



भारत हेवी इलेक्ट्रिकल्स लिमिटेड

(भारत सरकार का उपक्रम)

BHARAT HEAVY ELECTRICALS LIMITED

(A Govt. of India Undertaking)

TCN - 01

Ref: PSER:SCT:IIS-T1077:TCN-01

Date: 06-02-2010

Sub	Tender change notice (TCN- 01).		
Job	Erection, Testing & Commissioning of steam turbine & auxiliaries, generator & auxiliaries, BPTG, Turbo-Blowers, Electrical and C & I items at 3X 18 MW, power & blowing station, IISCO Burnpur, West Bengal.		
Ref	1.0	Tender no PSER:SCT:IIS-T1077:10.	
	2.0	BHEL's NIT, vide reference no Ref: PSER:SCT:IIS-T1077:10	Dated 27-01-2010
	3.0	Other references (if any).	

With reference to above, following points, relevant to tender, may please be noted and complied with while submitting the offer.

- 1.0 Addition of clause no. 1.9 B 1.9 to 1.9 B 1.11 with the existing clauses as per 1.9 (B) (ELECTRICAL AND CONTROL & INSTRUMENTATION) in the page no. 24 of VOLUME-ID & II as per annexure-A.
- 2.0 Modification to clause no. 18 (C&I ITEMS FOR BOILER) & 19 (ELECTRICAL AND C&I ITEMS FOR 3X18 STG) of appendix-I in the page no. 105 of VOLUME-ID & II as per annexure-B.
- 3.0 Modification to sub to sub-clause no 2.1 (INSTRUMENTATION PACKAGE), 2.4 (UPS & VMS PACKAGE) & 2.5 (DCS PACKAGE) of sub clause 2.0 (ITEM TO BE ERECTED & COMMISSIONED BY VENDOR) in the clause no. 17 (BALANCE OF PLANT EQUIPMENT – C& I AREA) of appendix-I in the page no. 103 to 105 of VOLUME-ID & II as per annexure-C
- 4.0 **BOQ cum price schedule format VOL-III PRICE SCHEDULE, REV-0 has been revised as VOL-III-PRICE SCHEDULE, REV-1 which is enclosed herewith. As such you are requested to consider the revised BOQ/price schedule only and quote your price accordingly.** Offer from bidders in superseded price schedule (Vol-III, REV-0) shall not be considered. Bidders are also requested to submit a declaration in techno-commercial offer that they have submitted their price bid in sealed envelope as per **REVISED price schedule format (VOL-III- PRICE SCHEDULE, REV-1)**
- 5.0 Revised 'No deviation certificate' is attached. Bidder to submit 'No deviation certificate' as per attached format only.

पावर सेक्टर पूर्वी क्षेत्र (मुख्यालय)

POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960

फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

6.0 All other terms & conditions shall remain unchanged.

Thanking you,

Yours faithfully,
for BHARAT HEAVY ELECTRICALS LTD

DGM (SCT)

Encl:

- 1.0 ANNEXURE-A
- 2.0 ANNEXURE-B
- 3.0 ANNEXURE-C
- 4.0 Revised BOQ cum price schedule format (VOL-III- PRICE SCHEDULE, REV-1)
- 5.0 Revised format of 'No deviation certificate'.

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POWER SECTOR EASTERN REGION, DJ-9/1, SALT LAKE CITY, KOLKATA - 700 091

फैक्स/Fax : (033) 23211960 फोन/Phone : बोर्ड/EPABX : 23211798/ 1691

ANNEXURE-A TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

1.9(B) ELECTRICALS AND CONTROLS & INSTRUMENTATION

1.9.B1.9 In case of Panel, Desk, Switch board, Gauge board ,cabinet ,MCC additional payment /recovery shall be applicable in case of variation in length (L) only and no other dimensions.

1.9.B1.10 Contractor's quoted rate for above items shall be inclusive of a variation limit of (+/-) 10% of length (L), as specified in Volume-III, Appendix-I. However, if actual length is found beyond (+/-) 10% variation in length as indicated in the schedule, additional payment/recovery in rate will be derived in the following manner.

In case, actual length exceeds variation limit, the contractor will be entitled for additional payment for the portion beyond 1.1 times of indicated length and BHEL will be entitled to recover for the portion below 0.9 times of indicated length

- Length as indicated in the schedule = A
- Rate quoted = Rs. B
- Rate per unit length (L) to be considered for the purpose of additional payment/ recovery for variation in length = $B/A = C$
- Actual length = D
- Compensation entitled by the contractor in case of increase in length beyond 1.1A = $(D-1.1A) \times C$.
- Reduction entitled by BHEL in case of decrease in length below 0.9A = $(0.9A-D) \times C$.
- For variation in weight, width, height of above items, no variation of unit rate shall be applicable.

1.9.B1.11 Unit rate quoted by bidders, items other than panel ,desk, switch board, gauge board, cabinet, MCC shall remain unaltered regardless of weight, dimension

ANNEXURE-B TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

18.0 C&I ITEMS FOR BOILER(3 UNITS)

Description	Dimension	Quantity
Boiler LTMCC(sf-do type)	19000x2500x1500	3
VMS remote cabinet for FD fans and ID fans A&B	1000x2345x800	3
Furnace Temp. Probe starter Box	600x600x300	6
DC scanner air fan motor starter box	900x1120x375	3
Bhelvision 20m (EWLI) asceter cabinet	600x600x350	3
Flue gas analyser(sox,nox,hc&co2)	1000x2100x800	3
Swas-wet panel	2000x2100x600	3
Swas-dry panel	1000x2100x800	3
BFG goggle valve-hydraulic power pack cabinet	1200x1600x850	3
BFG goggle valve-Control panel	500x800x300	3
ERV local controller box	400x350x270	3
BHELvision 20m (EWLI) display unit	99x194x68	3
ERV control station	-	3
Co analyser(ps unit)	-	3
O2 analyser(after APH)	-	6
Silica panel	860x560x420	3
EWLI BHELVISION pressure vessel	-	3
electrodes with Gaskets for Ewli(BHELVISION)	-	30
PTFF cable(4 core) between electrode & local BHEL asceter unit	-	300
MTM thermocouple	-	144
Junction Boxes	-	72
Fsss local gun maintenance switch	-	24
flame scanner head assly	-	36
vibration pick up for ID and FD fan	-	24
pneumatic regulating power cylinder for dampers-FD/ID fans	-	12
pneumatic regulating power cylinder for dampers-SADC	-	72
Smart positioners for pneumatic regulating power cylinders/control valves	-	33
Ip convertor for regulating pneumatic power cylinder/control valve	-	18
pneumatic regulating power cylinder for secondary air damper	-	72
pneumatic on/off power cylinder for scanner emergency damper	-	3
Pressure transmitters	-	180
Pressure gauges	-	168
Temperature element	-	390
Temperature gauges	-	93
Analysis transmitter	-	45
Level transmitter	-	18
flow transmitter	-	30
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ANNEXURE-B TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILLIARIES, GENERATOR & AUXILLIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

19.0 ELECTRICAL AND C&I ITEMS FOR 3X18 STG(EACH UNIT)

SL. NO	DESCRIPTION OF EQUIPMENT	OVERALL DIMENSIONS IN mm			WEIGHT IN M.TONS	QUANTITY IN NOS
1.	PHASE SEGREGATED BUS DUCT	40 meters.	1250	400	5	40 meters.
2.	PTSP CUBICLE	1950	2100	2500	2	1
3.	NGT CUBICLE	1400	1300	2300	1.2	1
4.	GENERATOR CONTROL DESK	1722	1566	1677	1.8	1
5.	RELAY PANEL	1600	800	2300	1.2	2

CONTROL CABLES: (EACH UNIT)

Size	Length in meters	Weight in tons
3Cx4 sq.mm	1000	1
5Cx2.5 sq.mm	1000	1
10Cx2.5 sq.mm	1500	1.5
2Cx0.75 sq.mm	500	1
3Cx6 sq.mm	500	1

ANNEXURE-C TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILLIARIES, GENERATOR &
AUXILLIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER &
BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

