

Corrigendum 4 dated 18-07-2022 to Tender Specification BHEL PSSR SCT 2033

Tender Specification BHEL PSSR SCT 2033 Erection, testing, commissioning, trial run and handing over of the Mechanical works of FGD system at 2X500 MW NTPL Tuticorin.

The following clauses are changed / modified as below: -

- A.** WEIGHT SCHEDULE/BOQ - VOLUME-IA PART – I CHAPTER – VIII of TECHNICAL CONDITIONS OF CONTRACT (TCC) may be read as per attachment (from page no 2 to 11)
- B.** VOLUME –II PRICE BID R1 PART C: Bill of Quantities Revision 1 is as per attachment (Page 12 to 17)
- C.** Technical Pre-Qualification Criteria of Annexure 1A of NIT is revised as below

Existing	Revised
3) Executed work of Structure and 'Pressure Part and/or Power Cycle Piping' in power plant of any rating of – i) At least 3250 MT of Erection work of Structure and 'Pressure Part and/or Power Cycle Piping' within a common period of twelve consecutive months in cumulative of two running/completed contracts. Or ii) At least 2160 MT of Erection work of Structure and 'Pressure Part and/or Power Cycle Piping' within a period of twelve consecutive months in cumulative of one running/completed contracts.	3) Executed work of Structure and 'Pressure Part and/or Power Cycle Piping' in power plant of any rating of – i) At least 2970 MT of Erection work of Structure and 'Pressure Part and/or Power Cycle Piping' within a common period of twelve consecutive months in cumulative of two running/completed contracts. Or ii) At least 1890 MT of Erection work of Structure and 'Pressure Part and/or Power Cycle Piping' within a period of twelve consecutive months in cumulative of one running/completed contracts.

All other conditions of the tender specification remain unchanged.

Bidders are requested to consider this corrigendum as part of tender specification and quote accordingly.

-Sd-
Moses Prashanth Kumar
Manager / Subcontracts

TECHNICAL CONDITIONS OF CONTRACT (TCC)

VOLUME – IA PART – I CHAPTER –VIII WEIGHT SCHEDULE

1.8.1 Weight Schedule

Sl. No	Description	Weight (MT)	Rate Schedule ID
1	Structure	3319.09	1A
2	Non Pressure Parts/Ducts/Dampers	2451.78	2A
3	Rotation Machines	991.51	3A
4	Fabrication of Segments & Structural items for various Tanks	590.53	4A
5	*Erection of Tanks including Structural items & hydro cyclones and other miscellaneous items	721.22	4B
6	Mineral Wool	189.90	5A
7	Fixing Component	49.35	5B
8	Aluminium Sheet & Sealing Compound	50.44	5C
9	CS Pipes	475.08	6A
10	SS Piping	15.00	6B
11	Removal and disposal of insulation & duct from existing FG duct to chimney	50.00	7A

***The erection tonnage indicated is inclusive of 590.53 MT of fabricated tanks**

NOTE:

- I. The product list and the manufacturing units indicated above are indicative for estimation purpose only. The weight mentioned above is approximate and liable to vary as per design consideration of the manufacturing unit.
- II. The payment will be made at the quoted / accepted rates for the tonnage actually handled.
- III. Besides the products indicated above there is likelihood in addition of any products integral to FGD and its auxiliaries. Tenderers quoted rate shall be applicable for such products also.
- IV. For the purpose of payment, the gross weight indicated in RR/LWB/PWB will be taken into account for calculating the tonnage handled.

