocket,replace the shear pin.Fit circlip on both sides of shear pin.Restore to normal.	BD	Nos.	50	267.00	13,350.00
G	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.	6	29,546.00	1,77,276.00
G	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	128	1,189.00	1,52,192.00
G	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	15	6,604.00	99,060.00
G	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	257	2,121.00	5,45,097.00
G	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	3,630.00	7,260.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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.	4	13,352.00	53,408.00
G	14	Sprocket repair /build up work	Open the top cover plate. Remove the chain links.Repair/Build up the sprocket by welding with hardfacing electrod Flush grind the weld area. Join the chain link and normalize the conveyor.	BD	No.	4	2,617.00	10,468.00
G	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.	4	2,593.00	10,372.00
G	16	Bearing replacements of lignite conveyors, DE / NDE side.(any-1)	Open the bearing plummer block. Replace the bearing with new one.	BD	No.	4	2,593.00	10,372.00
G	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.	4	1,247.00	4,988.00
G	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	4,364.00	8,728.00
G	19	Lubrication of gear box.	Remove the old oil from the gear box. Fill the new oil. Clean the gear box.	BD	No.	32	712.00	22,784.00
G	20	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place tne cover.	BD	No.	4	313.00	1,252.00
G	21	Lignite flow indicator adjustments.	Open the cover plate of conveyor. Adjust the flap of flow indicator. Box up	BD	No.	4	782.00	3,128.00
G	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.	4	2,078.00	8,312.00
G	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.	4	1,664.00	6,656.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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	13	3,750.00	48,750.00
G	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.	3	3,013.00	9,039.00
G	26	Conveyor drive chain tension adjustment	Remove the drive chain guard.Adjust the tension as per EIC instruction,Normalise the system	BD	No.	3	1,040.00	3,120.00
G	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	18,547.00	37,094.00
G	28	Lig. Conveyor Flywheel hub gap setting	Lig. Conveyor Flywheel hub gap setting as per instruction of E-I-C.	BD	No	1	357.00	357.00
G	29	Lig. Conveyor Flywheel hub repairing/Replacement	Lig. Conveyor Flywheel hub repairing/Replacement as per instruction of E-I-C.	BD	No	1	3,648.00	3,648.00
G	30	Lig. Conveyor Flow Adjustment	Lig. Conveyor Flow Adjustment as per instruction of E-I-C.	BD	No	6	313.00	1,878.00
G	31	Lig. Conveyor link cleaner repair/replacement work	Lig. Conveyor link cleaner repairing/replacement as per instruction of E-I-C.	BD	No	2	2,604.00	5,208.00
G	32	Lig. Conveyor gear box coupling repair/replacement	Lig. Conveyor gear box coupling repair/replacement as per instruction of E-I-C.	BD	No	1	782.00	782.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	**2. Lignite rotary air lock feeder.**					0	-	-
G	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.	9	79,824.00	7,18,416.00
G	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.	317	890.00	2,82,130.00
G	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.	64	940.00	60,160.00
G	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.	59	471.00	27,789.00
G	37	Lubrication of gear box.	Open the gear box. Drain the old oil/grease. Refill / replaced the new oil / grease.	BD	No.	109	890.00	97,010.00
G	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.	64	2,360.00	1,51,040.00
G	39	Speed sensing disc repair / replacements	Remove the cover of disc. Repair / replace the with new one. Place the cover.	BD	No.	4	417.00	1,668.00
G	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	1,823.00	3,646.00
G	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.	1	2,075.00	2,075.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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.	2	1,815.00	3,630.00
G	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	2	3,132.00	6,264.00
G	44	Replacement of shaft sleeve and bearing replacement work	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	13,291.00	53,164.00
G	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.	2	1,664.00	3,328.00
G	46	Lignite RALF gear box Leakage attending	Identify the leakage. Replace flange gasket or oil plug if required.	BD	No.	2	526.00	1,052.00
G	47	Lignite RALF gear box replacements	Drain the oil from drain plug. Remove the motor & gear box from position.Repair/replace the GB mounting flange bolt. 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.	9	3,648.00	32,832.00
G	48	Lignite RALF clutch servicing	Dismantle the clutch assembly, thoroughly inspect for the problem and replace the damaged parts and box up.	BD	No.	26	2,138.00	55,588.00
G	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.	26	2,248.00	58,448.00
G	50	Lig. RALF Clutch torque setting	Lig. RALF Clutch torque setting as per instruction of E-I-C.	BD	No	56	535.00	29,960.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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	39	2,948.00	1,14,972.00
