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# TENDER SPECIFICATIONS

TENDER NO. BHEL:NR(SCT): PARICHA: CNI : 654

FOR

Tender for the work Of “Erection, testing, commissioning, post commissioning, trial operations and handing over of all C&I Equipments at 2x250 MW Paricha (II) Units 5 & 6, Jhansi , 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.

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**IMPORTANT NOTE**

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THIS TENDER SPECIFICATION ISSUED TO:

M/S-----

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**BOQ CUM RATE SCHEDULE FOR C+I WORKS AT 2x250 MW PARICHA TPS UNIT 5+6**

Sl. No	ITEM DESCRIPTION	UNIT	QTY	Unit Rate (Rs.)	Amount (Rs.)
<b>PANELS / CONSOLES / RACKS</b>					
1	CONTROL CABINETS FOR S.G. (750L X 2355H X 750W)	No.	42		
2	CONTROL CABINETS FOR T.G. (750L X 2355H X 750W)	No.	50		
3	CONTROL CABINETS FOR MMI (750L X 2355H X 750W)	No.	4		
4	SOOT BLOWER MCC (9000L X2525H X 1000W)	No.	2		
5	DC SCANNER FAN STARTER BOX (900L X 1120H X 375W)	No	2		
6	EWLI ASSERTOR PANEL (INCLUDING MOUNTING OF LOOSE SUPPLIED ELECTRODES , REMOTE & LOCAL DISPLAY UNITS) ( 600X600X350MM ) , ( 600X600X350MM )	No	4		
7	VIBRATION MONITORS CABINET (400L X 300H X 300W)	No.	6		
8	GRAVEMETRIC FEEDER PANEL. (1200L X 2315H X 600W)	No.	12		
9	GRAVEMETRIC FEEDER INTEGRAL CABINET (800L X 300H X 600W)	No.	12		
10	DIGITAL AVR PANELS 3050L X 2300H X 750W)	No.	2		
11	SEAL OIL STARTER PANELS 1000L X 2200H X 800W)	No.	2		
12	DC SEAL OIL PUMP SERIES RESISTANCE BOX - 600L X 500H X 600W)	No.	2		
13	GAS ANALYSER PANELS 1000L X 2200H X 800W)	No.	2		
14	DC EOP/JOP CONTROL PANELS 1000L X 2200H X 800W)	No.	4		
15	DC EOP / JOP SERIES RESISTANCE BOX - 1300L X 750H X 950W)	No.	4		
16	GENERATOR ANN / INST PANELS 1000L X 2200H X 800W)	No.	4		
17	Local starter box for Furnace temperature probe ( 600 W x 300 H x 300 D)	No.	4		
18	Open Type Instrument Rack	No.	43		
<b>Cable tray erection including supports fabrication / erection</b>					
19	Ladder / perforated cable trays 300 mm wide including 250 mm wide cable duct with cover	Mtr.	200		
20	Ladder / perforated cable trays 150 mm wide including 180 mm wide cable duct with cover	Mtr.	2225		
21	Ladder / perforated cable trays 100 mm wide	Mtr.	3720		
22	Ladder / perforated cable trays 50 mm wide including 60 mm wide cable duct with cover	Mtr.	950		
<b>Junction boxes / Indication boxes / Local control stations.</b>					

