

इंटरनेट

मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 10810-2 (1984): Methods of test for cables, Part 2:
Tensile test for aluminium wires [ETD 9: Power Cables]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

BLANK PAGE





Indian Standard

“पुनर्विज्ञापित १९९६”
“RE-AFFIRMED 1996”

METHODS OF TEST FOR CABLES

PART 2 TENSILE TEST FOR ALUMINIUM WIRES

1. Scope — Covers method to determine tensile strength of aluminium wires used for conductors of electric cables.

2. Significance — This test is performed on conductor material to determine the strength of the material when subjected to tensile stress. Since cable conductors to be pulled from one end along trenches are subjected to considerable force during pulling as well as manufacture, it is necessary to ensure that the conductor material has adequate tensile strength.

3. Terminology

3.1 Gauge Length — The original length of that portion of the specimen over which strain or change of length is determined.

3.2 Breaking Load — The load at which the test specimen fractures.

4. Apparatus

4.1 Tensile Testing Machine — Automatic, having capacity to meet the requirement of this test and shall have the rate of separation of jaws as specified in 8.3. The grips shall be such as to firmly hold the test specimen.

4.2 Plane Faced Micrometer — Least count 0.01 mm.

4.3 Suitable Scale — Least count 1 mm.

4.4 Weighing Balance — Sensitivity 0.01 g.

5. Material — No material other than the test specimen is required for performing this test.

6. Test Specimen

6.1 The gauge length shall be 250 mm. The total length of the specimen shall be at least equal to gauge length plus the length of the wire required for the full use of grips employed.

6.2 Number of Specimens — One.

7. Conditioning — No pre-conditioning is required.

8. Procedure

8.1 For circular specimen, diameter is measured.

8.2 For shaped solidal conductor specimen, the mass and length of specimen are determined.

8.3 The test specimen is fixed between the two jaws of the machine by means of grips. The load is applied gradually and uniformly to the wire having an original gauge length of 250 mm. The rate of separation of jaws of the machine shall be not greater than 100 mm/min. When the test specimen fractures, that breaking load is noted down from the dial of the tensile testing machine, and tensile strength is calculated.

9. Tabulation of Observations

Circular Wire Diameter	Shaped Solidal Conductor		Cross-Sectional Area	Breaking Load
	Mass	Length		
mm	g	mm	mm ²	N

Adopted 14 March 1984

© April 1985, ISI

Gr 1

10. Calculations

where

where

L = length of specimen in mm.

11. Report

11.1 Reference Specification

[illegible]

11.2 Conclusion — Specimen meets/does not meet the requirements of specification.