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IS 1755 (1983): Method for wrapping test for metallic wire
[MTD 3: Mechanical Testing of Metals]
Indian Standard

METHOD FOR
WRAPPING TEST FOR METALLIC WIRE

(First Revision)

Second Reprint AUGUST 2007
(Including Amendment No 1)

UDC 669-426 620 163 33
AMENDMENT NO. 1 JUNE 1997
TO
IS 1755 : 1983 METHOD FOR WRAPPING TEST FOR METALLIC WIRE

(First Revision)

(Page 4, clause 1.1) — Substitute the following for the existing clause:

'1.1 This standard prescribes the method for conducting wrapping test of metallic wires.'

(MTD 3)
Indian Standard

METHOD FOR
WRAPPING TEST FOR METALLIC WIRE

(First Revision)

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(Continued on page 2)

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IS : 1755 - 1983

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Indian Standard

METHOD FOR
WRAPPING TEST FOR METALLIC WIRE

(First Revision)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 27 June 1983, after the draft finalized by the Methods of Physical Tests Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 This Indian Standard was first published in 1961. Subsequently, it was decided by the concerned sectional committee to revise this standard so as to have a single reference in Indian Standard on method for wrapping test on metallic wire. So this standard, supersedes IS : 4168-1967* and IS : 3388-1965† as the requirements of these standards have been covered now in this standard.

0.3 In the preparation of this standard, assistance has been derived from the following standards published by the International Organization for Standardization:

- ISO R 145-1960 Wrapping test for steel wire
- ISO R 958-1969 Wrapping test for aluminium and aluminium alloy wire
- ISO R 397-1964 Wrapping test for copper and copper alloy wire

0.4 Certain specific requirements have to be specified in the material specification where reference has been made to this standard. For convenience of reference, these requirements have been summarized and included in Appendix A.

0.5 In reporting the result of a test or analysis made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960‡.

*Method for wrapping test of aluminium and aluminium alloy wire.
†Method of wrapping test for copper and copper alloy wire.
‡Rules for rounding off numerical values (revised).
18: 1755 - 1983

1. SCOPE

1.1 This standard prescribes the method for conducting wrapping test of metallic wires circular in cross section, up to 6.0 mm.

2. PRINCIPLE OF TEST

2.1 The test consists of winding the wire a specified number of turns around a mandrel of the diameter stated in the material specification. It may also include unwinding or unwinding and rewinding to a specified number of turns.

2.1.1 The test shall be carried out at ambient temperature, unless otherwise specified. The ambient temperature during test should be recorded.

3. TEST PIECE

3.1 The test piece shall be a piece of wire of sufficient length to enable the test to be made.

4. TESTING MACHINE

4.1 The testing machine used shall be so constructed that the wire may be wound in helix, tightly around the mandrel so that adjacent coils are in contact. A piece of wire to be tested may be used as the mandrel provided it is of the specified mandrel diameter.

5. TEST PROCEDURE

5.1 The test piece shall be wound round the mandrel at a constant speed, sufficiently slow to prevent any rise in temperature likely to affect the result of the test. To ensure tight winding a tensile stress not exceeding 5 percent of the nominal tensile strength of the wire may be applied during winding.

5.2 If unwinding or unwinding and rewinding are specified, the rate of unwinding or rewinding shall be sufficiently slow to prevent any rise in temperatures likely to affect the result of the test. At least one turn shall be left unwound.

6. TEST REQUIREMENTS

6.1 At the end of the test, the test piece shall be examined. The interpretation of the appearance of the tested portion shall be done in accordance with the material specification.
APPENDIX A

( Clause 0.4 )

REQUIREMENTS TO BE SPECIFIED IN MATERIAL SPECIFICATION FOR WIRE AND WIRE PRODUCTS

A-1. In the material specification for wire and wire products where reference to this standard has been made, the following points shall be specified for wrapping test:

a) The length of wire and the number of turns for winding or for winding and unwinding ( see 2.1 and 3.1 ),
b) The diameter of the mandrel round which the wire is to be wound ( see 2.1 ),
c) Speed of winding ( see 5.1 ), and
d) The interpretation of the visual appearance of the test pieces after the test ( see 6.1 ).
BUREAU OF INDIAN STANDARDS

Headquarters:
Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002
Telephone 23230131, 23233375, 23239402  Fax 91+011 23239399, 23239382
E- Mail info@bsi.org.in  website http://www.bsi.org.in

Central Laboratory:
Plot No 20/9, Site IV, Sahibabad Industrial Area, SAHIBABAD 201010  Telephone 277 0032

Regional Offices:
Central  Manak Bhavan, 9 Bahadur Shah Zafar Marg, NEW DELHI 110002  23237617
"Eastern 1/14 CIT Scheme VII M, VIP Road, Kankurgachi, KOLKATA 700054  23378662
"Northern  SCO 335-336, Sector 34-A, CHANDIGARH 160022  260 9285
"Southern  C I T Campus, IV Cross Road, CHENNAI 600113  2254 1984
"Western Manakalya, E9, MIDC, Behind Marol Telephone Exchange, Andheri (East), MUMBAI 400093  2832 9295

Branch Offices:
"Pushpak", Nurmohamed Shaikh Marg, Khapur, AHMEDABAD 380001  560 1348
Peenya Industrial Area, 1st Stage, Bangalore-Tumkur Road, BANGALORE 839 4955
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62-63, Ganga Nagar, Unit VI, BHUBANESHWAR 751001  240 3139
5th Floor, Kovai Towers, 44, Palakkad Road, COIMBATORE 6410018  221 0141
SCO 21, Sector 12, Faridabad 121007  229 2175
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Prthviv Raj Road, Opposite Bharat Overseas Bank, C-Scheme, JAIPUR 302001  222 3282
11/418 B, Sarvodaya Nagar, KANPUR 208005  223 3012
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Plot Nos. 857-860, Market Yard, Guiltki, PUNE 411037  2427 4804
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TC No. 2275 (1 & 2), Near Food Corporation of India, Kesavadasapuram-Ulfloor Road, Kesavadasapuram, THIRUVANANTHAPURAM 695004  255 7914
1st Floor, Udyog Bhavan, VUDA, Srinuram Junction, VISHAKHAPATNAM-03  271 2833

*Sales Office is at 5 Chowringhee Approach, P O Princep Street, KOLKATA 700072  2355 3243
†Sales Office (WRO) Plot No E-9, MIDC, Rd No. 8, Behind Telephone Exchange, Andheri (East), MUMBAI-400 093  2832 9295

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