2.1 Instrumentation Package (To be Erected & Commissioned by Vendor)

S No.	Description	Qty
1	Control valves (Approx weight 80 kgs) (instrumentation job only)	100 nos
2	Desuperheaters (Approx weight 100 kgs) (instrumentation job only)	8 nos
3	Turbine Bypass system(Approx weight 130 kgs) (instrumentation job only)	4 nos
4	Pressure Safety valves (Approx weight 75 kgs) (instrumentation job only)	15nos
5	Thermal Safety valves (Approx weight 75 kgs) (instrumentation job only)	10 nos
6	Flow orifice plates (Approx weight 80 kgs) (instrumentation job only)	30 nos
7	Flow nozzles (Approx weight 80 kgs) (instrumentation job only)	25 nos
8	Mass flow meters	6 nos
9	Pressure gauges	270 nos
10	Pressure transmitters	100 nos
11	Pressure switches	25 nos
12	Diff. pressure gauges	35 nos
13	Diff. pressure transmitters	150 nos
14	Diff. pressure switches	25 nos
15	Temperature gauges	250 nos
16	RTDs	60 nos
17	Thermo couples	70 nos
18	Level gauges	35 nos
19	Level transmitters (Displacer Type)	40 nos
20	Level switches	120 nos
21	Annubars	10 nos
22	Erection material for above items (i) globe valve (ii)comp & con. fittings (iii) condensing chambers (iv) Syphon (v) 5 way manifolds (vi) Air filter regulators (vii) Thermowells	2000 LOT 350 350 500 100 400
23	Impulse pipes &tubes for impulse connection for instrument hookup (i) SS tube 12.7 x 2.1 mm (ii) SS tube 6.35 x 0.9 mm (iii) ERW / SAW Steel tube 60.8 x 3.65 (NB 50) (iv) SS pipe 33.4 x 3.4 mm (v) SS pipe 21.3 x 3.7 mm (vi) SS pipe 6 x 1 mm	3000m 1600m 4500m 2000m 4000m 4500m

ANNEXURE-C TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

24	STRL Steel (Std Quality) (i) Strl ST equal angle 50 x 50 x 6 (ii) Strl St channel 100 x 50 (iii) Strel St PL 6	1500 Kgs 1000 Kgs 600 Kgs
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2.4 UPS & VMS Package

Erection of UPS & VMS is in VENDOR scope. Vendor will provide. commissioning supervision

S No.	Description	Qty
1	UPS Package	
	UPS charger, inverter etc suit of panels	3sets
	battery with racks (two battery bank each bank contains cells)	377 Cells
	UPS ACDB Panel	6 nos
2	Vibration Monitoring panel	10 no

2.5 DCS / maxDNA Package

Items to be Erected and Commissioned by vendor under (DCS/maxDNA Package)

Sl No	Description	Dimension/weight	Qty	Remarks
1	MaxDNA cabinets for SG, TG and Stn DCS			
	Panels	750mmx750mmx2315mm (each) wt-650kg/cabinet	124 nos	For SG-36, TG-35, STATION C&I-53
2	Engineer work station (EWS) : PC, Intel Core 2 Duo Dual core processor: (RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, DVD Writer, Floppy Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.)		2 sets	Both EWS are for Entire System (PBS)

ANNEXURE-C TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

3	Operator workstation(OWS): PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System..	wt-50 kg each	16 sets	3 OWS for Boiler 3 OWS for STG 3 OWS for TB 3 for LVS 1 for I/c P&BS Stn 1 for BPTG monitor 1 Electrical system 1 BOP
4	Control desk(standard height & depth)	wt-54,000kgs	18 mtr	
5	MaxStorian : PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, DVD Writer, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.		2 set	
6	Link station: PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.		1 set	
7	SOE Station: PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.		1 set	
8	21" TFT Monitor –		19 nos	2 EWS + 13 OWS + 2 Storians + 1 maxLink + 1 for SOE
9	NETWORK Panels (With required quantity of Ethernet switches, Media converter Network accessories, Power distribution accessories, MCBs, TBs, CAT – 5 UTP Cables etc.)		3 nos	
10	Ethernet switches	Wt-Approx 50kg	1 lot(approx	

ANNEXURE-C TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER & BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

			12 switches)	
11	<p>Laptop PC: Intel Centrino Duo Mobile / Core 2 Duo minimum 2.4GHz, 800MHz FSB, 4MB L2, 2 GB, DDR2 SD Ram, DVD+/- RW Drive, Minimum of 120GB, 7200 RPM, Wireless LAN 802.11a/b/g, Bluetooth 2.0+ , 1 No. 10/ 100 Base-T Ethernet LAN port with one RJ45 connector, Minimum of three (3) USB ports, 15.4" (min), XGA TFT, Long lasting 6/8 cell Lithium ion battery with Charger/AC Adapter (Charger /Adapter 100 to 240V, 50~60Hz</p> <p>Make HP-Compaq / DELL / IBM-Lenovo</p>		2 sets	
12	Maxnet Ethernet UTP cables	300 kg	1.5 Km	
13	Printers			
i	Dot matrix printer	Wt-300kgs	3 nos	2 for OWS 1 for SOE
ii	Colour inkjet printer(A4)(network ready)		6 nos	4 for OWS 1 for EWS 1 for PBS I/C OWS
iii	Laser jet printer(A4)		2 nos	1 for EWS 1 for OWS
14	Large video screen 67" diagonal rear projection system(overview Cdr+67,8deg)	wt-900 kgs	3 display units	
15	Dot matrix printer Table		3 nos	
16	Master clock system	wt-approx 200 kgs	1 lot	
17	Hart management system for 1450 transmitters			
	One system	Approx 1200 kgs	1 no	
	panels	1200mmX800mmX240 WDH	2 nos	
	PC with printer	100 kgs	1 no	
18	Brushless AVR	@ 1250x1250x2315m m/ approx 650 kgs	4 panels	
19	C&I cables for STG	approx 2000 kgs	1 lot	

ANNEXURE-C TO TCN-01

JOB :- ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILLIARIES, GENERATOR &
AUXILLIARIES, BPTG, TURBO-BLOWERS, ELECTRICAL AND C & I ITEMS AT 3X 18 MW, POWER &
BLOWING STATION, IISCO BURNPUR, WEST BENGAL

REF. TENDER NO. :- PSER:SCT:IIS-T1077:09

	internal controls			
i	Thermocouple cable 0.5	-	4X1600	
ii	Sq mm		meters	
iii	FEP extruded/PTFE taped 0.5 Sq mm	-	4x3500	
iv	4 Pair 1.5 Sq mm Armoured PVC CU cable	-	4x1200	
v	Armoured FRLS 0.5 Sq mm 4 Pair PVC CU cable	-	4x7500	
vi	Cable Tray 1.5 Sq mm strands	-	4x300 Nos	
20	Pressure transmitters	-	180 nos	
21	Pressure gauges	-	168 nos	
22	Temperature element	-	390 nos	
23	Temperature gauges	-	93 nos	
24	Analysis transmitter	-	45 nos	
25	Level transmitter	-	18 nos	
26	flow tranmitter	-	30 nos	
27	LABORTORY INSTRUMENTS(Receipt from store,transportation to laboratory, placement,functional check,demonstation and handing over)			
i	mechanical,electrical and electronic instruments of state of the art		3 nos	
ii	table		10 nos	
iii	chair		15 nos	

VOL-III (REV-01)	
PRICE SCHEDULE	
MATERIAL RECEIPT FROM STORE, UNLOADING/RELOADING, AND ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICALS AND CONTROL & INSTRUMENTATION WORK FOR 3 Nos 18 MW STG+1 No 8.275 MW BPTG + 3 Nos Turbo-blowers (each 2,28,600 Nm³/hr) POWER AND BLOWING STATION	
AT	
IISCO STEEL PLANT, BURNPUR, BURDWAN,	
WEST BENGAL, INDIA	
TENDER NO. PSER:SCT:IIS-T1077:10	
<u>PREAMBLE</u>	
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, ID, 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
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
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 tenderer shall be deemed to have visited site and made himself aware of all the site conditions, studied the specifications, details of instruments/panels/equipments to be dismantled/reuse etc. and details of work to be done within the time schedule as per tender conditions and to have acquainted himself of the conditions prevailing at site.
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. These shall be utilised as per relevant sections of tender. Bidders shall quote for each item in the rate 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.
	A) Only authorised persons of bidder having power should sign in the price bid. All the pages must be signed.
	B) For bid evaluation purpose (deciding L1), grand total price of all the items of rate schedule shall be considered.
	C) 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.

