उत्पाद मैन्युअल
आई एस 302-2-30 : 2007 के अनुसार
घरेलु और समान विद्युत साधित्रों की सुरक्षा भाग 2 विशेष अपेक्षाएँ अनुभाग 30 रूम हीटर (पहला पुनरीक्षण) के लिए
दस्तावेज़ संख्या – पीएम/आईएस 302-2-30/4/ दिसम्बर 2023

भारतीय मानक ब्यूरो की स्कीम-I (अनुरूपता मूलयांकन) विनियम, 2018 के तहत यह उत्पाद मैन्युअल प्रमाणीकरण के प्रचालन में रीति और पारिशिता 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 दस्तावेज़ का उपयोग किया जा सकता है ।

PRODUCT MANUAL FOR
SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES
PART 2 PARTICULAR REQUIREMENTS SECTION 30 ROOM HEATERS
(FIRST REVISION)
ACCORDING TO IS 302-2-30:2007

Document No - PM/IS 302-2-30/4/December 2023

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

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PRODUCT MANUAL FOR SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES PART 2 PARTICULAR REQUIREMENTS SECTION 30 ROOM HEATERS (FIRST REVISION) ACCORDING TO IS 302-2-30:2007

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1.	**Product**	:	IS 302-2-30 : 2007
	Title	:	Safety of household and similar appliances – Room Heaters.
	No. of Amendments	:	3
2.	**Sampling Guidelines:**		
a)	**Raw material**	:	_
b)	**Grouping guidelines**	:	Please refer ANNEX – A
c)	**Sample Size**	:	2 nos. of Room Heaters
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
6.	**Scope of the Licence :** Licence is granted to use Standard Mark as per IS 302-2-30:2007 with the following scope:		
	Name of the Product		Safety of household and similar appliances – Room Heaters
	Type of heater		Convector heaters/ Fan heaters/ Heaters for use in greenhouses/ Liquid filled radiators/ Panel heaters/ Radiant heaters/ Tubular heaters/ others
	Model No.		
	Class		Class of Appliance_____, Insulation Class _____
	Grade		Pollution degree_____, Material group _____
	Rating		_____W,_____V,_____Hz,_____Phase _____

ANNEX A

Grouping Guidelines

1) For GoL/CSoL, following grouping shall be considered provided the samples are of the same Type, Class, Grade and Rating:

   a) **Group I** - up to and including 1000 W
   b) **Group II** – above 1000 W

2) 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.

3) In case of room heaters with multiple input wattages, where higher wattage ratings are in multiple of lower wattage ratings, then Grant of Licence can be considered for similar heaters with lower input wattage rating(s) based on testing of room heaters with higher input wattage ratings subject to there is no change in other parameters. In this regard, declaration shall be given by manufacturers for all the input wattage ratings the manufacturer intends to cover in the scope of the licence.
   Note: For example, if room heater with heating rods of 400W/ 800W/ 1200W is tested, then room heater with heating rods of 400W/ 800W may also be covered in the scope of licence.

4) The Firm shall declare the varieties of Room Heaters they intend to cover in the Licence. The Scope 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 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

Sl. No.	Test Equipment	Tests used in with Clause Reference
1	Voltmeter, Ammeter, Wattmeter	Cl. 10, Cl. 19
2	Step-less variable voltage transformer	Cl. 8
3	Milli-ammeter for Leakage Current, High Voltage Tester	Cl. 13, Cl. 16
4	Thermocouple with digital/analog indicator	Cl. 30
5	Cord grip test apparatus, Micrometer	Cl. 25
6	Vernier Caliper, Feeler gauges	Cl. 29
7	Torque Screw Drivers	Cl. 25, Cl. 28
8	Wooden Test Corner, Laboratory ovens having thermostatic controls	Cl. 11
9	Ball pressure apparatus, Inclined plane , Impact test apparatus	Cl. 21, Cl. 30
10	Generator having a virtual impedance of 12 Ω	Cl. 14
11	Humidity Chamber	Cl. 15

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 – The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each appliance and also on its packaging.

3.1 Marking and Labelling shall be as per the requirement of IS 302-2-30 : 2007.

3.2 In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place as follows: "For details of BIS certification please visit www.bis.gov.in".

4. CONTROL UNIT – For the purpose of this Scheme, room heaters of each type and rating manufactured in a 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**	**Remarks**
		Clause	**Reference**				
5	Earth Continuity test	5.1, A-1	IS 302-1	R	Each room heater	—	–
5	Electric strength test	5.1, A-2	IS 302-1	R			
5	Functional test	5.1, A-3	IS 302-1	R			
7	MARKING AND INSTRUCTIONS	7	IS 302-2-30 IS 302-1	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.		
8	Protection against access to live parts	8	IS 302-2-30 IS 302-1	R	One	Every Control Unit	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.
27	Provision for Earthing	27		R	Each room heater	—	—
10	Power input and current	10	IS 302-2-30 IS 302-1	R	10% subject to a minimum of three andmaximum of thirteen	Every Control Unit	Please see Note 1
13	Leakage current and electric strength at operating temperature	13		R			
11	Heating	11	IS 302-2-30 IS 302-1	R	Two	Every week for each type and rating	
15	Moisture resistance	15		R			
16	Leakage current and Electric Strength	16		R			

14	Transient Overvoltage	14	IS 302-2-30 IS 302-1	S	One	Every year for each type and rating	Please see Note 2
21	Mechanical Strength	21	IS 302-2-30 IS 302-1	S	Two from each type and rating every 3 months or 5000 room heaters whichever is earlier		
17	Overload Protection of transformers andassociated circuits	17	IS 302-2-30 IS 302-1	S	Two	Every six months for each type and rating	
19	Abnormal Operation	19		S			
20	Stability & Mechanical Hazards	20		S			
22	Construction	22	IS 302-2-30 IS 302-1	S	Two	Every six months for each type and rating	Please see Note 2
23	Internal wiring	23		S			
24	Components	24		S			
25	Supply connection and external flexible cords	25		S			
26	Terminals for external conductors	26		S			
28	Screws and connections	28		S			
29	Clearances, creepage distances and solid insulation	29		S			
30	Resistance to heat & fire	30		S			
31	Resistance to rusting	31		S			

Note-1: In case of failure, all room heaters in the control unit shall be tested and those found failing shall be rejected. All room heaters produced subsequently shall be tested for these requirements till 13 consecutive heaters pass. The original frequency may then be restored.

Note-2: In case of failure in any type and rating, a thorough investigation of the cause of failure shall be made and defects rectified. Five samples of that

type and rating from the improved lot shall be tested for these requirements till samples from five consecutive control units pass. The original frequency may then be restored.

Note-3: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-4: Levels of control given in column 3 are only 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. Earth Continuity test (Cl. 5.1, A-1 of IS 302-1)
2. Electric strength test (Cl. 5.1, A-2 of IS 302-1)
3. Functional test (Cl. 5.1, A-2 of IS 302-1)
4. Protection against access to live parts (Cl. 8)
5. Power input and current (Cl. 10)
6. Heating (Cl. 11)
7. Leakage current and electric strength at operating temperature (Cl. 16)
8. Mechanical strength (Cl. 21)
9. Provision for earthing (Cl. 27)
10. Screws and connections (Cl. 28)
11. Resistance to heat and fire (Cl. 30)
12. Stability and Mechanical Hazards (Cl. 20)
13. Marking (Cl. 7)