

TENDER SPECIFICATION

No. BHE/PW/PUR/BSJI-CNI/485

FOR

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

AT

NTPC-SAIL POWER COMPANY PRIVATE LTD
BHILAI, DISTT: DURG,

CHHATTISGARH

PART: II (PRICE BID SPECIFICATION)



BHARAT HEAVY ELECTRICALS LIMITED
(A Govt. of India Undertaking)
POWER SECTOR - WESTERN REGION
345, KINGS WAY - NAGPUR 440 00

BHARAT HEAVY ELECTRICALS LIMITED

(A GOVERNMENT OF INDIA UNDERTAKING)

POWER SECTOR - WESTERN REGION

SHREEMOHINI COMPLEX

345-KINGSWAY, NAGPUR-440 001

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

NTPC-SAIL POWER COMPANY PRIVATE LTD

BHILAI, DISTT: DURG,

CHHATTISGARH

EARNEST MONEY DEPOSIT : Please see Special Conditions of Contract.

LAST DATE FOR TENDER SUBMISSION : Please obtain updated information from web
page "<http://www.bhel.com>" → Tender
Notifications → View Corrigendum.

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

M/s.

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PLEASE NOTE:

THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

BIDDER SHALL NOTE THAT THEIR OFFER WILL BE CONSIDERED SUBJECT TO THE APPROVAL OF BHEL'S
CUSTOMER.

For Bharat Heavy Electricals Limited

Dy. General Manager (Purchase)

Place: Nagpur

Date:

BHEL-PSWR-NAGPUR
Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)
Schedule of Rates and Quantities (Page 1 of 26)

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai; Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-1	Control Panel (approx L1000 X B1000 X H2500, 400Kg) - one panel	20	Nos		
A-2	Control Panel (approx L1000 X B1000 X H2500, 400Kg) - one panel	45	Nos		
A-3	Control Panel (approx L1501 to 2250 X B1000 X H2500, 1200 Kg) - suit of three panels	25	Nos		
A-4	Control Panel (approx L2251 to 3000 X B1000 X H2500, 1600 Kg) - suit of four panels	2	Nos		
A-5	Electrical heat tracer panel and accessories	2	Set		
A-6	Unit Control panel	1	Set		
A-7	Electrical control panel 1900x1000x2355	2	Set		

Date:

Signature & Official Seal of Bidder

BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 2 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-8	Gr. Feeder Remote Control Panel (1400 x 2365 x 510), 636 kg	14	Set		
A-9	Generator Instrumentation cabinet including annunciator (1230 x 1060 x 2550, 600 Kgs)	2	No		
A-10	220/240 VAC UPS with inverter, bypass line equipment, ACDB and Batteries	2	Set		
A-11	Vibration monitoring system for Fans and Pulverisers	4	Set		
A-12	Vibration monitoring system for main turbine	2	Set		
A-13	Vibration monitoring system for BFP/CEP/ACWP/CWP	2	Set		
A-14	DC motor starter box for scanner fan	2	No		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 3 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-15	Mill inerting system control box 755 X 340 X 1345, local mounted	6	Nos		
A-16	Control panels for Centrifuges	4	Nos		
A-17	Gr. Feeder local Control Panel (1000 x 600 x 300), 77 kg,	14	Nos		
A-18	Control Panel for HP dosing system (1000x800x2000, 3.0 MT)	2	No		
A-19	Burner Tilt Shear Pin Failure Indication Box	4	Nos		
A-20	Air Heater Rotor Stoppage Alarm Box	4	Sets		
A-21	Condenser Vacuum pump system	2	Set		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 4 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-22	Local Instrument racks (LIR)	70	Nos		
A-23	Local Instrument enclosures (LIE)	44	Nos		
A-24	NETWORK PANELS (800x800x2100)	7	Nos		
A-25	WALL MOUNTED NETWORK ENCLOSURES (500x600x600)	10	Sets		
A-26	HART MANAGEMENT SYSTEM CABINET	2	Set		
A-27	Pulverizer screw conveyer monitoring system	6	Set		
A-28	Pulverizer 'Delta P' Panel (1600x550x2000, 1.5MT)	6	Set		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 5 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-29	Electronic Water Level Indicator (EWLI)	4	Sets		
A-30	Hydrogen Purity analyzer	2	No		
A-31	SWAS Sample handling system with racks & Sample conditioning panel with chiller (Both wet and dry)	2	Sets		
A-32	Conductivity Analyzer (Both panel mounted and field mounted)	30	Nos		
A-33	Chloride Analyzer	2	Nos		
A-34	Dissolved Oxygen Analyzer	8	Nos		
A-35	Hydrazine Analyzer	2	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 6 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-36	Sodium Analyzer (Multi channel)	2	Nos		
A-37	pH Analyzer	18	Nos		
A-38	Phosphate Analyzer	2	Nos		
A-39	Silica Analyzer (Multi channel)	2	Nos		
A-40	Analyzer Panel	2	Nos		
A-41	Furnace Temperature probe	4	Nos		
A-42	Coal bunker level monitoring system	2	Sets		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 7 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
A-43	Master Slave Clock System	1	Sets		
A-44	EPABX System	1	Sets		
A-45	CCTV System	1	Sets		
B-1	Direct Water Level Gauge	4	Sets		
B-2	Solenoid valves (3 way, AC/DC, 1/4", 1/2", 1", NPT/BSP, single/dual coil)	250	Nos		
B-3	HEA Exciter system	32	Sets		
B-4	Flame Scanner Head Assembly (Fire ball and Discriminating Type)	64	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 8 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
B-5	Relay / Latch relay with base	4	Nos		
B-6	Air filter regulators / Lubricators (1/2", 1", 0-6KG, 0-10 KG)	152	Nos		
B-7	Speed Regulators / Air lock valves in oil gun corner rack	24	Nos		
B-8	max Engineering / operator / storian / LAN / WAN /LVS Work Station/ Shift in charge / stn in charge / gateway / interface PC / HART etc., PC/Server Station with ASCII Keyboard, Mouse & 21" Colour Monitor, individual UPS in Modular CRT Desk with racks for HMI System	50	Sets		
B-9	Printers (80/132 col Dot Matrix, A3 Inkjet, A3 Laserjet, etc) with Printer table and accessories	32	Sets		
B-10	LVS (Large Video Screen) made up of 5X1 matrix. Each LVS of DLP/LCD type, Rear projection type, 67 inches diagonal size, with 1024x768 resolution non interlaced	6	Sets		
B-11	Laboratory Setup for Customer	1	Set		

