



Bharat Heavy Electricals Limited

(A Government of India Undertaking)

Power Sector – Eastern Region

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TENDER CHANGE NOTE 01 (TCN – 01) DT: 24-08-2007

WITH REFERENCE TO THE NIT, PUBLISHED IN THE WEB SITES FOR THE WORK OF ERECTION AND COMMISSIONING OF U#1 & U#2 BOILER, ROTATING MACHINES AND DUCT, ESP, CRITICAL PIPING, MICS. PIPING ETC. ALONG WITH MATERIAL UNLOADING, HANDLING AND MATERIAL MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS. AGAINST TENDER DOCUMENT NO PSER:SCT:MJA-B 779:07, FOLLOWING CHANGES MAY PLEASE BE NOTED AND COMPLIED.

01. Clarification on pre-bid discussion. (FILE 1)
02. Revised **BOQ cum schedule of rates(Absolute Value)-Rev.01** (FILE 2A)
03. Revised **BOQ cum schedule of rates(Percentage Value)-Rev.01** (FILE 2B)
04. Annexure – Package-A (FILE 3). This supercedes corresponding Annexure of VOL-ID – Package - A issued earlier.
05. Annexure – Package-B (FILE 4). This supercedes corresponding Annexure of VOL-ID – Package – B issued earlier.

- **BIDDERS ARE REQUESTED TO NOTE THAT THE REVISED BOQ CUM RATE SCHEDULE (REV-01) SUPERSEDES ORIGINAL BOQ. BIDDERS SHALL SUBMIT THEIR OFFER ONLY AS PER REVISED BOQ (REV-01). OFFER FROM BIDDER IN SUPERSEDED BOQ WILL NOT BE CONSIDERED.**
- **BIDDERS ARE REQUIRED TO SUBMIT A DECLARATION IN TECHNO-COMMERCIAL OFFER THAT THEY HAVE SUBMITTED THEIR PRICE BID IN SEALED ENVELOP AS PER REVISED BOQ (REV.-01) ONLY.**

BIDDERS ARE REQUESTED TO SUBMIT OFFER BY THE EXTENDED DUE DATE OF SUBMISSION OF OFFER i.e. 03-09-07(15=00 Hrs).

ALL OTHER TERMS & CONDITIONS OF THE TENDER SHALL REMAIN UNCHANGED.

SR MANAGER (SCT)

CLARIFICATIONS OF PRE-BID DISCUSSION ON 14/08/2007 AT PSER ,HQ, KOLKATA FOR THE WORK OF ERECTION AND COMMISSIONING OF U#1 & U#2 BOILER, ROTATING MACHINES AND DUCT, ESP, CRITICAL PIPING, MICS, PIPING ETC. ALONG WITH MATERIAL UNLOADING, HANDLING AND MATERIAL MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS.

(TENDER NO - PSER:SCT:MJA-B779:07)

Sl. No.	Description/ Tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
A. SCC – VOL – ID – PACKAGE-A & PACKAGE-B			
A.1	<u>APPENDIX – I</u>	Review of 'ESTIMATED WEIGHT OF VARIOUS PRODUCT GROUPS FOR EACH UNIT'	Refer to APPENDIX– I (Rev 01) of Annex - Package-A & Annex – Package – B separately for both the packages.
A.2	<u>APPENDIX – III</u>	Review of 'LIST OF T&P TO BE PROVIDED BY BHEL FREE OF HIRE CHARGES ON SHARING BASIS FOR ERECTION AND COMMISSIOINING'	Refer to APPENDIX– III (Rev 01) of Annex - Package-A & APPENDIX– III A(Rev 01) & APPENDIX– III B(Rev 01) – for package B
A.3	<u>APPENDIX – IV A</u>	Review of 'MAJOR TOOLS AND PLANTS & MMDs TO BE DEPLOYED BY THE CONTRACTOR FOR HANDLING UNLOADING /HANDLING AT PREASSEMBLY AREA ,ERECTION AND COMMISSIONIG ETC.'	Refer to APPENDIX– IV A (Rev 01) of Annex - Package-A & Annex – Package – B separately for both the packages.
A.4	<u>APPENDIX – IV B</u>	Review of 'MINIMUM EQUIPMENTS HAVE TO BE ARRANGED BY THE CONTRACTOR FOR MATERIAL UNLOADING, HANDLING, LOADING AT OPEN OPEN STORAGE YARD /STORES'	Refer to APPENDIX– IV B (Rev 01) of Annex – Package – B only
A.5	<u>APPENDIX – VI</u>	Review of 'MAJOR consumables TO BE DEPLOYED BY THE CONTRACTOR FOR MATERIAL MANAGEMENT OF COMPLETE PLANT MATERIAL'	Refer to APPENDIX-VI (Rev.01) of Annex - Package-A & Annex – Package – B separately for both the packages.
A.5	APPENDIX-V	Review of MAJOR CONSUMMABLES TO BE PROVIDED BY BHEL FREE OF COST FOR EACH UNIT	Refer to APPENDIX-V (Rev 01) of Annex - Package-A & Annex – Package – B separately for both the packages.
A.6	<u>New Clause Cl. no. 11.2.8 introduced</u>	New clause under "OBLIGATION OF BHEL" introduced in Package – A & Package - B	New Clause introduced is as below :- 'One no. 115T/30T EOT crane shall be provided on sharing basis in the power house area. Operator and consumable shall be provided by other contractor (by TG package contractor). Routine, Break down maintenance (not attributable to the contractor) is excluded from the scope of the contractor. However, the contractor has to co-ordinate with the TG package contractor for availability of the EOT Crane & its operator.
A.7	<u>Clause no. 11.1.1 Para 2</u>	As per tender - In addition to above, under appendix III, BHEL may provide 1 no 75 T crawler crane free of cost on sharing basis.....	Shall be read as below for Package A & Package – B: In addition to above, under appendix III, BHEL may provide 1 no crane of capacity up to 75 T free of cost on sharing basis.....

Sl. No.	Description/ tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
A. SCC – VOL – ID – PACKAGE-A & PACKAGE-B			
A.8	<u>Clause no. 11.1.1</u>	Confirm whether the higher capacity Crane from M/s. BHEL can be used for shifting/ loading the Boiler drum 1 & 2 from stock yard/ storage yard.	BHEL shall provide Cranes, as required for unloading / handling of the Boiler drum, free of cost for Package – A & Package - B
A.9	<u>Cl. no. 25</u>	Variation in HP butt weld joint quantities	As per tender terms for Package – A & Package - B
A.10	<u>Cl. No. 26.10.7</u>	As per Tender: Average single man-hr rates including overtime, if any, supervision, use of tools & tackles and other site expences and incidentals including consumbales for carrying out rework / revamping as certified by site as may arise during the course of erection testing and commissioning- Rs 25.00 per manhour.	Shall be read as below for Package A & Package – B: Average single man-hr rates including overtime, if any, supervision, use of tools & tackles and other site expences and incidentals including consumbales for carrying out rework / revamping as certified by site as may arise during the course of erection testing and commissioning- Rs 40.00 per manhour.
A.11	<u>Cl. No. 26.10.8</u>	As per Tender: Average single man-hr rates including overtime, if any, supervision, use of tools & tackles and other site expences and incidentals excluding consumbales for carrying out rework / revamping as certified by site as may arise during the course of erection testing and commissioning- Rs 16.00 per manhour.	Shall be read as below for Package A & Package – B: Average single man-hr rates including overtime, if any, supervision, use of tools & tackles and other site expences and incidentals excluding consumbales for carrying out rework / revamping as certified by site as may arise during the course of erection testing and commissioning- Rs 25.00 per manhour.
A.12	<u>Cl. no. 23.0</u>	<u>REVISION ON ACCEPTED CONTRACT RATE</u> Not applicable	Shall be read as below :- ORC not applicable for this contract. <u>REVISION ON ACCEPTED CONTRACT RATE</u> In case the contract gets extended beyond the contractual completion period with extension as allowed by BHEL for reasons not attributable to contractor and balance value of the job is more than 15% of Contract Value on contract completion date, the contractor shall be entitled for rate revision at the rate of 10 % per annum or part thereof on their quoted / accepted basic rates price (i.e. without applying PVC). Such rate increase shall be applied on balance work (item wise) left beyond contractual completion period. During execution of work in this extended period, the contractor shall be entitled for such increase provided delay is not attributable to the contractor. PVC will not be applicable on enhanced incremental rate.

Sl. No.	Description/ tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
A. SCC – VOL – ID – PACKAGE-A & PACKAGE-B			
A.13	<u>Clause No: 17.2</u>	<p>As per tender Service tax (including educational cess) shall be reimbursed against submission of documentary evidences, i.e, copy of TR-6 Challan and Self certified reconciliation Statement to the satisfaction of BHEL. As such, the bidder's quoted rate shall be Exclusive of the Service Tax (including educational cess). Any changes in Service Tax rules (by Government) shall be complied with. Vendor may have to opt for composition scheme applicable for execution of the contract vide notification no. 32/2007 dated 22/6/2007. For that, vendor shall obtain prior approval of BHEL before deposit of Service Tax to the service Tax Department.</p>	<p>Shall be read as below for Package A & Package – B Service tax (including educational cess) as legally leviable & payable by the contractor under the provisions of applicable law / act shall be paid by BHEL as per contractor's bill. However, contractor shall have to submit proof of service tax deposited by them immediately after the deposit but not later than the next bill submitted after the due date of deposit. The contractor shall furnish proof of service tax registration with Central Excise Division covering the services covered under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by contractor on BHEL for this project. The contractor shall obtain prior approval of BHEL before billing the service tax amount.</p> <p>With introduction of Cenvat credit rules 2004 which came into force w.e.f. 10.09.2004, excise duty paid on input goods including capital goods used for providing the output service and service tax paid on input service can be taken credit of against the service tax payable on output service. As such, while offering the rates, the contractors may take into account the benefit of above provisions as the cost of input to contractors will be the cost net of excise duty and service tax and adjust their offer price accordingly to make it more competitive.</p> <p>As such, the bidder's quoted rate shall be Exclusive of the Service Tax (including educational cess). Any changes in Service Tax rules (by Government) shall be complied with.</p>
A.14	<u>Clause No: 16.4.1 C)</u>	Header for Payment terms (Group VI) changed for package –A & Package – B as per Annex - Package-A & Annex – Package – B separately for both the packages	<p>-In the Header – Col-3 – “Piping And Valves” to be read as “Piping And Valves etc. (Sl. No. 6.1, 6.2, 6.3, 6.5, 6.6)” -In the Header – Col-4 – “Structures, Hangers, Tanks & Vessels etc.” to be read as “STRUCTURES, HANGERS, PLATFORMS ETC. (Sl. No. 6.4, 6.7& 6.8)”</p>
A.15	<u>Clause No: 16.4.1 D)</u>	New clause introduced for Package – A only as per Annex – Package - A	Stages Of Progressive Pro-Rata Payments of Boiler Drum unloading (Sl. No. 8.0 of Price schedule , Vol-III) introduced

Sl. No.	Description/ tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
B. TECHNICAL SPECIFICATION – VOL – II – PACKAGE-A & PACKAGE-B			
B.1	<u>Cl. no. 2.3.5 of PKG-A & PKG-B</u>	As per Tender: Contractor should obtain the formal clearance from Chief Inspector of Boilers / Bihar	Shall be read as below for Package A & Package – B: Contractor should obtain the formal clearance from Chief Inspector of Boilers / West Bengal .
B.2	<u>Cl. no. 2.4.18.14 for PKG-B only</u>	—	Clause stands deleted

Sl. No.	Description/ tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
C. BOQ – VOL – III – PACKAGE-A & PACKAGE-B			
C.1	<u>PRICE SCHEDULE VOL-III A (For PKG-A & PKG-B) & IIIB (For PKG-A & PKG-B)</u>	PRICE SCHEDULE VOL-III A (For PKG-A & PKG-B) & IIIB (For PKG-A & PKG-B)	PRICE SCHEDULE VOL-III A (For PKG-A & PKG-B) & IIIB (For PKG-A & PKG-B) amended as (Rev-01) supersedes earlier Price Schedule Vol-III A & Vol-III B (rev-00)

Sl. No.	Description/ tender clause no	Tender clause / Clarifications asked by bidder	Clarifications by BHEL
D. NIT			
D.1	<u>Due date of offer submission</u>	Due date of offer submission – 27-08-07 (15=00 Hrs)	Due date of offer submission – 03-09-07 (15=00 Hrs)

ALL OTHER TERMS AND CONDITIONS SHALL REMAIN UNCHANGED.

