

TECHNICAL SPECIFICATION FOR THE GI Stay Wire 7/3.15 mm (7/10)

1. SCOPE:

The specification provides for the manufacture, testing before despatch, supply and delivery of G.I. stay wire.

2. STANDARDS:

The G.I. Stay Wire shall confirm to IS 2141-1979 with latest amendments unless otherwise modified in this specification.

3. MATERIAL:

The wire shall be drawn from steel made by the open hearth basic oxygen or electric Furnace process and of such quality that when drawn to the size of wire specified and coated with zinc, the finished strand and the individual wires shall be of uniform quality and have the properties and characteristics as specified in this specification. The wires shall not contain sulphur and phosphorous exceeding 0.060 percent each.

3.1 The wires shall be coated with zinc of Grade Zn 98 (IS:209-1966).

3.2 The wires shall be circular and shall be free from scale, irregularities imperfection, split surface flaws, rough jagged and imperfect edges. The zinc coating shall be smooth, even and, bright.

3.3 Joints shall be permitted in the individual wires during stranding but these stranding joints shall not be less than 15 metres apart in the finished strands.

4. Construction:

4.1 The wires shall be of grade 4 having minimum tensile strength of 70 Kgf./mm sq.

4.2 The constructional details shall be as specified in table give below. The galvanized stay strand shall be of 7 (seven) wires and the wires shall be so stranded together that when an evenly distributed pull is applied at the ends of the completed wire, each strand will take an equal share of the pull.

No. of wires	Single wire before stranding				Strand	
	Diameter (mm)	Tolerance %	Min Elongation %	Min breaking load KN/Sq.mm	Length of lay	Minimum breaking load KN/sq.mm
7	3.15	+ 0.06 mm, - 0.03 mm	6	5.46	12 to 18 times the strand diameter	34

5. Sampling Criteria:

Sampling criteria and the tests shall be in accordance with IS:2141-1979.

6. Tests:

- 6.1 i) Tests on wires before manufacture ductility test in accordance with IS-1755.
ii) Chemical analysis of sample from each lot.
iii) Coating test.

The uniformity of zinc coating shall be tested by the method specified IS:2633-1964. The wire shall with stand the number of dips as specified in IS:4826 – 1968 indicated below:
Weight of coating and number of Dips Heavily – Coated Wire.

Nominal diameter of Galvanized wire (mm)	Hard Weight of coating g/sq.m	No. of dips 1 Min.
3.15	240	3

Hard: Galvanized after drawing, without annealing.

General:

Weight of coil

The wire shall be supplied in 50 Kg. coils.

7. Marking:

Each coil shall carry a brand or be stamped with the following information:

- a) Manufacturer name or trade mark.
- b) Lot number & coil number
- c) Size
- d) Construction
- e) Tensile designation
- f) Lay
- g) Coating
- h) Length
- i) Mass
- j) Contract No. (PO No.)
- k) ISI Certification work if any
- l) Identification mark APEPDCL.

The above shall be legible stamped upon a metallic tape securely attached to the coil.

8. Samples:

Sample piece shall be produced along with the tender.

9. Packing: Each coil shall be wrapped in hessian and packed as per manufacturer practice.

10. Schedule of requirement, desired delivery and prices:

10.1 The schedule requirement and desired delivery are indicated in Section-IV.