

3 X 800 MW PATRATU TPS

VOLUME – II

TECHNICAL SPECIFICATION FOR
OCTAGONAL GALVANIZED POLES

SPECIFICATION NO: PE-TS-434-558-E004
REV-0



BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA, UTTAR PRADESH, INDIA – 201301

1152270/2022/PS-PEM-EL



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COMPLIANCE CERTIFICATE

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same
2. There are no deviations with respect to specification other than those furnished in the 'schedule of deviations'
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in BOQ-Cum-Price schedule of the specification shall not be considered (i.e., technical description & quantities as per specification shall prevail).
6. The requirements mentioned in Section-I shall prevail and govern in case of conflict between the same and the corresponding requirements mentioned in the descriptive portion in Section-II

BIDDER'S STAMP & SIGNATURE

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SECTION – 'I'

SPECIFIC TECHNICAL REQUIREMENTS



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1.0 SCOPE OF ENQUIRY

- 1.1 Design, manufacture, assembly, inspection & testing at manufacturer's works, proper packing and delivery to site of OCTAGONAL GALVANIZED POLES as mentioned in different sections of this specification, complete with all accessories for efficient and trouble-free operation.
- 1.2 Standard technical requirements of the LIGHTING POLES are indicated in Section-II. Project specific requirements/changes are listed in Section-I.
- 1.3 The requirements of Section-I shall prevail and govern in case of conflict between the corresponding requirements of Section-I and Section-II.
- 1.4 Review of sub vendor's documents by the vendor shall not relieve the vendor from the responsibility of design and supply.
- 1.5 The documents shall be in English language and MKS system of units. Submission of all post award stage documents shall be done through document management system-DMS.

2.0 BILL OF QUANTITIES:

- 2.1 Quantity requirements shall be as per BOQ-cum-price schedule as part of NIT.

3.0 SPECIFIC TECHNICAL REQUIREMENTS

<u>S.No.</u>	<u>Reference Clause No. of Section- II</u>	<u>Specific Requirement/ Change</u>
1	3.2.4 (JB-M)	4 X 16 mm ² cable shall be read as 3.5 X 25 mm ² cable.
2	3.1.1	Clause 3.1.1 shall be read as: Lighting poles as required for street lighting and flood lighting shall be of Octagonal type as per applicable standard.
3	3.2.2 (e)	Clause 3.2.2 (e) shall be read as: Junction box shall be integral to pole. Junction Box shall be suitable for mounting inside Octagonal pole.
4	3.1.5	Clause 3.1.5 shall be read as: Each street lighting pole shall be suitably provided with internal junction box.
5	3.1.6	Clause 3.1.6 shall be read as: Not applicable
6	3.1.7	Clause 3.1.7 shall be read as: Flood lighting pole shall be provided with galvanised MS plate and shall be suitable for the number of flood lighting luminaires and controlgear boxes.
7	3.5	Clause 3.5 Not applicable
8	3.6.1	Clause 3.6.1 Not applicable
9	8.2	Clause 8.2 shall be read as: Erection & commissioning spares are included in the bidder's scope of supply. These include foundation bolts for 2 nos. poles.



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10	6.1	Clause 6.1 shall be read as: The approval on Quality plan (ref.no. PE-QP-999-558-E004, REV.01) shall be obtained from end customer after award of contract & shall be subjected to modification without any commercial implication to BHEL.
11	7.0 (TOOLS & TACKLES)	Following clause is added: Bidder to supply necessary accessories required for installation of its supplied equipment's without any cost implication to BHEL.
12	Sub-vendor list	Following clause is added: The approval on Sub-vendor list shall be obtained from end customer after award of contract & same shall be subjected to modification without any commercial implication to BHEL.
13		The Street Light system and peripheral lighting shall be designed generally in line with design guidelines. The Poles shall be mounted above ground using base plate and minimum height of pole shall be 8 mtrs The poles shall be hot-dip galvanized as per IS2629/ IS2633/ IS4759. The average coating thickness of galvanizing shall be min. 70 micron. The System shall be capable of withstanding the appropriate wind load etc as per IS 875 considering prevailing soil/ site condition considering all accessories mounting on pole. The street light poles shall have loop in loop out arrangement for cable entry and light fixture / wiring protected with suitably rated MCB.

3.1 Galvanized Octagonal poles- technical requirements

- 3.1.1 **Scope:** The octagonal pole shall be mounted on RCC pedestal as per design & drawing prepared by the vendor, after award of contract. Octagonal lighting pole accessories such as arm/ holding brackets, hold fast, base plate, foundation bolt, **wire (if required)**, 100 mm dia GI pipes for taking cables shall be supplied by vendor to meet overall system requirements. The other consumable required to complete the job in all respects shall also be in contractor's scope.
- 3.1.2 **Exclusion:** The scope of civil work such as embedment, RCC pedestal using M-30 grade concrete, for steel shuttering etc. are excluded from the scope of bidder.
- 3.1.3 The Octagonal Poles shall be designed to withstand the maximum wind speed as per **IS-875 latest revision & amendments**. The top loading i.e. area and the weight of fixtures are to be considered to calculate maximum deflection of the pole and the same shall meet the requirement of BS: 5649 Part VI 1982/ BSEN 40-3:2000, pr EN-10-3-3.



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- 3.1.4 The pole shaft shall have octagonal cross section and shall be continuously tapered with single longitudinal welding. There shall not be any circumferential welding joint.
- 3.1.5 The octagonal Poles shall have door of approximate 500 mm length at the elevation of 500 mm from the Base plate. The door shall be vandal resistance and shall be weather proof to ensure safety of inside connections. The door shall be flush with the exterior surface and shall have suitable locking arrangement. There shall also be suitable arrangement for the purpose of earthing **at two points**. The pole shall be adequately strengthened at the location of the door to compensate for the loss in section. Lighting pole junction box shall be provided along with octagonal pole as per requirement.
- 3.1.6 Material: Octagonal Poles HT Steel Conforming to grade S355JO.
 Base Plate Fe 410 conforming to IS 226 / IS 2062
 Foundation Bolt EN.8 grade
- 3.1.7 The Octagonal Poles shall be in single section (upto 9/11 Mtr).
- 3.1.8 The poles shall be hot dip galvanized as per IS 2629 / IS 2633 / IS 4759/ BS EN ISO 1461 standards with average coating thickness of 70 micron. The galvanizing shall be done in single dipping.
- 3.1.9 The Octagonal Poles shall be bolted on a foundation with a set of four foundation bolts for greater rigidity.
- 3.1.10 The galvanized mounting bracket shall be supplied along with the Octagonal Poles for installation of the luminaries.
- 3.1.11 The brackets shall be made of specified size NB G.I heavy duty pipe approx. 1.2 M long, bent at the centre at an angle of 105 degrees, with necessary holding brackets, hold fasts etc. with special reducer at end to accommodate type of street light fitting to be fixed. The bracket shall be galvanised.
- 3.1.12 QP enclosed with the specification shall be subject to customer approval without any commercial implication to BHEL
- 3.1.13 Section –II, General requirements shall also be applicable to Octagonal galvanized poles in general.
- 4.0 Supplier to also give the following undertaking in the BOM:
"The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated -----.
Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."
- 5.0 Bidder shall furnish all inputs for foundation design to BHEL during detailed engineering.
- 6.0 **Inspection & Testing:**

Standard quality plan is enclosed. Inspection shall be carried out as per quality plan without any implication on cost and delivery. There shall be no commercial implication to



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BHEL on account of any changes in QP during contract stage.

All equipment to be supplied shall be of type tested design. During detail engineering, the contractor shall submit for Owner's approval the reports of all the type tests as listed in this specification and carried out within last ten years from **08.09.18**. These reports should be for the test conducted on the equipment similar to those proposed to be supplied under this contract and the test(s) should have been either conducted at an independent laboratory or should have been witnessed by a client.

However if the contractor is not able to submit report of the type test(s) conducted within last ten years from the date of bid opening, or in the case of type test report(s) are not found to be meeting the specification requirements, the contractor shall conduct all such tests under this contract at no additional cost to the owner either at third party lab or in presence of client/owners representative and submit the reports for approval.

All acceptance and routine tests as per the specification and relevant standards shall be carried out. Charges for these shall be deemed to be included in the equipment price.

Selection of samples for type test, acceptance test & routine test and acceptance criteria for all the items shall be as per relevant I.S

Galvanizing Tests

The quality of galvanizing shall be smooth, continuous, free from flux stains and shall be inspected visually.

In addition following tests shall be conducted as acceptance tests.

(a) Uniformity of coating - The coating of any article shall withstand for one (1) minute dips in standard copper sulphate solution without the formation of an adherent red spot of metallic copper upon the basic metal.

(b) The quality of cadmium/zinc plating on items with screw threads shall be free from visible defects such as unplated areas, blisters and modules and shall be inspected visually.

(c) In addition, the plating thickness shall be determined microscopically/ chemically or electronically.

7.0 DOCUMENTATION

7.1 Documents required after award of LOI shall be as per NIT.

7.2 Document/drawing submission/re-submission schedule shall be submitted by vendor as required.



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1.0 APPLICABLE STANDARDS & CODES

[A] POLES

- | | | |
|-----|---|------------------------|
| 1. | Tubular steel poles for over head power lines | IS 2713 |
| 2. | Code and practice for design loads for structures | IS 875 Part III, 1987 |
| 3. | Code of practice for general construction in steel | IS 800 |
| 4. | European structural steel standard (Grade of M.S. plate) | BS-EN 10025/ DIN 17100 |
| 5. | Code of practice for phosphating of iron and steel | IS 6005 |
| 6. | Colour for ready mixed paints & enamels | IS 5 |
| 7. | Recommended practice for hot dip galvanising of iron & steel | IS 2629 |
| 8. | Method of testing uniformity of coating on zinc coated articles | IS 2603 |
| 8. | Method of sampling for steel pipes, tubes & fittings | IS 4711 |
| 10. | Method of chemical analysis of pig iron, cast iron and plain carbon & low alloy steel | IS 228 |
| 11. | Steel tubes for structural purposes | IS 1161 |
| 12. | Mechanical testing of metals-Tensile Testing | IS 1608 |
| 13. | Specification for hot dip zinc coatings on structural steel and allied products | IS 4759 |
| 14. | Method for testing uniformity of coating on zinc coated articles | IS 2633 |
| 15. | Specification for structural Steel | IS: 226 |
| 16. | Hot Rolled Medium and High Tensile. Structural Steel | IS 2062 |
| 17. | Method for Verification of Structural Design by Testing | BS 5649 |



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18. Lighting columns. Design and verification. BS EN 40-3-2:2013

[B] ASSEMBLED EQUIPMENT AND COMPONENTS

- | | | |
|----|--|-----------|
| 1. | Low voltage switchgear and controlgear | IEC 60947 |
| 2. | General requirements for enclosures for accessories for household and similar fixed electrical installations | IS 14772 |
| 3. | Electrical accessories- Circuit breaker for overcurrent protection for household and similar installations | IEC 60898 |
| 4. | Low voltage Fuses for voltages not exceeding 1100V AC or 1500V DC | IS 13703 |
| 5. | Visual indicator lamps | IS 1901 |



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2.0 TECHNICAL DETAILS

S. No.	Description	Unit	Value
1.0	System Design Data		
a	Rated voltage	V	415
b	Rated frequency	Hz	50
c	Voltage and frequency variation (permissible)	%	Voltage: $\pm 10\%$ Frequency: $\pm 5\%$
d	Combined voltage & frequency variation (permissible)	%	10% absolute
e	System fault level & duration	kA, sec	10kA for 1 sec
2.0	Lighting Poles		Hot dip galvanized Octagonal pole
2.1	Type of Pole		
a	Octagonal pole type PS-1		9 m, Refer Clause 3.1.9 (a) of Section II
b	Octagonal pole type PS-2		11 m, Refer Clause 3.1.9 (b) of Section II
c	Octagonal pole type PF-1		9 m, Refer Clause 3.1.9 (d) of Section II
d	Octagonal pole type PF-2		9 m, Refer Clause 3.1.9 (e) of Section II
2.2	Material		HT Steel Conforming to grade S355JO
2.3	Tensile Strength	MPa	490-630 N/mm ²
2.4	Mounting arrangement		[] PCC foundation [✓] Base plate
2.5	Grade of concrete		[] M20 [✓] M25 [] M30
2.6	Surface Treatment		[] Painted [✓] Galvanized

2.7 The general dimensions of pole are mentioned below

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Sl.no.	Height (meter)	Top Dia A/F (mm) Min.	Bottom Dia A/F (mm) Min.	Sheet thickness (mm) min.	Base plate dim. (LxBxT) mm. min	Foundation bolt				Ancho r plat thickn ess (mm) min.
						Bolt size (no. x dia.) (mm) min.	PCD (mm)	Bolt length (mm)	Projected Bolt length (mm)	
1	9	70	155	3	260x260x16	4x24	250	750	125	3
2	11	90	210	4	300x300x20	4x24	300	850	125	4

These dimension are subjected to tolerances as per IS-2102 except for bending radius.