G	52	Lig RALF Scraper shaft replacement	Lig. Scraper Shaft replacement work as per instruction of EIC. Removal of old scrapper shaft from existing assembly by removing Clutch, Gear box , RALF end cover including bearings. Removal/repair of damaged Scrapper shaft and installation of all parts and restore the sysetm. Take a trial of the Lig. RALF and coorections to be done as per observation and instruction of EIC.	BD	No	4	32,419.00	1,29,676.00
G	**3. Master Fuel trip valve.**					0	-	-
G	53	Overhauling/Servising of motorise/manual 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	1	19,451.00	19,451.00
G	54	Spindle gate lubrication.	Open the cover. Clean the spindle, Lubricate the spindle with grease. Box up.	PM	No.	18	890.00	16,020.00
G	55	Manual operation of the MFT.	Open /close the MFT manually as per instruction of EIC.	BD	Once Operation	18	778.00	14,004.00
G	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.	4	1,040.00	4,160.00
G	57	Opening/closing of lignite bunker gate.	Open/close the lignite bunker gates as per requirements.	BD	Once Operation	51	739.00	37,689.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	58	Lignite bunker gate servicing.	Remove the spindles of gate. Clean the gear pairs, nut & bearings. Check freeness of gate. Box up.	BD	No.	19	2,365.00	44,935.00
G	59	MFT spindle nut replacements	Open the cover of MFT. Remove the spindle. Remove nut & box up after replacing nut.	BD	No.	4	1,296.00	5,184.00
G	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	38,902.00	1,55,608.00
G	**4. Limestone air lock feeder. 10 TPH.**						-	-
G	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.	34	1,179.00	40,086.00
G	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	3,630.00	7,260.00
G	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	1,037.00	2,074.00
G	64	Shaft seals replacements of RALF	Open the seal cover on both side. Replace new seal. Box up.	BD	No.	16	831.00	13,296.00
G	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.	2	831.00	1,662.00
G	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.	2	3,243.00	6,486.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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.	165	712.00	1,17,480.00
G	68	Greasing of DE / NDE bearing of RALF.	Open the DE / NDE bearing cover. Grease properly. Box up	BD	No.	4	313.00	1,252.00
G	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.	5	313.00	1,565.00
G	70	Repair replacements of speed sensing disc.	Replace the disc with new one if required.	BD	No.	4	313.00	1,252.00
G	71	Limestone gearbox overhauling.	Remove the gear box from position. Dismantle the gear box. Replace damage part and box up.	BD	No.	2	2,075.00	4,150.00
G	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.	5	627.00	3,135.00
G	73	Limestone feeder Gear box view glass replacement.	Drain the oil. Replace the view glass. Oil top up and box up.	BD	No.	4	627.00	2,508.00
G	74	Limestone bunker level checking	Open the manhole door. Check the level of bunker. Box up.	BD	No.	4	313.00	1,252.00
G	75	Limestone bunker gate servicing.	Remove the spindles of gate. Clean the nut & bearings. Check freeness of gate. Box up.	BD	No.	5	1,037.00	5,185.00
G	76	Opening/closing of limestone bunker gate.	Open/close the limestone bunker gates as per requirements.	BD	Once Operation	2	313.00	626.00
G	77	Lime Stone RALFs Gland leakage arresting	Lime Stone RALFs Gland leakage arresting by gland tightening	BD	NO	34	444.00	15,096.00
G	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	4	2,594.00	10,376.00
G	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	96	1,816.00	1,74,336.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	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	4	15,561.00	62,244.00
G	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	2	11,102.00	22,204.00
G	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	5	4,169.00	20,845.00
G	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	1,673.00	6,692.00
G	84	Conveyor link Sprockets replacement. Phase-1-(Single/one side)	Decouple the drive. Open the side plates.Decouple the chain link . Replace sprocket.Couple the link .Normalise the conveyor.Assist trial run.	BD	NO	9	1,296.00	11,664.00
G	85	Replacements of NMEJ betn feeder and conveyors. Size 1mx2m	Replacement of NMEJ between feeder and conveyor as per EIC	BD	NO	2	6,483.00	12,966.00
G	86	Lig RALF Scraper shaft repair.	Repair of scraper shaft as per EIC	BD	NO	2	1,904.00	3,808.00
G	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	6	831.00	4,986.00
G	88	Flight bar repair/replacement work	Repair/replace flight bar as per direction of EIC.	BD	No	32	417.00	13,344.00
G	89	Lignite RALF inspection for tripping	Inspect the Lignite RALF in running condition for frquent tripping or any abnormalities. Inform to EIC.	BD	per Lig.RALF	64	246.00	15,744.00
G	90	Lignite Bunker liner removal work	Ensure Elec/Mech isolation of conveyor. Isolate the bunker gate if required. Remove the liner from bunker as per direction of EIC.	BD	No.	21	1,904.00	39,984.00

