

**TENDER
SPECIFICATION BHEL
PSSR SCT 2157**

FOR

Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu.

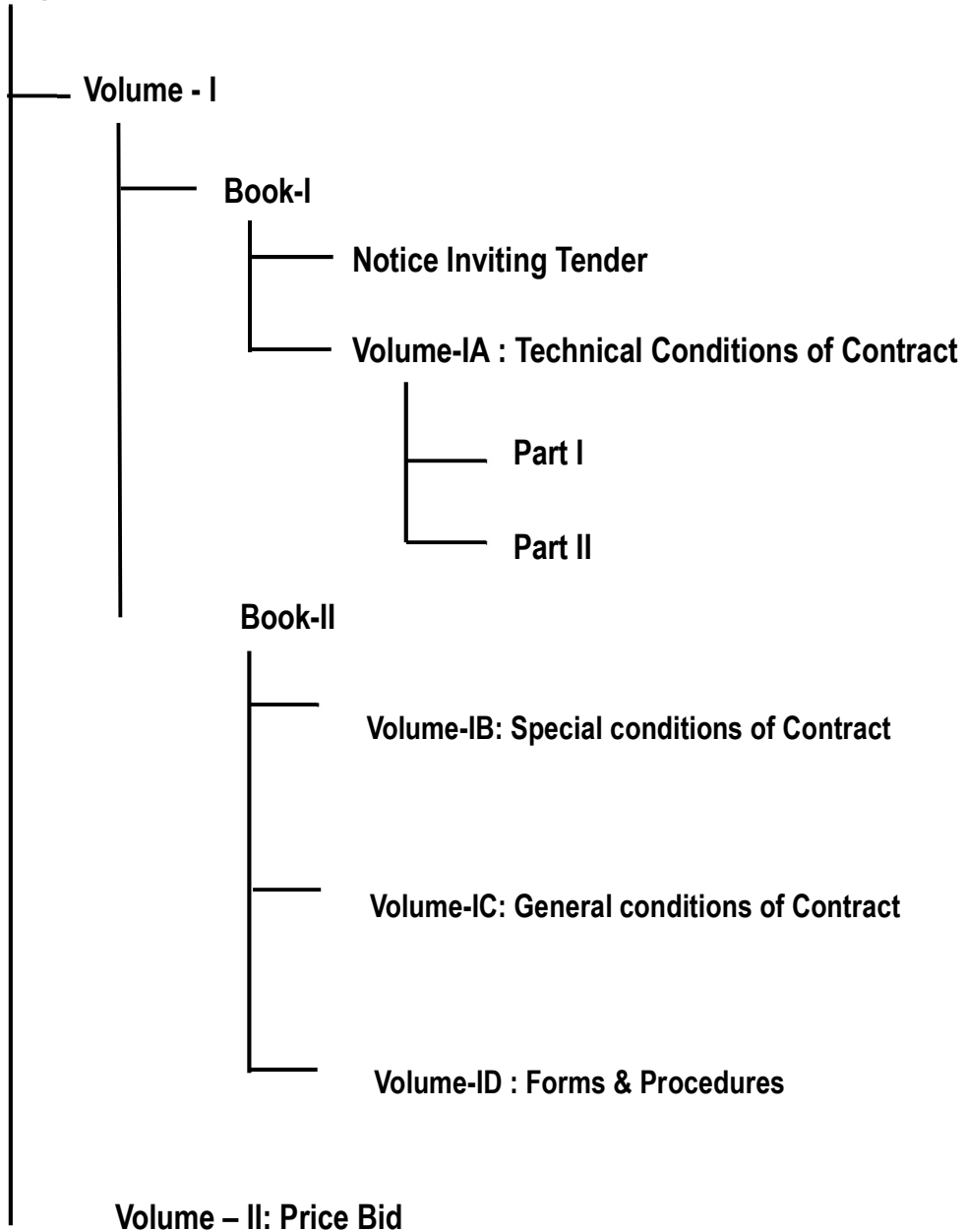
**PRICEBID
VOLUME –II**



BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector – Southern Region
BHEL Integrated Office Complex, TNEB Road
Pallikaranai, Chennai -600100

TENDER SPECIFICATION CONSISTS OF

Tender Specification



PRICE BID

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PRICE BID

PART A

Instruction to Bidders:

1. Bidders shall only quote “Total Lumpsum amount” in the format given in the price bid. The “Total Lumpsum amount” is for the entire scope of work. Payment will be as per actual quantity executed as certified by BHEL Engineer.
2. Tenderers are requested to affix their company seal and authorized signature in all pages.
3. Bidders shall quote ‘Total Amount’ in the format enclosed as a separate Excel File in BHEL NIC e-Procurement portal for the subject tender and upload the same under ‘Packet details - > Tender covers -> Finance '(Cover Type Description – Price Bid)’ and same shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope of work defined in specification and in accordance with terms & conditions of the tender. Any other entry elsewhere in the price bid shall be treated as Null and Void. Quoting of rates in any other form/ formats will not be entertained.
4. The above mentioned ‘Total amount’ is for the entire Bill of Quantity (BOQ) given in Part -C of the Price Bid.
5. BHEL has pre-fixed the weightages for the amount of individual items of Bill of Quantity with respect to the ‘Total Amount’ in Part-C.
6. Based on the pre-fixed weightages, the amount for the individual items of the Bill of Quantity shall be arrived at. This amount shall be rounded off to the nearest rupee.
7. Based on the quantities of individual item and the amount arrived in SI No: 6 above, unit rate of individual items shall be derived. This unit rate shall be rounded off to four decimal places.
8. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.7 above.