**VOL-III (REV-01)
PRICE SCHEDULE**

**MATERIAL RECEIPT FROM STORE, UNLOADING/RELOADING, AND ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICALS AND CONTROL & INSTRUMENTATION WORK FOR 3 Nos 18 MW STG+1 No 8.275 MW BPTG + 3 Nos Turbo-blowers (each 2,28,600 Nm³/hr) POWER AND BLOWING STATION
AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA**

TENDER NO. PSER:SCT:IIS-T1077:10

SUMMARY PRICE

SL. NO.	DESCRIPTION OF ITEMS	DIMENSION (in mm) (Length)x(Width)x(H eight)/DETAIL	QUANTITY	UNIT PRICE	PRICE
01	package-1: Lumpsum price for providing manpower, supervision, T&P, IMTEs/ MMDs & all consumables etc. for Material receipt from store, unloading/reloading, handling, taking delivery of materials from stores, yard etc, transportation of these to pre-assembly yard/ place of erection, temporary storage, preservation as required prior to erection after receipt, watch & ward, erection, testing, commissioning, trial operation, PG test, handing over etc. of Steam Turbine, Generator, Auxiliaries, BPTG, turbo-blowers, Pumps, Heaters, De-aerator, piping system, thermal insulation, final painting etc, as enumerated in detail in the tender specification for 3 nos 18 mw STG+1 NO 8.275MW BPTG+3 NOS TURBO-BLOWERS (each 2,28,600 nm ³ /hr) at IISCO BURNPUR as per technical specification & terms & conditions as detailed in this tender document.				
02	package-2: Price for Erection, Testing, Commissioning of all electrical and Control & instrumentation work of BOILER, STG, BPTG, TURBOBLOWER, BOP, Generator Transformer and their auxiliaries etc for 3 nos 18 mw STG+1 NO 8.275MW BPTG+3 NOS TURBO-BLOWERS (each 2,28,600 nm ³ /hr) at IISCO BURNPUR.				
03	Total Price(package-1+package-2)				

VOLUME - III A, Rev-01 PRICE SCHEDULE						
MATERIAL RECEIPT FROM STORE, UNLOADING/RELOADING, AND ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICALS AND CONTROL & INSTRUMENTATION WORK FOR 3 Nos 18 MW STG+1 No 8.275 MW BPTG + 3 Nos Turbo-blowers (each 2,28,600 Nm ³ /hr) POWER AND BLOWING STATION AT IISCO STEEL PLANT, BURNPUR, BURDWAN, WEST BENGAL, INDIA						
TENDER NO. PSER:SCT:IIS-T1077:10						
BREAK UP ELECTRICAL AND C&I ITEMS						
SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a)	BALANCE OF PLANT EQUIPMENT- ELECTRICAL					
2(a1)	ITEMS TO BE ERECTED, TESTED & COMMISSIONED BY VENDOR					
2(a1).1	BOP (ELECTRICAL) PACKAGE					
2(a1).1.1	33kV GIS Sw.Board. (Total of 30 Panels)(unit weight-2000kg weight per panel)	Dimension of each Panel.	1	set		
2(a1).1.2	i) 1 no 6.6kV Power & Blowing Sw. Bd (Total of 59 Panels)(unit weight-2000 kg weight per panel)	(Dim. of each Panel : 820x2355x2700)	1	set		
	ii) 1 no. 6.6kV Steel plant Emergency Board (Total of 16 Panels)(unit weight-2000 kg weight per panel)	13120x2355x2700(Dim. of each Panel : 820x2355x2700)	1	set		
2(a1).1.3	11/34.5 kV, 25MVA, ONAN Generator Trafo. For STG-1,2 &3.(unit weight-48565 Kg. Oil Qty: 12880 lts)	6600x4800x5300mm Dimension of each Trafo.	3	Nos		
2(a1).1.4	11/34.5 kV, 12MVA, ONAN Generator Trafo. For BPTG.(unit weight-31345 Kg.Oil Qty: 8250 lts.)	6050x4200x4800mm Dimension of each Trafo.	1	No		
2(a1).1.5	11/34.5 kV, 20MVA, ONAN Generator Trafo. For TRT Gen.(unit weight-42465 Kg.Oil Qty:10745 lts.)	6500x4900x5000mm Dimension of each Trafo	1	No		
2(a1).1.6	33/6.9kV, 31.5MVA, Dyn11 ONAN PTR-1 & 2(unit weight-60335 Kg.Oil Qty: 15430 lts)	7300x4900x5500mm	2	Nos		
2(a1).1.7	11/6.9kV, 5MVA, Dyn11 ONAN, PTR-3 (unit weight-12000 Kg.Oil Qty: 2100 lts)	4700x3300x3750mm	1	No		
2(a1).1.8	33/6.9kV, 12.5MVA, Dyn11 ONAN, PTR-4 (26710 Kg.Oil Qty: 6750 lts.)	5500x4800x4900mm	1	No		

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AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA**

TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a1).1.9	6.6/0.433kV,2.0MVA,ONAN SAT-1 to 8 (unit weight-6,000 Kg.Oil Qty:1400Ltr)	2260x3350x2900mm	8	Nos		
2(a1).1.10	Lighting Trafo 250 kVA ,415V/433V (unit weight-1800 Kg.)	1500x900x1900mm	2	Nos		
2(a1).1.11	Emergency Lighting Trafo 100 kVA,415V/433V(unit weight-1200 Kg)	1500x800x1600mm	1	No		
2(a1).1.12	LT Switchgear					
i	415V PCC-1	1500x10370x2430	1	No		
ii	415V PCC-2	1500x11970x2430	1	No		
iii	415V PCC-3	1500x9570x2430	1	No		
iv	415V PCC-4	1500x10370x2430	1	No		
v	415V EPCC	1200x9180x2430	1	No		
vi	415V STG MCC-1	1200x11580x2430	1	No		
vii	415V STG MCC-2	1200x11580x2430	1	No		
viii	415V STG MCC-3	1200x11580x2430	1	No		
ix	415V BPTG MCC	1200x10780x2430	1	No		
x	415V TB MCC-1	1200x12380x2430	1	No		
xi	415V TB MCC-2	1200x12380x2430	1	No		
xii	415V TB MCC-3	1200x12380x2430	1	No		
xiii	415V BOP MCC	1200x32380x2430	1	No		
xiv	415V ACDB	600x7260x2430	1	No		
xv	415V MLDB	600x8060x2430	1	No		
xvi	415V AC ELDB	600x4860x2430	1	No		
xvii	240V UPSDB-1	600x9660x2430	1	No		
xviii	240V UPSDB-2	600x9660x2430	1	No		
xix	220V DCDB-1	600x9660x2430	1	No		
xx	220V DCDB-2	600x10460x2430	1	No		
xi	AC & VENT SYS MCC	1200x26780x2430	1	No		
2(a1).1.13	HT Cable Kits.					
i	33kV AI Cables	1Cx630sq.mm	60	Nos		

