



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 03

Ref: PSER:SCT:BAR-B997:TCN-03

Date: 04-05-2009

Sub	Tender change notice (TCN) 03.	
Job	Erection and Commissioning of Boiler, Rotating Machines and Duct, Critical Piping, Misc Piping, etc. including Civil works of Elevator Pit & Machine Room of both the Units of 2 X 660MW Barh (STG-II) STPP Project., PO-Barh, Dist-Patna, Bihar.	
Ref	1.0	Tender no PSER:SCT:BAR-B997:09.
	2.0	BHEL's NIT, vide reference no Ref: PSER:SCT:BAR-B997:09 Dated 03-04-2009
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:BAR-M997:TCN-01, dated 21-04-09.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:BAR-M997:TCN-02, dated 27-04-09.
	5.0	Other references (if any).

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting offer.

- 1.0 Technical modification is attached vide annexure-I.
- 2.0 Price schedule format VOL-III A, PRICE SCHEDULE, REV-0 has been revised as VOL-III A, PRICE SCHEDULE, REV-01. Bidders are requested to submit their price in revised format (VOL-III A, PRICE SCHEDULE, REV-01) only. Offer from bidders in superseded price schedules shall not be considered. Bidders are requested to furnish a declaration in techno-commercial offer that they have submitted their price bid in sealed envelope as per revised price schedule format (VOL-III A, PRICE SCHEDULE, REV-01).
- 3.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.
- 4.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

DGM (SCT)

Encl

- 1.0 Technical modification (annexure-I)
- 2.0 Revised price format as (VOL-III A, PRICE SCHEDULE, REV-01)
- 3.0 Revised 'No deviation certificate' format.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

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ANEXURE-I

TECHNICAL MODIFICATION

1. **The sl. No. 5.0 of Appendix-1 of Vol-1D stands modified as follows (WEIGHT OF PIPING SYSTEMS OF EACH UNIT) :**

5.0	PIPING PGMAs	SYSTEM DESCRIPTION	WT. IN MT
	80 & 81	SA335 P-91 PIPINGS	432
	- do-	SS Piping	8
	- do-	ALLOY/CARBON STEEL PIPINGS	2461
	- do-	STRUCTURES / HANGERS & SUPPORTS	639
	- do-	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	65
	- do-	TANKS & VESSELS	34
	- do-	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	111
	- do-	MISCELLANEOUS APPROACH / OPERATION PLATFORM	60
DETAILS OF VARIOUS SYSTEMS INCLUDED IN THE SCOPE ARE INDICATED IN ANNEXURE-1A Rev. 01 indicated below.			

2. **“LIST OF APPLICABLE PGMAS” enclosed with the Vol-II of the tender specification stands superseded with ANNEXURE-1 furnished below for piping systems:**

ANNEXURE-I

SL NO	PGMA	DESCRIPTION	WT/ BOILER (kgs)	IBR	ACTIVITY	REMARKS
1	80307	HP & LP BYPASS WARM UP	2,200	I	SN	
2	80322	CRH PIPING TO DEAERATING HEATER	9,600	I	SN	
3	80323	STEAM TO BFP DRIVE TURBINE	3,400	I	SB	
4	80329	EXTRACTION STEAM TO BFP DRIVE TURBINE	9,100	I	SN	
5	80331	EXTRACTION STEAM TO LP HEATER-2	6,700	I	SN	
6	80332	EXTRACTION STEAM TO LP HEATER-3	4,800	I	SN	
7	80334	EXTRACTION STEAM TO LP HEATER-4	3,000	I	SN	
8	80335	EXTRACTION STEAM TO DEAERATING	21,600	I	SN	

