

BHEL/ PSER-KOLKATA
NOTICE FOR EXTENSION OF SUBMISSION DUE DATE

(TCN-02 DATED 19/04/2006)

TENDER SPEC NO. : PSER:SCT:KGN-I662:06 DATED 04/04/2006

FOR

JOB: HANDLING AT SITE, STORAGE YARD, STORES, TRANSPORTATION TO SITE, ERECTION, TESTING, COMMISSIONING AND HANDING OVER OF Control & Instrumentation works OF 1 X 500 MW, UNIT # 5 , NTPC in Dist—Bhagalpur, Bihar, India.

DUE DATE OF SUBMISSION OF OFFER AGAINST ABOVE MENTIONED TENDER IS EXTENDED UP TO 27. 04. 2006 (15 : 00 Hrs.)

ALL OTHER TERMS AND CONDITIONS OF THE ABOVE TENDER (INCLUDING TCN-01), SHALL REMAIN UNCHANGED.

REVISION -01 OF PRICE BID FORMAT / VOL-III (PREPARED BASED ON ORIGINAL TENDER & TCN-01 DATED 18/04/2006) IS ENCLOSED. REV-01 SUPERCEEDS REV-0 OF VOL-III, ISSUED WITH ORIGINAL TENDER DATED 04/04/2006. BIDDERS ARE REQUESTED TO SUBMIT THEIR PRICE BID IN THIS FORMAT ONLY.

**MANAGER/ SCT
BHEL/ PSER-- KOLKATA**

TENDER DOCUMENT NO - PSER:SCT:KGN-I662:06

VOLUME - III (Rev-01)

BOQ CUM SCHEDULE OF RATES

**RECEIPT FROM STORES, HANDLING/REHANDLING,
TRANSPORTATION TO PLACE OF ERECTION, Erection, Testing
and Commissioning of C&I Package for UNIT# 5 of 1X500 MW
KAHALGAON EXTENSION PROJECT, Dist-- Bhagalpur, Bihar.**

FOR

1 x 500 MW UNIT # 5

AT

**KAHALGAON THERMAL POWER STATION
BIHAR**

**BHARAT HEAVY ELECTRICALS LIMITED
(A Govt Of India Undertaking)
POWER SECTOR – EASTERN REGION
PLOT – DJ 9/1, SECTOR II, SALT LAKE
KOLKATA – 700 091**

C&I ERECTION WORK FOR , 1 X 500 MW, UNIT V,KAHALGAON, BIHAR

TENDER DOCUMENT NO: PSER:SCT:KGN-I662:06

BOQ CUM SCHEDULE OF RATES

VOLUME – III (Rev-01)

PREAMBLE

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| 1 | This preamble forms part of tender document and schedule of items. The tenderer should read this preamble carefully in rates for various items. Clauses under this preamble shall be read in conjunction with Volume-IB, IE , Volume – II and other tender sections as applicable. |
| 2 | The work shall be carried out strictly as per specifications, description of the items in these schedule and / or engineer's instructions. |
| 3 | Items of work provided in this schedule but not covered in this specification shall be executed strictly as per instruction of the engineer. |
| 4 | Unless specifically mentioned otherwise in the tender document, the tenderer shall quote for the finished items and shall provide for the complete cost towards power, fuel, tools, tackles, equipment, constructional plants, temporary works, labour, dismantling of all temporary piping, structures, valves, pumps, tanks & other misc. equipment, strengthening of roads/culverts/bridges etc. including arranging all clearances etc. required for carrying out different activities & tests, materials, levies, taxes(except service tax), transport, layout, repairs, rectification, maintenance till handing over, supervisions, colonies, shops, establishments, overheads, profits and all incidental items not specifically mentioned but reasonably implied and necessary to complete the work according to the complete tender document and this schedule. |
| 5 | The quantities of the various items mentioned in this schedule of items are approximate, based on very preliminary information and may vary to any extent or be deleted altogether. The quoted rates of each item will remain firm throughout the period of execution including extension, for reasons whatsoever, as long as variation in the total value of work executed under any part of this contract including extra items, if any but excluding any price variation remains, within thirty percent ($\pm 30\%$) of the awarded price as per LOI . |
| 6 | The rates quoted shall be inclusive of cleaning of site of any vegetation, dressing , clearing of old structures and leveling etc. including fixing of grid pillars, benchmarks etc. required for commencement of site activities. No separate payment will be made towards the same. |
| 7 | Rates shall be quoted in figures and in words in clear legible writing. No overwriting is allowed. All scoring and cancellations should be countersigned and in case of illegibility the interpretation of engineer shall be final. All entries shall be in English language. |
| 8 | All works item wise shall be measured upon completion and paid for at the rates quoted and accepted as per BHEL approved payment schedule/billing break-up. |
| 9 | The tender shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications and details of work to be done within the time schedule attached and to have acquainted himself of the conditions prevailing at site. |

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| 10 | No splitting of the job is envisaged. Decision of BHEL in this regard shall be final and binding to the bidders. |
| 11 | Engineer's decision shall be final and binding on the contractor regarding clarification of items in the schedule with respect to the other sections/volumes of the contract. |
| 12 | Size and weights of various items are mentioned in the attached BOQ cum rate/price schedule for reference purpose only & these shall not be taken into consideration for quoting/calculating amount in the rate schedule. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate column, taking unit as mentioned in the quantity column. Rates shall be filled in both figures and words. Amount shall be calculated based upon these rates multiplied by the mentioned quantity for the respective items. |

Note : Bidders to note the following for quoting their rates.
1) Only authorised persons of bidder having power should sign in the price bid. All the pages must be signed.
2) For bid evaluation purpose (deciding L1), grand total price of all the items of rate schedule (Group A + B + C + D) shall be considered.
3) Quoted rates shall be inclusive of all taxes, duties etc., except service tax as per tender terms. Service tax(as applicable) shall be payable/reimbursable extra as per tender terms.