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TENDER NO. PSER:SCT:IIS-T1077:10						
BREAK UP ELECTRICAL AND C&I ITEMS						
SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
ii	11kV, AI Cables	1Cx630 sqmm,	12	Nos		
iii	6.6kV AI Cables	1Cx630Sq.mm	110	Nos		
iv	6.6kV AI Cables	3Cx185Sq.mm,	70	Nos		
2(a1).1.14	PB Stations					
i	Start/stop PB with ammeter and L/R Selector	180x285x125	40	Nos		
ii	WP start/stop PB STN with lockable Stay put lock/Remote switch and stay put stop PB and Ammeter	180x295x125	40	Nos		
iii	WP start/stop PB STN with lockable stay put Lock/Remote switch and stay put stop PB	180x295x125	100	Nos		
iv	Weather proof break glass type, Mushroom type emergency stop push bottom station	145x245x116	20	Nos		
2(a1).1.15	220V Station Battery Chargers.(Total 2 Panels)	3200x830x2350	2	Nos		
2(a1).1.16	220V Station Battery Chargers.(Total 1 Panels)	4800x830x2350	1	Nos		
2(a1).1.17	220V Station Battery. (800AH, 110Cells)	4370x830x2500	2	Nos		
2(a1).1.18	220V Station Battery.(1600AH, 110Cells)	7000X830X2500	1	Nos		
2(a1).1.19	SCAP Panels	15600x1250x2200	1	nos		
2(a1).1.20	6.6 kV load break isolators for SAT-1 to 8	2400x1650x2300	8	Nos		
2(a1).1.21	NGR for generator Trafo 400A, 47.63 Ohms on 33kV side	1900x3200x3000	5	Nos		
2(a1).1.22	NGR for PTR -1,2,3&4 Trafos 600A, 6.35 Ohms	1800x1500x2000	4	Nos		
2(a1).1.23	Rubber Mat 2mm thick for LT swgr	1M x 2M	340	Nos		
2(a1).1.24	Rubber Mat 2.5mm thick for 6.6kV swgr	1M x 2M	70	Nos		
2(a1).1.25	Rubber Mat 3mm thick for 33kV swgr	1M x 2M	30	Nos		
2(a1).1.26	Fire Proof Sealing System	3000 Sq.Mtrs	3000	SQM		
2(a1).1.27	RTCC panel	800x915x2350	8	Nos		

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BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a1).1.28	Data concentrator	800x800x220	3	Nos		

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SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a1).1.29	LT Bus ducts 415V, 4000A, TPN Al Bus bar, 50kA/sec, Al enclosure non segregated from LT side of each Stn Aux Trafo to PMCC	400x800x10000 (each bus duct)	8	sets		
2(a1).2	HT POWER CABLE PACKAGE					
i	33kV (UE) Armoured, Al Conductor XLPE insulated FRLS outer-sheathed cable.	1C x 630 Sq.mm.	3000	Metre		
ii	11kV (UE) Armoured, Al Conductor XLPE insulated FRLS outer-sheathed cable	1C x 630 Sq.mm.	600	Metre		
iii	6.6kV (UE) Armoured; Al Conductor XLPE insulated FRLS outer-sheathed cable	1C x 630 Sq.mm.	6500	Metre		
iv	6.6kV (UE) Armoured; Al Conductor XLPE insulated FRLS outer-sheathed cable.	3C x 185 Sq.mm.	6000	Metre		
2(a1).3	LT POWER CABLE PACKAGE					
i	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 240 Sq. mm	10000	Metre		
ii	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 185 Sq. mm	7000	Metre		
iii	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 120 Sq. mm	5000	Metre		
iv	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 95 Sq.mm	5000	Metre		
v	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 70 Sq.mm	5000	Metre		
vi	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5 C x 50Sq.mm	5000	Metre		
vii	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3.5C x 35Sq.mm	9000	Metre		
viii	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	1C x 240 Sq.mm	3000	Metre		
ix	1.1KV armoured Cu. Conductor XLPE Insulated, FRLS outer sheathed.	3C x 4Sq.mm	10000	Metre		
x	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	3C x 16 Sq.mm	15000	Metre		
xi	1.1KV Armoured Al. Conductor XLPE Insulated, FRLS outer sheathed.	4C x 16 Sq.mm	20000	Metre		
xii	1.1KV PVC/FRLS Un-Armoured Cu. Conductor XLPE Insulated, FRLS outer sheathed.	1C x 6 Sq.mm	1000	Metre		
xiii	1.1KV Un-Armoured Cu. Conductor XLPE Insulated, FRLS outer sheathed.	1C x 120 Sq.mm	2000	Metre		
xiv	1.1KV Un-armoured Cu. Conductor XLPE Insulated, FRLS outer sheathed.	1C x 35 Sq.mm	1000	Metre		
xv	1.1KV armoured Cu. Conductor XLPE Insulated, FRLS outer sheathed.	4C x 4 Sq.mm	20000	Metre		
2(a1).4	CONTROL & SIGNAL CABLES PACKAGE					
i	1.1kV PVC Insulated FRLS Outer Sheathed.	3C x 2.5 Sq. mm	15,000	Metre		
ii	1.1kV PVC Insulated FRLS Outer Sheathed.	5C x 2.5 Sq.mm	4,000	Metre		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
iii	1.1kV PVC Insulated FRLS Outer Sheathed.	7C x 2.5 Sq. mm	3,000	Metre		
iv	1.1kV PVC Insulated FRLS Outer Sheathed	10C x 2.5 Sq. mm	25,000	Metre		
v	1.1kV PVC Insulated FRLS Outer Sheathed	16C x 2.5 Sq. mm	8,000	Metre		
vi	1.1kV PVC Insulated FRLS Outer Sheathed.	19C x 2.5 Sq. mm	8,000	Metre		
vii	1.1kV PVC Insulated FRLS Outer Sheathed.	24C x 2.5 Sq. mm	2000	Metre		
2(a1).5	DOUBLE COMPRESSION BRASS CABLE GLANDS AND HEAVY DUTY COPPER CABLE LUGS	-	2280	Set(set of one cable of required size and required lugs)		
2(a1).6	<u>PRE FABRICATED CABLE TRAYS AND ACCESSORIES</u>					
i	Ladder type str run cable tray, W=750mm.	-	1200	Nos		
ii	Ladder type str run cable tray, W=600mm.	-	3000	Nos		
iii	Ladder type start run cable tray with 300mm accessories and coupler plates	-	600	Nos		
iv	Cover along with accessories for 300mm width ladder type cable	-	120	Nos		
v	Cover along with accessories for 600mm width ladder type cable	-	600	Nos		
vi	Vertical down of 600mm bending radius with coupler plates for Ladder Type Cable tray, w=300mm	-	30	Nos		
vii	Vertical up of 600mm bending radius with coupler plates for Ladder Type Cable tray, w=300mm	-	30	Nos		
viii	Horizontal TEE of 1250mm bending radius with coupler plates for Ladder Type Cable tray, w=750mm	-	45	Nos		
ix	Horizontal elbow bend of 1250mm bending radius with access and coupler plates for Ladder Type Cable tray, w=750mm	-	45	Nos		
x	Vertical up of 1250mm bending radius with coupler plates for Ladder Type Cable tray, w=750mm	-	45	Nos		

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SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
xi	Vertical down of 1250mm bending radius with coupler plates for Ladder Type Cable tray, w=750mm	-	45	Nos		