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Bill of Quantities

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
TRY	FD	19	FOUNDATION MATL FOR DUCT STRUC	1811	2716	4527	1A
TRY	FH	990	ABSORBER ISLAND-HANDLING SYSTEM	10000	7500	17500	1A
TRY	FT	10	FOUNDATION MATERIAL-DUCT STRUCTURE	8965	9166	18130	1A
TRY	FT	100	DUCT STR BYP & BUF/GGH/ABS	300129	286889	587018	1A
TRY	FT	110	DUCT STR BUF/GGH & ABS	135982	185253	321235	1A
TRY	FT	120	DUCT STR ABS & BYP/STACK	40433	40433	80865	1A
TRY	FT	300	PLATFORM FOR DUCT	25232	25573	50804	1A
TRY	FT	301	PLATFORM FOR G&D	5000	5000	10000	1A
TRY	FT	700	HSFG BOLT-DUCT STRU	297	508	805	1A
TRY	FZ	10	FOUNDATION MATL FOR ABS	3882	3882	7763	1A
TRY	FZ	11	FOUNDATION MATL FOR ELEVATOR	3747	3747	7495	1A
TRY	FZ	12	FOUNDATION MATL RC PUMP SHED	3000	3000	6000	1A
TRY	FZ	100	ABSORBER COLUMNS	64288	64272	128560	1A
TRY	FZ	120	ELEVATOR COLUMN	41818	41855	83673	1A
TRY	FZ	200	ABSORBER BEAMS AND BRACINGS	92985	92985	185969	1A
TRY	FZ	220	ELEVATOR BEAM AND BRACING	30351	30477	60827	1A
TRY	FZ	300	ABSORBER LOWER FLOORS	38383	38262	76645	1A
TRY	FZ	310	ABSORBER UPPER FLOORS	51401	51357	102758	1A
TRY	FZ	320	SUPPORTING STRUCTURE FOR EMERGENCY QWT	5000	5000	10000	1A
TRY	FZ	325	ELEVATOR FLOORS	6326	6260	12587	1A
TRY	FZ	340	INTER-CONNECTING PLTF TO ABS	7624	7645	15269	1A
TRY	FZ	391	ABSORBER MISCELLANEOUS	5000	5000	10000	1A
TRY	FZ	610	ELEVATOR CLADDING STRUCTURES	13283	13283	26565	1A
TRY	FZ	611	ROOF SHEETING	2500	2500	5000	1A
TRY	FZ	700	ABSORBER HSFG FASTNERS	755	755	1510	1A
TRY	FZ	701	HSFG BOLT-ELEV STRUC	486	486	972	1A
TRY	FZ	702	HSFG BOLT-RC SHED	2000	2000	4000	1A
TRY	FZ	710	ELEVATOR M/C ROOM & GUIDE	5000	5000	10000	1A
TRY	FZ	810	ABSORBER FLOOR GRILLS	66300	66300	132600	1A
TRY	FZ	811	ELEVATOR FLOOR GRILL	26627	26627	53255	1A
TRY	FZ	814	ABS BAFFLE GRATING	8700	8700	17400	1A
TRY	FZ	820	ABSORBER STAIRS & HANDRAILS	26377	26377	52754	1A
TRY	FZ	821	ELEVATOR STAIR AND HAND RAIL	12232	12232	24463	1A
TRY	FZ	900	ABS SPRAY PIPE SUPP	19000	19000	38000	1A
TRY	FZ	901	ABS ME SUPPORT	18000	18000	36000	1A
TRY	FZ	902	ABS BAFFLE GRATING SUPP	18000	18000	36000	1A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
TRY	FZ	909	ABSORBER SHEAR PLATE	10000	10000	20000	1A
TRY	FZ	910	ABSORBER SYSTEM-BASE	18535	18535	37070	1A
TRY	FZ	915	ABSORBER SYSTEM-CASING BOTTOM	88549	88469	177018	1A
TRY	FZ	920	ABSORBER SYSTEM-CASING INTERM	50719	50719	101437	1A
TRY	FZ	925	ABSORBER SYSTEM-CASING TOP	150000	150000	300000	1A
TRY	FZ	930	ABSORBER SYSTEM-LINING-C276	5000	5000	10000	1A
TRY	FZ	950	MAN HOLE DOOR FOR ABSORBER	4000	4000	8000	1A
TRY	FZ	952	NOZZLE NB25 TO NB250	4000	4000	8000	1A
TRY	FZ	953	ABS NOZL NB 300 & ABOVE	4000	4000	8000	1A
TRY	FZ	990	SPECIAL WELDING ELECTRODE	4000	4000	8000	1A
TRY	FT	10	FOUNDATION MATERIAL - DUCT STRUCTURE INSIDE CHIMNEY	1747	0	1747	1A
TRY	FT	121	DUCT STR ABS & BYP/STACK-IN INSIDE CHIMNEY	123011	0	123011	1A
TRY	FT	700	HSFG BOLT-DUCT STRU INSIDE CHIMNEY	237	0	237	1A
TRY	FD	200	INSTRUMENT TAPPING	754	754	1508	2A
TRY	FD	207	OUTLET GUIDE VANE	10000	10000	20000	2A
TRY	FD	462	DUCT BYP & BUF/GGH/ABS	122906	103877	226783	2A
TRY	FD	464	EXPANSN JNT METALLIC	17698	17698	35395	2A
