



उत्पाद मैनुअल

आई एस 302-2-202 : 1992 के अनुसार
घरेलु और समान विद्युत साधित्रों की सुरक्षा भाग 2 विवरणात्मक अपेक्षाएँ अनुभाग 202 विद्युत् स्टोव
के लिए

दस्तावेज संख्या – पीएम/आईएस 302-2-202/1/ जनवरी 2024

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 SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES PART 2 PARTICULAR REQUIREMENTS SECTION 202 ELECTRIC STOVES

ACCORDING TO IS 302-2-202 : 1992

Document No - PM/IS 302-2-202/1/January 2024

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.

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**PRODUCT MANUAL FOR
SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES PART 2
PARTICULAR REQUIREMENTS SECTION 202 ELECTRIC STOVES
ACCORDING TO IS 302-2-202 : 1992**

1.	Product	:	IS 302-2-202 : 1992
	Title	:	SAFETY OF HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES PART 2 PARTICULAR REQUIREMENTS SECTION 202 ELECTRIC STOVES
	No. of Amendments	:	2
2.	Sampling Guidelines:		
a)	Raw material	:	—
b)	Grouping guidelines	:	Please refer ANNEX – A
c)	Sample Size	:	2 nos. of Electric Stove
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 302-2-202 : 1992 with the following scope:		
	Name of the Product	Electric Stoves (Safety)	
	Class	Class of Appliance _____,	
	Rating	_____ W, _____ V, _____ Hz, _____ Phase _____	
	Pollution Degree		
	Material Group		

ANNEX A

Grouping Guidelines

- 1) Grade/Size/Class/Variety covered in the scope of Standard shall only be considered for endorsing in the scope of licence and form part of grouping guidelines. Grade/Size/Class/Variety other than specified in Standard (e.g. which may be supplied as per mutual agreement between manufacturer and purchaser) shall not be considered and hence shall not form part of grouping guidelines.
- 2) For the purpose of certification, following technical parameters are considered for classifications of “Electric Stoves (Safety)”:
 - a) Rating : __W, __V, __Hz, __Phase
 - b) Class of Appliance __
 - c) Pollution Degree:
 - d) Material Group:
- 3) **Each variety shall be tested for all the requirements for the purpose of GoL/CSoL.** All varieties, along with their technical parameters as above, intended to be covered in the scope of licence, shall be declared by the manufacturer. The Scope of Licence may be restricted based on the Manufacturing capability and testing facilities of the Manufacturer.
- 4) During the operation of the Licence, BO shall ensure that all the models 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	Testing Panel consisting of Voltmeter, Ampere meter, Wattmeter, ECR Test, Micro Ampere Meter, PAES,	Cl.8 (Protection against access to live parts), Cl. 10 (Power input and current), Cl. 13 (Leakage current and electric strength at operating temperature), Cl. 27 (Provision for earthing)
2	High Voltage Tester, Stop Watch, Micro Ampere Meter	Cl. 13 (Leakage current and electric strength at operating temperature), 16 (Leakage current and electric strength)
3	Humidity Chamber with Digital Temperature Controller, Hygrometer and Hour Meter	Cl. 15 (Moisture resistance), Cl.16 (Leakage current and electric strength), Cl. 31 (resistance to rusting)
4	Glow Wire Test- Digital Temperature Controller, Digital Timer, Hot Air Oven- Digital Temperature Controller, Digital Timer Ball Pressure Apparatus, Measuring Cylinder & Chemicals- NH ₄ Cl, CCl ₄	Cl. 30 (Resistance to heat & fire), Cl.31(Resistance to rusting)
5	Suitable size dull black painted wooden test corner with embedded copper disc along with thermocouple & temp.indicator	Cl. 11 (Heating), Cl. 19 (Abnormal Operation)
6.	Incline Test Apparatus	Cl. 20 (Stability and mechanical hazards)
7	Impact Test Apparatus	Cl. 21 (Mechanical strength)
8	Cord Grip tester with Weight	Cl. 25 (Supply connection and external flexible cables and cords)
9	Micro Meter, Vernier Caliper, Feeler gauges	Cl. 25 (Supply connection and external flexible cables and cords), Cl. 29 (Clearances, creepage distances and solid insulation)
10	Torque Screw Driver	Cl. 28

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 302-2-202: 1992.

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, all the Electric Stoves having same class of appliance, same rating, same degree of protection and same class of material manufactured in a day under similar condition 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	A-1	IS 302-1	R	Each Electric Stove		
5	Electric strength test	A-2		R	Each Electric Stove		
5	Functional test	A-3		R	Each Electric Stove		
27	Provisions for Earthling	27		R	Each Electric Stove		
8	Protection against Electric Shock	8		R	Each Electric Stove		
7	Marking	7	IS 302-1, IS 302-2-202	R	Firm should exercise adequate control so that whole production should meet the requirements. Records shall be maintained.		
12	Operation under overload conditions of appliances with heating elements	12		R	One	Each Control Unit	
10	Power Input and Current	10	IS 302-1	R	One	Each Control Unit	
13	Electrical Insulation and Leakage Current at Operating Temperature	13		R	One	Each Control Unit	
28	Screws and Connections	28		R	One	Each Control Unit	
16	Insulation Resistance and Electric Strength (After Humidity Treatment)	16	IS 302-1, IS 302-2-202	R	One	Each Control Unit	
15	Moisture Resistance	15		S	One	Every six months for each rated input, pollution degree and material group	
11	Temperature Rise	11		S	One		
19	Abnormal Operation	19		S	One		
20	Stability and Mechanical Hazards	20		S	One		
21	Mechanical Strength	21		S	One		

22	Construction	22		S	One		
23	Internal Wiring	23		S	One		
24	Component	24		S	One		Refer Note- 1
25	Supply Connections and External Flexible Cables and Cords	25		S	One		
31	Resistance to Rusting	31		S	One		
26	Terminals for External Conductors	26	IS 302-1	S	One		
29	Creepage Distances and Clearances	29		S	One		
30	Resistance to Heat, Fire, and Tracking	30		S	One		

Note-1: No further testing required, if accompanied with BIS Standard Mark or with Test Certificate.

Note-2: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau.

Note-3: Levels of control given in table above are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control 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. Stability and Mechanical Hazards (Cl. 20)
12. Marking (Cl. 7)
13. Internal wiring (Cl. 23)
14. Terminals for external conductors (Cl. 26)