
वस्त्रादि — धातुशील कार्ड क्लोथिंग —
विशिष्टि

भाग 3 सिलेंडर, डोफर और लिकर-इन के लिए तार

(पहला पुनरीक्षण)

Textiles — Metallic Card Clothing —
Specification

Part 3 Wires for Cylinder, Doffer and
Licker-In

(First Revision)

ICS 59.120.10

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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

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FOREWORD

This Indian Standard (Part 3) (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.

During processing of cotton for spinning, carding quality is critically influenced by the characteristics of metallic card clothing. This standard specifies the requirement of the same which govern the quality of carding.

This standard was first published in 1982. The present revision has been made to incorporate the following changes:

- a) Reference clause has been updated; and
- b) Finish, dimensions, packing and marking clause have been modified.

This standard has been published in several parts. Others part in this series are:

Part 1 Terminology

Part 2 Bead wires

The composition of the Committee responsible for the revision 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, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (*second revision*)'. The number of the significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Indian Standard***TEXTILES — METALLIC CARD CLOTHING —
SPECIFICATION****PART 3 WIRES FOR CYLINDER, DOFFER AND LICKER-IN***(First Revision)***1 SCOPE**

This standard (Part 3) specifies the requirements for metallic card clothing used on cylinder, doffer and licker-in of cards.

2 REFERENCE

The standard given below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated was 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 this standard:

<i>IS No.</i>	<i>Title</i>
IS 1501 (Part 1) :	Metallic materials —
2025/ISO 6507-1 :	Vickers hardness test:
2023	Part 1 Test method
	<i>(sixth revision)</i>

3 RAW MATERIAL

The metallic card clothing shall be made of carbon steel or any other suitable steel wire as agreed to between the buyer and the seller.

4 FINISH

The teeth of metallic wire shall have a smooth finish. The wire shall be free from manufacturing defects like missing/broken teeth, burrs, rust stains and welded joints.

5 FLEXIBILITY

The flexibility of the metallic wire shall be tested by wrapping it over a cylinder of 125 mm diameter. The wire shall not show any sign of cracking, breaking or splitting.

6 DIMENSIONS

The dimensions of metallic card clothing wire shall conform to the manufacturer's specifications or drawings as agreed to between the buyer and the

seller. The declared dimensions shall be subject to the tolerances given in [Table 1](#).

7 HARDNESS

Hardness at the tip of the wire up to a depth of 30 percent of tooth height shall not be below HV 650 in case of cylinder wire, and below HV 550 in case of licker-in wire and doffer wire. The Vickers hardness shall be determined by the method prescribed in IS 1501.

8 SAMPLING**8.1 Lot**

The rolls of wire of same dimensions manufactured from same material and under essentially similar conditions and delivered to a buyer against one despatch note shall constitute a lot.

8.2 The conformity of the lot to the requirements of this standard shall be determined on the basis of the tests carried out on the samples selected from it.

8.3 Unless otherwise agreed to between the buyer and the seller, the number of rolls to be selected at random shall be in accordance with [Table 2](#).

8.4 Two test samples shall be taken from each sample roll and tested for finish, dimensions and hardness.

8.5 Five samples of six metre each shall be drawn from five different rolls and tested for flexibility.

8.6 Criteria for Conformity

The lot shall be considered conforming to the requirements of this standard if the following conditions are satisfied:

- The number of rolls failing to satisfy any one or more of the characteristics mentioned in [8.4](#) does not exceed the corresponding number given in col (4) of [Table 2](#); and

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- b) All the rolls satisfy the requirement mentioned in [8.5](#).

9 MARKING

9.1 Each spool of wire shall bear the following information:

- Manufacturer's name, initials or trade-mark, if any;
- Type of wire;
- Weight of the wire; and
- Any other information required by the law in force and/or by the buyer.

9.2 BIS Certification Marking

The product(s) 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.

10 PACKING

The metallic wire shall be coated with anti-rust coating and wound on spools with a layer of suitable paper in between the layers of wires for proper unwinding of wire from spool. The spools shall be suitably packed in cases which can withstand normal hazards of transport, storage and handling.