APPENDIX – I (Rev 01)
ESTIMATED WEIGHT OF VARIOUS PRODUCT GROUPS FOR EACH UNIT

PRODUCT GROUP (PG)	DESCRIPTION OF PG	APPROX DESIGN WEIGHT (MT)
GROUP-I : PRESSURE PARTS (Rev 01)		
04	BOILER DRUM WITH INTERNALS	244
05	WATER WALL HEADERS	180
06	WATER WALL PANELS	500
07	CIRCULATION SYSTEM e.g. DOWNCOMER & RISER TUBES AND HANGERS & SUSPENSION	320
08	BUCKSTAYS & FURNACE GUIDES	662
09	SEAL BOXES FOR FURNACE OPENING & INSTRUMENT INSERTS	12
10	SUPER HEATER HEADERS	177
11	SUPER HEATER COILS	923
12	SH SPACER TUBES, SAT. LINKS, DESH & DESH LINKS, SH HANGERS & SUPPORTS	402
15	REHEATER HEADERS	52
16	REHEATER COILS ETC.	527
17	REHEATER LINKS & SUSPENSIONS	92
18	FURNACE ROOF SKIN CASING	22
19	ECONOMISER COILS, HEADERS & PIPES	751
20	SOOT BLOWERS	73
28	FURNACE DOORS & FASTENERS	5
31	SKIN CASING & COMPONENTS	17
32	FIXING COMPONENTS FOR INSULATION (ONLY ATTACHMENTS TO PR. PARTS & PIPING)	16
SUB TOTAL (in MT)		4975
GROUP-II : INTEGRAL/TRIM PIPINGS (Rev 01)		
21	SOOT BLOWING STEAM PIPING	28
24	BOILER TRIM PIPING, SAFETY VALVES, SILENCERS, NAME PLATES ETC.	368.4
42	OIL SYSTEM PIPINGS	63
SUB TOTAL (in MT)		459.4
GROUP-III : NON-PRESSURE PARTS (Rev 01)		
30	MAIN BOILER ENCL.	187
35	MAIN BOILER STRUCTURES	4812
36	BOILER MAIN FLOORS, STAIRS & LADDERS ETC.	3350
38	INTERCONNECTING STRUCTURES & PLATFORMS	700
39	COLUMNS & FRAMES FOR DUCTING, FAN HANDLING STRUCTURES ETC.	1632
41	OIL & GAS BURNERS, IGNITORS ETC.	4
43	IGNITOR, SCANNER & SEAL AIR SYSTEM	60
45	COAL BURNERS	140
47	PULVERISED FUEL PIPING & SUPPORTS	392
48	AIR DUCTS, FLUE GAS DUCTS, DAMPERS, EXPN. JOINTS/NMEJs, DUCT SUPPORTS ETC.	1855
57	Dampers & gates	453
50	STEAM COIL AIR HEATER	13
67	MILL PLANT AUXILIARIES	150
81	MISC TANKS(IBD/CBD/CC PUMP MAKE UP WATER TANK/METERING TANK, CW STORAGE TANK ETC.)	30
99*	MISC. HANDLING EQUIPMENT	38
SUB TOTAL (in MT)		13816

GROUP-IV : ROTATING MACHINES (Rev 01)		
52	ROTARY REGENERATIVE AIR HEATER	1192
55 & 56	FD, ID & PA FANS WITH SUB-DELIVERIES	379
-	MOTORS (ID, FD, PA, MILLS, SA, SC ETC)	200
61	COAL MILLS & SUB-DELIVERIES	1080
65	COAL FEEDERS	46
SUB TOTAL (in MT)		2897

TENTATIVE WEIGHT SCHEDULE OF ESP :
APPENDIX 1-GROUP V [FOR EACH UNIT] (Rev 01)

CUST	NS	PGMA	DESCRIPTION	APPROX. WT. (in KGS)
R505	1	79401	ROLL/SLIDE SUPPORTS	24000
R505	1	79405	ESP-SUB-DELIVERY COMPON	1000
R505	1	79406	INSULATOR HOUSING AS	52500
R505	1	79408	GAS DIST. ASSY	105000
R505	1	79409	GD-RAPPING MECHANISM	16500
R505	1	79410	GD_DRIVE ARRANGEMENT	858.216
R505	1	79411	GAS SCREEN-EP	51000
R505	1	79413	EMIT SYST SUSPENSION	19795.144
R505	1	79414	SUPPORT INSULATORS	8640
R505	1	79415	EMITTING ELECTRODES	30244.5
R505	1	79416	EMIT ELECT RAPP MECH	43500
R505	1	79417	DRIVE ARGT. FOR EMIT. S	37800
R505	1	79419	COL ELEC SUSPENSION	131000
R505	1	79420	COLLECTING ELECTRODE	688463.926
R505	1	79421	EMIT SYS FRAME-TOP	179770.154
R505	1	79422	EMIT SYS FRAME BOTOM	217342.464
R505	1	79423	INSPECTION DOORS	15302.144
R505	1	79424	SHOCK BARS	113078.591
R505	1	79425	COLL ELECT RAPP MECH	124000
R505	1	79426	COLL ELEC RAPP DRIVE	7723.944
R505	1	79428	ESP ROOF PANELS	203172.428
R505	1	79430	ELECTRICAL SD COMPTS	16583.04
R505	1	79431	GEARED MOTORS FOR RAPP	26910.4
R505	1	79432	EMIT SYS FRAME-MIDLE	177803.796
R505	1	79437	JUNCTION BOX & PUSH BUT	2060
R505	1	79442	OUTER ROOF-EP	288000
R505	1	79443	HOPPER RIDGES	85000
R505	1	79444	HOPPER UPPER PART	481000
R505	1	79445	HOP MLD&LOWER PART	467000
R505	1	79446	INSULATOR SUPP PANEL	122000
R505	1	79447	ROOF PANEL ASSY	144000
R505	1	79448	CASING STRUCTURE	459495.088
R505	1	79449	CASING SHELL/PANEL	574802.316
R505	1	79450	INLET-OUTLET FUNNEL	184000
R505	1	79455	PENT HOUSE FOR E P	270000
R505	1	79457	SPLITTER&GUIDE VANES	10000
R505	1	79459	CONTROL ROOM-INSERTS	30000
R505	1	79460	CABLE-CABLE RACKS	230000
R505	1	79461	EP PERF TEST EQUIPT	1000
R505	1	79462	EARTHING,CABLE TRAYS,SU	130000
R505	1	79463	ASH LEVEL INDICATOR	1176.912
R505	1	79465	APP PLATFORM-HOPPER	175000
R505	1	79466	WATER WASHING SYSTEM	4000
R505	1	79467 / 68	ROOF INSULATION	30000

R505	1	79472	INTERLOCKS-EP	2105.2
R505	1	79473	ELECTRICALLY OPERTD HOI	6260
R505	1	79474	OPACITY MONITOR & ACCES	1000
R505	1	79477	LT SWITCH BOARD/ESP SWT	38000
R505	1	79478	BAPCON & ACCESSORIES	2000
R505	1	79481	SUPPOTING STRUCTURES FO	650000
R505	1	79490	HEATING ELEMENTS	4432
R505	1	79492	AUXILIARY CONTROL PANEL	30000
R505	1	79493	RAPPER CONTROL PANEL	1202
R505	1	79494	STATCON PANEL	1000
R505	1	79520	COLLECTING ELECTRODE	683362.17
R505	8	79988	COMMISSIONING SPARES	500
R505	6	79996	TOOLS & TACKLES	200
R505	6	79997	MANDATORY SPARES	6000
R505	6	79999	INITIAL SPARES	2000
R505	1	89610	EP GALLERIES&STAIRS	90000
R505	1	89611	ESP ROOF HANDRAILS	10000
			TOTAL (IN KG.)	7508584.433
			TOTAL (IN MT APPROX.)	7508.00

APPENDIX-I (GROUP VI –POWER CYCLE PIPING, SG PIPING, TG PIPING ETC)**(Rev 01)****LIST OF APPLICABLE PG-MAs AND WEIGHT SCHEDULE
OF PIPING (POWER CYCLE PIPING, TG PIPING) (Rev 01)**

SL NO	PGMA	DESCRIPTION	APPROX. WT IN (MT) FOR UNIT-1
1	24345	MAIN STEAM PIPING SH OUT TO BLER STOP VALVE II	34.50
2	80301	MS FROM BOILER STP VALVE TO ESV	114.0
3	80303	MS HEADER TO AUX PRDS	15.0
4	80304	MS HEADER TO HPBP VALVE	24.0
5	80307	HP & LP BYPASS WARM UP	1.7
6	80310	HRH FROM REHEATER TO INTERCEPTOR VALVE	300.0
7	80311	HRH FROM INTERCEPTOR VALVE TO TURBINE	20.0
8	80312	LPBP VALVE UPSTREAM & DOWNSTREAM	109.0
9	80320	CRH FROM TURBINE TO REHEATER	129.0
10	80321	HPBP VALVE TO CRH PIPING	12.0
11	80322	CRH PIPING TO DEAERATING HEATER	11.0
12	80323	STEAM TO BFP DRIVE TURBINE	3.7
13	80324	CRH HEADER TO AUX. PRDS	1.3
14	80329	EXTRACTION STEAM TO BFP DRIVE TURBINE	12.0
15	80331	EXTRACTION STEAM TO LP HEATER-2	5.9
16	80332	EXTRACTION STEAM TO LP HEATER-3	3.3
17	80335	EXTRACTION STEAM TO DEAERATING HEATER	13.0
18	80336	EXTRACTION STEAM TO HP HEATER NO.1	7.0
19	80337	EXTRACTION STEAM TO HP HEATER NO.2	6.3
20	80339	AUX STEAM TO BFD TURBINE	1.2
21	80340	AUX STEAM HEADER	5.6
22	80341	AUX STEAM HEADER INTERCONN BETWEEN UNITS	41.0
23	80345	AUX STEAM TO DEAERATING HEATER	6.8
24	80349	AUX STEAM TO GLAND SEALS - TG SCOPE	1.7
25	80362	EXHAUST STEAM FROM PRIME MOVERS-SG SCOPE	20.0
26	80373	AUX STEAM HEADER SV EXHAUST	6.4
27	80420	BOILER FEED PUMP SUCTION	21.0
28	80421	BOILER FEED PUMP RECIRCULATION	28.0
29	80423	BOILER FEED PUMP TO HPH INCLUDING BYPASS	88.0
30	80424	BFD BETWEEN HTRS & GROUP PROTECTION VLV	47.0
31	80425	BFD FROM FINAL HPH TO SG TP	119.0
32	80430	SPRAY WATER TO HPBP	5.2
33	80432	SPRAY WATER TO BOILER DESH UPTO SG TP	19.0
34	80433	SPRAY WATER FROM BFP INTERSTAGE	4.2
35	80452	HP PIPING DRAINS - SG SCOPE	24.0
36	80453	LP PIPING DRAINS - SG SCOPE	8.4
37	80811	H AND S FOR BOILER FEED DISCHARGE PPG LU	20.0
38	80812	H AND S FOR AUXILIARY STEAM PIPING FOR LU	28.0
39	80830	H AND S FOR CRITICAL PIPING - STEAM LINES	130.0
40	80840	AUX STR FOR MAIN STEAM PIPING FOR SB	311.0

