

TENDER SPECIFICATION

No. BHE/PW/PUR/RGIT-CLE/444

FOR

HANDLING AT SITE STORES/STORAGE YARD, TRANSPORTATION TO SITE OF WORK, ERECTION, CHECKING OF CALIBRATION, TESTING, ASSISTANCE FOR COMMISSIONING AND HANDING OVER OF ELECTRICAL, CONTROL & INSTRUMENTATION WORKS FOR BOILER AND ITS AUXILIARIES, STEAM TURBINE, TURBOGENERATOR AND THEIR AUXILIARIES, STATION C&I, FOR 2x250 MW UNIT # 1 & 2

AT

O.P. JINDAL SUPER THERMAL POWER PLANT

RAIGARH

CHHATTISGARH

PART-II

(PRICE BID)



Bharat Heavy Electricals Limited

Power Sector - Western Region, Nagpur

345-Kingsway, Nagpur-440 001

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345-KINGSWAY, NAGPUR-440 001

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444

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EARNEST MONEY DEPOSIT: Please see Special Conditions of Contract.

LAST DATE FOR TENDER SUBMISSION: Please obtain updated information from web

page www.bhel.com ® **Tender**

Notifications ® **View Corrigendums.**

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING **PART-I** TECHNICAL BID SPECIFICATION AND **PART- II** PRICE BID, ARE ISSUED TO:

M/s.

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PLEASE NOTE:

- 1) **THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.**
- 2) **BIDDER SHALL NOTE THAT THEIR OFFER WILL BE CONSIDERED SUBJECT TO THE APPROVAL OF BHEL'S CUSTOMER.**

For Bharat Heavy Electricals Limited

DGM (Purchase)

Place: Nagpur

Date:

Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 1 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
Controls & Instrumentation						
C-1	Control Panel (approx L1000 X B1000 X H2500, 400Kg) - one panel	A	28 Nos			
C-2	Control Panel (approx L1001 to 1500 X B1000 X H2500, 800 Kg) - suit of two panels / Grav feeder panels	A	60 Nos			
C-3	Control Panel (approx L1501 to 2250 X B1000 X H2500, 1200 Kg) - suit of three panels	A	18 Nos			
C-4	Control Panel (approx L2251 to 3000 X B1000 X H2500, 1600 Kg) - suit of four panels	A	4 Nos			
C-5	Control Panels for HP/LP Ammonia dosing systems (1000x800x2000, 3.0 MT each approx)	A	6 No			
C-6	Air Heater Rotor Stoppage Alarm Box	A	4 Sets			
C-7	Burner Tilt Shear Pin Failure Indication Box	A	4 Nos			

Date:

