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TENDER NO. BHEL:NR(SCT): OBRA9-RM-CI:530

FOR

TENDER FOR THE WORK OF “DISMANTLING OF C&I EQUIPMENTS, ERECTION, TESTING, COMMISSIONING, TRIAL OPERATION AND HANDING OVER OF ALL C&I EQUIPMENTS FOR UNIT NO.9 (200 MW) OF OBRA ‘B’ THERMAL POWER STATION, OBRA, DISTT-SONEBHADRA (UP)”.

PART II – PRICE BID



Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301 (INDIA)



ISO 9001-2000, ISO
14001 and OHSAS
18001 certified
company
SubContract and
Purchase Deptt.

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)
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IMPORTANT NOTE

PURCHASER OF THIS TENDER DOCUMENT IS ADVISED TO CHECK AND ENSURE COMPLETION OF ALL PAGES OF TENDER DOCUMENT AND REPORT ANY DISCREPANCY TIMELY FOR CORRECTIVE ACTION, IF ANY, TO THE ISSUING AUTHORITY BEFORE THE BIDS ARE SUBMITTED. ORIGINAL COPY OF TENDER DOCUMENT COMPLETE IN ALL RESPECTS MUST BE SUBMITTED BACK AS PART OF THE BID WITHOUT WHICH THE SAME IS LIABLE TO BE REJECTED BY BHEL.

THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

Bharat Heavy Electricals Limited
(A Govt. Of India Undertaking)
Power Sector – Northern Region,
Plot No. 25 , Sector - 16A ,
Distt. Gautam Budh Nagar, NOIDA – 201 301(INDIA)

PROCEDURE FOR SUBMISSION OF SEALED TENDERS:

The tenderers must submit their tenders as required in **two parts** in separate sealed covers **prominently superscribed as Part-I Technical bid and Part-II ,Price bid** also indicating on each of the cover tender specification no., date and time as mentioned in tender notice.

TECHNICAL BID (COVER-I)

Except **Price bid Part-II**, complete set of tender document consisting of General conditions of Contract, “Technical specification & Special terms and condition” (Part-I) issued by BHEL shall be enclosed in **Part I Technical Bid only**. All schedules, data sheets and details called for in the specification shall also be submitted along with technical bid. All details / Data / Schedules including offer letter duly signed and stamped are to be **submitted in duplicate**.

PRICE BID (COVER-II)

Tenderers may please note that price bid is **to be submitted only in original copy** of Tender i.e. Price bid (Part-II) issued by BHEL and no duplicate copy of same is required.

These Two separate covers i.e. cover I & II shall together be enclosed in a **third envelope (Cover-III)** and this sealed cover shall be superscribed with tender specification No., due date, time and submitted to officer inviting tender as indicated in tender notice on or before due date as indicated.

BOQ CUM RATE SCHEDULE FOR C AND I WORKS AT OBRA UNIT- 9

TENDER NO. BHEL:NR(SCT): OBRA9-RM-CI:530

Sl. No	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE (IN Rs.)	TOTAL AMOUNT (Rs IN FIGURES AND WORDS)
<u>PANELS / CONSOLES / RACKS TO BE INSTALLED</u>					
1	CONTROL CABINETS FOR S.G. (750L X 2355H X 750W)	No.	17		
2	CONTROL CABINETS FOR STN C+I (750L X 2355H X 750W)	No.	6		
3	CONTROL CABINETS FOR MMI (600L X 2100H X 600W)	No.	1		
4	UNIT CONTROL PANEL (2400L X 2355H X 800W)	No.	1		
5	SWAS DRY PANEL (1500L X 2200H X 600W)	No.	1		
6	SWAS WET PANEL (3600L X 2200H X 1400W)	No.	1		
7	SWAS CHILLER PANEL (2200 L X 1800H X 1300W)	No.	1		
8	FGA SAMPLE HANDLING PANEL (1200L X 2000H X 800W)	No.	1		
9	240 V UPS PANEL (3200L X 2270H X 850W)	No.	1		
10	360 V, 200 AH MAINTENANCE FREE BATTERY (5280L X 1770H X 850W)	No.	1		
11	UPS ACDB PANEL (2000L X 1911H X 850W)	No.	1		
12	SOOT BLOWER MCC (9750L X 2450H X 1000W)	No.	1		
13	DC SCANNER FAN STARTER BOX (900L X 1120H X 375W)	No.	1		
14	AC POWER DISTRIBUTION PANEL (2700L X 2365H X 800W)	No.	1		
15	EWLI ASSERTOR PANEL (INCLUDING MOUNTING OF LOOSE SUPPLIED ELECTRODES) 600X600X350	No.	2		
16	GRAVEMETRIC FEEDER PANEL. (1400L X 2365H X 510W)	No.	6		
17	DIGITAL AVR REG PANELS (1150 L X 2295H X 1200W)	No.	1		
18	DIGITAL AVR FB PANELS (2180 L X 2295H X 1200W)	No.	1		
19	DIGITAL AVR THY PANELS (2720 L X 2295H X 1200W)	No.	1		
20	Instrument Rack max 1650L X 1600H X 600W)	No.	15		
21	Instrument Enclosures max 1450L X 2300H X 800W)	No.	50		
<u>Cable tray erection including supports fabrication / erection</u>					
22	Ladder / perforated cable trays 300 mm wide including 250 mm wide cable duct with cover	Mtr.	150		
23	Ladder / perforated cable trays 150 mm wide including 180 mm wide cable duct with cover	Mtr.	1875		
24	Ladder / perforated cable trays 100 mm wide	Mtr.	2875		

