**TED 17 (22497) F**

***भारतीय मानक***

***Indian Standard***

**IS 3942: XXXX**

**पोतीय गहराई मापन रॉड — विशिष्टि**

(*प्रथम पुनरीक्षण*)

**MARINE SOUNDING RODS — SPECIFICATION**

( *First Revision* )

 ICS 47.020.30; 47.020.99

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भारतीय मानक ब्यूरो

BUREAU OF INDIAN STANDARDS

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 **November 2024 Price Group**

Shipbuilding Sectional Committee, TED 17

**FOREWORD**

This Indian Standard (*First Revision*) was adopted by the Bureau of Indian Standards after the draft finalized by the Shipbuilding Sectional Committee is approved by the Transport Engineering Division Council.

This standard was first published in 1966. This first revision is being undertaken to update the standard and to incorporate the latest technological advancement/ development that has taken place in various fields. The salient features of this first revision are:

1. The standard has been drafted as per latest drafting guidelines.
2. Reference of revised Indian Standard has been given.
3. Clauses related to Marking, BIS Certification and sampling plan have been added/ updated

Sounding rods with proper markings are one of the means employed on board ships for sounding tanks. The sounding rods, when required, are connected to a suitable rope and lowered into the sounding pipe. In the forward and after end of the ship, sounding pipes may have to be fitted at an incline or with smooth curves of large radii. As it is difficult to lower straight rods into such sounding pipes, sounding rods with flexible joints are used.

The composition of the committee responsible for formulation of this standard is given as Annex A.

For the purpose of deciding whether a particular requirement of this standard is compiled 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.

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*Indian Standard*

MARINE SOUNDING RODS — SPECIFICATION

(*First Revision*)

**1 SCOPE**

This standard specifies the requirements for flexible and straight marine sounding rods.

**2 REFERENCES**

The following standards 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 standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

|  |  |
| --- | --- |
| *IS No.* | *Title* |
| IS 410: 1977 | Specification for cold rolled brass sheet, strip and foil (*Third Revision*) |
| IS 2062: 2011 | Hot rolled medium and high tensile structural steel - Specification (*Seventh Revision*) |
| IS 2500 (Part 1): 2000 | Sampling procedures for inspection by attributes: Part 1 sampling schemes indexed by acceptance quality limit (AQL) for lot - By - Lot inspection (*Third Revision*) |
| IS 6912: 2005 | Copper and copper alloys forging stock and forging - Specification (*Second Revision*) |
| IS 7811: 2019 | Phosphor bronze rods and bars (*Second Revision*) |

**3 MATERIAL**

**3.1** The material of the sounding rods shall conform to any of the following Indian Standards:

1. IS 410;
2. IS 2062;
3. IS 6912; and
4. IS 7811.

**4 DIMENSIONS AND GRADUATIONS**

**4.1** The shape and dimensions of flexible and straight marine sounding rods shall be as shown in, Fig. 1 and 2 respectively.



Fig. 1 Dimensions for Flexible Sounding Rods



All dimensions in millimetres.

FIG. 2 Dimensions For Straight Sounding Rods

**4.2** Flexible sounding rods made of brass or bronze shall be 12 mm square in section. Straight sounding rods made of brass or bronze shall be 14 × 6.3 mm in section.

**4.3** Flexible sounding rods made of steel shall be 12 mm square in section. Straight sounding rods made of steel shall be 15 × 6 mm in section.

**4.4** The length of the graduated part shall be 1250 mm for straight as well as flexible rods.

**4.5** The sounding rods shall be graduated as shown in Fig. 1 and 2.

**4.6** The graduation marks shall be clear, of uniform depth and thickness and perpendicular to the edges. These marks shall be filled in black. The thickness of the lines shall be 0.4 mm. The lines shall be of sufficient depth to maintain legibility and indelibility.

**4.7** The size of the numbers punched on the sounding rod shall be 5 mm.

**5 ACCURACY**

**5.1** The actua1 length between any 10 consecutive graduation marks shall not differ by more than 0.02 mm, when compared against a standard certified scale.

**5.2** The actual length of the total graduated part shall not differ by more than 2 mm, when compared against a standard certified scale.

**6 PRESERVATIVE TREATMENT**

**6.1** The scales shall be smeared with a coating of mineral jelly or any other suitable preservative and wrapped in greaseproof paper.

**7 MARKING**

**7.1** The abbreviation ‘cm’ shall be marked at the end of the graduations.

**7.2** Each sounding rod shall be legibly and indelibly marked with the maker’s initials and his recognized trade-mark.

**7.3 BIS Certification Marking**

The sounding rods may also be marked with the Standard Mark.