		HEATER				
9	80336	EXTRACTION STEAM TO HP HEATER NO.1	8,000	I	SN	
10	80337	EXTRACTION STEAM TO HP HEATER-2	5,300	I	SN	
11	80338	EXTRACTION STEAM TO HP HEATER-3	5,300	I	SN	
12	80339	AUX STEAM TO BFD TURBINE	1,900	I	SN	
13	80345	AUX STEAM TO DEAERATING HEATER	4,100	I	LU	
14	80349	AUX STEAM TO GLAND SEALS - TG SCOPE	1,800	I	SN	
15	80363	EXHAUST STEAM FROM PRIME MOVERS-TG SCOPE	29,700	N	SN	
16	80371	DRAIN FLASH TANK VENT TO CONDENSER	13,300	N	SN	
17	80375	UNLISTED SV EXHAUSTS - TG SCOPE	2,200	N	SN	
18	80379	HPH SV EXHAUST TO FLASH TANK	5,200	N	SN	
19	80381	HP HEATER VENTS - TG SCOPE	3,700	N	SN	
20	80382	LP HEATER VENTS	1,800	N	SN	
21	80385	VENT FROM UNLISTED PPG/EQPT TO COND	12,200	N	SN	
22	80388	CONDENSER AIR EVACUATION PIPING	4,100	N	SN	
23	80401	CD FROM PUMP TO LPH1/DC INLET TEE&RECIR	37,800	N	LU	
24	80402	CD FROM LPH1/DC INLET TEE TO TG TP	25,700	N	LU	
25	80403	CD FROM TG TP TO DEAERATING HEATER	13,100	N	LU	
26	80407	CONDENSATE FOR SEALING OF VACUUM	2,900	N	LU	
27	80408	CONDENSATE DUMP FROM HEADER	1,100	N	LU	
28	80412	CONDENSATE TRANSFER	1,900	N	LU	
29	80419	DEAERATOR SAFETY VALVE EXHAUST TO ATM	4,600	N	LU	
30	80420	BOILER FEED PUMP SUCTION	25,700	N	LU	
31	80421	BOILER FEED PUMP RECIRCULATION	62,000	I	LU	
32	80423	BOILER FEED PUMP TO HPH INCLUDING BYPASS	128,000	I	LU	
33	80424	BFD BETWEEN HTRS & GROUP PROTECTION VLV	48,000	I	LU	
34	80425	BFD FROM FINAL HPH TO SG TP	224,000	I	LU	
35	80430	SPRAY WATER TO HPBP	5,600	I	LU	
36	80432	SPRAY WATER TO BOILER DESH UPTO SG TP	21,600	I	LU	
37	80433	SPRAY WATER FROM BFP INTERSTAGE	6,100	I	LU	
38	80436	SPRAY WATER TO LPBP DESH	7,200	N	SN	
39	80439	TURBINE FLASH TANK DRAIN TO CONDENSER	1,000	N	SN	
40	80442	GLAND STEAM COOLER DRAINS	500	N	SN	
41	80443	LP HEATER-1 TO CONDENSER	4,900	N	SN	
42	80444	LP HEATER-2/3/4/5 DRAINS&DRIP PUMP INCL	8,100	N	SN	
43	80446	DEAERATING HEATER OVER FLOW AND DRAIN	5,900	N	LU	
44	80447	HP HEATER DRAINS	18,900	N	SN	
45	80448	DRAIN FROM UNLISTED EQPT/VESSEL-TG SCOPE	11,900	N	SN	
46	80449	TG CYCLE PIPING DRAINS & VENTS	12,500	N	SN	
47	80452	HP PIPING DRAINS - SG SCOPE	13,500	I	LU	
48	80457	MANIFOLDS FOR HP FLASH BOX & CONDENSER	2,200	N	SN	
49	80459	HP FLASH TANK DRAIN TO CONDENSER	2,100	N	SN	
50	80463	TG AUX COOLING WATER	125,000	N	LU	
51	80468	MAIN CIRCULATION WATER PIPING	340,000	N	LU	

