उत्पाद मैन्युअल
आई एस 368 : 2014 के अनुसार
पानी गरमाने के डबाऊ हीटर - विशिष्टि (पांचवा पुनरीक्षण) के लिए
दस्तावेज़ संख्या – पीएम/आईएस 368/3/ मार्च 2026

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।

PRODUCT MANUAL FOR
ELECTRIC IMMERSION WATER HEATERS –
SPECIFICATION (FIFTH REVISION)
ACCORDING TO IS 368 : 2014
Document No - PM/IS 368/3/ March 2026

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.

भारतीय मानक ब्यूरो
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उत्पाद मैन्युअल
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1.	मानक संख्या **IS No.**	:	IS 368 : 2014
	शीर्षक **Title**	:	Electric Immersion Water Heaters
	संशोधनों की संख्या **No. of amendments**	:	1
2.	नमूना दिशानिर्देश **Sampling Guidelines:**		
a)	कच्चा माल **Raw material**	:	NIL
b)	समूहीकरण दिशानिर्देश **Grouping Guidelines**	:	Please refer ANNEX – A
c)	नमूने का परिमाण	:	2 numbers

	Sample Quantity		
d)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर** **Parameters to be Declared in Test Request**		As per Scope of Licence
3.	परीक्षण उपकरणों की सूची **List of Test Equipment**	:	Please refer ANNEX – B
4.	निरीक्षण और परीक्षण की स्कीम **Scheme of Inspection and Testing**	:	Please refer ANNEX – C
5.	एक दिन में संभा वत परीक्षण **Possible tests in a day:**	:	Please refer ANNEX-D
6.	लाइसेंस का दायरा /**Scope of the Licen**	:	As per below table
	Licence is granted to use Standard Mark as per IS 368 : 2014 withthe following scope:		
	Name of the Product	Electric Immersion Water Heaters	
	Model number		
	Class of appliance	Class I/II/III	
	Grade	Pollution Degree __, Material Group __, IP__	
	Rating	_____W,____V,_____Hz	
	Nature of supply	Single phase a.c./ d.c.	

NOTE:
The requirements of 'Electric Immersion Water Heaters' as per IS 302-2-201 : 2008 or IS 302 (Part 2/ Section 74) : 2024/ IEC 60335-2-74 : 2021 are deemed complied if the product meets to the requirements of IS 368 : 2014 under BIS certification licence.

ANNEX – A

समूहीकरण दिशानिर्देश
Grouping Guidelines

1) Manufacturer shall declare the parameters indicated in the scope of licence for each model number of the Electric Immersion Water Heaters produced by them.

2) For considering GoL/CSoL, grouping shall be considered based on the following:

Sl.No.	Criteria for grouping		
a.	Nature of Supply	Single phase a.c.	d.c.
b.	Wattage	up to and including 1000 W	above 1000 W

3) One sample from each group, preferably of the highest wattage, for each voltage rating intended to be covered in the licence may be drawn for testing to cover the entire range of wattages in that group.

4) The Firm shall declare the model numbers of Electric Immersion Water Heaters they intend to cover in the Licence. TheScope of Licence may be restricted based on the Manufacturing capability and Testing facilities of the Manufacturer.

5) During the operation of the Licence, BO shall ensure that all the model numbers covered in the Licence are tested in rotation to the extent possible.

ANNEX – B

परीक्षण उपकरणों की सूची

List Of Test Equipment

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Major test equipment required to test as per the Indian Standard

Sl. No.	Test equipment list	Test used in with clause reference
1.	Voltmeter, Finger Test Apparatus	Cl. 8 (Protection against Electric Shock)
2.	Voltmeter, Ammeter, Wattmeter	Cl. 10 (Power input and current)
3.	Test Corner consisting of dull-black painted plywood, Temperature Controller	Cl. 11 (Temperature Rise)
4.	IR Meter, Micro ammeter, HV Tester, Stopwatch	Cl. 13 (Leakage current and electric strength at operating temperature)
5.	Humidity Test Chamber	Cl. 15 (Moisture Resistance)
6.	Metal foil, HV Test Supply	Cl. 16 (Insulation resistance and electric strength)
7.	Test Corner, Felt Strips, Copper/brass disks	Cl. 19 (Abnormal Operation)
8.	Inclined Test Apparatus	Cl. 20 (Stability and mechanical hazards)
9.	Spring Hammer, Finger Test Apparatus	Cl. 21 (Mechanical strength)
10.	Micrometer, VAW meter, Pressure Test Apparatus	Cl. 22 (Construction)
11.	Flexing Test Apparatus	Cl. 23 (Internal wiring)
12.	Cord Grip Test Apparatus, Measuring Tape, Micro ohmmeter	Cl. 25 (Supply connection and external flexible cables and cords)
13.	Torque Screwdriver	Cl. 26 (Terminals for external conductors)
14.	Earth Contact Resistance Testing Panel (ECR Measurement), Voltmeter, Ammeter	Cl. 27 (Provisions for earthing)
15.	Torque Wrench	Cl. 28 (Screws and connections)
16.	Filler Gauge, Vernier Caliper, Micrometer	Cl. 29 (Creepage distance and clearances)
17.	Glow Wire Test Apparatus, Oven, Ball Pressure Apparatus, Heating Oven with temperature controller	Cl. 30 (Resistance to Heat, Fire and Tracking)
18.	Humidity Chamber with temperature and humidity controller, measuring cylinder, Ammonium chloride, Carbon Tetrachloride	Cl. 31 (Resistance to rusting)

Note: The above list is indicative only and may not be treated as exhaustive.