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
I	ERECTION AND COMMISSIONING OF LOCAL/FIELD MOUNTED INSTRUMENTS, DEVICES, SWITCHES	--		
,B.1.1	PD Type Mass flow meter in HFO,LDO/HSD and HFO return line with mounting flanges, electronics amplifier box, inter connecting cabling, etc.	SET	3	.0000921
,A.16.11,D.5.13,D.5.15,D.5.19,E.1.3,E.2.4,E.2.5,G.5.2,G.6.2,G.7.3,K.2.1	Pressure Transmitters / DP Transmitters / DP Type flow transmitters/Conductivity Transmitters/DP type LT	Nos	908	.0120075
,A.16.1,A.16.2,A.17.1,D.5.17,D.5.18,E.1.8,E.2.9,J.1.1,K.6.34	Level Transmitter (Guided Wave/Ultrasonic/Capacitance Type) along with accessories	Nos	126	.0073127

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.A.16. 4,B.1. 2,B.6. 1,C.1. 1,D.3. 7,D.3. 8,D.5. 8,E.1. 1,E.1. 2,E.2. 13,E.2 .3,E.2. 6,E.3. 1,F.1. 4,G.11 .4,G.2. 1,G.5. 1,G.6. 1,G.7. 4,K.5. 6,K.6. 36,K.6 .38,K. 7.3,K. 7.4,K. 7.6	Pressure / DP Gauge/Reverse Rotation Indicators/Discharge indicators	Nos	1,077	.0108249

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.16. 5,B.1. 3,B.6. 3,C.1. 2,D.3. 3,D.5. 11,E.1 .12,E. 2.11,E .2.2,E. 3.5,F. 1.5,G. 11.1,G .5.4,G. 6.4,G. 7.2	Temperature Gauge	Nos	667	.0096363
,B.1.9, C.1.3, D.5.10 ,E.1.7, E.2.7, E.3.2, F.1.6, F.1.7, G.11.3 ,G.7.8, K.5.7, K.6.37	Level Gauge/Level Alaram	Nos	70	.002514

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,B.1.4, B.6.2, D.3.1, D.3.10 ,D.5.7, E.1.4, G.7.6, K.4.1, K.5.5, K.6.35 ,K.7.7	Pressure / Differential Pressure Switch / Temperature Switch	Nos	557	.0071486
,A.16. 6,A.16 .7,B.6. 16,D.5 .5,E.3. 3,E.4. 2,K.6. 39	Level Switches (RF/Float/Capacitance/Conductivity type) along with accessories	Nos	61	.0022362

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.16. 12,A.1 6.13,A .16.14 ,A.16. 3,B.6. 19,D.3 .2,D.3. 5,E.1. 5,E.1. 6,E.2. 8,E.4. 1,G.5. 3,G.6. 3,G.7. 1	Temperature Elements(RTD/Thermocouple with Thermowell/RTD with Thermowell) / Flow Elements/Thermocouple with threaded connection	Nos	864	.0109508
,A.16. 9,E.1. 13	E/P Coverters, I/P Converters	Nos	38	.0004352
,D.3.9, E.1.11 ,E.2.1 0	Position Transmitters	Nos	12	.0001844
,B.6.1 7	ERV Controller with Pressure Switch	SET	2	.0001475

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,B.1.5	FSSS Local Oil Gun Maintenance Switch Box	Nos	18	.0004052
,B.1.6, F.1.3	H.E.A Exciter Box with Accessories	SET	17	.0006696
,B.1.7, F.1.1	Flame Scanner Head Assembly with accessories	SET	33	.0012741
,B.5.2	Feeder Coal Flow Assembly flange mounted with Electronics	SET	7	.0008497
,B.6.4, B.6.5, B.6.6, B.6.7, B.6.8, B.6.9	MTM T/C (Route Length 8 to 18 MM) - 8MM OD	Nos	130	.0035535
,B.6.1 0,B.6. 11,B.6 .12,B. 6.13,B .6.14	MTM T/C (Route Length 20 to 28 MM) - 8MM OD	Nos	271	.0136335
,B.6.1 5	MTM T/C (Route Length 30 to 40 MM) - 8MM OD	Nos	13	.0006526

