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(Reaffirmed 1980)

Indian Standard
SPECIFICATION FOR
BUTCHER'S KNIVES
(Revised)

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INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Indian Standard

SPECIFICATION FOR BUTCHER'S KNIVES

(Revised)

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Indian Standard

SPECIFICATION FOR BUTCHER'S KNIVES

(Revised)

0. FOREWORD

0.1 This Indian Standard (Revised) was adopted by the Indian Standards Institution on 28 July 1965, after the draft finalized by the Cutlery Sectional Committee had been approved by the Consumer Products Division Council.

0.2 Formulation of Indian Standard specifications for cutlery items has been taken up at the instance of the Chief Inspectorate of General Stores (Ministry of Defence) and Office of the Development Commissioner, Small Scale Industries. In the preparation of this standard, considerable assistance has been derived from the following Defence Services specifications issued by the Ministry of Defence, Government of India.

IND/GS/324 Knives, butchers, sticking 7"

IND/GS/392 Knife, butcher, cutting

IND/GS/414 Knife, butcher, flaying, and knife, butcher, flaying, small

0.3 This standard was first published in 1959. In this revision, the dimensions have been given in metric units and a sampling plan and criteria for conformity have been included.

0.4 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*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard covers the requirements for butcher's knives of the following types:

- a) Flaying knife, large;
- b) Flaying knife, small;

* Rules for rounding off numerical values (*revised*).

- c) Cutting knife; and
- d) Sticking knife.

2. MATERIALS

2.1 Blades — The blades for flaying, cutting and sticking knives shall be made of steels conforming to designation C98, C80 and C65 of Schedule II of IS : 1570-1961* respectively. The steel used shall have sulphur and phosphorus not exceeding 0.05 percent each and silicon not exceeding 0.25 percent.

2.2 Handle — The handle shall be of wood and shall conform to the requirements for Class V handles specified in IS : 620-1962†.

2.3 Rivets — The rivets shall be made of copper, brass or aluminium alloy (see Designations NR 5 and NR 6 of IS : 740-1956‡).

3. SHAPES AND DIMENSIONS

3.1 The knives shall conform to the shapes and dimensions shown in Fig. 1 to 4. Knives with different shapes and dimensions may be supplied by prior agreement between the purchaser and the supplier.

4. MANUFACTURE

4.1 The knives shall be well made and tangs well drawn out. The handle scales shall fit closely to the tang throughout its length and shall be secured by means of rivets. The heads of the rivets shall be finished flush with the scales on both sides. The handle scales shall be flush with the tang throughout its length.

5. HARDNESS

5.1 The blades shall be well and evenly hardened and tempered to attain a hardness within the range of 600 to 700 *HV* (see IS : 1501-1959§) or 55 to 60 *HRC* (see IS : 1586-1960§). The testing point shall be as near as practicable to the cutting edge.

6. WORKMANSHIP AND FINISH

6.1 The blades and the tangs shall be free from cracks, seams, flaws, scales, pits, burrs and other defects. The blades shall taper uniformly towards the cutting edge and shall not have a chisel edge (see Fig. 1 to 4).

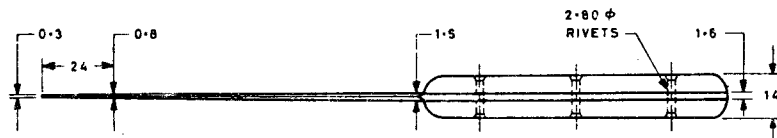
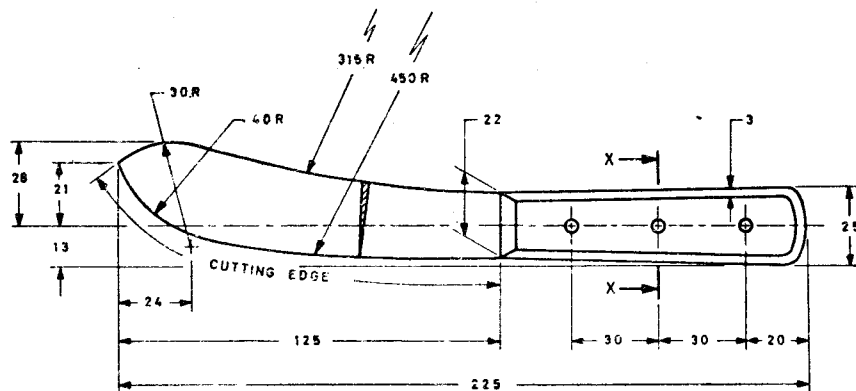
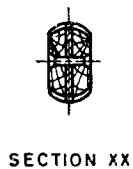
* Schedules for wrought steels for general engineering purposes.

† Specification for general requirements for wooden tool handles (*revised*).