41	80871	H AND S OF MISCELLANEOUS PIPING FOR SYN	35.0
			1793.2
		Misc. valves / Nozzles / Orifice / Traps / root valves / Thermowells etc.	
42		HP Bypass Valves with piping & accessories	10.0
43		Extraction /CRH –NRVs	30.0
45		Control Valves for HP Piping	80.0
46		Misc. power cycle / TG piping valves/ Nozzles / Orifice / Traps / root valves/ thermowells etc.	120.0
			240

**LIST OF APPLICABLE PG-Mas AND WEIGHT SCHEDULE
OF BOILER INTEGRAL PIPING (Rev 01)**

PGMA		DESCRIPTION	APPROX. WEIGHT FOR UNIT-1 (in KG)
24	350	BOILER FILLING PIPING	1600
80	342	AUX STEAM TO SCAPH	5,000
80	343	AUX STEAM TO AH SOOT BLOWERS	2,100
80	344	AUX STEAM TO FO SYSTEM TP	20,000
80	351	AUX STEAM TO UNLISTED USERS - SG SCOPE	16,000
80	352	AUX STEAM TO UNLISTED USERS - TG SCOPE	2,000
80	355	STEAM TRACING PIPING	12,000
80	364	CBD TANK VENT TO SYSTEM	2,800
80	365	CBD TANK VENT/SV EXHAUST TO ATMOSPHERE	900
80	366	IBD TANK VENT TO ATMOSPHERE	12,000
80	368	SCAPH DRAIN TANK VENT/SV EXHAUST TO ATM	2,300
80	395	AUX STEAM TO FUEL OIL ATOMISING	1,200
80	418	ERECTION MATERIALS FOR INSTRUMENTS	300
80	450	CBD AND EMERGENCY DRUM DRAIN	2,000
80	451	BOILER INTEGRAL PIPING DRAINS	14,000
80	453	LP PIPING DRAINS - SG SCOPE	4,900
80	454	SCAPH DRAINS	2,400
80	455	DRAIN FROM UNLISTED EQPT/VESSEL-SG SCOPE	3,500
80	460	SG AUX COOLING WATER UNIT SYSTEM	46,000
80	471	BOILER WATER WASH TO & FROM UNIT	12,000
80	477	SERVICE WATER PIPING	2,000
80	480	FIRE WATER-OTHER AREAS	6,200
80	600	HIGH PRESSURE DOSING PIPING	1,200
80	612	SERVICE AIR FOR INDIVIDUAL UNITS	13,000
80	616	INSTRUMENT AIR FOR INDIVIDUAL UNIT	11,000
80	650	FUEL OIL SUPPLY AND RETURN PIPING	90,000
80	812	H&S FOR AUXILIARY STEAM PIPING FOR LU	23,000
80	820	AUX STR OF DRAINS AND VENTS FOR LU	33,000

80	901	SUB DELIVERY VALVES FOR LIGHT UP	9,000
80	905	BHEL VALVES FOR LIGHT UP	22,000
		SUB TOTAL (in KG.)	373,400
		SUB TOTAL (in MT)	373.4

**LIST OF APPLICABLE PG-Mas AND WEIGHT SCHEDULE
OF TEMPORARY PIPING (Rev 01)**

PGMA		DESCRIPTION	APPROX. WEIGHT FOR UNIT- 1(in KG)
80	399	STEAM BLOWING PIPING-TEMPORARY	61,000
80	604	CHEMICAL CLEANING PIPING-TEMPORARY	50,000
80	816	H&S OF ACID CLEANING PIPING	8,000
80	917	BHELVALVE-ACID CLEANING ALKALI FLUS-TEMP	5,500
80	918	BHEL VALVES-TEMPORARY PIPING FOR SB	5,200
80	927	H&S FOR TEMPORARY PIPING - STEAM BLOWING	9,000
		SUB TOTAL (in KG.)	138,700
		SUB TOTAL (in MT)	138.7

**CATEGORY WISE TONNAGE UNDER PIPING GROUP FOR EACH UNIT OF MEJIA
2X500 MW PROJECT (GROUP VI) (Rev 01)**

SL. NO.	CATEGORY / DESCRIPTION	APPROX WT IN MT FOR UNIT-1
1	P-91 PIPINGS	172
2	OTHER ALLOY STEEL PIPINGS	562
3	CARBON STEEL PIPINGS	822
4	STRUCTURES / HANGERS & SUPPORTS	580
5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZLE, ORIFICE, TRAPS, THERMOWELLS ETC.	270
6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS, HANGER & SUPPORT) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138
7	PERMANENT PLATFORMS / APPROACHES FOR EQPT./VALVES ETC.	100
	TOTAL (in MT) (GROUP V –PIPING)	2644

NOTES ON APPENDIX 1 (Rev 01) (APPROXIMATE WEIGHT SCHEDULE)

1.0	Besides product groups indicated herein, there is likelihood of addition of new product groups by BHEL's unit for release of some items, integral to this work. Tenderers' quoted unit rates shall be applicable for such product groups also.
2.0	BHEL's decision with regard to classification of a particular product group is binding on the contractor.
3.0	For temporary system, required for Steam Blowing, Chemical cleaning etc., the pumps and vessels/tanks will be categorized as NPP (non-Pressure Part) and Temporary piping system with valves and fittings and Hanger & support will be categorised under Piping Group (Group VI applicable item) and payment will be made for erection & commissioning only (as per applicable rate / MT). No separate payment will be made for dismantling and return of such piping, Tanks etc. to site store. The tonnage calculated by BHEL engineer is final and binding to the contractor. This Clause shall supersede all other clauses regarding payment modality for temporary piping system, if appearing contrary to this clause, elsewhere in the tender.
4.0	The weights indicated in above schedule are approximate only and are liable to variations and alternations. Rates quoted by the contractors shall remain valid for +/- 20 % of contract price, superseding other variations stipulated elsewhere in the tender, if any.

APPENDIX – III (Rev 01)
LIST OF T&P TO BE PROVIDED BY BHEL FREE OF HIRE CHARGES ON SHARING BASIS
FOR ERECTION AND COMMISSIONING

SL NO	DESCRIPTION & CAPACITY OF T&P	QUANTITY	REMARKS
01	High capacity crane of 600MT capacity/equivalent crane with ringer	01 No	On sharing basis for limited period during the erection of structures like upper tiers of boilers, ceiling girders, roof top structures etc for which high capacity crane is required.
02	Mid range crawler/ tyre mounted crane (capacity 200 MT and above)	01 No	On sharing basis as per requirement during the execution period
03	Crawler/ tyre mounted crane . (100-150 MT)/equivalent	01 No	On sharing basis as per requirement during the execution period
04	EOT Crane (115T / 30T capacity) in Power House	01 No	On sharing basis as per requirement during the execution period
05	Passenger Cum Good lift	01 No	During the execution period
06	Hydraulic test/ pressurizing pump: 0-450/600 Kg / cm ²	01 No	With necessary electrical starter
07	Acid/ chemical cleaning pump: 200 TPH/equivalent with control panel	05 Nos	----Do---
08	Acid/ chemical Injection pump	03 Nos	---Do----
09	HUCK –BOLTING MACHINE	01 No	Only M/c with hydraulic oil
10	Induction Welding machines	04 nos	On sharing basis as per requirement

For details please refer relevant sections and clauses.

APPENDIX – IV A (Rev 01)
MAJOR TOOLS AND PLANTS & MMDs TO BE DEPLOYED BY THE CONTRACTOR FOR
HANDLING UNLOADING /HANDLING AT PREASSEMBLY AREA ,ERECTION AND
COMMISSIONING ETC

TOOL & PLANTS

SL NO	DESCRIPTION OF EQUIPMENTS	CAPACITY	MINIMUM QUANTITY
01	Crawler cranes	75 T	02 (two) nos 1 st crane to be deployed with in 30 days from LOI and 2 nd crane to be deployed with in 90 days from LOI.
02	Tyre mounted/Crawler cranes with telescopic boom/lattice boom	40 T	02 (two) nos 40 T-1no To be deployed with in 30 days from LOI. 40 T – 1 no To be deployed with in 90 days from LOI
03	Pick and carry cranes	18 T/25 T	2(two) nos 1 no to be deployed with in 30 days from LOI 1 no to be deployed with in 60 days from LOI
04	Pick & carry tyre mounted mobile crane	10 T/ 12 T/ 14 T	06 (six) nos 2nos with in 30 days of LOI and bal progressively with in 90 days from LOI
05.1	Trailer	40 T	1 no (with in 90 days of LOI)
05.2	Tractor trolley/ trailer	25 T	04 (four) nos 1 st trailer to be deployed with in 30 days of LOI and 2nd Trailer with in 60 days of LOI and bal with in 120 days of LOI
06	Truck	9 T/ 12 T capacity	04 (four) nos. 02 (two) nos. within 30 days. Balance within 90 days.
07	Wheel mounted lorry / dip trolley	10 T	As per requirement
08	Air compressor (electric) – 7 kg/cm ²	100 psi/ 80 cfm	As per requirement
09	Tig welding test	-	As per requirement
10	Plasma cutting m/c	10 mm	As per requirement
11	Pre-heating/ stress relieving set (heating control panel, cables, heating elements etc.)	As per requirement	As per requirement
12	Radiography arrangement including the source.	IR 192	As per requirement

13	Radiography film viewer	Min	As per requirement
14	High frequency unit for TIG welding		As per requirement
15	Digital Temperature indicator		As per requirement
16	Infrared sensor for Temperature detector		As per requirement
17	RECORDABLE ULTRASONIC TEST EQUIPMENT (UFD KRAFT KAMMER MAKE USN50 or higher version to meet the requirements)	RECORADAD LE	As per requirement
18	GAS BURNER ARRANGEMENT		As per requirement
19	PORTABLE HARDNESS TESTER	EQUOTIP OR MICRODUR MAKE	As per requirement
20	SPOT WELDING MACHINNE		As per requirement
21	MOTORISED PIPE BENDING MACHINE FOR BENDING PIPES UPTO 100Nb	AS REQD.	As per requirement
22	Electro-hydraulic pipe bending machine.	For up to 100 mm NB pipes	As per requirement
23	Pipe bending machine – hand operated	Up to 50 mm NB pipes	As per requirement
24	Pipe chamfering machine	For machine pipe dia upto 800 mm	As per requirement
25	Pneumatic / Electric drive power hackshaw for pipe cutting	As per reqmnt	Minimum 4 nos.
26	Portable pipe cutting & chain machine	As per reqmnt	As per requirement
27	DG set	(to cater minimum 10 nos. Welding generators, required lighting and small drives like grinding machines etc.)	1 set
28	Welding generator (electric & diesel)	300 amps	As per requirement.(minimum 175 nos during peak requirement)
29	3 phase distribution board with complete set up for drawl of construction power.	600 amp	As per requirement
30	Electric cable for drawl & distribution of construction power	As per site requirement	As per requirement
31	Semi-automatic welding m/c		Min 4 nos.
32	Dehumidifier for Electrode Storage room		Min 1 set
33	Baking oven and holding oven with	As per	As per requirement

	thermostat and temperature gauge for baking coated welding electrodes	requirement	
34	Portable oven for coated welding electrodes	As per requirement	As per requirement
35	Motorised megger	As per requirement	03 set
36	Strand jacks with ropes, guides, anchors, hydraulic drive unit including control panel complete in all respect for drum lifting	As per requirement	01 set
37	Winches (electric) (winches also includes wire ropes)	10 T 05 T 03 T Others	Minimum 02 nos Minimum 14 nos Minimum 06 nos As per requirement
	Winches(Hand operated)	1 T	As per requirement
38	Hydraulic jacks	100 T 50 T Others	04 nos 04 nos As per requirement
39	1 sec theodolite		02 nos
40	Pneumatic /Electrical orque wrenches (spec 600 ft lb)	600 ft-lb (up to min M 64 size)	06 nos
41	Mechanical torque wrench	750 ft-lb	06 nos
42	Special slings and deshakles for unloading drum and lifting of ceiling girder and handing ODC consignments		As per requirement.

