



**उत्पाद मैनुअल
आई एस 367 : 1993 के अनुसार**

**घरेलू और समान उपयोग के लिए इलेक्ट्रिक केतली और जग
के लिए**

दस्तावेज संख्या – पी एम/आई एस 367 / 1/फरवरी 2022

भारतीय मानक ब्यूरो की स्कीम-1 (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिश्रिता की सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों और लाइसेंसी द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस प्रमाणीकरण लाइसेंस/प्रमाणपत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज का उपयोग किया जा सकता है।

**PRODUCT MANUAL FOR
ELECTRIC KETTLES AND JUGS FOR HOUSEHOLD AND SIMILAR USE
ACCORDING TO IS 367: 1993**

Document No.- PM/ IS 367/ 1/ Feb 2022

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence 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 licence/certificate.

भारतीय मानक ब्यूरो
BUREAU OF INDIAN STANDARDS
मानक भवन, ९, बहादुर शाह ज़फ़र मार्ग
Manak Bhawan, 9, Bahadur Shah Zafar Marg
नई दिल्ली- ११०००२
New Delhi – 110002



PRODUCT MANUAL FOR ELECTRIC KETTLES AND JUGS FOR HOUSEHOLD AND SIMILAR USE ACCORDING TO IS 367: 1993

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2019 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 367: 1993
	Title	:	Electric Kettles and Jugs for household and similar use
	No. of Amendments	:	nil
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	Two pieces
3.	List of Test Equipment	:	Please refer ANNEX – B.
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – C.
5.	Possible tests in a day	:	Please refer ANNEX - D
	Scope of the Licence :		
6.	Name of the Product		Electric Kettles / Jugs / Cordless Kettles etc for household and similar use
	Rated Input power		
	Rated Voltage		
	Class of appliance		
	Rated capacity		
	Degree of protection		

ANNEX A

Grouping Guidelines

1(a). For the purpose of GoL/ CSoL, samples of Electric Kettles and Jugs shall be tested considering the following:

- i. Type of the product (Kettle/ Jug/ Cordless Kettle etc)
- ii. Rated voltage
- iii. Rated input power
- iv. Class of appliance
- v. Rated capacity
- vi. Degree of protection against harmful ingress of water

1(b). All other parameters stated above remaining the same, the following relaxation may be given when a variety is tested for all the requirements:

- i. To cover a range of rated inputs, samples of minimum, maximum and an interim rated power may be tested.
 - ii. To cover a range of rated capacities, samples of minimum, maximum and an interim rated capacity may be tested.
2. The Firm shall declare the varieties they intend to cover in the Licence. The Scope of Licence may be restricted based on the manufacturing and testing capabilities of the manufacturer.
3. During the operation of the Licence, BO shall ensure that all the varieties covered in the Licence are tested in rotation to the extent possible.

ANNEX B**List Of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Petroleum spirit	Marking and instructions, Cl 8 of IS 367
2	Test probe B, 13 and 41 of IS 1401, Voltmeter, mill-ammeter, oscilloscope, force gauges, 2000 ohm non-inductive resistor, coulombmeter, energymeter	Protection Against Electric Shock, Cl. 8 of IS 302-2-15
3	Voltmeter, Ammeter, Wattmeter, Timer	Power input and current, Cl 10 of IS 302-2-15
4	Temp recorder, Fine wire thermocouples, Winding resistance measurement system, Test Corner, probe for measurement of surface temperature	Heating, Cl 11 of IS 302-2-15
5	Metal foil, Leakage Current Tester, Isolation transformer, HV test supply, Network as per relevant fig. of IS 302-1	Leakage current and electric strength at operating temperature, Cl 13 of IS 302-2-15
6	Impulse voltage test generator and monitor	Transient voltages, Cl 14 of IS 302-2-15
7	IP test equipment, Measuring beaker, Spray Nozzle (only when the second numeral is greater than 0), Spillage test apparatus, Humidity Chamber with Temperature and Humidity controller, HV test facilities	Moisture resistance, Cl. 15 of IS 302-2-15
8	Metal foil, Low impedance ammeter, HV test supply	Leakage current and Electric Strength, Cl. 16 of IS 302-2-15
9	Temp recorder, Fine wire thermocouples, Winding resistance measurement system, Test Corner, probe for measurement of surface temperature	Overload protection of transformers and associated circuits, Cl. 17 of IS 302-2-15
10	Plywood board, Electrostatic discharge test apparatus, Radiated field test apparatus, Fast transient burst test apparatus, Voltage dip and interruption test apparatus	Abnormal Operation, Cl. 19 of IS 302-2-15

11	Inclined plane, masses, force gauges, test probe similar to test probe B of IS 1401 with circular stop face 50 mm Ø, Stop plate, test rod	Stability & Mechanical Hazards, Cl. 20. of IS 302-2-15
12	Spring hammer, Hardened steel pin, Force gauges	Mechanical Strength, Cl. 21 of IS 302-2-15
13	Test rig for torque on pin supported appliance, Heating cabinet, Test probe 11 of IS 1401, Test fingernail , Force gauge, Pressure test apparatus Automatic cord reel test apparatus Oxygen bomb with pressure apparatus Methylated spirits	Construction, Cl 22 of IS 302-2-15
14	Flexing test apparatus	Internal wiring, Cl 23 of IS 302-2-15
15	Flexing test apparatus, Cord anchorage force & torque tester, Cold chamber	Supply connection and external flexible cords, Cl 25 of IS 302-2-15
16	Torque screwdriver	Terminals for external conductors, Cl 26 of IS 302-2-15
17	Earth continuity tester	Provision for earthing, Cl 27 of IS 302-2-15
18	Torque gauge	Screws and connections, Cl 28 of IS 302-2-15
19	Mechanical measurement tools, Rod or ball gauges, Proof tracking test apparatus	Creepage Distance clearance and Distance through Insulation, Cl. 29 of IS 302-2-15
20	Heating Oven with Temp controller, Ball pressure Apparatus, Glow wire test apparatus	Resistance to heat and fire, Cl 30 of IS 302-2-15
21	Humidity Chamber with Temp and Humidity Controller Measuring Cylinder 500 ml Ammonium Chloride, Carbon Tetrachloride, Distilled Water	Resistance to Rusting, Cl. 31 of IS 302-2-15
22	Air conditioner	To maintain ambient temperature
23	Vernier Calipers, Scale, Micrometer	Overall dimensions, Cl 11 of IS 367
24	Weighing scale	Mass, Cl 12 of IS 367
25	Volumetric flask	Water capacity, Cl 13 of IS 367
26	Thermocouple, stopwatch	Time to boil 1L of water, Cl 14 of IS 367