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Sl. No	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE (IN Rs.)	TOTAL AMOUNT (Rs IN FIGURES AND WORDS)
25	Ladder / perforated cable trays 50 mm wide including 60 mm wide cable duct with cover	Mtr.	2000		
<u>Junction boxes / Indication boxes / Local control stations TO BE INSTALLED</u>					
26	Junction boxes upto 12 ways / Local gun maintenace switch / local push buttons / shear pin failure indication box	No.	50		
27	Junction boxes upto 24 ways	No.	80		
28	Junction boxes upto 64 ways	No.	30		
29	Junction boxes with cold junction compensation (SUV -13)	No.	11		
<u>Power / Control / Signal cables laying, dressing, clamping & termination TO BE INSTALLED</u>					
30	2 Core / 1 Pair Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	4100		
31	3 Core / 1 Triad Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	32700		
32	4 Core / 2 Pair Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	22550		
33	5 Core Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	3000		
34	7 / 8 Core / 4 Pair / 2 Triad Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	36000		
35	10 - 16 Core / 8 Pair Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	41100		
36	17 - 24 Core / 12 Pair Cable (armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	2000		
37	3C x 6 / 16 Sq.mm Cable (armoured / un-armoured)	Mtr	1200		
38	1C x 300 Sq.mm Cable (armoured / un-armoured)	Mtr	500		
39	Pre-fabricated cable (upto 50 M length)	No.	25		
40	4P UTP E-CAT CABLE	Mtr	5000		
<u>Impulse pipe / tubing TO BE INSTALLED</u>					
41	6mm / 8 mm Cooper Tube	Mtr	1500		
42	6mm SS Tube	Mtr	2000		
43	1/2 , 3/4 " CS impulse Pipe	Mtr	120		
44	1/2 , 3/4 " AS impulse Pipe	Mtr	1000		
45	3/4",1/2 " SS impulse Pipe	Mtr	1000		
46	GI Pilica conduit with fittings (upto 1" size)	Mtr	100		
47	GI Pilica conduit with fittings (above 1" size)	Mtr	100		

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Sl. No	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE (IN Rs.)	TOTAL AMOUNT (Rs IN FIGURES AND WORDS)
48	GI rigid conduit upto 1"	Mtr	50		
49	GI Pipe (upto 1" size)	Mtr	200		
<u>Local / Field mounted Instruments / Equipment TO BE INSTALLED</u>					
50	Flame Scanner head assembly, including cable upto local JB	No.	20		
51	Electromagnetic relief valve controller box	No.	9		
52	Hardwired Consoles with push buttons and indicating lamps for SG / EAST / GEN systems	No	5		
53	UCB mounted instrument / indicator / recorder / control station	No.	120		
54	I / P Convertor	No.	30		
55	Flexible hose 1 / 4 " (2 meter long)	No.	56		
56	Flexible hose 1" (3 meter long)	No.	4		
57	Erection, commissioning of Pneumatic Power cylinders				
a	Regulating type with positioner, PFT etc (Bore x Stroke - 6"x8" / 8"x8" / 8"x6")	No.	18		
b	Regulating type with positioner, PFT etc (Bore x Stroke - 12x6" / 14"x16")	No.	10		
58	Callibration / commissioning of Power cylinder (erected by other agency or equipment mounted)	No.	10		
59	Temp. elements ie.RTDs & Thermocouples (Simplex / Duplex / Triplex, with thermowell)	No.	35		
60	Metal Temperature Measuring Thermocouples (Simplex / Duplex)	No.	100		
61	Analysers	No.	15		
62	Pressure / diff. Pressure / temperature/ level gauge	No.	70		
63	Pressure / diff. Pressure / temperature / level switch (level switch can be flange type or welded type / with or without electronic unit)	No.	85		
64	Pressure / diff. Pressure / level / position transmitter	No.	120		
65	Printers	No	4		
66	PC set with monitor / keyboard / power supply unit	No	6		
67	Computer /Printer Table+Chair	No	4		
68	Callibration of SOV operated pneumatic trip Valves	No	20		

