

Indian Standard
SPECIFICATION FOR
SURFACE BOXES FOR SLUICE VALVES
(*First Revision*)

Third Reprint AUGUST 1992

UDC 621.646.5-758.1:628.146

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BUREAU OF INDIAN STANDARDS
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NEW DELHI 110002

Indian Standard

SPECIFICATION FOR SURFACE BOXES FOR SLUICE VALVES (*First Revision*)

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Indian Standard

SPECIFICATION FOR SURFACE BOXES FOR SLUICE VALVES (*First Revision*)

0. FOREWORD

0.1 This Indian Standard (First Revision) was adopted by the Indian Standards Institution on 4 May 1979, after the draft finalized by the Sanitary Appliances and Water Fittings Sectional Committee had been approved by the Civil Engineering Division Council.

0.2 Surface box is a deep metal frame with a lid fixed in the ground with the lid level at the surface to give access to underground fittings, such as a valve or hydrant. Surface boxes are made in different patterns and sizes to suit stop valves, sluice valves, hydrant, etc. This standard covers the requirements for cast iron surface boxes for use with sluice valves on service pipes and water mains. This standard was first published in 1966. In this revision the tolerances on various dimensions of surface boxes have been incorporated.

0.3 This standard is one of a series of Indian Standards on water fittings. Other standards published so far in the series are given on page 8.

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 The standard lays down the requirements for cast iron surface boxes for use with sluice valves with valve caps, conforming to IS : 780-1969† and IS : 2906-1969‡ for use on service pipes and water mains.

*Rules for rounding off numerical values (revised).

†Specification for sluice valves for water works purposes (50 to 300 mm size) (*fourth revision*).

‡Specification for sluice valves for water works purposes (350 to 1200 mm size) (*first revision*).

IS : 3950 - 1979

2. MATERIALS

2.1 Frame — Cast iron used in the manufacture of surface boxes shall be of a quality of not less than Grade FG 150 of IS : 210-1978*.

2.2 Hinge Pin — Hinge pin shall be made of galvanized mild steel conforming to IS : 280-1972†. The galvanizing shall be done in accordance with IS : 2629-1966‡.

3. MANUFACTURE AND WORKMANSHIP

3.1 Surface boxes shall be clearly cast to the specified dimensions. The castings shall be sound, clean and free from porosity, blow holes, hard spots, cold shuts and chills. They shall be well dressed and fettled, and also free from voids due to shrinkage, gas inclusions or other causes.

4. CONSTRUCTION

4.1 The surface boxes shall be made in accordance with the details given in Fig. 1.

4.2 Cover — The upper surface of the covers shall be designed with an adequate non-slip surface which shall, unless otherwise specified, include the letter 'W' cast therein. The design may also include such other letters as may be agreed to between the purchaser and the manufacturer.

5. DIMENSIONS AND TOLERANCES

5.1 Dimensions — Dimensions shall conform to those specified in Fig. 1.

5.2 Tolerances — The following tolerances shall be allowed on the dimensions:

- | | |
|--|--------|
| a) On dimensions up to and including 10 mm | + 2 mm |
| b) On dimensions above 10 mm up to and including 50 mm | ± 2 mm |
| c) On dimensions over 50 mm | ± 5 mm |

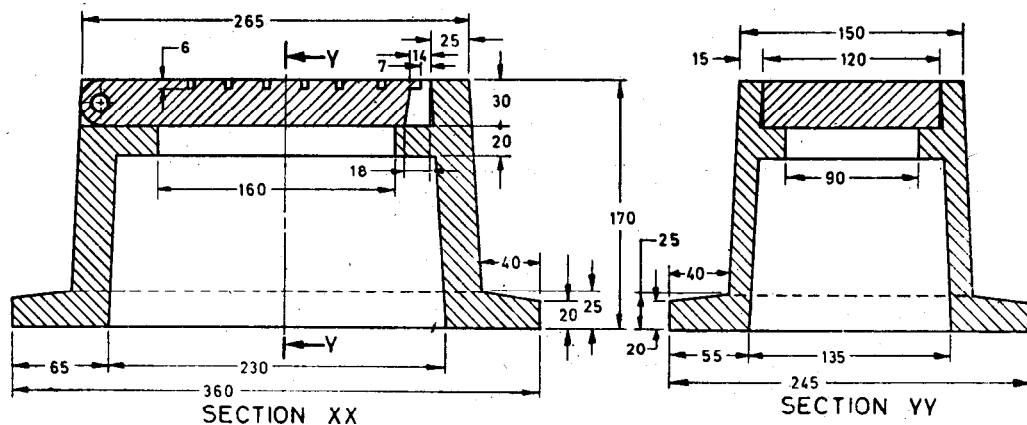
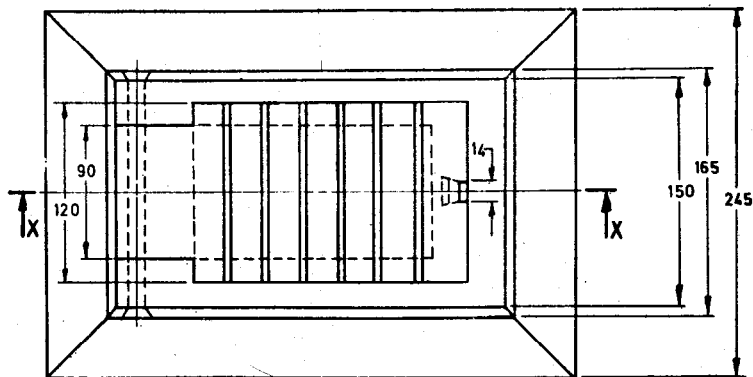
6. MASS

6.1 The minimum mass of surface boxes shall be 33 kg.

*Specification for grey iron castings (*third revision*).

†Specification for mild steel wire for general engineering purposes (*second revision*).

‡Recommended practice for hot-dip galvanizing of iron and steel.



All dimensions in millimetres.

FIG. 1 A TYPICAL ILLUSTRATION OF A RECTANGULAR SURFACE BOX FOR SLUICE VALVE

7. INSPECTION

7.1 The manufacturers shall afford all reasonable facilities for carrying out inspection during the course of manufacture and facilities shall be given to the purchaser, if he so desires, to carry out inspection of the surface boxes to his order before the application of any coating.

8. PROTECTIVE COATING

8.1 Surface boxes shall be thoroughly cleaned and dried and then coated by being dipped in a bath containing a composition having a bitumen or tar base. The coating shall be smooth and tenacious so as not to flow when exposed to a temperature of 63°C and shall not be so brittle as to chip off at a temperature of 15°C.

9. MARKING

9.1 Each surface box shall cast on them the following information:

- a) Manufacturer's name and trade-mark, and
- b) The word 'W' or any other letter as agreed to between the purchaser and the manufacturer.

9.1.1 Each surface box 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. The ISI 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 which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. 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.

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