TRY	FD	465	DUCT SUP BYP & BUF/GGH	13068	10650	23718	2A
TRY	FD	482	DUCT BUF/GGH & ABS	294693	333881	628574	2A
TRY	FD	484	EXPNSN JNT METALLIC	13770	15992	29762	2A
TRY	FD	485	DUCT SUPPORT BUF/GGH & ABS	55830	61174	117004	2A
TRY	FD	492	DUCT ABS & BYP/STACK	145975	145970	291945	2A
TRY	FD	494	EXPNSN JNT NON METALLIC	12000	12000	24000	2A
TRY	FD	495	DUCT SUP ABS & STACK/BYP	38000	38000	76000	2A
TRY	FD	498	HOOK UP DUCT WITH STRUCTURE	20706	20706	41412	2A
TRY	FD	700	BULKED BPS - ERECTION BOLTS AND NUTS	1384	1384	2768	2A
TRY	FD	912	SLIDE BEARING PLATE	613	613	1225	2A
TRY	FD	915	MAN HOLE DOOR	689	689	1377	2A
TRY	FD	993	ERECTION MATERIAL	40000	40000	80000	2A
TRY	FJ	360	VALVES (BHEL)	92	92	184	2A
TRY	FJ	364	VALVES & SAFETY VALVES(SD)	1000	1000	2000	2A
TRY	FJ	365	ABSORBER AGITATOR	1500	1500	3000	2A
TRY	FJ	960	LAPPING TOOLS FOR CONVENTIONAL VALVE	10	10	20	2A
TRY	FJ	989	BHEL VALVE COMG SPAR	0.12	0.12	0.24	2A
TRY	FP	865	SUBDELIVERY - MIST ELIMINATOR	15000	15000	30000	2A
TRY	FP	867	SUBDELIVERY - VALVES	1000	1000	2000	2A
TRY	FP	988	COMMG SPARES/SD	100	100	200	2A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
TRY	FP	992	WELDING ELECTRODES	300	300	600	2A
TRY	FP	993	CONSUME & EREC MATLS	500	500	1000	2A
TRY	FT	121	DUCT STRU ABS & BYPA/STACK-IN	39199	39279	78478	2A
TRY	FD	495	DUCT SUP ABS & STACK/BYP INSIDE CHIMNEY	36000	-	36000	2A
TRY	FD	496	DUCT ABS BYP/STACK - TRANSITION PIECE INSIDE CHIMNEY	156000	-	156000	2A
TRY	FD	700	Bulked BPS - Erection Bolts and Nuts INSIDE CHIMNEY	400	-	400	2A
TRY	FD	912	Slide Bearing Plate INSIDE CHIMNEY	400	-	400	2A
TRY	FP	5	EMERGENCY QUENCHING WATER TANK	13000	13000	26000	4B
TRY	FP	354	GASKETS	5	5	10	4B
TRY	FP	700	FASTNERS	100	100	200	4B
TRY	FL	221	MINERAL WOOL FOR FGD SYSTEM	74800	78200	153000	5A
TRY	FL	700	BULKED DD COMPONENTS FOR FGD SYSTEM	12795	13104	25899	5A
TRY	FL	210	FIXING COMPONENTS FOR FGD SYSTEM	17964	18572	36536	5B
TRY	FL	701	BPS FASTENERS FOR FGD SYSTEM	401	411	812	5B
TRY	FL	810	OUTER CASING FOR FGD SYSTEM	19584	20352	39936	5C
TRY	FP	860	VALVES (BHEL)	1500	1500	3000	6A
TRY	FS	200	Absorber Rc System Piping - Boi	30000	10500	40500	6A
TRY	FS	300	Absorber Aat - Boi	150	0	150	6A
TRY	FZ	630	STRUCTURES - RC PUMP HOUSE	80000	80000	160000	1A
TRY	FS	988	Absorber Island Slurry Sys - Commissioni	100	100	200	6A
BAP	55	81	BUF FIX MATERIAL	1810	1810	3619	1A
BAP	55	82	BUF STAIR & HND RAIL	1577	1577	3154	1A
BAP	57	141	SEAL AIR HAG AND ID FAN OUTGAT	7938	7938	15875	1A
BAP	57	566	PLATFORMS AND LADDERS-FGD GD	21001	21001	42001	1A
BAP	FW	310	STRU FOR BOOSTER FAN HANDLING	18485	18485	36969	1A
BAP	55	0	FAN TOOL & FIXTURE	300	-	300	2A
BAP	57	497	KNIFE GATE & CHECK VALVE	3634	3634	7268	2A
BAP	57	540	GATE-FGD BOOSTER FAN INLET	36921	36921	73842	2A
BAP	57	550	GATE-FGD BOOSTER FAN OUTLET	43298	43298	86596	2A
BAP	57	570	GATE-FGD OUTLET	26048	26048	52096	2A
BAP	57	577	ELECT ACTUATOR FOR GATE,DAMPER	11500	11500	23000	2A
BAP	57	583	DAMPER FGD BYPASS	28720	28720	57440	2A
BAP	57	992	SPL MATL ELECTRODES	18	18	36	2A
BAP	FW	213	ABSORBER SYSTEM INTERNALS	17600	17600	35200	2A
BAP	FW	988	COMMISSIONING SPARES	10000	-	10000	2A
BAP	55	84	BUF C & S AIR FAN	2990	2990	5979	3A