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Sl. No	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE (IN Rs.)	TOTAL AMOUNT (Rs IN FIGURES AND WORDS)
69	Callibration / commissioning of regulating Control Valves with positioners / LS / PFT	No	5		
70	Commissioning of motorised actuators	No	10		
71	Electronic Earthing Pit with electrode	No	6		
72	Fabrication / Erection of structural steel	MT	5		
<u>EQUIPMENTS TO BE REMOVED</u>					
73	FSSS PANEL (6100 L X 2160H X 700W)	No	1		
74	TSP-3 PANEL (1400 L X 2250H X 600W)	No	1		
75	BAILEY SYSTEM PANEL (1220 L X 2200H X 600W)	No	1		
76	DYNA SPEED PANEL (1600 L X 2200H X 450W)	No	1		
77	DC PANEL (600 L X 1800H X 770W)	No	1		
78	SOOTBLOWER CONTROL PANEL (4000 L X 2250H X 800W)	No	1		
79	SOOTBLOWER MCC (11000 L X 2200H X 800W)	No	1		
80	DAS PANEL (4000 L X 2000H X 600W)	No	1		
81	MILL CONTROL PANEL (1800 L X 2400H X 750W)	No	1		
82	OLD RELAY PANEL PANEL (1400 L X 2200H X 800W)	No	1		
83	INVERTER PANEL (800 L X 1900H X 800W)	No	1		
84	DYNA DRIVE PANEL (1100 L X 2200H X 600W)	No	1		
85	WASTE PANEL (600 L X 2000H X 450W)	No	1		
86	JUNCTION BOXES	No	100		
87	CONT CABLE TYPE-1 : INSTRUMENT TO FIELD JB AVERAGE LENGTH 20 MTRS	NO	500		
88	CONT CABLE TYPE-2 : FIELD JB TO CR PANEL / MCC AVERAGE LENGTH 100 MTRS	NO	350		
89	POWER CABLE TYPE-3 : MCC TO CR PANEL AVERAGE LENGTH 100 MTRS	NO	200		
90	CONT CABLE TYPE-4 : CONROL DESK TO CR PANEL AVERAGE LENGTH 30 MTRS	NO	80		
91	CABLE TRAYS (LOCAL)	M	500		
92	TRANSMITTERS	NO	120		
93	SWITCHES - PRESSURE ,TEMPRETURE	NO	140		
94	GAUGES - PRESSURE , TEMPRETURE, FLOW	NO	250		

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Sl. No	ITEM DESCRIPTION	UNIT	QTY	UNIT RATE (IN Rs.)	TOTAL AMOUNT (Rs IN FIGURES AND WORDS)
95	INSTRUMENTS PIPING / TUBING (with accessories)	M	1000		
96	MAKING OPENING FOR PANELS IN 300 MM THICK FLOOR	SQ M	25		
97	DISMANTLING AND FIXING BACK EXISTING GLASS PARTITION	SQ M	50		
98	DISMANTLING AND BUILDING BACK EXISTING BRICK PARTITION (115 MM THICK)	SQ M	50		
	HT MOTORS				
99	REMOVAL OF HT CABLES FROM MOTOR TERMINAL BOXES	NO	8		
100	FIXING OF REMOVED HT CABLES TO MOTOR TERMINAL BOXES	NO	5		
101	MAKING NEW END TERMINATION OF HT CABLES FOT HT MOTORS	NO	4		
	TOTAL			TOTAL	

NOTES

1)	All dimensions are in mm unless otherwise specified.
2)	In case of omission in quoting any rate, the evaluation will be done considering the highest quoted rate obtained against that item but the work, if awarded, will be on the lowest quoted rate obtained against that item.
3)	In case of difference in rates between words and figures, the lesser of the two will be treated as valid rate.
4)	The bidders shall enter both 'Unit Rate' & 'Amount'. In case of any mismatch between 'Total Amount based on Unit Rate' & 'Total Amount as quoted', the higher of the two shall be considered for evaluation and the lower of the two shall be considered for award.
5)	Sub-total on each page shall be indicated and brought forward to next page and duly signed. The contractor shall ensure that grand total on this page is arithmetically checked and corrected and certified accordingly while signing below by the bidders. Despite this, if any calculation error is noticed in totalling after tender opening, the higher of the two (i.e between total value worked out by BHEL and the total value indicated by bidder in their offer) shall be considered for evaluation and the lower of the two shall be considered for award.
6)	Evaluation of the bids shall be done based on total price against this BOQ.
7)	The quantities indicated against each item above are tentative and same are liable to vary depending upon 'the site requirement. The contractor has to erect / commission all items indicated by BHEL Engineer for achieving unit wise milestone.