

LCB for Panel Type hopper Heater - Sagardighi

Schedule Number	Description	Unit	QTY/Unit	Quoted/Not Quoted
Schedule No.:1	LOCAL CONTROL BOX (JUNCTION BOX) FOR PANEL TYPE HOPPER HEATER AS PER TECHNICAL SPECIFICATION TEP:NTPC:JB:006:REV 02 AND DRAWING 1-00-114-29450 & 4-00-114-32563	NO	120	

Note: Supplier should submit all attached **Signed & Sealed** enquiry documents given along with enquiry including **Signed and Sealed** SDDR (Specification deviation disposition report)

In case of non-submission of all requested documents along with offer, your offer will be liable for rejection in GeM Portal. Two days time will be given for representation within which supplier should submit all documents. On non-submission of representation within 2 days, your offer will be liable rejection.

Aslo Supplier should furnish there Project Coordinator contact details i.e Email ID's and Contact Number for Techno Commercial Queries.

Note No. #1

Attachment:TEP NTPC JB 006 REV 02.pdf

PRODUCT STANDARD ELECTRICAL C & I BAP/BHEL/RANIPET – 632 406		TEP:NTPC:JB:006:REV 02 PAGE 01 OF 04 EFFECTIVE DATE 22.10.2007		
TITLE : TECHNICAL SPECIFICATION FOR BOUGHT ITEMS FOR ESP ITEM : JUNCTION BOX CUSTOMER : NATIONAL THERMAL POWER CORPORATION LTD (NTPC).				
	NAME	DESIGNATION	SIGNATURE	DATE
PREPARED	G.M.KUMAR	SEF	<i>G.M. Kumar</i>	22.10.2007
CHECKED	T.VENUGOPAL	DM	<i>[Signature]</i>	22.10.2007
APPROVED	C.R.JAYACHANDRAN	SR.MGR.	<i>[Signature]</i>	22.10.2007
ISSUED BY				
EDC – AQCS				
REVISION NO :00		INITIAL RELEASE : 24.01.2004		
REVISION NO :01		: 09.05.2006		
REVISION NO :02		: 22.10.2007		

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Note No. #1

Attachment:TEP NTPC JB 006 REV 02.pdf

PRODUCT STANDARD
ELECTRICAL C & I
RANIPET - 632 406

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1.0.0 SCOPE OF SUPPLY:

The scope of supply of Junction box includes, manufacturing, Inspection, testing, packing and delivery.

2.0.0 CONSTRUCTION:

The Junction boxes shall be provided with hinged door with captive screws. Top of the box shall be arranged to slope towards the rear of the box. The box shall be hot dip galvanised and shall be provided with suitable Neoprene gaskets to achieve specified degree of protection. Adequate spacing shall be provided to terminate the external cables. The boxes shall be suitable for mounting on rail/column/steel structure etc.,

3.0.0 APPLICATION:

The Junction boxes are used in Electrostatic precipitators to interconnect various field mounted equipments.

4.0.0 APPLICABLE STANDARDS:

The Junction boxes shall be manufactured and tested as per the following standards.

- 4.1.1 IS 13947 - Low voltage Switch gear and Control gear.
- 4.1.2 IS 2633 - Method of testing of uniformity of coating of zinc coated articles.
- 4.1.3 IS 2629 - Recommended practice for hot dip galvanising on iron and steel
- 4.1.4 IS 4759 - Specification for hot dip zinc coatings on structural steel and other allied products.
- 4.1.5 IS 694 - PVC insulated wires.

5.0.0 SITE CONDITIONS:

- 5.1.1 Ambient temperature : 5 Deg.C to 50 Deg.C
- 5.1.2 Relative humidity : 100% RH
- 5.1.3 Atmospheric : Heavy dusty, abrasive, and polluted, conducive to fungus growth, climate is tropical.
- 5.1.4 Design temperature : 50 Deg.C
- 5.1.5 Location : Out door


Note No. #1

Attachment:TEP NTPC JB 006 REV 02.pdf

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6.0.0 GENERAL REQUIREMENTS:

- 6.1.1 Gland plate material : Hot rolled sheet steel
- 6.1.2 Casing, Base plate material : Cold rolled sheet steel
- 6.1.3 Gland plate thickness : 3 mm
- 6.1.4 Casing, base plate thickness : 2 mm
- 6.1.5 Galvanising of all sheet steel, fasteners : As per IS 2629 & IS 4759
- 6.1.6 Amount of zinc coating : (i) 610 gm/sq.m.
(ii) Min. coating thickness on junction box shall not be less than 86 microns. 
- 6.1.7 Door opening angle : 180 Degree.
- 6.1.8 Door locking arrangement : Rider clamps at two points
- 6.1.9 Enclosure protection type : IP 55 as per IS 13947
- 6.1.10 Thickness of Neoprene gasket : Min. 3 mm on compression
- 6.1.11 Terminal block type : As per BHEL drawing
- 6.1.12 Terminal block insulating material : Melamine confirming to ESI standard 12.1
- 6.1.13 Terminal block voltage grade : 750/1000 V
- 6.1.14 Terminal block current rating : As per drawing .
- 6.1.15 Wiring (for power JB only) : 1100V grade, PVC insulated single core, multistranded copper wires of cross section as per drawing.
- 6.1.16 Lug type (as per IS 8309) : Annealed finned solder less crimping type copper lugs (lugs shall be provided for internal & external wiring).
- 6.1.17 Lug size : To suit cable sizes indicated in the drawing
- 6.1.18 Number of earthing terminals : Two
- 6.1.19 Size of earthing terminals : M8x10 Screw with star / Belleville washer.

Note No. #1

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- 6.1.20 Location of earthing terminals : As per drawing.
 - 6.1.21 Location of earthing symbol : Just above the earthing terminal.
 - 6.1.22 Rated voltage grade of junction box : 415V.

7.0.0 MAKE OF COMPONENTS

- 7.1.1 Terminal block : ELMEX
- 7.1.2 Crimping type lug : DOWELL
- 7.1.3 PVC Wires : ISI (BIS) APPROVED / CERTIFIED makes

8.0.0 PACKING

Each JB shall be fully wrapped in plastic cover to avoid water entry and each unit shall be packed separately in cardboard unit. Finally all such packing shall be packed in a completely closed wooden crate. Along with the packing slip two copies of supplier's drawing shall be sent.

9.0.0 DRAWING PREPARATION

- 9.1.1 Manufacturing and packing drawings prepared in AUTO CAD shall be submitted in SOFT MEDIA in addition to hard copies for approval by BHEL, (prior to start of manufacture) within 10 days from the date of purchase order.
- 9.1.2 After final approval, one CD containing the approved drawing shall be supplied. Apart from CD, 6 hard copies of approved drawings shall be submitted on delivery.

10.0.0 NAME PLATE:

The nameplate shall be made of non-corrosive material indicating manufacturers name, Serial number, type (variant number), etc. shall be provided.

11.0.0 INSPECTION:

The inspection and testing shall be carried out based on the following documents:

- 11.1.1 BHEL purchase order
- 11.1.2 BHEL technical specification
- 11.1.3 BHEL quality checklist
- 11.1.4 BHEL / NTPC approved sub vendor drawing.

12.0.0 This specification is prepared in line with NTPC specification, hence no deviation shall be taken.

REF: ECI: PQR: LCB: REV.00

Pre-Qualification Requirement for LCBs for Panel Type Hopper Heater

The prospective supplier should meet the following Pre-Qualification requirements:

1. Vendor should have supplied Electrical Junction Boxes for power plant or process industry applications with similar ratings.
2. Supplied Junction Boxes should be successfully operating for at least One-year period (Prior to the date of submission of offer for the present tender).
3. The vendor should provide PO & suitable End User Certificate from their customers for their satisfactory performance indicating Date of supply and commissioning of the above, quantity of supply and other details.
4. Service support after sales should be provided by supplier at site (if required).

Prepared



वेमुला जय प्रकाश / VAMULA JAYA PRAKASH
वरिष्ठ अभियंता / Senior Engineer
ईडीसी - ई.सी. & आई / EDC-E,C&I
बीएचएल, बीएपी, रांपिट / BHEL, BAP, RANIPET-6.


