

INDIAN INSTITUTE OF TECHNOLOGY KANPUR



Tender Notice No. 23/Elect/2020

SCHEDULE OF QUANTITY

Name of Work: Replacement of faulty 11 KVA, HT panel with circuit breakers installed at NWTF etc and other associated works.

Name of the Contractor					
S. No	Description of Items	Qty	Unit	Rate in Figures in Rupees	Amount
1	Supply, installation, testing and commissioning of indoor type, metal clad switchgear with fabricated from 2 mm thick CRCA/ aluzinc material, 11KV, 1250 amp, 25kA/3Sec VCB panel with integrated operating handle, totally enclosed and fully interlocked with self support alluminium busbar, horizontal draw out breaker with all compartments type tested for internal arc for 25 kA for 1 sec as per IEC 62271-100, as amended up to date and additional specifications and following capacities and enclosed specifications E-01				
A	Stand alone feeder (1 set)- 1250 A VCB electrically operated, draw out type with completely encapsulated poles and continuous rated closing & tripping coils.				
i).	Three nos 150/1-1 ratio, 2.5VA, class 1.0 Resin Cast Current Transformer for metering purposes and class 5P10 Resin Cast Current Transformer for protection purposes.				
ii).	Three nos. Potential Transformer 11kV epoxy cast resin, withdrawable type with HT fuse				
iii).	Auxiliary relay for fault (OTI, WTI, Buchholz-Alarm and Trip				
iv).	Numerical relay with LCD Display - 3 over current + Earth Fault with instantaneous element with IDMT/ DMT characteristics selectable at site , master trip relay hand reset type trip circuit supervision function, inrush protection, record and store at least 100 Events with Date and Time Stamp, Last Five Fault Records stored in Non-volatile memory , Self Supervision function, Minimum 4 Digital Binary Inputs and 6 Digital output Contacts, Modbus communication Protocol with RS-485 Port, Breaker Control (ON/OFF) ,Modbus protocol for communication., Antipumping relay.				

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v).	Multifunction Meter for measurement of Current, Voltage, Power Factor, KVA, KVAR, Frequency, KWHR and maximum demand recording and indicating with compatibility to RS485 port.				
vi).	One Set of Red / Green / Indication Lamps for close and open position. One Amber indicating lamp for trip circuit healthy. One Set of white phase indication lamps for phase.				
vii).	DC/AC control supply with required power pack is also to be supplied with panel.				
viii).	The panel suhold have sufficient arrangements for connection two nos 3 coe 240 sq.mm. cables on incoming side as well as on out going side.	1.00	Nos.		
2	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	4.00	Nos.		
3	Supplying & fixing 32 mm x 6mm thick GI earth strip on surface or in recess for connection etc. as reqd.	120.00	Mtr		
4	Providing and fixing earth bus of 50 mm X 5 mm copper strip on surface for connections etc. as required.	60.00	Mtr		
5	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required.	2.00	Nos.		
6	Providing and fixing 25 mm X 5 mm G.I. strip on surface or in recess for connections etc. as required.	10.00	Mtr.		
7	Supply & laying of one number XLPE steel armoured aluminium power cable of grade 11 KV of size 3 C X 240 Sqmm as per following details with tagging at interval of 50 meter.				
a)	Direct in ground including excavation, sand cushioning, protective covering and refilling the trench as reqd.	30.00	Mtr		
b)	In the existing RCC / HUME / STONE WARE / METAL pipe as reqd.	10.00	Mtr		

S. No	Description of Items	Qty	Unit	Rate in Figures in Rupees	Amount
c)	Direct in the existing masonry open duct as reqd.	10.00	Mtr		
8	Providing, laying and fixing following dia G.I. pipe (medium class) in ground complete with G.I. fittings including trenching (75 cm deep)and re-filling etc. as required				
a)	65 mm Dia	70.00	Mtr		
b)	100 mm Dia	10.00	Mtr		
9	Supply & laying of one number XLPE steel armoured copper control cable of grade exceeding 1.1 KV of size 10 x 2.5 Sqmm as per following details.				
a)	Direct in ground including excavation, sand cushioning, protective covering and refilling the trench as reqd.	10.00	Mtr		
b)	In the existing RCC / HUME / STONE WARE / METAL pipe as reqd.	10.00	Mtr		
c)	Direct in the existing masonry open duct as reqd.	20.00	Mtr		
d)	on surface with MS clamps	2.00	Mtr		
10	Supply & laying of one number XLPE steel armoured copper control cable of grade exceeding 1.1 KV of size 4 x 4.0 Sqmm as per following details.				
a)	Direct in ground including excavation, sand cushioning, protective covering and refilling the trench as reqd.	5.00	Mtr.		
b)	In the existing RCC / HUME / STONE WARE / METAL pipe as reqd.	5.00	Mtr.		
c)	Direct in the existing masonry open duct as reqd.	20.00	Mtr.		
11	S&M end termination with brass compression gland and copper lugs etc. complete as reqd. for the following size of PVC/XLPE insulated al conductor cable 1.1kV grade as reqd.				
a)	10 C x 2.5 sqmm	4.00	Nos.		

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b)	4 C x 4.0 sqmm	4.00	Nos.		
12	Supplying and laying Insulating mat "Shock safe" in front of electrical panels, ISI marked as required complete. (3.0 mm thick for upto 33.0 kV class C)	2.00	Sq. Mtr		
13	supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 11 kV grade as required				
a)	Above 120sq.mm. upto 240 sq.mm.	3.00	Nos.		
14	Digging & refilling the cable trench , ramming and making good the same as reqd.	50.00	Mtr.		
15	Lifting removing cable up to 400 sq.mm. size from trench/clamps, making role & depositing the same in store I/c cartage.	50.00	Mtr.		
16	Supplying and laying chequered plate in cut pcs of 6mm thick with handle cutting/ welding as required complete.	2.00	Sq. Mtr		
17	Supplying and fixing 'C' Channel of size 100 x 50 mm ISMC in cut sizes i/c cutting/ welding as required complete.	10.00	Mtr.		
	TOTAL Rs.				