



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:BRM-S1312:TCN-01

Date: 18-02-2012

Sub	Tender change notice (TCN) 01.	
Job	Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, Bihar.	
Ref	1.0	Tender no PSER:SCT:BRM-S1312:12.
	2.0	BHEL's NIT, vide reference no PSER:SCT:BRM-S1312:2695, dated 09-02-2012.
	3.0	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 Amendment/Clarification to tender as per enclosed Annexure-A
- 2.0 Revised Volume-III A, Price Schedule, Rev-1, superseding previous version, is attached. You are requested to submit offer as per attached revised price schedule.
- 3.0 Revised 'No deviation certificate' as per enclosed Annexure-2. 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

ENGR (SCT)

Encl
As above.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

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

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

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<p>TENDER NO - PSER:SCT:BRM-S1312:12.</p>

SL NO	AMENDMENT/ MODIFICATION																																								
1.0	VOLUME-ID & II (SPECIAL CONDITIONS OF CONTRACT AND TECHNICAL SPECIFICATION, SCOPE)																																								
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	45.4.2.2.7.2	Fuel oil flow control Part I & II,
	45.4.2.2.7.3	Air flow control Part I & II,
	45.4.2.2.7.4	PA header pressure control,
	45.4.2.2.7.5	Mill temperature air flow control,
	45.4.2.2.7.6	Furnace pressure control,
	45.4.2.2.7.7	Drum level control Part I & II,
	45.4.2.2.7.8	SH Temperature control,
	45.4.2.2.7.9	RH Temperature control,
	45.4.2.2.7.10	Hotwell level control,
	45.4.2.2.7.11	Aux. steam temp. control,
	45.4.2.2.7.12	BFP circulation control,
	45.4.2.2.7.13	Heater drain tank level control
	45.4.2.2.7.14	FW storage tank level control,
	45.4.2.2.7.15	Condenser booster pump flow control,
	45.4.2.2.7.16	DM water flow control,
	45.4.2.2.8	Commissioning of interlock protections:
	45.4.2.2.8.1	Fan Damper drives,
	45.4.2.2.8.2	FD Fan A & B,
	45.4.2.2.8.3	ID Fan A,B & C,
	45.4.2.2.8.4	PA Fan A & B,
	45.4.2.2.8.5	Secondary and primary air heater,
	45.4.2.2.8.6	F.O. trans pump A & B (for U#9),
	45.4.2.2.8.7	F.O.Trans. pump (for U#10),
	45.4.2.2.8.8	L.O.trans pump A (for U#9).
	45.4.2.2.8.9	L.O.trans pump B (for U#10),
	45.4.2.2.8.10	CW pump,
	45.4.2.2.8.11	Condenser trans pump A, B & C,
	45.4.2.2.8.12	BCW pump A & B for U#9,
	45.4.2.2.8.13	BCW Pump C for U# 9 & 10,
	45.4.2.2.8.14	BCW drain pump D & E,
	45.4.2.2.8.15	Mill A to F,
	45.4.2.2.8.16	BFP A & B.
	45.4.2.2.9	Commissioning of all analysers, such as,
	45.4.2.2.9.1	SWAS system,
	45.4.2.2.9.2	pH of Drum water,
	45.4.2.2.9.3	Conductivity
	45.4.2.2.9.4	Silica at drum water,
	45.4.2.2.9.5	Dissolved Oxygen in BFP water and FW storage tank.
	45.4.2.2.9.6	O2 analyser,
	45.4.2.2.9.7	Smoke density measurement,
	45.4.2.2.10	Commissioning of UPS system.
1.1.3	45.4.2.3	Final commissioning of the unit, hooking up of all instruments with measurement and Auto Control loops and acceptance by customer: 10% (AS PER TOTAL AMOUNT OF SCH-3 OF PRICE SCHEDULE/ VOLUME-IIIA-LATEST REVISION)
1.1.4	45.4.2.4	BHEL site at their discretion, may further split up all the above percentages and effect payment to suit the site condition, cash flow requirement and according to the progress of work.
2.0		All other terms & conditions shall remain unchanged.

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

JOB: Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, BSEB, Bihar.