**7.3.1** The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act,* 2016and the Rules and Regulations made thereunder. The details of conditions under which the license for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

**8 SAMPLING**

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

**ANNEX A**

(*Foreword*)

**COMMITTEE COMPOSITION**

SHIPBUILDING SECTIONAL COMMITTEE, TED 17

*Organization*  *Representative(s)*

Indian Register of Shipping Shri C R venugopal (*CHAIRPERSON*)

Academy of Maritime Education and Training (AMET), Col. Dr. G Thiruvasagam

Chennai Shri Mudunnuri Surya Prakasa Raju (*Alternate*)

American Bureau of Shipping, Mumbai Shri A N Das

 Shri Arnab Ghosh (*Alternate*)

Bureau Veritas, Mumbai

 Shri Rajan S Vardhan

Cochin Shipyard Ltd, Cochin Shri Harikrishnan S

 Shri Deepu Surendran (*Alternate*)

Cochin University of Science and Technology, Kerala Dr. K Sivaprasad

 Dr. A Mathiazhagan (*Alternate*)

Cyber Marine Knowledge Systems Pvt. Ltd, Mumbai Shri Kumar Ajagekar

 Shri Praveen R Rai (*Alternate*)

DNVGL AS Shri Uday Chaitanya Ganivada

 Shri Jagadeesh Pisini (*Alternate*)

Directorate General of Quality Assurance, Shri Moninder Pal Singh Azrot

New Delhi Shri SM Bhosale (*Alternate*)

Directorate General of Shipping, Mumbai Shri Suresh Kumar

 Shri Aji Vasudevan (*Alternate*)

Directorate of Marine Engineering, Marine Engineering Capt. C S Baburaj

Naval Headquarters, New Delhi

Directorate of Naval Architecture, Naval Head Quarters, Capt. Sujit Baxi

New Delhi Shri Pankaj Grover (*Alternate*)

Directorate of Naval Design, Naval Headquarters, New Delhi Cmde. Vineet Tiwari

 Cdr. A P Singh (*Alternate*)

Engineers India Limited, New Delhi Shri K N Choudhary (*Alternate*)

Garden Reach Shipbuilders and Engineers Ltd., Kolkata Capt. Jagmohan

 Shri Sajal Sengupta (*Alternate*)

Goa Shipyard Ltd, Goa Shri Santosh Kumar Singh

 Shri Fabian Savio Rodrigues (*Alternate*)

Govardhan Das P.A., Kolkata Shri J R Aggarwal

 Shri Sanjay Raj Aggarwal (*Alternate*)

Hindustan Shipyard Ltd, Visakhapatnam Shri Y Shivramakrishnan

 Shri Mellamu Ashok Kumar (*Alternate*)

Indian Chain Pvt. Ltd, Kolkata Shri Pradip Chitlangia

 Shri Rohan Chitlangia (*Alternate*)

Indian Institute of Technology, Chennai Shri P Krishnankutty

 Shri R Vijaya Kumar (*Alternate*)

Indian Institute of Technology, Kharagpur Shri Prasad Kumar Bhaskaran

Indian Maritime University IMU, Visakhapatnam Shri Sheeja Janardhanan

 Shri Avinash Godey (*Alternate*)

Indian National Ship-owners Association, Mumbai Shri Mayank Awasthi

 Shri Sunil Kumar (*Alternate*)

Indian Register of Shipping, Mumbai Shri N Girish

 Shri S Renganathan (*Alternate*)

Institute of Marine Engineers India, Mumbai Shri Rajeev Nayyer

 Shri Bhupesh Tater (*Alternate*)

L & T Shipbuilding Limited, Chennai Capt. Kjh Christie

 Cdr. Kamal Kanagat (*Alternate*)

Lloyd's Register Asia, Mumbai Shri C Sreenivasa Rao

 Shri C R Dash (*Alternate*)

Mazagon Dock Ltd, Mumbai Shri Biju George

 Shri Vinit Wagh (*Alternate*)

Nippon Kaiji Kyokai, Mumbai Shri Ajay Kumar

 Shri Ashish Balwantrai Matta (*Alternate*)

Oil & Natural Gas Corporation Ltd, Mumbai Shri G V V Pawan Kumar

Seatech Integrated Technology, Pvt. Ltd., Ghaziabad Shri Kandha Mantry

 Shrimati Malika Khatri (*Alternate*)

Shipyard Association of India, New Delhi Shri Sanjeev Walia

Shoft Shipyard Private Limited, Thane Shri Sahayraj

Tata Consultancy Services Limited, Mumbai Shri Abhik Chaudhuri

The Great Eastern Shipping Co. Ltd, Mumbai Shri Anjan Kumar Sahu

The Shipping Corporation of India Ltd, Mumbai Shri Vikram Dingley

 Shri N K Tripathi (*Alternate*)

Titagarh Wagons Limited, Kolkata Shri Vineet Shrivastava

Vedam Design & Technical Consultancy Pvt. Ltd. Shri Akshay Jain

Mumbai Shri Rakesh Roy (*Alternate*)

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 [Representing Director General (*Ex-officio)*]

MEMBER SECRETARY

SHRI MOHAMMAD TAUSIF,

Scientist ‘D’/ JOINT DIRECTOR (TED), BIS