(BOQ CUM RATE / PRICE SCHEDULE FOR KAHALGAON, UNIT V (1 X 500 MW, C&I ERECTION WORK))								
TENDER NO. (PSER:SCT:KGN-I662:06 DATED 04/04/2006)							VOL-III	Rev-01
	TENDER NO. PSER:SCT:KGN-I662:06			VOL-III	Rev 01	Unit rate (Rs)		Amount (Rs.) = Unit rate (x) Quantity
						Figures	Words	
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit			
SECTION A :- CONTROL PANELS, COMPOSITE SYSTEMS AND FIELD DEVICES								
A-EDN1	Digital AVR Panels(Reg, Thy, FS)	950x750x2295	750	2	No.			
A-EDN2	Digital AVR Panels (Reg, Thy, FS)	1150x750x2295	780	2	No.			
A-EDN3	TG Control Panels(Analog) CJJ-01,02,03,05,06, 07,08,11,12,20,30	750X1500X2400	400 & 800	11	No.			
A-EDN4	TG Control Panels(Binary)CCA-01,02,03,,04,05, 06,07,08,10,11,12	750X1500X2400	800 & 1200	11	No.			
A-EDN5	TSI INDIGENOUS PORTION Erection & assistance in Commisssioning to be provided by the subcontractor (Technical support for commg. Will be provided by BHEL-refer SCC) (Consisting of the following):			1	Set			
	Junction Box for driver			1	No.			
	Cable conduit (Protective Hose) for Sensors			500	No.			
	Fullywired control cabinet with Isolators			4	No.			
	WORK STATION			2	No.			
	SERVERS			2	No.			

	TENDER NO. PSER:SCT:KGN-I662:06			VOL-III	Rev 01	Unit rate (Rs)		Amount (Rs.) = Unit rate (x) Quantity
SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
	COLOUR MONITOR 21"			2	No.			
	Inkjet Printer-			2	No.			
	COLOUR MONITOR 15"			2	No.			
	Ethernet Hub and cables			1	Set			
	Power Distribution Board			1	No.			
	0.5 sq mm 4Pair cable			2	Km			
	0.5 sq mm arm 4Triad cable			3	Km			
A-EDN6	Turbine supervisory system (Imported),Sinkawa-Japan make (TSI/Vibration Analyzer/Field Sensors,panel cards, etc. are received in received in knocked down condition,which are to be assembled in position. Erection & assistance in Commisssioning to be provided by the subcontractor) (Technical support for commg. Will be provided by BHEL-refer SCC)			1	Set			
A-EDN7	HMI for TG (Ref. BOM for TG MMIPIS/Doc. No. 404/BM/070 Rev.03)			1	Set			

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SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-EDN8	HMI for SG (Ref. BOM for SG MMIPIS/Doc. No. 404/BM/065 Rev.03)			1	Set			
A-EDN9	UPS			1	No.			
A-EDN10	Control valves			2	No.			
A-EDN11	24 VDC BATTERY CHARGER	2850 x 940 x 1800	2500	1	Set			
A-EDN12	24 VDC BATTERY CHARGER FOR FOPH	1250 x 600 x 1600	2500	2	No.			
A-EDN24	MFT/PURGE panels CJF51,52,66,67 (4 panels)			1	No.			
A-EDN25	Oil Panels CJF53,54,55,56,70,71 (2 panels)			3	No.			
A-EDN26	FSSS coal 2 panels	750x750x1500	800	5	Set			
A-EDN27	SADC/PRDS 2 panels	750x750x1500	800	1	Set			
A-EDN28	Soot Blower Control 2 Panels	750x750x1500	800	1	Set			
A-EDN29	Fuel Oil Pump House 2 Panels	750x750x1500	800	1	Set			
A-EDN30	MISC. SG. Panels 2 panels	750x750x1500		1	Set			
A-EDN31	UPS			2	Set			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-EDN32	OXYGEN analysers (INDEGENOUS)		50	1	No.			
A-EDN33	OXYGEN analysers (IMPORTED)		50	1	No.			
A-EDN34	Electronic transmitter			1	Set			
A-EDN35	24 VDC BATTERIES, SET OF 20 CELLS	2140 x 1453 x 865		2	Set			
A-EDN36	24 VDC BATTERIES, SET OF 40 CELLS FOR FOPH	820 x 710 x 1730		1	Set			
A-EDN37	Local Inst Encl./Local Inst. Rack	1450x2350x800	400	7	No.			
A-EDN38	Loose items for LIE/LIR		2500	1	Set			
A-EDN39	24 VDC BATTERY CHARGER - DCDB	INCLUDED IN CHARGER		1	Set			
A-EDN40	24 VDC BATTERY CHARGER - DCDB FOR FOPH	INCLUDED IN CHARGER		2	No.			
A-RPT1	Supervisory Local Control Panel for Dosing System	800X400X1600	500	1	No.			
A-HYD2	Govering console board	1200mmx1650mm		2	No.			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-HYD1	Vib Axial displacement diff. Exp & casing system consisting of 18 Nos. probes, 16 Nos. of photometers, junction boxes, interconnecting cables, mounting accessories, panel mounted monitor (Approx. 100 Kgs.) The scope of work covers integration of system and commissioning.		100	1	Set			
A-TPJ2	PD Type Flow meter (including erection of 2 Nos Pulse Amplifiers, shielded signal cables, condensing pots etc.)			2	No.			
A-TPJ3	Flame Scanner Head Assembly (Including erection of fiber optic cable of length 120", Lens Barrel Assembly, Minature 6 way Junction Box etc.)			44	Set			
A-TPJ4	FSSS local oil gun maintenance switch box			20	No.			
A-TPJ5	Speed Regulator /Air Lock Valves.			20	Set			
A-TPJ6	H.E.A. Excitor box along with retractor assembly, flexible spark rod, spark tip, flexible cable assembly, S.S. house (1 mtr long, 6.35 mm ID) , air filter regulator etc.			20	No.			
A-TPJ7	Furnace Temperature Probe Remote Panel Indicator.			4	No.			
A-TPJ8	Rotor Stoppage Alarm Box-including sensors, interconnecting.			2	Sets			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-TPJ9	Acoustic pyrometer system, APS consisting of Microprocessor based.(The scope of work covers installation of equipment, integration of system and commissioning etc.)			1	Set			
	1No.Acoustic pyrometer Panel of size 800x355x75 MM to be Mounted in control room. Along with windows based PC and accessories like key board, Mouse, Monitor, printer, furniture							
	16 Nos of ultrasonic type transmitter-receiver to be mounted on furnace openings, 16 Nos. preamplifiers to be mounted in furnace platform, special prefab cables for trans-receivers to preamplifiers etc.							
	Loose supplied mounting accessories.							
A-TPJ10	GRAVIMETRIC FEEDER PANEL.- Freestanding Remote power cabinet for feeders.	1400X540X2365	750	10	No.			
A-TPJ11	Commissioning of Load Cell Amplifier Feeder Integral Cabinet. (The cabinet is an integral part of feeder).			10	No.			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-TPJ12	Ultrasonic Coal Flow Monitor, UCFM. Consisting of sensor probe, control unit, flexible conduit, mounting flanges, fasteners etc. The scope of work includes installation of sensor probe and control unit, mounting flanges, fasters etc. and integration of system and commissioning.			10	Set			
A-TPJ13	Furnace Temp Probe			2	No.			
A-TPJ14	Electronic Water Level indicator EWLI comprising of the Following.			1	Set			
	2 Nos. 16 port pressure vessel 2 nos. 8 port pressure vessel With loose Supplied electrodes.							
	2 Nos. of local panel (Approx. dimension 950x300x950 mm)							
	- 2 nos. of Remote logic panel approx. dimension.600x450x2315 mm).							
	- 2 Nos. of remote Display unit (98x58x260 mm).							
	- 4 Sets of interconnection cable between Local panel and electrodes.							
	The job includes fixing of pressure Vessels, electrodes, remote Display, unit, laying of cable between local & Remote units, integration of the total System etc.							