TENDER NO - PSER:SCT:BRM-S1312:12

PREAMBLE

01	This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in filling 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 are approximate, based on preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra item, if any but excluding any price variation remains within twenty percent (20%) of the awarded price as per LOI.
10	All works item wise shall be measured upon completion and paid for at the rates quoted and accepted.
11	Evaluation shall be done based on overall quoted price.

VOLUME-III
PRICE SCHEDULE, REV-1

JOB: Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, BSEB, Bihar.

TENDER NO - PSER:SCT:BRM-S1312:12

SCH-1 - TOTAL PRICE

SL.NO.	DESCRIPTION OF WORK	ALL INCLUSIVE TOTAL PRICE (Rs)
1.0	TOTAL PRICE FOR DISMANTLING OF EXISTING C&I AND ASSOCIATED SYSTEM ETC, TRANSPORTATION OF THE SAME TO DESIGNATED PLACE AS DIRECTED , BRINGING OF MATERIALS TO REQUIRED WORK SITE, ERECTION, TESTING, COMMISSIONING ETC OF NEW CONTROL & INSTRUMENTATION (C&I) SYSTEM AS PER TENDER TAKING INTO ACCOUNT OF ALL CLARIFICATIONS/MODIFICATIONS TILL DATE FOR 1X110 MW UNIT # 7 AT BARAUNI TPS, BSEB, BIHAR.	

NOTES

1.0	BIDDER TO NOTE THAT TOTAL PRICE AT SL NO 1.0 ABOVE WILL BE TAKEN INTO ACCOUNT FOR EVALUTION. AWARDING WILL BE DONE ON QUOTED PRICE AGAINST SL NO 1.0 ABOVE AND SUCH , SHALL BE COMPLETE IN ALL RESPECT FOR FULL SCOPE DEFINED AND IN ACCORDANCE WITH ALL TERMS AND CONDITIONS OF TENDER.
2.0	SERVICE TAX (INCLUDING EDUCATION CESS) SHALL BE PAID EXTRA AS DETAIL IN TENDER. HENCE BIDDER'S QUOTED RATE SHOULD BE EXCLUSIVE OF SERVICE TAX.
3.0	TO QUOTE PRICE ONLY IN INTERNATIONAL NUMERALS AND ENGLISH WORDS BREAK UP NOT TO BE SHOWN UNLESS AND OTHERWISE SPECIFICALLY ASKED FOR IN THE TENDER
4.0	BIDDER SHALL FURNISH ITEM-WISE BREAK UP OF ABOVE TOTAL PRICE IN THE RESPECTIVE SCHEDULE AS PER FOLLOWING. TOTAL PRICE OF VARIOUS SCHEDULES SHALL MATCH WITH ABOVE TOTAL PRICE.
4.1	SCH-2 - DISMANTLING OF EXISTING C&I SYSTEM
4.2	SCH-3 - ERECTION , TESTING , COMMISSIONING ETC OF NEW C& I SYSTEM

VOLUME-III
PRICE SCHEDULE, REV-1

JOB: Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, BSEB, Bihar.

TENDER NO - PSER:SCT:BRM-S1312:12

SCH-2- DISMANTLING WORK

SL.NO.	DESCRIPTION OF WORK	QUANTITY	UNIT	TOTAL AMOUNT (IN Rs) (In figures)
1.0	TOTAL LUMPSUM PRICE FOR DISMANTLING OF EXISTING C&I AND ASSOCIATED SYSTEM AS REQUIRED FOR INSTALLATION OF THE NEW INSTRUMENTS , CABLE, TRAYS ETC (DISMANTLING OF CABLES SHALL BE AROUND 65-70 KM) AS DIRECTED BY BHEL, TRANSPORTATION OF THE SAME TO THE DESIGNATED PLACES AS DIRECTED BY CUSTOMER/BHEL FOR 1X110 MW UNIT # 7 AT BARAUNI TPS, BSEB, BIHAR .	1	LUMPSUM	

VOLUME-III
PRICE SCHEDULE, REV-1

JOB: Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, BSEB, Bihar.

