

SCHEDULE-III**TECHNICAL SPECIFICATION OF TINNED COPPER FUSE
WIRE AGAINST TN-2370****3.01 SCOPE**

This specification is intended to cover the design, manufacture and testing before despatch, supply and delivery of Tinned Copper Fuse Wire at sites. Tinned copper fuse wire shall be used for rewirable type electric fuses at various sites of Jaipur Vidyut Vitran Nigam Limited for protection of lines and transformers.

3.02 STANDARD:-

The Tinned Copper Fuse wire shall be generally comply in all respect to the requirement of relevant IS:9926/1981 amended upto date except wherever modified in this specification.

Consideration may be given to alternative which the supplier consider advisable by reasons of his own manufacturing requirements and experiences, provided descriptive matter is submitted and recommended device of arrangement is equal to or superior to that required by the accompanying specification and if the purchaser is convinced of the quality and/ or superiority of the material.

3.03 TECHNICAL SPECIFICATION:-

The Tinned Copper Fuse wire shall be conforming to the IS:9926/1981 with latest amendments, if any. The Tinned Copper fuse wire shall comply with the following requirements:-

- a) The fuse wire shall be made from electrolytic tough pitched (ETP) copper (tinned) conforming to IS:8130/1984 amended upto date.
- b) The fuse wire shall be circular and shall have a uniform cross section and free from pits, draw marks or any other harmful surface defects.
- c) The tin coating layer shall be uniform, smooth, continuous and firmly adherent to the base copper material.
- d) The electrical properties of the material used for making the fuse wires shall be as given hereunder:-
- e)

| | | |
|-----|---------------------------|--------------------------|
| i. | Resistivity at 20 deg. C. | 0.017241 ohm mm Sq./m |
| ii. | Density at 20 deg. C. | 8.89 gm/cub cm. |

| | | | | | |
|------|--|-------------------------------|-------------------|--|--------|
| iii. | Constant mass temp. deficient of resistance at 20 deg.C. | | | 0.00393/deg.C. | |
| iv. | Coefficient of linear expansion | | | 17 x 10 ⁻⁶ / Deg.C. | |
| v. | Diameter & maximum allowable Resistance | | | | |
| | Rated Current of fuse wire | Nominal diameter | Tolerance (+/-) t | Permissible resistance in Ohm per meter at 20 Deg.C. | |
| | 1 | 2 | 3 | 4 | 5 |
| | A | mm | mm | Max. | Min. |
| | 10 | 0.35 | 0.004 | 0.1834 | 0.1730 |
| | 25 | 0.75 | 0.008 | 0.0400 | 0.0376 |
| | 40 | 1.25 | 0.011 | 0.0143 | 0.0136 |
| | 50 | TO BE FURNISHED BY THE BIDDER | | | |
| | 60/63 | 1.50 | 0.015 | 0.0099 | 0.0094 |
| | 80 | 1.80 | 0.018 | 0.0069 | 0.0065 |

3.04 TEST CERTIFICATE:-

The bidder must furnish type test reports along with bid as specified in IS:9926-1981 with latest amendments, from the testing house as specified in the Qualification Requirement of the Tender Documents (Schedule-III-A).

3.05 TESTS

The samples of all ratings/ sizes will be tested as per sampling plan of ISS at your works free of cost in presence of our inspecting officer for compliance to the requirement of guaranteed technical particulars and relevant IS:9926/1981 for acceptance of offered lot.

Acceptance Tests

The following tests shall be carried out as Acceptance Tests on the samples to be selected as per sampling plan:-

- i) Visual examination.
- ii) Dimensional Check.
- iii) Resistance Check.

3.06 PACKING:

The wire shall preferably be supplied in spools weighing 10 gms to 50 gms. The spools shall be so packed that the fuse wire are adequately protected against damages in ordinary handling and transit. The net weight of fuse wire of one spool should be 500 gms.

3.07 **MARKING:**

Each packing containing spools/ reels/ coils of fuse wire shall be clearly marked with the following informations:-

- i. Manufacturer's name or trade mark.
- ii. Purchaser's TN No., PO No. & date.
- iii. The material of fuse wire i.e. copper.
- iv. Length and weight of each spool.
- v. ISI certification mark.
- vi. The rated current.

3.08 **SCHEDULE OF REQUIREMENT**

The approximate requirement for following ratings of Tinned Copper Fuse Wire is as under:

| S. No. | Ratings | Approx. qty. (Kg.) |
|---------------|----------------|---------------------------|
| 1. | 10 A | 200 |
| 2 | 25 A | 600 |
| 3. | 40 A | 600 |
| 4. | 50 A | 250 |
| 5 | 60 A | 200 |
| 6. | 80 A | 100 |

Nigam reserves the right to increase/ decrease the quantity of any rating to any extent at the time of finalization.