Note

The above major T&P list is indicative only. Additional T & Ps, if required have to be mobilized by you within the quoted/accepted rate.

MEASURING AND MONITORING DEVICES (MMD)

As per requirement .

APPENDIX-V (Rev 01)

MAJOR CONSUMMABLES TO BE PROVIDED BY BHEL FREE OF COST FOR EACH UNIT

SN	DESCRIPTION OF ITEMS
01	All lubricants, chemicals and N ₂ gas as required for testing, preservation, chemical cleaning / acid cleaning, oil flushing and the lubricants for trial runs of the equipments and trial operation of the unit
02.	TIG wires which wil be supplied by BHEL units.
03	Filler rods and electrodes for P91 piping system.

APPENDIX-VI (REV 01)

1) MAJOR consumables TO BE DEPLOYED BY THE CONTRACTOR FOR ERECTION AND COMMISSIONING OF EACH UNIT

SN	DESCRIPTION OF ITEMS
01	Electrodes for CS , SS, AS – As required except for the special electrodes supplied by BHEL/Manufacturing Units
02.	Different gases like O2, CO2, Argon, D/A etc.
03	CTC, Petrol, diesel, kerosene – As required.
04	Lapping pastes
05	NDE Consumables
06.	Hoses and clamps of different sizes – As required
07	Touch –up paints, preservatives and other consumables.
08	Cotton wastes, jutes etc.
09	Grouting cement as applicable
10	Sleepers for dragging of equipment like drums etc – As required.
09	Other consumables to complete the job (other than those supplied by BHEL free of cost as per Appendix V

NOTE: The above list is not exhaustive and all required the consumables required to complete the work shall have to be arranged by the successful contractor at his cost.

UNDER CI. 16.4 of SCC PACKAGE A**16.4.1 C) Stages Of Progressive Pro-Rata Payments of Piping Group (Group VI)****100 % PAYMENT BREAK UP**

SL NO	STAGES OF PAYMENT	PIPINGS AND VALVES ETC. (SI. No. 6.1, 6.2, 6.3, 6.5, 6.6)	STRUCTURES, HANGERS, PLATFORMS ETC. (SI. No. 6.4, 6.7 & 6.8).
A	Completion of Pre-assembly	15%	----
B	Placement in Position	25%	50%
C	Alignment, welding, grouting & bolting as required	35%	40%
D	Completion of non destructive examination & stress relieving / heat treatment	10%	----
E	Completion of Hydraulic test(drainable)	05%	----
F	Pre-Boiler System Flushing/chemical cleaning	01%	----
G	Boiler light up and ABO	01%	02%
H	Completion of steam blowing	01%	---
J	Hot correction of hangers	01%	02%
K	COAL FIRING	01%	01%
L	FULL LOADING	01%	01%
M	Submission of As-built drawings	01%	01%
N	Liquidation of pending points	01%	01%
O	Reconciliation of issued materials	01%	01%
P	Completion of all contractual Obligation and de mobilization of site office.	01%	01%
	TOTAL	100%	100%

16.4.1D	Stages Of Progressive Pro-Rata Payments of Boiler unloading (SI. No. 8.0 of Price schedule , Vol-III)	100% break up
SI no of rate schedule	Description of activity	% of payment
8.0	<ul style="list-style-type: none"> Unloading from railway wagon Shifting to the boiler area 	50% 50%

APPENDIX – I (Rev 01)
ESTIMATED WEIGHT OF VARIOUS PRODUCT GROUPS FOR EACH UNIT

PRODUCT GROUP (PG)	DESCRIPTION OF PG	APPROX DESIGN WEIGHT (MT)
GROUP-I : PRESSURE PARTS (Rev 01)		
04	BOILER DRUM WITH INTERNALS	244
05	WATER WALL HEADERS	180
06	WATER WALL PANELS	500
07	CIRCULATION SYSTEM e.g. DOWNCOMER & RISER TUBES AND HANGERS & SUSPENSION	320
08	BUCKSTAYS & FURNACE GUIDES	662
09	SEAL BOXES FOR FURNACE OPENING & INSTRUMENT INSERTS	12
10	SUPER HEATER HEADERS	177
11	SUPER HEATER COILS	923
12	SH SPACER TUBES, SAT. LINKS, DESH & DESH LINKS, SH HANGERS & SUPPORTS	402
15	REHEATER HEADERS	52
16	REHEATER COILS ETC.	527
17	REHEATER LINKS & SUSPENSIONS	92
18	FURNACE ROOF SKIN CASING	22
19	ECONOMISER COILS, HEADERS & PIPES	751
20	SOOT BLOWERS	73
28	FURNACE DOORS & FASTENERS	5
31	SKIN CASING & COMPONENTS	17
32	FIXING COMPONENTS FOR INSULATION (ONLY ATTACHMENTS TO PR. PARTS & PIPING)	16
SUB TOTAL (in MT)		4975
GROUP-II : INTEGRAL/TRIM PIPINGS (Rev 01)		
21	SOOT BLOWING STEAM PIPING	28
24	BOILER TRIM PIPING, SAFETY VALVES, SILENCERS, NAME PLATES ETC.	368.4
42	OIL SYSTEM PIPINGS	63
SUB TOTAL (in MT)		459.4
GROUP-III : NON-PRESSURE PARTS (Rev 01)		
30	MAIN BOILER ENCL.	187
35	MAIN BOILER STRUCTURES	4812
36	BOILER MAIN FLOORS, STAIRS & LADDERS ETC.	3350
38	INTERCONNECTING STRUCTURES & PLATFORMS	700
39	COLUMNS & FRAMES FOR DUCTING, FAN HANDLING STRUCTURES ETC.	1632
41	OIL & GAS BURNERS, IGNITORS ETC.	4
43	IGNITOR, SCANNER & SEAL AIR SYSTEM	60
45	COAL BURNERS	140
47	PULVERISED FUEL PIPING & SUPPORTS	392
48	AIR DUCTS, FLUE GAS DUCTS, DAMPERS, EXPN. JOINTS/NMEJs, DUCT SUPPORTS ETC.	1855
57	Dampers & gates	453
50	STEAM COIL AIR HEATER	13
67	MILL PLANT AUXILIARIES	150
81	MISC TANKS(IBD/CBD/CC PUMP MAKE UP WATER TANK/METERING TANK, CW STORAGE TANK ETC.)	30
99*	MISC. HANDLING EQUIPMENT	38
SUB TOTAL (in MT)		13816

GROUP-IV : ROTATING MACHINES (Rev 01)		
52	ROTARY REGENERATIVE AIR HEATER	1192
55 & 56	FD, ID & PA FANS WITH SUB-DELIVERIES	379
-	MOTORS (ID, FD, PA, MILLS, SA, SC ETC)	200
61	COAL MILLS & SUB-DELIVERIES	1080
65	COAL FEEDERS	46
SUB TOTAL (in MT)		2897

TENTATIVE WEIGHT SCHEDULE OF ESP :
APPENDIX 1-GROUP V [FOR EACH UNIT] (Rev 01)

CUST	NS	PGMA	DESCRIPTION	APPROX. WT. (in KGS)
R505	1	79401	ROLL/SLIDE SUPPORTS	24000
R505	1	79405	ESP-SUB-DELIVERY COMPON	1000
R505	1	79406	INSULATOR HOUSING AS	52500
R505	1	79408	GAS DIST. ASSY	105000
R505	1	79409	GD-RAPPING MECHANISM	16500
R505	1	79410	GD_DRIVE ARRANGEMENT	858.216
R505	1	79411	GAS SCREEN-EP	51000
R505	1	79413	EMIT SYST SUSPENSION	19795.144
R505	1	79414	SUPPORT INSULATORS	8640
R505	1	79415	EMITTING ELECTRODES	30244.5
R505	1	79416	EMIT ELECT RAPP MECH	43500
R505	1	79417	DRIVE ARGT. FOR EMIT. S	37800
R505	1	79419	COL ELEC SUSPENSION	131000
R505	1	79420	COLLECTING ELECTRODE	688463.926
R505	1	79421	EMIT SYS FRAME-TOP	179770.154
R505	1	79422	EMIT SYS FRAME BOTOM	217342.464
R505	1	79423	INSPECTION DOORS	15302.144
R505	1	79424	SHOCK BARS	113078.591
R505	1	79425	COLL ELECT RAPP MECH	124000
R505	1	79426	COLL ELEC RAPP DRIVE	7723.944
R505	1	79428	ESP ROOF PANELS	203172.428
R505	1	79430	ELECTRICAL SD COMPTS	16583.04
R505	1	79431	GEARED MOTORS FOR RAPP	26910.4
R505	1	79432	EMIT SYS FRAME-MIDLE	177803.796
R505	1	79437	JUNCTION BOX & PUSH BUT	2060
R505	1	79442	OUTER ROOF-EP	288000
R505	1	79443	HOPPER RIDGES	85000
R505	1	79444	HOPPER UPPER PART	481000
R505	1	79445	HOP MLD&LOWER PART	467000
R505	1	79446	INSULATOR SUPP PANEL	122000
R505	1	79447	ROOF PANEL ASSY	144000
R505	1	79448	CASING STRUCTURE	459495.088
R505	1	79449	CASING SHELL/PANEL	574802.316
R505	1	79450	INLET-OUTLET FUNNEL	184000
R505	1	79455	PENT HOUSE FOR E P	270000
R505	1	79457	SPLITTER&GUIDE VANES	10000
R505	1	79459	CONTROL ROOM-INSERTS	30000
R505	1	79460	CABLE-CABLE RACKS	230000
R505	1	79461	EP PERF TEST EQUIPT	1000
R505	1	79462	EARTHING,CABLE TRAYS,SU	130000
R505	1	79463	ASH LEVEL INDICATOR	1176.912
R505	1	79465	APP PLATFORM-HOPPER	175000
R505	1	79466	WATER WASHING SYSTEM	4000
R505	1	79467 / 68	ROOF INSULATION	30000

