

**TECHNICAL SPECIFICATION FOR G.I. WIRES 8 SWG ( 4 mm)**

This specification covers manufacture, supply and delivery of galvanized solid steel wire of 4 mm for use in power distribution system.

The G.I. wires shall comply with the latest edition of IS: 280 and IS: 7887 for solid wire. These wires shall be drawn from mild rods conforming to latest version of IS: 7887. The general requirements relating to G. I. wire shall be laid down in latest version of IS: 1387. The wires shall be round, free from splits, surface flaws etc.

The diameter of G.I. wire shall be 4 mm with tolerance of  $\pm 2.5\%$  (applicable only to the coils of wire) and tensile strength of 32-55 kgf/mm<sup>2</sup>. The wire shall be galvanized with heavy coating as per IS: 4826. Maximum difference between two readings taken on any two diameters on Cross section should not exceed 2.5%.

The wire shall be drawn from steel made by the open hearth process, oxygen or electric furnace process & of such quality that when drawn to the size of wire specified & coated with zinc, the finished wire shall be of uniform quality and shall have the characteristics specified in latest version of IS: 4826. The sulphur and phosphorus contents should not exceed 0.060 percent each. The heavy coating of shall be used in galvanization as per IS 4826.

**1. Tests:**

The following tests shall be carried out in accordance with latest version of IS: 280, as per complying criteria stipulated therein.

- (i) Dimensional Check (dia)
- (ii) Visual inspection regarding freedom from defects.
- (iii) Tensile test.
- (iv) Zinc coating test.
- (v) Chemical Composition.
- (vi) Bend Test/ Wrapping test.

**2. Weight of Coil Reel:**

**The GI wire shall be supplied in 50-70 Kgs. coils.**

**3. Marking:**

**Each coil shall provided with a metallic tag fixed firmly on the inner part of the coil bearing the following information:**

- a. Manufacturer's name of trade mark.
- b. Lot number and coil Number.
- c. Size
- d. Specification no.
- e. Tensile designation/ grade (Annealed or Hard)
- f. Coating
- g. Length
- h. Weight
- i. ISI certification mark, If any
- j. Identification mark, (property of PVVNL)

**4. Packing:**

GI wire shall be supplied in bare coils. Each coil of wire shall suitably be bound and fastened compactly for safe rail/ road transport.

**5. Prices:**

The price shall be Firm.

**6. Guarantee Technical Particulars:**

Guarantee Technical Particulars shall be as enclosed.