Approved



डॉ. कुविली / D. QUILY
उत्पाद अभियंता / Product Engineer
ईडीसी - ई.सी. एण्ड आई / EDC-E, C & I
बीएचएल, बीएपी, रांपिट / BHEL/BAP/RANIPET-6

Note No. #5

Attachment:SQP_E843_00_Junction Boxes (Galvanized-Painted-FRP).pdf

	Standard Quality Plan for Junction Boxes (Galvanized/Painted/FRP) for ESP Application For NTPC and NON NTPC projects		
	REF. NO.	REVISION NO.	EFFECTIVE DATE
	QP:E :843	00	26 03 2016

TITLE : Standard Quality Plan for Junction Boxes (Galvanized/Painted/FRP) for ESP Application

PREPARED BY : CH ANIL SINGH / ASST.ENGINEER

REVIEWED & APPROVED BY : C SRINIVASAN / DGM

SIGNATURE

Ch. Anil Singh

C. Srinivasan

ISSUED & CONTROLLED BY : QUALITY ASSURANCE
 BHEL, RANIPET - 632 406.

DOCUMENT STATUS

INFORMATION COPY

CONTROL COPY


It is a control copy only if the mark against the control copy is in other than black colour. Otherwise it will be an uncontrolled copy. Check for current revision.

ISSUED TO:

CONTROL COPY NO :

Note No. #5

Attachment:SQP_E843_00_Junction Boxes (Galvanized-Painted-FRP).pdf

 Ranipet	Standard Quality Plan for Junction Boxes (Galvanized/Painted/FRP) for ESP Application For NTPC and NON NTPC projects	
REF. NO.	REVISION NO.	EFFECTIVE DATE
QP:E :843	00	26 03 2016

<u>RECORD OF REVISION</u>		
REV. NO	EFFECTIVE DATE	REMARKS
00	26 03 2016	Original Issue

Sl. No.	COMPONENT / ASSEMBLY / OPERATION/TESTS	CHARACTERISTICS	CLASS	STANDARD QUALITY PLAN FOR JUNCTION BOXES (GALVANIZED/PAINTED/FRP) FOR ESP APPLICATION.		PROJECT: STANDARD NTPC and NON NTPC Projects			REMARKS				
				TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC		AGENCY			
1	2	3	4	M	B/C	7	8	9	D*	**	10	11	
1.0	Review of Raw Material TC for	Chemical Composition	Major	Chemical	Sample	Sample	Aprd Drwg/ Spec.	TC		P	V	V	
2.0	Visual Inspection	a) Make of components b) Name plate details c) Checks on mounting arrangement of TB's thickness d) Overall dimension, thickness e) Verification of verticality and squareness f) Provision of gaskets at door and gland plate g) Operation of door and door locking arrangement h) Matching of door with box i) Verification on wiring, terminal blocks and provision of suitable cable gland and lugs j) Provision of dummy covers for cable glands k) Verification of availability earthing bolts & nuts	Major Major Major Major Major Major Major Major Major Major Major	Visual Visual Visual Visual Visual Visual Visual Visual Visual Visual Visual	100% 100% 100% 100% 100% 100% 100% 100% 100% 100% 100%	Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec. Aprd Drwg/ Spec.	- - - TR -do- -do- -do- -do- -do- -do- -do-		P P P P P P P P P P P	V V V V V V V V V V V	V V V V V V V V V V V		
4.0	Acceptance test for Painting Junction Boxes	a) Painting Thickness	Major	Visual	100%	10%	Aprd Drwg/ Spec.	-do-		P	W	V	
5.0	Acceptance Tests for galvanized Junction Boxes	a) Galvanizing Coating Thickness b) Mass of Zinc Coating c) Uniformity of zinc coating /dip test d) Adhesion test	Critical Critical Critical Critical	Measure Measure Measure Measure	Sample for lot Sample for lot Sample for lot Sample for lot	Sample for lot Sample for lot Sample for lot Sample for lot	Spec/ASTM123-2015 IS-4759-1996 Table-1, IS 6745 1972 IS-2629-1985 IS-2633-1986 IS-4759-1996 IS-2629-1985	-do- -do- -do- -do-		P P P P	W W W W	V V V V	Refer Note 1 Refer Note 2

