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BUREAU OF INDIAN STANDARDS

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भारतीय मानक मसौदा

फुटवियर उद्योग के लिए हाथ के उपकरण — विशिष्टि

भाग 5 सीधा हैकिंग चाकू

(IS 6053(Part 5) का पहला पुनरीक्षण)

Draft Indian Standard

Hand Tools for Footwear Industry — Specification

Part 5 Straight Hacking Knife

(*First Revision of IS 6053(Part 5)*)

(ICS 61.060)

Footwear Sectional Committee, CHD 19	Last Date for Comments: 01 July 2024

Footwear Sectional Committee, CHD 19

FOREWORD

(*Formal clause will be added later*)

The straight hacking knife is used for trimming of extra upper leather to make it of uniform shape. It is also used for rounding of sole leather to give it a regular shape.

This standard was originally published in 1972. This revision has been taken up in order to bring out the standard in latest style and format of the Indian Standards. The relevant clauses have been added and the references have been updated.

This Indian Standard is published in several parts. The other parts in this series are:

Part 1 Upper clicking knife

Part 2 Bottom cutting knife (Rampi)

Part 3 Designers' knife

Part 4 Half Round Knife

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.

Draft Indian Standard

HAND TOOLS FOR FOOTWARE INDUSTRY — SPECIFICATION
PART 5 STRAIGHT HACKING KNIFE

(*First Revision*)

1 SCOPE

This standard (Part 5) prescribes the requirements, method of sampling and tests for straight hacking knife used in footwear industry for cutting leather.

2 REFERENCES

The Indian standards given below contain provisions which through reference in this text, constitute provisions 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 Indian standard are encouraged to investigate the possibility of applying the most recent editions of the standards.

IS No.	*Title*
IS 347 : 2023	Varnish Shellac For General Purposes — Specification *(second revision)*
IS 579 : 2017	Vegetable tanned sole leather - Specification *(fourth revision)*
IS 620 : 1985	Specification for wooden tool handles general requirements
IS 1501 (Part 1) : 2020	Metallic Materials — Vickers Hardness Test Part 1 Test Method (*fifth revision*)
IS 2050 : 1991	Glossary of terms & elating to footwear (*First Revision*)
IS 4905 : 2015	Random sampling and randomization procedures (*first revision*)

3 TERMINOLOGY

For the purpose of this standard, the definition given in IS 2050 shall apply.

4 REQUIREMENTS

4.1 Materials

4.1.1 *Blades*

The knife blade shall be made from steel conforming to the performance test given in **4.5.1, 4.5.2** and **4.3.3**

4.1.2 *Handle*

Handle of the knife shall be made from wood conforming generally to the requirements of Class V of IS 620.

4.1.3 *Washers*

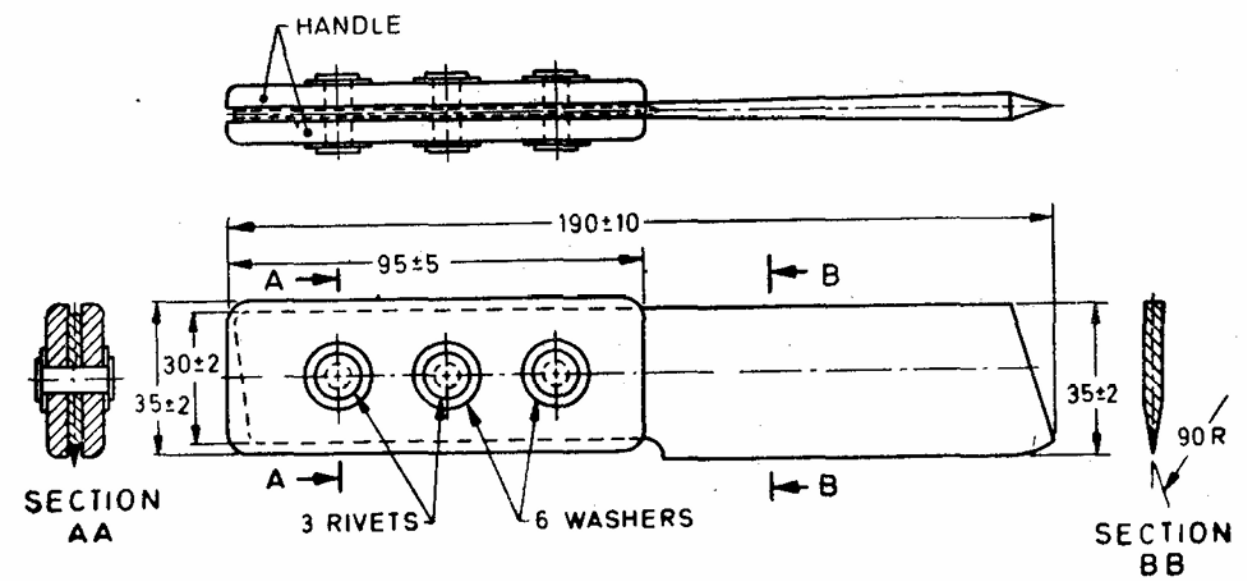
The washer shall be of mild steel, 16 mm diameter and 0.8 mm thickness.

