

Item no B-2- 150 Watts street Light Fitting

- 1 Road lighting luminaire with single piece die cast Aluminium, with all electrical accessories, such as copper ballast, ignitor, capacitor etc., suitable for high pressure sodium vapour tubler lamp 150 watts (SON T) . The reflector shall be high purity aluminium electrochemically brightened and anodised. Synthetic rubber gasket shall be provided for rainproof with clear acrylic bowl for housing, the lamp & gear compartment with IP 54 protection. The street light fitting shall be suitable to side entry mounting for 40 to 50 mm OD pipe bracket. 30 sets

Item no B-3 250 watts Integral type HPMV roof lamp Fitting

- 1 Closed integral 250 Watts HPMV lamp fitting housed in a painted die cast aluminium housing accommodating the lamp holder with a provision to adjustmnt for wide /narrow beam distribution,ballast,and capacitor with cable gland entry.The aluminium reflector shall be electrochemically brightened and anodised for better optic .M S zinc plated eye bolt shall be provided for mounting the fitting on the concrete roof slab .

12 nos

Item no B-5-b Power Distribution boards-New Compressor House- extn

- 1 Medium voltage 3phase 8way 60 amps per phase wall mountingtype /column mounting heavy duty type TPN Fuse Distribution Board housed in a thick CRCA sheet steel enclosure and treated with degreasing,derusting,and phosphatingsolutions before painting. The fuse base and fuse holders shall be porcelain type and suitable for Rewirable/HRC fuses. The busbars shall be copper material and shall be mounted in the steel enclosure with insulators.The fuse distribution board shall be provided with suitable hylem sheets between the phase busbars and neutral links to protect against the accidental contact when the cover is open and 2 separate earthing terminals shall be provided .The Fuse distribution board should confirm to IS2675 andIS2086. 1no

Item no B-5-b Lighting Distribution boards-New Compressor House- extn

- 2 Medium voltage 3 phase 6 way 15 amps per way , MCB fuse distribution board , as per IS 8623, with one number 63 amps short circuit current rating 16KA 4 pole MCB as Incomer. Each Phase shall be controlled with 32 amps double pole MCB, with 6 nos out going each 16 amps short circuit current rating 10 KA, single pole MCB (MCB as per IS 8828 and IEC 60898)The MCB distribution board shall be housed with copper bus bars mounted on insulated base, neutral bar & earth knob duly interconnected with MCBs'.The top and bottom box shall be provided with removable gland plates for cable termination.The fuse distribution board shall be made with thick CRCA sheet pre treated and powder coated and suitable foe wall/col mounting type. 1no

Item sl no B- 5 -a -Specification for Medium Voltage Industrial Type Switchboard-				
Sl.No	Description for BHEL Requirement	Specified/ To be confirmed by	Offered	Deviations
	Design, manufacture and supply of Medium Voltage, floor mounting, free standing, indoor, Industrial type switchboard comprising of fuse switches, busbar chamber and conforming to the specification and features given below.			
1.0	Incomer Fuse Switch unit with fuses:			
1.1	Current rating at 415V, 50Hz	400A		
1.2	Configuration	Three poles and neutral		
1.3	Type of enclosure	Sheet steel		
1.4	Fuses for 3 phases	400A		
1.5	Quantity of Incomer fuse switch	1 no.		
2.0	Outgoing Fuse switch Units with fuses:			
2.1	Configuration	Three poles and neutral		
2.2	Current rating at 415V, 50Hz	100A		
2.2.1	Type of enclosure	Sheet steel		
2.2.2	Fuses for 3 phases	100A		
2.2.3	Quantity of 100A fuse switch	4 nos.		
2.3	Current rating at 415V, 50Hz	63A		
2.3.1	Type of enclosure	Cast iron		
2.3.2	Fuses for 3 phases	60A		
2.3.3	Quantity of 60A fuse switch	4 nos.		
3.0	Busbars:			
3.1	Current rating at 415V, 50Hz	400A		
3.2	Configuration	Three poles and neutral		
3.3	Material	Aluminium		