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-TPJ15	ERV Controller.			9	No.			
A-TPJ16	SB MCC	18250X900X2450	1100	1	No.			
A-HWR1	Generator Auxiliary Control Cabinets.	1000X800X2200	450	1	No.			
A-HWR3	Instrumentation Cabinet For Seal Oil & H2 System. (GCCO2).	1000X800X2200	450	1	No.			
A-HWR4	Instrumentation Cabinet For Seal Oil & H2 System. (GCCO3).	1000X800X2200	450	1	No.			
A-HWR5	Gas Analyser Cabinet (GCCO5). Including sensor, analyzer etc.		450	1	No.			
A-HWR6	PC based stator End vibration Monitor Cabinet. (GCCO7).Including fixing 24 Nos. vibration probes, Pre-amplifier units, charge amplifier enclosures, interconnection the probes and amplifiers with special cables and lugs, and integrating PC based vibration monitor, etc. The scope of work includes installation, integration of system and commissioning.	545x730x1865	150	1	Set			
A-HWR7	Moisture detector			2	No.			
A-HWR8	Electronic Level switching System for Condenser Comprising 2 electronic Unit, 6 Nos.Probes each With 10 Mtrs .of 4 Core PTFE Cable etc.			1	Set			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A-HWR9	Oil Purification panel Removal, Calibration and erection of oil Purification skid mounted instruments.	1000x450x1600		1	Set			
A-RPT8	OPACITY MONITOR (OPM)	-	150	4	No.			
A-PEM1	MCC FOR HYDROGEN GENERATION PLANT	5000 X 1000 X 2500	4.5	1	No.			
A-PEM2	LIGHTING PANELS LP-A(12),AC,12 O/G CKTS			2	No.			
A-PEM3	STARTER PANEL FOR CENTRAL OIL PURIFICATION SYSTEM			1	No.			
A-PEM4	STARTER PANEL FOR CONDENSER ON LINE TUBE CLEANING SYSTEM			1	No.			
	GRAND TOTAL PRICE OF ALL THE ITEMS (GROUP A); TO BE QUOTED BOTH IN FIGURES AS WELL AS WORDS.							

