

केंद्रीय मुहर विभाग - III

हमारा संदर्भ- केन्द्रीय मुहर विभाग-3/16: IS 7285(Part 1)

08 03 2018

**विषय: IS 7285(Part 1) : 2018 के अनुपालन हेतु एस टी आई**

1. इस उपरोक्त विषय का संदर्भ प्राप्त है।
2. सक्षम प्राधिकारी ने उपरोक्त एस टी आई को अनुमोदित कर दिया है।
3. सभी शाखा कार्यालय से आग्रह है कि उपरोक्त एस टी आई का अनुपालन सुनिश्चित करें।

(अमित कुमार)  
वैज्ञानिक 'सी' (सी एम डी-III)

**प्रमुख (सी एम डी-III)**

सभी क्षेत्रीय/शाखा कार्यालय

आई टी एस विभाग — बीआईएस इंटरनेट पर अपलोड करने हेतू

**CENTRAL MARKS DEPARTMENT-III**

Our Ref: CMD-3/16: IS 7285 (Part 1)

08 03 2018

**Subject: STI for implementation of Revised IS 7285 (Part 1): 2018**

1. This has reference to the subject stated above.
2. The above STI have been approved by the Competent Authority.
3. All ROs/BOs are requested to ensure the implementation of the above STI.

Amit Kumar  
Sc. C (CMD III)

Head (CMD III)

Circulated to: All ROs/BOs

Copy to: ITS for hosting on Intranet

**SCHEME OF TESTING AND INSPECTION  
FOR CERTIFICATION OF  
REFILLABLE SEAMLESS STEEL GAS CYLINDERS - Part 1 –  
NORMALIZED STEEL CYLINDERS  
ACCORDING TO IS 7285 (Part 1) (Fourth Revision)**

**1. LABORATORY**

**1.0 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 Indian Standard.

**1.1** All testing instruments/equipments shall be periodically checked and calibrated. Records of such checks/calibration shall be maintained.

**1.1.1** Tensile testing machines shall be calibrated once in a year.

**1.1.2** Various pressure gauges used shall be calibrated at least once in a month.

**1.1.3** The pyrometer used for heat treatment furnace shall be calibrated once in every six months.

**1.1.4** Testing instruments/equipments shall be carried out periodically from NABL accredited calibration laboratories wherever they are available in the same city. In case where such laboratories are not available, traceability to a National Measurement System (NPL) to be ensured. All records of such calibrations to be kept.

**2. TEST RECORDS**

**2.1** All records of tests as per this Scheme of Testing and Inspection shall be kept in suitable forms.

**2.2** Copies of any such records that may be required by BIS shall be made available at any time on request.

**2.3** Records of all the tests made at the cylinder manufacturer's work shall be kept for the life time of the cylinder and copies of test certificates shall be forwarded to the purchaser of the cylinder and the inspecting authority.

**3. QUALITY CONTROL**

**3.1** The manufacturer shall maintain a Quality Control Department and shall enforce proper inspection at all stages of manufacturing, to ensure that each cylinder is free from any manufacturing defects and comply in all respects to Indian Standard Specification.

**3.2** It is recommended that, as far as possible, Statistical Quality Control (SQC) methods may be used for controlling the quality of the product during production as envisaged in this Scheme. [See IS 397(various parts). In addition, effort should be made to gradually introduce a Quality Management System in accordance with IS/ISO 9001.

#### 4. STANDARD MARK

4.1 The Standard Mark, as given in Column (1) of the First Schedule of the licence shall be marked on each cylinder provided always that the cylinder to which the Standard Mark is applied conforms to every requirement of the specification.

#### 5. CYLINDER MARKING

5.1 In addition to the Standard Mark, information as per *clause 14* of IS 7285 (Part 1): 2018 shall be permanently stamped on each cylinder.

#### 6. LEVEL OF CONTROL

6.1 **CONTROL UNIT:** For the purpose of this scheme, Batch shall be as under:

*Batch* – A quantity of up to 200 cylinders plus cylinders for destructive testing of the same nominal diameter, thickness and design, made successively from the same steel and same heat and subjected to the same heat treatment for the same duration of time.

6.2 The identity of each batch shall be maintained.

6.3 The tests as indicated in Table 1 and at the levels of control specified therein shall be carried out on the whole production of the factory covered by this Scheme and appropriate records maintained in accordance with *clause 2* above and charts may be maintained as per *clause 3* above. All the production which conforms to the Indian Standard and covered by this licence shall be marked with Standard Mark.