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,B.6.1 8,D.3. 4,D.5. 9,G.5. 5	Flow Switch/Flow meter/Flow Indicator/Vacuum Switch	Nos	30	.0006445
,D.3.1 1	GO, No GO Switch	Nos	10	.0007323
,D.3.6	On/Off Switch Box including light assembly and interconnecting heat resistant cable	SET	2	.0000735
,E.3.4, G.11.2	Thermowells (Screwed & Welded)	Nos	22	.0001392
,E.1.9, E.2.12 ,E.2.1 4,G.7. 5	Speed Measuring Loop/Speed Probe/Speed Sensor/Vibration Transducer/Key Phasor	Nos	21	.0002621
,D.5.1 4,D.5. 16,K.6 .33	Flow Transmitters (Other than DP type)	Nos	50	.0026723

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.A.16. 10,B.1 1.1.1, B.11.1 .2,B.1 1.1.3, D.4.4, D.5.12	Air Filter Regulator-(1/4 inch -1 inch)/Purge meter cum DP regulator	Nos	70	.0005361
.D.5.2 2,D.5. 23,D.5 .24,D. 5.25	Analyzers (Oxidation Reduction Potential/Turbidity/Ph/Conductivity)	Nos	39	.0019226
.E.1.1 0	Proximeter Units, Local Field Cable etc. for Governing Sytem	SET	12	.0001666
.C.1.1 0	Averaging Pitot Tube	SET	2	.0000843
.D.3.1 2	Emergency Push Buttons	Nos	2	.0000661
.K.6.3, K.6.4	Multisensor Detectors/ Heat Detectors	Nos	1,419	.0020123
.K.6.5, K.6.7	Air Sampling/Probe/IR (Air Purge) Detectors/Q.B.Detectors	Nos	13	.0000364

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,K.6.6, K.6.8, K.6.9	Beam Detectors/IR (Flame) Detectors	Nos	84	.0012031
,K.6.1 9	Hooter cum Strobes	Nos	183	.0013138
,K.6.2 0	Power Supply Modules for Fire Protection System	Nos	20	.0001606
,K.6.1 0,K.6. 11,K.6 .12	Manual Call points	Nos	279	.0079874
,K.6.2 2	EXIT/WARNING Signs	Nos	225	.0006501
,A.16. 8,B.1. 10,D.5 .20,D. 5.21,E .2.1	Temperature Transmitter	Nos	537	.0079295
,K.6.1 6	Optical LHS Controllers	Nos	4	.0001122
,K.7.1	Release Unit with Solenoid, CPG & Actuator	Nos	8	.0001309

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.16.15	EWLI with all associated cabling and accessories	Set	3	.0003826
,K.7.11	Special Switches-Abort Switch	Nos	7	.0000396
,K.6.17	IO Modules	Nos	325	.0092236
,K.6.21	IO Modules	Nos	255	.0011617
II	ERECTION AND COMMISSIONING OF SPECIAL INSTRUMENTS	--		
,A.18.1,A.18.2	High Temp/Low Temp O2 Analyzer including all accessories	SET	12	.0035465
,A.18.5,D.1.1	Opacity Monitor including all accessories	SET	5	.0020322
,A.18.6	SOX/NOX/CO (Combined) Analyzer / Flue Gas Analyzer including all accessories	SET	1	.0011933
,A.18.4,A.18.7,A.18.8	CO/Velocity/HF/Mercury/NOX/SOX/NH3/Gas Flow Analyzer including all accessories	SET	5	.0050454

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.19.1	SWAS System Sample Handling System (including Racks , Panels, Chillers, Sensors, Transmitters, indicators, Cabling and all other accessories)	SET	1	.0101505
,A.19.2	SWAS System (Set of Racks Common to both Units) (including Racks, , Panels, Sensors, Transmitters, indicators Cabling and all other accessories)	SET	1	.0015328
,A.32.12,A.32.13,A.32.15,	LAN Switches with accessories /Router with accessories	Nos	24	.0002638
,A.20.1.A	Installation of vibration sensors, driver, extension cable with mounting block, Phase marker sensor, driver, extension cable with bracket , Shaft vibration sensors, driver, extension cable with probe holder, Loop checking using Portable Shaker Table for each vibration sensor and eddy-current sensors. This broadly covers equipments of CER Unit#1, CWPH of Unit#1, Compressor House, SWI P/H, RODM CR	SET	1	.0035647
III	ERECTION AND COMMISSIONING OF UPS/BATTERY & BATTERY CHARGER	--		
,A.23.1	2X200 kVA Main UPS	SET	1	.0029629
,A.23.7	Ni-Cd Battery 1045 AH made up of around 2x295 cells complete with all accessories	SET	2	.0046107
,A.23.2	ACDB for Main UPS	Nos	2	.0012466