Sl.No	Description for BHEL Requirement	Specified/ To be confirmed by	Offered	Deviations
3.4	Busbar chamber	CRCA sheet steel of min. 2 mm thickness.		
4.0	Accessories:			
4.1	Voltmeter with selector switch	Analog type, a.c., 0-500V, 96mm square, accuracy class 1.0		
4.2	Voltmeter and switch make	Vendor to confirm		
4.3	Indication lamp	3 lamps for the phases		
5.0	Overall dimensions of the Panel	Vendor to confirm		
6.0	Make of the Fuse switches	GE, L&T, Siemens		
6.1	Type no. and make of the fuse switch offered	Vendor to confirm		
6.2	Technical leaflet of the fuse switch offered to be enclosed with the offer.	Vendor to confirm		
7.0	General Features of the Fuse switches:			
7.1	The switches shall be totally enclosed and fully shrouded			
7.2	Provided with On/Off flag indication and two earthing terminals			
7.3	Quick make, quick break mechanism, independent of the speed of the operator.			
7.4	Double break isolation arrangement ensuring complete isolation of fuse units when unit is in off position			
7.5	All current carrying parts shall be hard silver plated			
7.6	Units to be provided with bolted type neutral links with facility to disconnect neutral easily.			

Sl.No .	Description for BHEL Requirement	Specified/ To be confirmed by	Offered	Deviations
7.7	Interlock to ensure the lid cannot be opened until the switch is in off position and the possibility to defeat the interlock by a competent examiner.			
7.8	Provided with phase-phase, phase-earth barrier			
8.0	General Features of Switchboard:			
8.1	The panel shall be of Industrial type construction with enclosed busbar chamber in the middle and the fuse switch units mounted on the top and bottom of the busbar chamber.			
8.2	Busbars shall be made of high conductivity aluminium alloy with adequate cross section to operate at low operating temperatures.			
8.3	The neutral busbars shall have a continuous current rating of 50% of the phase busbars. All busbars shall be insulated, colour coded for easy identification of individual phases and neutral.			
8.4	The earth busbar of size 6x 50mm G.I.Flat shall run through out the length of the switchboard and be terminated at the two ends.			
8.5	High tensile bolts and spring washers shall be provided on all busbars and connection joints.			
8.6	All sheet steel used in the panel shall undergo a rigorous metal treatment process involving alkaline degreasing, descaling in dilute sulphuric acid, phosphating and painting.			
8.7	The switches shall be provided with cable adopter boxes in sheet steel for termination of armoured aluminium cable suitable for the current rating of the switches.			

Sl.No	Description for BHEL Requirement	Specified/ To be confirmed by	Offered	Deviations
8.8	Adequate number of busbar supports shall be provided to withstand short circuit current.			
8.9	The busbar chamber covers shall be fitted with dust proof neoprene gaskets.			
8.10	The switchboard shall be provided with angle iron frame work of adequate size for floor mounting.	Vendor to specify size		
8.11	The connections from the busbars to the switches shall be through flexible insulated copper conductors of adequate cross section.			
8.12	The switchboard shall be painted with one coat of red oxide primer and two coats of enamel paint to match the colour of the switches.			
8.13	The construction of the panel shall generally conform to the Indian Electricity Rules.			
9.0	Reference List/ Qualifying Conditions:			
9.1	Only those vendors who have supplied and commissioned similar or higher capacity/ size equipment that is working satisfactorily for at least one year after commissioning should quote.			
9.2	Information about the companies where similar equipments have been supplied, certificate about satisfactory performance are to be submitted for qualification of the offer.			
10.0	Scope of Supply	Quantity		
10.1	Industrial type switchboard of the configuration and specification as furnished above	1 nos.		