52	80473	DEMINERALISED WATER SYSTEM	6,000	N	LU	
53	80477	SERVICE WATER PIPING	15,000	N	LU	
54	80493	HP FLASH TANK VENT TO CONDENSER	4,200	N	SN	
55	80494	LP FLASH TANK VENT TO CONDENSER	3,600	N	SN	
56	80495	LP FLASH TANK DRAIN TO COND	2,900	N	SN	
57	80601	LOW PRESSURE DOSING PIPING	1,100	N	LU	
58	80610	SERVICE AIR-COMP SUCT & DIS TO RECEIVER	18,000	N	LU	
59	80614	INST AIR COMP SUC & DIS TO RECEIVER	18,000	N	LU	
60	80901	SUB DELIVERY VALVES FOR LIGHT UP	1,000	N	LU	
61	80933	H & S FOR LP PIPING	25,000	N	LU	
62	80930	H&S FOR SYNCHRONISATION - TG	40,000	N	SN	
63	80992	IMPORTED ELECTRODES	700	N	HT	
64	80300	MS FROM SUPERHEATER TO BOILER STOP VALVE	98,000	I	HT	
65	80301	MS FROM BOILER STOP VALVE TO ESV	263,000	I	SB	
66	80303	MS HEADER TO AUX PRDS	18,000	I	SB	
67	80304	MS HEADER TO HPBP VALVE	40,000	I	SB	
68	80310	HRH FROM REHEATER TO INTERCEPTOR VALVE	290,000	I	SB	
69	80311	HRH FROM INTERCEPTOR VALVE TO TURBINE	26,000	I	SB	
70	80312	LPBP VALVE UPSTREAM & DOWNSTREAM	140,000	I	SB	
71	80320	CRH FROM TURBINE TO REHEATER	136,000	I	SB	
72	80321	HPBP VALVE TO CRH PIPING	12,000	I	SB	
73	80324	CRH HEADER TO AUX.PRDS	2,000	I	SB	
74	80340	AUX STEAM HEADER	6,000	I	LU	
75	80341	AUX STEAM HEADER INTERCONN BETWEEN UNITS	75,000	I	LU	COMMON FOR TWO UNITS
76	80342	AUX STEAM TO SCAPH	14,000	I	LU	
77	80343	AUX STEAM TO AH SOOT BLOWERS	2,100	I	LU	
78	80344	AUX STEAM TO FO SYSTEM TP	85,000	I	LU	COMMON FOR TWO UNITS
79	80351	AUX STEAM TO UNLISTED USERS - SG SCOPE	16,000	I	SN	
80	80352	AUX STEAM TO UNLISTED USERS - TG SCOPE	2,000	I	SN	
81	80355	STEAM TRACING PIPING	9,000	I	LU	COMMON FOR TWO UNITS
82	80368	SCAPH DRAIN TANK VENT/SV EXHAUST TO ATM	2,300	N	LU	
83	80373	AUX STEAM HEADER SV EXHAUST	6,000	N	LU	
84	80395	AUX STEAM TO FUEL OIL ATOMISING	1,200	I	LU	
85	80399	STEAM BLOWING PIPING-TEMPORARY	61,000	N	SB	COMMON FOR TWO UNITS
86	80431	SPRAY WATER TO AUX PRDS	2,200	I	LU	
87	80451	BOILER INTEGRAL PIPING DRAINS	14,000	I	LU	
88	80452	HP PIPING DRAINS - SG SCOPE	12,000	I	LU	
89	80453	LP PIPING DRAINS - SG SCOPE	7,500	N	LU	
90	80454	SCAPH DRAINS	6,300	N	LU	
91	80455	DRAIN FROM UNLISTED EQPT/VESSEL-SG SCOPE	10,000	N	LU	