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SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
xii	HOR.CROSS of 600mm bending radius for perforated tray with accessories and coupler plates ,w=300mm	-	12	Nos		
xiii	HOR.ELBOW for 300mm perforated tray	-	35	Nos		
xiv	HOR.ELBOW for 900mm bending radius for 600 ladder tray with accessories and coupler plates	-	120	Nos		
xv	coupler plates	-	30	Nos		
xvi	HOR.CROSS of 1250mm bending rad & coupler plates for 750mm width LDR type	-	25	Nos		
xvii	HOR.CROSS of 600mm bending rad & coupler plate for 300mm width LDR type	-	6	Nos		
xviii	(channel) cable tray2	-	120	Nos		
xix	type(channel) cable tray2	-	120	Nos		
xx	HORCROSS OF 900mm bending rad & coupler plates for 600mm width LDR type (channel) cable tray2	-	12	Nos		
xxi	300mm(W) Perforated type cable tray	-	600	Nos		
xxii	HOR TEE of 600mm bending rad & coupler plates for 300mm width Perforated type	-	40	Nos		
xxiii	type.	-	120	Nos		
xxiv	Cover along with accessories for Perforated type Cable Tray, W=300mm	-	600	Nos		
xxv	HOR.T of 600mm bending rad & coupler plate for 300mm width ladder type	-	30	Nos		
xxvi	plates ,w=300mm	-	45	Nos		
xxvii	coupler plates ,w=300mm	-	45	Nos		
xxviii	Cover for Perforated type Cable Tray, W=150mm	-	600	Nos		
xxix	150mm (W) Perforated type cable tray.	-	600	Nos		
2(a1).7	STRUCTURAL STEELS					
i	ISMC 100x50 mm Channels	-	75000	Kgs		
ii	ISA 50x50x6 mm Runner angles	-	25000	Kgs		
iii	ISA 65x65x6 mm Runner angles	-	30000	Kgs		
2(a1).8	PLANT EARTHING & LIGHTNING PROTECTION MATERIALS					
i	GI pipe Electrode	-	100	Nos		
ii	75 x 10mm GI Strips	-	10,000	Metre		
iii	50 x 6 mm GI Strip	-	2000	Metre		
iv	35 x 6mm GI Strips	-	2000	Metre		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
v	8SWG GI wire ,solid	-	500	Metre		
vi	16SWG GI wire , solid	-	500	Metre		
vii	Vertical Air Termination Rod	-	15	Metre		
viii	40 mm diameter, MS rod	-	5000	Metre		
2(a1).9	PLANT ILLUMINATION PACKAGE					
2(a1).9.1	Details of Various Lighting Fixtures and lamps.					
i	Recessed mounting type downlighter suitable for false ceiling mounting & 60W GLS lamp	-	20	Nos		
ii	Bulk head GLS wall mounting type	-	155	Nos		
iii	Industrial type fixture suitable for surface mounting on wall or ceiling & 1x36W fluorescent tube	-	70	Nos		
iv	Industrial type fixture suitable for surface mounting on wall or ceiling & 2x36W fluorescent tube	-	440	Nos		
v	Corrosion resistant industrial batten for TLD 2x36W fluorescent lamp	-	70	Nos		
vi	Recess mounting type decorative lighting fixture with 2x36W fluorescent lamps, copper blast ,starter & power factor improvement capacitor	-	400	Nos		
vii	Integral well-glass luminary suitable for 1x125W HPMV	-	125	Nos		
viii	Industrial wellglass luminary suitable for 1x70 HPSV lamp with non integral control gear	-	640	Nos		
ix	Street lighting fixture suitable for 125W HPSV lamp with optic reflector & acrylic cover	-	105	Nos		
x	Industrial High bay fixture suitable for 125W HPMV Lamp High bay fixture	-	70	Nos		
xi	Industrial High bay fixture suitable for 250W HPMV Lamp High bay fixture	-	155	Nos		
xii	Street lighting fixture suitable for 250W HPSV lamp with optic reflector & acrylic cover	-	20	Nos		

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2(a1).9.2	Details of Lighting Panels & JB's:					
i	6 way AC Indoor lighting panels	800x600x250	24	Nos		
ii	6 way AC Outdoor lighting panels	800x600x250	5	Nos		
iii	6 way DC Indoor lighting panels	800x600x250	15	Nos		
iv	6 way DC Outdoor lighting panels	800x600x250	4	Nos		
v	12 way AC Indoor lighting panels	900x600x250	15	Nos		
vi	12 way AC Outdoor Lighting panels	900x600x250	5	Nos		
vii	18 way AC Indoor Lighting Panels	1000x600x250	4	Nos		
viii	18 way AC Outdoor Lighting Panels	1000x600x250	4	Nos		
2(a1).9.3	Flexible wires					
i	1.1KV, PVC Insulated Single Core Copper Conductor Flexible Wires	2.5 Sq .mm, Red	12000	Metre		
ii		2.5 Sq .mm, Yellow	10000	Metre		
iii		2.5 Sq .mm, Yellow	10000	Metre		
iv		2.5 Sq .mm, Yellow	32000	Metre		
v		2.5 Sq .mm, Yellow	32000	Metre		
vi	1.1KV, PVC Insulated Single Core Copper Conductor Flexible Wires	4 Sq. mm, Red	2500	Metre		
vii		4 Sq. mm, Black	7500	Metre		
viii		4 Sq. mm, Blue	2500	Metre		
ix		4 Sq. mm, Yellow	2500	Metre		
x		4 Sq. mm, Green	7500	Metre		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a1).10	<u>ACCESSORIES FOR ILLUMINATION PACKAGE</u>					
i	9 mtrs. Lighting pole	-	16	Nos		
ii	2 mtrs. Lighting pole	-	150	Nos		
iii	3 mtrs. Lighting pole	-	10	Nos		
iv	Metsec channel 2500mm length	-	250	Nos		
v	1200mm long 120 deg bend 50NB pipe with 2nos suitable clamp with base	-	125	Nos		
vi	1200mm long 150 deg bend 50NB pipe with 2 nos suitable clamp with base	-	50	Nos		
vii	3000mm long 25mm GI conduit	-	1000	Nos		
viii	3000mm long 50 mm GI conduit	-	25	Nos		
ix	25mm GI bends	-	250	Nos		
x	25mm GI inspection bends suitable for item sl no 7 above	-	250	Nos		
xi	25 mm GI straight coupler suitable for item sl no 7 above	-	250	Nos		
xii	3000 mm long 19mm GI down conduit	-	100	Nos		
xiii	3000 mm long 25mm PVC conduit	-	100	Nos		
xiv	25mm PVC bend suitable for item sl no 13 above	-	50	Nos		
xv	25mm Flexible PVC conduit	-	200m	Metre		
xvi	PVC gland suitable for 25 mm PVC flexible conduit sl no 15	-	200	Nos		
xvii	4 way conduit branching JB for 25mm GI conduit	-	250	Nos		
xviii	Spring loaded ball and sockets suitable for 19mm dia GI down conduit	-	500	Nos		
xix	6mm dia x 35mm long anchor bolt with nut & washers	-	2000	Nos		

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TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
xx	6mm dia x 35mm long anchor bolt with hook, nuts & bolts & washers	-	1000	Nos		
xxi	12.5 mm dia anchor bolt straight with nut & washers	-	100	Nos		
xxii	3mm dia anchor fasteners with nut & washers	-	500	Nos		
xxiii	Saddle with saddle bar suitable for 25mm dia conduit with hardware	-	5000	Nos		
xxiv	19mm cable clamps with base	-	5000	Nos		
xxv	4 way 150x100x100mm rectangular sheet steel JB with two 1" and two 3/4" cable entries along with glands and TB suitable for 6nos. 35sq.mm cable	-	100	Nos		
xxvi	Double compression nickel plated brass cable glands 1" for safe area suitable for item no. 25	-	250	Nos		
xxvii	Double compression nickel plated brass cable glands 3/4" for safe area suitable for item no. 25	-	2000	Nos		
xxviii	Check nuts suitable for 19mm GI conduit	-	5000	Nos		
xxix	Galvanised steel chain	-	500m	Metre		
xxx	S hook	-	250	Nos		
xxxi	Rubber grommet (19 mm)	-	500	Nos		
xxxii	Rubber grommet (25mm)	-	500	Nos		
xxxiii	FSB-2 Flush mounted swbd with 2 nos 15A piano type switched & 15A receptable with switch (modular type)	-	30	Nos		
xxxiv	FSB-3 Flush mounted swbd with 5 nos piano 15A piano type switched & 15A receptable with switch (modular type)	-	30	Nos		
xxxv	FSB-5 Flush mounted swbd with 5 nos piano 15A piano type switched & 15A receptable with switch (modular type)	-	20	Nos		
xxxvi	Domestic type 5/15A socket with switch (flash mounted modular)	-	20	Nos		
xxxvii	Industrial metal clad weather proof type 5/15A socket with switch	-	75	Nos		
xxxviii	63ATPN welding receptacles weather proof type	-	35	Nos		
xxxix	63A TPN welding receptacles (Flame proof area)	-	2	Nos		
xxxx	240V to 24v Supply module with hand lamp and 15 mtr cable	-	4	Nos		

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AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA

TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(a2)	<u>MISCELLANEOUS ITEMS REQUIRED FOR ERECTION.</u> <u>(ITEMS TO BE SUPPLIED, ERECTED, TESTED & COMMISSIONED BY</u> <u>VENDOR)</u>					
i	Cable Tags 2mm thick, 75mm long, 15mm width Aluminium Strips.	-	1000	Nos		
ii	Trefoil clamps for single core cables –25mm wide 8SWG Aluminium Strips.	-	500	Nos		
iii	Clamps for multicore cables---25x3mm Aluminium flats.	-	500	Nos		
iv	3mm dia Nylon Cord	-	500	Nos		
v	Hardware for Erection (like Nuts, bolts, washers etc)	-	500	Nos		
2(b)	<u>BALANCE OF PLANT EQUIPMENT- C&I AREA</u>					
2(b).1	<u>ITEMS TO BE PROCURED, ERECTED & COMMISSIONED BY VENDOR</u>					
2(b).1.1	Cable Glands (Non –ex proof), Double compression, Ni coated brass/SS. (approved make/manufacturer of items to be supplied by bidders as per COMET or equivalent to be approved by BHEL)					
i	Size- ½”	-	2000	Nos		
ii	Size- ¾”	-	1000	Nos		
iii	Size-1”	-	1500	Nos		
iv	Size-1-1/4”	-	500	Nos		
v	Size- 1-1/2”	-	1200	Nos		
vi	Size- 2”	-	1000	Nos		
2(b).1.2	Cable Glands (Ex- proof), Double compression, Ni coated brass/SS. (approved make/manufacturer of items to be supplied by bidders as per COMET or equivalent to be approved by BHEL)					
i	Size- ½”	-	500	Nos		
ii	Size- ¾”	-	400	Nos		
iii	Size-1”	-	500	Nos		
iv	Size-1-1/4”	-	200	Nos		
v	Size- 1-1/2”	-	300	Nos		

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TENDER NO. PSER:SCT:IIS-T1077:10						
BREAK UP ELECTRICAL AND C&I ITEMS						
SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
vi	Size- 2"	-	300	Nos		
2(b).1.3	Tinned Cable Lugs at both ends (approved make/manufacturer of items to be supplied by bidders as per COMET or equivalent to be approved by BHEL)					
i	Size- for 0.5 mm ² cable	-	2000	nos		
ii	Size- for 1 mm ² cable	-	2000	nos		
iii	Size- for 1.5 mm ² cable	-	2000	nos		
iv	Size- for 2.5 mm ² cable	-	2000	nos		
2(b).1.4	PVC Cable Gland shrouds (covers)	-	9000	nos		
2(b).1.5	Cable ferruling numbers & characters	-	10000	Nos		
2(b).1.6	Name plates/Tag plates with tying/fixing material for cable's both end & filed instruments	@ 100 meters per run of cable	1000	Nos		
2(b).1.7	Cable Markers	@ 100 meters per run of cable	500	Nos		
2(b).1.8	Cable Supporting channels/angles (MS) with clamps, from JB to instrument	@25 meters from JB to each	1	metre		
2(b).1.9	Nuts & Bolts, Washers, clamps		500	set (set of one nut, one bolt, 2 washers)		
2(b).1.10	Cable Fastening Material		500			
2(b).2	C&I ITEMS ERECTED & COMMISSIONED BY VENDOR					
2(b).2.1	for Instrumentation package					
2(b).2.1.1	Control valves (Approx weight 80 kgs)(instrumentation job only)	-	100	Nos		
2(b).2.1.2	Desuperheaters (Approx weight 100 kgs)(instrumentation job only)	-	8	Nos		
2(b).2.1.3	Turbine Bypass system (Approx weight 130 kgs)(instrumentation job only)	-	4	Nos		
2(b).2.1.4	Pressure Safety valves (Approx weight 75 kgs)(instrumentation job only)	-	15	Nos		
2(b).2.1.5	Thermal Safety valves (Approx weight 75 kgs)(instrumentation job only)	-	10	Nos		
2(b).2.1.6	Flow orifice plates (Approx weight 80 kgs)(instrumentation job only)	-	30	Nos		

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TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
2(b).2.1.7	Flow nozzles (Approx weight 80 kgs)(instrumentation job only)	-	25	Nos		
2(b).2.1.8	Mass flow meters	-	-	Nos		
2(b).2.1.9	Pressure gauges	-	270	Nos		
2(b).2.1.10	Pressure transmitters	-	100	Nos		
2(b).2.1.11	Pressure switches	-	25	Nos		
2(b).2.1.12	Diff. pressure gauges	-	35	Nos		
2(b).2.1.13	Diff. pressure transmitters	-	150	Nos		
2(b).2.1.14	Diff. pressure switches	-	25	Nos		
2(b).2.1.15	Temperature gauges	-	250	Nos		
2(b).2.1.16	RTDs	-	60	Nos		
2(b).2.1.17	Thermo couples	-	70	Nos		
2(b).2.1.18	Level gauges	-	35	Nos		
2(b).2.1.19	Level transmitters (Displacer Type)	-	40	Nos		
2(b).2.1.20	Level switches	-	120	Nos		
2(b).2.1.21	Annubars	-	10	Nos		
2(b).2.1.22	deleted	-	-	-		
2(b).2.1.23	deleted	-	-	-		
2(b).2.1.24	Erection material for above items					
	(i) Globe valve	-	2000	Nos		
	(ii) deleted	-	-	-		
	(iii) condensing chambers	-	350	Nos		
	(iv) Syphon	-	350	Nos		
	(v) 5 way manifolds	-	500	Nos		
	(vi) Air filter regulators	-	100	Nos		
	(vii) Thermowells	-	400	Nos		
2(b).2.1.25	Impulse pipes & tubes for impulse connection for instrument hookup					
	(i) SS tube 12.7 x 2.1 mm including comp fittings/connectors/needle valve etc	-	3000m	Metre		
	(ii) SS tube 6.35 x 0.9 mm including comp fittings/connectors/needle valve etc	-	1600m	Metre		
	(iii) ERW / SAW Steel tube 60.8 x 3.65 (NB 50)	-	4500m	Metre		

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BREAK UP ELECTRICAL AND C&I ITEMS						
SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	(iv) SS pipe 33.4 x 3.4 mm	-	2000m	Metre		
	(v) SS pipe 21.3 x 3.7 mm	-	4000m	Metre		
	(vi) SS pipe 6 x 1 mm	-	4500m	Metre		
2(b).2.1.26	STRL Steel (Std Quality)					
	(i) Strl ST equal angle 50 x 50 x 6	-	1500	Kgs		
	(ii) Strl St channel 100 x 50	-	1000	Kgs		
	(iii) Strel St PL 6	-	600	Kgs		
2(b).2.2	Cables Package					
2(b).2.2.1	Signal Cables					
	1P x 1.5 sq.mm (Intrinsic Safe), Individual & Overall shielded	-	5000	Metre		
	8P x 0.5 sq.mm (Intrinsic Safe), Individual & Overall shielded	-	15000	Metre		
	12P x 0.5 sq.mm (Intrinsic Safe), Individual & Overall shielded	-	15000	Metre		
	1P x 1.5 sq.mm, Individual & Overall shielded	-	50000	Metre		
	8P x 0.5 sq.mm, Individual & Overall shielded	-	75000	Metre		
	12P x 0.5 sq.mm, Individual & Overall shielded	-	85000	Metre		
	1P x 0.5 sq.mm, Overall shielded	-	200	Metre		
	6P x 0.5 sq.mm, Overall shielded	-	200	Metre		
	12P x 0.5 sq.mm, Overall shielded	-	200	Metre		
	2T x 0.5 sq.mm (Intrinsic Safe), Individual & Overall shielded	-	200	Metre		
	1T x 1.5 sq.mm, Individual & Overall shielded	-	6000	Metre		
	8T x 1.5 sq.mm, Individual & Overall shielded	-	15000	Metre		
	1P x 16 AWG Cr-Al Extension	-	5000	Metre		
	6P x 20 AWG Cr-Al Extension	-	200	Metre		
	12P x 20 AWG Cr-Al Extension	-	10000	Metre		
2(b).2.2.2	Junction Boxes					
	44 terminals, weather proof	-	150	Nos		
	44 terminals, explosion proof	-	30	Nos		
2(b).2.3	Analysers Package					
	CONDUCTIVITY ANALYZERS	-	10	No		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	PH ANALYZERS	-	10	No		
	DISSOLVED OXYGEN ANALYZERS	-	5	No		
2(b).2.4	UPS & VMS Package					
i)	UPS Package	-				
a	UPS charger, inverter etc suit of panels		3	set		
b	battery with racks contains cells		377	cells		
c	UPS ACDB Panel	1000x850x2400	6	nos		
ii)	Vibration Monitoring panel	-	10	No		
2(C)	DCS/maxDNA Package(Erection, Tested, Commissioned by vendor)					
1	Panels for MaxDNA cabinets for SG, TG and Stn DCS	750mmx750mmx2315mm (each)	124	nos		
2	Engineer work station (EWS) : PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, DVD Writer, Floppy Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.)	-	2	sets		
3	Operator workstation(OWS) : PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System)	-	16	sets		
4	Control desk (standard height & depth)(wt-54,000kgs)	-	18	metre		
5	MaxStorian : PC, Intel Core 2 Duo Dual core processor RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, DVD Writer, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.	-	2	sets		
6	Link station : PC, Intel Core 2 Duo Dual core processor: RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System	-	1	set		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
7	SOE Station: PC, Intel Core 2 Duo Dual core processor:RAM – 1GB, Hard Disk – 160GB, Graphics Card, Ethernet Port – 3 Nos., DVD ROM Drive, Keyboard, Mouse, USB Ports – 4 Nos., Windows XP Professional Operating System.	-	1	set		
8	21" TFT Monitor	-	19	nos		
9	NETWORK Panels (With required quantity of Ethernet switches, Media converter Network accessories, Power distribution accessories, MCBs, TBs, CAT – 5 UTP Cables etc.)	-	3	nos		
10	Ethernet switches(Wt-Approx 50kg)	-	12	nos		
11	Laptop PC: Intel Centrino Duo Mobile / Core 2 Duo minimum 2.4GHz, 800MHz FSB, 4MB L2, 2 GB, DDR2 SD Ram, DVD+/- RW drive, Minimum of 120GB, 7200 RPM, Wireless LAN 802.11a/b/g, Bluetooth 2.0+, 1 No. 10/ 100 Base-T Ethernet LAN port with one RJ45 connector, Minimum of three (3) USB ports, 15.4" (min), XGA TFT, Long lasting 6/8 cell Lithium ion battery with Charger/AC Adapter (Charger /Adapter 100 to 240V, 50~60Hz Make HP-Compaq / DELL / IBM-Lenovo	-	2	sets		
12	Maxnet Ethernet UTP cables(300 kgs)	-	1.5	km		
13	Printers	-				
i	Dot matrix printer(300 kg)	-	3	nos		
ii	Colour inkjet printer(A4)(network ready)	-	6	nos		
iii	Laser jet printer(A4)	-	2	nos		
14	Large video screen 67" diagonal rear projection system(overview Cdr+67,8deg)(wt-900 kg)	-	3	sets(set consist)		
15	Dot matrix printer Table	-	3	nos		
16	Master clock system(wt-200 kg)	-	1	lot		
17	Hart management system for 1450 transmitters	-				
i	One system(Approx 1200 kgs)	-	1	no		
ii	Panels	1200mmX800mmX2400	2	no		
iii	PC with printer(100kg)	-	1	no		
18	Brushless AVR	1250x1250x2315mm	4	panel		

