



PRODUCT MANUAL
SPECIFICATION FOR HARD-DRAWN WIRE FABRIC FOR
CONCRETE REINFORCEMENT
ACCORDING TO IS 1566:1982

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 1566 : 1982
	Title	:	HARD-DRAWN WIRE FABRIC FOR CONCRETE REINFORCEMENT
	No. of Amendments	:	4
2.	Sampling Guidelines:		
a)	Raw material	:	Hard drawn steel wire – Conforms to IS 432 (Part 2)
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	Hard drawn wire fabric – Size 2 mtr × 2 mtr
3.	List of Test Equipment	:	Please refer ANNEX – B
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C
5.	Possible tests in a day :		
	a) Dimensions (Clause 6)		
	b) Sizes of sheets or roll (Clause 7)		
	c) Mass (Clause 8)		
	d) Mechanical Properties (Clause 10)		
	e) Tensile test (Clause 11.2)		
	f) Bend test (Clause 11.3)		
6.	Scope of the Licence :		
	“Licence is granted to use Standard Mark as per IS 1566 : 1982 with the following scope:		
	Name of the product	Hard Drawn Steel Wire Fabric	
	Type	Square mesh /Oblong mesh	
	Mesh Size		

ANNEX A

Grouping Guidelines

1. Hard-drawn steel wire fabric for concrete reinforcement covered in IS 1566 : 1982 are categorized into following:
 - a) Type – Oblong mesh and Square mesh
 - b) Dimensions: Mesh sizes, weight and sizes for welded wire fabric- As agreed between the purchaser and manufacture. (Commonly used dimensions are given in Appendix A)
2. Considering the above, following grouping guidelines shall be followed for GoL/CSoL:

“Samples of hard-drawn steel wire fabric for concrete reinforcement of each type for maximum and minimum mesh size and maximum diameter of wire (for square mesh)/ maximum main diameter of wire (oblong mesh), shall be tested for all requirements to cover all mesh sizes between the range of mesh sizes and diameter of wire tested.
3. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.
4. During the operation of the Licence, BO shall ensure that all varieties covered in the Licence are tested in rotation, to the extent possible.

ANNEX B**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Dimensions (Clause 6.1 and 9.2)	<ul style="list-style-type: none"> - Ball ended micrometer - Vernier calliper - Weighing balance - Steel scale - Vernier calliper
2	Sizes of Sheets or coils (Clause 7.1 and 9.3)	<ul style="list-style-type: none"> - Measuring tape - Ball end micrometer
3	Mass (Clause 8.2 and 9.4)	<ul style="list-style-type: none"> - Weighing balance
4	Mechanical properties (Clause 10.1) Tensile test (Clause 11.2)	<ul style="list-style-type: none"> - Tensile testing machine - Extensometer with dial gauge - Ball ended micrometer - Steel scale - Vernier calliper - Thermometer - Scriber - Hammer - Sample cutter - Air conditioner
5	Bend test (Clause 11.3)	<ul style="list-style-type: none"> - Arrangement for bend testing with required mandrels & accessories - Steel scale - Vernier calliper - Sample Cutter - Right Angle - Thermometer
6	Testing wire mesh in shear load	<ul style="list-style-type: none"> - Arrangement for testing wire mesh in shear load.

The above list is indicative only and may not be treated as exhaustive.

ANNEX C

SCHEME OF INSPECTION AND TESTING

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 1566 : 1982.

3.1 In addition, the following information should be given on the metal tag attached to each coil or a bundle of sheet:

- a) Name of the manufacturer or his recognized trade mark, if any;
- b) Cast number of raw material;
- c) Mesh size and diameter of the wire and nominal mass of fabric;
- d) Net Weight;
- e) Control unit number/batch number to trace back the production details; and
- f) Any other information required by purchaser.

4. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

5. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
4	Quality of steel	4.1, 10.1	IS 1566 IS 432 (Part 2)	-	-	-	Hard-drawn wire received shall be ISI marked and received with certificate of manufacturer
5	Manufacturer	5.1	IS 1566	-	Each coil/sheet	-	-
6	Dimensions (Mesh size, weight and size of wire)	6.1, 8.1, 8.2, 9.1, 9.2, 9.4	IS 1566	R	One	Every 50 sheets/ every 10 rolls manufactured	-
7	Sizes of sheets or Rolls	7.1 9.3	IS 1566	R	One		
11.2	Tensile Test	11.2	IS 1566	R	One	Every 6000 m ² of Fabric manufactured from same cast of steel wire	In case of failure of sample, retesting may be carryout as per clause 11.4 of IS 1566 : 1982

11.3	Bend Test	11.3, 11.3.1	IS 1566	R	One	Every 6000 m ² of Fabric manufactured from same cast of steel wire	In case of failure of sample, retesting may be carryout as per clause 11.4 of IS 1566 : 1982
12.2.2	Load in shear	12.2.2	IS 1566	S	-	As per requirement of purchaser.	

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.