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Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
BAP	55	85	BUF CPLNG GUARD	62	62	124	3A
BAP	55	89	BUF MOTOR CANOPY	2127	2127	4253	3A
BAP	55	91	FIRST FILL LUBRICANT	1890	1890	3780	3A
BAP	55	287	1 STG BUF ROTOR	9868	9868	19735	3A
BAP	55	480	BUF SET & INDN SHAFT	129	129	258	3A
BAP	55	580	BUF EXPN JOINTS	1850	1850	3700	3A
BAP	55	587	1 STG BUF HOUSING	31131	31131	62261	3A
BAP	55	787	BUF SUCTION BOX	16551	16551	33102	3A
BAP	55	880	BUF CPLNG	1242	1242	2484	3A
BAP	55	887	BUF DIFFUSER	14495	14495	28989	3A
BAP	55	980	BUF LUBE OIL SYS	3000	3000	6000	3A
BAP	55	983	BUF ACTUATOR	100	100	200	3A
BAP	57	491	BLOWER WITH MOTOR	4700	4700	9400	3A
BAP	FW	701	SLURRY PUMPS & ACCESSORIES	20000	-	20000	3A
BAP	FW	702	WATER PUMPS & ACCESSORIES	5000	-	5000	3A
BAP	FW	798	AIR RECEIVERS	5000	-	5000	4B
BAP	FW	816	MANL BTRFLY VALV- UTLTY	1000	-	1000	6A
BAP	FW	817	MOTOR BTRFL VALV-UTLTY	500	-	500	6A
BAP	FW	818	PNEM BTRFLY VALV-UTLTY	500	-	500	6A
BAP	FW	819	MAN BTRFLY VALV-LS SLRY	1500	-	1500	6A
BAP	FW	820	MOTOR BTRFLY VALV-LS SLRY	2500	-	2500	6A
BAP	FW	821	PNEUM BTRFLY VALV-LS SLRY	500	-	500	6A
BAP	FW	822	MAN BTRFLY VALV-GYP SLRY	1500	-	1500	6A
BAP	FW	823	MOTOR BTRFLY VALV -GYP SLRY	2500	-	2500	6A
BAP	FW	824	PNEUM BTRFLY VALV-GYP SLRY	500	-	500	6A
BAP	FW	825	MAN BTRFLY VALV-AIR	500	-	500	6A
BAP	FW	826	MOTOR BTRFLY VALV-AIR	500	-	500	6A
BAP	FW	827	PNEUM BTRFLY VALV-AIR	500	-	500	6A
BAP	FW	828	MAN GATE VALV-UTLTY	3500	-	3500	6A
BAP	FW	829	MOTOR GATE VALV-UTLTY	500	-	500	6A
BAP	FW	830	PNEUM GATE VALVE-UTLTY	500	-	500	6A
BAP	FW	834	MAIN GLOBE VALV-UTLTY	1000	-	1000	6A
BAP	FW	840	CERAMIV VALVES	500	-	500	6A
BAP	FW	841	CONTROL VALVES	500	-	500	6A
BAP	FW	842	MAN PINCH VALV-GYP SLRY	500	-	500	6A
BAP	FW	845	BALL VALVES- WATER	500	-	500	6A
BAP	FW	848	CHECK VALVES- WATER	500	-	500	6A
BAP	FW	851	DIAPHRAGM VALV-SLURRY	500	-	500	6A
BAP	FW	267	INSULATION MATERIALS FOR DUCT	10000	-	10000	5A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
BAP	FW	268	FIXING COMP FOR DUCT	10000	-	10000	5B
BAP	FW	269	CLADDING SHEET FOR DUCT	10000	-	10000	5C
BAP	FW	715	HANDLING EQUIPMENT IN FGD	10000	-	10000	1A
BAP	FW	901	LS PIPING-ABS	2910	-	2910	6A
BAP	FW	902	FS PIPING-ABS	2910	-	2910	6A
BAP	FW	903	PW PIPING-ABS	36000	-	36000	6A
BAP	FW	903	PW PIPING-ABS	4000		4000	6B
BAP	FW	904	CW PIPING-ABS	10000	-	10000	6A
BAP	FW	905	SA PIPING-ABS	2500	-	2500	6B
BAP	FW	906	IA PIPING-ABS	2000	-	2000	6B
BAP	FW	907	OA PIPING-ABS	20000	-	20000	6A
BAP	FW	912	GS PIPING-RACK	90000	-	90000	6A
BAP	FW	913	LS PIPING-RACK	35000	-	35000	6A
BAP	FW	914	FS PIPING-RACK	23000	-	23000	6A
BAP	FW	915	PW PIPING-RACK	17000	-	17000	6A
BAP	FW	917	SA PIPING-RACK	3000	-	3000	6B
BAP	FW	918	IA PIPING-RACK	3000	-	3000	6B
BAP	FW	919	GS PIPING-TANKS	14550	-	14550	6A
BAP	FW	920	LS PIPING-TANKS	5820	-	5820	6A
BAP	FW	921	FS PIPING-TANK	5820	-	5820	6A
BAP	FW	922	PW PIPING-TANKS	7500	-	7500	6A
BAP	FW	923	SA PIPING-TANKS	500	-	500	6B
BAP	FW	925	SUB DELIVERIES	2000	-	2000	6A
BAP	FW	926	HANGERS AND SUPPORTS	70000	-	70000	2A
BAP	FW	930	POTABLE WATER-PED	2250	-	2250	6A
BAP	FW	932	POTABLE WATER-RACK	2250	-	2250	6A
BAP	FW	934	FIXING COMP-INSU	2000	-	2000	5B
BAP	FW	935	MINERAL WOOL MATTRESS	1000	-	1000	5A
BAP	FW	936	ALUMINIUM CLADDING FOR INSUL	500	-	500	5C
PESD	38	552	AGITATOR STRUCTURE FOR DRAIN SUMPS - ABSORBER AREA DRAIN SUMP	4000	0	4000	1A
PESD	38	552	AGITATOR STRUCTURE FOR DRAIN SUMPS - GYPSUM AREA DRAIN SUMP	2000	0	2000	1A
PESD	38	552	AGITATOR STRUCTURE FOR DRAIN SUMPS - LIMESTONE SLURRY AREA DRAIN SUMP	2000	0	2000	1A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
PESD	38	507	VACUUM PUMPS WITH DRIVER (IE3 MOTOR), ALL CONNECTION BOLTS/NUTS/WASHERS FOR INSTALLATION, REQUIRED INSTRUMENTS AND ANY SAFETY DEVICE. NECESSARY VIBRATION ISOLATORS SHALL BE PROVIDED TO PREVENT THE TRANSMISSION OF THE DYNAMIC LOADS ON TO THE BUILDING STRUCTURE.	20000	0	20000	3A
PESD	38	507	VENT FAN INCLUDING ENCLOSURE AND ITS ARRANGEMENT	1000	0	1000	3A
PESD	38	507	BELT FILTER WASHING PUMP WITH MOTOR(SAME PUMP IS TO BE USED FOR THE CAKE WASH AND SEALING OF THE VACCUM PUMP ALSO).	2000	0	2000	3A
PESD	38	321	DOSING SYSTEM FOR WASTE WATER NEUTRALIZATION	800	0	800	3A
PESD	38	552	AGITATOR FOR AUXILIARY ABSORBENT TANK	4140	0	4140	3A
PESD	38	552	AGITATOR FOR LIME STONE SLURRY STORAGE TANK	8600	0	8600	3A
PESD	38	552	AGITATOR FOR WASTE WATER TANK	2000	0	2000	3A
PESD	38	552	AGITATOR FOR FILTRATER WATER TANKS	1500	0	1500	3A
PESD	38	552	AGITATOR FOR ABSORBER AREA DRAIN SUMP	1000	0	1000	3A
PESD	38	552	AGITATOR FOR GYPSUM AREA DRAIN SUMP	500	0	500	3A
PESD	38	552	AGITATOR FOR LIMESTONE SLURRY AREA DRAIN SUMP	500	0	500	3A
PESD			Plates of various thickness from 6mm to 32mm (IS 2062 E250 Gr BR)	519426		519426	4A
PESD			Structural Steel for tanks	71100		71100	4A
PESD	38	441	AUXILIARY ABSORBENT TANK	70950	0	70950	4B
PESD	38	442	LIME STONE SLURRY STORAGE TANK	91630	0	91630	4B
PESD	38	443	PRIMARY HYDRO CYCLONE	33209	0	33209	4B
PESD	38	444	SECONDARY WASTE WATER HYDRO CYCLONE	48009	0	48009	4B
PESD	38	445	WASTE WATER TANK	25712	0	25712	4B
PESD	38	447	PROCESS WATER TANK	225060	0	225060	4B
PESD	38	446	FILTRATER WATER TANKS	24343	0	24343	4B

