भारतीय मानक

Indian Standard

IS 11510 : 2023

वस्त्रादि — जूट कॉप वाइंडिंग मशीन के लिए स्पिंडल — विशिष्टि

(पहला पुनरीक्षण)

Textiles — Spindle for Jute Cop Winding Machine — Specification

(First Revision)

ICS 59.120.30

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, 9 बहादुर शाह ज़फर मार्ग, नई दिल्ली - 110002
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI - 110002
www.bis.gov.in www.standardsbis.in

October 2023 **Price Group 4**

Textile Machinery and Accessories Sectional Committee, TXD 14

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Textile Machinery and Accessories Sectional Committee had been approved by the Textiles Division Council.

This standard was originally published in 1985. The standard has again been revised to incorporate the following changes:

a) References to Indian Standards have been updated; and
b) Marking clause has been modified.

The composition of the Committee responsible for the formulation of this standard is given in Annex A.

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 : 2022 ‘Rules for rounding off numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

TEXTILES — SPINDLE FOR JUTE COP WINDING MACHINE — SPECIFICATION

(First Revision)

1 SCOPE

This standard prescribes the requirements of spindle for cop winding machine in a jute mill.

2 REFERENCES

The standards given below contain provisions which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition of the standards.

IS No.	*Title*
1570 (Part 2) : 1979	Schedules for wrought steels: Part 2 Carbon steels (unalloyed steels) (*first revision*)
1586 (Part 1) : 2018/ISO 6508 -1 : 2016	Metallic materials — Rockwell hardness test: Part 1 Test method (*fifth revision*)

3 MANUFACTURE

3.1 Material

The spindle shall be manufactured from carbon steel designation 55C8 as per IS 1570 (Part 2).

3.2 Finish

The spindle shall be ground finish. The tapering shall not exceed 1 in 100.

4 REQUIREMENTS

4.1 Dimensions

4.1.1 The nominal dimensions of the spindle shall be as agreed to between the manufacturer and purchaser or in the absence of any agreement, the nominal dimensions would be as declared by the manufacturer.

4.1.2 *Tolerances*

The dimensional requirements of the spindle shall be subject to the following tolerances (*see* Fig. 1):