92	80460	SG AUX COOLING WATER UNIT SYSTEM	46,000	N	LU	
93	80471	BOILER WATER WASH TO & FROM UNIT	12,000	N	LU	
94	80477	SERVICE WATER PIPING	3,100	N	LU	
95	80480	FIRE WATER-OTHER AREAS	11,000	N	LU	
96	80601	LOW PRESSURE DOSING PIPING	1,000	N	LU	
97	80604	ACID CLEANING PIPING-TEMPORARY	50,000	N	LU	COMMON FOR TWO UNITS
98	80612	SERVICE AIR FOR INDIVIDUAL UNITS	13,000	N	LU	
99	80616	INSTRUMENT AIR FOR INDIVIDUAL UNIT	11,000	N	LU	
100	80650	FUEL OIL SUPPLY AND RETURN PIPING	160,000	N	LU	COMMON FOR TWO UNITS
101	80812	H&S FOR AUXILIARY STEAM PIPING FOR LU	16,000	N	LU	
102	80816	H&S OF ACID CLEANING PIPING	8,000	N	LU	COMMON FOR TWO UNITS
103	80818	AUX STR OF AUXILIARY STEAM PIPING FOR LU	35,000	N	LU	
104	80820	AUX STR OF DRAINS AND VENTS FOR LU	33,000	N	LU	
105	80830	H&S OF CRITICAL PIPING FOR SB - STEAM LINES	200,000	N	SB	
106	80840	AUX STR FOR MAIN STEAM PIPING FOR SB	300,000	N	SB	
107	80901	SUB DELIVERY VALVES FOR LIGHT UP	19,000	N	LU	
108	80905	BHEL VALVES FOR LIGHT UP	22,000	N	LU	
109	80917	BHELVALVE-ACID CLEANING ALKALI FLUS-TEMP	5,500	N	LU	COMMON FOR TWO UNITS
110	80918	BHEL VALVES-TEMPORARY PIPING FOR SB	5,200	N	SB	COMMON FOR TWO UNITS
111	80920	H&S FOR HYDRO TEST	15,000	N	HT	
112	80921	H&S FOR LIGHT UP STEAM LINE	23,000	N	LU	
113	80927	H&S FOR TEMPORARY PIPING - STEAM BLOWING	9,000	N	SB	COMMON FOR TWO UNITS
114	80992	IMPORTED ELECTRODES	30,000	N	HT	
115	80993	MISC ERECTION MATLS	2,000	N	HT	
116	81012	CLEAN DRAIN FLASH TANK - DIA 1500 MM	5,200	N	LU	
117	81036	CW STORAGE TANK 16-25 CUM	6,900	N	LU	
118	81041	IMPURE CONDENSATE TANK	4,100	N	SN	COMMON FOR TWO UNITS
119	81042	MAKE UP WATER STORAGE TANK BELOW 300 CUM	8,100	N	SN	
120	81060	SPECIAL TANKS AND VESSELS	10,000	N	LU	
121	80604	ACID CLEANING PIPING-TEMPORARY	50,000	N	LU	

3. **The clause no. 21.15.5 of VOLUME-ID stands modified as follows :**

Records of consumption of construction power is to be maintained for information of BHEL. The meters to be used for metering of construction power shall have necessary test certificate from relevant approving authority and these meters shall be used only on clearance from client/BHEL.

4. **FOLLOWING IS ADDED TO SCOPE OF WORK:**

Local transportation of load materials for load testing of cranes deployed by BHEL/BHEL's crane hiring agency shall be in the contractor's scope.

**VOLUME-III A
PRICE SCHEDULE, REV-1**

ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS, PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH, DIST-PATNA, BIHAR.

TENDER NO - PSER:SCT:BAR-B997:09

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.

**VOLUME-III
PRICE SCHEDULE, REV-1
SUMMARY SCHEDULE -1**

ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH,DIST-PATNA,BIHAR.

TENDER NO - PSER:SCT:BAR-B997:09

SUMMARY OF PRICES FOR CRANE PROVIDED BY BIDDER

SL. NO.	PACKAGE	TOTAL PRICE IN RUPEES
1.0	TOTAL PRICE OF SCHEDULE-3 (BOILER-PACKAGE A)	
2.0	TOTAL PRICE OF SCHEDULE-4 (CIVIL WORK FOR ELEVATOR PIT & MACHINE ROOM-PACKAGE B)	
3.0	TOTAL PRICE OF SCHEDULE-5 (75 TON CRANE PROVIDED BY BIDDER-PACKAGE C)	
GRAND TOTAL A		
NOTE	FOR PRICE BID EVALUATION FOLLOWING CRITERIA SHALL BE APPLICABLE	
1	GRAND TOTAL A OF SUMMARY PRICE SCHEDULE -1 AND GRAND TOTAL B OF SUMMARY PRICE SCHEDULE -2 SHALL BE CONSIDERED FOR WORKING OUT THE "LOWEST COST TO BHEL"	
2	LOWEST GRAND TOTAL (EITHER A OR B) OUT OF SUMMARY PRICE SCHEDULE 1 AND 2 OF ALL THE QUALIFIED BIDDERS SHALL BE CONSIDERED AS L-1 PRICE	
3	IN CASE L-1 PRICE CORRESPOND TO SUMMARY PRICE SCHEDULE -1 CRANES (75 TON CAPACITY BE PROVIDED BY VENDOR AS PER TERMS & CONDITIONS AND SPECIFICATION DETAILED IN TENDER	
4	IN CASE LI PRICE CORRESPONDS TO SUMMARY PRICE SCHEDULE -2, TWO NO CRANES (75 TON CAPACITY) SHALL BE PROVIDED BY BHEL AS PER TERMS AND CONDITIONS AND SPECIFICATION DETAILED IN THE TENDER.	