Annexure-A1

Part-G1: Lignite / Limestone Feeding System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
G	91	Overhauling/Servicing of Manual MFT	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.	BD	No.	9	5,836.00	52,524.00
G	92	Limstone RALF flow adjustment	Ensure the Elec/Mech isolation.Dismental the RALF and inspect the rotor bucket. Blank the rotor bucket by plate welding as per EIC. Box up the RALF and normalise for trail.	BD	No.	2	3,347.00	6,694.00
G	93	Lig. RALF Transition Duct with inner sleeve replacement (Material SS 310/304)	Ensure Isolation of Elec/Mech. Shift the Lig. RALF assembly and MFTs to the platform area as per instruction of EIC. Dismantled / removal of old seal box filled with refreactory and complete area cleaning. Removal of old/damaged transition duct and sleeves and shifted the scrap to scrap yard. Inspection of corrucgated plates and repair/repalcement it as per instruction of EIC.if required make ss plate plate seal box all around to corrugated plate area as per instruction of EIC. Assembly of new ztransition duct along with inner and outer sleeve. Welding work of SS sleeves and transition ducts plates. Inspection of Supports and hangers of Lig. RALF assembly and replacement of it if any. Providing curtain air pipe to the transition ducts inline with old assembly. Inspection of Air pipe and replacement of it if any (Max. 10 mtr.)	BD	No.	2	3,89,024.00	7,78,048.00
		Part-G1: Total						**57,28,658.00**

Annexure-A1

Part-H1: ESP

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
H	1	CRM /ERM/GDRM oil top up.	Check for oil level/condition, Oil top up/replace if reqd.	BD	No.	5	210.00	1,050.00
H	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.	21	1,069.00	22,449.00
H	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.	21	178.00	3,738.00
H	4	Replacement of shaft insulators for emmitting rapping mechanism	Decouple the motor gear box assembly. Remove the cover plate.. Replace the insulator .	BD	No.	2	1,664.00	3,328.00
H	5	Alignment of collecting / emmitting gear box.	Align the collecting / emmitting gear box assembly with the rapping mechanism shaft.	BD	No.	2	1,247.00	2,494.00
H	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.	2	3,326.00	6,652.00
H	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.	2	6,093.00	12,186.00

Annexure-A1

Part-H1: ESP

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
H	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) Note : If 4 high beam torch not used during inspection 33 % amount will be deducted.	BD	No.	21	2,850.00	59,850.00
H	9	Replacements of CRM / ERM coupling.	decouple the gear box, replace the coupling with new one, Align and couple.	BD	No.	2	2,496.00	4,992.00
H	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	1	2,615.00	2,615.00
H	11	Removal of collecting plate	Identify the damaged plate. Remove the damaged plate after confirmation from GIPCL E I/C.	BD	No	11	2,372.00	26,092.00
H	12	ESP & APH hoppers drain 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.	2	2,075.00	4,150.00
H	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.	1	316.00	316.00
H	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.	9	836.00	7,524.00

Annexure-A1

Part-H1: ESP

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
H	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.	27	1,042.00	28,134.00
H	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.	37	316.00	11,692.00
H	17	GD screen /hopper baffles Replacement/repairing	Replacement/installation on new GD screen including joining with existing GD screen	BD	No.	1	3,426.00	3,426.00
H	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.	4	6,244.00	24,976.00
H	19	Replacement of Shaft insulator	Replacement of Shaft insulator	BD	No.	2	1,770.00	3,540.00
H	20	Locking of CE	Locking of CE with shock bar if instructed by engineer in charge.	BD	No.	75	477.00	35,775.00
H	21	Re-positioning of Collecting Electrode	reposition/removal of Collecting Electrode	BD	No.	16	1,247.00	19,952.00

Annexure-A1

Part-H1: ESP

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
H	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.	8	951.00	7,608.00
H	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	21	1,481.00	31,101.00
H	24	Inspection of Shaft/Support insulator 1 Qty	Check for oil level/condition, Oil top up/replace if reqd.	BD	No.	4	210.00	840.00
H	25	fly ash cleaning over collecting plate/emitting electrode	fly ash cleaning over collecting plate/emitting electrode for 1 Hr inline with instruction of EIC	BD	No.	1	179.00	179.00
H	26	Detail Field internal inspection for Assesment .One field-1qty for OH preparation	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.submit in-detail report about observation (mutually prescribed) found Must engage 4 ESP known manpower with properly charged high beam torch with all required PPEs) Note : If 4 high beam torch not used during inspection 33 % amount will be deducted.	BD	No.	5	5,010.00	25,050.00

Annexure-A1

Part-H1: ESP

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
H	27	Field internal inspection during partial loading	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) Note : If 4 high beam torch not used during inspection 33 % amount will be deducted. . Payment in this clause only given if inspection of individual field complete and prescribed report submitted within 1 Hr from time of handover of front during partial loading other wise clause No. 8 is applicable of part H is applicable	BD	No.	5	3,440.00	17,200.00
		Part-H1: Total						**3,66,909.00**