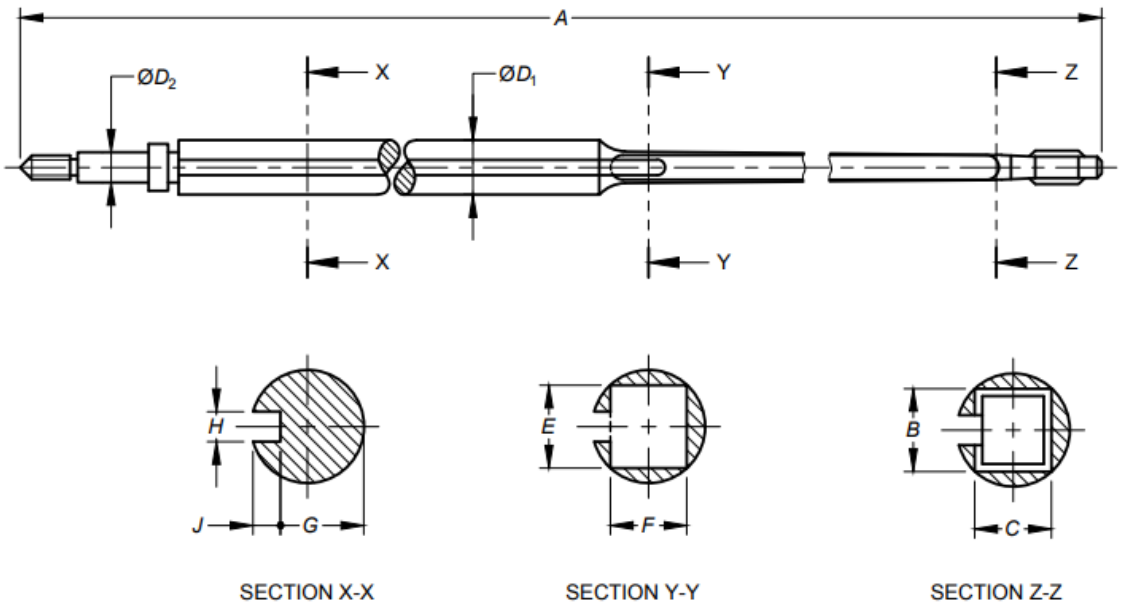

FIG. 1 SPINDLE FOR JUTE COP WINDING MACHINE

Sl No.	*Spindle Dimension*	*Tolerance in* (*mm*)
(1)	(2)	(3)
i)	A	± 0.75
ii)	B	± 0.05
iii)	C	± 0.05
iv)	øD_1	− 0.025 − 0.075
v)	øD_2	+ 0.00 − 0.01
vi)	E	± 0.05
vii)	F	± 0.05
viii)	G	− 0.05 − 0.10
ix)	H	+ 0.10 − 0.00
x)	J	+ 0.05 − 0.00

4.2 Hardness

Spindle shall have hardness of 25 HRC to 32 HRC.

4.2.1 Hardness shall be determined by method prescribed in IS 1586 (Part 1).

4.3 Run-Out

The run-out of spindle shall not exceed 0.05 mm.

4.4 Eccentricity

The eccentricity of spindle shall not exceed .05 mm.

5 SAMPLING AND CRITERIA FOR CONFORMITY

5.1 Lot

In a consignment, all the spindles of the same type and manufactured under the same conditions shall constitute a lot.

5.1.1 For conformance of this specification, samples shall be drawn from the lot in accordance with Table 1.

5.2 Number of Test

5.2.1 All the spindles in the sample shall be visually examined for material and finish.

5.2.2 For requirements given in **4.1**, **4.3** and **4.4** the spindles selected in the sample shall be tested. Hardness (**4.2**), shall be tested on the sub-sample given in co1 (4) of Table 1.

5.3 Criteria for Conformity

5.3.1 Whenever a spindle fails to meet any of the requirements given in **4.1**, **4.3** and **4.4** it shall be declared as defective. The lot shall be declared as conforming to the requirements of **4.1**, **4.3** and **4.4** if the number of defective spindles does not exceed the corresponding acceptance number and for requirements of **4.2** none of the spindles tested on the sub-sample shall fail.

6 MARKING

6.1 Unless otherwise agreed between the buyer and manufacturer, each spindle shall be legibly marked with the following information:

a) Manufacturer's name or trade-mark;

b) Name of the material;

c) Dimensions of the spindle;

d) Batch or code number;

e) Gross and net mass;

f) Lot/Batch number;

g) Country of origin; and

h) Any other information required by the law in force and/or by the buyer.

6.2 BIS Certification Marking

The product conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the

Bureau of Indian Standards Act, 2016 and the Rules and Regulations framed thereunder, and the product may be marked with the Standard Mark.

7 PACKING

Spindles shall be packed in such a way so as to ensure complete protection from rust and bending.

Table 1 Number of Spindles to be Selected for Sampling

(*Clauses* 5.1.1 *and* 5.2.2)

Sl No.	Lot Size	Sample Size	Acceptance Number	Sub-Sample Size
(1)	(2)	(3)	(4)	(5)
i)	Up to 150	8	1	2
ii)	151 to 300	13	2	2
iii)	301 to 500	20	3	2
iv)	501 to 1 000	32	5	3
v)	1 001 and above	50	7	3

ANNEX A

(*Foreword*)

