



PRODUCT MANUAL FOR

CAST IRON SINGLE FACED THIMBLE MOUNTED SLUICE GATES

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो) अनुरूपता मूल्यांकन (विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS 13349:1992
	शीर्षक Title	:	Cast Iron Single Faced Thimble Mounted Sluice Gates
	संशोधनों की संख्या No. of amendments	:	1
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Please refer Annex – A
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	Please refer Annex – B
c)	नमूने का परिमाण Sample Quantity	:	1 Sluice Gate
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer Annex – C
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer Annex – D
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	The licence will be operated on Factory testing basis. During surveillance inspection, all available varieties covered in the licence scope are to be tested in factory.

6.	लाइसेंस का दायरा /Scope of the Licence:	
“License is granted to use Standard Mark as per IS 13349:1992 with the following scope:		
	Name of the product	Cast Iron Single Faced Thimble Mounted Sluice Gates
	Class	1/2/3
	Shape	Circular/ Square/ Rectangular
	Types	Rising stem/ non-rising stem, Conventional bottom/ flush bottom, Upward opening/ downward opening
	Design for Head	Seating/ Unseating/ Both
	Nominal Size	

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ANNEX A

Raw Material

Raw Material	Indian Standard
Thimble, frame, guide, extension guide, slide (shutter), gear box, pedestal, stem guide, bracket, wedging devices, flush bottom seal, support bar	These components shall be made from cast iron conforming to IS 210 as given in Table 3 of IS 13349.
Yoke (bridge)	Yoke shall conform to IS 210/ IS 2062 (as applicable) as given in Table 3 of IS 13349.
Wedges	Wedges shall conform to IS 210/IS 291/IS 28/IS 318/IS 3444 (as applicable) as given in Table 3 of IS 13349.
Wedge facings	Wedges shall conform to IS 291/IS 318/IS 6911/IS 7814 (as applicable) as given in Table 3 of IS 13349.
Operating nut and guide bush	Operating nut and guide bush shall conform to IS 318 as given in Table 3 of IS 13349.
Connecting block	Connecting block shall conform to IS 210/IS 306/IS 318 (as applicable) as given in Table 3 of IS 13349.
Seating faces	Seating faces shall conform to IS 291/IS 7814/IS 306/IS 318/IS 6911 (as applicable) as given in Table 3 of IS 13349.
Stem extension road	Stem extension road shall conform to IS 2062/ IS 6603 (as applicable) as given in Table 3 of IS 13349.
Flush bottom resilient seal	Flush bottom resilient seal shall conform to IS 11855 as given in Table 3 of IS 13349.
Coupling	Coupling shall conform to IS 210/IS 2062/IS 6603 (as applicable) as given in Table 3 of IS 13349.
Flush bottom seal retainer bar	Flush bottom seal retainer bar shall conform to IS 210/ IS 7814/ IS 6603 (as applicable) as given in Table 3 of IS 13349.
Anchor bolts	Anchor bolts shall conform to IS 2062/ IS 6603 (as applicable) as given in Table 3 of IS 13349.
Fasteners	Fasteners shall conform to IS 1363 (Pt 1)/IS 1363 (Pt 3)/ IS 6603 (as applicable) as given in Table 3 of IS 13349.

ANNEX-B

Grouping Guidelines

1. Cast Iron Single Faced Thimble Mounted Sluice Gates as per IS 13349:1992 are classified as given below:
 - a) Class : Class 1/ Class 2/ Class 3
 - b) Shape : Circular/ Square/ Rectangular
 - c) Types : Rising stem/ non-rising stem, Conventional bottom/ flush bottom, Upward opening/ downward opening
 - d) Design of Head : Seating/ Unseating/ Both
 - e) Nominal Size: as given in Table 1 & Table 3
2. Considering the above, the guidelines given below shall be followed for GOL/CSoL:
 - a) Sluice Gates of each Class, Type & Design of Head shall be tested for all requirements to cover that particular Class, Type & Design of Head in the scope of licence.
 - b) Sluice Gates of any shape shall be tested for all requirements to cover all the shapes in the scope of licence.
 - c) Sluice Gates of lowest and highest nominal size shall be tested for all requirements to cover all the intermediate sizes including the nominal sizes tested.
3. The Scope of Licence may be restricted based on the Manufacturing and Testing capabilities of the Manufacturer.

ANNEX-C

List of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

S. No.	Test used in with clause reference	Test equipment list
1	Construction, Workmanship & Design requirements (Cl 7, 8 9 & 10)	- Depth Gauge - Steel Tape - Vernier Caliper - Steel Scale - Outside Caliper - Inside Caliper - Torque wrench or UTM
2	Seat clearance (Cl 11.2)	- Feeler Gauge
3	Shop leakage test (Cl 11.4) & Hydrostatic test (Cl 11.5)	- Test set up for hydraulic test (means for applying hydraulic pressure with pressure gauge, wall with mounting provisions) - Measuring cylinder for allowable water collection - Stop Watch

ANNEX D

SCHEME OF INSPECTION AND TESTING

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipments.

2. TEST RECORDS – The manufacturer shall maintain test records for all tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements given at Clause 14 of IS 13349:2015.

3.1 Additional Marking requirements: Each sluice gate shall also be marked with the following additional requirement:

“For BIS certification details please visit www.bis.gov.in”

4. CONTROL UNIT – Sluice gates of the same Class, Shape, Type, Design of Head and Nominal Size manufactured from the same consignment of raw materials in a week shall constitute a control unit.

5. LEVELS OF CONTROL - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

6. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Recommended Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
6	Material						
	Thimble, frame, guide, extension guide, slide (shutter), gear box, pedestal, stem guide, bracket, wedging devices, flush bottom seal, support bar	6, Table 3 of IS 13349	IS 210	S	One	Each consignment	No further testing is required if accompanied with test certificate or ISI marked.
	Yoke (bridge)		IS 210/ IS 2062				
	Wedges		IS 210/IS 291/IS 28/IS 318/IS 3444				
	Wedge facings		IS 291/IS 318/IS 6911/IS 7814				
	Operating nut and guide bush		IS 318				
	Connecting block		IS 210/IS 306/IS 318				
	Seating faces		IS 291/IS 7814/IS 306/IS 318/IS 6911				
	Stem extension road		IS 2062/ IS 6603				
	Flush bottom resilient seal		IS 11855				
	Coupling		IS 210/IS 2062/IS 6603				
	Flush bottom seal retainer bar		IS 210/ IS 7814/ IS 6603				
	Anchor bolts		IS 2062/ IS 6603				
	Fasteners		IS 1363 (Pt 1)/IS 1363 (Pt 3)/ IS 6603				

7	General design and Construction requirements	7	IS 13349	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity		
8	Surface Preparation and Painting	8	IS 13349				
9	Manual Lifting Devices	9	IS 13349				
10	Fabrication & Workmanship	10	IS 13349				
11	SHOP TESTING -						
11.2	Seat Clearance check	11.2	IS 13349	R	One	Each Control Unit	-
11.3	Smooth Movement test	11.3	IS 13349	R	One	Each Control Unit	-
11.4	Shop Leakage Test by Applying Unseating Hydraulic Pressure	11.4	IS 13349	R	One	Each Control Unit	-
11.5	Hydrostatic test	11.5	IS 13349	R	One	Each Control Unit	-