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SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
19	C&I cables for STG internal controls (200 kg)	-	1	lot		
i	Thermocouple cable 0.5 Sq mm	-	6400	meters		
ii	FEP extruded/PTFE taped 0.5 Sq mm	-	14000	meters		
iii	4 Pair 1.5 Sq mm Armoured PVC CU cable	-	4800	meters		
iv	Armoured FRLS 0.5 Sq mm 4 Pair PVC CU cable	-	30000	meters		
v	Cable Tray width-50/100/150	-	1200	meters		
20	Pressure transmitters	-	180	nos		
21	Pressure gauges	-	168	nos		
22	Temperature element	-	390	nos		
23	Temperature gauges	-	93	nos		
24	Analysis transmitter	-	45	nos		
25	Level transmitter	-	18	nos		
26	flow transmitter	-	30	nos		
27	LABORATORY INSTRUMENTS (Receipt from store, transportation to laboratory, placement, functional check, demonstration and handing over)					
i	mechanical, electrical and electronic instruments of state of the art		3	nos		
ii	Table		10	metre		
iii	Chair		15	nos		
2(d)	ITEMS TO BE FABRICATED, ERECTED AND COMMISSIONED BY VENDOR					
i	Cable Supporting channels/angles (MS) with clamps, from JB to instrument	@25 meters from JB to each inst.	3000	kgs		
ii	2" GI pipe for transmitter and JB mounting and support set up	-	2000	Metre		
ii(a)	2" GI pipe caps	-	300	nos		
ii(b)	2" GI pipe elbow	-	300	nos		
iii	MS angle iron- 50x50x6 mm for panel base frame & its site fabrication	-	3000	kgs		
iv	MS angle iron- 50x50x6 mm for JB mounting & its site fabrication	-	2000	kgs		
v	Impulse line supporting clamps for	-	5000	Nos		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
v(a)	deleted		-	-		
v(b)	deleted	-	-	-		
v©	deleted	-	-	-		
vi	Gusset Plates (6mm TH) 200mm x 80mm, MS	for instrument stand pipe	2500	Nos		
vii	Base Plates (6mm TH) 250mm x 250mm, MS	for instrument stand pipe	1500	Nos		
viii	40x40x4 mm Angle, MS	-	1500	Metre		
ix	35x35x4 mm Angle, MS	-	1500	Metre		
x	50x50x6 mm Angle	-	1800	Metre		
xi	ISMC 100x50 mm Channel, MS	-	1500	Metre		
xii	6mm TH plate, MS	-	1000	kgs		
xiii	50 x 6 mm Flat, MS	-	300	Metre		
xiv	deleted	-	-	Metre		
xv	deleted	-	-	Nos		
xvi	pre-fabricated canopies for jb's, transmitters, field switches, gauge boards etc	-	800	Nos		
xvii	deleted	-	-	Nos		
xviii	false flooring frame stand for panels	-	50	Nos		
2(e)	C&I ITEMS FOR BOILER(3 UNITS)(items to be erected ,tested and commissioned by vendor)					
	WBS Description					
	Boiler LTMCC(sf-do type)	19000x2500x1500	3	Nos		
	VMS remote cabinet for FD fans and ID fans A&B	1000x2345x800	3	Nos		
	Furnace Temp. Probe starter Box	600x600x300	6	Nos		
	DC scanner air fan motor starter box	900x1120x375	3	Nos		
	Bhelvision 20m (EWLI) ascertor cabinet	600x600x350	3	Nos		
	Flue gas analyser(sox,nox,hc&co2)	1000x2100x800	3	Nos		
	Swas-wet panel	2000x2100x600	3	Nos		
	Swas-dry panel	1000x2100x800	3	Nos		
	BFG goggle valve-hydraulic power pack cabinet	1200x1600x850	3	Nos		
	BFG goggle valve-Control panel	500x800x300	3	Nos		
	ERV local controller box	400x350x270	3	Nos		
	BHELvision 20m (EWLI) display unit	99x194x68	3	Nos		
	ERV control station	-	3	Nos		
	Co analyser(ps unit)	-	3	Nos		

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SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	O2 analyser(after APH)	-	6	Nos		
	Silica panel	860x560x420	3	Nos		
	EWLI BHELVISION pressure vessel	-	3	Nos		
	electrodes with Gaskets for Ewli(BHELVISION)	-	30	Nos		
	PTFF cable(4 core) between electrode & local BHEL ascerter unit	-	300	metre		
	MTM thermocouple	-	144	Nos		
	Junction Boxes	-	72	nos		
	Fsss local gun maintenance switch	-	24	nos		
	flame scanner head assly	-	36	nos		
	vibration pick up for ID and FD fan	-	24	nos		
	pneumatic regulating power cylinder for dampers-FD/ID fans	-	12	Nos		
	pneumatic regulating power cylinder for dampers-SADC	-	72	Nos		
	Smart positioners for pneumatic regulating power cylinders/control valves	-	33	Nos		
	Ip convertor for regulating pneumatic power cylinder/control valve	-	18	Nos		
	pneumatic regulating power cylinder for secondary air damper	-	72	Nos		
	pneumatic on/off power cylinder for scanner emergency damper	-	3			
	Pressure transmitters	-	180	Nos		
	Pressure gauges	-	168	Nos		
	Temperature element	-	390	Nos		
	Temperature gauges	-	93	Nos		
	Analysis transmitter	-	45	Nos		
	Level transmitter	-	18	Nos		
	flow tranmitter	-	30	Nos		
		-				
	ITEMS TO BE CALIBRATED, TESTED AND COMMISSIONED BY VENDOR (EXCLUDING ERECTION)	-				
	pneumatic regulating control valve	-	24	Nos		
	pneumatic ON/OFF control valve	-	93	Nos		
		-				
	CONTROL CABLES	-				
	4C Scanner cable	-	350	metre		
	2C/3C/4CX1.5/2.5 SQMM	-	3000	metre		
	3CX6 SQMM	-	3000	metre		
	5C/7CX1.5/2.5 SQMM	-	3000	metre		
	Thermocouple Compensation cable(2p/6p/8p)	-	3000	metre		
2(f)	ELECTRICAL AND C&I ITEMS FOR 3X18 STG (items to be erected, tested and commissioned by vendor)					
	PHASE SEGREGATED BUS DUCT	40000X1250X 400	3	sets		