(BOQ CUM RATE / PRICE SCHEDULE FOR KAHALGAON, UNIT V (1 X 500 MW, C&I ERECTION WORK))								
TENDER NO. (PSER:SCT:KGN-I662:06 DATED 04/04/2006)							VOL-III	Rev-01
TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	Amount (Rs.) = Unit rate (x) Quantity
SECTION B :- FIELD INSTRUMENTS, CONTROLLERS								
B-RPT4	ASH LEVEL INDICATOR (HIGH & LOW)	900x100x100	15	320	No.			
HWR	Vacuum Switches.			2	No.			
G.1.4.3	Bimetallic Dial Thermometer			49	No.			
	Loose supplied Instruments for h2 cooler piping							
G.1.4.6	Diff Pr. Switch/ Pr. Switch			125	No.			
G.1.4.7	Pt RTD, Duplex			17	No.			
G.1.5.1	H2 Gas pressure Indicators			1	No.			
G.1.5.2	H2 Gas Purity Indicator			1	No.			
G.1.5.3	Dew Point Indicators			2	No.			
G.1.5.4	Pw Flow Indicators			2	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
G.2.4.1	Dial Thermometers			28	No.			
G.2.5.7	Co-Exial Dial Thermometer			17	No.			
G.2.5.8	Resistance Thermometer			12	No.			
G.2.5.9	Thermocouples			102	No.			
G.2.5.10	Pressure Transmitters			51	No.			
G.2.5.11	Diff. Pressure Transmitter			4	No.			
G.2.5.15	Level Transmitters With Amplifier, bar Probe			6	Set			
G.2.5.16	Level Switches With amplifier, bar Probe including Interconnecting Cable			7	Set			
G.2.6.1	Level Indicator/Level gauges (reflex type)			8	No.			
G.2.6.2	Level Transmitter with Strainer Electrode, Amplifier etc. (Water Detector)			2	Set			
TPJ	Level Switches / Transmitters			46	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A.1.3	Pressure/DP Gauge			644	No.			
A.1.6	Pressure /DP Switches.			178	No.			
A.1.7	Temperature Gauge/Indicators.			136	No.			
A.1.8	Temperature Switches			32	No.			
A.2.2	Chromel Alumel Thermocouple.			38	No.			
A.2.7.1	ELECTRIC ACTUATORS of Regulating type (with integral starters including lever etc.) -For FD Fans		150	2	No.			
A.2.7.2	ELECTRIC ACTUATORS of Regulating type (with integral starters including lever etc.) -For ID Fans		700	2	No.			
A.2.7.3	ELECTRIC ACTUATORS of Regulating type (with integral starters including lever etc.) -For PA Fans		300	2	No.			
A.2.8.1	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Burner Tilt Power Cylinders (Approx. Weight 1000 kg each).			4	No.			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A.2.8.2	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Power Cylinders for SADC (Approx. weight 10 kg each).			88	No.			
A.2.8.3	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- AH Outlet Regulating Dampers (weight 1200 kg each)			6	No.			
A.2.8.4	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Seal Air filter POWER CYLINDERS (Apx. Weight 20 Kg. Each).			2	No.			
A.2.8.5	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Hot Air Regulating Dampers (Weight 300 kg each).			10	No.			
A.2.8.6	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Cold Air Regulating Dampers (Weight 70 kg each).			10	No.			
A.2.8.7	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Gas path (primary Air Heater outlet)		70	2	No.			
A.2.8.8	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Gas path (Secondary Air Heater outlet) ON/OFF TYPE		70	4	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A.2.8.9	Seal Air to mill discharge valve (Coal pipe)		10	10	No.			
A.2.8.10	Scanner air Damper		25	1	No.			
A.2.8.11	Scanner air fan disc damper		10	1	No.			
A.2.8.12	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Seal Air to mill		20	10	No.			
A.2.8.13	PNEUMATIC POWER CYLINDERS(REGULATING TYPE)- Seal Air to feeder		20	10	No.			
A.2.8.14	PNEUMATIC POWER CYLINDERS (REGULATING TYPE)-Burner inlet Gate		10	40	No.			
A.2.8.15	PNEUMATIC POWER CYLINDERS (REGULATING TYPE)-Seal Air inlet /Outlet damper		20	4	No.			
A.2.9	Air Filter Regulator		1	107	No.			
A.2.20	Heavy Duty Limit Switch (for Burner Tilt shear Pin Failure indication purpose).			20	No.			
A.3.3	Pressure Controllers.			2	No.			

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Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
A.3.7	Purge Metters cum DP regulators.			20	No.			
A.3.9	Feeder gate limit switches.			20	No.			
A.4.5.2	Flow Indicator switches.			5	No.			
A.4.6.2	MTM Thermocouple			440	No.			
A.1.13	Air sets			22	No.			
HYD	Flow indicator			20	No.			
A1.1.2	Capacitance type level switch			30	No.			
A1.1.3	Duplex RTD 120 long VAR 13			10	No.			
A1.1.4	Duplex RTD 455 long VAR 11			10	No.			
A1.1.5	Duplex RTD 140 long VAR 12			10	No.			
A1.1.6	Duplex RTD 240 long VAR 12			10	No.			
B1.1.6	MIS Thermometers			12	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
B1.1.7	Gas filled Thermometers			6	No.			
B1.1.8	RTD			82	No.			
B1.2	Thermowells			112	No.			
B1.2.2	Level transmitters (capacitance type, top mounted)			4	No.			
B1.2.3	Speed measuring loop			6	No.			
B1.2.4	Vib, Axial displacement			32	No.			
B1.2.5	Proximitors			16	No.			
B1.2.9	Position Transmitters			8	No.			
B1.3	I/P Transducers			6	No.			
C.1	Pr. Gauge (SHELL)			14	No.			
C.2	Steam Inlet Temp.			12	No.			
C.3	Drain Outlet Temp.			14	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
C.4	Feedwater Inlet Temp.			8	No.			
C.5	Feedwater Outlet Temp.			8	No.			
C.6	Cond. Inlet Temp.			6	No.			
C.7	Cond. outlet Temp.			6	No.			
	Temperature Gauges with 5 m long capacity + Thermo well.			64	No.			
	Transmitter Racks.	1200 X 600 X 2150	300	4	No.			
	PH Analyzer in Enclosure Racks;		350	2	No.			
E.2.1.8	Speed measuring loop, with probe, proximate unit, local field cable etc.			6	Set			
E.2.1.10.	Bearing thermo elements.			20	No.			
PC	Pressure gauges with 2/3 way gauge cock			110	No.			
C.1.2	Temperature Gauges with thermo- well.			150	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
C.1.14.1	Condensing Loop			18	No.			
2	Rotameter			7	No.			
5	Flow element assy			17	No.			
B3.1	Temperature Elements		2.5	100	No.			
B3.1	E/P convertors		1	30	No.			
	GRAND TOTAL PRICE OF ALL THE ITEMS (GROUP B); TO BE QUOTED BOTH IN FIGURES AS WELL AS WORDS.							

(BOQ CUM RATE / PRICE SCHEDULE FOR KAHALGAON, UNIT V (1 X 500 MW, C&I ERECTION WORK))						
TENDER NO. (PSER:SCT:KGN-I662:06 DATED 04/04/2006)				VOL-III		Rev01
TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
SECTION C :- DEVICES ERECTED BY OTHER AGENCIES						
C-4	Removal, Calibration and Re-fixing of following Generator Instruments; (Withdrawl, Calibration and fixing)	1	Set			
	Level Switches -16 no					
	Thermostats-21 no					
	Pressure Switches-13 no					
	Pressure/DP Gauges-48 no					
	Presuure/DP Transmitters-31 no					
	Temperature Gauges-27 no.					
	Flow Gauge -2 no.					

