PRODUCT STANDARD EDC/ELECTRICAL,C&I BAP/BHEL/RANIPET – 632 406	TECI:NTPC:CT:013:REV 04 PAGE 01 OF 05 EFFECTIVE DATE 17.06.2017

TITLE : TECHNICAL SPECIFICATION FOR BOUGHT OUT ITEMS FOR ESP

ITEM : CABLE TRAY , COUPLER PLATE & FASTENERS

CUSTOMER : NATIONAL THERMAL POWER CORPORATION LTD (NTPC).

NAME		DESIGNATION	SIGNATURE	DATE
PREPARED	SMITH BABU K K	Mgr		17.06.2017
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ISSUED BY:
EDC-ECI

REVISION NO 04	Cl. No 3.1.0 of PART "C ALTERED	17.06.2017
REVISION NO 03	Cl. No 5.1 &6.0 of PART "B", 4.1 &5.0 of PART "C ALTERED	21.07.2016
REVISION NO 02	CL. No 3.1&3.2 OF PART "C" ALTERED	10.08.2011
REVISION NO 01	GENERALY REVISED	28.04.2006
REVISION NO 00	INITIAL RELEASE	13.05.2004

PART A
CABLE TRAY

1.0.0 SCOPE OF SUPPLY:

The scope of supply of CABLE TRAY consists of manufacturing, inspection, testing, packing and delivery.

2.0.0 APPLICATION:

For laying power and control cables between SWITCH GEAR PANELS, control panels located in Control room and field equipments of ELECTROSTATIC PRECIPITATOR.

3.0.0 APPLICABLE STANDARDS:

3.1.0 IS 1079 - Hot rolled carbon steel sheets & strips

3.1.1 IS 1239 - Mild steel tubes, tubular & other wrought steel fittings.

3.1.2 IS 2629 - Recommended practice for hot dip galvanising on iron and steel.

3.1.3 IS 2633 - Methods of testing uniformity of coating of zinc coated articles.

4.0.0 CONSTRUCTION:

4.1.1 The cable trays shall be fabricated out of hot rolled sheet steel. The dimensions shall be as per the drawing indicated in the enquiry/purchase order

4.1.2 All burrs and sharp edges shall be curved backward after perforations are made, and the cable tray shall have smooth surface for each cable pulling/laying.

4.1.3 The straight section shall be supplied in 2.5 metre length.

4.1.4 The sides of trough shall have four holes at each end of straight section of the trays for fixing the side couplers.

4.1.5 The material used for fabricating the tray shall be of mild steel as per IS 1079 or IS 1239.

4.1.6 The size of the trays shall be as indicated in the PURCHASE ENQUIRY/PURCHASE ORDER.

4.1.7 The cable tray of 2.5m length shall withstand a uniformly distributed load of 76Kg/m, when the tray is simply supported at two ends. The steady state deflection shall not exceed 7mm at the mid span.

4.1.8 The cable tray shall be hot dip galvanised, after fabrication, as per IS 2629 and IS 2633. The galvanising shall be uniform, clean, smooth, continuous and free from acid spots. The amount of zinc deposit for trays shall not be less than 610 gm/sq.m of the surface area. The thickness of deposit at any spot shall not be less than 86 microns.

5.0.0 INSPECTION AND TESTING:

5.1.0 The inspection and testing of CABLE TRAY shall be carried out based on the following documents.

1. BHEL Purchase order.
2. BHEL dimensional drawing
3. BHEL Inspection checklist.
4. BHEL Technical specification (TEP).

6.0.0 This specification meets NTPC contract specification; hence the vendor shall take no deviation.

PART B
COUPLER PLATE

1.0.0 SCOPE OF SUPPLY:

The scope of supply of COUPLER PLATE includes manufacturing, inspection, testing, packing and delivery.

2.0.0 APPLICATION:

For coupling adjacent trays, so that the trays are held firmly.

3.0.0 APPLICABLE STANDARDS:

3.1.0 IS 1079 - Hot rolled carbon steel sheets & strips

3.1.1 IS 1239 - Mild steel tubes, tubular & other wrought steel fittings.

3.1.2 IS 2629 - Recommended practice for hot dip galvanising on iron and steel.

3.1.3 IS 2633 - Methods of testing uniformity of coating of zinc coated articles.

3.1.4 IS 2062 - Steel for general structural purposes. (Gr. A)

4.0.0 CONSTRUCTION:

4.1.0

4.1.0 SIDE COUPLERS:

4.1.1 The side coupler plate shall be 3mm thick (tolerance as per relevant standards) sheet steel plates with 2 circular holes and 2 elliptical holes for fixing fasteners.

4.1.2 The coupler plate shall be fabricated out of hot rolled sheet steel as per IS 1079 or IS 1239 or IS 2062 (Gr. A). The dimensions shall be as per the drawing indicated in the enquiry / Purchase Order.

4.1.3 The coupler plate shall be hot dip galvanised, after fabricating, as per IS 2629 and IS 2633. The galvanising shall be uniform, clean, smooth, continuous and free from acid spots. The amount of zinc deposit for coupler shall not be less than 610gm/sq.m of the surface area. The thickness of deposit at any spot shall not be less than 86 microns.

5.0.0 INSPECTION AND TESTING:

5.1.0 The inspection and testing of COUPLER PLATE shall be carried out based on the following documents.

1. BHEL Purchase order.
2. BHEL dimensional drawing
3. BHEL Inspection check list.
4. BHEL Technical specification and drawing .

6.0.0 PACKING:

The coupler plates shall be tied in numbers of fifty using suitable GI wires and packed & supplied in plastic cover with gunny bag to prevent damage & loss during transmit.

7.0.0 This specification meets NTPC contract specification hence no deviation shall be taken by the vendor.

PART C
CABLE TRAY FASTENERS

1.0.0 SCOPE OF SUPPLY:

The scope of supply of CABLE TRAY FASTENERS includes manufacturing, inspection, testing, packing and delivery.

2.0.0 APPLICATION:

For coupling adjacent cable trays and to hold them firmly.

3.0.0 DETAILS:

3.1.0 One set of commercial quality galvanised FASTENERS for cable tray consists of the following.

i) M8 x 20mm screw: 1 No., 04

ii) M8 nut : 1 No.,

iii) M8 washer : 2 Nos..

3.2.0 The screw and nut shall be grade C as per IS 1363 (part 2 & 3). The class shall be 3.6 or 4.6 or 4.8 for screw and for nut. The washer shall be plain punched steel washer A1 as per IS 2016. The screw, nut and washer shall be hot dip galvanized as per IS 1367 part 13 and IS 2629.

4.0.0 INSPECTION AND TESTING:

4.1.0 The inspection and testing of CABLE TRAY FASTNER shall be carried out based on the following documents.

1. BHEL Purchase order.
2. BHEL Inspection checklist.
3. BHEL Technical specification and drawing.

5.0.0 PACKING:

The fasteners shall be packed & supplied in plastic cover with gunny bag to prevent damage & loss during transmit.

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