2.8	PAINTING details for poles (if applicable)		(AS APPLICABLE)
a	Paint shade as per IS:5		NA
b	Paint Thickness	Microns	NA
2.9	GALVANISATION details for poles		
a	Process		Hot dip
b	Min weight of zinc coating	gm/m ²	460
c	Avg. thickness of zinc coating	Microns	70
3.0	Street Light Junction Box (Integral to pole)		
a	Enclosure material		[] FRP [√] CRCA Sheet.
b	Enclosure thickness	mm	1.6
c	Galvanisation details		
i)	Process		Hot dip
ii)	Min weight of zinc coating	gm/m ²	460
iii)	Avg. thickness of zinc coating	Microns	70
d	Degree of protection		IP-55
4.0	Cable Glands		By vendor for all incoming and outgoing cables at Pole JB
a	Type		[√] Double compression [] Single compression

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b	Material		Brass
c	Nickel Plating provided		☒ Yes ☐ No
d	Size		Cable Gland shall be suitable for cable size : 3.5C-25sqmm
5.0	Cable Lugs		By vendor for all incoming and outgoing cables at Pole JB
a	Type		☒ Crimping type ☐ Ring type
b	Material		Tinned copper
c	Size		Suitable for Cable sizes: 3.5C-25sqmm armoured cable.
6.0	WIND SPEED DATA		As per IS-875 latest revision & amendments. (Wind speed : 39 meters/sec)
7.0	Soil bearing Capacity		8 T/m ²



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S. No.	Description	Unit	Value
1.0	System Design Data		
a	Rated voltage	V	
b	Rated frequency	Hz	
c	Voltage and frequency variation (permissible)	%	
d	Combined voltage & frequency variation (permissible)	%	
e	System fault level & duration	kA, sec	
2.0	Lighting Poles		
2.1	Type of Pole		
a	PS-1 (9m), Refer 3.1.9 Section-II		
b	PS-2 (11 m), Refer 3.1.9 Section-II		
c	PS-4 (11 m), Refer 3.1.9 Section-II		
d	PF-1 (9m), Refer 3.1.9 Section-II		
e	PF-2 (9m), Refer 3.1.9 Section-II		
2.2	Material		
2.3	Tensile Strength	MPa	
2.4	Mounting arrangement		
2.5	Grade of concrete		
2.6	Surface Treatment		
2.7	PAINTING details for poles (if applicable)		
a	Paint shade as per IS:5		
b	Paint Thickness	Microns	



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2.8	GALVANISATION details for poles		
a	Process		
b	Min weight of zinc coating	gm/m2	
c	Avg thickness of zinc coating	Microns	
Note:	Exterior Aluminium paint specified at 2.7 above is not in vendor's scope and is to be carried out at site after installation. It is specified only for completeness of datasheet. However, black bituminous paint & red oxide primer to be applied by vendor as per clause 3.12 of section II.		
3.0	Street Light Junction Box		
a	Enclosure material		
b	Enclosure thickness	mm	
c	Galvanisation details		
i)	Process		
ii)	Min weight of zinc coating	gm/m2	
iii)	Avg. thickness of zinc coating	Microns	
d	Degree of protection		
4.0	Cable Glands		By vendor for all incoming and outgoing cables at Pole JB and feeder panel
a	Type		
b	Material		
c	Nickel Plating provided		
d	Size		
5.0	Cable Lugs		By vendor for all incoming and outgoing cables at Pole JB and feeder panel
a	Type		
b	Material		
c	Size		

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SUB VENDOR'S LIST FOR OCTAGONAL GALVANIZED POLES

The approval on Sub-vendor list shall be obtained from end customer after award of contract & same shall be subjected to modification without any commercial implication to BHEL.

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES1	AC CONTACTORS		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	AC CONTACTORS		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	AC CONTACTORS		TELEMECHANIQUE/ SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	TAKEN OVER BY SCHNEIDER
	AC CONTACTORS		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	AC CONTACTORS		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
	AC LOAD BREAK SWITCH		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
ES2	AC LOAD BREAK SWITCH		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	AC LOAD BREAK SWITCH		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	AC LOAD BREAK SWITCH		KAYCEE	KAYCEE INDUSTRIES LTD., C/O-CMS COMPUTERS LTD., 35A, REAR BLDG., KILOKARI, NEW DELHI-110014	
	AC LOAD BREAK SWITCH		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES3	AC MCCB		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	AC MCCB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	AC MCCB		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	AC MCCB		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	AC MCCB		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	AC MCCB		CROMPTON GREAVES	RAIL TRANSPORTATION SYSTEMS,VANDANA BUILDING, 11, TOLSTOY MARG, TOLSTOY MARG, NEW DELHI, DL 110001	
	ACDB/ DCDB DRAWOUT TYPE		ELECTRO CONTROLS & DEVICES	M/S ELECTRO CONTROLS & DEVICES, F-41, SITE-C, SURAJPUR INDUSTRIAL AREA GREATER NOIDA UTTAR PRADESH :201308	
ES4	ACDB/ DCDB DRAWOUT TYPE		KMG ATOZ SYSTEMS	C-49, SECTOR-81-NOIDA-201305	
	ACDB/ DCDB DRAWOUT TYPE		ASIATIC	A-58 NARAINA IND. AREA, PHASE-I , NEW DELHI 110028	
	ACDB/ DCDB DRAWOUT TYPE		UNILEC ENGINEERS PVT. LTD.	BEHRAMPUR INDUSTRIAL AREA, BEGAMPUR KHATOLA ROAD, GURGAON-122001	
	ACDB/ DCDB DRAWOUT TYPE		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	ACDB/ DCDB DRAWOUT TYPE		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	ACDB/ DCDB DRAWOUT TYPE		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	ACDB/ DCDB DRAWOUT TYPE				

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	ACDB/ DCDB DRAWOUT TYPE		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	ACDB/ DCDB FIXED TYPE		ELECTRO CONTROLS & DEVICES	M/S ELECTRO CONTROLS & DEVICES, F-41, SITE-C, SURAJPUR INDUSTRIAL AREA GREATER NOIDA UTTAR PRADESH :201309	
	ACDB/ DCDB FIXED TYPE		JASPER ENGINEERS PVT. LTD.	A-23, SECTOR - 8, NOIDA-201301	
	ACDB/ DCDB FIXED TYPE		JACKSON ENGINEERS	A-43, HOSEIRY COMPLEX, OPPOSITE NSEZ, NOIDA-201305	
	ACDB/ DCDB FIXED TYPE		SPACEAGE SWITCHGEARS LTD.	68 & 13-A INDUSTRIAL DEVELOPMENT COLONY, MEHRAULI ROAD GURGAON, HARYANA-122001	
	ACDB/ DCDB FIXED TYPE		KMG ATOZ SYSTEMS	C-49, SECTOR-81-NOIDA-201305	
	ACDB/ DCDB FIXED TYPE		ASIATIC	A-58 NARAINA IND. AREA, PHASE-I , NEW DELHI 110028	
	ACDB/ DCDB FIXED TYPE		UNILEC ENGINEERS PVT. LTD.	BEHRAMPUR INDUSTRIAL AREA, BEGAMPUR KHATOLA ROAD, GURGAON-122001	
	ACDB/ DCDB FIXED TYPE		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	ACDB/ DCDB FIXED TYPE		ENPRO ENGG.	NO.995P, DIAMOND PLAZA, 2ND FLOOR, 12TH MAIN ROAD, ANNA NAGAR, CHENNAI-40	
	ACDB/ DCDB FIXED TYPE		ASSOCIATED SWGR & PROJ. LTD.	C-10, UPSIDC, INDUSTRIAL AREA, SITE-IV, KASNA ROAD, GREATER NOIDA-201306	
	ACDB/ DCDB FIXED TYPE		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
	ACDB/ DCDB FIXED TYPE		ECS PRIVATE LTD	7/47, Site 2, Upsidc Ind Area, Loni Road, MOHAN Nagar, Ghaziabad, Uttar Pradesh 201007	
	ACDB/ DCDB FIXED TYPE		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	

ES5

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	ACDB/ DCDB FIXED TYPE		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	ACDB/ DCDB FIXED TYPE		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	ACDB/ DCDB FIXED TYPE		KHOKHAR ELECT. PVT LTD.	C-44, SEC-63, NOIDA-201307	
	ACDB/ DCDB FIXED TYPE		VIDHYUT CONTROLS (INDIA) PVT. LTD.	M/S VIDHYUT CONTROL (I) PVT.LTD. D-12 & 13, SECTOR-17,KAVI NAGAR INDL.AREA, GHAZIABAD – 201002 (DELHI NCR) U.P. INDIA	
	AIR CIRCUIT BREAKER		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	AIR CIRCUIT BREAKER		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015,	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES6	AIR CIRCUIT BREAKER		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	AIR CIRCUIT BREAKER		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	AIR CIRCUIT BREAKER		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	AUXILIARY RELAYS		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
ES7	AUXILIARY RELAYS		ALSTOM LTD	A-7, SEC-65, NOIDA	
	AUXILIARY RELAYS		JYOTI LTD.	JYOTI LIMITED, E&CS DIVISION, 3/15, BIDC, GORWA, VADODARA - 390 016, E-MAIL ID: ECS@JYOTI.COM	
	AUXILIARY RELAYS		OEN INDIA LTD	29/1479, VYTILLA, COCHIN - 682 019 KERALA, INDIA	
	AUXILIARY RELAYS		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	BIMETAL RELAYS		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	BIMETAL RELAYS		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
ES8	BIMETAL RELAYS		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	BIMETAL RELAYS		TELEMECHANIQUE/ SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	TAKEN OVER BY SCHNEIDER