**VOLUME-III
PRICE SCHEDULE, REV-1
SUMMARY SCHEDULE -2**

ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH,DIST-PATNA,BIHAR.

TENDER NO - PSER:SCT:BAR-B997:09

SUMMARY OF PRICES FOR CRANE PROVIDED BY BHEL

SL. NO.	PACKAGE	TOTAL PRICE IN RUPEES
1.0	TOTAL PRICE OF SCHEDULE-3 (BOILER-PACKAGE A)	
2.0	TOTAL PRICE OF SCHEDULE-4 (CIVIL WORK FOR ELEVATOR PIT & MACHINE ROOM-PACKAGE B)	
3.0	TOTAL PRICE OF SCHEDULE-6 (75 TON CRANE PROVIDED BY BHEL-PACKAGE C)	
GRAND TOTAL B		
NOTE	FOR PRICE BID EVALUATION, FOLLOWING CRITERIA SHALL BE APPLICABLE	
1	GRAND TOTAL A OF SUMMARY PRICE SCHEDULE -1 AND GRAND TOTAL B OF SUMMARY PRICE SCHEDULE -2 SHALL BE CONSIDERED FOR WORKING OUT THE "LOWEST COST TO BHEL"	
2	LOWEST GRAND TOTAL (EITHER A OR B) OUT OF SUMMARY PRICE SCHEDULE 1 AND 2 OF ALL THE QUALIFIED BIDDERS SHALL BE CONSIDERED AS L-1 PRICE.	
3	IN CASE L-1 PRICE CORESPOND TO SUMMARY PRICE SCHEDULE -1, TWO NUMBER CRANES (75 TON CAPACITY) SHALL BE PROVIDED BY VENDOR AS PER TERMS & CONDITIONS AND SPECIFICATION DETAILED IN THE TENDER	
4	IN CASE L-I PRICE CORRESPONDS TO SUMMARY PRICE SCHEDULE -2, TWO NO CRANES (75 TON CAPACITY) SHALL BE PROVIDED BY BHEL AS PER TERMS AND CONDITIONS AND SPECIFICATION DETAILED IN THE TENDER	

**VOLUME-III
PRICE SCHEDULE , REV-I
SCHEDULE-3**

ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. AND CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH,DIST-PATNA,BIHAR.

PRICE BREAK UP OF BOILER & AUX

TENDER NO :- PSER:SCT:BAR-B997:08

SL.NO	DESCRIPTION OF ITEM	UNIT OF MEASUREMENT	QTY	RATE PER MT(IN RUPEES)	TOTAL (IN RUPEES)
1	2		3	4	5
1.0	GROUP-I (PRESSURE PARTS)	MT	13096		
2.0	GROUP-II (INTEGRAL & TRIM PIPING)	MT	1310		
3.0	GROUP-III(NON-PRESSURE PARTS)	MT	46382		
4.0	GROUP-IV(ROTATING MACHINES)	MT	8784		
5.0	GROUP-V (PIPING)	MT			
5.1	SA335 P-91 PIPINGS	MT	864		
5.2	SS PIPING	MT	16		
5.3	ALLOY /CARBON STEEL PIPINGS	MT	4922		
5.4	STRUCTURES / HANGERS & SUPPORTS	MT	1278		
5.5	VALVES AND OTHER FITTINGS LIKE FLOW NOZZ., ORIFICE, TRAPS ETC.	MT	130		
5.6	TANKS & VESSELS	MT	68		
5.7	TEMPORARY PIPING SYSTEM (INCLUDING VALVES & FITTINGS) FOR STEAM BLOWING, CHEMICAL CLEANING ETC	MT	222		
6.0	MISCELLANEOUS APPROACH / OPERATION PLATFORM	MT	120		
7.0	LUMP SUM PRICE FOR PROVIDING ASSISTANCE FOR CONDUCTING PG TEST	NO.	2		
TOTAL PRICE					

**VOLUME-III
PRICE SCHEDULE, REV-1
SCHEDULE-4**

ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH,DIST-PATNA,BIHAR.