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**MATERIAL RECEIPT FROM STORE, UNLOADING/RELOADING, AND ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICALS AND CONTROL & INSTRUMENTATION WORK FOR 3 Nos 18 MW STG+1 No 8.275 MW BPTG + 3 Nos Turbo-blowers (each 2,28,600 Nm³/hr) POWER AND BLOWING STATION
AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA**

TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	PTSP CUBICLE	1950 X 2100 X 2500	3	nos		
	NGT CUBICLE	1400X1300X2300	3	nos		
	GENERATOR CONTROL DESK	1722X1566X1677	3	nos		
	RELAY PANEL	1600X800X2300	6	nos		

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PRICE SCHEDULE

MATERIAL RECEIPT FROM STORE, UNLOADING/RELOADING, AND ERECTION, TESTING & COMMISSIONING OF STEAM TURBINE & AUXILIARIES, GENERATOR & AUXILIARIES, BPTG, TURBO-BLOWERS, ELECTRICALS AND CONTROL & INSTRUMENTATION WORK FOR 3 Nos 18 MW STG+1 No 8.275 MW BPTG + 3 Nos Turbo-blowers (each 2,28,600 Nm³/hr) POWER AND BLOWING STATION
AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA

TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	CONTROL CABLES:	-				
	3Cx4 sq.mm x 1000	-	3000	metre		
	5Cx2.5 sq.mm x 1000	-	3000	metre		
	10Cx2.5 sq.mm x 1500	-	4500	metre		
	2Cx0.75 sq.mm x 500	-	1500	metre		
	3Cx6 sq.mm	-	1500	metre		
2(g)	<u>ELECTRICAL AND C&I ITEMS FOR 1X8.275 MW BPTG(items to be erected, tested and commissioned by vendor)</u>					
	PTSP CUBICLE	1950 X 2100 X 2500	1	set		
	NGT CUBICLE	1400X1300X2300	1	set		
	CONTROL DESK	1722 X 1566 X1677	1	set		
	RELAY PANEL	1600X800X2300	2	set		
	CONTROL CABLES:					
	3Cx4 sq.mm x 1000		1000	metre		
	5Cx2.5 sq.mm x 1000		1000	metre		
	10Cx2.5 sq.mm x 1500		1500	metre		
	2Cx0.75 sq.mm x 500		500	metre		
	3Cx6 sq.mm		500	metre		
2(h)	<u>ELECTRICAL AND C&I ITEMS FOR TURBO BLOWER/STG/BPTG(each unit)(items to be erected, tested and commissioned by vendor)</u>					
2(h).1	LOCAL/FIELD MOUNTED INSTRUMENTS AND DEVICES					
	Pressure gauges	-	40	Nos		
	Differential Pressure gauges.	-	4	Nos		
	Electronic Pressure transmitters/Temperature transmitters	-	110	Nos		
	Pressure switches	-	10	Nos		
	Electronic diff. Pressure transmitters	-	6	Nos		
	Temperature Gauges (Bimetallic)	-	6	Nos		

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AT
IISCO STEEL PLANT, BURNPUR, BURDWAN,
WEST BENGAL, INDIA**

TENDER NO. PSER:SCT:IIS-T1077:10

BREAK UP ELECTRICAL AND C&I ITEMS

SL. NO.	DESCRIPTION	DIMENSION(in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	Temperature Gauges (MIS)	-	6	Nos		
	Thermo couples	-	20	Nos		
	Thermo wells	-	35	Nos		
	Level gauges	-	3	Nos		
	Level transmitters	-	2	Nos		
	Speed measuring loop	-	6	Nos		
	Control valves	-	10	Nos		
	Electro-pneumatic converters	-	3	Nos		
	Vibration Probes	-	12	Nos		
	Axial Displacement Probe	-	5	Nos		
	LVDT Casing Expansion Probe	-	1	Nos		
	Probe Housing Assembly	-	5	Nos		
	Differential Expansion Probe	-	2	Nos		
	Safety relief valve	-	2	Nos		
	Solenoid valves	-	4	Nos		
	Velocity probes(Velomitor)	-	2	Nos		
2(h).2	Panel mounted instruments					
	Vibration, Axial displacement monitoring system. (Mounted on EDN panel)	-	1	Nos		
	Turbo log Antisurge control system(Mounted on EDN panel)& surge detector	-	2	Nos		
	Configuration Work station for TSI	-	1	Nos		
2(h).3	PANELS AND CUBICLES:					
	Local gauge board (1200X1300)	-	1	Nos		
	Governing console board (1400X1600X350)	-	1	Nos		
	CHANNEL (75X40MM)	-	50 Meters	metre		
	ANGLE (50X50X6mm)	-	50 Meters	metre		
	SHEET 4mm THICK (400x120mm)	-	60 No.s	Nos		
	PLATE 10mm thick (375x770mm)	-	10 No.s	Nos		
2(h).4	PROCESS IMPULSE TUBING AND PNEUMATIC TUBING FITTINGS					
	CS PIPE 21.3 X 3.73	-	600	Metre		
	SS TUBE 12.7 X 2.1	-	300	Metre		

VOLUME - III A, Rev-01 PRICE SCHEDULE						
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TENDER NO. PSER:SCT:IIS-T1077:10						
BREAK UP ELECTRICAL AND C&I ITEMS						
SL. NO.	DESCRIPTION	DIMENSION (in mm) (Length)x(Width)x(Height) /DETAIL	QUANTITY	UNIT	UNIT RATE	TOTAL AMOUNT
	SS TUBE 6 X 1	-	100	Metre		
2(h).5	LOOP CHECKING INCLUDING CALIBRATION & TESTING					
	PNEUMATIC DRIVE	-	9	Nos		
	ELECTRICAL DRIVE	-	180	Nos		
	TOTAL PRICE					
NOTE	01. TOTAL PRICE FOR PACKAGE -2 SHOULD MATCH WITH SL. 2. OF SUMMARY SCHEDULE					

FORMAT FOR NO DEVIATION CERTIFICATE
(To be submitted in the bidder's letter head)

BHARAT HEAVY ELECTRICALS LIMITED,
Power Sector - Eastern Region,
Plot no 9/1, DJ Block, Sector – II, Salt Lake City,
Kolkata – 700 091

Sub	No Deviation Certificate.	
Job	Erection, Testing & Commissioning of steam turbine & auxiliaries, generator & auxiliaries, BPTG, Turbo-Blowers, Electrical and C & I items at 3X 18 MW, power & blowing station, IISCO Burnpur, West Bengal.	
Ref	1.0	Tender no PSER:SCT:IIS-T1077:10.
	2.0	BHEL's NIT, vide reference no Ref: PSER:SCT:IIS-T1077:10 Dated 27-01-2010
	03	BHEL's TCN-01, vide reference no PSER:SCT:IIS-T1077:TCN-01, dated 06-02-10.

Dear Sirs,

With reference to above, this is to confirm that as per tender conditions, we have visited site before submission of our offer and noted the job content & site conditions etc. We also confirm that we have not changed/ modified the tender documents as appeared in the website/ issued by you and in case of such observance at any stage, it shall be treated as null and void.

We hereby confirm that we have not taken any deviation from tender clauses together with other references as enumerated in the above referred NIT. We hereby confirm our unqualified acceptance to all terms & conditions, unqualified compliance to technical specification and acceptance to reverse auctioning process.

In the event of observance of any deviation in any part of our offer at a later date whether implicit or explicit, the deviations shall stand null & void.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

(Signature, date & seal of authorized
representative of the bidder)