TENDER NO - PSER:SCT:BRM-S1312:12

SCH-3- RATE SCHEDULE (ERECTION , TESTING ,COMMISSIONG OF C&I WORK)

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
TOTAL PRICE FOR ERECTION, TESTING, COMMISSIONING ETC OF NEW CONTROL & INSTRUMENTATION (C&I) SYSTEM AS DETAILED IN TENDER FOR THE FOLLOWING							
1.0	P-1810400004 -13308	LOCAL MEASURING INSTRUMENTS	MIS 0-120C,150MM M20X1.5-M CAPILLARY 7M	AA7320501350	30	NOS	
2.0			MIS 0-200C.,150MM M20X1.5-M CAPILLARY 7M	AA7320501368	16	NOS	
3.0			MIS 0-300C,150MM M20X1.5-M CAPILLARY 7M	AA7320501376	5	NOS	
4.0			MIS CPLRY DIAL THRMTR 0-650,D150,M20X1.5	AA7320501481	5	NOS	
5.0			THERMOWELL-MP BLB 12-L1=150-N1=27-IS7358	AA7326005257	25	NOS	
6.0			THERMOWELL-MP BLB 12-L1=150-N1=75-IS7358	AA7326005265	40	NOS	
7.0			TW,SS316,SCR,M20X1.5-F/M33X2-M,L-244MM	AA7326005273	30	NOS	
8.0			PR.SW.DIFFL.RNG 0.4-4KG/SQCM 2SPDT	HY7314001871	1	NOS	
9.0			MIS TH. METER CPLRY DIAL 150, 0-500C.	HY7320501392	12	NOS	
10.0			MIS CPLRY DIAL 150 THRMTR 0-300DEG.C.	HY7320501457	8	NOS	
11.0			MIS CPLRY DIAL 150 THRMTR 0-500DEG.C.	HY7320501473	5	NOS	
12.0			THERMOWELL MED.PR BLB8 L1=150,N1=27 SS	HY7326005753	18	NOS	
13.0			THERMOWELL HP BLB12 L1=250,N1=100 SS	HY7326010188	35	NOS	
14.0			TRANSPARENT WATER LG 1" #300 RF L=900MM	HY7330261076	5	NOS	
15.0			WTR LVL GG 1"ANSI 300 RF DISTANCE L=1200	HY7330261084	2	NOS	
16.0			WTR LVL GG DBL PLT ILLMTOR SWPR3000 L900	HY7330261327	2	NOS	
17.0			FERROSTAT PICKUP JAQUET:DSF2210.87ST(5M)	TC9751932017	6	NOS	
18.0			LPH-4 DRIP TO LPH-3 LVL CONTROL VALVE	TC9755041613	1	NOS	
19.0			BIMET TH.MTR,120C,D150,1/2"NPT-M,BULB D8	TC9755145273	15	NOS	