Table 1 Tolerances on Dimensions and Angle of Tooth

(Clause [6](#))

SI No.	Wire	Pitch	Angle of Tooth	Height of Tooth	Thickness at Base
(1)	(2)	mm (3)	(4)	mm (5)	mm (6)
i)	Cylinder wire	± 0.05	$\pm 0^\circ 30'$	± 0.03	± 0.02
ii)	Doffer wire	± 0.05	$\pm 0^\circ 30'$	± 0.03	± 0.02
iii)	Licker-in wire	± 0.1	$\pm 0^\circ 30'$	± 0.03	± 0.02

Table 2 Sample Size and Permissible Number of Non-Conforming Rolls

(Clauses [8.3](#) and [8.6](#))

SI No.	Lot Size in Rolls	Sample Size in Rolls	Permissible Number of Defective Rolls
(1)	(2)	(3)	(4)
i)	Up to 50	5	0
ii)	51 to 100	8	0
iii)	101 to 150	13	0
iv)	151 to 300	20	1
v)	301 and above	32	1

ANNEX A

(Foreword)

COMMITTEE COMPOSITION

Textile Machinery and Accessories Sectional Committee, TXD 14

<i>Organization</i>	<i>Representative(s)</i>
Central Manufacturing Technology Institute, Bengaluru	DR NAGAHANUMAIAN (<i>Chairperson</i>)
Bajaj Industries Private Limited, Kolkata	REPRESENTATIVE
Bombay Textile Research Association, Mumbai	SHRI VIJAY GAWDE SHRI R. A. SHAIKH (<i>Alternate</i>)
Central Manufacturing Technology Institute, Bengaluru	SHRI B. R. MOHANRAJ SHRI K. SARAVANAN (<i>Alternate</i>)
Confederation of Indian Textile Industry, New Delhi	SHRIMATI CHANDRIMA CHATTERJEE SHRI ANMOL GUPTA (<i>Alternate</i>)
ICAR - Central Institute for Research on Cotton Technology, Mumbai	DR N. SHANMUGAM DR T. SENTHIL KUMAR (<i>Alternate</i>)
India ITME Society, Mumbai	SHRI S. SENTHIL KUMAR SHRIMATI SEEMA SRIVASTAVA (<i>Alternate</i>)
Indian Jute Industries Research Association, Kolkata	SHRIMATI SOUMITA CHOUDHURY SHRI PARTHA SANYAL (<i>Alternate</i>)
Indian Jute Mills Association, Kolkata	SHRI BHUDIPTA SAHA SHRI TANMOY SINGHA (<i>Alternate</i>)
Indian Textile Accessories and Machinery Manufacturers Association, Mumbai	SHRI N. D. MHATRE SHRI CHANDRESH SHAH (<i>Alternate</i>)
Inspiron Engineering Private Limited, Ahmedabad	SHRI ANKUR SONI
Lagan Engineering Company Limited, Kolkata	REPRESENTATIVE
Lakshmi Machine Works Limited, Coimbatore	SHRIMATI KALPANA A. SHRIMATI DIVYA V. (<i>Alternate</i>)
Laxmi Shuttleless Looms Private Limited, Ahmedabad	SHRI KETAN SANGHVI
Lohia Corp Limited, Kanpur	SHRI HITESH UPENDRA BHONDE SHRI HIMANSHU SHUKLA (<i>Alternate</i>)
Ludlow Jute Limited, Kolkata	REPRESENTATIVE

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<i>Organization</i>	<i>Representative(s)</i>
Ministry of Heavy Industries and Public Enterprises, Department of Heavy Industry, New Delhi	REPRESENTATIVE
National Safety Council, Navi Mumbai	SHRI LALIT R. GABHANE SHRI R. R. DEOGHARE (<i>Alternate</i>)
Office of the Textile Commissioner, Mumbai	SHRI N. K. SINGH SHRI NAROTTAM KUMAR (<i>Alternate</i>)
Peass Industrial Engineers Private Limited, Navsari	SHRI RAVI S. RAO SHRI NITINKUMAR SURESHBHAI PATEL (<i>Alternate</i>)
Textile Machinery Manufacturers Association, Mumbai	SHRI PRASHANT MANGUKIA SHRI ASHOK KUMAR PAL (<i>Alternate</i>)
The Synthetic and Art Silk Mills Research Association, Mumbai	DR MANISHA MATHUR SHRI SANJAY SAINI (<i>Alternate</i>)
Truetzschler India Private Limited, Ahmedabad	SHRI PRAVIN KANDGE SHRI SHILADITYA JOSHI (<i>Alternate</i>)
BIS Directorate General	SHRI J. K. GUPTA, SCIENTIST 'E'/DIRECTOR AND HEAD (TEXTILES) [REPRESENTING DIRECTOR GENERAL (<i>Ex-officio</i>)]

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

Bureau of Indian Standards

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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, 6 th Floor, DMRC Building, Bhavbhuti Marg, New Delhi 110002	{ 2323 7617
Eastern : 8 th 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 : 5 th Floor/MTNL CETTM Technology Street, Hiranandani Gardens, Powai, Mumbai - 400076	{ 25700030 25702715

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