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES9	BUCHHOLZ RELAY		ALSTOM LTD	A-7, SEC-65, NOIDA	
	BUCHHOLZ RELAY		ATVUS INDUSTRIES	689, BLOCK 'O', NEW ALIPORE, CALCUTTA-700053	
	BUCHHOLZ RELAY		INSTRUMENTS & CONTROLS	146,GIDC IND.ESTATE,MAKARPURA, VADODRA-390010	
ES10	CABLE CLAMPS & CABLE TIES		ELECTROMAC IND.CORPN.	27/28 AF,NEW EMPIRE IND.ESTT., R.KRISHNA MANDIR RD.JB NGR ,ANDHERI(E), MUMBAI-400059	
	CABLE CLAMPS & CABLE TIES		INCAB	HARE STREET,KOLKATA,WEST BENGAL-700001	
	CABLE CLAMPS & CABLE TIES		NOVOFLEX MARKETING PVT. LTD.	RAIKVA' - 5TH FLOOR, UNIT-6 3A, RAM MOHAN MULLUCK GARDEN LANE KOLKATA - 700 010	
	CABLE GLANDS	III	ALLIED TRADERS & EXPORTERS	C-124 A, SECTOR-2, NOIDA -201 301, UTTAR PRADESH, INDIA	NOTED
ES11	CABLE GLANDS	III	ARUP ENGG & FOUNDRY WORKS	391/119,PRINCE ANWAR SHAH ROAD, CALCUTTA-700068	NOTED
	CABLE GLANDS	III	BALIGA LIGHTING EQPT.PVT.LTD.	63A,CP RAMASWAMY ROAD, ALWARPET,P.B.No 6910, CHENNAI-600018	NOTED
	CABLE GLANDS	III	COMMET BRASS PRODUCTS	NUTAN CHEMICAL COMPOUND, WALBHAT ROAD, GOREGAON, MUMBAI-400063	NOTED
	CABLE GLANDS	III	DOWELLS	M/S. DOWELLS ELECTRICALS 47/47A, SATGURU INDUSTRIAL ESTATE. OFF AAREY ROAD, GOREGOAN (EAST). MUMBAI 400 063.	NOTED
	CABLE GLANDS	III	ELECTROMAC INDUSTRIES	27/28AF NEW EMPIRE IND.ESTT., R.KRISHNA MANDIR RD.JB NGR ,ANDHERI(E),MUMBAI-400059	NOTED
	CABLE GLANDS	III			

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	CABLE GLANDS	III	INCAB	HARE STREET,KOLKATA, WEST BENGAL-700001	NOTED
ES12	CABLE LUGS	III	DOWELLS	M/S. DOWELLS ELECTRICALS 47/47A, SATGURU INDUSTRIAL ESTATE. OFF AAREY ROAD, GOREGOAN (EAST).	A
	CABLE LUGS	III	M/s Billets Elektro Werke Ltd. (3D)	Umbergaon	A
	CABLE LUGS	III	M/s Chetna	Nasik	A
	CABLE LUGS	III	Additionally any make's model with VDE or CE or UL or CSA marking or BIS approved with CML no. refer note 3.		NOTED
	CABLE LUGS	III	UNIVERSAL MACHINES LTD.	4.B.B.D.BAG (EAST) 90,STEPHEN HOUSE,5TH FLR CALCUTTA-700001	
ES13	D.C. MCCB		CROMPTON GREAVES	RAIL TRANSPORTATION SYSTEMS,VANDANA BUILDING, 11, TOLSTOY MARG, TOLSTOY MARG, NEW DELHI, DL 110001	
	D.C. MCCB		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI- 110015	
	D.C. MCCB		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY,	
	D.C. MCCB		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	EARTH LEAKAGE CB		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI- 110015	
	EARTH LEAKAGE CB		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	EARTH LEAKAGE CB		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES14	EARTH LEAKAGE CB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	EARTH LEAKAGE CB		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	EARTH LEAKAGE CB		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
	EARTH LEAKAGE CB		INDO ASIAN	B-24, PHASE - II, NOIDA - 201305, U.P.	
	EARTH LEAKAGE CB		MDS SWITCHGEAR LTD	314-317 SHAH NAHAR ESTATE	
	EARTH LEAKAGE CB		S&S POWER SWITCHGEAR LTD,	NEW NO. 67, OLD NO. 19, DR. RANGA ROAD, MYLAPORE, CHENNAI - 600004	
ES15	JELLY FILLED CABLES		DELTON SALES LTD.	DELTON HOUSE 4801, BHARAT RAM ROAD, 24 DARYAGANJ N. DELHI-110002	
	JELLY FILLED CABLES		HINDUSTAN CABLES	A-40 ASIAN GAMES VILLAGE RANJIT SINGH BLOCK NEW DELHI-110049	
	JELLY FILLED CABLES		TELELINK-NICCO	NICCO HOUSE 2, HARE STREET, CALCUTTA-700001	
	JELLY FILLED CABLES		USHA BELTRON LTD.	TATISILWAI, ranchi- 835105	
	GI CONDUITS	III	BIS LICENSEE WITH VALID CML NO		A
	GI CONDUIT (EPOXY PAINTED)	III	BIS LICENSEE WITH VALID CML NO		A
ES19	PVC CONDUIT / HUME PIPE / LIGHTING WIRE / HDPE PIPE / STRUCTURAL STEEL	III	BIS LICENSEE / ISI MARKED WITH VALID CML NUMBER		A
ES20	DC CONTACTORS		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	DC CONTACTORS		BHEL (BHOPAL)	HEAVY ELECTRICAL PLANT	
	DC CONTACTORS		ELECTROMAC INDUSTRIES	27/28AF NEW EMPIRE IND. ESTT., R. KRISHNA MANDIR RD. JB NGR, ANDHERI(E), MUMBAI-400059	
	DC CONTACTORS		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	DC CONTACTORS		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	DC CONTACTORS		TELEMECHANIQUE / SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	TAKEN OVER BY SCHNEIDER

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	DC CONTACTORS		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
ES21	CONTROL SWITCHES/ SELECTOR SWITCH		KAYCEE	KAYCEE INDUSTRIES LTD., C/O-CMS COMPUTERS LTD., 35A, REAR BLDG., KILOKARI, NEW DELHI-110014	
	CONTROL SWITCHES/ SELECTOR SWITCH		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	CONTROL SWITCHES/ SELECTOR SWITCH		ALSTOM LTD	A-7, SEC-65, NOIDA	
	CONTROL SWITCHES/ SELECTOR SWITCH		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	CONTROL SWITCHES/ SELECTOR SWITCH		M/s Shrenik & Co.	39A/3, PANCHRATNA INDUSTRIAL ESTATE, SARKHEJ-BAVLA ROAD, CHANGODAR,	
	CONTROL SWITCHES/ SELECTOR SWITCH		RECOM PVT. LTD.	M/S RECOM PVT. LTD., 16A , 2ND FLOOR A, WING RAJ INDUSTRIAL COMPLEX, MILITARY	
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
ES22	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		INDCOIL	PLOT NO. A- 150/ 151, 23RD U ROAD, WAGLE ESTATE, THANE WEST, CST RD, FRIENDS COLONY, HALLOW PUL, KURLA WEST, MUMBAI, MAHARASHTRA 400070	
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		KAPPA ELECTRICALS	KAPPA ELECTRICALS, KAPPA CONSOLIDATED PVT. LTD., 14, CART TRACK ROAD, MADUVANKARAI, CHENNAI - 600 042, INDIA.	
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		LOGICSTAT	B-160, INDUSTRIAL AREA, C BLOCK RD, OKHLA I, OKHLA INDUSTRIAL AREA, NEW DELHI, DL 110020	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		PRECISE ELECTRICALS	47A-49A,CHAKALA ROAD ANDHERI(E),MUMBAI-99 MUMBAI, MAHARASHTRA, INDIA PIN-400 099	
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		UNILEC ENGINEERS PVT. LTD.	PLOT NO: R-247, T.T.C. INDUSTRIAL AREA, M.I.D.C, RABALE, NAVI MUMBAI- 400 701 INDIA	
	CONTROL TRANSFORMER/ WINDING HEATING TRANSFORMER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	FOR CONTROL TRANSFORMER ONLY
ES23	LT- CURRENT TRANSFORMER		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	LT- CURRENT TRANSFORMER		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
	LT- CURRENT TRANSFORMER		INDCOIL	PLOT NO. A- 150/ 151, 23RD U ROAD, WAGLE ESTATE, THANE WEST, CST RD, FRIENDS COLONY, HALLOW PUL, KURLA WEST, MUMBAI, MAHARASHTRA 400070	
	LT- CURRENT TRANSFORMER		KAPPA ELECTRICALS	KAPPA ELECTRICALS, KAPPA CONSOLIDATED PVT. LTD., SOUTHERN ELECTRIKS 14, CART TRACK ROAD, MADUVANKARAI, CHENNAI - 600 042, INDIA.	
	LT- CURRENT TRANSFORMER		PRAGATI ELECTRICALS	280/3,II POKHRAN RD	
	LT- CURRENT TRANSFORMER		PRECISE ELECTRICALS	47A-49A,CHAKALA ROAD ANDHERI(E),MUMBAI-99 MUMBAI, MAHARASHTRA, INDIA PIN-400 099	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	LT- CURRENT TRANSFORMER		SILKAANS ELECT.MFG.CO.PVT.LTD	PLOT NO: R-247, T.T.C. INDUSTRIAL AREA, M.I.D.C , RABALE, NAVI MUMBAI- 400 701 INDIA	
	LT- CURRENT TRANSFORMER		PRAYOG ELECTRICALS PVT. LTD.	GROUND FLOOR, THAKORE INDUSTRIAL COMPUND, STATION ROAD, VIDYA VIHAR (W), NATHANI ROAD , OPP. AMIBIKA TEMPLE,MUMBAI Mumbai - 400086, Maharashtra, India	
	LT- CURRENT TRANSFORMER		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	LT- CURRENT TRANSFORMER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
	LT- POTENTIAL TRANSFORMER		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	LT- POTENTIAL TRANSFORMER		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
	LT- POTENTIAL TRANSFORMER		INDCOIL	PLOT NO. A- 150/ 151, 23RD U ROAD, WAGLE ESTATE, THANE WEST, CST RD, FRIENDS COLONY, HALLOW PUL, KURLA WEST, MUMBAI, MAHARASHTRA 400070	
	LT- POTENTIAL TRANSFORMER		KAPPA ELECTRICALS	KAPPA ELECTRICALS, KAPPA CONSOLIDATED PVT. LTD., SOUTHERN ELECTRIKS 14, CART TRACK ROAD, MADUVANKARAI, CHENNAI - 600 042, INDIA.	
	LT- POTENTIAL TRANSFORMER		PRAGATI ELECTRICALS	280/3,II POKHRAN RD	
	LT- POTENTIAL TRANSFORMER				
	LT- POTENTIAL TRANSFORMER				

