



**PRODUCT MANUAL FOR
PORTABLE LIQUEFIED PETROLEUM GAS APPLIANCES
OPERATING AT VAPOUR PRESSURE
ACCORDING TO IS 11241: 1985**

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.

1.	Product	:	IS 11241: 1985
	Title	:	Portable Liquefied Petroleum Gas Appliances operating at vapor pressure
	No. of Amendments	:	2
2.	Sampling Guidelines:		
a)	Raw material	:	As per Cl. 4 of IS 11241: 1985. The relevant requirements given in 5 of Section 1 of IS 5116: 1996 shall apply.
b)	Grouping guidelines	:	Each type of Portable LPG Appliances such as Cooking appliances, Lights, Space heaters and Blow torches shall be tested for GoL/CSoL.
c)	Sample Size	:	Two
3.	List of Test Equipment	:	Please refer ANNEX – A .
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B .
5.	Possible tests in a day	:	Gas soundness (Cl. 16), Ignition and flame travel (Cl. 18), Flame stability (Cl. 19), resistance to draughts (Cl. 20), Combustion (Cl. 21), Surface temperature (Cl. 22)
6.	Scope of the Licence:		
	“Licence is granted to use Standard Mark as per IS 11241:1985 with the following scope:		
	Name of the product	Portable Liquefied Petroleum Gas appliances operating at vapour pressure	
	Type	Cooking appliances/ Lights/ Space heaters / Blow torches	

ANNEX A**List of Test Equipment***Major test equipment required to test as per the Indian Standard*

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Gas soundness test , Cl.16	Compressor, Special fixture to hold the valve assembly, Leak test Equipment, Pressure gauge
2	Ignition and Flame travel test Cl. 18	Gas cylinder filled with LPG
3	Resistance to draughts test Cl. 20	LPG cylinder fixed with adjustable pressure regulator, Pressure gauge, Anemometer, Fan, Container
4	Combustion Test as per clause 21	Gas collection hood, Orsat apparatus, Chemicals, Gas regulator, Stop watch
5	Surface Temperature test as per clause 22	LPG cylinder, Special fixture with adjustable pressure regulator, Pressure gauge, Surface Pyrometer/Thermocouple, Container
6	Finish, Cl. 8	Coat meter, Apparatus as per Annex E of IS 5116, Arrangement for adhesion test, Arrangement for corrosion resistance test, Apparatus as per Fig. 1 of IS 5116 for paint scratch test

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

ANNEX B

Scheme of Inspection and Testing

1. LABORATORY – A laboratory shall be maintained which shall be suitably equipped 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 11241:1985.

3.1 Each appliance shall also be accompanied by an instruction card as per clause 26 of IS 11241:1985.

4. CONTROL UNIT – LPG appliances having same design, made of same material having same total gas consumption in g/h and same rating of individual burners in kcal/h manufactured during 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.

5.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

5.2 No change in design of any type of gas appliance shall be made in respect of critical factors namely design of burner in respect of number of holes and their diameter, injector jets, primary air opening, type of gas appliance body and its finish, material and design of burner etc. In case any change is made, BIS shall be informed and samples made available for testing. The modified gas appliance shall be marked only after the sample has been found conforming to the Standard and permitted to do so by the BIS.

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 Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
3 & 3.1	Construction	4.1 & 4.2	IS 5116	R	Each appliance	–	–
4	Materials	5.1	IS 5116	S	Each gas appliance	–	No further testing is required, if accompanied with the Test Certificate or ISI Marked.
		5.1.1 Annex B	IS 5116	S	One piece of each component	Each consignment	
				S	One piece of each component		
		5.2 Annex C	IS 5116	S	Each Gas appliance	Each consignment	
		5.3	IS 5116 (Ref IS 2305)	R	One component up to 500 components		
				R	Two components for 501 and above		
		5.4	IS 5116	S	One Component	Each consignment	
		5.5	IS 5116	S	One Component	Each consignment	
4.1	IS 11241	S	One	Each consignment			
5	Design for maintenance	5.1 to 5.3	IS 11241	R	Each appliance		–
6	Stability	6 & 6.1	IS 11241	R	One appliance	Each Control unit	–

7	Inlet connection	7, 7.1, 7.2, 7.3	IS 11241	R	Each appliance		–
8	Finish	7.1	IS 5116	R	Each appliance		–
	Vitreous– enamelled Components	7.2, Annex E	IS 5116	R	Two	Each lot finished together	
	Nickel Chrome plated material	7.3.	IS 5116 IS 3203 IS 6009	R	Two		
	Painted surface	7.4	IS 5116	R	One	Every month	
	Screws, Nuts, Bolts, Springs, Pipes and Pin	7.7	IS 5116	S	One	Each consignment	No further testing is required, if accompanied with the Test Certificate or ISI Marked.
9	Gas Valve	9 & 9.1	IS 11241	R	Each appliance	–	–
10	Washers, O Seals and jointing compounds	10	IS 11241	S	One	Each consignment	If one piece fails, twice the number of samples shall be drawn. If all samples conform, the consignment shall be accepted or otherwise rejected.
11	Injector jets	11, 11.1	IS 11241	R	Each appliance	–	–
12	Guards	12	IS 11241	R	Each appliance		
13	Primary air regulators	13	IS 11241	R	Each appliance	–	–
14	Flexible tubing	14	IS 11241	R	Each appliance		
15	Gas containers	15	IS 11241	R	Each appliance		
16	Gas soundness	16	IS 11241	R	Each gas ways including valve & appliance	–	If there is any defect in any of the gas appliances for any of these requirements, the defect shall be rectified, and tested again and shall be marked only if found conforming to ISS

18	Ignition and flame travel	18 & 18.1	IS 11241	R	Each appliance	–	If there is any defect in any of the gas appliances for any of these requirements, the defect shall be rectified, and tested again and shall be marked only if found conforming to ISS
19	Flame stability	19	IS 11241	R	Each appliance	–	
20	Resistance to draught	20	IS 11241	R	One	Every Thirtieth control unit	–
21	Combustion	24 & Annex E	IS 4246	R	One	Every Thirtieth control unit	–
22	Surface temperature	22	IS 11241	R	One	Every Thirtieth control unit	–
23	Maximum Heat Output	23	IS 11241	R	One	Every Thirtieth control unit	–

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 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.