COMMITTEE COMPOSITION

Textile Machinery and Accessories Sectional Committee, TXD 14

Organization	*Representative(s)*
Central Manufacturing Technology Institute, Bengaluru	DR NAGAHANUMAIAN **(*Chairperson*)**
Amritlakshmi Machine Works, Mumbai	SHRI N. K. BRAHMACHARI SHRI N. K. RAUT (*Alternate*)
ATE Enterprises Private Limited, New Delhi	SHRI ABHIJIT KULKARNI SHRI ANIL KUMAR SHARMA (*Alternate*)
Bajaj Industries Private Limited, Kolkata	REPRESENTATIVE
Bhowmick Calculator, Kolkata	SHRI GOUTAM BHOWMICK SHRI VIVEKANANDA BHOWMICK (*Alternate*)
Central Manufacturing Technology Institute, Bengaluru	SHRI B. R. MOHANRAJ SHRI K. SARAVANAN (*Alternate*)
Confederation of Indian Textile Industry, New Delhi	SHRI AJAY KUMAR
Dashmesh Jacquard and Powerloom Private Limited, Panipat	SHRI RAJMEET DHAMMU (*Representative*)
HLL Lifecare Limited, Noida	SHRI AKHIL G. S. SHRI RATNAKAR GUPTA (*Alternate*)
ICAR-Central Institute for Research on Cotton Technology, Mumbai	DR N. SHANMUGAM DR T. SENTHILKUMAR (*Alternate*)
India ITME Society, Mumbai	SHRI PRASHANT MANGUKIA SHRIMATI SEEMA SRIVASTAVA (*Alternate*)
Indian Jute Industries Research Association, Kolkata	SHRIMATI SAUMITA CHOUDHURY SHRI PARTHA SANYAL (*Alternate*)
Indian Jute Mils Association, Kolkata	REPRESENTATIVE
Indian Textile Accessories and Machinery Manufacturers Association, Mumbai	SHRI N. D. MHATRE SHRI CHANDRESH SHAH (*Alternate*)
Inspiron Engineering Private Limited, Ahmedabad	SHRI SANJAY KOWARKAR SHRI ANKUR SONI (*Alternate*)
JCB Industries, Guwahati	SHRI DHRUBA SARMA SHRI ABHIJIT BHUYAN (*Alternate*)
Kusters Calico Machinery Limited, Karjan	SHRI DEVANG PARIKH SHRI SHUBHASIS SUR (*Alternate*)
Lakshmi Machine Works Limited, Coimbatore	MS KALPANA A. MS DIVYA V. (*Alternate*)
Laxmi Shuttleless Looms Private Limited, Ahmedabad	SHRI KETAN SANGHVI
Ludlow Jute Limited, Kolkata	REPRESENTATIVE

Organization	*Representative(s)*
Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, New Delhi	SHRI SANJEEV GUPTA SHRI S. SUNDAR (*Alternate*)
National Safety Council, Navi Mumbai	SHRI LALIT R. GABHANE SHRI R. R. DEOGHARE (*Alternate*)
Office of the Textile Commissioner, Mumbai	SHRI C. R. KALESAN SHRI JAGRAM MEENA (*Alternate*)
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The Bombay Textile Research Association, Mumbai	SHRI VIJAY GAWDE SHRI R. A. SHAIKH (*Alternate*)
The Synthetic and Art Silk Mills Research Association, Mumbai	DR MANISHA MATHUR SHRI SANJAY SAINI (*Alternate*)
The Textile Association (India), Mumbai	SHRI J. B. SOMA SHRI ASHOK JUNEJA (*Alternate*)
Truetzschler India Private Limited, Ahmedabad	SHRI PRAVIN KANDGE SHRI SHILADITYA JOSHI (*Alternate*)
United Nations International Children's Emergency Fund, New Delhi	DR PRATIBHA SINGH SHRI YUSUF KABIR (*Alternate*)
Veermata Jijabai Technological Institute, Mumbai	DR SURANJANA GANGOPADHYAY SHRI S. P. BORKAR (*Alternate*)
BIS Directorate General	SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR AND HEAD (TEXTILES) [REPRESENTING DIRECTOR GENERAL (*Ex-officio*)]

Member Secretary
SHRI SWAPNIL
SCIENTIST 'B'/ASSISTANT DIRECTOR
(TEXTILES), BIS

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act*, 2016 to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the website-www.bis.gov.in or www.standardsbis.in.

This Indian Standard has been developed from Doc No.: TXD 14 (22381).

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

BUREAU OF INDIAN STANDARDS

Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002
Telephones: 2323 0131, 2323 3375, 2323 9402 *Website*: www.bis.gov.in

Regional Offices:		*Telephones*
Central	: 601/A, Konnectus Tower -1, 6th Floor, DMRC Building, Bhavbhuti Marg, New Delhi 110002	2323 7617
Eastern	: 8th Floor, Plot No 7/7 & 7/8, CP Block, Sector V, Salt Lake, Kolkata, West Bengal 700091	2367 0012 2320 9474
Northern	: Plot No. 4-A, Sector 27-B, Madhya Marg, Chandigarh 160019	265 9930
Southern	: C.I.T. Campus, IV Cross Road, Taramani, Chennai 600113	2254 1442 2254 1216
Western	: Plot No. E-9, Road No.-8, MIDC, Andheri (East), Mumbai 400093	2821 8093

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Published by BIS, New Delhi