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मानक

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IS 699-1 (1993): Textile machinery and accessories - Cross wound spool centres for jute winding machines, Part 1: Spool centres for spool winding machines [TXD 14: Machinery for Fabric Manufacture]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

वस्त्रादि मशीनरी एवं सहायकांग — पटसन आवलन मशीनों के लिए
अनुप्रस्थ आवलित स्पूल केन्द्र — विशिष्ट

भाग 1 स्पूल आवलन मशीनों के लिए स्पूल केन्द्र

(दूसरा पुनरीक्षण)

Indian Standard

TEXTILE MACHINERY AND ACCESSORIES —
CROSS WOUND SPOOL CENTRES FOR
JUTE WINDING MACHINES — SPECIFICATION

PART 1 SPOOL CENTRES FOR SPOOL WINDING MACHINES

(Second Revision)

UDC 677-053-296-2 : 677-13

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BUREAU OF INDIAN STANDARDS
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FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Jute Mill Machinery/Accessories and Spare Parts Sectional Committee had been approved by the Textile Division Council.

This standard which was first published in 1955 and subsequently revised in 1983, has again been revised to include the specification for spool centres for precision winding machines.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this standard.

Indian Standard

TEXTILE MACHINERY AND ACCESSORIES — CROSS WOUND SPOOL CENTRES FOR JUTE WINDING MACHINES — SPECIFICATION

PART 1 SPOOL CENTRES FOR SPOOL WINDING MACHINES

(Second Revision)

1 SCOPE

This standard prescribes the requirements of 13 types of cylindrical and 11 types of conical spool centres for use in different types of jute spool winding machines.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

IS No.	Title
196 : 1966	Atmospheric conditions for testing (<i>revised</i>)
707 : 1976	Glossary of terms applicable to timber technology and utilization (<i>second revision</i>)
1141 : 1973	Code of practice of seasoning of timber (<i>first revision</i>)
2500 (Part 1) : 1973	Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (<i>first revision</i>)

3 GENERAL REQUIREMENTS

3.1 Material

The spool centre may be made of paper, synthetic material or any of the species of timber listed in Annex A in accordance with the contract or order.

3.1.1 Timber used for the manufacture of spool centres shall be seasoned (*see* IS 1141 : 1973) before use.

3.1.2 Wooden spool centres shall be free from visible defects such as checks, splits, gum veins, bark pockets, hole or any other defect which is likely to affect the life or usefulness (for the description of defects *see* IS 707 : 1976). The surface shall be sanded smooth.

3.1.3 Synthetic as well as paper spool centres shall have uniformly distributed embossing on the surface.

4 SPECIFIC REQUIREMENTS

4.1 Dimensions and Mass

The spool centres of various types shall comply with the dimension and mass specified in Tables 1 and 2 when read with Fig. 1 and 2 respectively in accordance with the contract or order.

4.2 Concentricity

The spool centres shall be concentric, the eccentricity of spool centres shall, however, not exceed 1.5 mm in case of cylindrical spool centres and 0.8 mm in case of conical spool centres.

4.3 Position of the Groove in Cylindrical Spool Centre

The distance between the groove and the end shall be same at both the ends of cylindrical spool centres (*see* Fig. 1).

5 METHOD OF TEST

5.1 The dimensions, mass and concentricity of the spool centres shall be checked by the use of suitable calipers, gauges and balance.

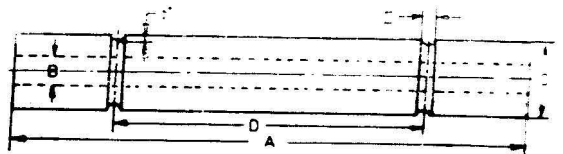
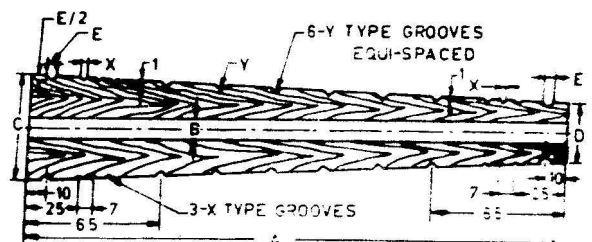


FIG. 1 CYLINDRICAL SPOOL CENTRE



All dimensions in millimetres.

FIG. 2 CONICAL SPOOL CENTRE

Table 1 Dimensions of Cylindrical Spool Centres for Different Types of Jute Spool Winding Machines
(Clause 4.1, and Fig. 1)

Type	Length A	Inside Dia B	Outside Dia C	Grooves				
				Distance from Centre to Centre of Grooves D	No. of Grooves	Width E	Depth F	Mass of 100 Spool Centres
(1)	(2) mm	(3) mm	(4) mm	(5) mm	(6)	(7) mm	(8) mm	(9) kg
1	244	14.5	40.0	143.0	2	2.6	2.3	14.0
2	244	14.3	35.0	133.0	2			14.0
3	246	12.7	32.0	143.0	2			15.0
4	248	11.1	32.0	146.0	2			15.0
5	248	12.7	35.0	138.0	2			15.0
6	248	12.7	38.0	152.0	2			15.0
7	250	14.5	38.0	150.0	2			15.0
8	251	11.1	38.0	152.0	2			15.0
9	258	9.5	35.0	152.0	2			15.0
10	260	9.5	38.0	152.0	2			15.0
11	267	28.5	48.0	152.0	2			—
12	271	32.0	41.3	152.0	2			—
13	282	30.0	43.0	28.0	9			—
Tolerance	± 2	+ 0.5 - 0	± 1.0	± 1.5	—	—	—	+ 2.0 - 1.5