FC24

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES24	LT- POTENTIAL TRANSFORMER		PRECISE ELECTRICALS	47A-49A,CHAKALA ROAD ANDHERI(E),MUMBAI-99 MUMBAI, MAHARASHTRA, INDIA PIN-400 099	
	LT- POTENTIAL TRANSFORMER		SILKAANS ELECT.MFG.CO.PVT.LTD	PLOT NO: R-247, T.T.C. INDUSTRIAL AREA, M.I.D.C, RABALE, NAVI MUMBAI- 400 701 INDIA	
	LT- POTENTIAL TRANSFORMER		PRAYOG ELECTRICALS PVT. LTD.	GROUND FLOOR, THAKORE INDUSTRIAL COMPU,ND, STATION ROAD, VIDYA VIHAR (W), NATHANI ROAD , OPP. AMIBIKA TEMPLE,MUMBAI Mumbai - 400086, Maharashtra, India	
	LT- POTENTIAL TRANSFORMER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
	LT- POTENTIAL TRANSFORMER				
ES25	DC SWITCH		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	DC SWITCH		KAYCEE	KAYCEE INDUSTRIES LTD., C/O-CMS COMPUTERS LTD., 35A, REAR BLDG., KILOKARI, NEW DELHI-110014	
	DC SWITCH		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	DISTRIBUTION BOX		M/S SHRENIK & CO.	39A/3, PANCHRATNA INDUSTRIAL ESTATE, SARKHEJ-BAVLA ROAD, CHANGODAR, AHMEDABAD – 382 213	
ES26			BAJAJ ELECTRICALS	BAJAJ ELECTRICALS LTD. ENGINEERING & PROJECTS BU (NORTH) 3rd FLOOR, GULMOHARHOUSE, COMMUNITY CENTRE 161/B-4, GAUTAM NAGAR, YUSUF SARAI NEW DELHI – 110049	
ES27	EMER. PORTABLE LTG. SET				

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ES28	EMER. PORTABLE LTG. SET		BAJAJ ELECTRICALS	BAJAJ ELECTRICALS LTD. ENGINEERING & PROJECTS BU (NORTH) 3rd FLOOR, GULMOHARHOUSE, COMMUNITY CENTRE 161/B-4, GAUTAM NAGAR, YUSUF SARAI NEW DELHI – 110049	
	FUSE BASE		INDO ASIAN	B-24, PHASE - II , NOIDA - 201305, U.P.	
	FUSE BASE		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	FUSE BASE		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI- 110015	
	FUSE BASE		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI- 110020	
	FUSE BASE		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	FUSE BASE		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA- 121003	
	FUSE BASE		SPACEAGE SWITCHGEARS LTD.	68 & 13-A INDUSTRIAL DEVELOPMENT COLONY, MEHRAULI ROAD GURGAON, HARYANA-122001	
	FUSE BASE		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	FUSE BASE		ALSTOM LTD	A-7, SEC-65, NOIDA	
	FUSE BASE		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
	HRC FUSES		INDO ASIAN	B-24, PHASE - II , NOIDA - 201305, U.P.	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES29	HRC FUSES		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	HRC FUSES		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	HRC FUSES		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	HRC FUSES		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	HRC FUSES		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
	HRC FUSES		SPACEAGE SWITCHGEARS LTD.	68 & 13-A INDUSTRIAL DEVELOPMENT COLONY, MEHRAULI ROAD GURGAON, HARYANA-122001	
	HRC FUSES		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	HRC FUSES		ALSTOM LTD	A-7, SEC-65, NOIDA	
	HRC FUSES		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
	GI WIRE & FLAT	III	INDUSTRIAL PERFORATION (I) PVT.LTD.	MR. A. K. SAHA 327, R.N.GUHA ROAD, DUM DUM KOLKATA-West Bengal-India Phone- 9830241788 Pincode : 700028 Email : ipipl@cal2.vsnl.net.in	
	GI WIRE & FLAT	III	INDIA ELECTRICALS SYNDICATE	Mr. Suresh Kumar Agarwal 55, Ezra Street, Kolkata-West Bengal-India Phone- 033-22354047 Pincode : 700001 Email : cabletray@vsnl.com	
	GI WIRE & FLAT	III	INDMARK FORMTECH PVT. LTD.	Mr. Narendra R. Meher J Block, Plot No.-375, MIDC BHOSARI PUNE-MAHARASHTRA-INDIA Phone- 020-27130546 Pincode : 411026 Email : indmarkformtech@vsnl.net	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES31	GI WIRE & FLAT	III	PREMIER POWER PRODUCTS (CAL) PVT. LTD.	Chatterjee International Centre, 33A, Jawaharlal Nehru Road, 6th Floor, Suit No. - 11A, Kolkata, - West Bengal-India Phone- 9331008739 Pincode : 700071 Email : hemantdaga@dagaventures.com	
	GI WIRE & FLAT	III	PATNY SYSTEMS (P) LTD	PATNY PLAZA 160 , SARDAR PATEL ROAD SEUNDRABAD SECUNDRABAD-TELANGANA-INDIA Phone- 040-27902451 Pincode : 500003 Email : mr.mkt@patnysystems.com	
	GI WIRE & FLAT	III	PASSIVE INFRA PROJECTS PVT. LTD.	MR. VARUN AGRAWAL 182, VAISHALI, PITAMPURA Delhi-DELHI-INDIA Phone- 9871183059 Pincode : 110088 Email : ATANU.SAHA@PASSIVEINFRA.COM	
	GI WIRE & FLAT	III	RUKMANI ELECTRICAL & COMPONENTS PVT LTD	11A , MAHARISHI DEBENDRA ROAD 1ST FL, ROOM NO.4 KOLKATA-WEST BENGAL-INDIA Phone- Pincode : 700007 Email : maruthikabra@gmail.com	
	GI WIRE & FLAT	III	RATAN PROJECTS & ENGINEERING CO. PVT.LTD.	MR. G.D. SINGHEE/MR. MAHESH SINGHEE 26, P.K. TAGORE STREET, MAIN BUILDING KOLKATA-WEST BENGAL-INDIA Phone- 9830177331 Pincode : 700006 Email : mahesh@ratans.com	
	GI WIRE & FLAT	III	RABI ENGINEERING WORKS PVT. LTD.	MR. TAPAN KUMAR SEN/MR. SIDDHARTHA 327, R.N. GUHA ROAD, DUM DUM, KOLKATA-WEST BENGAL-INDIA Phone- 9748753002 Pincode : 700028 Email : rabiengineering@gmail.com	
	GI WIRE & FLAT	III	RAJASTHAN METAL SMELTING CO.	Mr. R. K. Tibrewala D-80, Road No. 7, V.K.I.A., Jaipur-Rajasthan-India Phone- 0141-2332269 Pincode : 302013 Email : info@rmscoindia.com	
	GI WIRE & FLAT	III	SARAL INDUSTRIES	Mr. Y.K. Gupta L-1, L-2, Industrial Area-1 Sultanpur Road Rae Bareilly-Uttar Pradesh-India Phone- 0535-2702474 Pincode : 229010 Email : saralindustries@gmail.com	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
E533	GI WIRE & FLAT	III	PARCO Engineers Pvt. Ltd.	401, skyline Epitom Building, Near to Jolly Gym Khana, Kirol Road , Vidhyavihar, MH 400086 India	
	GI WIRE & FLAT	III	UNITECH FABRICATORS and ENGINEERS PVT LTD	INDRAPRASHTHA APARTMENT 24, M.B.RAOD , BIRATI KALABAGAN KOLKATA KOLKATA-WEST BENGAL-INDIA Phone- Pincode : 700051 Email : ufepl@vsnl.net; ufepl@rediffmail.com	
	GI WIRE & FLAT	III	BIS LICENSEE / ISI MARKED WITH VALID CML NUMBER		
	IND.POWER & WLDG SOCKETS		CROMPTON GREAVES	3RD FLOOR, EXPRESS BUILDING,9-10, BAHADUR SHAH ZAFAR MARG, NEAR ITO CROSSING,NEW DELHI-110002, INDIA	
	IND.POWER & WLDG SOCKETS		CYCLO ELECTRIC DEVICE & SERV.CO.	: A-3, NEAR ANTHEM BIOSCIENCE, KSSIDC INDUSTRIAL AREA, BOMMASANDRA, BOMMASANDRA INDUSTRIAL AREA, BANGALORE, KARNATAKA 560099	
	IND.POWER & WLDG SOCKETS		BCH	20/4, MATHURA ROAD, FARIDABAD - 121006, HARYANA, INDIA	
	IND.POWER & WLDG SOCKETS		BEST & CROMPTON	Best & Crompton Engineering Ltd	BEST &
	IND.POWER & WLDG SOCKETS		AJIMERA INDUSTRIES & ENGG. WORKS	AJIMERA INDL. AND ENGG. WORKS. AJIMERA HOUSE, A-61 / KHAIRANE MIDC. , TTC INDL. AREA, NAVI MUMBAI – 400705.	
	IND.POWER & WLDG SOCKETS				
E534	INTERPOSING RELAY		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
	INTERPOSING RELAY		ALSTOM LTD	A-7, SEC-65, NOIDA	
	INTERPOSING RELAY		JYOTI LTD.	JYOTI LIMITED, E&CS DIVISION,3/15, BIDC, GORWA,VADODARA - 390 016, E-MAIL ID: ECS@JYOTI.COM	
	INTERPOSING RELAY		OEN INDIA LTD	29/1479, VYTILLA, COCHIN - 682 019 KERALA, INDIA	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES35	INTERPOSING RELAY		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	INDICATING LAMPS		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
	INDICATING LAMPS		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	INDICATING LAMPS		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
	INDICATING LAMPS		VAISHNO(HOTLINE SWGR.& CONTROL)	G-19, SECTOR - 11, NOIDA - 201301, UTTAR PRADESH, INDIA	
	INDICATING LAMPS		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	INDICATING LAMPS		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	INDICATING LAMPS		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	JUNCTION BOXES (NON FLAME PROOF)	III	JASPER ENGINEERES PVT. LTD.	A-23, SECTOR - 8, NOIDA-201301	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	Electro Controls & Devices	M/S ELECTRO CONTROLS & DEVICES, F-41, SITE-C, SURAJPUR INDUSTRIAL AREA GREATER NOIDA, UTTAR PRADESH :201308	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	M/s Shrenik & Co.	39A/3, PANCHRATNA INDUSTRIAL ESTATE, SARKHEJ-BAVLA ROAD, CHANGODAR, AHMEDABAD – 382 213	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	M/s PHOENIX MECANO LTD.,	388 BHARE, TALUKA MULSHI, POST GHOTAWADE, PIRANGOOT, INDUSTRIAL AREA, PUNE-412115	NOTED ; NOTE-2

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES36	JUNCTION BOXES (NON FLAME PROOF)	III	Adroit Control Engineers Pvt. Ltd.	M/S ADROIT CONTROL ENGINEERS PVT.LTD. PLOT-3, KRISHNA INDL. AREA, SECTOR-25 FARIDABAD – 121004	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	M/s PHOENIX MECANO LTD.,	388 BHARE, TALUKA MULSHI, POST GHOTAWADE, PIRANGOOT, INDUSTRIAL AREA, PUNE-412115	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	MIKA ENGINEERS	BRANCH OFFICE : 'D'-101, DHEERAJ HERITAGE RESIDENCY II, SHASTRI NAGAR, SANTACRUZ (W), MUMBAI 400 054.	TYPE-S ONLY NOTED; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	M/s PHOENIX MECANO LTD.,	388 BHARE, TALUKA MULSHI, POST GHOTAWADE, PIRANGOOT, INDUSTRIAL AREA, PUNE-412115	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	BAJAJ ELECTRICALS	BAJAJ ELECTRICALS LTD. ENGINEERING & PROJECTS BU (NORTH) 3rd FLOOR, GULMOHARHOUSE, COMMUNITY CENTRE 161/B-4, GAUTAM NAGAR, YUSUF SARAI NEW DELHI – 110049	NOTED ; NOTE-2