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
20.0			FLOW ELEMENT AS PER TC65177-28	TC9755177280	1	NOS	
21.0			PRGG SS CASING 0TO2.5 DIA150	TC9755253432	10	NOS	
22.0			PRGG SS CASING 0TO4 DIA150	TC9755253440	8	NOS	
23.0			PRGG SS CASING 0TO6 DIA150	TC9755253459	5	NOS	
24.0			PRGG SS CASING 0T10 DIA150	TC9755253467	10	NOS	
25.0			PRGG SS CASING 0TO16 DIA150	TC9755253475	14	NOS	
26.0			PR GAUGE,SS,0-25KG/CM2,1/2"NPTM,D150	TC9755253483	8	NOS	
27.0			PR GAUGE,SS,0-40KG/CM2,1/2"NPTM,D150	TC9755253491	10	NOS	
28.0			PR GAUGE,SS,0-60KG/CM2,1/2"NPTM,D150	TC9755253505	10	NOS	
29.0			PR GAUGE,SS,0-250KG/CM2,1/2"NPTM,D150	TC9755253521	10	NOS	
30.0			PR GAUGE,SS,-1-1.5KG/CM2,1/2"NPTM,D150	TC9755253564	14	NOS	
31.0			PR GAUGE,SS,0-160 KG/CM2,D150,1/2"NPTM	TC9755253572	10	NOS	
32.0			DP GAUG,0-2.5KSC,SS,D150,ST P:10KSC,IP55	TC9755271082	1	NOS	
33.0			GOVERNING CONSOLE BOARD	TC9755547100	1	NOS	
34.0			LOCAL GAUGE BOARD	TC9755782117	1	NOS	
35.0			LOCAL GAUGE BOARD	TC9755782117	1	NOS	
36.0			PRESSURE INDICATING SWITCH 0-160KG/CM2	TC9765254016	8	NOS	
37.0			PRESSURE INDICATING SWITCH 0 TO 4 KG/CM2	TC9765254024	1	NOS	
38.0			GLAND STEAM HP/IP TURBINE INLET PR. CV	TC9755041010	1	NOS	
39.0			GLAND STEAM HP/IP TURBINE DUMP PR. CV	TC9755041060	1	NOS	
40.0			HOTWELL MAKEUP LVL CONTROL VALVE	TC9755041214	1	NOS	
41.0			DEARATOR LVL CONTROL VALVE	TC9755041311	1	NOS	
42.0			HPH-2 DRIP TO HPH-1 LVL CONTROL VALVE	TC9755041362	1	NOS	
43.0			HPH-1 DRIP TO DEARATOR LVL CONTROL VALVE	TC9755041419	1	NOS	
44.0			HPH-1 DRIP TO LPH-5 LVL CONTROL VALVE	TC9755041516	1	NOS	
45.0			LPH-5 DRIP TO LPH-4 LVL CONTROL VALVE	TC9755041567	1	NOS	
46.0			LP GLAND STEAM PRESSURE CONTROL VALVE	TC9765091052	1	NOS	
47.0			EMERGENCY HOTWELL MAKEUP LVL CV	TC9765091060	1	NOS	
48.0			DESUPER HEATER FOR GLAND STEAM	TC9765091079	1	NOS	
49.0			CHANGE OVER CV FOR HP LEAKOFF-1	TC9765091087	1	NOS	
50.0			CHANGE OVER CV FOR HP LEAKOFF-2	TC9765091095	1	NOS	
51.0			BFP FLOW NOZZLE FOR 120 MW	TC9765176015	2	NOS	
52.0			CONDENSATE FLOW ORIFICE	INRQ00733001	1	NOS	
53.0			MAKE UP FLOW ORIFICE	INRQ00733003	1	NOS	
54.0	95-088						

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
54.1			FLAME SCANNER HEAD ASSEMBLY		20	NOS	
54.2			BHELSCAN FLAME SCAN AMPLIFIER		5	NOS	
54.3			6-WAY JUNCTION BOX		20	NOS	
55.0	95-089		LOCAL OIL GUN MAINTAINANCE BOX		12	NOS	
56.0	95-091		GI CABLE TRAY , WIDTH 100 mm		975	mtrs.	
56.1			GI CABLE TRAY , WIDTH150 mm		300	mtrs.	
56.2			GI CABLE TRAY , WIDTH 50 mm		175	mtrs.	
56.3			JUNCTION BOX 24-WAY		50	NOS	
56.4			JUNCTION BOX 48-WAY		65	NOS	
56.5			channel (ISMC 100mmX50mmX06MM)		250	mtrs.	
56.6			ANGLE (40mmX40mmX05mm)		250	mtrs.	
56.7			FLAT (06mmX50mmX2500mm)		100	mtrs.	
56.8			FLAME SCANNER SHIELDED CABLE		6000	mtrs.	
56.9			2P X 0.5 Sq.mm O/A Shielded Cable		5000	mtrs.	
56.10			4P X 0.5 Sq.mm O/A Shielded Cable		500	mtrs.	
56.11			8P X 0.5 Sq.mm O/A Shielded Cable		300	mtrs.	
56.12			4P X 0.5 Sq.mm P/O Shielded Cable		1000	mtrs.	
56.13			3C X 1.5 Sq.mm Control Cable		2000	mtrs.	
56.14			10C X 1.5 Sq.mm Control Cable		500	mtrs.	
56.15		16C X 1.5 Sq.mm Control Cable		6000	mtrs.		
	(Cable glands,lugs,Cable dressing materials and AI Cable Tag shall be supplied by BHEL with above cables)						
56.16			GI CABLE TRAY WIDTH 150mm		375	mtrs.	
57.0	95-092						
57.1			4P X 0.5 Sq.mm.O/A SHIELDED CABLE		7200	mtrs.	
57.2			8P X 0.5 Sq.mm.O/A SHIELDED CABLE		7200	mtrs.	
57.3			12P X 0.5 Sq.mm.O/A SHIELDED CABLE		9000	mtrs.	
57.4			4P X 0.5 Sq.mm.P/O SHIELDED CABLE		1500	mtrs.	
57.5			7C X 1.5Sq.mm CONTROL CABLE		4000	mtrs.	
57.6			10C X 1.5 Sq.mm Control Cable		500	mtrs.	
57.7			16C X 1.5 Sq.mm Control Cable		6000	mtrs.	
57.8			GI CABLE TRAY , WIDTH150 mm		375	mtrs.	
		(Cable glands,lugs,Cable dressing materials and AI Cable Tag shall be supplied by BHEL with above cables)					
58.0	96-187						
58.1			CABLE TRAY WIDTH 100 mm		875	mtrs.	
58.2			3C X 2.5 Sq.mm Cu power cable		41000	MTRS.	