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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.	4	15,344.00	61,376.00
I	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	11,156.00	22,312.00
I	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. Necessary scaffolding is included.	BD	Each	2	4,187.00	8,374.00
I	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.Necessary scaffolding is included.	BD	Each	13	15,344.00	1,99,472.00
I	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	13	22,313.00	2,90,069.00
I	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 /8.00mm /10mm thickness as per E-I-C. for baffles the plate shoud be as per actual profile only.	BD	MT	15	39,028.00	5,85,420.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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	6,131.00	12,262.00
I	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.Necessary scaffolding is included.	BD	No	5	2,504.00	12,520.00
I	9	Internal cleaning of cyclone to back pass NMEJ at bottom portion. Length - @5 meter	-do-	BD	No.	4	2,504.00	10,016.00
I	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. Necessary scaffolding is included. **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	75,806.00	4,54,836.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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,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,dust trap. Jointing of NMEJ by heating m/c. check for any leakages. Hot tghtening of all bolts as per E-I-C. Necessary scaffolding is included.**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	40,033.00	1,60,132.00
I	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.Necessary scaffolding is included. **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	11,156.00	22,312.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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. Necessary scaffolding is included. **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	15,344.00	61,376.00
I	14	NMEJ patch up work. (during running boiler) 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.Necessary scaffolding is included.	BD	No.	12	15,185.00	1,82,220.00
I	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.	18	1,252.00	22,536.00
I	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.	3	1,893.00	5,679.00
I	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	1,179.00	28,296.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	18	Attend leakage in PAWB/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	98	449.00	44,002.00
I	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.	6	1,046.00	6,276.00
I	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	2,094.00	8,376.00
I	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.	2	4,187.00	8,374.00
I	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 along with painting of structure 1 coat primer + 1 coat enamel paint. Supply of paint is contractor scope as per GIPCL approved brand (i.e Asian paint, Burger) as per E-I-C at site. Incase of shifting / repositioning / erection of already fabricated structure within boiler area, 40% weight / iteam rate shall be applicable.	BD	MT	15	37,998.00	5,69,970.00
I	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.	80	11,156.00	8,92,480.00
I	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	2174	118.00	2,56,532.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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 2) Secondary air tubes block - 4329 tubes in ph1 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	98	1,556.00	1,52,488.00
I	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	12	6,131.00	73,572.00
I	27	Plate patch up work on Cyclone and COD duct.	Shifting of material from store. Prepare the material	BD	MT	15	40,172.00	6,02,580.00
I	28	Repair / Replacement of gap flange / Retainer plate / flange of NMEJ	Shifting of material from store. Fabricate 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	74	2,515.00	1,86,110.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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	66	1,570.00	1,03,620.00
I	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	18	2,504.00	45,072.00
I	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	80	3,758.00	3,00,640.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	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	2	66,777.00	1,33,554.00
I	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	64	1,878.00	1,20,192.00
I	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 plate and Prepare new plate as per required size (except bending), Replace with MS/SS plate of up to 16.0 mm thickness as per E-I-C. Remove scrap from site to scrap yard as per EIC.	BD	MT	17	57,536.00	9,78,112.00
I	35	Seal box removing at Hot spot area Size: 900 X 500 X 250 mm of 6/8mm IS 2062 M.S plate	Seal box plate and refractory / Bed material / ceramic wool and all jack removing from shell plate by cutting set, chissel - hammer or breaker machine, All metalic and refractory debris / scrap removing from site to scrap yard as per EIC	BD	No.	54	5,831.00	3,14,874.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	36	NMEJ patch up/jacking work. (during forced outage/AOH of boiler) Locations : C to C,Backpass inlet, COD inlet NMEJ, Seal pot , Air duct NMEJ., Flue gas duct NMEJ.	Clean the area around NMEJ. Identify leakages/ hot spot. Attending by patch up work by ceramic wool or high temperature cloth as per EIC. Jacking at leakage area for supporting of applied ceramic wool. Normalise. Check for flue gas leakage. Necessary scaffolding is included. (all leakages in one NMEJ to be considered as one no.)	BD	No.	6	2,075.00	12,450.00
I	37	Fabrication of retainer plate along with two nos. stiffners/ scaffolding nozzles (as per requirement, drawing / E-I-C) Size: 600x200x10 mm of SS plate	Shifting of material from store. Fabricate the retainer plate, stiffner from 10 mm SS plate, welding of stiffners with plate and and scaffolding nozzles from SS pipe and flanges (as per requirement, drawing / E-I-C)	BD	No.	59	1,570.00	92,630.00
I	38	Erection of retainer plate/scafflding nozzles (as per requirement / drawing / E-I-C) Size of retainer: 600x200x10 mm of SS plate	Shifting of material from store. Ensure surface preparation of base plate by cleaning, grinding etc. Erection and welding of the retainer plate in Cyclone & COD NMEJ area, Bullnose area, any other area/ Erection and welding of scaffolding nozzles in Cyclone/COD and other area (as per requirement, drawing / E-I-C)	BD	No.	54	1,046.00	56,484.00
I	39	Fabrication of anchors of all size of SS material	Cutting and welding of SS clit for fabrication of anchors/ preparation from old anchors for reuse as per requirement, E-I-C.	BD	No.	50	93.00	4,650.00
I	40	Assistance for Oxygen level measurement work	Assist for opening & closing of measuring port. (One boiler oxygen level level measurement at various points shall be considered as 01 NO)	BD	NO	21	403.00	8,463.00
I	41	Bending of MS plate up to 16 mm thickness	Receive material from ware house . Bend the plates inplant or outside of plant. To & fro transportation of material or bending machine shall be in the scope of contractor. Preparation of material should be as per drawing/EIC. In case of plate bending provided by GIPCL, then 50% quantity shall be applicable.	BD	MT	6	16,546.00	99,276.00
I	42	Dismantling of steel structure/ cyclone and fluegas duct plates work	Dismantle the structure steel / cyclone and fluegas duct plates , Shift to scrap yard as per E-I-C at site.	BD	MT	16	19,128.00	3,06,048.00