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	JUNCTION BOXES (NON FLAME PROOF)	III	AJMER INDUSTRIES & ENGG. WORKS	AJMER INDL AND ENGG. WORKS. AJMER HOUSE, A-61 / KHAIRANE MIDC. , TTC INDL AREA, NAVI MUMBAI – 400705.	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	S.B. ELECTRICAL ENGINEERING CORPORATION	03, SARDAR GRIHA BUILDING, LOHAR CHAWAL, MUMBAI-400002	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	RITTAL INDIA PVT. LTD.	Espire Building ,Level -1 A-41, Mohan Co-Operative Industrial Estate ,Mathura Road, New Delhi -110044	NOTED ; NOTE-2
	JUNCTION BOXES (NON FLAME PROOF)	III	HPL ELECTRIC AND POWER LTD.	Works Address: Village Shavella, PO:Jabli, Teh- Kasauli, Dist-Solan, Himachal Pradesh-173209	NOTED ; NOTE-2
ES37	JUNCTION BOXES (FLAME PROOF)	II	SUDHIR SWITCHGEAR	305/6, APEEJAY HOUSE, 130, BOMBAY SAMACHAR MARG, MUMBAI - 400 023. INDIA	NOTED ; NOTE-2
ES45	LIGHTING SWITCH , SOCKET & S/F UNIT		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	
	LIGHTING SWITCH , SOCKET & S/F UNIT		ANCHOR	STEEL HOUSE, B WING, PLOT NO. 24, MAHAL INDUSTRIAL ESTATE, MAHAKALI CAVES ROAD, NEAR PAPER BOX, ANDHERI (E), MUMBAI, MAHARASHTRA - 400093	
	LIGHTING SWITCH , SOCKET & S/F UNIT		KAYCEE	KAYCEE INDUSTRIES LTD., C/O-CMS COMPUTERS LTD., 35A, REAR BLDG., KILOKARI, NEW DELHI-110014	
	LIGHTING SWITCH , SOCKET & S/F UNIT		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES47	LIGHTING SWITCH , SOCKET & S/F UNIT		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	LIGHTING SWITCH , SOCKET & S/F UNIT		INDO ASIAN	B-24, PHASE - II , NOIDA - 201305, U.P.	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		ASIATIC	A-58 NARAINA IND. AREA, PHASE-I , NEW DELHI 110028	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		EVERGREEN ENGG. CO.	EVERGREEN ENGG COMPANY WORKS-5, PLOT NO. 9,10,11,12, SURVEY NO. 242, CHINCH PADA, VASAI EAST-401208	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		TECNIC CONTROLS	703, MADHAVA, BANDRA, KURLA COMPLEX, BANDRA EAST, MUMBAI, MAHARASHTRA 400051	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		EX-PROTECTA LIGHTING EQUIPMENT	305-306, GIDC ESTATE, VITHAL UDYOGNAGAR - 388121 DIST. ANAND, GUJARAT 388121 INDIA	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		BALIGA ELECTRICALS	63A, CP RAMASWAMY ROAD, PB NO 6910, CHENNAI-600018	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		ENPRO ENGG.	NO.995P, DIAMOND PLAZA, 2ND FLOOR, 12TH MAIN ROAD, ANNA NAGAR, CHENNAI-40	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		STERLING SWGR CONTROL PVT.LTD.	P.O. BOX NO. 17023, SORAB HOUSE, 2ND FLOOR, 555, S.B. MARG, DADAR, MUMBAI - 400028, MAHARASHTRA, INDIA	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		VAISHNO(HOTLINE SWGR & CONTROL)	G-19, SECTOR - 11, NOIDA - 201301, UTTAR PRADESH, INDIA	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		JASPER ENGINEERS PVT. LTD.	A-23, SECTOR - 8, NOIDA-201301	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		KMG ATOZ SYSTEMS	C-49, SECTOR-81-NOIDA-201305	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		UNILEC ENGINEERS PVT. LTD.	BEHRAMPUR INDUSTRIAL AREA, BEGAMPUR KHATOLA ROAD, GURGAON-122001	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		CANDS	J/202, ANSA INDUSTRIAL ESTATE, SAKI VIHAR ROAD, SAKINAKA, ANDHERI (EAST), MUMBAI-72	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		TECKNIC CONTROLS	703, MADHAVA, BANDRA, KURLA COMPLEX, BANDRA EAST, MUMBAI, MAHARASHTRA 400051	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		UNITED ELECTRIC	97 UDYOG VIHAR PHASE-I, GURGAON 122015, HARYANA	
	LOCAL PUSH BUTTON STATION (NON FLAME PROOF)		M/s Shrenik & Co.	39A/3, PANCHRATNA INDUSTRIAL ESTATE, SARKHEJ-BAVLA ROAD, CHANGODAR, AHMEDABAD – 382 213	
	LOCAL PUSH BUTTON STATION (FLAME PROOF)				
	LIGHTING PANEL (FLAME PROOF)		BALIGA ELECTRICALS	63A, CP RAMASWAMY ROAD, PB NO 6910, CHENNAI-600018	
ES48					

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES49	LIGHTING PANEL (FLAME PROOF)		SUDHIR SWITCHGEAR	305/6, APEEJAY HOUSE, 130, BOMBAY SAMACHAR MARG, MUMBAI - 400 023. INDIA	
	LIGHTING PANEL (NON FLAME PROOF)		MIKA ENGINEERS	D'-101, DHEERAJ HERITAGE RESIDENCY II, SHASTRI NAGAR, SANTACRUZ (W), MUMBAI 400 054.	
	LIGHTING PANEL (NON FLAME PROOF)		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	
	LIGHTING PANEL (NON FLAME PROOF)		Vidhyut Controls (India) Pvt. Ltd.	M/S VIDHYUT CONTROL (I) PVT.LTD. D-12 & 13, SECTOR-17,KAVI NAGAR INDL-AREA,GHAZIABAD – 201002 (DELHI NCR) U.P. INDIA	
	LIGHTING PANEL (NON FLAME PROOF)		KMG ATOZ SYSTEMS	"ATOZ HOUSE" C-49, SECTOR-81, GAUTAM BUDDH NAGAR, NOIDA – 201 305 U. P. (INDIA)	
ES50	LIGHTING PANEL (NON FLAME PROOF)		UNILEC ENGINEERS PVT. LTD.	BEHRAMPUR INDUSTRIAL AREA, BEGAMPUR KHATOLA ROAD, GURGAON-122001	
	LIGHTING PANEL (NON FLAME PROOF)		AVAIDS TECHNOVATORS LTD.	PLOT NO.25 ,SECTOR-3,IMT-MANESAR, GURGEON-122050 (HARYANA)	
	LIGHTING PANEL (NON FLAME PROOF)		Adroit Control Engineers Pvt.Ltd.	M/S ADROIT CONTROL ENGINEERS PVT.LTD. PLOT-3, KRISHNA INDL. AREA, SECTOR-25 FARIDABAD – 121004	
	LIGHTING PANEL (NON FLAME PROOF)		JACKSON ENGINEERS	A-43, HOSEIRY COMPLEX, OPPOSITE NSEZ, NOIDA-201305	
	LIGHTING PANEL (NON FLAME PROOF)				

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
	LIGHTING PANEL (NON FLAME PROOF)		MILESTONE SWITCHGEARS PVT. LTD.	MILESTONE SWITCHGEARS PVT. LTD. 97, UDYOG VIHAR, PHASE-1, GURGEON HARYANA - 122016	
	LIGHTING PANEL (NON FLAME PROOF)		Positronics Pvt. Ltd.	POSITRONICS HOUSE, 882/ 2, G.I.D.C. MAKARPURA, VADODARA 390010 GUJARAT	
	LIGHTING PANEL (NON FLAME PROOF)		Pyrotech Electronics Pvt. Ltd.	M/s Pyrotech Electronics Pvt. Ltd.(Unit -1) Led Light, Sensor Division F-16A, Road No.3 Mewar Industrial Area, Madri Udaipur -313003, Rajasthan,	
	MCB		MDS SWITCHGEAR LTD	314-317 SHAH NAHAR ESTATE	
ES51	MCB		INDO ASIAN	B-24, PHASE - II, NOIDA - 201305, U.P.	
	MCB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	MCB		S&S POWER SWITCHGEAR LTD,	NEW NO. 67, OLD NO. 19, DR. RANGA ROAD, MYLAPORE, CHENNAI - 600004	
	MCC (FIXED TYPE)		SPACEAGE SWITCHGEARS LTD.	68 & 13-A INDUSTRIAL DEVELOPMENT COLONY, MEHRAULI ROAD GURGAON, HARYANA-122001	
ES52	MCC (FIXED TYPE)		ASSOCIATED SWGR & PROJ.LTD.	C-10, UPSIDC, INDUSTRIAL AREA, SITE-IV, KASNA ROAD, GREATER NOIDA-201306	
	MCC (FIXED TYPE)		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
E553	LV MOTORS (NON FLAME PROOF)		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
	LV MOTORS (NON FLAME PROOF)		BHARAT BIJLEE LTD.	BHARAT BIJLEE LIMITED, 1ST FLOOR, 7-B, RAJINDRA PARK, PUSA ROAD, NEW DELHI - 110 060.	
	LV MOTORS (NON FLAME PROOF)		CROMPTON GREAVES	3RD FLOOR, EXPRESS BUILDING,9-10, BAHADUR SHAH ZAFAR MARG, NEAR ITO CROSSING,NEW DELHI-110002, INDIA	
	LV MOTORS (NON FLAME PROOF)		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	LV MOTORS (NON FLAME PROOF)		KIRLOSKAR ELECTRIC CO LTD.	P.O. BOX 5555, , MALLESWARAM WEST ,BANGALORE 560055	
	LV MOTORS (NON FLAME PROOF)		LAXMI HYDRAULICS PVT. LTD	129/130, INDUSTRIAL ESTATE PATIL NAGAR, HOTGI ROAD SOLAPUR-413003, MAHARASHTRA	APPROVED UPTO 200KW
	LV MOTORS (NON FLAME PROOF)		MARATHON	MARATHON ELECTRIC INDIA PRIVATE LTD.SECTOR - 11, MODEL TOWN, FARIDABAD - 121006	
	LV MOTORS (NON FLAME PROOF)		NGEF	POCKET NO.10, FLAT NO. 37 & 38, EXPANDABLE DDA FLATS, NASIRPUR DWARKA, PHASE-I NEW	
	LV MOTORS (NON FLAME PROOF)		RAJINDRA ELECT INDUSTRIES	14 SHAH IND.ESTATE VEERA DESAI RD,ANDHERI(W) MUMBAI-400053	
	LV MOTORS (NON FLAME PROOF)		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
E554	LV MOTORS (FLAME PROOF)		RAJINDRA ELECT INDUSTRIES	14 SHAH IND.ESTATE VEERA DESAI RD,ANDHERI(W) MUMBAI-400053	
E555	MODULAR SWITCH BOARD		ANCHOR	STEEL HOUSE, B WING, PLOT NO. 24, MAHAL INDUSTRIAL ESTATE, MAHAKALI CAVES ROAD, NEAR PAPER BOX, ANDHERI (E), MUMBAI, MAHARASHTRA:- 400093	
	MODULAR SWITCH BOARD		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	
	MODULAR SWITCH BOARD		HAVELLS INDIA LIMITED	QRG TOWERS , 2D SECTOR-126, NOIDA- 201301	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES56	OIL TEMP INDICATOR		PERFECT CONTROLS	BLOCK NO. 7, NORTH ROAD, WEST C.I.T. NAGAR, CHENNAI - 600035, INDIA.	
	OIL TEMP INDICATOR		PRECIMEASURE	M/S. PRECIMEASURE CONTROLS PVT. LTD. 168/C, INDUSTRIAL SUBURB, PEENYA 3RD PHASE, BANGALORE - 560058. KARNATAKA, INDIA	
ES57	PROTECTION - RELAYS (PNUEMATIC)		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	PROTECTION - RELAYS (PNUEMATIC)		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	PROTECTION - RELAYS (PNUEMATIC)		GE-MULTILINE, GE INDIA INDUSTRIAL PVT. LTD.	NO. 90- B, ELECTRONICS CITY, HOSUR ROAD, BENGALURU - 560016, KARNATAKA	
	PROTECTION - RELAYS (PNUEMATIC)		SCHWEITZER ENGG. LAB (SEL)	406, BHIKAJI CAMA BHAVAN, BHIKAJI CAMA PLACE, BHIKAJI CAMA PLACE, MOHAMMADPUR, RK PURAM, NEW DELHI, DL 110066	
	PROTECTION - RELAYS (PNUEMATIC)		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	PROTECTION - RELAYS (PNUEMATIC)		ALSTOM LTD	A-7, SEC-65, NOIDA	
	PROTECTION - RELAYS (PNUEMATIC)		ABB	14, MATHURA ROAD, FARIDABAD, HARYANA-121003	
	PROTECTION - RELAYS (PNUEMATIC)		AVK-SEG & CONTROLS(I) LTD	C-60, NOIDA PHASE-II	
	PROTECTION - RELAYS (NUMERICAL)		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	PROTECTION - RELAYS (NUMERICAL)		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
ES58	PROTECTION - RELAYS (NUMERICAL)		GE-MULTILINE, GE INDIA INDUSTRIAL PVT. LTD.	NO. 90- B, ELECTRONICS CITY, HOSUR ROAD, BENGALURU - 560016, KARNATAKA	
	PROTECTION - RELAYS (NUMERICAL)		SCHWEITZER ENGG. LAB (SEL)	406, BHIKAJI CAMA BHAVAN, BHIKAJI CAMA PLACE, BHIKAJI CAMA PLACE, MOHAMMADPUR, RK PURAM, NEW DELHI, DL 110066	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES59	RECEPTACLES - DECORATIVE		ANCHOR	STEEL HOUSE, B WING, PLOT NO. 24, MAHAL INDUSTRIAL ESTATE, MAHAKALI CAVES ROAD, NEAR PAPER BOX, ANDHERI (E), MUMBAI, MAHARASHTRA. - 400093	
	RECEPTACLES - DECORATIVE		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	
	RECEPTACLES - DECORATIVE		BAJAJ ELECTRICALS	BAJAJ ELECTRICALS LTD. ENGINEERING & PROJECTS BU (NORTH) 3rd FLOOR, GULMOHARHOUSE, COMMUNITY CENTRE 161/B-4, GAUTAM NAGAR, YUSUF SARAI NEW DELHI – 110049	
	RECEPTACLES - DECORATIVE		AJMERIA INDUSTRIES & ENGG. WORKS	AJMERIA INDL. AND ENGG. WORKS. AJMERIA HOUSE, A-61 / KHAIRANE MIDC. , TTC INDL. AREA, NAVI MUMBAI – 400705.	
	RESISTOR FOR DC STARTERS		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
ES60	RESISTOR FOR DC STARTERS		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	RESISTOR FOR DC STARTERS		RSI	60,IND.DEV.COLONY, MEHRAULI ROAD, GURGAON-122001	
	RESISTOR FOR DC STARTERS		SPEED-O-CONTROL	C-16, NAND JYOT INDUSTRIAL ESTATE, SAFED POOL, ANDHERI-KURLA ROAD, SAFED POOL, MAGAN NATHURAM RD, SHIVAJI NAGAR, SAKINAKA, MUMBAI, MAHARASHTRA 400072	
	RESISTOR FOR DC STARTERS		SUSHIL ENGG CORP.	D-7, GHATKOPAR INDUSTRIAL ESTATE, OFF LBS MARG, GHATKOPAR (WEST), AMRUT NAGAR RD, AMRUT NAGAR, GHATKOPAR WEST, MUMBAI, MAHARASHTRA 400086	
	RESISTOR FOR DC STARTERS				