‡ Specification for wrought aluminium and aluminium alloys, rivet stock (for general engineering purposes).

§ Method for Vickers hardness test for steel.

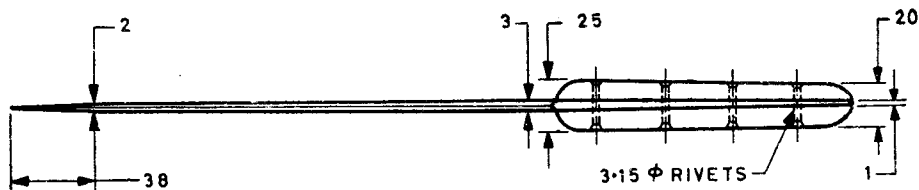
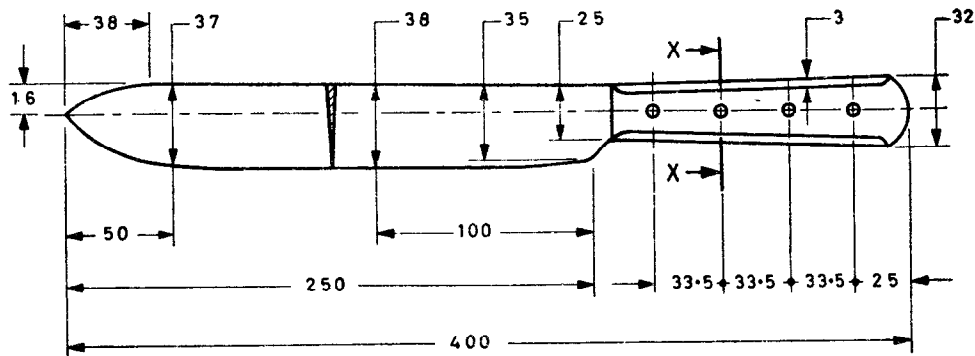
§ Method for Rockwell hardness test (B and C scales) for steel.



All dimensions in millimetres.

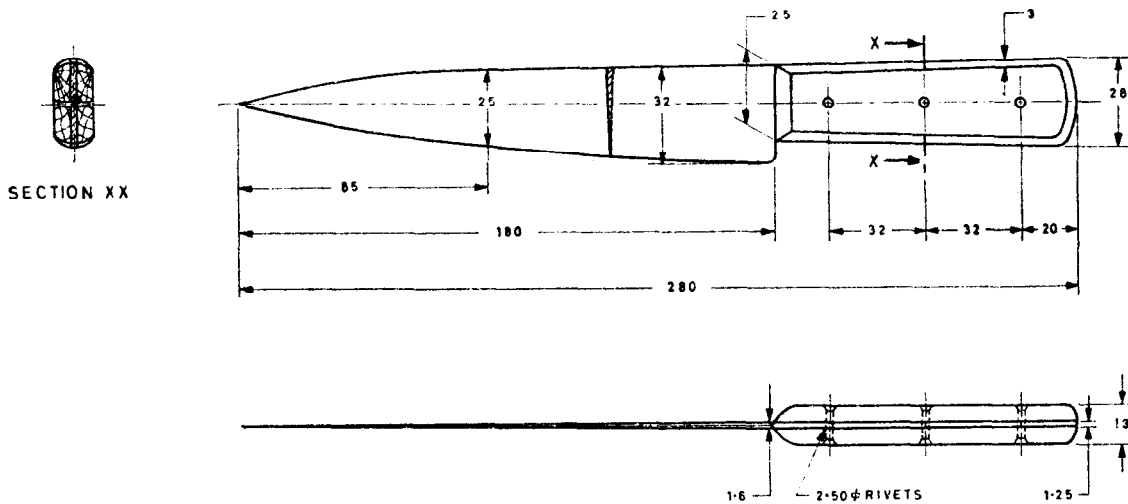
FIG. 2 BUTCHER'S FLAYING KNIFE, SMALL

SECTION XX



All dimensions in millimetres.

FIG. 3 BUTCHER'S CUTTING KNIFE



All dimensions in millimetres.

FIG. 4 BUTCHER'S STICKING KNIFE

6.2 Blades shall be free from rough grinding marks and shall be finished bright all over. The handles shall be finished smooth and their sharp edges and corners shall be rounded. The cutting edge shall be sharp and ready for use. The blade and handle shall be in alignment.

7. DESIGNATION

7.1 The designation of butcher's knives shall indicate the name, size (large or small) and number of this standard.

Example:

A butcher's flaying knife, large shall be designated as:

Butcher's Flaying Knife Large, IS : 921

8. SAMPLING

8.1 The number of knives to be selected from a lot for ascertaining conformity to this specification shall be as agreed to between the manufacturer and the purchaser. A suitable sampling scheme and criteria for conformity for knives are given in Appendix A.