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
PESD	38	507	PRIMARY HYDRO CYCLONE CONSISTING OF HYDRO CYCLONE CLUSTERS ALONG WITH THE ANCHOR BOLTS, NUTS AND WASHERS, FLANGES, ACCESSORY PIPING WITHIN THE SKID.	15000	0	15000	4B
PESD	38	507	SECONDARY HYDRO CYCLONE CONSISTING OF HYDRO CYCLONE CLUSTERS ALONG WITH THE ANCHOR BOLTS, NUTS AND WASHERS ,FLANGES , ACCESSORY PIPING WITHIN THE SKID.	10000	0	10000	4B
PESD	38	507	VACUUM BELT FILTERS COMPLETE WITH ACCESSORIES INCLUDING DISCHARGE CHUTE, DRIVERS (VFD WITH LCP) AND DRIVING MOTORS(IE3) WITH INVERTER PANEL, CLOTH SPRAY NOZZLES, RUBBER BELT , CLOTH ETC.	70000	0	70000	4B
PESD	38	507	VACUUM RECEIVERS WITH ANCHOR BOLTS, NUTS AND WASHERS	60000	0	60000	4B
PESD	38	507	BELT FILTER WASHING TANK	10000	0	10000	4B
PESD	38	552	PRIMARY HYDRO CYCLONE FEED TANK	1800	0	1800	4B
PESD	38	552	SECONDARY WASTE WATER HYDRO CYCLONE FEED TANK	4300	0	4300	4B
PESD	38	507	ALL INTERCONNECTED PIPING (SLURRY, AIR AND WATER PIPES), WHICH INCLUDES THE REQUISITE PIPE SUPPORT MATERIALS, FITTING'S, GASKET, FLANGE MATERIALS, BOLTING.	5000	0	5000	6A
PESD	38	507	VALVES FOR THE ENTIRE GYPSUM DEWATERING SYSTEM	2000	0	2000	6A
PESD	38	507	EXPANSION JOINTS AT SUCTION & DISCHARGE OF EACH PUMP AND ALSO FOR OTHER EQUIPMENT WHEREVER APPLICABLE	1000	0	1000	6A
PESD	-	-	MS ERW PIPE - 150 DIA (1700 MTR APPROX)	37400		37400	6A
PESD	-	-	MS ERW PIPE - 100 DIA (250 MTR APPROX)	3800		3800	6A
PESD	-	-	MS ERW PIPE - 80 DIA (270 MTR APPROX)	2700		2700	6A
PESD	-	-	SS HYDRANT VALVE(200X100X120)- 30 NOS	600		600	6A
PESD	-	-	AIR RELEASE VALVE-DIA 25 MM -6 NOS	6		6	6A
PESD	-	-	DRAIN VALVE- 6 NOS	6		6	6A
PESD	-	-	HOSE PIPE-15 M LENGTH (60NOS)	1200		1200	6A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
PESD	-	-	HOSE BOX-INTERNAL & EXTERNAL(750X250X600) - 30 NOS APPROX	500		500	6A
PESD	-	-	BRANCH PIPE WITH NOZZLE-30 NOS APPROX	300		300	6A
PESD	-	-	150 MM DIA GATE VALVE- 8 NOS	600		600	6A
PESD	-	-	100 MM DIA GATE VALVE- 6 NOS	300		300	6A
PESD	-	-	STRUCTURAL STEEL	1000		1000	6A
PESD	-	-	MS FITTINGS(1 LOT)	15600		15600	6A
PESD	-	-	WATER MONITOR-4 NOS	200		200	6A
PESD	-	-	4 NOS OF DELUGE VALVE 100 MM DIA ALONGWITH TRIM, GATE VALVE, STRAINER, NOZZLE, SOLENOID VALVE, PRESSURE SWITCH, QBDS, DVLCP ETC. FOR TRANSFORMER	1200		1200	6A
PESD	-	-	100 NB - ERW GI PIPE - 80 MTRS	1200		1200	6A
PESD	-	-	50 NB- ERW GI PIPE - 380 MTRS	2050		2050	6A
PESD	-	-	25 NB - ERW GI PIPE - 40 MTRS	100		100	6A
PESD	-	-	100 ERW MS BLACK PIPE - 60 MTRS	900		900	6A
PESD	-	-	25 NB ERW MS BLACK PIPE- 520 MTRS	1300		1300	6A
PESD	-	-	STRUCTURAL STEEL, PIPE FITTINGS,FLANGES,NUT, BOLT & GASKET, PIPE CLAMPS	160		160	6A
PESD	-	-	9 NOS OF DELUGE VALVE 100 MM DIA ALONGWITH TRIM, GATE VALVE, STRAINER, NOZZLE, SOLENOID VALVE, PRESSURE SWITCH, QBDS, DVLCP ETC. FOR GABLE GALLERIES	2700		2700	6A
PESD	-	-	150 NB ERW GI PIPE - 20 MTRS	400		400	6A
PESD	-	-	100 NB ERW GI PIPE - 450 MTRS	6800		6800	6A
PESD	-	-	50 NB ERW GI PIPE - 810 MTRS	4400		4400	6A
PESD	-	-	25 NB ERW GI PIPE- 20 MTRS	100		100	6A
PESD	-	-	100 NB ERW MS BLACK PIPE- 100 MTRS	1500		1500	6A
PESD	-	-	STRUCTURAL STEEL, PIPE FITTINGS,FLANGES,NUT, BOLT & GASKET, PIPE CLAMPS	390		390	6A
PESD	-	-	PRESSURISED WATER TYPE(9 LTR CAPACITY)-5 NOS	62.5		62.5	6A
PESD	-	-	CO2 TYPE (4.5 LTR CAPACITY)- 8 NOS	140		140	6A
PESD	-	-	DRY CHEMICAL TYPE(6 KG CAPACITY)-10 NOS	105		105	6A
Hyd			DAY SILO-2 NOS	98000		98000	2A