ANNEX – C

निरीक्षण और परीक्षण की स्कीम

Scheme Of Inspection And Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that during operation of BIS licence, manufacturers will implement a Quality Assurance Plan (QAP) i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan (QAP) defining the control unit (i.e. lot/batch etc.), the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and declare the arrangement for testing i.e. whether in-house or subcontracting/sharing for each applicable test and submit the same to BIS Branch Office for information. The manufacturer shall comply with the QAP and maintain test records in accordance with para 2.1.

1.3 **RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:**

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: **All electric immersion water heaters of each model number manufactured in a day shall constitute a control unit.**

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in Table 1. Manufacturer has the discretion of declaring their own levels of control or accept the levels of control given in this document.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan.

2. ENSURING COMPLIANCE THROUGH TESTING- Manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard for which they may have in-house test facilities. However, there is no obligation to maintain in-house laboratory. Licensee may use alternative arrangements for tests of the production as per the declared QAP. Various alternatives are available for operation of BIS certification as given below and the relevant guidelines for availing such relaxations by the manufacturers, as amended from time to time, are to be referred:

i) Shared testing resources like common facility,

ii) Cluster based testing facility,

iii) Sub-contracting to outside laboratories which may either be:

a) BIS recognised/empanelled laboratories, or

b) Any accredited laboratory as per ISO/IEC 17025.

2.1 **TEST RECORDS -** The manufacturers shall maintain test records for the tests carried out (either in-house or at a sub-contracted or at shared test facility) to establish conformity of the product to the Standard for operation of licence. For the tests being subcontracted or conducted at a shared test facility, test results issued by the laboratories or test facilities, shall be made available for inspection by BIS.

3. MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each electric immersion water heaters provided always that the product so marked conforms to each requirement of the specification

3.1 Marking shall be done as per IS 368 : 2014.

3.2 Additional Marking requirements: Additionally, the following shall also be marked on product or package or both:

a) "For BIS certification details please visit www.bis.gov.in"

3.3 Instructions shall be provided with each electric immersion water heaters as per requirements prescribed at Cl. 7.12 of the **IS 302 (Part 2/ Sec 74) : 2024/ IEC 60335-2-74 : 2021**.

4. 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
(ONLY FOR GUIDANCE PURPOSE)

(1)				(2)		
Test Details				**Levels of Control**		
Cl. as per IS 368	**Requirement**	**Test Methods**		**No. of Sample**	**Frequency**	**Remarks**
		Clause	**Reference**			
24	Component	24	IS 302 (Part 2/ Sec 74)	Each Consignment	No further testing required, if supplied with test certificate or BIS Standard Mark	
7	Marking	7		Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained		
	Earth Continuity Test	A-1	IS 302 (Part 1)/ IEC 60335-1	Each Electric Immersion Water Heater		
	Electric Strength Test	A-2				
	Functional Test	A-3				
8	Protection against access to live parts	8	IS 302 (Part 2/ Sec 74)			
10	Power Input & Current	10				
13	Leakage current & electric strength at operating temperature	13		One	Each Control Unit	
27	Provision for Earthing	27		One		
11	Heating	11	IS 302 (Part 2/ Sec 74)	One	Once in every week for each model number of Electric Immersion Water Heaters manufactured in the period	

12	Operation under overload conditions of appliances with heating element	12	IS 368, IS 302 (Part 2/ Sec 74)	One	Once in every six months for each model number of Electric Immersion Water Heaters manufactured in the period
18	Endurance	18		One	
19	Abnormal operation	19		One	
22	Construction	22		One	
31	Resistance to rusting	31		One	
14	Transient overvoltage	14		One	
15	Moisture Resistance	15		One	
16	Leakage Current & Electric Strength	16		One	
17	Overload Protection of transformers and associated circuits	17		One	
20	Stability & Mechanical Hazards	20		One	
21	Mechanical Strength	21		One	
23	Internal Wiring	23		One	
25	Supply connections and external flexible cords	25		One	
26	Terminals for external conductors	26		One	
28	Screws and Connections	28		One	
29	Clearances, creepage distances and solid insulation	29		One	
30	Resistance to heat and fire	30		One	
31	Resistance to rusting			One	
32	Radiation, toxicity and similar hazards	32		One	

ANNEX – D

एक दिन में संभावित परीक्षण
Possible Tests in a day

1. Earth Continuity test (A-1 of IS 302 (Part 1))
2. Electric strength test (A-2 of IS 302 (Part 1))
3. Functional test (A-3 of IS 302 (Part 1))
4. Marking and Instruction (Cl. 7)
5. Protection against access to live parts (Cl. 8)
6. Power input and current (Cl. 10)
7. Leakage current and Electric strength (Cl. 16)
8. Provision for earthing (Cl. 27)