Table 2 Dimensions of Conical Spool Centres for Different Types of Jute Spool Winding Machines
(Clause 4.1, and Fig. 2)

Type	Length A	Inside Dia B	Outside Dia		Grooves			Mass of 100 Spool Centres	
			At Bottom C	At Top D	Circular E	Triangular X Y		Wooden	Synthetic
(1)	(2) mm	(3) mm	(4) mm	(5) mm	(6)	(7)	(8)	(9) kg	(10) kg
1	241	19.1	63.5	41.3	2.4	2.3	2.3	27.0	—
2	254	17.0	63.5	40.0				27.0	—
3	257	12.7	49.2	30.1				27.0	—
4	260	11.1	52.4	28.6				27.0	—
5	260	14.3	57.2	35.0				27.0	—
6	273	25.4	63.5	39.7				—	41.0
7	278	22.2	63.5	39.7				—	41.0
8	278	25.4	63.5	39.7				—	41.0
9	278	27.0	65	40.0				—	41.0
10	280	27.0	63.5	39.7				—	41.0
11	304	27.4	63.5	39.7				—	41.0
Tolerance	± 2	+ 1.0 - 0	± 1.0	± 1.0	—	—	—	+ 2.0 - 1.5	± 1.5

5.2 In case of dispute or if agreed to between the buyer and the seller, the test sample shall be conditioned to moisture equilibrium and tested in the standard atmospheric conditions, that is (65 ± 2) percent relative humidity and $27 \pm 2^\circ\text{C}$ temperature (see also IS 196 : 1966).

6 MARKING

6.1 Each spool centre shall be marked with the following information:

- a) Indication of the source of manufacture,
- b) Date of manufacture,
- c) Batch number, and
- d) Dimensions of the spool.

6.1.1 The spool centres may also be marked with the Standard Mark.

7 PACKING

7.1 The spool centres shall be packed in accordance with the agreement between the buyer and the seller.

8 SAMPLING AND CRITERIA FOR CONFORMITY

Unless otherwise agreed to between the purchaser and the manufacturer to ascertain the conformity of the spool centres for jute winding machines to the requirements of this specification, single sampling plan with Inspection Level 1 and Acceptance Quality Level (AQL) of 2.5 percent given in Tables 1 and 2 of IS 2500 (Part 1) : 1973 shall be followed.

ANNEX A

(Clause 3.1)

LIST OF RECOMMENDED SPECIES OF TIMBER FOR THE MANUFACTURE OF WOODEN SPOOL CENTRES

	TRADE NAME	BOTANICAL NAME
Cylindrical spool centre	Amari	<i>Ammora</i> spp.
	Birch	<i>Betula</i> spp.
	Champ	<i>Michelia</i> spp.
	Chaplash	<i>Artocarpus chaplasha</i>
	Chikrassy	<i>Chukrasia velutina</i> (Syn. <i>C. tabularis</i>)
	Haldu	<i>Adina cordifolia</i>
	Hathipaila	<i>Pterospermum acerifolium</i>
	Kaim	<i>Mitragyna parvifolia</i> (Syn. <i>Stephegyne parvifolia</i>)
	Kurchi	<i>Holarrhena antidysenterica</i>
	Mango	<i>Mangifera</i> spp.
	Mokha	<i>Schrebera swietenoides</i>
	Pali	<i>Palaquium ellipticum</i>
	Pitraj	<i>Abhanamixis polystachya</i> (Syn. <i>Amoorarohituska</i>)
	Silver Oak	<i>Grevillea robusta</i>
Toon	<i>Toona ciliata</i> (Syn. <i>Cedrela toona</i>)	
Conical spool centre	Amari	<i>Amoora</i> spp.
	Birch	<i>Betula</i> spp.
	Champ	<i>Michelia</i> spp.
	Chikrassy	<i>Chukrasia velutina</i> (Syn. <i>C. tabularis</i>)

	TRADE NAME	BOTANICAL NAME
Conical spool centre	Haldu	<i>Adina cordifolia</i>
	Hathipaila	<i>Pterospermum acerifolium</i>
	Kaim	<i>Mitragyna parvifolia</i> (Syn. <i>stephegyne-parvifolia</i>)
	Kurchi	<i>Holarrhena antidysenterica</i>
	Pali	<i>Palaquium ellipticum</i>
	Sandan	<i>Ougeina cojeinensis</i> (Syn. <i>O. dalbergioids</i>)
	Silver Oak	<i>Grevillea robusta</i>
	Mokha	<i>Sohrebera swietenioides</i>
	Tendu-light coloured outer wood only	

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