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.23.6	Battery Health Monitoring System for Main UPS	Nos	2	.000344
,A.23.8	24 V DC Ni-Cd Battery for TG Charger :Rating 560AH 24 V DC, complete with all accessories	SET	2	.0003339
,A.23.9	24 V DC Ni-Cd Battery for SG Charger :Rating 935AH 24 V DC, complete with all accessories	SET	2	.0005765
,A.23.10	Charger (approx. 887A)complete with all accessories	SET	2	.0010876
,A.23.11	TG Siemens Charger (approx.120A) complete with all accessories	SET	2	.0005438
,A.24.1	2X20 kVA Offsite UPS complete with all accessories	SET	10	.0092014
,A.24.7	Ni-Cd Battery made up of around 180 cells, 140AH complete with all accessories	SET	22	.0253589
,A.24.2	ACDB for Offsite UPS	Nos	20	.0069254
,A.24.3	Battery Health Monitoring System for Offsite UPS	Nos	20	.0021495
,A.24.8,A.24.9	24 V DC Ni-Cd Battery for FOPH, Aux. Boiler Charger :Rating 50AH 24 V DC, complete with all accessories	SET	4	.0001183

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.24.10,A.24.11,A.24.12	Charger for FOPH, Aux. Boiler, CWPH complete with all accessories	SET	6	.0016315
,K.1.2,K.5.2	Erection & Commissioning of Battery & Battery Charger for Pumps of Fire Protection System	SET	5	.0008298
A24.13	24 V DC Ni-Cd Battery for CWPH Charger :Rating 100AH 24 V DC, complete with all accessories.	SET	2	.0001762
IV	ERECTION AND COMMISSIONING OF CONTROL PANELS AND RELATED ACCESSORIES	--		
,B.2.1	ASLD System along with all loose supplied items such as sensors, amplifiers, PSU, JB, Cables, accessories etc.	SET	1	.0007389
,D.2.1	Automatic Leakage Control System for Air Pre-Heater comprising of ALCS panels, Controllers, accessories and interconnecting cables, etc.	SET	1	.0003139
,B.3.1	Furnace CCTV System (Panels, CCTV Head Assembly, AFRs, SS Hose mounted at Boiler, Remote Control Box, other related electronics, accessories, etc.)	SET	4	.0011851
,G.1.1	Moisture Measurement System panel with controller and accessories	SET	1	.0002329
,G.1.2	Generator end Vibration Monitoring Cabinet with cables, monitors and accessories	SET	1	.0002361
,G.1.3	Grounding Brush Monitor	SET	1	.000109
,G.1.4	H2 Gas Analyzer Cabinet	SET	2	.000385

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.44.1	HART Management System Panel and loose items	SET	4	.004442
,B.5.1	Gravimetric Feeder Remote Power Cabinet and accessories	Nos	7	.0017053
E.5.1	TSI System for BFP Drive Turbine Items	SET	2	.0013983
,B.1.8, F.1.2	Installation fo 19 inch racks for Flame Scanner, VMS,etc.	SET	9	.0004186
,A.15.1	TSI System for Main Turbine: TSI Rack and Panel along with interconnections / Main Turbine Complete Sensors and Assembly	SET	1	.0012056
,A.4.1, A.4.2	Network Panels	Nos	3	.0002785
,K.3.2, K.4.3, K.5.4, K.6.41	Deluge Valve Control Panels	Nos	134	.0038148
,K.6.1, K.6.2	Fire Alarm/Repeater Panel	SET	11	.0015564
,A.36.1	Master Slave Clock System Panel with accessories, GPS Antennas along with accessories Singal conditioner -1 Panel, Signal conditioner -2 panel, signal conditioner -3 panel along with accessories	SET	1	.0001618

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Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.36. 2	Slave Clock (RS 485 based)/NTP Based	Nos	50	.0024853
,A.26. 7.5	Network Enclosures with / without Ethernet Switches, bar graph enclosures	SET	6	.0003928
,G.1.5	Generator Instrumentation Cabinet	SET	1	.0001332
,K.1.1, K.5.1	Diesel Engine Control Panel for Pumps	Nos	5	.0002683
,K.6.1 8	Siren and its associated accessories, panels, etc.	SET	1	.0003008
,K.7.5	Gas Release Panel with Batteries	SET	1	.0001395
V	PLACEMENT, ALIGNMENT,ERECTION, ELECTRICAL INTERCONNECTION, TESTING AND COMMISSIONING OF DCS PANELS	--		
,A.10. 1,A.7. 1,A.8. 2,A.9. 1,A.9. 4,G.13 .1,G.1 3.2,A. 14.2	Suite of One Cubicles	Nos	16	.0026584

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,A.12. 1,A.14 .1,A.7. 3,A.8. 1,A.9. 2	Suite of Two Cubicles	Nos	7	.0017808
,A.10. 3, A.7.5	Suite of Three Cubicles	Nos	2	.0008568
,A.10. 2	Suite of Four Cubicles	Nos	6	.0027151
VI	PLACEMENT, ALIGNMENT,ERECTION, ELECTRICAL INTERCONNECTION, TESTING AND COMMISSIONING OF DCS PANELS (FOR PANELS ALREADY UNLOADED NEAR CONTROL ROOM)	--		
A.2.1, A.3.1, A.3.4, A.3.8, A.5.1, A.7.A. 1,A.7. A.2	Suite of One Cubicles	Nos	17	.0024009

