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उत्पाद मानयल
Steel Wire Ropes – Fibre Main Cores
IS 1804:2004 के अनुसार

PRODUCT MANUAL For
Steel Wire Ropes – Fibre Main Cores
ACCORDING TO IS 1804:2004

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, 2008 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	उत्पाद Product	:	IS 1804:2004
	शीर्षक Title	:	Steel Wire Ropes – Fibre Main Cores - Specification
	संशोधनों की संख्या No.of amendments	:	02
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Natural Fibre Cores shall be made from virgin long fibres (soft fibres like jute or hard fibres like sisal or manila) and Man-made fibre cores shall be made from entirely new fibres i.e. fibre forming polyolefins (Monofilament film or fibrillated film of polyethylene, polypropylene etc) or any suitable alternative material agreed between purchaser and supplier. Lubricants used to facilitate the preparation of natural fibre shall conform to IS 9182 (Part 1) Conformity of raw materials to the requirements may be established through supplier's test certificate, or test report

			of BIS recognized/empaneled labs or NABL accredited labs or in house testing. No testing is required for ISI Marked material.
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer Annex –A
c)	नमूने का आकार Sample Size	:	8 m core is required (as main product). Besides, a separate sample of raw fibre for salt content test shall also be drawn.
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	:	Lay length (without conditioning) Water soluble acids Nominal diameter Nominal runnage
6.	लाइसेंस का दायरा /Scope of the Licence:		
	Licence is granted to use Standard Mark as per IS 1804:2004 with the following scope:		
	Name of the product	Fibre Main Cores for Steel Wire Ropes	
	Type of Fibre	Natural Fibre -Jute or Sisal or Manila etc. Man Made fibre – Monofilament film or fibrillated film of polyethylene, polypropylene etc.	
	Core Designation	Nominal Diameter in mm and Nominal Runnage (kg/m)	
	Any other Aspect	Lubricated/Unlubricated Core	

ANNEX-A
GROUPING GUIDELINES

IS 1804 classifies Fibre Main Cores for Steel Wire Ropes in terms of the type of fibre, the diameter of the core and the core runnage (mass per unit length), lubricated or unlubricated core.

Accordingly, for the purpose of grant of licence and/or change in scope of licence, the manufacturer shall declare the nominal diameter(s) and corresponding nominal runnages for each type of the fibre cores intended to be covered in the scope of licence. Samples of fibre main cores of each type of fibre (sisal or jute or manila or polyethylene, polypropylene etc.) and of **any core diameter** (and the corresponding declared runnage) may be drawn and tested **to cover all the sizes (diameters) and the corresponding declared runnages of cores of that type of fibre**, in the scope of licence. Further if sample drawn is of lubricated core, unlubricated core may be added in the scope on that basis.

However, scope of licence shall be restricted on the basis of the manufacturing and testing capability.

During the operation of licence, samples of each variety covered in the licence shall be drawn and tested by rotation to the extent possible.

ANNEX-B
LIST OF TEST EQUIPMENTS

Major test equipment required to test the requirements of the Indian Standard.

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Weighing scale LC 1 mg, distilled water, xylene or an appropriate benzole fraction, extraction sleeve, extraction flask 250 ml, drying cabinet, desiccator, methyl chloride, Soxhlet apparatus, graduated cylinder	Water content and core lubricant content (Clause 5.1)
2	Soxhlet apparatus, boiling arrangement, graduated cylinder distilled water, weighing scale LC 0.1 gram, filter paper, phenolphthalein, 0.1 mol/l standard volumetric NaOH or KOH solution	Water soluble acids (clause 6.1)
3	Wide mouthed glass stoppered bottle, platinum or silica basin, 50 g/l Na ₂ CO ₃ solution, arrangement to dry / ignite / incinerate, 20 % (v/v) HNO ₃ , 0.1 mol/l standard volumetric AgNO ₃ solution, saturated solution of ammonium iron (III) sulphate, 0.1 mol/l standard volumetric potassium thiocyanate solution	Salt content (clause 6.2)
4	Sliding calliper, tension apparatus, measuring scale or tape, chalk	Size of yarn (4.3), Length of Lay (5.2) and Core diameter (clause 7.2 and 8)
5	Tension apparatus, weighing scale LC 0.1 g	Core runnage (clause 7.2 and 8)
6	Arrangement to maintain atmospheric conditions to relative humidity 65 ± 2 %, temperature 27 ± 2 °C	Conditioning for physical tests

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 **and implement** a calibration plan for the test equipment.
2. **TEST RECORDS** – 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 license shall be marked on the labels attached at both ends of each coil of Fibre Main Cores provided always that the said material to which the mark is thus applied conforms to every requirement of the specification
 - 3.1 Marking and packing shall be done as per the provisions of the Indian Standard. In addition, the following information shall be given on the label attached to each coil or on the package:
 - a) Control Unit (or Batch) Number.
 - b) BIS website details i.e–“For details of BIS certification please visit www.bis.gov.in”
4. **CONTROL UNIT** – For the purpose of this scheme all the coils of fibre core of one type, runnage and diameter manufactured in a day under similar conditions shall constitute a control unit.
5. **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.
 - 5.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.
6. **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
LEVELS OF CONTROL

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or)S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
4.1	No. of strands	4.1	IS 1804:2004	R	One coil	Each control unit	
4.2	Yarn Sizes	Table 1 and 2	-do-	R	-do-	-do-	
5.1	Core lubrication – Water content and core lubricant content	Annex A	-do-	R	-do-	-do-	
5.2	Lay Length		IS 7071 (Parts 1 to 3)	R	-do-	-do-	
6.1	Water soluble acids	Annex B	-do-	R	-do-	-do-	
6.2	Salt	Annex C	-do-	R	-do-	-do-	
7.1	Length	7.1	-do-	R	-do-	-do-	
7.2/8	Nominal diameter and nominal runnage of core/Core designation	Annex D and E	-do-	R	-do-	-do-	
9	Identification		IS 9560	R*	-do-*	-do-*	*If agreed to between core manufacturer and wire rope manufacturer

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 empaneled 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.