R505	1	79472	INTERLOCKS-EP	2105.2
R505	1	79473	ELECTRICALLY OPERTD HOI	6260
R505	1	79474	OPACITY MONITOR & ACCES	1000
R505	1	79477	LT SWITCH BOARD/ESP SWT	38000
R505	1	79478	BAPCON & ACCESSORIES	2000
R505	1	79481	SUPPOTING STRUCTURES FO	650000
R505	1	79490	HEATING ELEMENTS	4432
R505	1	79492	AUXILIARY CONTROL PANEL	30000
R505	1	79493	RAPPER CONTROL PANEL	1202
R505	1	79494	STATCON PANEL	1000
R505	1	79520	COLLECTING ELECTRODE	683362.17
R505	8	79988	COMMISSIONING SPARES	500
R505	6	79996	TOOLS & TACKLES	200
R505	6	79997	MANDATORY SPARES	6000
R505	6	79999	INITIAL SPARES	2000
R505	1	89610	EP GALLERIES&STAIRS	90000
R505	1	89611	ESP ROOF HANDRAILS	10000
			TOTAL (IN KG.)	7508584.433
			TOTAL (IN MT APPROX.)	7508.00

APPENDIX-I (GROUP VI –POWER CYCLE PIPING, SG PIPING,TG PIPING ETC)**(Rev 01)****LIST OF APPLICABLE PG-MAs AND WEIGHT SCHEDULE
OF PIPING (POWER CYCLE PIPING, TG PIPING) (Rev 01)**

SL NO	PGMA	DESCRIPTION	APPROX. WT IN (MT) FOR UNIT-1
1	24345	MAIN STEAM PIPING SH OUT TO BLER STOP VALVE II	34.50
2	80301	MS FROM BOILER STP VALVE TO ESV	114.0
3	80303	MS HEADER TO AUX PRDS	15.0
4	80304	MS HEADER TO HPBP VALVE	24.0
5	80307	HP & LP BYPASS WARM UP	1.7
6	80310	HRH FROM REHEATER TO INTERCEPTOR VALVE	300.0
7	80311	HRH FROM INTERCEPTOR VALVE TO TURBINE	20.0
8	80312	LPBP VALVE UPSTREAM & DOWNSTREAM	109.0
9	80320	CRH FROM TURBINE TO REHEATER	129.0
10	80321	HPBP VALVE TO CRH PIPING	12.0
11	80322	CRH PIPING TO DEAERATING HEATER	11.0
12	80323	STEAM TO BFP DRIVE TURBINE	3.7
13	80324	CRH HEADER TO AUX. PRDS	1.3
14	80329	EXTRACTION STEAM TO BFP DRIVE TURBINE	12.0
15	80331	EXTRACTION STEAM TO LP HEATER-2	5.9
16	80332	EXTRACTION STEAM TO LP HEATER-3	3.3
17	80335	EXTRACTION STEAM TO DEAERATING HEATER	13.0
18	80336	EXTRACTION STEAM TO HP HEATER NO.1	7.0
19	80337	EXTRACTION STEAM TO HP HEATER NO.2	6.3
20	80339	AUX STEAM TO BFD TURBINE	1.2
21	80340	AUX STEAM HEADER	5.6
22	80341	AUX STEAM HEADER INTERCONN BETWEEN UNITS	41.0
23	80345	AUX STEAM TO DEAERATING HEATER	6.8
24	80349	AUX STEAM TO GLAND SEALS - TG SCOPE	1.7
25	80362	EXHAUST STEAM FROM PRIME MOVERS-SG SCOPE	20.0
26	80373	AUX STEAM HEADER SV EXHAUST	6.4
27	80420	BOILER FEED PUMP SUCTION	21.0
28	80421	BOILER FEED PUMP RECIRCULATION	28.0
29	80423	BOILER FEED PUMP TO HPH INCLUDING BYPASS	88.0
30	80424	BFD BETWEEN HTRS & GROUP PROTECTION VLV	47.0
31	80425	BFD FROM FINAL HPH TO SG TP	119.0
32	80430	SPRAY WATER TO HPBP	5.2
33	80432	SPRAY WATER TO BOILER DESH UPTO SG TP	19.0
34	80433	SPRAY WATER FROM BFP INTERSTAGE	4.2
35	80452	HP PIPING DRAINS - SG SCOPE	24.0
36	80453	LP PIPING DRAINS - SG SCOPE	8.4
37	80811	H AND S FOR BOILER FEED DISCHARGE PPG LU	20.0
38	80812	H AND S FOR AUXILIARY STEAM PIPING FOR LU	28.0
39	80830	H AND S FOR CRITICAL PIPING - STEAM LINES	130.0
40	80840	AUX STR FOR MAIN STEAM PIPING FOR SB	311.0

41	80871	H AND S OF MISCELLANEOUS PIPING FOR SYN	35.0
			1793.2
		Misc. valves / Nozzles / Orifice / Traps / root valves / Thermowells etc.	
42		HP Bypass Valves with piping & accessories	10.0
43		Extraction /CRH –NRVs	30.0
45		Control Valves for HP Piping	80.0
46		Misc. power cycle / TG piping valves/ Nozzles / Orifice / Traps / root valves/ thermowells etc.	120.0
			240

**LIST OF APPLICABLE PG-Mas AND WEIGHT SCHEDULE
OF BOILER INTEGRAL PIPING (Rev 01)**

PGMA		DESCRIPTION	APPROX. WEIGHT FOR UNIT-1 (in KG)
24	350	BOILER FILLING PIPING	1600
80	342	AUX STEAM TO SCAPH	5,000
80	343	AUX STEAM TO AH SOOT BLOWERS	2,100
80	344	AUX STEAM TO FO SYSTEM TP	20,000
80	351	AUX STEAM TO UNLISTED USERS - SG SCOPE	16,000
80	352	AUX STEAM TO UNLISTED USERS - TG SCOPE	2,000
80	355	STEAM TRACING PIPING	12,000
80	364	CBD TANK VENT TO SYSTEM	2,800
80	365	CBD TANK VENT/SV EXHAUST TO ATMOSPHERE	900
80	366	IBD TANK VENT TO ATMOSPHERE	12,000
80	368	SCAPH DRAIN TANK VENT/SV EXHAUST TO ATM	2,300
80	395	AUX STEAM TO FUEL OIL ATOMISING	1,200
80	418	ERECTION MATERIALS FOR INSTRUMENTS	300
80	450	CBD AND EMERGENCY DRUM DRAIN	2,000
80	451	BOILER INTEGRAL PIPING DRAINS	14,000
80	453	LP PIPING DRAINS - SG SCOPE	4,900
80	454	SCAPH DRAINS	2,400
80	455	DRAIN FROM UNLISTED EQPT/VESSEL-SG SCOPE	3,500
80	460	SG AUX COOLING WATER UNIT SYSTEM	46,000
80	471	BOILER WATER WASH TO & FROM UNIT	12,000
80	477	SERVICE WATER PIPING	2,000
80	480	FIRE WATER-OTHER AREAS	6,200
80	600	HIGH PRESSURE DOSING PIPING	1,200
80	612	SERVICE AIR FOR INDIVIDUAL UNITS	13,000
80	616	INSTRUMENT AIR FOR INDIVIDUAL UNIT	11,000
80	650	FUEL OIL SUPPLY AND RETURN PIPING	90,000
80	812	H&S FOR AUXILIARY STEAM PIPING FOR LU	23,000
80	820	AUX STR OF DRAINS AND VENTS FOR LU	33,000

80	901	SUB DELIVERY VALVES FOR LIGHT UP	9,000
80	905	BHEL VALVES FOR LIGHT UP	22,000
		SUB TOTAL (in KG.)	373,400
		SUB TOTAL (in MT)	373.4

**LIST OF APPLICABLE PG-Mas AND WEIGHT SCHEDULE
OF TEMPORARY PIPING (Rev 01)**

PGMA		DESCRIPTION	APPROX. WEIGHT FOR UNIT- 1(in KG)
80	399	STEAM BLOWING PIPING-TEMPORARY	61,000
80	604	CHEMICAL CLEANING PIPING-TEMPORARY	50,000
80	816	H&S OF ACID CLEANING PIPING	8,000
80	917	BHELVALVE-ACID CLEANING ALKALI FLUS-TEMP	5,500
80	918	BHEL VALVES-TEMPORARY PIPING FOR SB	5,200
80	927	H&S FOR TEMPORARY PIPING - STEAM BLOWING	9,000
		SUB TOTAL (in KG.)	138,700
		SUB TOTAL (in MT)	138.7

**CATEGORY WISE TONNAGE UNDER PIPING GROUP FOR EACH UNIT OF MEJIA
2X500 MW PROJECT (GROUP VI) (Rev 01)**

SL. NO.	CATEGORY / DESCRIPTION	APPROX WT IN MT FOR UNIT-1
1	P-91 PIPINGS	172
2	OTHER ALLOY STEEL PIPINGS	562
3	CARBON STEEL PIPINGS	822
4	STRUCTURES / HANGERS & SUPPORTS	580
5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZLE, ORIFICE, TRAPS , THERMOWELLS ETC.	270
6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS, HANGER & SUPPORT) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138
7	PERMANENT PLATFORMS / APPROACHES FOR EQPT./VALVES ETC.	100
	TOTAL (in MT) (GROUP V –PIPING)	2644

NOTES ON APPENDIX 1 (Rev 01) (APPROXIMATE WEIGHT SCHEDULE)

1.0	Besides product groups indicated herein, there is likelihood of addition of new product groups by BHEL's unit for release of some items, integral to this work. Tenderers' quoted unit rates shall be applicable for such product groups also.
2.0	BHEL's decision with regard to classification of a particular product group is binding on the contractor.
3.0	For temporary system, required for Steam Blowing, Chemical cleaning etc., the pumps and vessels/tanks will be categorized as NPP (non-Pressure Part) and Temporary piping system with valves and fittings and Hanger & support will be categorised under Piping Group (Group VI applicable item) and payment will be made for erection & commissioning only (as per applicable rate / MT). No separate payment will be made for dismantling and return of such piping, Tanks etc. to site store. The tonnage calculated by BHEL engineer is final and binding to the contractor. This Clause shall supersede all other clauses regarding payment modality for temporary piping system, if appearing contrary to this clause, elsewhere in the tender.
4.0	The weights indicated in above schedule are approximate only and are liable to variations and alternations. Rates quoted by the contractors shall remain valid for +/- 20 % of contract price, superseding other variations stipulated elsewhere in the tender, if any.

APPENDIX – III A (Rev 01)
LIST OF T&P TO BE PROVIDED BY BHEL FREE OF HIRE CHARGES ON SHARING BASIS
FOR ERECTION AND COMMISSIONING

SL NO	DESCRIPTION & CAPACITY OF T&P	QUANTITY	REMARKS
01	High capacity crane of 600MT capacity/equivalent crane with ringer	01 No	On sharing basis for limited period during the erection of structures like upper tiers of boilers, ceiling girders, roof top structures etc for which high capacity crane is required.
02	Mid range crawler/ tyre mounted crane (capacity 200 MT and above)	01 No	On sharing basis as per requirement during the execution period
03	Crawler/ tyre mounted crane . (100-150 MT)/equivalent	01 No	On sharing basis as per requirement during the execution period
04	EOT Crane (115T / 30T capacity) in Power House	01 No	On sharing basis as per requirement during the execution period
05	Passenger Cum Good lift	01 No	During the execution period
06	Hydraulic test/ pressurizing pump: 0-450/600 Kg / cm ²	01 No	With necessary electrical starter
07	Acid/ chemical cleaning pump: 200 TPH/equivalent with control panel	05 Nos	----Do---
08	Acid/ chemical Injection pump	03 Nos	---Do---
09	HUCK –BOLTING MACHINE	01 No	Only M/c with hydraulic oil
10	Induction Welding machines	04 nos	On sharing basis as per requirement

For details please refer relevant sections and clauses.