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
	Flow Meter with Contacts-10 no.					
	Conductivity cells-3 no.					
	Level Transmitter-1 no.					
	Bimetallic Thermometer-1 no.					
	Moisture sensor Probe-2 no.					
	Vacuum Switch-2 no.					
	Rotor Earth Fault Relay-1 no.					
	Level Probes-3 no.					
C-5	RTDs/Pt100 RTD/ Thermocouple mounted on equipment	270	No.			
C-6	Moisture measuring equipment	1	No.			
C-7	Portable type gas analyzer	1	No.			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-8	Vapour exhaust fan	2	No.			
C-9	Referzeration gas drier	2	No.			
C-10	On line partial discharge equipment	1	Set			
C-11	Exciter dryer/ heater	1	Set			
C-12	Stroboscope	1	Set			
C-13	Exciter Lighting	1	Set			
C-14	Generator air Dryer	1	Set			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-15	Condenser Vacuum Pump. Removal, calibration and commissioning of CVP skid mounted instruments including CVP PLC and motor mounted on the skid. The approximate quantity of skid mounted instruments shall be.	2	Set			
	Pressure Indicators –2					
	Flow Switches-2					
	Level Switches-2					
	Diff Pr. Switches-2.Pressure Indicators switches – 2					
	Temp. Indicators. –4 Flow Indicators Switch-1. Temperature Controller-2 Temperature Switch-1.					
C-16	NRV valves, Stop valves, HP/LP Bypass Valves	40	No.			
C-17	Governing Racks consisting of EHTC, ATT devices, Solenoid Valves and other rack mounted instruments (LRI).	1	Set			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-18	LP Bypass Racks consisting of solenoid Valves and other skid mounted instruments (LR2). The scope of work includes removal, calibration and re-fixing of rack mounted instruments, checking solenoid valves, drives, wiring checking of on the rack.	1	Set			
	Diff. pressure switch-13 NO					
	Potentiometer for position indication-29 NO					
	Speed sensor-4 NO.					
	Temp. switch-2 NO.					
C-19	PNEUMATIC-Loop Checking	8	No.			
C-20	ELECTRICAL-Loop Checking	240	No.			
C-21	Temperature Indicators.	14	No.			
C-22	DP Indicators.	1	No.			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-23	Temp. switches.	5	No.			
C-24	Level Switches.	1	No.			
C-25	Temperature Elements (Checking the healthiness only).	10	No.			
C-26	Control valves -For LPH2 &3. Each set comprising of 1 electronic unit, 2 sets of electrodes with cables.	12	Set			
C-27	Control valves -Each set comprising of 5 electronic units, 9 sets of electrodes with cables.	5	Set			
C-28	Safety relief valves	2	No.			
C-29	Control valves (pneumatic actuated)	75	No.			
C-30	Control valves (self actuated/electrically)	15	No.			
C-31	Motor operated valves	200	No.			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-32	HP dosing/Phosphate dosing & skid mounted instruments including motors (The scope of work is Removal, Calibration and re-fixing).	2	Set			
	Pressure Gauges-2 NOS					
	Diff Pr. Indicator-2 NOS					
	Diff Pr. Indicator-2 NOS					
	Level indicator-10 NOS					
	Pressure Switches.-2 NOS					
	Level Switches.-4 NOS					
C-33	ON/OFF Switch including light assembly and interconnecting cable (checking and commissioning only).	2	Nos.			
C-34	Pt- 100 RTDs for Motor/ Winding temp measurement (The Scope of Work is removal, calibration and Re-fixing).	84	Nos.			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-35	Temperature Gauges-For Bearing temp. Measurement(The Scope of Work is removal, calibration and Re-fixing.)	30	Nos.			
C-36	LUB OIL SKIDS FOR FD- A&B, ID- A&B, PA- A&B FANS.	10	Sets			
	The Scope of work includes removal of instruments, calibration, refixing, checking cable connection from JB to instruments, motor connection, meggering and improving IR value of motor etc.					
	The total number of instruments, mounted on the skid per unit shall be as below.					
	Motor					
	Pressure Gauge.					
	Thermostats					
	Temperature Gauge.					
	Level switche					

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
C-37	Flow Switch	8	Nos.			
C-38	Pneumatic valves/Trip valves/ Regulating valves (The work includes fixing of loose supplied items like air set, I/p converters, position feedback transmitters, solenoid valves, limit switches, checking of copper tubes, checking, setting of limit switches, positioners, position feedback transmitters, air lock valves, adjustment stroke length, replacing damaged copper tubes etc.)	95	No.			
C-39	Solenoid valves (3 Way, 24 V DC)	11	No.			
C-40	Pneumatic Actuators of ON/OFF Type -Hot Air Shut Off Gate.	10	No.			
C-41	Pneumatic Actuators of ON/OFF Type-Cold Air Shut Off Gate.	10	No.			
C-42	Feeder gate power cylinders.	10	No.			
C-43	Pressure / DP Switches.	28	No.			

TENDER NO. PSER:SCT:KGN-I662:06		VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	Quantity	Unit	Figures	Words	
	GRAND TOTAL PRICE OF ALL THE ITEMS (GROUP C); TO BE QUOTED BOTH IN FIGURES AS WELL AS WORDS.					

