

For Comments only

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DRAFT *INDIAN STANDARD*

**LIFE BOAT CRUTCHES — SPECIFICATION**  
(*First Revision* of IS 4551)

(ICS no 47.080)

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**Last date for receipt  
of comments is 10 08 2024**

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Marine Engineering and Safety Aids Sectional Committee TED 19

FOREWORD

This draft Indian Standard will be adopted by the Bureau of Indian Standards after the draft finalized by the Marine Engineering and Safety Aids Sectional Committee is approved by the Transport Engineering Division Council.

This standard was first published in 1968. This first revision is being undertaken to update the standard and to incorporate latest technological advancement/ development that has taken place in various fields. The salient features of this first revision are:

- a) The standard has been drafted as per latest BIS drafting guidelines.
- b) Reference to Indian Standard has been updated
- c) Material grades referred in standard have been updated. Aluminium as a material for crutches has been removed.
- d) Clauses related to marking, BIS Certification and sampling plan have been added.

Crutch is one of the essential equipment of lifeboat. The number of crutches to be provided with each lifeboat is covered by statutory rules.

This standard generally incorporates the requirements under the Merchant Shipping Act, 1958 and the rules made thereunder, and in addition lifeboat equipment is subject to the approval by the Government of India, under the said Act and the Rules.

The composition of the committee responsible for formulation of this standard shall be given in Annex A (*To be added later*).

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*

## **LIFE BOAT CRUTCHES — SPECIFICATION**

*(First Revision of IS 4551)*

### **1 SCOPE**

This standard specifies the requirements of lifeboat crutches.

### **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 editions of these standards.

<i>IS No</i>	<i>Title</i>
1875 : 1992	Carbon steel billets, blooms, slabs and bars for forgings — Specification (Fifth Revision)
2629 : 1985	Recommended practice for hot-dip galvanizing of iron and steel (First Revision)
14329 : 1995	Malleable iron castings — Specification

### **3 TERMINOLOGY**

For the purpose of this standard, the following definitions shall apply.

**3.1 Crutch** — Crutch is a swivel metal fitting in which the oar rests when rowing and acts as a fulcrum for the oar and transfers the thrust from the oar to the lifeboat.

**3.2 Gunwale** — Fore and aft member forming the upper most sides of the boat at the termination of the shell. Gunwales are pierced suitably to receive the crutches.

### **4 NUMBER OF CRUTCHES**

The recommended number of crutches to be carried by each lifeboat, according to length of boat is given below:

<i>Length of lifeboat in metres</i>	<i>Number of Crutches</i>
4.25 and under	6
Over 4.25 to 5.50	8
Over 4.25 to 5.50	9
Over 4.25 to 5.50	11
Over 8.50	12

## **5 MANUFACTURE**

**5.1** Crutches shall be made steel, malleable cast iron or wrought iron. These shall be galvanized when forged out of steel in one piece.

**5.2** At the lower end of the crutch, a hole shall be provided to attach it by a lanyard or galvanized chain to the boat.

**5.3** The crutch shall be removable from the gunwale.

**5.4** Crutch of hinged type may also be used.

## **6 SHAPE AND DIMENSIONS**

The shape and dimensions of crutches shall be according to Fig. 1.

## **7 MARKING**

Each lifeboat crutch shall be marked with manufacturers' name or recognized trade-mark.

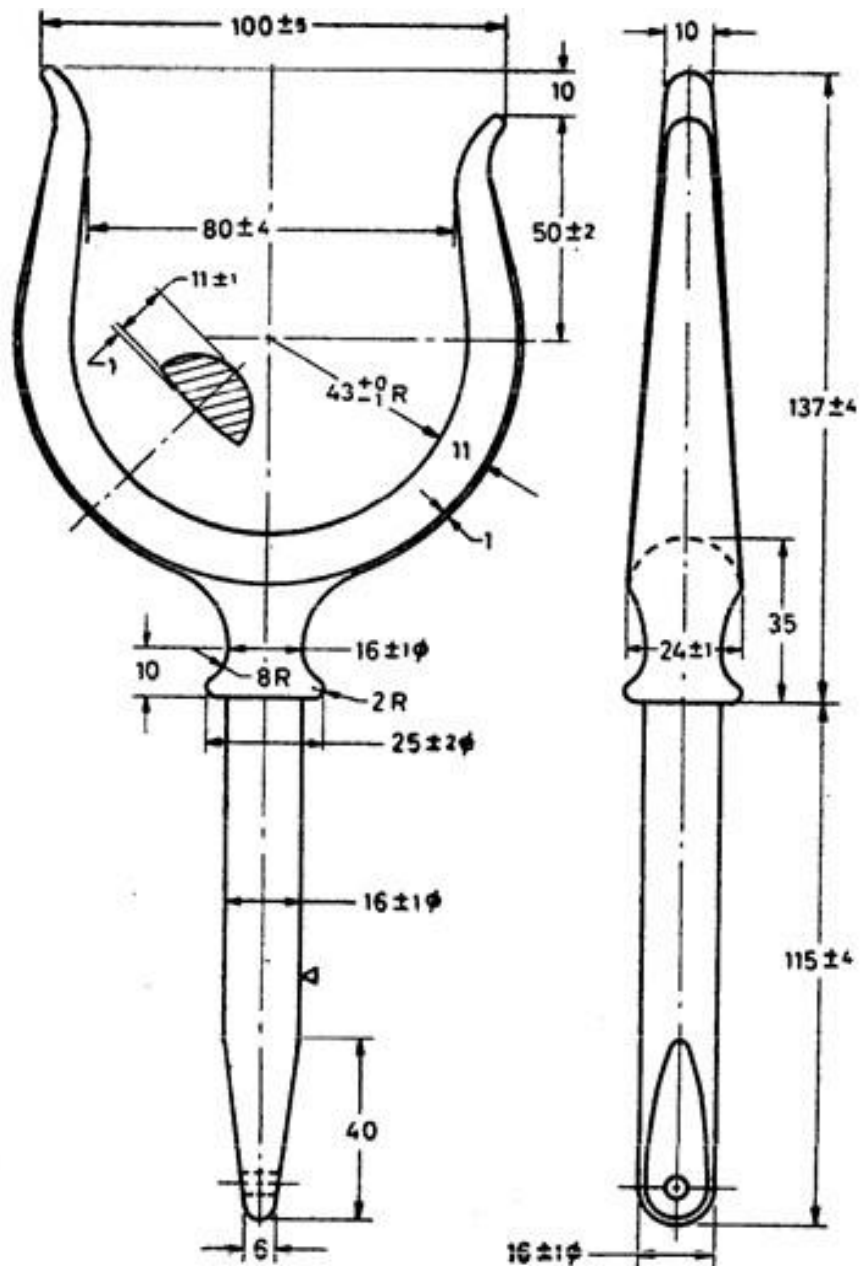
## **8 BIS CERTIFICATION MARKING**

The lifeboat crutches may also be marked with the Standard Mark.

**8.1** The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the BIS Act, 2016 and the Rules and Regulations framed thereunder, and the product(s) may be marked with the Standard Mark.

## **9 SAMPLING**

Unless otherwise agreed upon between a supplier and purchaser, the inspection sampling shall be as per IS 2500 (Part 1).



All dimensions in millimetres

Fig. 1 Dimension for Lifeboat Crutch

**ANNEX A**  
*(Forward)*

**COMMITTEE COMPOSITION**