Annexure-A1

Part-I1: Duct/Damper/NMEJ/MEJ

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
I	43	Cyclone Downcomer sleeve replacement work	Removal of old/damaged sleeve. Shfiting of new sleeve from store to site. Erection and welding of cyclone downcomer sleeve alongwith necessary cutting into various pieces for positioning and stiffners/retainers (as per requirement, drawing / E-I-C). Necessary scaffolding is included. Shift the scrap to yard.	BD	MT	1	44,608.00	44,608.00
I	44	FBHE Module Bypass work	Open MHDs (Two Nos.) Bypass the FBHE tubes by plugging or by plate/pipe fit up as per instruction of EIC (Total 154 nos. Nos. of Tubes : Tube OD : 50.80mm)	BD	NO	2	19,451.00	38,902.00
I	45	Overhauling of gear box of guliton gate	Overhauling of gear box and successful trial/operation of gate. Including physical limit switch setting in-co-ordination with electrical / C & I representative	BD	NO	8	1,537.00	12,296.00
I	46	only sealing strip and surrounding casing of guliton gate	top or bottom and port or bonnet sealing strips replacement. Required areas surrounding of sealing strip plate patch up to be done maximum up to 500mm width both side. Trail operation with limit switch setting in-co-ordination with electrical / C & I representative.Scraping and painting of gate. Apply of lubricant dry molycote. (Supply of Molycote on GIPCL scope)	BD	NO	18	3,842.00	69,156.00
I	47	Replace the bearings, chain, sprockets of guliton gate	Replace the bearings, chain, sprockets as per standard industrial practice	BD	NO	8	3,074.00	24,592.00
I	48	Clean & Grease of guliton gate	Only Clean & Grease the driving chain. Apply of lubrication in bearing, and vertical side sealing	BD	NO	8	1,537.00	12,296.00
I	49	Scraping and painting of guliton gate	Scraping and painting of gate. Apply of lubricant dry molycote. (Supply of Molycote on GIPCL scope)	BD	NO	8	1,537.00	12,296.00
		Part-I1: Total						**77,30,179.00**

Annexure-A1

Part-J1: Fuel Firing System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
		Scaffolding Erection						
J	1	Propane tank safety valve servicing/testing assistance	Assist for safety valve servising/testing 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	Per Day	**3**	4,169.00	12,507.00
J	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.	PM	No.	**80**	1,664.00	1,33,120.00
J	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.	PM	No.	**150**	1,455.00	2,18,250.00
J	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.	**24**	1,040.00	24,960.00
J	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.	**56**	2,360.00	1,32,160.00

Annexure-A1

Part-J1: Fuel Firing System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
J	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.	3	414.00	1,242.00
J	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	1,673.00	3,346.00
J	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.	6	1,673.00	10,038.00
J	9	Strainer (Oil, steam, air) cleaning from SUB / BL control station.	Open the strainer, clean the element with diesel , air. Box up.	BD	No.	26	1,247.00	32,422.00
J	10	Strainer (Oil , Steam , air) replacements from SUB / BL control station.	Replace the strainer with new one.	BD	No.	4	627.00	2,508.00
J	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.	51	1,419.00	72,369.00
J	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.	3	110.00	330.00
J	13	Bed Lance guide pipe cleaning.	Remove the bed lance from position. Clear the chocking of guide pipe. Fixed the Bed lance.	BD	No.	**88**	313.00	27,544.00
J	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.	**20**	6,682.00	1,33,640.00
J	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.	5	239.00	1,195.00