4.1.4 *Rivets*

The rivets shall be of mild steel, flat head 6 mm diameter and 16 mm long.

4.2 Design and Dimensions

A typical design with recommendatory dimensions is given in Fig. 1



All dimensions in millimetres.

FIG. 1 STRAIGHT HACKING KNIFE

4.3 Hardness

The hardness of the finished steel blades of the knife, measured as near to the cutting edge as possible shall be within 625 to 725 HV when tested according to IS 1501 (Part 1).

4.4 General Requirements and Finish

4.4.1 The blades shall be suitably hardened and tempered. The blades shall be free from cracks, seams, pits, burns and other visible defects. They shall be smoothly ground and capable of being sharpened by means of an oil stone to a fine cutting edge**.**

4.4.2 The tang shall be well drawn and securely fitted to the handle with rivets.

4.4.3 The handle shall be evenly and smoothly finished and shall be coated with shellac varnish **(*see*** IS 347).

4.5 Performance Requirements

4.5.1 The knife when suitably sharpened and subjected to a practical cutting test on butt portion of vegetable tanned sole leather (*see* IS 579), approximately 5 mm thick, shall cut easily and shall give a clean cut edge. The cutting edge shall fully retain its keenness and shall show no sign of distortion or any other defects on completion of the test.

4.5.2 The blades of the knife shall not show any sign of blunting, cracking, permanent set or loosening or tendency to fold from the handle being struck sharp blows on one of the hard timbers given in Annex A from a height of 250 mm with the cutting edge facing downwards.

4.5.3 The blades of each knife shall be struck four hard blows across the edge of any of the hard timbers given in Annex A along its flat surface. The blades shall show no sign of damage or distortion during or after the test.

5 Packing and Marking

5.1 Packing

The blades of the knife shall be wrapped in greased paper and securely tied. The wrapped knives shall then be packed as agreed to between the purchaser and the supplier**.**

5.2 Marking

5.2.1 Each blade of the knife or the package or both shall be marked legibly with the following particulars**:**

a) Name of the manufacturer or trade-mark, if any; and

b) Date and year of manufacture

5.2.2 *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 products may be marked with the standard mark.

6 SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

The scale of sampling and criteria for conformity shall be as prescribed in Annex B.

Annex A

(*Clause* 4.5.2 and 4.5.3)

HARD TIMBERS

A-1 The following timbers may be used for testing the performance of the knives:

TRADE NAME	BOTANICAL NAME
Kusum	*Schleicher oleosa Merr*.
Babul	*Acaicia nilotica* (Linn.) Del. Syn. *Acacia arbica* Llinn, Fam. Leguminosae
Sissoo	*Dalbergia sissoo* Roxb.
Sal	*Shorea robusta* Gaertn.f.
Hopea	*Hopea* sp.
Mesua	*Mesua Ferres*

ANNEX B

(*Clause* 6)

SCALE OF SAMPLING AND CRITERIA FOR CONFORMITY

B-1 SCALE OF SAMPLING

B-1.1 LOT

In a consignment all the knives of the same shape and dimensions shall be grouped together to constitute a lot.

B-1.2 Each lot shall be tested separately for determining its conformity to the requirements of this specification.

B-1.3 The number of knives to be selected in the sample depends on the size of the lot and shall be in accordance with col 2 and 3 of Table 1.

TABLE 1 SACLE OF SAMPLING AND PREMISSIBLE NUMBER OF DEFECTIVES

Sl. No	Lot Size	Sample Size	Permissible No. of Defectives
(1)	(2)	(3)	(4)
i.	Up to 25	5	0
ii.	26 to 50	8	0
iii.	51 and above	13	1

B-1.4 These sample knives shall be selected at random from the lot. For random selection procedures, IS 4905 may be referred.

B-2 CRITERIA FOR CONFORMITY

B-2.1 All the selected knives shall be examined for material, construction, dimensions and finish and shall also be tested for performance requirements given in **4.5**. A knife failing in any one of the above requirements shall be taken as a defective. The number of defectives shall not exceed the permissible number given in co1 4 of Table 1 if the lot is to be accepted as satisfactory.

B-2.2 Two knives, if the lot size is 100 and below, shall be tested for hardness of steel blade. There shall be no failure if the lot is to be accepted under this clause.