PM/ IS 367/ 1/ Feb 2022

27	Thermocouple, stopwatch	Time to boil water capacity, Cl 15 of IS 367
28	Volumetric flask, stopwatch	Min. quantity of water that can be boiled, Cl 16 of IS 367
29	Support as per Cl 5 of IS 367, thermocouple	Temperature of supporting surface, Cl 17 of IS 367
30	Calorimeter, energymeter	Thermal efficiency, Cl 18 of IS 367
31	Test jig for endurance test	Endurance, Cl 19 of IS 367
32	carbon tetrachloride or trichlorethane, ammonium chloride, heating cabinet, TE as per IS 1068 for thickness, adhesion and corrosion	Finish, Cl 20 of IS 367

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

ANNEX C

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 equipment.

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

3. LABELLING AND MARKING – As per the requirements of IS 367: 1993.

4. CONTROL UNIT – All electric jugs and kettles of the same type and rating manufactured in one day 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. REJECTIONS – 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	Levels of Control	
Cl.	Requirement	Test Methods			No. of Sample	Frequency
		Cl.	Ref			
8	Marking	8	IS 367	R	Each appliance	
8	Marking (indelibility)	7.14	IS 302-1	R	One	Each control unit
9	Earth continuity test	A-1	IS 302-1	R	Each appliance	
9	Electric strength test	A-2	IS 302-1	R	Each appliance	
9	Functional test	A-3	IS 302-1	R	Each appliance	
9	Protection against access to live parts	8	IS 302-2-15	R	One	Each control unit
9	Provisions for earthing	27	IS 302-2-15	R	One	Each control unit
9	Power Input and Current	10	IS 302-2-15	R	One	Each control unit
9	Heating	11	IS 302-2-15	R	One	Once in a month for each type and rating
9	Leakage current and Electric strength at operating temperature	13	IS 302-2-15	R	One	Once in a week for each type and rating
9	Moisture Resistance	15	IS 302-2-15	R	One	Once in a month for each type, rating & IP
9	Leakage current and Electric strength	16	IS 302-2-15	R	One	Once in a month for each type and rating
13	Capacity	13	IS 367	R	One	Once in a week for each type and rating
15	Time to boil water capacity	15	IS 367	R	One	Once in a week for each type and rating
11	Overall dimensions	11	IS 367	R	One	Once in a week for each type and rating
12	Mass	12	IS 367	R	One	Once in a week for each type and rating
14	Time to boil 1.0 l of water	14	IS 367	R	One	Once in a week for each type and rating
16	Minimum quantity of water that can be boiled	16	IS 367	R	One	Once in a week for each type and rating
17	Temperature of supporting surface	17	IS 367	R	One	Once in a week for each type and rating
18	Thermal efficiency	18	IS 367	R	One	Once in a week for each type and rating
19	Endurance	19	IS 367	S	One	Every six months for each type and rating
20	Finish	20	IS 367	S	One	Every six months for any rating
9	Transient Overvoltages	14	IS 302-2-15	S	One	Every six months for each type and rating

9	Overload protection of transformers and associated circuits	17	IS 302-2-15	S	One	Every six months for each type and rating
9	Abnormal operation	19	IS 302-2-15	S	One	Every six months for each type and rating
9	Stability and Mechanical hazards	20	IS 302-2-15	S	One	Every six months for each type and rating
9	Mechanical strength	21	IS 302-2-15	S	One	Every six months for each type and rating
9	Construction	22	IS 302-2-15	S	One	Every six months for each type and rating
9	Internal wiring	23	IS 302-2-15	S	One	Every six months for each type and rating
9	Components	24	IS 302-2-15	S	One	Every six months for each type and rating
9	Supply connection and external flexible cables and cords	25	IS 302-2-15	S	One	Every six months for each type and rating
26	Terminals for external conductors	26	IS 302-2-15	S	One	Every six months for each type and rating
28	Screws and connections	28	IS 302-2-15	S	One	Every six months for each type and rating
29	Creepage distances, clearances and distances through insulation	29	IS 302-2-15	S	One	Every six months for each type and rating
30	Resistance to heat, fire and tracking	30	IS 302-2-15	S	One	Every six months for each rating
31	Resistance to rusting	31	IS 302-2-15	S	One	Every six months for any rating
32	Radiation, toxicity and similar hazards	32	IS 302-2-15	S	One	

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

Note-2: Levels of control given in column 3 are recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEX D

Possible Tests in a day

1. Capacity
2. Time to boil water capacity
3. Overall dimensions
4. Mass
5. Time to boil 1.0 l of water
6. Minimum quantity of water that can be boiled
7. Temperature of supporting surface
8. Thermal efficiency
9. Protection against access to live parts
10. Power input and current
11. leakage current and electric strength at operating temperature
12. Provision for Earthing
13. High Voltage test