Signature and Official Seal of Bidder

Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 2 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	(3)#	QTY (4)	UOM (5)	UNIT RATE (Rs.) (6)	TOTAL AMOUNT (Rs.) (7)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-8	Control panels for Centrifuges	A	4	Nos		
C-9	DC motor starter box for scanner fan	A	2	No		
C-10	Electrical control panel 3224x2345x1000 in two to three loose shipping sections	A	2	Sets		
C-11	FSSS Local Oil Gun Maintenance Switch Box	A	24	Nos		
C-12	HART MANAGEMENT SYSTEM CABINET	A	2	Sets		
C-13	Local Instrument enclosures / racks (LIE / LIR) approx 275 Kg each	A	136	Nos		
C-14	Master and Slave Clock system including slave clocks	A	1	Set		
C-15	NETWORK PANELS (800x800x2100)	A	4	Nos		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 3 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-16	Positioner cabinets (380x380x210) for LPBP CV1, LPBP CV2, Spray water CV	A	6	Nos		
C-17	WALL MOUNTED NETWORK ENCLOSURES (500x600x600)	A	4	Sets		
C-18	Wall mounted Power Distribution box	A	4	Nos		
C-19	Air filter regulators / Lubricators (1/2", 1", 0-6KG, 0-10 KG)	B	282	Nos		
C-20	SWAS Sample handling system with racks & Sample conditioning panel with chiller (1500 x 600 x 2000 - 400Kg; 3300x 600 x 2000 - 500Kg; 2300 x 700 x 2300 - 500Kg; 3000 x 1300 x 1800 - 1000Kg)	A	2	Sets		
C-21	Chloride Analyzer	B	2	Nos		
C-22	Conductivity Analyzer	B	12	Nos		
C-23	Dissolved Oxygen Analyzer	B	4	Nos		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 4 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-24	Hydrazine Analyzer	B	2	Nos		
C-25	pH Analyzer	B	1	Nos		
C-26	Silica Analyzer (Multi channel)	B	2	Nos		
C-27	Sodium Analyzer (Multi channel)	B	2	Nos		
C-28	Opacity Monitor Consisting of Transmitter & Receiver, Electronic Unit, Air Blower unit, Weather Proof housings, Junction boxes, flexible hoses, mounting flanges with pipe for Transmitter, Receiver & Air blower, interconnected cables etc. for mounting on ESP outlet duct.	B	4	Sets		
C-29	SO ₂ Analyzer (in situ type)	B	2	Nos		
C-30	NOX Analyzer (in situ type)	B	2	Nos		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 5 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-31	O ₂ (OXYGEN) Analyzer	B	8	Nos		
C-32	CO Analyzer (in situ type)	B	4	Sets		
C-33	Dust emission monitor (Installation at around 50 M in chimney)	B	4	Sets		
C-34	Condenser On Line tube cleaning system (COLCTS)	B	2	Sets		
C-35	Condenser Vacuum pump system	B	2	Sets		
C-36	Console inserts (to be mounted on Backup desk)	B	4	Sets		
C-37	Digital / bargraph indicators	B	182	Nos		
C-38	Direct Water Level Gauge	B	4	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 6 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-39	Electronic Level Switch (with amplifier, etc), Capacitance or conductivity type	B	12	Nos		
C-40	Electronic Level Transmitter (with amplifier, etc), Capacitance or conductivity type	B	12	Nos		
C-41	Electronic Water Level Indicator (EWLI)	B	4	Sets		
C-42	Flame Scanner Head Assembly	B	40	Nos		
C-43	Float type Level Switch	B	112	Nos		
C-44	Flow switch (Mechanical / Electronic)	B	2	Nos		
C-45	Flow Transmitter (Pulse / mass flow / target type) including flanges	B	4	Nos		
C-46	Hydrogen Purity analyser	B	2	Nos		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 7 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	(3)#	QTY (4)	UOM (5)	UNIT RATE (Rs.) (6)	TOTAL AMOUNT (Rs.) (7)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-47	I/P converters	B	96	Nos		
C-48	Laboratory Setup for Customer	B	2	Sets		
C-49	Level Indicator / Level Gauge	B	22	Nos		
C-50	Level Transmitter (displacer type)	B	6	Nos		
C-51	Load transducer	B	6	Nos		
C-52	LVS (Large Video Screen) made up of 4X1 matrix. Each LVS of DLP/LCD type, Rear projection type, 67 inches diagonal size, with 1024x768 resolution non interlaced	B	2	Sets		
C-53	max Engineering / operator / storian / LAN / WAN / Shift in charge / stn in charge / gateway / interface PC / HART etc., PC/Server Station with ASCII Keyboard, Mouse & 21" Colour Monitor, individual UPS	B	25	Sets		
C-54	Moisture Sensor probe and dew point monitor	B	2	Sets		

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Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 8 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-55	MTM Thermocouple over 17 M upto 22 M length	B	140	Nos		
C-56	MTM Thermocouple upto 17 M length	B	112	Nos		
C-57	Pneumatic Pressure controller with accessories	B	2	Nos		
C-58	Pneumatic Temperature controller with accessories	B	6	Nos		
C-59	Pressure / DP / Flow (DP type) / Level -Transmitter	B	532	Nos		
C-60	Pressure Gauge / DP gauge	B	870	Nos		
C-61	Pressure Switch / DP Switch / DP indicating switch	B	364	Nos		
C-62	Printers (80/132 col Dot Matrix, A4/A3 Inkjet, A4/A3 Laserjet, etc)	B	12	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT-CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 9 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-63	Recorder 24 / 30 Channel	B	4	Nos		
C-64	Recorder 3 channel	B	12	Nos		
C-65	Relay / Latch relay with base	B	4	Nos		
C-66	Rotor Earth fault Detector	B	2	Nos		
C-67	SADC power cylinders erection and commissioning	B	112	Nos		
C-68	Solenoid valves (3 way, AC/DC, 1/4", 1/2", 1", NPT/BSP, single/dual coil)	B	120	Nos		
C-69	Speed Regulators / Air lock valves in oil gun corner rack	B	48	Nos		
C-70	Speed switch / Speed detector	B	8	Nos		