Annexure-A1

Part-J1: Fuel Firing System

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
J	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.	9	831.00	7,479.00
J	17	Barrel & Diffuser Installation	Make proper platform as per requirement for work. Barrel & Diffuser Installation Work	BD	No.	9	6,131.00	55,179.00
J	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.	1	13,306.00	13,306.00
J	19	Propane pump Servicing	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.	1	6,093.00	6,093.00
J	20	Oil line replacement work up to 50 NB	Ensure isolation of oil line. Remove the insualtion and identify the oil leakage. Replaced the oil line as per the direction of EIC.Check for no leakage.Clean the oil leakage area.	BD	Per Meter	15	1,673.00	25,095.00
J	21	FO Unloading pump oil seal replacement work	Ensure elec/mech isoaltion of pump.Replace the oil seal. Check for no leakage.	BD	No.	3	1,252.00	3,756.00
J	22	Unloading of Propane Gas from tanker to storge tank	Connect flexible hoses from tanker to propane transfer line and pressure equilizing line provided at storage tank. Cut new gasket for flange connection of flexible hoses. Open valves to unload propane from tanker to storage tank. Check all joints with soap solution to ensure no leakage of propane during unloading. If any leakage, isolate the system and attend the leakage and restart unloading. After completon of unloading, close all valves and disconnect the flexible hoses. Manpower to be kept at work location from start to completion of unloading.	BD	No.	3	4,992.00	14,976.00
		Part-J1: Total						**9,31,515.00**

Annexure-A1

Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	28	2,511.00	70,308.00
K	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.	4	843.00	3,372.00
K	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.	9	3,141.00	28,269.00
K	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.	9	1,673.00	15,057.00
K	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.	98	239.00	23,422.00
K	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.	12	316.00	3,792.00
K	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.	10	260.00	2,600.00

Annexure-A1
Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	4	518.00	2,072.00
K	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.	30	390.00	11,700.00
K	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.	7	649.00	4,543.00
K	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.	4	1,038.00	4,152.00
K	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	1,556.00	6,224.00
K	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.	32	2,594.00	83,008.00
K	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.	11	1,296.00	14,256.00

Annexure-A1

Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	4	3,890.00	15,560.00
K	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.	4	1,673.00	6,692.00
K	17	Servicing of HP valves from 6" to 10"size and any mode of operation (1500# and above)	-- do --	BD	No.	2	5,931.00	11,862.00
K	18	Servicing of HP valves 10" above to 16" size and any mode of operation (1500# and above)	-- do --	BD	No.	2	7,672.00	15,344.00
K	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.	2	22,313.00	44,626.00
K	20	Servicing of Safety valve in Soot blower steam line and CBD tank. Size - up to 3'	-- do --	BD	No.	2	5,931.00	11,862.00
K	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.	32	518.00	16,576.00
K	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	1,255.00	2,510.00

Annexure-A1
Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	19	1,673.00	31,787.00
K	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.	12	1,262.00	15,144.00
K	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.	77	718.00	55,286.00
K	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	2,094.00	4,188.00
K	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.	2	631.00	1,262.00

Annexure-A1

Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	4	948.00	3,792.00
K	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.	6	836.00	5,016.00
K	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.	15	15,344.00	2,30,160.00
K	31	Manual operation of spiese valve.	Open/close the spiese valve manually as per EIC.	BD	Once operation	77	477.00	36,729.00
K	32	Replacement of valves handle upto 4''	Remove the valve handle from position. Replace with new one.	BD	No.	13	631.00	8,203.00
K	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.	7	11,156.00	78,092.00

Annexure-A1

Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	7	15,344.00	1,07,408.00
K	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.	240	239.00	57,360.00
K	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.	13	836.00	10,868.00
K	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.	17	1,296.00	22,032.00
K	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.	9	3,347.00	30,123.00

Annexure-A1

Part-K1: Valves

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
K	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.	4	210.00	840.00
K	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.	4	316.00	1,264.00
K	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.	9	1,296.00	11,664.00
K	42	Replacement/Installation of KGV up to 300 NB pipe size	Remove the damaged valve from position and install the new valve on position. Check for no leakage as per direction of EIC. Remove the scrape from surrounding.	BD	No.	4	1,945.00	7,780.00
K	43	Replacement/installation of air line valve up to 50 NB pipe size	Remove the damaged valve from position and install the new valve on position. Check for no leakage as per direction of EIC.	BD	No.	3	1,296.00	3,888.00
K	44	Pipe removal / replacement / erection up to size 100 NB	Make necessary approch for work and Remove/replace/erect the MS/SS/GI pipe as per the direction of EIC.check for no leakage.	BD	per meter	268	649.00	1,73,932.00
K	45	Pipe removal / replacement / erection above size 100 NB up to 300 NB	Make necessary approch for work and Remove/replace/erect the MS/SS/GI pipe as per the direction of EIC. Check for no leakage.	BD	per meter	21	1,296.00	27,216.00
K	46	Clamp fabrication for online leakage attending of steam leakage	Fabricate the clamp as per required size of pipe.	BD	No.	4	1,673.00	6,692.00
		Part-K1: Total						**13,28,533.00**