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Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
B-12	Microphone including junction / control box and accessories for Mill DP level control	6	Sets		
B-13	CO Analyzer (in situ type)	2	Sets		
B-14	O2 (OXYGEN) Analyzer	4	Nos		
B-15	SO2 Analyzer (in situ type)	2	Nos		
B-16	NOX Analyzer (in situ type)	2	Nos		
B-17	Dust emission monitor (Installation at around 50 M in chimney)	2	Sets		
B-18	Flue gas analyzer sample handling system	2	Set		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 10 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
C-1	Console inserts (to be mounted on Backup desk)	2	Sets		
C-2	Vertical indicators (moving coil / bar graph)	40	Nos		
C-3	Digital / bar-graph indicators	25	Nos		
C-4	Recorder 24 / 30 Channel	6	Nos		
C-5	Recorder 3 channel	6	Nos		
C-6	Speed switch / Speed detector	6	Nos		
C-7	Moisture Sensor probe and dew point monitor	2	Set		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 11 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
C-8	Rotor Earth fault Detector	2	Nos		
C-9	Pressure Switch / DP Switch / DP indicating switch	338	Nos		
C-10	Temperature Switch / Thermostat	100	Nos		
C-11	Float type Level Switch	50	Nos		
C-12	Electronic Level Switch (with amplifier, etc), Capacitance or conductivity type	24	Nos		
C-13	Electronic Level Transmitter (with amplifier, etc), Capacitance or conductivity type	12	Nos		
C-14	Flow switch (Mechanical / Electronic)	26	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 12 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
C-15	Pressure Gauge / DP gauge	530	Nos		
C-16	Temperature Gauge (all types)	300	Nos		
C-17	Level Indicator / Level Gauge	14	Nos		
C-18	Flow indicator / Flow Gauge / Flow meter/Acoustic flow meter (coal)	16	Nos		
C-19	Pressure / DP / Flow (DP type) / Level -Transmitter	772	Nos		
C-20	Level Transmitter (displacer type)	22	Nos		
C-21	Flow Transmitter (Pulse / mass flow / target type) including flanges	4	Nos		