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES61	SWITCH BOX		ANCHOR	STEEL HOUSE, B WING, PLOT NO. 24, MAHAL INDUSTRIAL ESTATE, MAHAKALI CAVES ROAD, NEAR PAPER BOX, ANDHERI (E), MUMBAI, MAHARASHTRA - 400093	
	SWITCH BOX		ELEXPRO ELECTRICALS PVT/ LTD.	C 1/27 & 37 GIDC KABILPORE NAVSARI-396424	
	SWITCH BOX		BAJAJ ELECTRICALS	BAJAJ ELECTRICALS LTD. ENGINEERING & PROJECTS BU (NORTH) 3rd FLOOR, GULMOHARHOUSE, COMMUNITY CENTRE 161/B-4, GAUTAM NAGAR, YUSUF SARAI NEW DELHI – 110049	
	SWITCH BOX		AJIMERA INDUSTRIES & ENGG. WORKS	AJIMERA INDL. AND ENGG. WORKS. AJIMERA HOUSE, A-61 / KHAIRANE MIDC. , TTC INDL. AREA, NAVI MUMBAI – 400705.	
	SWITCH BOX		S.B. ELECTRICAL ENGINEERING CORPORATION	03, SARDAR GRIHA BUILDING, LOHAR CHAWAL, MUMBAI-400002	
	TERMINAL BLOCKS		WAGO-CONTROLS	C 27, GREATER NOIDA, SECTOR 58, C BLOCK, SECTOR 58, NOIDA, UTTAR PRADESH 201307	
ES62	TERMINAL BLOCKS		CONNECT WELL	309A/4, 3RD FLOOR, KALKAJI, OKHLA IND AREA PH-2, GOVINDPURI, NEW DELHI, DL 110019	
	TERMINAL BLOCKS		ELMEX CONTROLS PVT. LTD.	12,G.I.D.C.ESTATE,MUKARPURA ROAD,VADODARA-390010	
	TERMINAL BLOCKS		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
	TERMINAL BLOCKS		TECHNOPLAST	OPP.I.M.INTER COLLEGE, BEGUM SARAI KHURD ROAD, AMROHA - 244221, U.P.	
	TERMINAL BLOCKS				

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES63	TERMINAL BLOCKS		M/s PHOENIX MECANO LTD.,	388 BHARE, TALUKA MULSHI, POST GHOTAWADE, PIRANGOOT, INDUSTRIAL AREA, PUNE-412115	
	TERMINAL BLOCKS		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
	TIMERS - PNEUMATIC		BCH	20/4, MATHURA ROAD, FARIDABAD, HARYANA-121006	
	TIMERS - PNEUMATIC		ALSTOM LTD	A-7, SEC-65, NOIDA	
	TIMERS - PNEUMATIC		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	TIMERS - PNEUMATIC		TELEMECHANIQUE/SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	TAKEN OVER BY SCHNEIDER
ES64	TIMERS - PNEUMATIC		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	TIMERS - PNEUMATIC		ELECTRONICAUTOMATION PVT. LTD.	20, KHB INDUSTRIAL AREA YELAHANKA BANGLORE-560064	
ES65	TRANSUCERS		ESSEN DEINKI	FLAT NO. 502, SKYLINE HOUSE 85, NEHRU PLACE NEW DELHI	
ES66	TRANSUCERS		AUTOMATIC ELECTRIC LTD.	ADDRESS : 96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
	TRANSUCERS		SOUTHERN TRANSDUCERS	INTERTECH B-83, FLATTED FACTORY COMPLEX, NEAR MODI MILLS, OKHLA, NEW DELHI-110020	
	WINDING TEMP INDICATOR		PERFECT CONTROLS	OFFICE ADDRESS: 7, NORTH ROAD, WEST C.I.T. NAGAR, CHENNAI - 600035, INDIA.	
	WINDING TEMP INDICATOR		PRECIMEASURE	M/S. PRECIMEASURE CONTROLS PVT. LTD. 168/C, INDUSTRIAL SUBURB, PEENYA 3RD PHASE, BANGALORE - 560058. KARNATAKA, INDIA	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES67	RECEPTACLE (FLAME PROOF)		BALIGA ELECTRICALS	63A,CP RAMASWAMY ROAD, PB NO 6910, CHENNAI-600018	
	RECEPTACLE (FLAME PROOF)		SUDHIR SWITCHGEAR	305/6, APEEJAY HOUSE, 130, BOMBAY SAMACHAR MARG, MUMBAI - 400 023. INDIA	
	RECEPTACLE (FLAME PROOF)		FCG FLAME PROOF CONTROL GEAR	A1/53, SHAH & NAHAR INDUSTRIAL ESTATE, SITARAM JADHAV ROAD, LOWER PAREL (W), MUMBAI-400 013	
	RECEPTACLE (NON FLAME PROOF)		AJMERIA INDUSTRIES & ENGG. WORKS	AJMERIA INDL AND ENGG. WORKS. AJMERIA HOUSE, A-61 / KHAIRANE MIDC. , TTC INDL AREA, NAVI MUMBAI – 400705.	
ES68	RECEPTACLE (NON FLAME PROOF)		CROMPTON GREAVES	3RD FLOOR, EXPRESS BUILDING,9-10, BAHADUR SHAH ZAFAR MARG, NEAR ITO CROSSING,NEW DELHI-110002, INDIA	
	RECEPTACLE (NON FLAME PROOF)		CYCLO ELECTRIC DEVICE & SERV.CO.	: A-3, NEAR ANTHEM BIOSCIENCE, KSSIDC INDUSTRIAL AREA, BOMMASANDRA, BOMMASANDRA INDUSTRIAL AREA, BANGALORE, KARNATAKA 560099	
	RECEPTACLE (NON FLAME PROOF)		BCH	20/4, MATHURA ROAD, FARIDABAD - 121006, HARYANA, INDIA	
	RECEPTACLE (NON FLAME PROOF)		BEST & CROMPTON	BEST & CROMPTON ENGINEERING LTD 28C, AMBATTUR INDUSTRIAL ESTATE (NORTH) AMBATTUR, CHENNAI - 600 098	
	ENERGY METER (ANALOG)		BHEL (EDN)	MYSORE ROAD,BANGALORE-560026	
	ENERGY METER (ANALOG)		SIMCO ENGG. LTD	NO. 126, K ROAD, TIRUCHIRAPPALLI -620001, TAMIL NADU	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES72	ENERGY METER (ANALOG)		RISHABH INST.PVT LTD	RISHABH INSTRUMENTS PVT. LTD. F-31, MIDC, SATPUR NASHIK - 422007 MAHARASHTRA INDIA	
	ENERGY METER (ANALOG)		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
	ENERGY METER (ANALOG)		CONSERVE SYSTEMS PVT. LTD.(SCHNEIDER)	87, 1ST FLOOR INDUSTRIAL DEVELOPMENT COLONY (IDC) MEHRAULI ROAD, UGURGAON 122001 HARYANA, INDIA.	
ES73	ENERGY METER (DIGITAL)		CONSERVE SYSTEMS PVT. LTD.(SCHNEIDER)	87, 1ST FLOOR INDUSTRIAL DEVELOPMENT COLONY (IDC) MEHRAULI ROAD, UGURGAON 122001 HARYANA, INDIA.	
	ENERGY METER (DIGITAL)		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
	ENERGY METER (DIGITAL)				
ES74	AMMETER		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
	AMMETER		RISHABH INST.PVT LTD	RISHABH INSTRUMENTS PVT. LTD. F-31, MIDC, SATPUR NASHIK - 422007 MAHARASHTRA INDIA	
	AMMETER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
	VOLTMETER		AUTOMATIC ELECTRIC LTD.	96 AB LONAVLA INDUSTRIAL ESTATE NANGARGAON, LONAVLA-410401	
			RISHABH INST.PVT LTD	RISHABH INSTRUMENTS PVT. LTD. F-31, MIDC, SATPUR NASHIK - 422007 MAHARASHTRA INDIA	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES75	VOLTMETER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
	MPCB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	MPCB		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	MPCB		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
ES76	MPCB		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	MPCB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	MPCB		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	MAGNETIC OIL GAUGE		SUKRUT UDYOG	9/1/A, ERANDAWANE, OPPOSITE MEHENDALE GARAGE, ERANDAWANE, GULAWANI MAHARAJ RD, SWAROOP SOCIETY, VAKIL NAGAR, ERANDWANE, PUNE, MAHARASHTRA 411004	
ES77	MULTIFUNCTION METER		CONSERVE SYSTEMS PVT. LTD./ SCHNEIDER ELECTRIC INDIA PVT. LTD.	87, 1ST FLOOR INDUSTRIAL DEVELOPMENT COLONY (IDC) MEHRAULI ROAD, GURGAON 122001 HARYANA, INDIA.	TAKEN OVER BY SCHNEIDER
	MULTIFUNCTION METER		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
ES78	MULTIFUNCTION METER				