(BOQ CUM RATE / PRICE SCHEDULE FOR KAHALGAON, UNIT V (1 X 500 MW, C&I ERECTION WORK))								
TENDER NO. (PSER:SCT:KGN-1662:06 DATED 04/04/2006)						VOL-III	Rev-01	
TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	Amount (Rs.) = Unit rate (x) Quantity
SECTION D :- HARDWARE								
	IMPULSE PIPES/Cu Tubes/GI Pipes							
D-IP1	IMPULSE. PIPES-12.7x2.1 SS Pipe			300	Mtrs			
D-IP2	IMPULSE. PIPES-6x1.5 SS Pipe			60	Mtrs			
D-IP3	IMPULSE. PIPES CS-0.5/0.75" Dia			120	Mtrs.			
D-IP4	IMPULSE. PIPES-21.3x3.73 CS Pipe			800	Mtrs			
D-IP5	IMPULSE. PIPES-60.3x3.91 CS Pipe			100	Mtrs			
D-IP6	IMPULSE. PIPES-21.3x3.73 Cr-A1 PIPE			660	Mtrs			
D-IP7	IMPULSE. PIPES-21.3x2.3 CS Pipe			250	Mtrs			
D-IP8	IMPULSE. PIPES-21.3x2.3 AS Pipe			300	Mtrs			
D-IP9	IMPULSE. PIPES-13.5x2.6 CS Pipe			150	Mtrs			
D-IP10	IMPULSE. PIPES-13.5x2.6 SS Pipe			50	Mtrs			
D-IP11	IMPULSE. PIPES-½" SCH 160 (CS) (21.3X4.78 mm).			395	Mtrs			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-IP12	IMPULSE. PIPES-½" SCH 160 (AS) (21.3X4.78 mm).			200	Mtrs			
D-IP13	IMPULSE. PIPES-¾" SCH 80 (AS)-P22			250	Mtrs			
D-IP14	IMPULSE. PIPES-1" SCH 80 (CS) SA106B (33.40X4.55 mm).			800	Mtrs			
D-IP15	IMPULSE. PIPES-¼" SCH 80 (CS).			750	Mtrs			
D-IP16	IMPULSE. PIPES-½" SCH 80 (CS) (21.3X3.073) SA 106 Gr.B.			2755	Mtrs			
D-IP17	IMPULSE. PIPES-½" (CS) (21.3X7.47mm).			50	Mtrs			
D-IP18	IMPULSE. PIPES-½" SCH 40 (CS).			60	Mtrs			
D-IP19	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless Carbon Steel Tube, D=13.5X2.6			206	Mtrs.			
D-IP20	Impulse Pipes & Fabrication Material for Mounting frames.:Equal Angle, 50X50X5			350	Kgs.			
D-IP21	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless Carbon Steel Tube, D=21.3X2.3			510	Mtrs.			
D-IP22	Impulse Pipes & Fabrication Material for Mounting frames.:Carbon Steel Tube, D=33.7X3.2			53	Mtrs.			
D-IP23	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless SS tube = 21.3X2.6			330	Mtrs.			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-IP24	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless SS. Tube D=21.3X2.6			31	Mtrs.			
D-IP25	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless SS. Tube D=21.3X2.77.			484	Mtrs.			
D-IP26	Impulse Pipes & Fabrication Material for Mounting frames.:Seamless SS. Tube D=13.5X2.6.			14	Mtrs.			
D-IP27	GI Pipe NB, 153.25			825	Mtrs			
D-IP28	20 mm flexible conduit.			500	Mtrs			
D-IP29	20 mm GL rigid conduit.			500	Mtrs			
D-IP30	CS/GI(HEAVY DUTY) Pipe Gr. B (Nb 15)			1800	Mtrs.			
D-IP31	Pipe Gr. B/GI(HEAVY DUTY) (Nb. 25)			700	Mtrs.			
D-IP32	¼"/8mm OD PVC Coated Cu Tubes			5275	Mtr.			
	CABLES(POWER/CONTROL)							
D-C12	FRLS PVC Cables 5CX25 sq. mm, (solenoid valves power supply).			5000	Mtrs.			
D-C13	Cables (PVC, FRILS, Armoured, Instrumentation cables)-Flame Scanner Cable			5500	Mtrs.			