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Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 10 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	(3)#	QTY (4)	UOM (5)	UNIT RATE (Rs.) (6)	TOTAL AMOUNT (Rs.) (7)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-71	Temperature Gauge (all types)	B	510	Nos		
C-72	Temperature Switch / Thermostat	B	88	Nos		
C-73	Thermocouple / RTDs with thermowell (all types) along with converters wherever applicable	B	650	Nos		
C-74	Thermocouple assy with 6 / 9 Cr -Al MI T/C along with integral JB	B	4	Nos		
C-75	Totalisers	B	6	Nos		
C-76	Vertical indicators (moving coil / bar graph)	B	40	Nos		
C-77	Vibration monitoring system for BFP/CEP/ACWP	B	2	Sets		
C-78	Vibration monitoring system for Fans and Pulverisers	B	2	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 11 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	(3)#	QTY (4)	UOM (5)	UNIT RATE (Rs.) (6)	TOTAL AMOUNT (Rs.) (7)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-79	Vibration monitoring system for main turbine	B	2	Sets		
C-80	Vibration monitoring system for TDBFP	B	4	Sets		
C-81	Coal Feeder local instruments commissioning	C	12	Nos		
C-82	Commissioning of Hydraulic actuators	C	28	Nos		
C-83	Pneumatic regulating drives: (Valve, damper) incl Burner tilt	C	140	Nos		
C-84	Corner valve/ Trip valves commissioning	C	80	Nos		
C-85	ERV Controller	C	4	Nos		
C-86	Fan Lube oil skid	C	12	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 12 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-87	Furnace Temperature probe	C	4	Nos		
C-88	HEA Exciter system	C	24	Sets		
C-89	Limit Switches (checking and adjusting only).	C	40	Nos		
C-90	Mill Discharge Valve power cylinders (set of four)	C	12	Sets		
C-91	Only healthiness checking of embedded RTD / T/C	C	448	Nos		
C-92	Open/Close type pneumatic gates / dampers / valves	C	64	Nos		
C-93	Pulveriser Lube oil skid	C	24	Sets		
C-94	Rack mounted instruments commissioning	C	6	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 13 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-95	2P/ 4C x 1.5 sqmm control cable	D	13000	Meters		
C-96	5C X1.5 control cable	D	1000	Meters		
C-97	Cable duct 100 x 100 x 1000	D	120	Meters		
C-98	Cable duct 180 x 100 x 1000	D	100	Meters		
C-99	Cable duct 250 x 60 x 1000	D	60	Meters		
C-100	Cable duct 60 x 60 x 1000	D	400	Meters		
C-101	Perforated cable tray and accessories (with or without cover) 50mm	D	5000	Meters		
C-102	Perforated cable tray and accessories (with or without cover) 100mm	D	9000	Meters		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 14 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	(3)#	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-103	Perforated cable tray and accessories (with or without cover) 150mm	D	2500	Meters		
C-104	Perforated cable tray and accessories (with or without cover) 300mm	D	100	Meters		
C-105	Compensating cable 2P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	D	14000	Meters		
C-106	Compensating cable 4P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	D	7000	Meters		
C-107	Compensating cable 6P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	D	7000	Meters		
C-108	Laying, etc of Optical fibre cables (supervision of termination by other agency) in trenches and including minor civil works	D	1800	Meters		
C-109	Network UTP Cables (special termination using UTP connectors involved)	D	12000	Meters		
C-110	Screened Copper Cable 2P x 0.5 sqmm armoured / unarmoured	D	98000	Meters		