TECHNICAL CONDITIONS OF CONTRACT (TCC)

Unit	PG	MA	PGMA Description	Unit-1 & Common (Kg)	Unit-2 (Kg)	Total (Kg)	RATE SCH ID
Hyd			HOIST IN DAY SILO BUILDING	2500		2500	2A
Hyd			SLURRY RECIRCULATION PUMP-4 NOS/UNIT	35200		35200	3A
Hyd			OXIDATION BLOWER QTY- 2 NOS/UNIT	74000	74000	148000	3A
Hyd			WET BALL MILL-2 NOS	310000		310000	3A
PC	-	-	TG AUX COOLING WATER	33000		33000	6A
PC	-	-	H AND S FOR LP PIPING	500		500	6A
BPL			MOTOR- OXIDATION BLOWER- 4	16000	16000	32000	3A
BPL			MOTOR- BOOSTER FAN 4 NO(2 /UNIT)	32000	32000	64000	3A
BPL			MOTOR FOR WET BALL MILL- 2 NOS	20000		20000	3A
BPL			MOTOR FOR RC PUMP-4 NOS/UNIT	60000	60000	120000	3A
PEM			NAOH DOSING SYSTEM	2500		2500	2A
PEM			HOIST-4 NOS	2500		2500	2A
PEM			PHE	9000		9000	2A
PEM			SCS- 2 NOS	3000		3000	2A
PEM			CONICAL STRAINERS-3 NOS	750		750	2A
PEM			SG CRANE	6000		6000	2A
PEM			ACW PUMPS-3 NOS	7500		7500	3A
PEM			ECW PUMPS-3 NOS	7500		7500	3A
PEM	-	-	ORIFICE	1000		1000	6A
PEM	-	-	CONTROL VALVE	3000		3000	6A
			Total	5780435	3073453	8853888	