Bharat Heavy Electricals Ltd Boiler Auxiliaries Plant, Ranipet - 632 406. Quality Assurance		STANDARD QUALITY PLAN FOR JUNCTION BOXES (GALVANIZED/PAINTED/FRP) FOR ESP APPLICATION.				PROJECT: STANDARD NTPC and NON NTPC Projects			OP Ref : OP:E:843 REV.NO: 00 DATE: 26 03 2016 Page 4 of 4				
Sl. No.	COMPONENT / ASSEMBLY / OPERATION/TESTS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE STANDARD	FORMAT OF REC	AGENCY			REMARKS
					M	B/C				D*	M	B	
2		3	4	5	6	7	8	9	10	11			
0	IR and HV	a) IR test before and after HV HV test	Major	Visual	100%	100%	Aprd Drwg/ Spec.	IR>10 Mega Ohms	TC	P	W	V	
		b) HV test	Major	Elect.	100%	10%	Aprd Drwg/ Spec	HV 1.5 KV per 1 min	TC	P	W	V	
0	Functional Check	Connect Electrical Supply & Check	Major	Measurement	100%	10%	Aprd Drwg/ Spec.	Aprd Drwg/ Spec..	IR	P	W	V	
0	Type test reports	Degree of protection test	Major	Elect.	Sample	Sample	IS 13947 Part-1 1993	IS 13947 Part-1 1993.	TC/TR.	P	V	V	
0	Packaging	Visual	Major	Visual	100%	100%	Aprd Drwg/ Spec.	Aprd Drwg/ Spec..	IR	P	W	V	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER /SUB-SUPPLIER, C: CUSTOMER /CUSTOMER
DOMINATED INSPECTION AGENCY, B: BHEL/BHEL AIA, P: PERFORM, W: WITNESS AND V: VERIFICATION APRD DRAWG - SPEC. - BHEL SPECIFICATION, TC - TEST CERTIFICATE, COC - CERTIFICATE OF COMPLAINE CC - CALIBRATION CERTIFICATE, PO SPEC. - PURCHASE ORDER SPECIFICATION, IR =INTERNAL INSPECTION REPORTS TR = TEST REPORT

Note:1:- For Painting Junction boxes vendor shall submit test certificate/Compliance for surface preparation , primary coating and final painting for review by inspector during inspection.
Note 2 :- a) For NTPC projects, Galvanizing Shall be done at NTPC approved source as per CQR
b) For NON NTPC projects, Galvanizing shall be done as per our PMD vendors.

(To be submitted along with the offer)

SPECIFICATION DEVIATION DISPOSITION REPORT			
Spec n		Ite m	
Enq.No & Date			
Vendor Name			
SPEC N			
Page	Cla use	De ta ils Of De via tio n With Re a so n	Dispo sitio n By BHEL
Sig na ture Of Vend or			Re vie we d By
“AG REED DEVIATION “ if any to be incorporated in the PO in the event of order.			APPROVED BY

Date:

VENDOR's SIGNATURE WITH SEAL



****(To be submitted In the company letter head by supplier)******

Declaration of Local Content by Local supplier

Subject: Public Procurement (Preference to Make In India)

References:

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following links <https://dipp.gov.in/public-procurements>

http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf

http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf

https://dipp.gov.in/sites/default/files/PPP-MII%20Order%20dt%2029th%20May%2019_0.pdf

<https://dipp.gov.in/sites/default/files/PPP%20MII%20Order%20dated%204th%20June%202020.pdf>

We hereby declare with reference to above subject and references that

M/s -----(Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50% (fifty percent) or more defined in the above government notification for the goods and services

(or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50% (fifty percent) defined in the above government notification for the goods and services

(or)

Non Local supplier (If not belonging to Class-I & Class-II)

Please mention the details against the following:

Enquiry no:----- dated. -----

Type of Supplier (Class-I/Class-II)

Product:-----

Project:.....

Details of location at which local value addition will be made is as follows:

We also understand that the false declarations will be in breach of the code of Integrity under rule 175(1)(i)(h) of the General financial rules for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorized Signature M/s-----
(Signature and seal)

Place:.....

Date:.....