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES79	RCCB		C&S ELECTRIC LTD.	222, OKHLA IND. ESTATE, PH-III, NEW DELHI-110020	
	RCCB		SCHNEIDER ELECTRIC INDIA PVT. LTD.	9TH FLOOR, BLDG. NO. 10, TOWER-C, DLF CYBER CITY, PH-II, GURGAON-122002	
	RCCB		SIEMENS	RC-IN I S NR DEL AREA, JIL BUILDING, TOWER-B, PLOT NO. 78, SECTOR 18, GURGAON-122015, INDIA	
	RCCB		GE-POWER	KAMAK TOWER, 3RD FLOOR, PLOT NO. 12-A, TVK INDUSTRIAL ESTATE, EKKADUTHANGAL, GUINDY, CHENNAI-600032	
	RCCB		L&T	32, SHIVAJI MARG, P.O. BOX- 6223, NEW DELHI-110015	
	RCCB		CROMPTON GREAVES	RAIL TRANSPORTATION SYSTEMS,VANDANA BUILDING, 11, TOLSTOY MARG, TOLSTOY MARG, NEW DELHI, DL 110001	
	PVC WIRES		BIS APPROVED MAKE		
	EXIT SIGN (FLAME PROOF)		REPUTED MAKE		
ES80	EXIT SIGN (NON FLAME PROOF)		REPUTED MAKE		
ES81	LADDER		REPUTED MAKE		
ES82	HUME PIPE		REPUTED MAKE		
ES83	PHOTOELECTRIC SWITCH		REPUTED MAKE		
ES84	DICHORIC SPOT LIGHTING FIXTURE		REPUTED MAKE		
ES85	HAND LAMP UNIT		REPUTED MAKE		
ES86	VAF METER (DIGITAL)		M/s Newtek Electricals	M-90, M.I.D.C, Waluj, Aurangabad 431136, Maharashtra, India	
ES87					
ES88					
ES89					
ES90					

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
ES91	LED BASED HIGH INTENSITY AVIATION WARNING LIGHTS		M/s INSTA POWER LIMITED	Correspondence Address: M/s Insta Power Limited, S-19, Panch Shila Park, New-Delhi-110017 Manufacturing Unit: M/s Insta Power Limited, Khasra No. 103M, Raipur Industrial Area, Raipur, Bhagwanpur, Roorkee, Uttrakhand-247661	

ITEM CODE	ITEM/SERVICE DESCRIPTION	QP INSPECTION CAT	VENDOR NAME	ADDRESS	REMARKS
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NB

Remarks column :					
A : mean vendor to this item is acceptable to NTPC					
Under QP / Inspection category column :					
Cat-I : For these items the Quality plans approved by NTPC / BHEL & final acceptance will be on physical inspection & witness by NTPC/ BHEL.					
Cat-II : For these items the Quality plans approved by NTPC/ BHEL. BHEL reserves the right to inspect. However, no physical inspection shall be done by NTPC . The final acceptance by NTPC shall be on basis of verification of documents as per approved QP.					
Cat-III : For these items main supplier approves the Quality plans,. The final acceptance by NTPC/ BHEL shall be on basis of certificate of conformance by the main supplier.					
.@ : Vendor acceptance is subject to sub-QR clearance.					
Note 1 : Approval conditions attached to above identified vendors, as applicable shall be adhered to.					
Note 2 : List of acceptable Galvanisers :					
1) M. J. Engg , Delhi	7) Steelite Engg, Mumbai	13) B G Shirke, Pune	19) Neha Galvanizer, Kolkata		
2) Jamna Metal, Delhi	8) National Galvanizer, Kolkata	14) Gurpreet galvanizer, Hyderabad	20) Unitec Galvanizer, Hoogly		
3) A. V. Engg , Kolkata	9) Unistar Galvanizer, Kolkata	15) Sigma , Mumbai	21) Gurpreet galvanizers,		
4) Inar Profiles, Vishakhapatnam	10) B.P. Project, Kolkata	16) Radhakrishnan Shetty, Chennai	22) DMP Projects, Kolkata		
5) Anand Udyog, Mumbai	11) Bajaj, Pune	17) Karamtara, Mumbai			
6) Techno Engg, Chandigarh	12) Electrocare Industries, Mumbai	18) Poona Galvanizers, Pune			
Additional galvanizers, if any, proposed by manufacturer through main contractor during detailed engineering shall be reviewed and assessed as per merits of the case.					
Note 3 : VDE/ CE/JUL/CSA marking for product Quality : Self certification / valid certification from third party agency or BIS approval letter with CML no. For product quality shall be submitted for information.					

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**TECHNICAL SPECIFICATION FOR
OCTAGONAL GALVANIZED POLES**

SPECIFICATION NO. PE-TS-434-558-E004

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SECTION-II**GENERAL REQUIREMENTS**



TECHNICAL SPECIFICATION FOR OCTAGONAL GALVANIZED POLES

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1.0 INTENT OF SPECIFICATION

- 1.1 The requirement of this specification shall be fully complied with.
- 1.2 The “design” shall broadly cover the selection of components, materials, sizes etc. for the equipment of supply in vendor’s scope. Complete responsibility of establishing the correctness of equipment design rests with the vendor.
- 1.3 It is not the intent to specify here all the details of design and manufacture. However, the equipment shall conform in all respects to high standards of design, engineering and workmanship, and shall be capable of performing the required duties in a manner acceptable to Engineer / purchaser, who will interpret the meaning of drawings and specifications and shall be entitled to reject any work or material, which in his judgement is not in full accordance herewith.
- 1.4 Make of all equipment and components shall be as per sub vendor list (Section I) and subjected to the approval of BHEL/BHEL’s customer without any commercial implication.

2.0 CODES & STANDARDS

- 2.1 The material shall comply with all currently applicable safety codes and statutory regulations of India as well of the locality where the material is to be installed.
- 2.2 The material, construction, manufacture, inspection and testing shall conform to the latest revisions of standards as specified in Datasheet-A.
- 2.3 In case of conflict between the applicable reference standard and this specification, stringent requirement shall govern.

3 DESIGN REQUIREMENTS

3.1 LIGHTING POLES

- 3.1.1 Lighting poles as required for street lighting and flood lighting shall be of swaged/stepped tubular steel of swan neck construction as per applicable standard.
- 3.1.2 Where painted type of poles is specified (to be done at vendor’s works);
 - a) The poles shall be coated with black bituminous paint, conforming to applicable standard, throughout on the inside surface and on the outside surface up to the level which is embedded in ground.
 - b) Exposed outside surface shall be painted with two coats of red oxide and zinc chromate in synthetic compound primer.
 - c) Final painting shall be done at site after installation. Same is not in vendor's scope.
- 3.1.3 Where galvanization of poles is specified;
 - a) All inside and outside surfaces of the pole and base plate shall be hot dip galvanised as per manufacturer’s practice.
 - b) Base plate shall be galvanised after welding to the pole base.
 - c) Weight and thickness of zinc coating shall be as per Datasheet-A.



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- 3.1.4 Each street lighting pole shall be supplied with necessary pipe-reducer / fixing-bracket for fixing the luminaire.
- 3.1.5 Each street lighting pole shall be suitably provided with weather proof, galvanised steel junction box and two numbers fixing brackets suiting the diameter of the pole. The requirements of junction box are stipulated elsewhere. The fixing brackets shall be supplied loose.
- 3.1.6 Street lighting pole shall be provided with wiring hole. The location shall be coordinated with mounting position of street lighting pole JB. The diameter of hole shall be 20 mm. The hole shall be provided with a rubber / PVC grommet.
- 3.1.7 Flood lighting pole shall be provided with painted MS plate and shall be suitable for the number of flood lighting luminaires and controlgear boxes.
- 3.1.8 Provision for earthing shall be provided for flood / street lighting poles at a height 1 metre above the ground (MS flat size shall be informed during detailed engineering). The pole shall be earthed at two points.
- 3.1.9 Types of Lighting Poles

Exact type and designation of lighting pole is as given in Data Sheet A. Basic types are as follows:

- a) PS1 - Street Lighting Pole for one luminaire with 1200mm bracket arm.
- b) PS2 - Street Lighting Pole for one luminaire with 1800mm bracket arm.
- c) PS4 - Street Lighting Pole for two luminaires with 1800mm bracket arm each.
- d) PF1 - Flood Lighting Pole for one luminaire.
- e) PF2 - Flood Lighting Pole for two luminaires.

Details of luminaire shall be provided during detailed engineering.

3.2 POLE JUNCTION BOXES JB(S)

- 3.2.1 Junction boxes with terminals shall be supplied for branching and terminating lighting wires/cables.
- 3.2.2 Construction Features
 - (a) The junction boxes shall be fabricated out of material specified in Datasheet-A and shall be of rectangular shape. The cover shall be hinged or bolted with captive nuts and bolts and shall be provided with neoprene gasket lining all over.
 - (b) The junction boxes shall be provided with suitable knock outs/ gland plates for conduit/ cable connection. The conduit connection shall be properly sealed. The junction boxes meant for cable connection shall be complete with removable gland plates, glands and cable lugs, as required. The junction boxes shall be provided with two earthing terminals suitable for 14SWG GI earthing wires.



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- (c) The junction boxes shall be weather proof type conforming to IP-55 of IS:2147. Junction boxes for street light poles and lighting/lightning masts shall be provided with hinged doors and allen keys with bolts as locking arrangement.
- (d) The boxes and cover shall be hot dip galvanised.
- (e) The junction boxes shall be suitable for mounting on lighting poles, mast etc. The brackets, bolts, nuts, screws and any other erection accessories required for erection shall be provided along with the junction box.