TENDER NO. PSER:SCT:KGN-I662:06			VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity	
SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures		Words
D-C14	FRILS PVC-individually /collectively shielded cable.			5500	Mtrs.			
D-C15	FRILS PVC-individually /collectively shielded cable.-2PX0.5 sq. mm. cable.			4000	Mtrs.			
D-C16	FRILS PVC-individually /collectively shielded cable.-4PX0.5 sq. mm. Cable.			89000	Mtrs.			
D-C17	FRILS PVC-individually /collectively shielded cable.-8PX0.5 sq. mm cable.			60000	Mtrs.			
D-C18	2Px0.5 sq. mm. (MSC-indidually & collectively shielded)			5000	Mtrs.			
D-C19	FRILS PVC-individually /collectively shielded cable.-4Px0.5 sq. mm. (MSC-individually & collectively shielded)			12000	Mtrs.			
D-C20	FRILS PVC-individually /collectively shielded cable.-2Px1.5 K-type compensating cable			800	Mtrs.			
D-C21	FRILS PVC-individually /collectively shielded cable.-8Px1.5 K-type compensating cable			800	Mtrs.			
D-C22	FRILS PVC-individually /collectively shielded cable.-10PX0.6 sq. mm. shielded cable.			200	Mtrs.			
D-C23	FRILS PVC-individually /collectively shielded cable.-16 PX0.5 sq. mm. shielded cable.			1500	Mtrs.			
D-C24	FRLS Extension cable for APH T/C, No. of paris-8.			5000	Mtr			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-C25	FRLS Extension cable for furnace temperature probe and Boiler Water circulating Pump system T/C, No of pair -2.			3000	Mtr			
D-C26	FRILS PVC-individually /collectively shielded cable.-2PX1.5 sq. mm. shielded cable.			13000	Mtr			
D-C27	CONTROL CABLES-5C or 4Cx1.5 sq mm			48000	Mtr			
D-C28	CONTROL CABLES-7Cx1.5 sq mm			8000	Mtr			
D-C29	CONTROL CABLES-10Cx1.5 sq mm			30000	Mtr			
D-C30	CONTROL CABLES-19Cx1.5 sq mm			5000	Mtr			
D-C31	POWER CABLES-2CX2.5 sq. mm			2500	Mtr			
D-C32	POWER CABLES-3CX2.5 sq. mm.			45000	Mtr			
D-C33	POWER CABLES-3Cx16 sq mm			2500	Mtr			
D-C34	POWER CABLES-3Cx25 sq mm			1500	Mtr			
D-C35	POWER CABLES-2Cx35 sq mm			400	Mtr			
D-C36	6 mm. ¼" Cables.			33000	Mtrs			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-C37	2PX0.5 sq. mm, Individual Overall shield cable.			300	Mtrs			
D-C38	4 P X0.5 mm, Individually Overall shield cable.			1650	Mtrs			
D-C39	2 Triad, 0.5 sq. mm Cable			500	Mtrs			
D-C40	4 Pair, 0.5 sq mm Cable			500	Mtrs			
D-C41	PVC, FRLS, 4PX0.5 sq. mm. shielded control cable.			600	Mtrs.			
D-C42	Power cables for charger			100	Mtrs.			
D-C43	Thermocouples cables			100	Mtrs.			
D-C44	Instrumentation cables			100	Mtrs.			
D-C45	PTFE/FEP Special cables 2X2X0.5 SQ.mm			600	Mtrs.			
D-C46	PTFE/FEP Special cables 4X2X0.5 SQ.mm			2000	Mtrs.			
D-C47	PTFE/FEP Special cables 5X1.5 SQ.mm			500	Mtrs.			
D-C48	PTFE/FEP Thermocouple EXT. Cable 2X2X0.5 SQ.MM			5500	Mtrs.			
D-C49	PTFE/FEP Thermocouple EXT. Cable 2X2X0.5 SQ.MM			1500	Mtrs.			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-C50	Group Cable 2x2x0.5 sq.mm			9300	Mtrs.			
D-C51	Group Cable 4x2x0.5 sq. mm			51200	Mtrs.			
D-C52	Group Cable 8x2x0.5 sq. mm			15000	Mtrs.			
D-C53	Group Cable 12x2x0.5 sq. mm			12600	Mtrs.			
D-C54	POWER CABLES FOR 24V DC CHARGER			1000	Mtrs.			
D-C55	Cable duct			1000	Mtrs.			
D-C56	FIBER OPTIC CABLE (ON TRAY/ UNDERGROUND)			5000	Mtrs.			
D-C58	POWER CABLE 70SQ MM/90SQ MM AL. (FOR MAX DNA PANELS)			500	Mtrs.			
D-C59	ASSY. & ERECTION OF CANOPY FOR SINGLE INSTRUMENT			25	PER INSTRUM ENT			
D-C60	ASSY. & ERECTION OF CANOPY FOR RACK			25	PER RACK			
D-C61	COVERED CABLE DUCT WITH FITTINGS	100MMX50MM		2000	Mtrs.			
D-C62	COVERED CABLE DUCT WITH FITTINGS	50MMX50MM		1000	Mtrs.			
D-C63	FLEXIBLE METALLIC CONDUIT-1Sq MM			150	Mtrs.			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-C64	PERFORATED COVERED CABLE TRAY (FOR FIBER OPTIC CABLE)	150MMX50MM		500	Mtrs.			
	CABLE TRAYS/RACKS/LIR							
D-TR1	CABLE TRAYS (LADDER TYPE/ PERFORATED) with Clamps,supports, cover etc.	600 mm (W) x 120 mm (H)		1050	No.			
D-TR2	CABLE TRAYS (LADDER TYPE)with Clamps,supports,cover etc.	450 mm (W) x 120 mm (H)	4480	230	No.			
D-TR3	CABLE TRAYS (LADDER TYPE)with Clamps,supports,cover etc.	300 mm (W) x 120 mm (H)		100	No.			
D-TR4	CABLE TRAYS (PERFORATED TYPE)with Clamps,supports,cover etc.	150mm (W) x120 mm (H)	3990	210	No.			
D-TR5	Perforated Cable Tray, 300 mm. wide.			100	No.			
D-TR6	Perforated Cable Tray, 100 mm. wide.			425	Mtrs			
D-TR7	Perforated cable tray, 50 mm wide.			150	Mtrs			
D-TR8	Preferable cable tray, 150, mm wide.			75	Mtrs			
D-TR9	Pressure Instruments Racks Fabrication of pressure Instrument Racks with Loose supplied prefabricated equal /unequal angles, Prefabricated canopy mounting plate, LHS/RHS stands etc. Necessary welding, fixing with fasteners and grouting.	2150x700x2150	Total wt. Of Loose supplied items approx- 25 MT	12	No.			

TENDER NO. PSER:SCT:KGN-I662:06			VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity	
SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures		Words
D-TR10	Structural steel -fabrication/supports consisting of angles, channels (IS A 35X35X3, ISA 40X40X5, ISMC 100X50X6, ISA 50X50X6, ISMC 100X50). Supply excluded.			2	MT			
D-TR11	LIR	W1000 x H2150		3	No.			
D-TR12	LIR	W1200 x H2150		4	No.			
D-TR13	LIR	W1400xH2150		4	No.			
D-TR14	LIR	W1600xH2150		3	No.			
D-TR15	LIR-6 Instrument Rack	W1800 x H 2150	50	4	No.			
D-TR16	LIR-4 Instrument Racks	W1800 x H 2150	50	11	No.			
D-TR17	Rack 1500mmx1700mm to be fabricated at site with the following material.			12	Sets			
D-TR18	Channel-20 No.	100mmx50mm						
D-TR19	Angle-60Nos.	50mmx50mmx6mm						
D-TR20	Sheet 4mm thick -120 Nos.	400x120mm						
D-TR21	Plate 10mm thick-20 Nos.	375x770mm						