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Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
C-22	Thermocouple / RTDs with thermowell (all types) along with converters wherever applicable	720	Nos		
C-23	MTM Thermocouple upto 17 M length	120	Nos		
C-24	MTM Thermocouple over 17 M length	140	Nos		
C-25	Thermocouple assy with 6 / 9 Cr-Al MI T/C along with integral JB	4	Nos		
C-26	I/P converters	102	Nos		
C-27	Pneumatic Pressure controller with accessories	2	Nos		
C-28	Pneumatic Temperature controller with accessories	10	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 14 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
C-29	SADC power cylinders	120	Nos		
C-30	Rotameter	2	Sets		
D-1	Fan Lube oil skid	12	Sets		
D-2	Rack mounted instruments commissioning	6	Sets		
D-3	Coal Feeder local instruments commissioning	12	Nos		
D-4	Electrical regulating drives: (Valve, damper, scoop)	12	Nos		
D-5	Pneumatic Regulating Drives for Valve, damper including SADC, Burner tilt etc.	140	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 15 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
D-6	Commissioning of Hydraulic actuators	30	Nos		
D-7	ERV Controller	4	Nos		
D-8	Corner valve/ Trip valves commissioning	80	Nos		
D-9	Open/Close type pneumatic gates / dampers / valves	100	Nos		
D-10	Only healthiness checking of embedded RTD / T/C	200	Nos		
D-11	Limit Switches (checking and adjusting only).	120	Nos		
E-1	GI earthing wire	2500	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 16 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
E-2	GI Pipe (1/2", 1") Heavy grade	500	Meters		
E-3	GI Pipe (1.5 ", 2")	50	Meters		
E-4	Copper tube 6mm/8mm / 1/4" (Sheathed / bare)	3000	Meters		
E-5	Copper tube 1/2" to 1" (Sheathed / bare)	150	Meters		
E-6	Hoses - 1/2" to 1", SS/Teflon, Braided/unbraided, upto 5M length	70	Nos		
E-7	Perforated cable tray and accessories (with or without cover) 50mm	5000	Meters		
E-8	Perforated cable tray and accessories (with or without cover) 100mm	8000	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 17 of 26)**

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SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
E-9	Perforated cable tray and accessories (with or without cover) 150mm	3000	Meters		
E-10	Cable duct 60 x 60 x 1000	400	Meters		
E-11	Cable duct 100 x 100 x 1000	120	Meters		
E-12	Cable duct 180 x 100 x 1000	100	Meters		
E-13	Cable duct 250 x 60 x 1000	60	Meters		
E-14	Screened Copper Cable 2P x 0.5 sqmm armoured / unarmoured	88500	Meters		
E-15	Screened Copper Cable 4P x 0.5 sqmm armoured / unarmoured	256000	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 18 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
E-16	Screened Copper Cable 6P x 0.5 sqmm armoured / unarmoured	1000	Meters		
E-17	Screened Copper Cable 8P x 0.5 sqmm armoured / unarmoured	226000	Meters		
E-18	Screened Copper Cable 10P / 12P/ 16P x 0.5 sqmm armoured / unarmoured	30000	Meters		
E-19	Screened Copper Cable 24P x 0.5 sqmm armoured / unarmoured	8000	Meters		
E-20	Screened Copper Cable 1P/2C x 1.5 / 2.5 sqmm armoured / unarmoured	36000	Meters		
E-21	Screened Copper Cable 2P/ 3C /4C x 1.5 / 2.5 sqmm armoured / unarmoured	72000	Meters		
E-22	Screened Copper Cable 5C/7C x 1.5 /2.5 sqmm armoured / unarmoured	165000	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 19 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
E-23	Screened Copper Cable 10C/12C x 1.5 /2.5 sqmm armoured / unarmoured	40000	Meters		
E-24	Screened Copper Cable 19C x 1.5 /2.5sqmm armoured / unarmoured	18000	Meters		
E-25	Compensating cable 2P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	27000	Meters		
E-26	Compensating cable 4P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	20000	Meters		
E-27	Compensating cable 6P x 1.3 sqmm type Tx/Sx/Kx unarmoured/armoured	1000	Meters		
E-28	Copper Cable 2 or 3 triad, 0.5/1.5 sqmm armoured/unarmoured	4000	Meters		
E-29	Copper Cable 6 triad, 0.5/1.5 sqmm armoured/unarmoured	500	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 20 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
E-30	Laying, etc of Single Mode Optical fibre cables on cable trays, conduits etc with minor civil works	16000	Meters		
E-31	Laying, etc of Multi Mode Optical fibre cables on cable trays, conduits etc with minor civil works	7000	Meters		
E-32	Network UTP Cables (special termination using UTP connectors involved)	30000	Meters		
E-33	MS Flat 50 x 6 mm	100	Meters		
F-1	Assembly of JB mounting frames (approx 1100 x 500 x 800)	6	Nos		
F-2	Assembly of JB mounting frames (approx 1500 x 800 x 1800)	2	Nos		
F-3	Assembly of JB mounting frames (approx 2000 x 900 x 1800)	18	Nos		