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
58.3			2P x 0.5 Sq.mm O/A Shielded Cable		1000	mtrs.	
58.4			4P x 0.5 Sq.mm O/A Shielded Cable		1000	mtrs.	
58.5			8P x 0.5 Sq.mm O/A Shielded Cable		4000	mtrs.	
58.6			7C X 1.5 Sq.mm Control Cable		10000	mtrs.	
58.7			10 C X 1.5 Sq.mm Control Cable		14000	mtrs.	
58.8			2P x 0.5 Sq.mm Indv. & Collected Shielded Cable		1500	mtrs.	
58.9			4P x 0.5 Sq.mm Indv. & Collected Shielded Cable		750	mtrs.	
		(Cable glands,lugs,Cable dressing materials and AI Cable Tag shall be supplied by BHEL with above cables)					
59.0	96-193		SCANNER FAN DC MOTOR STARTER BOX		1	No.	
60.0	97-195		EWLI (ELECTRONIC WATER LEVEL INDICATOR) with following accessories		1	SET	
	97-088						
			EWLI BODY ASSEMBLY-02 Nos. 16P X 0.6Sq.mm Shielded Cable-500mtrs. 10P X 0.6 Sq.mm PTFE CABLE FOR PROBES/ELECTRODES with Gasket-60 mtrs. (Cable glands,lugs,Cable dressing materials and AI Cable Tag shall be supplied by BHEL with above cables) UCB AND FAP DISPLAY UNIT-4Nos. ASCERTOR CABINET WITH ASC. CARD-2 Nos. LINEAR POWER SUPPLY MODULE-1No. DISPLAY CARD, RELAY DRIVER CARD, MICRO CONTROLLER CARD(1 each) 12-PORT DISPLAY UNIT-1No. LOCAL INDICATION BOX-1No.]				
61.0	97-282		FLOWMETERS				
61.1			POSITIVE DISPLACEMENT METER-LDO LINE		1	No.	
61.2			POSITIVE DISPLACEMENT METER-HFO LINE		1	No.	
61.3			With following accessories				
			STRAINER FOR HEAVY FUEL OIL SUPPLY LINE --01 No. PULSE AMPLIFIER F TO I CONVERTER-04 NoS. MATTING FLANGES FOR HFO SUPPLY LINE-01 SET FLAME PROOF HOUSING FOR PULSE AMPLIFIER -02Nos.				

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
			SHIELDED SIGNAL CABLE -30 mtrs. MATTING FLANGES FOR LDO LINE STRAINER FOR LDO LINE-01 No. REDUCER/EXPANDER -HFO LINE-01 No. ORIFICE PLATE ASSEMBLY - SH SPRAY-02 Nos. ORIFICE PLATE ASSEMBLY - RH SPRAY-02 Nos. 5 VALVE MANIFOLD-04 Nos. CONDENSING POT --08 Nos. 1/2" SCH160-PIPE NIPPLE 6" LONG-24 Nos. 1/2" SCH160-PIPE NIPPLE 6" LONG-64 Nos. 1/2" SCH160 PIPE ELBOW-24 Nos. EQUAL TEE-16 Nos. 1/2" SCH160 PIPE BEND -24 Nos. 12" LENGTH 1/2"SCH160 NIPPLE-08 Nos. 1/2" THREE PIECE UNION -08 Nos. REDUCER/EXPANDER -1 No.				
62.0	97-284		FIELD GAUGES				
62.1			PRESSURE GAUGES		60	NOS	
62.2			TEMPERATURE GAUGES		66	NOS	
63.0	97-285						
63.1			PRESSURE SWITCHES		27	NOS	
63.2			TEMPERATURE SWITCHES		5	NOS	
63.3			DIFFERENTIAL PRESSURE SWITCHES		27	NOS	
64.0	97-297 & 97-298						
64.1			MTM THERMOCOUPLES 6 mm OD/ROUTE LENGTH 12 mtrs WITH WELD PADS AND WELD CLAMPS		21	NOS	
64.2			MTM THERMOCOUPLES 6 mm OD/ROUTE LENGTH 14 mtrs. WITH WELD PADS AND WELD CLAMPS		33	NOS	
64.3			MTM THERMOCOUPLES 6 mm OD/ROUTE LENGTH 16 mtrs WITH WELD PADS AND WELD CLAMPS		24	NOS	