APPENDIX – III B (Rev 01)
LIST OF T&P TO BE PROVIDED BY BHEL FREE OF COST AT OPEN STORAGE
YARDS/STORES FOR UNLOADING , HANDLING AND LOADING

SL NO	DESCRIPTION & CAPACITY OF T&P	QUANTITY	REMARKS
01	75 T crawler/tyre mounted cranes	01 No	On sharing basis as per requirement during the execution period.
02	18T/25 T crawler/tyre mounted cranes	02 No	On sharing basis as per requirement during the execution period.
03	8T/10T/12T hydra cranes	02No	On sharing basis as per requirement during the execution period.
04	EOT Crane (115T / 30T capacity) in Power House	01 No	On sharing basis as per requirement during the execution period

Under appendix B : In specific cases where more than 75 T crane is required, to unload and load consignment at open storage yard, BHEL shall provide the same free of cost .

For details please refer relevant sections and clauses.

APPENDIX – IV A (Rev 01)
MAJOR TOOLS AND PLANTS & MMDs TO BE DEPLOYED BY THE CONTRACTOR FOR
HANDLING UNLOADING /HANDLING AT PREASSEMBLY AREA ,ERECTION AND
COMMISSIONING ETC

TOOL & PLANTS

SL NO	DESCRIPTION OF EQUIPMENTS	CAPACITY	MINIMUM QUANTITY
01	Crawler cranes	75 T	02 (two) nos 1 st crane to be deployed with in 30 days from LOI and 2 nd crane to be deployed with in 90 days from LOI.
02	Tyre mounted/Crawler cranes with telescopic boom/lattice boom	40 T	02 (two) nos 40 T-1no To be deployed with in 30 days from LOI. 40 T – 1 no To be deployed with in 90 days from LOI
03	Pick and carry cranes	18 T/25 T	2(two) nos 1 no to be deployed with in 30 days from LOI 1 no to be deployed with in 60 days from LOI
04	Pick & carry tyre mounted mobile crane	10 T/ 12 T/ 14 T	06 (six) nos 2nos with in 30 days of LOI and bal progressively with in 90 days from LOI
05.1	Trailer	40 T	1 no (with in 90 days of LOI)
05.2	Tractor trolley/ trailer	25 T	04 (four) nos 1 st trailer to be deployed with in 30 days of LOI and 2nd Trailer with in 60 days of LOI and bal with in 120 days of LOI
06	Truck	9 T/ 12 T capacity	04 (four) nos. 02 (two) nos. within 30 days. Balance within 90 days.
07	Wheel mounted lorry / dip trolley	10 T	As per requirement
08	Air compressor (electric) – 7 kg/cm ²	100 psi/ 80 cfm	As per requirement
09	Tig welding test	-	As per requirement
10	Plasma cutting m/c	10 mm	As per requirement
11	Pre-heating/ stress relieving set (heating control panel, cables, heating elements etc.)	As per requirement	As per requirement
12	Radiography arrangement including the source.	IR 192	As per requirement
13	Radiography film viewer	Min	As per requirement

14	High frequency unit for TIG welding		As per requirement
15	Digital Temperature indicator		As per requirement
16	Infrared sensor for Temperature detector		As per requirement
17	RECORDABLE ULTRASONIC TEST EQUIPMENT (UFD KRAFT KAMMER MAKE USN50 or higher version to meet the requirements)	RECORADAD LE	As per requirement
18	GAS BURNER ARRANGEMENT		As per requirement
19	PORTABLE HARDNESS TESTER	EQUOTIP OR MICRODUR MAKE	As per requirement
20	SPOT WELDING MACHINNE		As per requirement
21	MOTORISED PIPE BENDING MACHINE FOR BENDING PIPES UPTO 100Nb	AS REQD.	As per requirement
22	Electro-hydraulic pipe bending machine.	For up to 100 mm NB pipes	As per requirement
23	Pipe bending machine – hand operated	Up to 50 mm NB pipes	As per requirement
24	Pipe chamfering machine	For machine pipe dia upto 800 mm	As per requirement
25	Pneumatic / Electric drive power hackshaw for pipe cutting	As per reqmnt	Minimum 4 nos.
26	Portable pipe cutting & chain machine	As per reqmnt	As per requirement
27	DG set	(to cater minimum 10 nos. Welding generators, required lighting and small drives like grinding machines etc.)	1 set
28	Welding generator (electric & diesel)	300 amps	As per requirement.(minimum 175 nos during peak requirement)
29	3 phase distribution board with complete set up for drawl of construction power.	600 amp	As per requirement
30	Electric cable for drawl & distribution of construction power	As per site requirement	As per requirement
31	Semi-automatic welding m/c		Min 4 nos.
32	Dehumidifier for Electrode Storage room		Min 1 set
33	Baking oven and holding oven with thermostat and temperature gauge	As per requirement	As per requirement

	for baking coated welding electrodes		
34	Portable oven for coated welding electrodes	As per requirement	As per requirement
35	Motorised megger	As per requirement	03 set
36	Strand jacks with ropes, guides, anchors, hydraulic drive unit including control panel complete in all respect for drum lifting	As per requirement	01 set
37	Winches (electric) (winches also includes wire ropes)	10 T 05 T 03 T Others	Minimum 02 nos Minimum 14 nos Minimum 06 nos As per requirement
	Winches(Hand operated)	1 T	As per requirement
38	Hydraulic jacks	100 T 50 T Others	04 nos 04 nos As per requirement
39	1 sec theodolite		02 nos
40	Pneumatic /Electrical orque wrenches (spec 600 ft lb)	600 ft-lb (up to min M 64 size)	06 nos
41	Mechanical torque wrench	750 ft-lb	06 nos
42	Special slings and deshakles for unloading drum and lifting of ceiling girder and handing ODC consignments		As per requirement.

Note

The above major T&P list is indicative only. Additional T & Ps, if required have to be mobilized by you within the quoted/accepted rate.

MEASURING AND MONITORING DEVICES (MMD)

As per requirement .

APPENDIX – IV B (Rev 01)

FOLLOWING MINIMUM EQUIPMENTS HAVE TO BE ARRANGED BY THE CONTRACTOR FOR MATERIAL UNLOADING, HANDLING, LOADING AT OPEN OPEN STORAGE YARD /STORES

Sl no	Description	Qty	Deployment schedule
1.0	Crane of capacity 40 T or more (At least one crane should be Truck mounted mobile crane with telescopic boom of min length 30m)	02	1 st -Within one month from date of LOI. 2 nd – Within three months from date of LOI.
2.0	Crawler crane of capacity 25 T or more having lattice boom of length min 25 mtr.	01	Within one month from date of LOI.
3.0	40 T trailer.	01	With in two and half months from date of LOI.
4.0	10/12/14/18 T pick & carry tyre mounted mobile crane.	02	1 st - within 15 days from date of LOI 2 nd – With in two months from date of LOI
5.0	20 T trailer.	02	With in two months from date of LOI.
6.0	Trucks.	04	1 st & 2 nd with in two months from date of LOI. 3 rd & 4 th with in three months from date of LOI.
7.0	Winches.	As Required	As per requirement
8.0	D-shackles.	-do-	-do-
9.0	Slings.	-do-	-do-
10.0	Max puller.	-do-	-do-
11.0	Pulley blocks.	-do-	-do-
12.0	Jacks.	-do-	-do-
13.0	Sleepers	As Required	As Required

Note

The above T&P list are indicative only. Additional T&Ps if required to execute the work are in the scope of the bidder within the quoted / accepted rate (except those which are specifically mentioned in appendix –IIIB)

MEASURING AND MONITORING DEVICES (MMD)

As per requirement to be finalized at site.

NOTE

	The above list of crane is minimum. Additional cranes, if required have to be mobilized by you within the quoted/accepted rate.
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APPENDIX-V (Rev 01)

MAJOR CONSUMMABLES TO BE PROVIDED BY BHEL FREE OF COST FOR EACH UNIT

SN	DESCRIPTION OF ITEMS
01	All lubricants, chemicals and N ₂ gas as required for testing, preservation, chemical cleaning / acid cleaning, oil flushing and the lubricants for trial runs of the equipments and trial operation of the unit
02.	TIG wires which wil be supplied by BHEL units.
03	Filler rods and electrodes for P91 piping system.

APPENDIX-VI (Rev 01)

1) MAJOR consumables TO BE DEPLOYED BY THE CONTRACTOR FOR ERECTION AND COMMISSIONING OF EACH UNIT

SN	DESCRIPTION OF ITEMS
01	Electrodes for CS , SS, AS – As required except for the special electrodes supplied by BHEL/Manufacturing Units
02.	Different gases like O2, CO2, Argon, D/A etc.
03	CTC, Petrol, diesel, kerosene – As required.
04	Lapping pastes
05	NDE Consumables
06.	Hoses and clamps of different sizes – As required
07	Touch –up paints, preservatives and other consumables.
08	Cotton wastes, jutes etc.
09	Grouting cement as applicable
10	Sleepers for dragging of equipment like drums etc – As required
09	Other consumables to complete the job(other than those supplied by BHEL free of cost as per Appendix V

NOTE: The above list is not exhaustive and all required the consumables required to complete the work shall have to be arranged by the successful contractor at his cost.

2) MAJOR consumables TO BE DEPLOYED BY THE CONTRACTOR FOR MATERIAL MANAGEMENT OF COMPLETE PLANT MATERIAL

SI no	Description
1.0	P V C Tape
2.0	Kerosene
3.0	Jute
4.0	Tape
5.0	Brush
6.0	Emery paper
7.0	White finishing enamel
8.0	Wire brush
9.0	Weatherproof and fireproof covering material
10.0	Concrete or wooden sleeper –as per requirement
11.0	Grease
12.0	Varnish
13.0	Silica gel
14.0	White spirit
15.0	Tarpauline
16.0	Zinc primer red oxide paints
17.0	Thinners for paints
18.0	Paraffin paper
19.0	End caps

NOTE: The above list is not exhaustive and all required the consumables required to complete the work shall have to be arranged by the successful contractor at his cost.