Date:

Signature & Official Seal of Bidder

BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 21 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-4	Assembly of JB mounting frames (approx 2600 x 500 x 1800)	6	Nos		
F-5	Assembly of local gauge board 1400 x 450 x1900 mm	6	Nos		
F-6	FSSS Local Oil Gun Maintenance Switch Box	24	Nos		
F-7	Junction boxes up to 48 way	400	Nos		
F-8	Junction boxes above 48 way	200	Nos		
F-9	CJCB Junction boxes up to 48 way	20	Nos		
F-10	CJCB Junction boxes above 48 way	50	Nos		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 22 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-11	2PB or 3PB Pushbutton box	20	Nos		
F-12	Impulse pipe CS ½" SCH 40 (D21.3 x 2.76 mm)	100	Meters		
F-13	Impulse pipe CS ½" SCH 80 (D21.3 x 3.73 mm)	4000	Meters		
F-14	Impulse pipe CS ¾" SCH 80 (D25 x 4 mm)	2000	Meters		
F-15	Impulse pipe CS ½" SCH 160 (D21.3 x 4.78 mm)	2000	Meters		
F-16	Impulse pipe AS ½" SCH 40 (D21.3 x 2.76 mm)	250	Meters		
F-17	Impulse pipe ASTM A 335 P22 1/2 " Sch XXS	2000	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 23 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-18	Impulse pipe ASTM A106Gr C 3/4 " Sch XXX	10000	Meters		
F-19	Impulse pipe ASTM A106Gr C 1 " Sch 80	1800	Meters		
F-20	Impulse pipe ASTM A106Gr C 1 " Sch 160	2000	Meters		
F-21	Impulse pipe ASTM A335 P22 1 " NB Sch 160	1600	Meters		
F-22	Impulse pipe ASTM A312 TP 304 3/4 NB" Sch 40	2000	Meters		
F-23	Impulse pipe ASTM A312 TP 316 3/4 NB" Sch 40	1200	Meters		
F-24	Impulse pipe ASTM A312 TP 316 3/4 NB" Sch 160	1200	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 24 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-25	Impulse pipe CS 1" SCH 40 (D33.4 x 3.37 mm)	50	Meters		
F-26	Impulse pipe CS 1" SCH 80 (D33.4 x 4.55 mm)	200	Meters		
F-27	Impulse pipe SS 1/4" (D12.7/13.5 x 2.1/2.6 mm)	500	Meters		
F-28	Impulse pipe SS 1/2" SCH 160	1000	Meters		
F-29	SS tube D6 x 1.0/1.5mm	200	Meters		
F-30	Impulse pipe CS 1/4" (D13.5 x 2.6 mm)	700	Meters		
F-31	Impulse pipe CS (D17.2 x 1.8 mm)	800	Meters		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 25 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist-Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-32	CS tube DN 80	20	Meters		
F-33	Impulse pipe SS ½" (D21.3 x 2.6 mm) Sch 40	1200	Meters		
F-34	Impulse pipe AS 1/4" (D13.5 x 2.6 mm)	400	Meters		
F-35	Impulse pipe 1/4" / 8mm / 6mm	5000	Meters		
F-36	Impulse pipe 1/2" (D21.3 x 3.2/3.6 mm)	1000	Meters		
F-37	Impulse pipe 1/2" (D21.3 x 4.78 mm)	200	Meters		
F-38	Plant Control Desk / CRT desk	2	Sets		

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BHEL-PSWR-NAGPUR**Tender Specification No. BHE/PW/PUR/BSJI-CNI/485 (Part-II: Price Bid Specification)****Schedule of Rates and Quantities (Page 26 of 26)**

Handling at site stores/storage yard, transportation to site of work, complete erection, checking of calibration, testing, assistance for commissioning and handing over of Controls & Instrumentation works for Boiler and its auxiliaries, Steam Turbine, Turbo-generator and their auxiliaries, Station C&I etc. for 2x250 MW thermal power project of NTPC-SAIL Power Company Private Ltd, Bhilai, Dist -Durg, Chhattisgarh. Various items of work are as follows.

SN	DESCRIPTION	QTY	UOM	UNIT RATE (Rs.)	TOTAL AMOUNT (Rs.)
F-39	Computer furniture for all Servers, PCs, Printers	2	Sets		
F-40	Structural steel for fabrication	60	Tons		
F-41	MS Sheet 3 to 4 mm thick	5	Sq. M.		
Grand Total in Figures (Rs.)					
Grand Total in words: Rupees					

Date:

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