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Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 15 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-111	Screened Copper Cable 4P x 0.5 sqmm armoured / unarmoured	D	250000	Meters		
C-112	Screened Copper Cable 6P x 0.5 sqmm armoured / unarmoured	D	40000	Meters		
C-113	Screened Copper Cable 8P x 0.5 sqmm armoured / unarmoured	D	88200	Meters		
C-114	Screened Copper Cable 10P / 12P x 0.5 sqmm armoured / unarmoured	D	26500	Meters		
C-115	Screened Copper Cable 16P x 0.5 sqmm armoured / unarmoured	D	12500	Meters		
C-116	Screened Copper Cable 24P x 0.5 sqmm armoured / unarmoured	D	200	Meters		
C-117	Screened Copper Cable 2P x 1 sqmm armoured / unarmoured	D	200	Meters		
C-118	Screened Copper Cable 1P/2C x 1.5 sqmm armoured / unarmoured	D	4300	Meters		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 16 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-119	Screened Copper Cable 2P/4C x 1.5 sqmm armoured / unarmoured	D	22000	Meters		
C-120	Screened Copper Cable 5C/7C x 1.5 sqmm armoured / unarmoured	D	14000	Meters		
C-121	Screened Copper Cable 10C/12C x 1.5 sqmm armoured / unarmoured	D	30000	Meters		
C-122	Screened Copper Cable 19C x 1.5 sqmm armoured / unarmoured	D	4000	Meters		
C-123	Copper Cable 2 or 3 triad, 0.5/1.5 sqmm armoured/unarmoured	D	2000	Meters		
C-124	Copper Cable 6 triad, 0.5/1.5 sqmm armoured/unarmoured	D	1000	Meters		
C-125	Impulse pipe CS 1/4" (D13.5 x 2.6 mm)	E	1380	Meters		
C-126	Impulse pipe CS (D17.2 x 1.8 mm)	E	3400	Meters		

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Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 17 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-127	Impulse pipe CS ½" SCH 40 (D21.3 x 2.76 mm)	E	40	Meters		
C-128	Impulse pipe CS ½" SCH 80 (D21.3 x 3.73 mm)	E	6500	Meters		
C-129	Impulse pipe CS ½" SCH 160 (D21.3 x 4.78 mm)	E	40	Meters		
C-130	Impulse pipe CS ¾" SCH 80 (D25 x 4 mm)	E	4400	Meters		
C-131	Impulse pipe CS 1" SCH 80 (D33.4 x 4.55 mm)	E	400	Meters		
C-132	Impulse pipe CS 1½" SCH 40 (D48.3 x 3.68 mm)	E	40	Meters		
C-133	Impulse pipe CS 1½" SCH 160 (D48.3 x 7.13 mm)	E	40	Meters		
C-134	Impulse pipe AS ¼" (D13.5 x 2.6 mm)	E	760	Meters		

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Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 18 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-135	Impulse pipe AS ½" SCH 40 (D21.3 x 2.76 mm)	E	500	Meters		
C-136	Impulse pipe AS ½" SCH 80 (D21.3 x 3.73 mm)	E	40	Meters		
C-137	Impulse pipe AS ½" SCH 160 (D21.3 x 4.78 mm)	E	40	Meters		
C-138	Impulse pipe ASTM A 335 P22 1/2 " Sch XXS	E	1600	Meters		
C-139	Impulse pipe ASTM A 335 P22 3/4 " Sch 80	E	600	Meters		
C-140	Impulse pipe SS 1/4" (D12.7/13.5 x 2.1/2.6 mm)	E	860	Meters		
C-141	Impulse pipe SS ½" (D21.3 x 2.6 mm) Sch 40	E	2100	Meters		
C-142	Impulse pipe SS 1/2" SCH 160	E	1500	Meters		

Date:

Signature and Official Seal of Bidder

Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 19 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-143	Impulse pipe SS 3/4" SCH 80 (D25 x 4 mm)	E	40	Meters		
C-144	Impulse pipe 1/4" (D13.5 x 3.2 mm)	E	3000	Meters		
C-145	Impulse pipe 1/2" (D21.3 x 3.2/3.6 mm)	E	2000	Meters		
C-146	Impulse pipe 1/2" (D21.3 x 4.78 mm)	E	400	Meters		
C-147	CS tube DN 80	E	40	Meters		
C-148	Flexible pipe 1"	D	100	Meters		
C-149	Flexible pipe 2"	D	100	Meters		
C-150	Hoses- 1/2" to 1", SS/Teflon, Braided/unbraided, upto 5M length	D	140	Nos		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 20 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-151	GI Pipe (1/2", 1") Heavy grade	D	4500	Meters		
C-152	GI Pipe (1.5 ", 2")	D	100	Meters		
C-153	Copper tube 6mm/8mm / 1/4" (Sheathed / bare)	E	5000	Meters		
C-154	Copper tube 1/2" to 1" (Sheathed / bare)	E	200	Meters		
C-155	GI earthing wire	D	14000	Meters		
C-156	MS/GI Flat 25 x 3 mm	D	1700	Meters		
C-157	MS/GI Flat 30 x 5 mm or 35 x 6 mm	D	1700	Meters		
C-158	MS/GI Flat 50 x 6 mm	D	7900	Meters		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 21 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-159	Computer furniture for all Servers, PCs, Printers	D	2	Sets		
C-160	Plant Control Desk / CRT desk (1193D x 824H x 5475W) in three to four shipping sections	D	2	Sets		
C-161	Assembly of JB mounting frames (approx 1100 x 500 x 800)	D	6	Nos		
C-162	Assembly of JB mounting frames (approx 1500 x 800 x 1800)	D	2	Nos		
C-163	Assembly of JB mounting frames (approx 2000 x 900 x 1800)	D	18	Nos		
C-164	Assembly of JB mounting frames (approx 2600 x 500 x 1800)	D	6	Nos		
C-165	Assembly of local gauge board 1400 x 450 x 1900 mm	D	6	Nos		
C-166	2PB or 3PB Pushbutton box	E	136	Nos		

Date:

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 22 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
C-167	CJCB Junction boxes upto 48 way	E	2	Nos		
C-168	CJCB Junction boxes above 48 way	E	66	Nos		
C-169	Junction boxes upto 48 way	E	446	Nos		
C-170	Junction boxes above 48 way	E	160	Nos		
C-171	MS Sheet 3 to 4 mm thick	E	10	Sq. M.		
C-172	Structural steel for fabrication	E	53	Tons		
Electrical						
E-1	Transportation from stores / storage yard to erection site, assembly, erection, welding, testing & commissioning of Isolated Phase Bus Duct (16.5 kV) for interconnection of Generator, Generator Circuit Breaker, isolator & Generator Transformer along with all accessories & auxiliaries as described in the Tender Specification. Approximate Weight 98 MT) Also see Clause 4.33 of tender specifications	F	2	Sets		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 23 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-2	220/240 VAC UPS with ACDB, battery	A		2Sets		
E-3	AC Control supply panel (ACCSP) consisting of transformers, changeover system, modules, etc. approx weight 3 MT	A		2No		
E-4	DC Control supply panel (DCCSP) consisting of changeover system, modules, etc. approx weight 0.5 MT	A		2No		
E-5	DC motor starter panel for DCSOP / DCEOP / DCJOP (1230x1060x2550, 450 Kgs each)	A		6Nos		
E-6	Digital AVR panel (1.5 MT)	A		6No		
E-7	Generator Instrumentation including annunciation cabinet (1230 x 1060 x 2550, 600 Kgs)	A		2No		
E-8	Generator, GT, ST and UAT protection and metering panels	A		16Nos		
E-9	Auxiliary Control Panel for ESP 10,500X1,600X2,400 supplied in loose shipping sections	A		4Nos		
E-10	Control Junction Box for SSPB 500X300X150	A		32Nos		

Date:

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 24 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-11	Disconnecting Switch for ESP 1,200 X 1,000 X 750	A	64	Nos		
E-12	LT Main Switch Board for ESP 13,000X1,600X2,400 supplied in loose shipping sections	A	2	No		
E-13	Electronic Controller for ESP 700 X 650 X 2000	A	64	Nos		
E-14	Rapper control panel for ESP 1000X650X2000 supplied in loose shipping sections	A	4	Nos		
E-15	Ash level indicator (High) and accessories like 15metrs each flexible conduct, cable, drin wire each& electronic unit & electric Probe assembly	B	128	Nos		
E-16	Heating Element for hopper	B	1536	Nos		
E-17	Heating element for shaft insulator including JB	B	64	Nos		
E-18	Heating Elements for Support Insulator including JB	B	256	Nos		