Total tonnage = 8263.36 MT *

*** Excluding 4A BOQ given for fabrication of various tanks at site**

**TENDER SPECIFICATION
BHEL PSSR SCT 2033**

FOR

**Erection, testing, commissioning, trial run and
handing over of the Mechanical works of FGD
system at 2X500 MW NTPL Tuticorin.**

PRICE BID (R1)

VOLUME –II



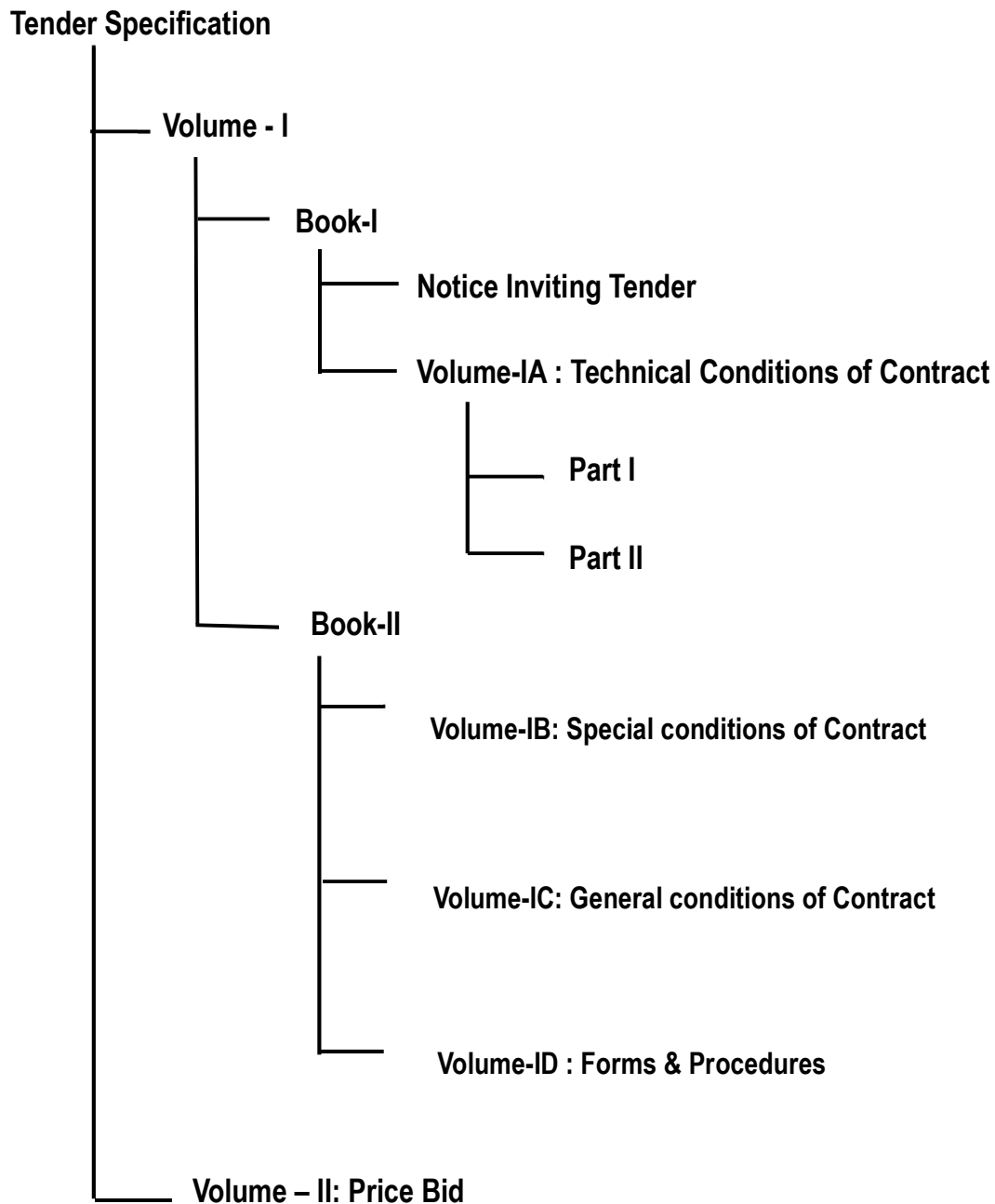
BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)