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
64.4			MTM THERMOCOUPLES 6 mm OD/ROUTE LENGTH 18 mtrs WITH WELD PADS AND WELD CLAMPS		9	NOS	
64.5			MTM JUNCTION BOX 24 WAY		20	NOS	
65.0	97-591						
65.1			JB FOR SHEAR PIN FAILURE INDICATOR		4	NOS	
65.2			LS FOR SHEAR PIN FAILURE INDICATOR		12	NOS	
66.0	97-577		ERV CONTROL EQUIPMENT		1	SET	
67.0	<u>SG C&I Package</u>						
67.1	717.SH1.50.01.1		FLAME SCANNER CJF07		1	Panels	
67.2	717.SH1.50.01.2		CJF01-04		4	Panels	
67.3	717.SH1.50.01.3		SUITE OF 3 (CJF23, CJF24, CJF20)		3	Panels	
67.4	717.SH1.50.01.4		SUITE OF 3 (CJF25, CJF26, CJF21)		3	Panels	
67.5	717.SH1.50.01.5		SUITE OF 3 (CJF27, CJF28, CJF31)		3	Panels	
67.6	717.SH1.50.02.1		SUITE OF 2 (CAF16 & 17)		2	Panels	
67.7	717.SH1.50.03.1		SUITE OF 2 (CJF20-21)		2	Panels	
68.0	<u>TG C&I Package</u>						
68.1	717.SH1.57.01.1		SUITE OF CJJ03 AND CJJ04		2	Panels	
68.2	717.SH1.57.01.2		SUITE OF CCA01-CCA03		3	Panels	
68.3	717.SH1.57.01.3		SUITE :CCA04		1	Panels	
68.4			CABLE TRAY 50mm X 25mm (WITH COVER etc.)		500	mtrs.	
68.5			CABLE TRAY 100mm X 25mm (WITH COVER etc.)		1500	mtrs.	
68.6			CABLE TRAY 50mm X 25mm (WITH COVER etc.)		2000	mtrs.	
68.7			CABLE TRAY 100mm X 25mm (WITH COVER etc.)		2000	mtrs.	
69.0	<u>BOP/Station C&I Package</u>						
69.1	717.SH1.58.01.1		SUITE OF CRE01 AND CRE02		2	Panels	
69.2	717.SH1.58.01.2		SUITE OF CRE03 AND CRE04		2	Panels	
69.3	717.SH1.58.01.3		SUITE OF CRE05 AND CRE06		2	Panels	
69.4	717.SH1.58.01.4		SUITE OF CRE07 AND CRE08		2	Panels	
69.5	717.SH1.58.01.5		SUITE OF CRE09 AND CRE10		2	Panels	
69.6	717.SH1.58.01.6		SUITE OF CRE011 AND CRE12		2	Panels	
69.7	717.SH1.58.01.7		SUITE OF CRE13 AND CRE14		2	Panels	
69.8	717.SH1.58.01.8		SUITE OF CRE15 AND CRE16		2	Panels	
69.9	717.SH1.58.01.9		SUITE OF CRE17 AND CRE18		2	Panels	
69.10	717.SH1.58.01.15		SUITE OF CRE19 AND CRE20		2	Panels	
69.11	717.SH1.58.01.10		SUITE OF CRE51 AND CRE52		2	Panels	