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A.1.1, A.2.2, A.3.5, A.3.6, A.13.2 ,A.7.A .3	Suite of Two Cubicles	Nos	13	.0028112
A.1.2, A.1.5, A.2.3, A.3.2, A.3.7, A.13.1 ,A.7.A .5,A.7. A.6	Suite of Three Cubicles	Nos	25	.0091031
A.1.3, A.2.4, A.3.3,	Suite of Four Cubicles	Nos	11	.004231
,A.1.4	Suite of Five Cubicles	Nos	1	.0004996
VII	INSTALLATION AND COMMISSIONING OF HMI SYSTEM WITH COMPLETE ACCESSORIES AND CONNECTIVITY	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.17. 5,A.20 .4,A.3 2.10,A .32.11 ,A.32. 7,A.32 .8,A.3 2.9,A. 34.3,A .34.4, A.34.5 ,A.34. 6,A.43 .2,A.4 3.3,G. 13.4,K .6.24	Printers (Laser Jet/Dotmatrix A4/A3/COLOUR/BW/Multifunction Printer)	Nos	51	.0021725
,A.31. 1	LED based rear projection Video wall: DLP cubes Video wall in 5x1 matrix with individual cube of size 80 inch.-84 inch. with 1600 mm x 1200 mm along with controller- 1 set and DLP cube (1x1) with cube of size 80 inch.-84 inch. with 1600 mm x 1200 mm along with controller-1 set and other interconnectors like matrix switchers, port splitters and cables like DVI Cables, Video Cables, serial cable, power supply sockets, bezel/frame for the complete LVS video wall, and Mounting stand approx. 1200 mm height / arrangement etc. with overall dimensions of the complete video wall arrangement as approx. 9944.6 mm(chord)x2400mm(height)x964mm{ width)	SET	1	.0034399

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.31. 2	LED based rear projection Video wall: DLP cubes Video wall in 2x1 matrix with individual cube of size 80 inch.-84 inch. with 1600 mm x 1200 mm along with controller- 1 set and other interconnectors like matrix switchers, port splitters and cables like DVI Cables, Video Cables, serial cable, power supply sockets, bezel/frame for the complete LVS video wall, and Mounting stand approx. 1200 mm height / arrangement etc. with overall dimensions of the complete video wall arrangement as approx. 3296.2 mm(chord)x2400mm(height)x964mm{ width}	SET	1	.0011101
,A.17. 4,A.20 .3,A.3 2.1,A. 32.2,A .32.3, A.32.4 ,A.32. 5,A.32 .6,A.3 4.1,A. 34.2,A .43.1, G.13.3 ,K.6.2 3	OVS with Monitor/Servers (incl. monitor) /Stations/User PC/OPC Client along with mini UPS	Nos	83	.0060368
,A.31. 3	LED TV (40 inch-55 inch)	SET	7	.000377
VIII	INSTALLATION OF FURNITURES	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.37.4	Desk-9 Section with Accessories for unit control desk	SET	1	.001706
,A.37.1	Desk-8 Section with Accessories for simulator	SET	1	.0014723
,A.37.2,A.37.3,A.37.5	Desk-2 Section with Accessories Instructor and engineer/ Control desk/2 section desk	SET	11	.004992
,A.19.7,A.37.6,A.37.7,A.37.8,K.6.25	Computer Table/Printer Table, along with chairs	SET	105	.0100101
,A.19.8,A.37.10,A.37.11,A.37.9	Almirah/Safety Locker/Printer Rack	SET	56	.0026773
IX	ERECTION AND COMMISSIONING OF JB/PUSH BUTTONS	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.20. 2,A.28 .1,A.2 8.2,A. 28.3,A .28.4, B.9.1, B.9.2, B.9.4, B.9.5, B.9.7, E.4.3, E.6.7, F.1.8, F.1.9	Junction Boxes upto 48 way	Nos	408	.0032763
,A.17. 2,A.28 .5,A.2 8.6,A. 28.7,B .10.3, B.9.3, B.9.6, G.10.1	Junction Boxes above 48 way upto 128 way	Nos	70	.0014158
,G.10. 2,K.7. 8	Push Button Station/ Fire Protection switch	Nos	16	.0001878

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,D.5.4	SVEB and interconnections	Nos	66	.0012249
,A.28. 10,A.2 8.8,A. 28.9	Junction Box for Temperature Transmitter	Nos	74	.0043944
X	ERECTION AND COMMISSIONING OF LIE/LIR	--		
,E.6.1, E.6.2, E.6.3, E.6.4	Local Gauge Boards	SET	10	.0012744
,A.25. 1,A.25 .2,A.2 5.3,B. 10.1	Local Instrument Enclosure	SET	80	.0102361