9. TESTS

9.1 Practical Test for Soundness — The knife shall be made to strike 12 full blows by hand from a height of 250 mm on an aluminium block of not less than 99 percent purity (*see* IS : 617-1959*) or on a block of well-seasoned timber, such as:

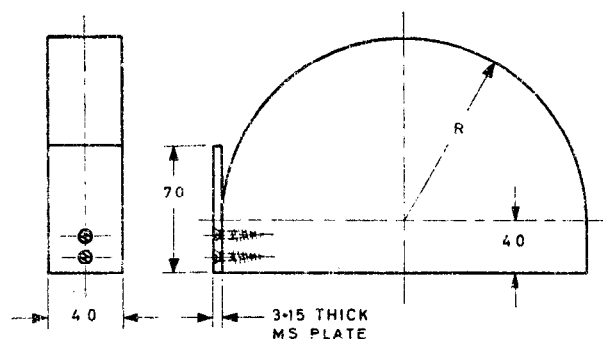
<i>Trade Name</i>	<i>Botanical Name</i>
sissoo	<i>Dalbergia sissoo</i> Roxb.
sal	<i>Shorea robusta</i> Gaertn. f.
rosewood (blackwood)	<i>Dalbergia latifolia</i> Roxb.
teak	<i>Tectona grandis</i> Linn. f.

The timber employed shall have a moisture content not exceeding 12 percent. The blows shall be struck in such a manner that practically the entire length of the cutting edge hits the surface of the test block. The cutting edge shall not show any sign of distortion after the test and there shall not be any damage to any other part of the knife.

9.2 Flexibility — The blades of flaying knives, large and small and cutting knives shall be bent round the periphery of the respective wooden segments

* Specification for aluminium and aluminium alloy ingots and castings for general engineering purposes (*revised*).

(see Fig. 5) until they are in contact with the segment throughout the length. They shall be kept in this position for one minute and then released. The blades shall not show any permanent set or damage after the completion of the test.



TYPE OF KNIFE	RADIUS (R)
Flaying, large	125
Flaying, small	100
Cutting	300

All dimensions in millimetres.

FIG. 5 WOODEN SEGMENT FOR FLEXIBILITY TEST FOR FLAYING AND CUTTING KNIVES

10. MARKING

10.1 Each knife shall be legibly and indelibly marked, preferably by stamping or engraving on the blade, the manufacturer's name, initials or registered trade-mark. The knives may also be marked with the year of manufacture, if required by the purchaser.

10.1.1 The knives may also be marked with the ISI Certification Mark.

NOTE— The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

11. PRESERVATIVE TREATMENT AND PACKING

11.1 The blades shall be coated with a suitable rust preventive. The handles shall be given two coats of good quality varnish. Each knife shall then be wrapped in a suitable quality paper. Wrapped knives shall be packed in a carton in accordance with the best prevalent trade practice. Each carton shall bear the manufacturer's name or trade-mark, description of the contents, the number of knives it contains, and the ISI Certification Mark if a licence has been obtained for its use (*see* Note under **10.1.1**).

APPENDIX A*(Clause 8.1)***SAMPLING SCHEME AND CRITERIA FOR CONFORMITY
FOR BUTCHER'S KNIVES****A-1. SAMPLING**

A-1.1 Lot — The knives of the same quality and dimensions manufactured from the same material under essentially similar conditions of manufacture shall constitute a lot.

A-1.2 To ascertain the conformity of the lot with the requirements of this standard, the number of knives to be selected at random from the lot shall be in accordance with col 1 and 2 of Table 1.

TABLE 1 SAMPLE SIZE AND CRITERIA FOR CONFORMITY

LOT SIZE (NUMBER OF KNIVES IN THE LOT)	SAMPLE SIZE (NUMBER OF KNIVES TO BE SELECTED)	ACCEPTANCE NUMBER
(1)	(2)	(3)
Up to 50	8	0
51 „ 100	13	1
101 „ 150	20	1
151 „ 300	32	2
301 „ 500	50	3
501 and above	80	5

A-2. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

A-2.1 The knives as selected according to **A-1.2** shall be tested for (a) shape and dimensions (*see 3.1*), (b) hardness (*see 5.1*), (c) workmanship and finish (*see 6*), (d) soundness (*see 9.1*), and (e) flexibility (*see 9.2*).

A-2.2 Criteria for Conformity — The lot shall be declared conforming to the requirements of this standard if the number of knives found defective for one or more characteristics mentioned in **A-2.1** is less than or equal to corresponding acceptance number given in col 3 of Table 1.

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*Sales Office in Bombay is at Novelty Chambers, Grant Road, BOMBAY 400007 89 65 28

†Sales Office in Calcutta is at 5 Chowringhee Approach, P.O. Princep Street, CALCUTTA 700072 27 68 00