Power Sector – Southern Region

690, Anna Salai, Nandanam, Chennai – 600 035

TENDER SPECIFICATION CONSISTS OF



PRICE BID

CONTENTS	
Description	No. of pages
Part A : Instructions to the Bidders	01
Part B : Format for total amount (Enclosed as a separate Excel File in BHEL NIC e-Procurement portal for the subject tender)	(Separate Excel File)
Part C: BOQ (R1)	02

PART A

Instruction to Bidders:

1. The quantity indicated in the BOQ / Price bid (Part C) is approximate only and is liable for variation. Payment will be as per actual quantity executed as certified by BHEL Engineer.
2. Tenderers are requested to affix their company seal and authorized signature in all pages.
3. Bidders shall quote 'Total Amount' in the format enclosed as a separate Excel File in BHEL NIC e-Procurement portal for the subject tender and upload the same under 'Packet details - > Tender covers -> Finance '(Cover Type Description – Price Bid)' and same shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope of work defined in specification and in accordance with terms & conditions of the tender. Any other entry elsewhere in the price bid shall be treated as Null and Void. Quoting of rates in any other form/ formats will not be entertained.
4. The above mentioned 'Total amount' is for the entire Bill of Quantity (BOQ) given in Part -C of the Price Bid.
5. BHEL has pre-fixed the weightages for the amount of individual items of Bill of Quantity with respect to the 'Total Amount' in Part-C.
6. Based on the pre-fixed weightages, the amount for the individual items of the Bill of Quantity shall be arrived at. This amount shall be rounded off to the nearest rupee.
7. Based on the quantities of individual item and the amount arrived in SI No: 6 above, unit rate of individual items shall be derived. This unit rate shall be rounded off to four decimal places.
8. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.7 above.

Part C : Bill of Quantities

Tender Specification BHEL:PSSR:SCT:2033 R1 for Erection, testing, commissioning, trial run and handing over of the FGD system (Mechanical) as per the tender specifications. FGD system consists of mainly E & C of Ducts (Tap off from Existing Flue gas duct, Duct from Absorber to Chimney inlet & Duct inside chimney till flue cane connection), Absorber tower along with oxidation blowers, Booster fans, Lime stone grinding and slurry preparation system consist of Wet ball mills, Lime stone silos, Slurry pumps, Gypsum dewatering system, Various Tanks and associated piping and also other auxiliaries i.e. Fire protection system, Equipment cooling water system (ACW and ECW pumps) etc.at 2X500 MW NTPL FGD TUTICORIN SITE.

at NTPL Tuticorin (2X500MW) FGD

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
--	Erection, testing, commissioning, trial run and handing over of the FGD system (Mechanical) as per the tender specifications. FGD system consists of mainly E & C of Ducts (Tap off from Existing Flue gas duct, Duct from Absorber to Chimney inlet & Duct inside chimney till flue cane connection), Absorber tower along with oxidation blowers, Booster fans, Lime stone grinding and slurry preparation system consist of Wet ball mills, Lime stone silos, Slurry pumps, Gypsum dewatering system, Various Tanks and associated piping and also other auxiliaries i.e. Fire protection system, Equipment cooling water system (ACW and ECW pumps) etc.at 2X500 MW NTPL FGD TUTICORIN SITE.	--		
1A	Structure	MT	3,319.09	.3798044
2A	Non Pressure Parts/Ducts/Dampers	MT	2,451.78	.2526064
3A	Rotation Machines	MT	991.51	.0814031
4A	Fabrication of Segments & Structural items for various Tanks	MT	590.53	.0688026
4B	*Erection of Tanks including Structural items & hydro cyclones and other miscellaneous items	MT	721.22	.0845058
5A	Mineral Wool	MT	189.9	.0164245
5B	Fixing Component	MT	49.35	.0067649
5C	Aluminium Sheet & Sealing Compound	MT	50.44	.0067667

Part C : Bill of Quantities

Tender Specification BHEL:PSSR:SCT:2033 R1 for Erection, testing, commissioning, trial run and handing over of the FGD system (Mechanical) as per the tender specifications. FGD system consists of mainly E & C of Ducts (Tap off from Existing Flue gas duct, Duct from Absorber to Chimney inlet & Duct inside chimney till flue cane connection), Absorber tower along with oxidation blowers, Booster fans, Lime stone grinding and slurry preparation system consist of Wet ball mills, Lime stone silos, Slurry pumps, Gypsum dewatering system, Various Tanks and associated piping and also other auxiliaries i.e. Fire protection system, Equipment cooling water system (ACW and ECW pumps) etc.at 2X500 MW NTPL FGD TUTICORIN SITE.

at NTPL Tuticorin (2X500MW) FGD

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
6A	CS Pipes	MT	475.08	.0937005
6B	SS Piping	MT	15	.0062115
7A	Removal and disposal of insulation & duct from existing FG duct to chimney	MT	50	.0030095
TOTAL Weightage				1.0