Annexure-A1

Part-L1: Soot Blower

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
L	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.	296	1,183.00	3,50,168.00
L	2	Assistance for soot blowing	One person is required for checking of all soot blower during operation per shift per boiler. Opening/closing of soot blower manual valve, if required. 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.	1483	584.00	8,66,072.00
L	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.	6	156.00	936.00
L	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.	70	947.00	66,290.00
L	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.	2	3,329.00	6,658.00

Annexure-A1

Part-L1: Soot Blower

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
L	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.	2	1,038.00	2,076.00
L	7	Oil seal replacements of rotary / transverse gear box	Drain the oil. Remove the motor. Replaced the damaged oil seal. Box up.	BD	No.	2	518.00	1,036.00
L	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.	134	474.00	63,516.00
L	9	Decoupling / Coupling of rotary / transverse motor	Declutch the both gear box. Decouple the gear box from motor. Box up.	BD	No.	70	296.00	20,720.00
L	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	779.00	1,558.00
L	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.	4	5,878.00	23,512.00
L	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.	6	5,878.00	35,268.00
L	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.	45	711.00	31,995.00
L	14	Puppet valve gland packing replacements	Replace the gland packing. Adjust the valve pressure.	BD	No.	16	416.00	6,656.00
L	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	1,248.00	4,992.00
L	16	Puppet valve pressure adjustments	Adjust the pressure as per E-I-C.	BD	No.	19	105.00	1,995.00

Annexure-A1

Part-L1: Soot Blower

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
L	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.	7	838.00	5,866.00
L	18	Steam blowing bar (strip) replacements.	Remove the damaged strip (blowing bar) Check during operation.	BD	No.	40	474.00	18,960.00
L	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.	12	7,605.00	91,260.00
L	20	Puppet valve plug replacement.	Check puppet valve plug thread. If found damage tap new thread. Fix new plug. Box up.	BD	No.	3	104.00	312.00
L	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.	19	1,557.00	29,583.00
L	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.	12	11,059.00	1,32,708.00
L	23	Jack shaft end bearing replacement 1 No. bearing	Remove old bearing of jack shaft assembly and replace it with new one	PM	No.	12	831.00	9,972.00
L	24	Drive end bearing replacement 1 No. bearing	Remove old bearing of drive shaft assembly and replace it with new one	PM	No.	18	727.00	13,086.00
L	25	Opening & closing of soot blower manual valve during sootblowing	Opening & closing of soot blower manual valve during sootblowing as per instruction of GIPCL EIC	PM	No.	0	103.00	-
L	26	external cleaning of sootblower	External cleaning of soot blower assembly	PM	No.	79	234.00	18,486.00
L	27	sootblower retracted manually	On jamming / on intimation. Remove soot blower traveeling carrieage along with lance from jamm postion to home postion through required tools and tackles . If required repair chain assembly	PM	No.	80	547.00	43,760.00
L	28	freeness checking	Check freeness of all four chain from both end between sprocket	PM	No.	120	547.00	65,640.00
L	29	home position checking	On intimation verified home postion of individual soot blower	PM	No.	50	103.00	5,150.00
L	30	Lubrication of tra. & Rotary chain (only Chain)	Lubrication of tra. & Rotary chain (only Chain) as per EIC instruction	PM	No.	32	260.00	8,320.00
		Part-L1: Total						**19,26,551.00**

Annexure-A1

Part-M1: Fuel Oil Handling

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
M	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.	12	791.00	9,492.00
M	2	PM of pump in drain oil tank (Transfer / unloading) Gear Pump.	--do--	PM	No.	2	593.00	1,186.00
M	3	Steam trap servicing.	Isolate the trap. Dis assemble the trap. Clean it / replaced element if required . Box up.	OM	No.	3	396.00	1,188.00
M	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	7,208.00	14,416.00
M	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.	2	1,967.00	3,934.00
M	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.	1	7,139.00	7,139.00
M	7	Replacement of coupling & Alignment (Transfer / unloading pump)	Decouple the coupling and replace if required. Align and couple.	BD	No.	2	3,937.00	7,874.00
M	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.	4	12,409.00	49,636.00