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.A.25. 4,A.25 .5,A.2 5.6,B. 10.2,E .6.5,E. 6.6,G. 12.15, G.8.1, G.8.2	Local Instrument Rack	SET	78	.0091962
XI	ERECTION AND COMMISSIONING OF PNEUMATIC POWER CYLINDERS (ON/OFF & REGULATING TYPE)	--		
.B.4.1	SADC	SET	116	.0091546
.B.4.2	PA/ID/FD Blade Pitch and other Control Dampers	SET	16	.0025461
.B.4.3, B.4.4	Hot Air/Cold Air/FD Fan Regulating Dampers	SET	14	.0025443
.B.4.5	Dynavane Filter Pressure Control Damper with SMART positioner	SET	1	.0001602
.E.4.4	Solenoid Operated Valves with Manifolds and tubing	Nos.	14	.0001335
.K.3.1, K.4.2, K.5.3	Solenoid Valves	Nos.	120	.0012891
XII	LAYING OF POWER CABLES	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.A.23. 3	UN 0000 - Uninyvin- Equivalent: 1Cx109 Sqmm Cu/1CX90 SQMM POWER CABLE	Mtrs	1,600	.0017868
.A.24. 4	UN 00 - Uninyvin- 68.3 sq.mm Cu Cable	Mtrs	5,200	.003595
XIII	TERMINATION OF POWER CABLES	--		
.A.23. 5	UN 0000 - 1CX109 SqmmCU/1CX90SQMM	Nos	12	.0000398
.A.24. 6	UN 00 - Uninyvin- 68.3 sq.mm Cu Cable	Nos	84	.0001727
XIV	LAYING AND TERMINATION OF CONTROL CABLES, POWER CABLES, LOOP CABLES	--		
.A.26. 3.4,K. 5.9,K. 6.26,K .6.27, K.6.28 .K.6.2 9,K.7. 9	2CX1.5 SQMM/2CX2.5 SQMM	Mtrs	139,210	.0320805

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.26. 3.1,A. 26.3.3 ,A.36. 4,G.4. 1	3CX1.5 SQMM/3CX2.5 SQMM/4CX2.5 SQMM/4CX6 SQMM	Mtrs	42,299	.0097477
,A.26. 3.2,A. 26.4.1 ,K.5.8	5CX2.5 SQMM/7CX2.5 SQMM/5CX1.5SQMM	Mtrs	2,810	.0006974
XV	LAYING AND TERMINATION OF INDIVIDUAL & OVERALL SHIELDED (TYPE G/F), TWISTED PAIR, ARMoured/UNARMoured CABLES, KX TYPE CABLES, OFC, OTHER SPECIAL CABLES	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.17. 3,A.26 .1.1,A. 26.1.5 ,A.26. 2.1,A. 26.2.4 ,A.26. 4.2,A. 26.4.4 ,A.36. 3,B.7. 1,B.7. 10,B.7 .14,B. 7.17,B .7.5,B. 7.6,D. 5.2.3, F.3.1,J .2.1,J. 3.1	2PX0.5 SQMM/ 2TX0.5SQMM/ 2PX1.5SQMM/ 2PX1.31SQMM/ 2PX16AWG KX/NX/RX/G CABLE, Heat Flux Sensor Cable 2P, Flame Scanner Cable, 3P, 3P X 1.0 SQ.MM	Mtrs	238,938	.0508269

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.26. 1.2,A. 26.1.3 ,A.26. 2.2,A. 26.2.5 ,A.26. 2.6,A. 26.4.3 ,B.7.1 1,B.7. 13,B.7 .15,B. 7.18,B .7.2,B. 7.7,D. 5.1.2, D.5.2. 2,E.8. 1,J.2.2 ,J.3.2	4PX0.5 SQMM/ 6PX0.5SQMM, F/G CABLE, 4PX1.31 SQ.MM KX, 6 PairX1.31 SQ.MM, 16 AWG, KX Type	Mtrs	238,780	.0592588

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.26. 1.4,A. 26.2.3 ,A.26. 2.7,B. 7.12,B .7.19, B.7.3, B.7.8, D.5.1. 1,D.5. 2.1,J.2 .3,J.3. 3	8PX0.5 SQMM CABLE, 8PX1.31SQMM KX Type	Mtrs	339,460	.1143323
,A.26. 2.8,B. 7.16,B .7.4,B. 7.9,J.2 .4,J.3. 4	12PX0.5 SQMM/ 12PX1.31 SQMM KX CABLE	Mtrs	120,240	.0490234
,A.26. 7.1,A. 36.8,	CAT-6 UTP CABLES/Ethernet Cables	Mtrs	6,034	.0007487