TENDER NO - PSER:SCT:BAR-B997:09

BREAK UP OF COMPLETE CIVIL WORKS FOR ELEVATOR PIT & MACHINE ROOM

S. No.	Item No.	Description	Unit	QTY FOR ONE UNIT	QTY FOR TWO UNITS	Unit Rate (Rs.)	Total Amount for Two Units (Rs.)
(a)	(b)	©	(d)	(e)	(f)	(g)	(h)=(f)x(g)
1	12	Providing and Fixing Plywood formwork with suitable overlay (film faced) , for cast-in situ, plain or reinforced cement concrete, to give an even and smooth surface to exposed faces of concrete, at all levels and for all kinds of works (except for the works of beams, columns and top deck of machine foundations supported on Vibration isolation System) and sections (including curved surfaces, block outs / pockets , openings etc.) including block type foundations with all labour, materials, equipment, handling transportation, shoring, strutting, scaffolding, staging, tying, nailing, caulking, bolting, testing, cambering, cleaning, removal of formwork and staging, design and preparation of scheme for formwork and getting it approved by the Engineer, etc. , all complete, as per specifications, drawings and instructions of the Engineer.					
	12(b)	For all works AGL	SQM	234	468		
2	8	Providing and Laying design mix cement concrete for Reinforced cement concrete works , as specified below, at all levels , for all kinds of works, with 20 mm nominal size graded stone aggregate (unless specified otherwise), with all labour, materials, equipment, handling, batching, transportation, testing, pumping, including mix design, mixing, conveying, placing and compacting, protecting and curing, testing, cleaning and finishing, rendering to give a smooth and even surface, for all working conditions, preparation of scheme for concreting and getting it approved by the Engineer, etc. , all complete, as per specifications, drawings and instructions of the Engineer					
	8(b)(ii)	For all works AGL M20	CUM	26	52		

3	11	Providing and Laying Reinforcements , as specified below in Reinforced cement concrete and other allied works (including reinforcements for piling, machine foundations like top deck of TGs, BFPs, FANs, Elevator pit etc.) with all labour, materials, equipment, handling, transportation, cleaning straightening, cutting, testing, including bending and placing, binding in position, concrete cover blocks, chairs and spacers, laps and anchorage, cover to reinforcement, preparation of bar bending schedules and getting it approved by the Engineer, etc. , all complete, as per specifications, drawings and instructions of the Engineer				
	11(b)(ii)	High Strength Deformed Bars	MT	5.2	10.4	
4	36	Providing and Laying in position brick masonry (with or without RCC band / reinforcement), with bricks of minimum crushing strength of 75 Kg/ cm ² , at all levels, for all kinds of works, for all thicknesses including all labour, material, equipment, handling transportation, etc. in Cement Sand mortar of specified proportion, mixing mortar, laying bricks, raking out joints, scaffolding, staging, curing, including making holes/opening of size upto 0.1 Sq. M. etc. , all complete, as per specifications, drawings and instructions of the Engineer.				
	36(a)	With burnt clay bricks conforming to IS: 12894 or IS: 13757				
	36(a)(i)	With 1: 6 (1 Cement and 6 Sand) mortar	CUM	52	104	
5	38	Providing cement sand plaster , as specified below in one or two layers , at all levels, for all types of masonry and / or concrete surfaces, (both exterior and interior) in all kinds of works (excluding grading under bed and lathe plaster) for skirting and dado, canopies, fins, fascia, ceiling, slab, beams, columns, lintel, canopies, projections, stairs, landings, including forming groove of uniform size from 12 mm x 12 mm upto 20 mm x 15 mm in plastered surface , as per approved pattern using wooden batton, all labour, materials, equipment, handling, transportation, scaffolding , staging surface preparation, handling, mixing, mortar, application, plastering, formation of drip course, on the ceiling of exterior projected surface, finishing, curing, testing etc. all complete, as per specifications, drawings and instructions of the Engineer				
	38(a)	18 mm thick, using 1: 6 cement: sand mortar, in two layers.	SQM	234	468	
	38(b)	12 mm thick, using 1: 6 cement: sand mortar, in single layers	SQM	300	600	
6	51	Providing and laying following floor finishes of approved shade and colour (non-premium colours), over under bed of cement mortar/ concrete, at all levels and for all kinds of works, elevations, on horizontal and vertical surfaces for all types of works (like flooring , skirting, dado, wall lining and facing , tread and risers etc.) including all workmanship, preparation of working drawings, topping , spreading white cement slurry at an average rate of 2.5 kg/ Sq. M. (unless noted otherwise), jointing and joint filling with white cement (unless noted otherwise) slurry mixed with colour pigment to match the shade of the finishing material, laying to plumb and water level in desired pattern , line and flush butt square jointing , curing, rubbing, grinding, polishing, edge moulding, finishing, and cleaning , testing , providing opening of required size and shape , casting in panels wherever specified, including all labour, material, equipment, scaffolding handling transportation etc. all complete, as per specifications, drawings and instructions of the Engineer (Under bedding of cement mortar / concrete (PCC) , if provided , shall be paid separately under relevant item) .				
	51(b)	Metallic Hardener topping – with ordinary grey cement – 12 mm thick (insitu)	SQM	125	250	
7	7	Providing and laying nominal mix or design mix, Plain Cement Concrete as specified below, at all levels , for all kinds of works, such as mass concrete, lean concrete, bed blocks, mud- mat, grading, under bed, filling, screed concreting, paving , plinth protection, damp-proof course, drains, gully chambers, trenches, etc. , with all labour, materials, equipments, handling, batching, transporting, pumping, including mix design, mixing, (no stacking of materials shall be done near the work area where concrete is being placed), conveying, placing and compacting, protecting and curing, testing for all working conditions etc. , all complete, as per specifications, drawings and instructions of the Engineer				
	7(a)	M 20 (with graded aggregate of nominal size 12.5 mm) design mix	CUM	6.5	13	
7	57	Providing, fitting and fixing in position fire proof single leaf/ double leaf metal doors with mineral wool insulation , conforming to IS : 3614 meeting TAC requirements and having a fire rating of two hours (minimum), at all levels and for all kinds of works, including all labour, material, workmanship, including preparation of working drawings, equipment , handling, transportation, steel frames, shutters, insulation, fittings, hinges, panic device having panic lock, latch, horizontal full width lever , openable on pressing door stoppers, hold fasts/ expanding anchor bolts, bolting arrangements, grouting frames blast cleaning of steel surfaces to near white metal surface (Sa 2.5 Swedish standard), applying inorganic zinc silicate primer of minimum 75 microns (DFT) and finish with suitable fire retardant painting system , testing, etc. , as per specifications, drawings and instructions of the Engineer	SQM	18.2	36.4	