UNDER Cl. no. 16.4 of SCC

16.4.1 C) Stages Of Progressive Pro-Rata Payments of Piping Group (Group VI)

100 % PAYMENT BREAK UP

SL NO	STAGES OF PAYMENT	PIPINGS AND VALVES ETC. (Sl. No. 6.1, 6.2, 6.3, 6.5, 6.6)	STRUCTURES, HANGERS, PLATFORMS ETC. (Sl. No. 6.4, 6.7 & 6.8).
A	Completion of Pre-assembly	15%	----
B	Placement in Position	25%	50%
C	Alignment, welding, grouting & bolting as required	35%	40%
D	Completion of non destructive examination & stress relieving / heat treatment	10%	----
E	Completion of Hydraulic test(drainable)	05%	----
F	Pre-Boiler System Flushing/chemical cleaning	01%	----
G	Boiler light up and ABO	01%	02%
H	Completion of steam blowing	01%	---
J	Hot correction of hangers	01%	02%
K	COAL FIRING	01%	01%
L	FULL LOADING	01%	01%
M	Submission of As-built drawings	01%	01%
N	Liquidation of pending points	01%	01%
O	Reconciliation of issued materials	01%	01%
P	Completion of all contractual Obligation and de mobilization of site office.	01%	01%
	TOTAL	100%	100%

TENDER DOCUMENT NO:PSER:SCT:MJA-B779:07

PRICE SCHEDULE

VOLUME -- III A (REV-01)

FOR

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, ESP, CRITICAL PIPING, MICS. PIPING, ETC. AND MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

FOR

PH-II, 2 X 500 MW THERMAL UNITS (1 & 2)

AT

DVC / MEJIA

THERMAL POWER PROJECT

P.O : MEJIA

DIST : BANKURA

WEST BENGAL

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVT. OF INDIA UNDERTAKING)

POWER SECTOR – EASTERN REGION

PLOT NO. – 9 / 1, DJ – BLOCK,

SECTOR – II, KARUNAMOYEE,

SALT LAKE CITY,

KOLKATA – 700091.

**VOLUME-III A
PRICE SCHEDULE, REV-01**

Unloading and material management of total plant material (covering both the units) and Erection, testing, commissioning, handing over etc of Boiler & aux, ESP, Critical /Misc. Piping etc. of 2x 500 MW Mejia Phase II Project, West Bengal

TENDER NO - PSER:SCT:MJA:B 779:07

PREAMBLE

01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc equipment, strengthening of roads/culverts/bridges etc including arranging all clearances etc required for carrying out different activities & tests, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the tender document and this schedule.
05	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing and leveling etc including fixing of grid pillars, benchmarks etc required for commencement of site activities. No separate payment will be made towards the same.
06	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English.
07	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
08	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
09	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract (package wise) including extra items, but excluding any price escalation, remains within +/- 20% (twenty percent) of the contract price (Package wise) given in the LOI/WO.
10	BIDDERS ARE REQUIRED TO SUBMIT OFFER FOR PACKAGE – A & PACKAGE – B IN TWO SEPARATELY SEALED COVERS CLEARLY SUPERSCRIBING WITH NOMENCLATURE, NAME OF THE JOB, TENDER DOCUMENT NO. , PACKAGE NO. (i.e. PACKAGE-A OR PACKAGE-B) AND DUE DATE OF SUBMISSION. BIDDER MAY QUOTE AGAINST ANY OR BOTH THE PACKAGES.
11	EVALUATION SHALL BE DONE BASED ON OVERALL QUOTED PRICE FOR PACKAGE - A & PACKAGE - B SEPERATELY
12	PACKAGE – A SHALL BE DECIDED FIRST AND WHOEVER IS SUCCESSFUL IN PACKAGE – A SHALL NOT BE CONSIDERED FOR PACKAGE-B (THEIR PRICE BID FOR PACKAGE - B SHALL NOT BE OPENED)

**VOLUME-III A - PACKGE - A
PRICE/RATE SCHEDULE (REV-01)**

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 1 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MISC PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	UNIT RATE (In Rs)	TOTAL AMOUNT (IN Rs) (In figures & In Words)
		a	b	a x b
1.0	Group-I(Pressue Part)	4975 MT		
2.0	Group-II(Intergral and Trim piping)	460 MT		
3.0	Group-III(Non-Pressure Part)	13816 MT		
4.0	Group-IV(Rotating machines)	2897 MT		
5.0	Group-V(ESP)	7508 MT		
6.0	Group -VI (Piping etc.)			
6.1	P-91 PIPINGS	172 MT		
6.2	OTHER ALLOY STEEL PIPINGS	562 MT		
6.3	CARBON STEEL PIPINGS	822 MT		
6.4	STRUCTURES / HANGERS & SUPPORTS	580 MT		
6.5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	270 MT		
6.6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138 MT		
6.7	MISCELLANEOUS APPROACH / OPERATION PLATFORM	100 MT		

**VOLUME-III A - PACKAGE - A
PRICE/RATE SCHEDULE (REV-01)**

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 1 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MISC PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	UNIT RATE (In Rs)	TOTAL AMOUNT (IN Rs) (In figures & In Words)
		a	b	a x b
6.8	Fabrication & Erection of Boiler structure (material shall be supplied by BHEL free of cost)	200 MT		
7.0	Lump sum price for providing assistance for conducting PG test.	1 NO		
8.0	Unloading of Boiler drum from Railway wagon and transporting/ dragging it to the boiler area for erection	1 NO		
TOTAL				

NOTES				
1.0	FOR DETAILS OF PGs COVERED UNDER DIFFERENT GROUPS, PLEASE REFER TO APPENDIX-I (rev 01) OF VOL-1D PACKAGE-A OF TENDER.			
2.0	BESIDES ABOVE PRODUCT GROUP, THERE IS LIKELIHOOD OF ADDITION OF NEW PG UNDER THE ABOVE GROUP HEADS DUE TO RELEASE OF SOME ITEMS INTEGRAL TO BOILER. THE QUOTED RATES SHALL BE APPLICABLE FOR SUCH PGs ALSO WITHIN THE STIPULATED VARIATION LIMIT.			
3.0	Bidder to note that evaluation & awarding of Package - A will be done on the Total quoted price indicated above.			
4.0	Any item as per scope of work if not included in the price quoted above and shown separately will not be taken into cognizance and the offer shall be liable for rejection.			

**VOLUME-III A - PACKGE - B
PRICE/RATE SCHEDULE (SUMMERY) , REV-01**

COMPLETE ERECTION, TESTING, COMMISSIONING OF BOILER, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF UNIT # 2 AND MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

**TENDER NO :- PSER:SCT:MJA-B779:07
SUMMARY OF PRICE SCHEDULE**

SL.NO	DESCRIPTION OF WORK	RATE SCHEDULE REF	TOTAL AMOUNT (In Rs.)
1.0	ERECTION, TESTING , COMMISSIOING & HANDING OVER OF COMPLETE BOILER & AUX OF UNIT # 2 OF MEJIA-B (PH-II) PROJECT., WEST BENGAL AS DETAILED IN THE TENDER	PART-A	
2.0	COMPLETE MATERIALS MANAGEMENT WORK INCLUDING UNLOADING AND HANDLING OF COMPLETE PLANT OF BOTH THE UNITS OF 2x500 MEJIA-B (PH-II) PROJECT., WEST BENGAL AS DETAILED IN THE TENDER	PART-B	
3.0	GRAND TOTAL PRICE (1.0+2.0)		
NOTES			
1.0	Bidder to note that evaluation & awarding of Package-B will be done on the Grand total quoted price against slno.3.0 above i.e summation of total price quoted under Rate Schedule(Part-A), Rev 01 and Rate Schedule(Part-B), Rev 01.		
2.0	Any item as per scope of work if not included in the price quoted above and shown separately will not be taken into cognizance and the offer shall be liable for rejection.		
3.0	Bidder to note the total all inclusive price quoted against sl.no1.0-Part-A and sl.no2.0-PART-B above should match with that of RATE SCHEULE(PART-A), Rev 01 and RATE SCHEDULE(PART-B), Rev 01 respectively.		

**VOLUME-III A - PACKGE - B
PRICE/RATE SCHEDULE (PART - A) , REV-01**

COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 2 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	UNIT RATE (In Rs)	TOTAL AMOUNT (IN Rs) (In figures & In Words)
		A	B	A x B
1.0	Group-I(Pressue Part)	4975 MT		
2.0	Group-II(Intergral and Trim piping)	460 MT		
3.0	Group-III(Non-Pressure Part)	13816 MT		
4.0	Group-IV(Rotating machines)	2897 MT		
5.0	Group-V(ESP)	7508 MT		
6.0	Group -VI (Piping, etc.)			
6.1	P-91 PIPINGS	172 MT		
6.2	OTHER ALLOY STEEL PIPINGS	562 MT		
6.3	CARBON STEEL PIPINGS	822 MT		
6.4	STRUCTURES / HANGERS & SUPPORTS	580 MT		
6.5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	270 MT		
6.6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138 MT		
6.7	MISCELLANEOUS APPROACH / OPERATION PLATFORM	100 MT		
6.8	Fabrication & Erection of Boiler structure (material shall be supplied by BHEL free of cost)	200 MT		
7.0	Lump sum price for providing assistance for conducting PG test.	1 NO		
TOTAL				

**VOLUME-III A - PACKAGE - B
PRICE/RATE SCHEDULE (PART - A) , REV-01**

COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 2 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

NOTES				
1.0	FOR DETAILS OF PGs COVERED UNDER DIFFERENT GROUPS, PLEASE REFER TO APPENDIX-I (Rev 01) OF VOL-1D PACKAGE-B OF TENDER.			
2.0	BESIDES ABOVE PRODUCT GROUP, THERE IS LIKELIHOOD OF ADDITION OF NEW PG UNDER THE ABOVE GROUP HEADS DUE TO RELEASE OF SOME ITEMS INTEGRAL TO BOILER. THE QUOTED RATES SHALL BE APPLICABLE FOR SUCH PGs ALSO WITHIN THE STIPULATED VARIATION LIMIT.			

**VOLUME-III A - PACKGE - B
PRICE/RATE SCHEDULE (PART - B) , REV-01**

MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SLNO	DESCRIPTION OF WORK	QUANTITY a	UNIT RATE b	TOTAL(IN Rs) axb
1.0	Unloading of Boiler drum from Railway wagon, and transporting / dragging it to the Boiler area for erection.	1 NO.		
2.1	Receipt/ taking delivery of materials at Mejja plant, unloading from trucks/ trailers, shifting to site stores/ storage yard/ work site, verification, stacking, storage & issue/ handing over to BHEL's erection contractor of boiler & aux, TG & aux, C&I of boiler & TG, piping, Insulation, BOP/ BOI packages/ items and various other items, materials/ components including providing services for materials management for 2x500 MW unit # 1&2, Mejja Ph-II.	100000 MT		
2.2	Receipt/ taking delivery of materials, unloading from wagon at Raniganj railway station or railway godown at Raniganj , reloading and transportation to stores/ store yard/ work site, unloading, shifting and stacking, including verification, at site stores/ storage yard/ work site as directed by BHEL & issue/ handing over to erection contractor and as per scope given in tender specification.	5000 MT		
2.3	Receipt/ taking delivery of materials at transport company's godown at Durgapur/Bankura/Raniganj or within 50 KM radius from the plant, reloading and transportation to stores/ store yard/ work site, unloading, shifting and stacking, including verification at site stores/ storage yard/ work site as directed by BHEL including issue/ handing over to erection contractor and as per scope given in tender specification.	500 MT		
3.0	Materials re-shifting.	10000 MT		
4.0	Materials re-stacking.	10000 MT		
5.0	Average single man hour rate including overtime, If any, supervision, use of required tools and tackles and other site expenses and incidentals including consumables/ preservatives for carrying out up-keepment, maintenance and preservation/ conservation work as per instruction of BHEL and as per scope given in tender specification.	35000 MAN-HOUR		
TOTAL				

TENDER DOCUMENT NO:PSER:SCT:MJA-B779:07

PRICE SCHEDULE

VOLUME -- III B (REV-01)

FOR

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, ESP, CRITICAL PIPING, MICS. PIPING, ETC. AND MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

FOR

PH-II, 2 X 500 MW THERMAL UNITS (1 & 2)

AT

DVC / MEJIA

THERMAL POWER PROJECT

P.O : MEJIA

DIST : BANKURA

WEST BENGAL

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVT. OF INDIA UNDERTAKING)

POWER SECTOR – EASTERN REGION

PLOT NO. – 9 / 1, DJ – BLOCK,

SECTOR – II, KARUNAMOYEE,

SALT LAKE CITY,

KOLKATA – 700091.