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.23. 4,A.24 .5,A.3 6.5	RS-485/RG-58 CABLE	Mtrs	13,440	.0052414
,A.26. 7.3,A. 36.9,K .6.30	HDPE Conduits for laying OFC Cables/other cables	Mtrs	19,550	.0270314
,A.26. 7.2,A. 36.6,K .6.31	Laying of Optical Fibre Cable	Mtrs	57,529	.0203959
,A.26. 7.4,A. 36.7,K .6.32	Splicing of Optical Fibre Cable	Nos	594	.0028325
,J.2.5	24PX0.5 SQMM	Mtrs	4,200	.003127
,K.6.1 4,K.6. 15	Laying and Termination of Special Cable OLHS Cable	Mtrs	31,781	.0135209
XVI	ERECTION OF CABLE TRAYS WITH/WITHOUT COVER	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.27. 1,B.8. 1,D.5. 3.1,E. 8.2,F. 1.11	PERFORATED CABLE TRAYS 50 MM WIDE	Mtrs	3,960	.0074409
,A.27. 2,B.8. 2,D.5. 3.2,F. 1.10	PERFORATED CABLE TRAYS 100 MM WIDE	Mtrs	5,330	.0127552
,B.8.3, E.8.3	PERFORATED CABLE TRAYS 150 MM WIDE	Mtrs	1,745	.0233544
,K.7.1 0	PERFORATED CABLE TRAYS 300 MM WIDE	Mtrs	100	.0003386
,A.35. 2	Duct Tray - 60x60x1000 mm	Mtrs	210	.0004542
,A.35. 3	Duct Tray - 180x100x1000 mm	Mtrs	110	.0004212
,A.35. 4	Duct Tray - 250x100x1000 mm	Mtrs	110	.0007039
XVII	FABRICATION AND INSTALLATION OF GI FLATS	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,B.14.1	Earth Flat (50x6)	Mtrs	125	.0001728
,B.14.2	Earth Wire 1.219mm GI	Mtrs	350	.0000558
XVIII	FABRICATION AND INSTALLATION OF STRUCTURAL STEEL	--		
,A.35.1,B.12.1,D.5.4.1,F.1.13,G.10.3,K.5.10,K.6.40,E.7.1	STRUCTURAL STEEL (ISMC/ISMB/ANGLE/FLATS etc)	MT	38	.0147575
XIX	ASSEMBLY AND ERECTION OF MOUNTING FRAMES	--		
,A.35.5	Assembly and Installation of Mounting frames with loose supplied prefabricated materials like slotted angles, channels, etc.	Nos	21	.0024577
XX	ERECTION AND TESTING OF IMPULSE PIPES CS/AS/SS PIPES, TUBES	--		

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.29. 11,A.2 9.4,A. 29.6,A .29.8, B.11.2 .1,B.1 1.2.2, B.11.2 .5,B.1 1.2.6, C.1.8, C.1.9, G.9.10 ,G.9.5, G.9.6, G.9.7, G.9.9	AS tubes upto 1 inch, 13.5X2.6, 21.3X2.77. 21.3x7.47	Mtrs	4,295	.0184249

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,A.29. 1,A.29 .2,A.2 9.3,A. 29.7,B .11.2. 3,B.11 .2.4,B. 11.2.7 ,B.11. 2.8,C. 1.5,C. 1.6,C. 1.7,E. 7.2,E. 7.7,F. 1.12,G .9.1,G. 9.3,G. 9.4,G. 9.8	CS tubes upto 1 inch, 16X2.6mm, 13.5 X 2.6	Mtrs	23,168	.0878879
,A.19. 3,E.7. 3	CS Pipe 2 inch	Mtrs	270	.0018523
,G.9.2	CS pipes above 2 inch	Mtrs	40	.0004538

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.A.19. 6,B.11 .1.7,D. 5.27,D .5.28, F.4.0, F.5.0	SS Tube upto 1 inch, Tube OD 6.35X1.6 with accessories	Mtrs	1,500	.0014359
.A.19. 4,A.19 .5	SS pipes above 1 inch upto 2 inch (SWAS System)	Mtrs	60	.0001308
.E.7.5, E.7.6	SS Tube 12.7x2.1, 6x1.5	Mtrs	2,070	.0089534
.A.29. 5,C.1. 4	Pipe ASTM A312 TP316H/TP304H - 1/2 inch NB SCH 80	Mtrs	390	.0014103
.A.29. 9	Pipe ASTM A213 TP316H - 3/4 inch NB SCH 160	Mtrs	700	.0039708
.A.29. 10	Pipe ASTM A213 TP316H - 3/4 inch NB SCH 80	Mtrs	1,000	.0048217
.A.30. 0,D.5. 26	CPVC Pipes ASTM D1784 CPVC Pipe(Industrial Grade)-1/2	Mtrs	2,500	.0013738

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,B.11.1.4,B.11.1.5,B.11.1.6,D.5.6	Cu tubes upto 1 inch	Mtrs	3,955	.0045571
,C.3.1	PIPE SCREW&SOCKETED IS1239 GAL (1/2 inch)	Mtrs	14,075	.0212077
,E.7.4	Cr. Al. Pipe 21.3 x 3.73 (1/2 inch)	Mtrs	500	.0083493
XXI	ERECTION AND TESTING OF HOSES, TUBES & GI PIPES	--		
,B.11.1.10,B.11.1.8,B.11.1.9	1/4,1/2,1 INCH TEFLON HOSE 1MTR/2MTR/3MTR LONG	Nos	110	.0002301
,B.12.2	1/2 inch GI Pipe	Mtrs	1,115	.0021742
XXII	CHECKING & COMMISSIONING OF THE FOLLOWING ERECTED BY MECHANICAL AGENCY	--		
,B.13.7	Burner Tilt Shear Pin Failure Indication JB with accessories	Nos	4	.0003633

