

BHEL

PURCHASE SPECIFICATION  
INSULATOR PLANT  
JAGDISHPUR-227817

JP-TP-13/GEN

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ACCEPTANCE NORM FOR ZINC SLEEVE PINS

ACCEPTANCE

- 1.0 Pins should be free from any visual galvanising defects and should conform to all relevant gauges.
- 2.0 Pins to be tested for adhesion of sleeve, the sleeve ring may be strucked lightly from the cone side with a light mallet and the ring should not become free or cracks observed at the junction.

QUALIFICATION TEST

- 3.0 Four pins to be selected at random out of every 10,000 lot supplied by each supplier and 2 each to be cut in transverse & axial direction. The adhesion of the zinc sleeve should be observe visually and should not be less than 80% approximate. A magnifying glass may be used in case of any doubt.
- 4.0 In the event of any test/observation proving defective shall be rejected and supplier shall make immediate arrangement to replace the same.

REVISIONS:00

PREPARED BY

APPROVED BY

Ref.Sl.No.

S.I. (Insulator)

F.C. (Engg.)

C-37  
E-35

BHARAT HEAVY ELECTRICALS LTD  
INSULATOR PLANT JAGDISHPUR

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PURCHASE SPECIFICATION  
(HOT-DIP GALVANISING)

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**TECHNICAL REQUIREMENT OF HOT-DIP GALVANISING PROCESS  
AND INSPECTION OF GALVANISED COMPONENTS**

1. SCOPE This document governs the procedure for hot-dip galvanising process & inspection / acceptance of galvanised components of Disc insulators and insulator hardware.
2. REFERENCE TO NATIONAL / INTERNATIONAL STANDARDS:  
IS:2486  
IS:209  
IS:2629  
IS:4759  
IS:2633  
IS:6745  
IS:383-1
3. SAMPLING ANBD CRITERIA FOR CONFORMITY:  
Sampling plan shall be as per Quality plan and all samples should conform to the acceptance norms.
4. PROCESS: The hot-dip galvanising process should be in accordance with IS-2629. Zinc to be used should be at least 99.95% pure as per IS-209. Hot-dip galvanising to be carried out with heating arrangement of a well mechanised oil fired/electric furnace having arrangement for temperature control. Dichromating treatment to be done after galvanising.
5. INSPECTION PROCEDURE/ACCEPTANCE NORMS:  
5.1. IN - PROCESS:  
5.1.1 The galvanisers will maintain process parameters in line with their Quality plan and maintain records for verification by BHEL.

PREPARED BY

APPROVED BY

*[Signature]*  
S.I. (Insulator)

*[Signature]*  
F.C. (Engg.)

Ref.Sl.No. 16

G36  
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5.2 FINISHED COMPONENT:

5.2.1 FREDOM FROM DEFECTS: Inspection for surface defects shall be done visually on samples drawn randomly from the offered lots. The zinc coating shall be adherent, smooth, reasonably bright, continuous and free from such imperfections as flux, ash and dross inclusions, bars and black spots, pimples, lumpiness and runs, rust stains, bulky white deposits and blisters. Ball and socket dimensions of galvanised components where applicable should conform to GO - NO GO Gauges.

5.2.2 UNIFORMITY IN THICKNESS: Samples shall be subjected to Copper sulphate dip test in accordance with IS-2633.  
(DIP TEST)  
Components shall withstand six successive dips of one-minute duration each.

5.2.3 MASS OF ZINC COATING: The mass of zinc coating shall be determined in accordance with IS:6745. Mass of zinc for all samples should be 610gms.m<sup>2</sup> minimum.

5.2.4 ADHESION TEST: The adherence of the zinc coating shall be checked in accordance with IS-2629.

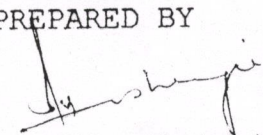
6.0 The sub-contractor should satisfy himself first as to the quality of the lot by carrying out the inspection/tests detailed above. Lot should be offered for inspection to BHEL, along with reports of inspection/tests carried out by the sub-contractor. Lots offered without prior inspection/testing by the sub-contractor shall not be entertained.

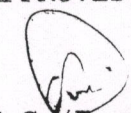
7.0 All standards mentioned above should be the latest revisions.

PREPARED BY

APPROVED BY

Ref.Sl.No. 16

  
S.I. (Insulator)

  
F.C. (Engg.)