**BOQ CUM RATE SCHEDULE FOR C-I WORKS AT 2x250 MW PARICHA TPS UNIT 5+6**

Sl. No	ITEM DESCRIPTION	UNIT	QTY	Unit Rate (Rs.)	Amount (Rs.)
23	Junction boxes upto 12 ways / Local gun maintenace switch / local push buttons / shear pin failure indication box	No.	160		
24	Junction boxes upto 24 ways	No.	206		
25	Junction boxes 25 - 64 ways	No.	126		
26	Junction boxes with cold junction compensation ( SUV -13)	No.	52		
<b>Power / Control / Signal cables laying, dressing, clamping &amp; termination.</b>					
27	2 Core / 1 Pair Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	2000		
28	3 Core / 1 Triad Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	NA	NA	NA
29	4 Core / 2 Pair Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	70000		
30	5 Core Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	2000		
31	7 / 8 Core / 4 Pair / 2 Triad Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	40900		
32	10 - 16 Core / 8 Pair Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	52600		
33	17 - 24 Core / 12 Pair Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	8200		
34	25 - 48 Core / 16-24 Pair Cable ( armoured / un-armoured) Core size upto 2.5 Sq. mm	Mtr	1200		
35	3C x 6-16 Sq.mm Cable ( armoured / un-armoured)	Mtr	NA	NA	NA
36	Pre-fabricated cable ( upto 50 M length)	No.	50		
37	4P UTP E-CAT CABLE	Mtr	2440		
<b>Impulse pipe / tubing</b>					
38	6mm / 8 mm Copper Tube	Mtr	1750		
39	6mm SS Tube	Mtr	2000		
40	1/2 , 3/4 " CS impulse Pipe	Mtr	3100		
41	1/2 , 3/4 " AS impulse Pipe	Mtr	1660		
42	1/2 , 3/4 " SS impulse Pipe	Mtr	500		
43	GI Pilica conduit with fittings ( upto 1" size)	Mtr	50		
44	GI Pilica conduit with fittings ( above 1" size)	Mtr	50		
45	GI rigid conduit upto 1"	Mtr	50		
46	GI Pipe 15 NB	Mtr	1600		

**BOQ CUM RATE SCHEDULE FOR C+I WORKS AT 2x250 MW PARICHA TPS UNIT 5+6**

Sl. No	ITEM DESCRIPTION	UNIT	QTY	Unit Rate (Rs.)	Amount (Rs.)
<b>Local / Field mounted Instruments / Equipment</b>					
47	Flame Scanner head assembly, including cable upto local JB	No.	40		
48	Electromagnetic relief valve controller box and Control Station and Remote Indicator (400L X 350 X 270W)	No.	8		
49	Hardwired Consoles with push buttons and indicating lamps for SG / EAST / GEN.systems	No.	20		
50	UCB mounted instrument / indicator / recorder / control station	No.	43		
51	Temperature controller	No.	8		
52	Pneumatic indicating controller	No.	10		
53	Limit Switches	No.	128		
54	Heavy duty Limit Switches (for BTPS)	No.	12		
55	Air Filter Regulators	No.	78		
56	I / P Convertor	No.	93		
56	Flexible hose 1 / 4 " ( 2 meter long)	No.	112		
57	Flexible hose 1" ( 3 meter long)	No.	8		
58	Erection, commissioning of Pneumatic Power cylinders				
a	On/Off type with sol. & limit switches	No.	86		
b	Regulating type with positioner, PFT etc (Bore x Stroke - 6"x8"/ 8"x8" / 8"x6" )	No.	144		
c	Regulating type with positioner, PFT etc (Bore x Stroke - 12x6"/ 14"x16" )	No.	8		
59	Calibration / commissioning of Power cylinder (erected by other agency or equipment mounted)	No.	86		
60	Temp. elements ie.RTDs & Thermocouples (Simplex / Duplex / Triplex, with thermowell)	No.	650		
61	Metal Temperature Measuring Thermocouples (Simplex / Duplex)	No.	240		
62	Pressure / diff. Pressure / temperature/ level gauge	No.	747		
63	Pressure / diff. Pressure / temperature / level switch (level switch can be flange type or welded type / with or without electronic unit)	No.	522		

**BOQ CUM RATE SCHEDULE FOR C-I WORKS AT 2x250 MW PARICHA TPS UNIT 5+6**

Sl. No	ITEM DESCRIPTION	UNIT	QTY	Unit Rate (Rs.)	Amount (Rs.)
64	Pressure / diff. Pressure / level / position transmitter	No.	220		
65	SENSORS / PICKUPS WITH CABLES				
a	Relative / Absolute Vibration	No	88		
b	Relative Expansion	No	2		
c	Axial Shift	No	6		
d	Speed pick up	No	12		
66	Printers	No	8		
67	PC set with monitor / keyboard / power supply unit	No	14		
68	Computer /Printer Table+Chair	No	16		
69	Reverse rotation monitor including respective probes / interconnecting leads	No	6		
70	Callibration of SOV operated pneumatic trip Valves	No	242		
71	Callibration / commissioning of regulating Control Valves with positioners / LS / PFT	No	50		
72	Commissioning of motorised actuators	No	86		
73	Fabrication / Erection of structural steel	MT	10		

**TOTAL**

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**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) Evaluation of the bids shall be done based on total price against this BOQ.
- 6) 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.