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,C.2.1, E.9.3, E.9.7, E.9.8, F.1.14 ,F.2.1, F.2.2, F.2.3, G.12.1 6,G.14 .0,J.4. 1,K.7. 2	Control Valves with Smart positioner/AFR/Air Lock valves etc	SET	152	.0028669
,B.13. 1,B.13 .5,G.1 2.4	Limit Switches/Level Switches	Nos	46	.0003254
,B.13. 4,D.4. 2	Pneumatic Actuators for Dampers	Nos	51	.0077279
,D.4.7, H.1.1	RTDs/Thermowells of various drives	Nos	601	.0033559

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.B.13. 6,D.4. 3,E.9. 6,G.12 .5	Solenoid Valves for different applications like Corner Station valves, Regulating valves, etc.	Nos	347	.004761
XXIII	REMOVAL, CALIBRATION & RE-FIXING OF INSTRUMENTS ERECTED BY OTHER AGENCIES	--		
.G.12. 3	Field Instruments (Position Transmitters)	Nos	24	.0003982
.H.1.2, E.5.2, D.4.6	Field Instruments (Temperature Gauges/Indicators)	Nos	117	.001653
XXIV	REMOVAL, CALIBRATION AND REFIXING OF INSTRUMENTS, CHECKING SOLENOID VALVES, DRIVES, INCLUDING WIRING ON THE RACK ETC ERECTED BY OTHER AGENCIES	--		
.D.4.1 0,D.4. 5,D.4. 8,D.4. 9,E.9. 1,E.9. 2,G.12 .9	Lub Oil System/Oil Centrifuge Unit/Lub Oil skid/Main Oil Tank	SET	20	.0017205

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,G.12. 2	Oil Centrifuge Unit	SET	2	.0002729
,J.4.3, J.4.4,J .4.5,J. 4.6	Dosing Skid (Oxygen, Ammonia, NaOH,Hydrazine)	SET	5	.0004527
,E.9.4	Hydraulic Coupling of MDBFP	SET	1	.000253
,G.12. 1	Condenser Vacuum Pump	SET	2	.0002871
,B.13. 8	Gravimetric Feeder comprising of Feeder mounted C and I equipment	SET	7	.0008524
,G.12. 8	HPSU Skid for Governing Control	SET	1	.0002438
,E.9.5	Governing Console Board	SET	2	.0004057
,B.10. 4,B.10 .5,G.1 2.10	HP/LP Bypass/HWL-1 and 2/MEFCV control valve skid instrumentation	SET	3	.0005661
,G.12. 11,G.1 2.12	Seal Oil System / Stator water System	SET	2	.0003962

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
,G.12.13	H2 Dryer Unit	SET	2	.000277
,A.38.1	Transducers-Voltage/Current/Frequency output 4-20 mA	Nos	25	.0005588
XXV	REMOVAL, CALIBRATION & RE-FIXING OF INSTRUMENTS FOR ACID CLEANING	--		
,J.5.1	Temp. Gauges	Nos	3	.0000386
,J.5.2	Pressure Gauges	Nos	2	.0000261
,J.5.3	Thermocouple Stem type and MTM	Nos	8	.0000294
,J.5.4	Junction Boxes	Nos	3	.0000617
XXVI	ELECTRONIC EARTH PITS	--		
,L	Treated Earth pit of CI Pipe 3000 mm long with funnel and accessories including all civil works in hardrock by drilling, filling of earth pit with alternate layer of charcoal & salt as per IE specification and making of brick chamber, with both side plastering, supply and fixing of manhole CI cover plate/RCC Slab etc. complete as per IS 3043 (only 100mm CI Pipe shall be supplied by BHEL). If desired resistivity is not achieved then Bentonite mix to be used by the contractor. Supply of Bentonite mix is in the scope of bidder.	Nos	20	.0034081
XXVI I	LOOP CHECKING OF THE INSTRUMENTS OF THE FOLLOWING EQUIPMENTS/ACTUATORS/DAMPERS	--		
,G.3.1	Loop checking of instruments of Generator, Turbine	SET	1	.0008643

Part C : Bill of Quantities

Tender Specification for Erection, Testing & Commissioning of Control and Instrumentation (C&I) works including Handling of materials at site BHEL stores / storage yard, transporting to site of erection and supply & application of final painting, for Unit-1 and identified BOP areas at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS, Tamil Nadu

at 2 X 660 MW Ennore SEZ Supercritical Thermal Power Project at Ash Dyke of NCTPS

Ref.No.	Description	Unit of Measurement	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
.B.13. 2,B.13 .3,C.2. 2,D.4. 1,F.2. 4,F.2. 5,G.12 .14,G. 12.6,G .12.7, G.15.0 ,H.1.3, J.4.2	Electrical Actuators for Valves/ Dampers, including loop checking commissioning	Nos	251	.0036441
TOTAL Weightage				1.0