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
69.12	717.SH1.58.01.11		SINGLE CUB. CTE01		1	Panels	
69.13	717.SH1.58.01.12		SINGLE CUB. CTE02		1	Panels	
69.14	717.SH1.58.02.1		Unit Control Panel		1	Panels	
69.15	717.SH1.58.02.2		Electrical Control Panel		1	Panels	
69.16	717.SH1.58.02.3		Transducer Panel CFA 01-02		2	Panels	
70.0	<u>HMI Package</u>						
70.1	717.SH1.56.01.1		NETWORK PANEL HMI-LAN A&B AC POWERED SW		1	No	
70.2	717.SH1.56.01.2		NETWORK PANEL DCS NWP06		1	No	
70.3	717.SH1.56.01.3		max operator station		5	Nos.	
70.4	717.SH1.56.01.4		LVS WORKSTATION		1	Set	
70.5	717.SH1.56.01.5		MAX LINK STATION		1	No	
70.6	717.SH1.56.01.6		STATION C&I		1	No	
70.7	717.SH1.56.01.7		STORIAN STATION		2	No	
70.8	717.SH1.56.01.8		PROGRAMMER STATION		1	No	
70.9	717.SH1.56.01.9		DOT MATRIX PRINTER		2	No	
70.10	717.SH1.56.01.10		COLOUR LAJERJET PRINTER - A4 SIZE		4	No	
70.11	717.SH1.56.01.11		color Inkjet Printer-A3		1	No	
70.12	717.SH1.56.01.12		NOTE BOOK PC		1	Set	
70.13	717.SH1.56.01.13		SWAS-STATION		1	Set	
70.14	717.SH1.56.01.14		SOE-STATION		1	Set	
71.0	<u>DAVR</u>						
71.1	717.SH1.48.01.1		REGULATION PANEL		1	No	
72.0	<u>ELECTRICAL ITEMS</u>						
72.1	717.PE1.58.01.1		UPS WITH ACDB		105	KVA	
72.2	717.PE1.58.01.2		BATTERY FOR UPS		260	Nos	
72.3	717.PE1.58.01.3		ELECTRONIC PRESSURE TRANSMITTER		300	Nos	
72.4	717.PE1.58.01.4		INSTRUMENTATION CABLES		135000	mtrs	
	NOTE : Cable sizes: 1P to 8P x 0.5/1.5 Sq.mm O/A, Sh. Inst. Cable, 3C to 16C x 1.5 to 2.5 O/A Control Cable, Individual length is not available. AVERAGE PRICE MAY BE QUOTED).(VENDOR HAS TO ARRANGE DOUBLE COMPRESSION CABLE GLANDS/LUGS/CABLE DRESSING MATERIALS AND PRICE SHOULD BE QUOTED ALL INCLUSIVE)						
72.5	717.PE1.58.01.5		COMPENSATING CABLES		10000	Kms	
72.6	717.PE1.58.01.6		JUNCTION BOXES		40	Nos	

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY		UNIT RATE (Rs)	AMOUNT (Rs)
72.7	717.PE1.58.01.7		HAND HELD HART COMMUNICATOR		1	No		
72.8	717.PE1.58.01.8		MASTER AND SALVE CLOCK		1	Set		
72.9	717.PE1.58.01.9		COLD JUNCTION COMPENSATION BOX		25	Nos		
72.10	717.PE1.58.01.10		LEVEL TRANSMITTER		15	Nos		
72.11	717.PE1.58.01.11		LARGE VIDEO SCREEN		4	No		
72.12			STATIC EXCITATION SYSTEM		1	set		
73.0	<u>MECHANICAL ITEMS</u>							
73.1	717.PM1.58.01.1		TEMPERATURE ELEMENTS (Thermocouple's & RTD's)		250	Number		
73.2	717.PM1.58.01.2		E/P Converter		80	Number		
73.3			SWAS SAMPLE HANDLING SYSTEM CONSISTING OF					
73.3.1	717.PM1.58.01.3		PRIMARY RACKS		1	Set		
73.3.2	717.PM1.58.01.4		WET PANEL		1	Set		
73.3.3	717.PM1.58.01.5		DRY PANEL		1	Set		
73.3.4	717.PM1.58.01.6		CHILLER		1	Set		
73.4			SWAS ANALYSER CONSISTING OF					
73.4.1	717.PM1.58.01.7		CONDUCTIVITY ANALYSER		8	Number		
73.4.2	717.PM1.58.01.8		DISSOLVED OXYGEN ANALYSER		2	Number		
73.4.3	717.PM1.58.01.9		pH ANALYSER		3	Number		
73.4.4	717.PM1.58.01.10		SILICA ANALYSER		2	Number		
73.4.5	717.PM1.58.01.11		FLUE GAS ANALYSER (SOX/NOX/CO2)		1	Set		
73.4.6	717.PM1.58.01.12		OXYGEN ANALYSER		3	Set		
73.4.7	717.PM1.58.01.13		CO ANALYSER		1	Set		
73.4.8	717.PM1.58.01.14		LIE / LIR		65	Nos.		
73.4.9			IMPULSE PIPE					
73.4.9.1	717.PM1.58.01.15		IMPULSE PIPE A335 P22 1/2" NB XXS		600	M		
73.4.9.2	717.PM1.58.01.16		IMPULSE PIPE A335 P22 1/2" NB SCH 80		350	m		
73.4.9.3	717.PM1.58.01.17		IMPULSE PIPE A335 P22 3/4" NB SCH80		500	m		