8	26	Providing, Fabrication, erection, alignment, welding etc. of structural. Steel, mild steel, medium and high strength steel at all levels, involving rolled sections, (including rounds), pipes / hollow sections , built up sections fabricated out of plates and / or rolled sections (including pipes and hollow sections) , chequered plates etc. in columns, beams, gantry girders, crane girders, roof trusses, roof girders, trestles, galleries, portals, purlins, space frames, shear connectors, hangers, struts, monorail beams, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, base plates, splice plates, chequered plate flooring, decking plates, floor plates, seal plates, diaphragms, steel frame grid over false ceiling, walkways, platforms, ladders, stairs, stringers, treads, landings, hand rails, toe plates, rungs, insert plates, edge protection structures, embedments, lugs, posts, stays, gates, louvers, lacings, stiffeners, gusset plates, washers, bunkers, silos, hoppers, casing pipe etc. including design of connections, and splicing , preparation and checking of fabrication drawings, and getting the same approved , site fabrication, collection of steel, straightening, preparation of cutting plans, cutting, bending and rolling grinding, clearances, drilling, assembly, bolting, (supply of permanent bolts and nuts to be paid separately under relevant items) erection bolts and nuts (weight not payable) , welding , edge preparation, pre-heating, post-heating, sequence of welding, testing of welders, inspection and testing of welds (visual inspection, non-destructive and special testing) , rectification / correction of defective welding works, production test plate, primer painting with chlorinated rubber based zinc phosphate having minimum 50 micron Dry Film Thickness (DFT) , erection marks, erection scheme, embedding in concrete, protection against damage in transit, ensuring stability of structures, installation of temporary structures, (weight of temporary structures not payable) , setting column bases etc. with all labour, materials, consumables, equipment, handling, transportation, testing (mechanical and non-destructive) etc. and all other activities, required for completion of the works, all complete, as per specifications, drawings and instructions of the Engineer					
	26(b)	For medium and High strength steel conforming to IS: 8500	MT	0.45	0.9		
9	41	Providing and applying of minimum three coats of finish paint of approved colour, shade and make , and a coat of compatible primer, for all types of plastered and / or exposed concrete surface, in all kinds of works, at all levels, including preparation of surfaces by providing minimum 2 mm thick Plaster of Paris, to give even and smooth surface, all labour, material ,equipment, handling transportation, scaffolding, finishing, testing etc. , all complete, as per specifications, drawings, and instructions of the engineer.					
	41(a)	Oil Bound Distemper	SQM	260	520		
	41(b)	Oil Bound Distemper for ceiling without provision of Plaster of Paris	SQM	91	182		
10	43	Providing and application of ready mix of two component , resin and polymer bonded granular textured coating finish , of approved colour, and shade for all types of plastered and / or exposed concrete surface, in all kinds of works, at all levels, including preparation of surface, preparation of working drawings, labour material, equipment, handling, transportation, mixing, laying, applying finishing, testing, curing, making grooves, scaffolding, staging, etc. all complete, as per specifications, drawings, and instructions of the engineer for following nominal thickness					
	43 (b)	2.5 mm	SQM	234	468		
TOTAL PRICE : (For Elevators of two units)							
11		For items not covered above, quote % above or below the CPWD schedule (DSR-2007).	percentage above CPWD Schedule(2007)	percentage below CPWD Schedule(2007)			
	a	Rate of complete item.					
	b	Rate of supply of materials at site only.					
	c	Rate for execution complete excluding supply of materials.					