3.2.3 Terminals

- (a) Multiway terminal blocks of approved type and make complete with galvanised screws, nuts, washers and marking strips shall be furnished for terminating the lighting wires.
- (b) All the terminals blocks shall be of 650V grade one piece construction with insulating barriers. These terminals shall be made of copper alloy and shall be stud type. Each terminal provided on junction box shall be suitable for terminating two numbers of aluminium conductors of the size as specified without any damage to the conductors or looseness.

3.2.4 The junction boxes shall be of following types:

Type	Description
JB-S	Provided with four (4) way stud type terminals, each terminal suitable for terminating upto two nos. of 3.5Cx50 mm ² stranded aluminium conductors & with one no.6A HRC fuse and link.
JB-M	Provided with four (4) way stud type terminals, each terminal suitable for terminating upto two nos. of 4Cx16 mm ² stranded aluminium conductors & tap off of 3 nos. 2C x 2.5 sq. mm. Cu cable.

3.3 CABLE GLANDS

- 3.3.1 Whether specifically mentioned or not, cable glands of suitable sizes shall be supplied along with each equipment for power and control cables.
- 3.3.2 Rubber components used in the gland shall be of neoprene.
- 3.3.3 Name / trade name of manufacturer, type no. and applicable range of outer diameter of cable shall be engraved / indelibly printed on the cable gland.

3.4 CABLE LUGS

- 3.4.1 All equipment shall be supplied with the power and control cable lugs of suitable size, whether specifically mentioned or not.
- 3.4.2 Name / trade name and size of lug shall be engraved/ indelibly printed on each cable lug.

3.5 TIMERS

3.5.1 Time Switch

- (a) Time switch shall be suitable for automatic switching ON and OFF of street lighting / flood lighting circuits.
- b) Time switch have 00 - 24 hrs clock base.



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- c) Time switch shall indicate actual time and shall permit accurate time setting.
- d) Time switch shall be rugged, independent of normal fluctuations of voltage / frequency and free from maintenance.
- e) Contact rating, clock accuracy, rated voltage rating and frequency rating of timer shall be suitable to its application.
- f) Time switch shall be provided with Ni-Cd battery.
- g) Time switch shall be suitable for mounting inside the panel.

3.5.2 On Delay Timer

- (a) Timer shall be fully static and suitable for operation on normal frequency and system voltage.
- (b) Timer shall have high setting accuracy, high repeat accuracy, low reset time and low power consumption.
- (c) Timer shall have the time setting range of 24 - 240 seconds, unless mentioned otherwise in Data Sheet A.
- (d) Timer shall be suitable for mounting inside the panel.

3.6 CIRCUIT DIAGRAM / DIRECTORY PLATE

- 3.6.1 A diagram is to be prepared for fixing to the inside cover of every mast feeder panel giving details of the points controlled by each circuit.

4.12 SURFACE TREATMENT FOR PANEL

- 4.12.1 All metal parts and the surfaces (exterior & interior) of equipment shall be degreased by dipping in hot alkaline solution and rubbed with wire brush to remove oil & scale from them & then rinsed in water. Alternatively, they may be shot / sand blasted.
- 4.12.2 Parts shall be pickled by dipping in hydrochloric acid tank to remove the rust from the surfaces formed during storage of sheets & then rinsed to remove traces of the acid. The cleaning and pretreatment of all metal parts shall be as per applicable standard.
- 4.12.3 The surfaces to be painted shall then be prepared by phosphatizing to protect them from further rusting & to create a good bond with the paint. The pretreatment shall conform to the applicable standard.
- 4.12.4 All parts shall then be subjected to a coat of red oxide primer paint.
- 4.12.5 All inside and outside surfaces of panel shall be spray painted with synthetic enamel of the shade as per Data Sheet A.
- 4.12.6 Electrostatic or powder coating painting shall be done as specified in Data Sheet A.
- 4.12.7 Wherever possible, finished parts shall be coated with peelable compound by spraying method to protect the finished product from scratches, grease, dirty and oily spots during handling and transportation.



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4 PACKING

- 4.1 Loose items shall be packed, duly labelled in a box and sealed properly to avoid damage during transportation. Packing list shall be pasted on every box, listing the contents of the box.

6.0 INSPECTION & TESTING

- 6.1 Bidder shall confirm compliance with the BHEL Standard Quality Plan (PE-QP-999-558-E004) without any deviations. At contract stage, the successful bidder shall submit the same QP for BHEL/ ultimate customer's approval. In case bidder has reference QP agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ ultimate customer's approval. There shall be no commercial implication to BHEL on account of any changes in QP during contract stage.
- 6.2 All the components and completely assembled equipment shall be tested as per the latest edition of standards. Any charges for these shall be deemed to be included in equipment price.
- 6.3 All the specified tests shall be carried out to verify the rating and performance of the equipment.
- 6.4 All manufacturing processes viz. machining, sheet forming, electroplating, wire routing, cleating & crimping, assembly, surface preparation shall conform to good manufacturing practices.

7.0 TOOLS AND TACKLE

- 7.1 Tools & tackle which are essential to facilitate assembly, adjustments, erection, maintenance & dismantling of equipment shall be provided as part of equipment supplied.
- 7.2 The above tools shall be supplied along with the initial consignment of equipment so as to be available prior to erection but may not be used for erection purposes.
- 7.3 Vendor shall also submit a list of recommended tools and tackle. Acceptance of these tools and tackle shall not be a binding on the purchaser.
- 7.4 Schedule of tools & tackle shall be filled up by bidder.

8.0 SPARES

- 8.1 Mandatory spares (if applicable) are indicated in BOQ-cum-price schedule.
- 8.2 Erection & commissioning spares are included in the bidder's scope of supply. Bidder to furnish list of E&C spares in the relevant schedules of the Bid Form and Price Schedules.

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**QAP FOR
OCTAGONAL GALVANIZED POLES**

1152270/2022/PS-PEM-EL

		MANUFACTURER'S NAME AND ADDRESS		MANUFACTURING QUALITY PLAN						PROJECT :		KUDGI STEP-1 (SIBRU) MW			
				ITEM :		OCTAGONAL POLE FOR LIGHTING		QP NO :		9573-215-QVT-Q-013		PACKAGE :			
				SUB-SYSTEM :				REV NO :		0		CONTRACT NO :		CS-9573-215-2-FC-COA-5971	
								DATE :		11-02-16		MAIN SUPPLIER :			
PAGE :															
SL NO.	COMPONENT AND OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK QM G C/N	REFERENCE OF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS			
									M	C	N				
1	Steel for Poles shaft	a. Chemical composition & mechanical properties	Major	Chemical & Mechanical	Sample as per mfr std	Same as 6 M	NTPC Specification manufacturer's plant std	NTPC Specification manufacturer's plant std	TC	V	P	V	V	at the time of final inspection	
		b. Thickness	Major	Measurement	Sample as per mfr std	Same as 6 M	NTPC Specification manufacturer's plant std	NTPC Specification manufacturer's plant std	TC	V	P	V	V		
2	Poles continuously tapered, Octagonal cross Section	a. Dimension, Cross Section	Major	Measurement	100%	Random	NTPC Approved Drawing	NTPC Approved Drawing	Internal Inspection Report		P	W	W		
		b. Longitudinal weld	critical	visual	100%	Random	NTPC Appd Drg/ Data sheet manufacturer std	single defect free longitudinal weld	Internal Inspection Report		P	W	V		
		c. Galvanization checks (Thickness, uniformity of coating & adhesion)	Major	Measurement	100%	Random	NTPC Appd Drg/ Data sheet Drawing IS 2629/IS 2633/4759	NTPC Appd Drg/ Data sheet Drawing	Internal Inspection Report		P	W	W		
3	Brackets	a. Dimension	Major	Measurement / verify	100%	Random	NTPC Appd Drg	NTPC Appd Drg	Internal Inspection Report	V	P	W	W		
		b. Galvanization checks (Thickness, uniformity of coating & adhesion)	Major	Measurement	100%	Random	NTPC Appd Drg/ Data sheet Drawing : IS 2629/IS 2633/ISO 11461	NTPC Appd Drg/ Data sheet Drawing	Internal Inspection Report	V	P	W	W		
4	Terminal Board / MCB / Backelite Sheet	Dimension / Make / grade	Major	Visual	100%	Random	NTPC Specification / Material Test Certificate	as per NTPC approved Drawing	TC	V	V	V	V		
5	Foundation Bolt	a. Mechanical Properties	Major	Mechanical	100%	Random	NTPC Appd Drg/ Data sheet IS EN 8	NTPC Appd Drg/ Data sheet EN 8 Grade	TC	V	P	V	V		
		b. Dimension	Major	Measurement	100%	Random	NTPC Appd Drg/ Data sheet IS EN 8	NTPC Appd Drg/ Data sheet IS EN 8	TC	V	P	V	V		
MANUFACTURER / SUB-SUPPLIER		IN SUPPLIER		LEGEND: RECORDS, IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. EMP: NTPC SHALL IDENTIFIED IN COLUMN "M"				DOC NO :							
SIGNATURE				M : MANUFACTURER / SUB-SUPPLIER C : SUPPLIER NOMINATED INSPECTION AGENCY SUBJECT TO PRIOR ACCEPTANCE OF NTPC) N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION AS APPROPRIATE				REVIEWED BY		APPROVED BY		APPROVAL SEAL			
FORMAT NO				FOR NTPC USE											
				ENG. DIV./QA&E											
				BD DOC NO				TECHNICAL SPECIFICATION		GENERAL TECHNICAL REQUIREMENTS		PART C	PAGE 1 of 2		

		MANUFACTURER'S NAME AND ADDRESS		MANUFACTURING QUALITY PLAN						PROJECT :							
				ITEM :		OCTOGONAL POLE FOR LIGHTING				QP NO. :		9573-213-QVE-Q-013		PACKAGE :			
				SUB-SYSTEM :						REV NO. :		1		CONTRACT NO. :			
										DATE :		11-07-16		MAIN SUPPLIER :			
								PAGE :									
Sl. NO.	COMPONENT AND OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK GM	6 C/N	REFERENCE OF DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
6	Final Testing	a. Deflection Test	Major	Measurement	1 Nos. per lot	Random	As per ISEN 40-3-3	As per Annexures A,B,C Docs Enclosed	TR	✓	P	W	W				
		b. Straightness	Major	Measurement	1 Nos. per lot	Random	As per BSEN 40-2	As per Annexures A,B,C Docs Enclosed	TR	✓	P	W	W				
		c. Weight	Major	Measurement	2 Nos. per lot	Random	As per IS 2713	As per Annexures A,B,C Docs Enclosed	TR	✓	P	W	W				
Note: LOT Size = 500 Poles LEGEND: RECORDS, IDENTIFIED WITH TICK (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. CHP: NTPC SHALL IDENTIFIED IN COLUMN "N" M: MANUFACTURER/ SUB-SUPPLIER C: SUPPLIER NOMINATED INSPECTION AGENCY (SUBJECT TO PRIOR ACCEPTANCE OF NTPC) N: NTPC P: PERFORM W: WITNESS AND V: VERIFICATION AS APPROPRIATE																	
MANUFACTURER / SUB-SUPPLIER		SIGNATURE		FORMAT NO. : QS - 01		FOR NTPC USE		REVIEWED BY		APPROVED BY		APPROVAL SEAL					
ENG. DIV. / QA & I																	
BID DOC. NO.		TECHNICAL SPECIFICATION		GENERAL TECHNICAL REQUIREMENTS		PART C		PAGE 2 of 2									