



उत्पाद मैनुअल

Composite Synthetic Fibre Ropes

IS 14928: 2001 के अनुसार

PRODUCT MANUAL

FOR Composite Synthetic Fibre Ropes

ACCORDING TO IS 14928: 2001

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

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.	उत्पाद Product	:	IS 14928: 2001
	शीर्षक Title	:	Textiles - Composite Synthetic Fibre Ropes- Specification
	संशोधनों की संख्या No. of amendments	:	1
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The ropes shall be manufactured from a composite synthetic fibre construction made from high tenacity polyester and polypropylene yarn in a specific composition. The rope yarns shall not contain fibres which have been used or recovered. Unless otherwise specified, hawser laid ropes shall be manufactured from hawser laid yarns twisted together with a Z-twist, the strands themselves consisting of single yarns or 'Z' twisted yarns in 'S' twist Unless otherwise specified, 8-strand plaited ropes shall be manufactured from four pairs of strands each

		alternate pair consisting of two 'S' twisted and two 'Z' twisted strands respectively The number of yarns in all strands shall be equal. However, a variation of up to ± 5 percent shall be permissible.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	: Please refer Annex - A
c)	नमूने का आकार Sample Size	: ~40m
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: Please refer Annex – B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	: Please refer Annex - C
5.	एक दिन में संभावित परीक्षण Possible tests in aday	
	• Construction (Cl 5.2), Structure (Cl. 5.3), Rope (Cl. 5.5) • Tests for Mass of coil, Breaking Strength and Length of coil can be carried out in a day provided the samples are conditioned as per Cl. 4 of IS 7071 (Parts 1 to 3): 1989	
6.	लाइसेंस का दायरा / Scope of the Licence:	
	"Licence is granted to use Standard Mark as per IS 14928:2001 with the following scope:	
	Name of the product	Composite Synthetic Fibre Ropes
	Construction Type	3-Strand Hawser-Laid / 8-Strand Plaited
	Nominal Diameter (Reference Number)	From mm up to and including mm (reference numbers to be indicated for each type of rope separately)

BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9, BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110002

ANNEX – A

GROUPING GUIDELINES

For the purpose of grant of licence or change in scope of licence three samples, preferably of the highest, lowest and intermediate sizes (nominal diameter) of each type of rope (3-strand hawser-laid rope and/or 8-strand plaited rope) shall be drawn and tested to cover all sizes of the type(s) of rope within the range of sizes of ropes so tested.

Scope shall be restricted based on manufacturing and testing facilities available.

During operation of licence, samples of all covered varieties shall be drawn in rotation.

ANNEX-B

LIST OF TEST EQUIPMENTS

Major test equipment required to test as per the Indian Standard

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Vernier caliper	Diameter measurement (Cl. 6.1)
2	weighing balance capable of weighing to an accuracy of 1 percent, measuring tape, Tensioning device/Tensile testing machine	Mass of Coil/Linear density (Cl. 6.2) and Length of Coil (Cl. 6.3)
3	Tensile testing machine – Constant rate traverse type, as per IS 7071-4, Measuring tape.	Breaking Strength (Cl. 6.1, Tables 1 and 2)
4	Conditioning Chamber	For conditioning the sample

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

ANNEX C

SCHEME OF INSPECTION AND TESTING

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

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

2. **TEST RECORD-** The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. **PACKING AND MARKING** - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on the labels attached to each end of the coils of ropes provided always that the material so marked conforms to each requirement of the specification.

3.1 Each coil shall have securely attached labels at both ends. These labels shall also be marked with the following:

- a) Name of the material
- b) Reference Number (diameter in mm)
- c) Length (in m) of the rope
- d) Indication of source of manufacture (Manufacturer's Name or Trade Mark)
- e) The batch or control unit number and month and year of manufacture, and
- f) Any other information required by buyer
- g) BIS licence number and "For BIS certification details please visit www.bis.gov.in"

5. **CONTROL UNIT-** For the purpose of this scheme, the total quantity of ropes of one type (3-strand hawser-laid rope and/or 8-strand plaited rope and same reference number manufactured in a day from same batch of yarn shall be taken as one control unit.

6. **LEVELS OF CONTROL :-** The tests as indicate in Table 1 and at the levels of controls in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and records maintained in accordance with paragraph 2 above.

6.1 All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark.

7. **REJECTION** - 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.

TABLE1
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub-contracting permitted	Recommended Levels of Control		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
5.1	Yarn	5.1	IS 14928:2001	S	One	Each consignment	Conformity may be established by supplier's certificate
5.2	Construction	5.2	IS 14928:2001	R	3 coils	Each control unit	-
5.3	Structure	5.3	IS 14928:2001	R	3 coils	Each control unit	-
5.4	Treatment	5.4	IS 14928:2001	R	3 coils	Each control unit	-
5.5	Rope	5.5	IS 14928:2001	R	3 coils	Each control unit	-
6.1, Tables 1 and 2	Diameter		IS 7071 (Pt 1 to 3):1989	R	3 coils	Each control unit	-

6.1, 6.2 Tables 1 and 2	Mass		IS 7071 (Pt 1 to 3):1989	R	3 coils	Each control unit	-
6.1, Tables 1 and 2	Breaking Strength		IS 7071 (Pt 4): 1989	R	3 coils	Each control unit	-
6.3	Length		IS 7071 (Pt 1 to 3):1989	R	3 coils	Each control unit	-

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. 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.