PRICE SCHEDULE, REV-1		VOLUME-III A		SCHEDULE-5	
ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH, DIST-PATNA, BIHAR.					
TENDER NO - PSER:SCT:BAR-B997:09					
CRANES PROVIDED BY BIDDER					
SL. NO	DESCRIPTION	UNIT	QUANTITY	UNIT RATE IN RUPEES	TOTAL IN RUPEES
10.1	MOBILISATION CHARGES	NO.	2		
10.2	MONTHLY LUMP SUM CHARGES FOR DEPLOYMENT OF 75T CRAWLER CRANE	CRANE-MONTH	92		
TOTAL PRICE					

PRICE SCHEDULE, REV-1		VOLUME-III A		SCHEDULE-6	
ERECTION AND COMMISSIONING OF BOILER, ROTATING MACHINES AND DUCT, CRITICAL PIPING, MICS. PIPING, ETC. INCLUDING CIVIL WORKS OF ELEVATOR PIT & MACHINE ROOM OF BOTH THE UNITS OF 2 X 660 BARH (STG-II) STPP PROJECT., PO-BARH, DIST. PATNA, BIHAR.					
TENDER NO - PSER:SCT:BAR-B997:09					
CRANES PROVIDED BY BHEL					
SL. NO	DESCRIPTION	UNIT	QUANTITY	UNIT RATE IN RUPEES	TOTAL IN RUPEES
1.0	MOBILISATION CHARGES	NO.	2	700000	1400000
2.0	MONTHLY LUMP SUM CHARGES FOR DEPLOYMENT OF 75T CRAWLER CRANE	CRANE-MONTH	92	428800	39449600
TOTAL PRICE					40849600

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Erection and Commissioning of Boiler, Rotating Machines and Duct, Critical Piping, Misc Piping, etc. including Civil works of Elevator Pit & Machine Room of both the Units of 2 X 660MW Barh (STG-II) STPP Project., PO-Barh, Dist-Patna, Bihar.	
Ref	1.0	Tender no PSER:SCT:BAR-B997:09.
	2.0	BHEL's NIT, vide reference no Ref: PSER:SCT:BAR-B997:09 Dated 03-04-2009
	3.0	BHEL's TCN-01, vide reference no PSER:SCT:BAR-M997:TCN-01, dated 21-04-09.
	4.0	BHEL's TCN-02, vide reference no PSER:SCT:BAR-M997:TCN-02, dated 27-04-09.
	5.0	BHEL's TCN-03, vide reference no PSER:SCT:BAR-M997:TCN-03, dated 04-05-09.
	6.0	Other references (if any).

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized representative of the bidder)