Date:

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 25 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-19	Microprocessor based BAPCON controller to be mounted in the EC panel of ESP	B	64	Nos		
E-20	Thermostat for hopper & Insulator heater including JB	B	72	Nos		
E-21	Oil filtration of ESP HV rectifier transformers (Erection by other agency)	C	64	Nos		
E-22	Electrical operated Hoist DSL cable trailing system	A	40	Sets		
E-23	Soot Blower Motor Control Center, double front, overall dimension 9700(W)x2450(H)x1000(D), WT 12T, shall be supplied in eight to ten loose shipping sections	A	2	Sets		
E-24	Wall blowers, LRSB, Air heater blowers commissioning	C	152	Nos		
E-25	Electrical regulating drives: (Valve, damper, scoop)	C	12	Nos		
E-26	19C/24C x 2.5 sqmm Copper cable (armoured/unarmoured)	D	10000	Meters		

Date:

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 26 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-27	2C / 3C 35 sqmm Al power cable	D	1200	Meters		
E-28	2C / 3C upto 10 sqmm Al power cable	D	23500	Meters		
E-29	2C / 3C /5C 2.5 sqmm Al cable	D	21000	Meters		
E-30	2C / 3C 120sqmm Al power cable	D	22000	Meters		
E-31	2C x 16 sqmm Aluminium cable (armoured/unarmoured)	D	2500	Meters		
E-32	2C x 16 sqmm Copper cable (armoured/unarmoured)	D	5000	Meters		
E-33	2C x 25/35 sqmm Aluminium cable (armoured/unarmoured)	D	9000	Meters		
E-34	2C x 25/35 sqmm Copper cable (armoured/unarmoured)	D	15000	Meters		
E-35	2C x 4.0/6.0/10.0 sqmm Aluminium cable (armoured/unarmoured)	D	20000	Meters		

Date:

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 27 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)		QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-36	2C x 50 sqmm Aluminium cable (armoured/unarmoured)	D	2000	Meters		
E-37	2C x 50/70 sqmm Copper cable (armoured/unarmoured)	D	4000	Meters		
E-38	2C/3C/5C x 2.5 sqmm Copper cable (armoured/unarmoured)	D	54000	Meters		
E-39	3.5C x 95 sqmm Aluminium cable (armoured/unarmoured)	D	5000	Meters		
E-40	3C x 25/35 sqmm Copper cable (armoured/unarmoured)	D	2500	Meters		
E-41	3C/4C x 16 sqmm Aluminium cable (armoured/unarmoured)	D	5000	Meters		
E-42	7C / 10C 2.5 sqmm Al cable	D	15500	Meters		
E-43	7C/10C x 2.5 sqmm Copper cable (armoured/unarmoured)	D	15500	Meters		
E-44	Ladder type cable tray 150 mm	D	4000	Meters		

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Bharat Heavy Electricals Limited: PSWR: Nagpur

Tender Specification No. BHE/PW/PUR/RGIT -CLE/444: Part-II (Price Bid) : Schedule of Rates and Quantities (Page 28 of 28)

Job: Erection, Testing, Assistance for Commissioning of C&I cum Electrical package of unit nos. 1 and 2 at 4x250 MW OP Jindal STPP

SN	DESCRIPTION (Col-2) # Payment Terms vide Cl. No. 12.2 of SCC (Col-3)	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)	
(1)	(2)	(3)#	(4)	(5)	(6)	(7)
E-45	Ladder type cable tray 300 mm	D	1800	Meters		
E-46	Ladder type cable tray 450 mm	D	5500	Meters		
E-47	Ladder type cable tray 600 mm	D	2300	Meters		
E-48	Works on Generator as per Tender Specification clause no 4.27.3 (Gen Stator / Rotor IR/PI /Winding Resistance Value Test, Bushing HV test, Exciter / PMG IR / winding / PI check, other works)	C	2	Sets		
TOTAL Rs						
TOTAL IN WORDS: Rupees						

Date:

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