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-TR22	ISMC 100 channel, 40X40X5 angle.			500	Kg			
D-TR23	Fabrication Material (ISMC 100X50X7.5, Angle 45X5x5).			0.5	MT			
D-TR24	Structural steel (including Channel ISMC 75X40 mm, Angle 25X25X3 mm, Plate 25X5 mm, Plate 5X1000X 1000 mm etc.)-Fabrication & Erection			4	MT			
D-TR25	CONDUITS(RIGID STEEL HOT DEEP GALVANISED)-20GI			350	METERS			
D-TR26	EPOXY PAINTED CONDUITS-20MM			50	METERS			
	JUNCTION BOXES							
D-J5	JUNCTION BOX:SUV 13 type			13	No.			
D-J6	JUNCTION BOX:SUV 12 type			34	No.			
D-J7	JUNCTION BOX:Normal junction Box.			59	No.			
D-J8	JUNCTION BOX:Proxi meter Junction box.			6	No.			
D-J9	JUNCTION BOX:Small thermo couple JB			5	No.			
D-J10	Junction Box (6 Way).			46	No.			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-J11	Junction Box (8 way).			22	No.			
D-J12	Junction Box. (12 way).			27	No.			
D-J13	Junction Box (24 way).			125	No.			
D-J14	Junction Box (36 way).			9	No.			
D-J15	Junction Boxes (18 way).			57	No.			
D-J16	Junction Box (60 way).			3	No.			
D-J17	Junction Box (64 way).			90	No.			
D-J18	Junction Box (80 way).			5	No.			
D-J19	Junction Box (100 way).			2	No.			
D-J20	Junction box-K-12 type JB			32	No.			
D-J21	Junction box-T-12 type JB			2	No.			
D-J22	24 Channel RJCB (Reference Junction Compensation Box) – 12Nos. Duplex.			40	No.			
D-J23	18 Channel RJCB, Duplex.			9	No.			

TENDER NO. PSER:SCT:KGN-I662:06			VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity	
					Figures	Words		
SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity				Unit
D-J24	12 Channel RJCB Duplex.			6	No.			
D-J25	Power Distribution Boxes (Wall Mounted) (16 way for RJBs).			25	No.			
D-J26	Power Distribution Boxes (Wall Mounted) (6 way for RJCBs).			3	No.			
D-J29	Mounting Frame (Ref. BHEL-Hardwar Drg. No. 41800001020)			1	Lot			
D-J30	Computer furniture PADO Package			1	Set			
D-J31	LOCAL PUSH BUTTON STATIONS	300 X 200 X 1500	0.075	5	No.			
D-J32	OUTDOOR TYPE WITH 4 WAY STUD TYPE TERMINALS [2 Nos 10sqmm Al CABLE], FLAME-PROOF [JB-FP]			20	NO			
	MISCELLANEOUS							
D-M1	¼" Size Teflon Hose of 2M.			88	No.			
D-M2	1" Size Teflon Hose of 3M.			4	No.			
D-M3	½" Size Teflon Hose of 1M.			40	No.			
D-M4	Burner Tilt shear pin failure indication Box	300X340X150	12	4	No.			
D-M5	SS 304 Condensing pot.			10	No.			

TENDER NO. PSER:SCT:KGN-1662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
Sl.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
D-M6	Electrical Sockets & Plugs			12	Set			
	FIXURES & RECEPTACLES							
E-F1	2X 40W, FLUORESCENT, INDUSTRIAL BOX TYPE BASE, AND VITREOUS ENAMELLED SIDE REFLECTORS [FC06]			10	No.			
E-F2	2X 40W, FLUORESCENT, CORROSION PROOF, TOTALLY ENCLOSED TPYE WITH SHEET ALUMINIUM HOUSING [FC82]			10	No.			
E-F3	1 X125W, MERCURY, WELL GLASS, FLAME PROOF, WITH VITREOUS ENAMELLED REFLECTOR AND CAST IRON HOUSING [MW94]			32	No.			
E-F4	2X 40W, FLUORESCENT, STREET LIGHT WITH SHEET ALUMINIUM CANOPY AND RIBBED ACRYLIC COVER [FC62]			4	No.			
E-F5	1 PH, 2 POLE, 3 PIN, PORCELAIN, METAL CLAD, WITH 20A ROTARY SWITCH AND SHROUDED PLUG [RA-20A]			6	No.			
E-F6	1 PH, 2 POLE, 3 PIN, WITH 15A PIANO KEY SWITCH [RB-5/15A]			8	No.			
E-F7	3 PH, 4 POLE, 415V, METAL CLAD, WITH 63A ROTARY SWITCH AND SHROUDED PLUG [RC(63A)]			2	No.			
E-F8	SWITH BOX WITH ONE NO. 5A SWITCH AND JUNCTION BOX WITH 4 WAY STUD TYPE TERMINALS [2 Nos 10sqmm Al CABLE] [SWB1]			7	No.			

TENDER NO. PSER:SCT:KGN-I662:06				VOL-III	Rev 01	Unit rate (Rs.)		Amount (Rs.) = Unit rate (x) Quantity
SI.No.	Description	DIMENSION in mm LxDxH	Unit WT IN Kg (APPROX.)	Quantity	Unit	Figures	Words	
E-F9	EMERGENCY LIGHTING UNIT OF HYDROGEN PLANT			3	No.			
E-F10	EARTHING WIRES -14SWG GI WIRES			300	METERS			
E-F11	EARTHING WIRES -2.5 SQ MM Cu			125	METERS			
E-F12	EARTHING WIRES -4.0 SQ MM Cu			700	METERS			
E-F13	GS FLAT FOR ABOVE GROUND EARTHING & PROTECTION (HYDROGEN PLANT)	50MMx6MM		100	No.			
E-F14	GS FLAT FOR ABOVE GROUND EARTHING & PROTECTION (HYDROGEN PLANT)	35MMx6MM		100	No.			
E-F15	GS FLAT FOR ABOVE GROUND EARTHING & PROTECTION (HYDROGEN PLANT)	25MMx3MM		100	No.			
E-F16	GS WIRE FOR ABOVE GROUND EARTHING & PROTECTION (HYDROGEN PLANT) -8SWG	8SWG		100	No.			
	GRAND TOTAL PRICE OF ALL THE ITEMS (GROUP D); TO BE QUOTED BOTH IN FIGURES AS WELL AS WORDS.							
	GRAND TOTAL PRICE OF ALL THE ITEMS (GROUP A+B+ C+D); TO BE QUOTED BOTH IN FIGURES AS WELL AS WORDS.							