**VOLUME-IIIB
PRICE SCHEDULE, REV-01**

Unloading and material management of total plant material (covering both the units) and Erection, testing, commissioning, handing over etc of Boiler & aux, ESP, Critical /Misc. Piping etc. of 2x 500 MW Mejia Phase II Project, West Bengal

TENDER NO - PSER:SCT:MJA:B 779:07

PREAMBLE

01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with various volumes of tender as per NIT together with subsequent changes/ modifications etc thereto as applicable as on date of submission of price offer.
02	The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions.
03	Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer.
04	Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc equipment, strengthening of roads/culverts/bridges etc including arranging all clearances etc required for carrying out different activities & tests, materials, levies, taxes, transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the tender document and this schedule.
05	The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing and leveling etc including fixing of grid pillars, benchmarks etc required for commencement of site activities. No separate payment will be made towards the same.
06	Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English.
07	The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site.
08	Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract.
09	The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or to be deleted altogether. The quoted/ accepted rates shall remain firm and valid as long as variation in total value of work executed under this contract (package wise) including extra items, but excluding any price escalation, remains within +/- 20% (twenty percent) of the contract price (Package wise) given in the LOI/WO.
10	BIDDERS ARE REQUIRED TO SUBMIT OFFER FOR PACKAGE – A & PACKAGE – B IN TWO SEPARATELY SEALED COVERS CLEARLY SUPERSCRIBING WITH NOMENCLATURE, NAME OF THE JOB, TENDER DOCUMENT NO. , PACKAGE NO. (i.e. PACKAGE-A OR PACKAGE-B) AND DUE DATE OF SUBMISSION. BIDDER MAY QUOTE AGAINST ANY OR BOTH THE PACKAGES.
11	EVALUATION SHALL BE DONE BASED ON OVERALL QUOTED PRICE FOR PACKAGE - A & PACKAGE - B SEPERATELY
12	PACKAGE – A SHALL BE DECIDED FIRST AND WHOEVER IS SUCCESSFUL IN PACKAGE – A SHALL NOT BE CONSIDERED FOR PACKAGE-B (THEIR PRICE BID FOR PACKAGE - B SHALL NOT BE OPENED)

**VOLUME-IIIB - PACKAGE - A
PRICE/RATE SCHEDULE (REV-01)**

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORTATION TO SITE OF WORK, COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 1 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MISC PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	PERCENT (%) COMPONENT
		a	
1.0	Group-I(Pressure Part)	4975 MT	
2.0	Group-II(Intergral and Trim piping)	460 MT	
3.0	Group-III(Non-Pressure Part)	13816 MT	
4.0	Group-IV(Rotating machines)	2897 MT	
5.0	Group-V(ESP)	7508 MT	
6.0	Group -VI (Piping etc.)		
6.1	P-91 PIPINGS	172 MT	
6.2	OTHER ALLOY STEEL PIPINGS	562 MT	
6.3	CARBON STEEL PIPINGS	822 MT	
6.4	STRUCTURES / HANGERS & SUPPORTS	580 MT	
6.5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	270 MT	
6.6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138 MT	
6.7	MISCELLANEOUS APPROACH / OPERATION PLATFORM	100 MT	

**VOLUME-III B - PACKGE - A
PRICE/RATE SCHEDULE (REV-01)**

HANDLING AT SITE STORES/ STORAGE YARD, TRANSPORATION TO SITE OF WORK, COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 1 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	PERCENT (%) COMPONENT
		a	
6.8	Fabrication & Erection of Boiler structure (material shall be supplied by BHEL free of cost)	200 MT	
7.0	Lump sum price for providing assistance for conducting PG test.	1 NO	
8.0	Unloading of Boiler drum from Railway wagon and transporting/ dragging it to the boiler area for erection	1 NO	
TOTAL			100%

NOTES			
1.0	FOR DETAILS OF PGs COVERED UNDER DIFFERENT GROUPS, PLEASE REFER TO APPENDIX-I (rev 01) OF VOL-1D PACKAGE-A OF TENDER.		
2.0	BESIDES ABOVE PRODUCT GROUP, THERE IS LIKELIHOOD OF ADDITION OF NEW PG UNDER THE ABOVE GROUP HEADS DUE TO RELEASE OF SOME ITEMS INTEGRAL TO BOILER. THE QUOTED RATES SHALL BE APPLICABLE FOR SUCH PGS ALSO WITHIN THE STIPULATED VARIATION LIMIT.		
3.0	Bidder to note that evaluation & awarding of Package - A will be done on the Total quoted price indicated above.		
4.0	Any item as per scope of work if not included in the price quoted above and shown separately will not be taken into cognizance and the offer shall be liable for rejection.		

**VOLUME-III B - PACKGE - B
PRICE/RATE SCHEDULE (SUMMERY) , REV-01**

COMPLETE ERECTION, TESTING, COMMISSIONING OF BOILER, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF UNIT # 2 AND MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

**TENDER NO :- PSER:SCT:MJA-B779:07
SUMMARY OF PRICE SCHEDULE**

SL.NO	DESCRIPTION OF WORK	RATE SCHEDULE REF	PERCENT (%) COMPONENT
1.0	ERECTION, TESTING , COMMISSIOING & HANDING OVER OF COMPLETE BOILER & AUX OF UNIT # 2 OF MEJIA-B (PH-II) PROJECT., WEST BENGAL AS DETAILED IN THE TENDER	PART-A	
2.0	COMPLETE MATERIALS MANAGEMENT WORK INCLUDING UNLOADING AND HANDLING OF COMPLETE PLANT OF BOTH THE UNITS OF 2x500 MEJIA-B (PH-II) PROJECT., WEST BENGAL AS DETAILED IN THE TENDER	PART-B	
3.0	GRAND TOTAL PRICE (1.0+2.0)		100%
NOTES			
1.0	Bidder to note that evaluation & awarding of Package-B will be done on the Grand total quoted price against slno.3.0 above i.e summation of total price quoted under Rate Schedule(Part-A), Rev 01 and Rate Schedule(Part-B), Rev 01.		
2.0	Any item as per scope of work if not included in the price quoted above and shown separately will not be taken into cognizance and the offer shall be liable for rejection.		
3.0	Bidder to note the total all inclusive price quoted against sl.no1.0-Part-A and sl.no2.0-PART-B above should match with that of RATE SCHEULE(PART-A), Rev 01 and RATE SCHEDULE(PART-B), Rev 01 respectively.		

**VOLUME-IIIB - PACKAGE - B
PRICE/RATE SCHEDULE (PART - A) , REV-01**

COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 2 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SL.NO	DESCRIPTION OF ITEM	APPROXIMATE WEIGHT (IN MT)	PERCENT (%) COMPONENT
		A	
1.0	Group-I(Pressue Part)	4975 MT	
2.0	Group-II(Intergral and Trim piping)	460 MT	
3.0	Group-III(Non-Pressure Part)	13816 MT	
4.0	Group-IV(Rotating machines)	2897 MT	
5.0	Group-V(ESP)	7508 MT	
6.0	Group -VI (Piping, etc.)		
6.1	P-91 PIPINGS	172 MT	
6.2	OTHER ALLOY STEEL PIPINGS	562 MT	
6.3	CARBON STEEL PIPINGS	822 MT	
6.4	STRUCTURES / HANGERS & SUPPORTS	580 MT	
6.5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	270 MT	
6.6	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	138 MT	
6.7	MISCELLANEOUS APPROACH / OPERATION PLATFORM	100 MT	
6.8	Fabrication & Erection of Boiler structure (material shall be supplied by BHEL free of cost)	200 MT	
7.0	Lump sum price for providing assistance for conducting PG test.	1 NO	
TOTAL			100%

VOLUME-IIIB - PACKGE - B
PRICE/RATE SCHEDULE (PART - A) , REV-01

COMPLETE ERECTION, TESTING, COMMISSIONING, HANDING OVER ETC. OF UNIT # 2 BOILER & AUX, ESP, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS PIPING ETC. OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

NOTES			
1.0	FOR DETAILS OF PGs COVERED UNDER DIFFERENT GROUPS, PLEASE REFER TO APPENDIX-I (Rev 01) OF VOL-1D PACKAGE-B OF TENDER.		
2.0	BESIDES ABOVE PRODUCT GROUP, THERE IS LIKELIHOOD OF ADDITION OF NEW PG UNDER THE ABOVE GROUP HEADS DUE TO RELEASE OF SOME ITEMS INTEGRAL TO BOILER. THE QUOTED RATES SHALL BE APPLICABLE FOR SUCH PGs ALSO WITHIN THE STIPULATED VARIATION LIMIT.		

**VOLUME-III B - PACKAGE - B
PRICE/RATE SCHEDULE (PART - B) , REV-01**

MATERIAL UNLOADING, HANDLING AND MATERIALS MANAGEMENT OF COMPLETE PLANT MATERIAL OF BOTH THE UNITS OF 2 X 500 MEJIA-B (PH-II) PROJECT., WEST BENGAL.

TENDER NO :- PSER:SCT:MJA-B779:07

Bidders are requested to submit their price only as sought under price schedule below :-

SLNO	DESCRIPTION OF WORK	QUANTITY a	UNIT RATE b	TOTAL(IN Rs) axb
1.0	Unloading of Boiler drum from Railway wagon, and transporting / dragging it to the Boiler area for erection.	1 NO.		
2.1	Receipt/ taking delivery of materials at Mejja plant, unloading from trucks/ trailers, shifting to site stores/ storage yard/ work site, verification, stacking, storage & issue/ handing over to BHEL's erection contractor of boiler & aux, TG & aux, C&I of boiler & TG, piping, Insulation, BOP/ BOI packages/ items and various other items, materials/ components including providing services for materials management for 2x500 MW unit # 1&2, Mejja Ph-II.	100000 MT		
2.2	Receipt/ taking delivery of materials, unloading from wagon at Raniganj railway station or railway godown at Raniganj , reloading and transportation to stores/ store yard/ work site, unloading, shifting and stacking, including verification, at site stores/ storage yard/ work site as directed by BHEL & issue/ handing over to erection contractor and as per scope given in tender specification.	5000 MT		
2.3	Receipt/ taking delivery of materials at transport company's godown at Durgapur/Bankura/Raniganj or within 50 KM radius from the plant, reloading and transportation to stores/ store yard/ work site, unloading, shifting and stacking, including verification at site stores/ storage yard/ work site as directed by BHEL including issue/ handing over to erection contractor and as per scope given in tender specification.	500 MT		
3.0	Materials re-shifting.	10000 MT		
4.0	Materials re-stacking.	10000 MT		
5.0	Average single man hour rate including overtime, If any, supervision, use of required tools and tackles and other site expenses and incidentals including consumables/ preservatives for carrying out up-keepment, maintenance and preservation/ conservation work as per instruction of BHEL and as per scope given in tender specification.	35000 MAN-HOUR		
TOTAL				100%