PRODUCT MANUAL FOR TRANSMISSION BELTING – FRICTION SURFACE RUBBER BELTING ACCORDING TO IS 1370: 1993

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 1370 : 1993
	Title	:	Transmission Belting – Friction Surface Rubber Belting
	No. of Amendments	:	Nil
2.	**Sampling Guidelines:**		
a)	**Raw material**	:	As per clause 4 of IS 1370
b)	**Grouping guidelines**	:	Please refer ANNEX – A
c)	**Sample Size**	:	2 metre
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 :**		
	(i) Dimensions and Tolerances (ii) Construction (iii) Full Thickness Breaking Strength (iv) Full Thickness Elongation (v) Test on Seam Strip		
6.	**Scope of the Licence :**		
	"Licence is granted to use Standard Mark as per IS 1370 : 1993 with the following scope:		
	Name of the product	Transmission Belting – Friction Surface Rubber Belting	
	Ply Construction		
	Type of Duck		
	Nominal Belt Width (mm)		

ANNEX A

Grouping Guidelines

1. Friction Surface Rubber Transmission Belting as per IS 1370: 1993 can be classified as per the following:

a) Ply Construction

- 3 ply to 10 ply

b) Type of Duck

- Soft Duck
  - 28 Type, 32 Type
- Hard Duck
  - 31 Type, 34 Type

c) Nominal Belt Width

- 25 mm to 630 mm

2. Considering the above, following grouping guidelines is developed for GoL/CSoL:

- Sample of highest ply construction with maximum width from each type of duck (Soft/Hard) shall be tested to cover Belting for that particular type of duck, for the ply and width upto and including the ply and width tested.

- If fabric type 32 is tested, fabric type 28 may also be covered. Similarly, if fabric type 34 is tested, fabric type 31may also be covered

3. The Firm shall declare the varieties intended to be covered in the Licence. 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 the types and sizes 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 and Tolerances (Clause 3)	(i) Measuring Tape (ii) Micrometer (iii) Vernier Caliper
2	Construction (Clause 5)	(i) Angle Protractor (ii) Measuring Tape
3	Full Thickness Breaking Strength (Clause 8.1)	(i) Arrangement to maintain 27±2ºC and 65±5% RH (ii) Sample Cutting Die (iii) Single Compartment and Double Compartment Grips (iv) Tensile Testing Machine
4	Full Thickness Elongation (Clause 8.2)	(i) Arrangement to maintain 27±2ºC and 65±5% RH (ii) Sample Cutting Die (iii) Single Compartment and Double Compartment Grips (iv) Tensile Testing Machine
5	Adhesion Test (Clause 8.3)	(i) Pincers (ii) Sharp Knife (iii) Test Machine for Adhesion
6	Test on Seam Strip (Clause 8.4)	(i) Knife (ii) Marker (iii) Vernier Caliper (iv) Vice

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 requirement of IS 1370: 1993.

4. CONTROL UNIT – Belting of the same width, ply and type of duck manufactured in one continuous length subject to a maximum of 200 meters shall constitute one 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 Standards 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

(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	Material	Cl. 4.1	IS 5996	S	One	Each consignment	No further testing is required if the consignment is accompanied with test certificate or ISI marked.
4.2	Mass of Duck	Cl. 4.2	IS 1370	R	One	Each roll of duck	In case of failure, two more samples shall be drawn and tested. If any of these two sample fails, the roll shall be rejected.
3	Dimension and Tolerances	Cl. 3	IS 1370	R	One	Each roll of belting	
5	Construction	Cl. 5	IS 1370	R	One	Each roll of belting	
8.1	Full Thickness Breaking Strength	Cl. 8.1	IS 1370	R	One	Each control unit	
8.2	Full Thickness Elongation	Cl. 8.2	IS 1370	R	One	Each control unit	
8.3	Adhesion Test	Cl. 8.3	IS 1370	R	One	Each control unit	
8.4	Test on Seam Strip	Cl. 8.4	IS 1370	R	One	Each control unit	

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.