Annexure-A1

Part-M1: Fuel Oil Handling

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
M	9	Pressure adjustments of pump.	Adjust the pressure relief valve as per E-I-C.	BD	No.	2	396.00	792.00
M	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.	12	1,967.00	23,604.00
M	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.	3	1,967.00	5,901.00
M	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	891.00	3,564.00
M	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.	13	1,572.00	20,436.00
M	14	Replacement of oil valve upto 3" size.	Isolate the system. Cut the damage valve. Replace the valve with new one.	BD	No.	2	1,967.00	3,934.00
M	15	Attending gland leakages of valves upto NB 3"	Tighten the glands. Replace if necessary	BD	No.	4	786.00	3,144.00
M	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.	4	7,208.00	28,832.00
		Part-M1: Total						**1,85,072.00**

Annexure-A1

Part-N1: Emergeny Boiler Feed Pump

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
N	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.	3	1,247.00	3,741.00
N	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	**24**	821.00	19,704.00
N	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.	3	1,247.00	3,741.00
N	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.	2	3,326.00	6,652.00
N	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	13,122.00	26,244.00
N	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	2,496.00	4,992.00
N	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	8,859.00	17,718.00

Annexure-A1

Part-N1: Emergeny Boiler Feed Pump

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
N	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.	7	1,566.00	10,962.00
N	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.	2	313.00	626.00
N	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	2,504.00	5,008.00
N	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.	6	4,589.00	27,534.00
N	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.	2	627.00	1,254.00
N	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.	2	2,496.00	4,992.00
N	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	11,048.00	22,096.00
N	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	13,122.00	26,244.00
N	16	Servising of Mechanical Seal	Dismantle the seal. Replace damaged parts. Assemble the seal.	BD	No.	2	2,734.00	5,468.00
		Part-N1: Total						**1,86,976.00**

Annexure-A1

Part-O1: Hoist

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
O	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.	15	1,351.00	20,265.00
O	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	12	6,554.00	78,648.00
O	3	HOIST OVERHAULING WORK.	Dismantling of hoist parts. Identify the damaged & replace if required. Lowering and lifting of hoist to & from ground floor 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	2	31,122.00	62,244.00
		Part-O1: Total						**1,61,157.00**

Annexure-A1

Part-P1: External Cleaning

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
P	**A) FANS**							
P	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	15	1,351.00	20,265.00
P	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	15	1,351.00	20,265.00
P	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	10	1,351.00	13,510.00

Annexure-A1

Part-P1: External Cleaning

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
P	**B) Valve Station**					0	-	-
P	4	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	10	1,187.00	11,870.00
P	5	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	10	1,187.00	11,870.00
P	6	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	10	1,187.00	11,870.00
P	7	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	13	337.00	4,381.00

Annexure-A1

Part-P1: External Cleaning

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
P	8	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	13	337.00	4,381.00
P	**C) Bed Ash, Lignite, Limestone**					0	-	-
P	9	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 externally for lignite, limestone , dust, dirt etc. Externally clean the plummer block at drive end & tail end assy, gear box with motor & its base plate, Conveyor drive chian & chain guard, Bottom floor of conveyor, air lock feeder NMEJ area, MFT, Clean all the area by air.Check that there is no gas leakage through conveyor cover plates or inspection windows, Inspect the NMEJ carefully for any leakage,Attend the leakage by tightening the joints or properly fitting the windows. Remove the scrap to scrap yard. Note down the defect & informe to E-I-C.	PM	Per Unit	9	1,583.00	14,247.00
P	10	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	9	1,187.00	10,683.00
P	11	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	9	1,187.00	10,683.00

Annexure-A1

Part-P1: External Cleaning

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
P	**D) NMEJ, Boiler**					0	-	-
P	12	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.	13	1,187.00	15,431.00
P	13	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.	13	1,187.00	15,431.00
P	14	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	**18**	1,187.00	21,366.00
P	15	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.	**18**	455.00	8,190.00
P	16	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.	6	593.00	3,558.00

Annexure-A1

Part-P1: External Cleaning

PART	SR. NO	Name of the Activity	Scope of Work	Nature of Work	Unit Measurement (UoM)	Qty.	Unit Rate in Rs.	Total Amount in Rs.
P	**E) ESP,EBFP**					0	-	-
P	17	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	6	1,187.00	7,122.00
P	**F) Blower,Duct,Damper**					0	-	-
P	18	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	4	1,187.00	4,748.00
P	19	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	**12**	396.00	4,752.00
P	**G) BOP /OTHER**					0	-	-
P	20	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	3	1,187.00	3,561.00
P	21	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	4	1,779.00	7,116.00
P	22	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	**250**	110.00	27,500.00
								2,52,800.00