SL NO	PGMA	PGMA DESCRIPTION	MATERIAL DESCRIPTION	MATERIAL CODE	QUANTITY	UNIT RATE (Rs)	AMOUNT (Rs)
73.4.9.4	717.PM1.58.01.18		IMPULSE PIPE A106 GR C 1/2" NB SCH 160		800 m		
73.4.9.5	717.PM1.58.01.19		IMPULSE PIPE A106 GR C 1/2" NB SCH 80		5250 m		
73.4.9.6	717.PM1.58.01.20		IMPULSE PIPE A106 GR C 3/4" NB SCH 80		1800 m		
73.4.9.7	717.PM1.58.01.21		ASTM A106 GR C 1" NB SCH 80		50 m		
73.4.9.8	717.PM1.58.01.22		ASTM A312 TP316 3/4" NB SCH160		600 m		
73.4.9.9	717.PM1.58.01.23		ASTM A312 TP316 3/4" NB SCH 80		300 m		
73.4.10	717.PM1.58.01.24		SOCKET WELD FITTING		1 Lot		
73.4.11	717.PM1.58.01.25		CONDENSATE POTS		75 Nos.		
73.4.12	717.PM1.58.01.26		INSTRUMENT VALVES		150 Nos.		
73.4.13	717.PM1.58.01.27		MODULER DESK		1 Set		
73.4.14	717.PM1.58.01.28		COMPUTER FURNITURE		1 Set		
73.4.15			TSI				
73.4.15.1	717.PR1.57.01.1		TSI (TSS IMPORTED PORTION)		1 Set		
73.4.15.2	717.PR1.57.01.2		TSI (TSS INDIGENOUS PORTION)		1 Set		
74.00			MODIFICATION OF FLOOR CUTOUT AT CONTROLROOM OR AT FIELD		800 Sq.ft		
75.00			1/2" G.I.PIPE WITH FITTINGS LIKE STRAIGHT CONNECTOR/TEE/ISOLATION VALVES		500 Mtrs		
76.00			1" G.I.PIPE WITH FITTINGS LIKE STRAIGHT CONNECTOR/TEE/ISOLATION VALVES		500 Mtrs		
77.00			COPPER TUBE (6 MM OD/8 MM OD) WITH FERRULE FITTINGS AND ISOLATION VALVES		1000 Mtrs		
TOTAL PRICE (FOR ERECTION , TESTING ,COMMISIONING OF C&I SYSTEM)							

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	Dismantling of existing C&I system, and erection, testing, commissioning etc of new control & instrumentation (C&I) system for 1x110 MW unit # 7 at Barauni TPS, Bihar.	
Ref	01	Tender no PSER:SCT:BRM-S1312:12.
	02	BHEL's NIT, vide reference no PSER:SCT:BRM-S1312:2695, dated 09-02-2012.
	03	BHEL's TCN-01, vide reference no PSER:SCT:BRM-S1312:TCN-01, dated 18-02-2012.
	04	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, integrity pact (if applicable) 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)