6.4 Each Batch of gas cylinders conforming to all the requirements of IS 7285 (Part 1): 2018 shall be covered by a certificate in accordance with *clause 12* of IS 7285 (Part 1): 2018.

6.5 **Preparation for Despatch:** The requirements as per *clause 17* of IS 7285 (Part 1): 2018 shall be complied with for each cylinder.

6.6 In respect of all other clauses of the Specification and at all stages of manufacture, the factory shall maintain appropriate control and checks to ensure that the product conforms to various requirements of the Specification.

#### 7. MATERIAL

7.1 The material used shall be as per *clause 5* of IS 7285 (Part 1): 2018.

7.2 The material of the finished cylinder shall satisfy the requirements given in *clause 7.9* of IS 7285 (Part 1): 2018.

#### 8. DESIGN & MANUFACTURE

8.1 In respect of design and manufacture, requirements of *clause 6* and *7* of IS 7285 (Part 1): 2018 shall be complied with.

## 9. HEAT TREATMENT

9.1 The cylinders shall be punched with serial number before heat treatment.

9.2 The heat treatment of the cylinders shall be done as per *clause 5.3* of IS 7285 (Part 1): 2018.

(NOTE: Care shall be taken to ensure the consistency of heat treatment cycle and the deviation of temperature shall be within the specified temperature range. In case the temperature falls below the lower limit, the furnace shall be stopped and restarted only after attaining the requisite temperature. The complete records of heat treatment cycle and interruptions of cycle shall be maintained.)

## 10. INSPECTION AND TESTING

10.1 In order to ensure that the cylinders are in compliance with IS 7285 (Part 1): 2018, they shall be subjected to Inspection & Testing in accordance with *clause 8* of IS 7285 (Part 1): 2018.

## 11. RE-TESTS

11.1 In the event of failure of cylinders in meeting the requirements, procedure in accordance with *clause 7.9.1* of IS 7285 (Part 1): 2018 shall be followed for retesting/re-heat treatment.

## 12. REJECTIONS

12.1 A separate record shall be maintained giving information relating to the rejection of the production not conforming to the requirements of the Specification and the method of disposal. Such material shall in no case be stored together with that conforming to the Specification.

## 13. SAMPLES

13.1 The licensee shall supply, free of charge, the samples required in accordance with the Bureau of Indian Standards (Certification) Regulations, 1988, as amended from time to time, from the factory or godown. BIS may draw samples from the open market, if available.

## 14. REPLACEMENT

14.1 Whenever a complaint is received soon after the goods with Standard Mark have been purchased and used, and if there is adequate evidence that the goods have not been misused, defective goods shall be replaced free of cost by the licensee in case the complaint is found to be genuine and the warranty period (where applicable) has not expired. The final authority to judge the conformity of the product to the Indian Standard shall be with BIS.

14.2 In the event of any damage caused by the goods bearing the Standard Mark, or any claim being filed by the consumers against BIS Standard Mark and not “conforming to” the relevant Indian Standard, entire liability arising out of such non-conforming product shall be of the licensee and BIS shall not in any way be responsible in such cases.

## **15. STOP MARKING**

**15.1** The marking of the product shall be stopped under intimation to BIS if, at any time, there is some difficulty in maintaining the conformity of their product to the Specification, or the testing equipment goes out of order or due to any other reason. The marking may be resumed as soon as the defects are removed under intimation to BIS.

**15.2** The marking of the product shall be stopped immediately if directed to do so by BIS for any reason. The marking may then be resumed only after permission by BIS. The information regarding resumption of marking shall also be sent to BIS.

## **16. PRODUCTION DATA**

The licensee shall send to BIS a statement of quantity produced, marked and exported by him and the value thereof at the end of each operative year of the licence as per the enclosed proforma which has to be authenticated by a Chartered Accountant.

**TABLE 1 LEVELS OF CONTROL**  
**(Para 6 of the Scheme of Testing and Inspection)**

TEST DETAILS			LEVELS OF CONTROL			
Cl.	Requirement	Test Methods Clause Reference	No. of samples	Lot Size	Frequency	Remarks
<b>5.</b>	<b>MATERIAL</b>					
5.1 5.2 5.3 5.4	Steel	5 IS 7285 (Part 1)	-	-	-	The cylinder manufacturer shall obtain and provide certificates of cast (heat) analysis of the steel supplied for the construction of gas cylinder.
6.7 6.8.2	Material for neck ring and foot rings	6.7 IS 7285 (Part 1) 6.8.2  (As per design/ drawing)	Two	Each consignment	-	In case the consignment is received with a Test Certificate showing compliance to the specification no further testing is necessary.
<b>6</b>	<b>DESIGN</b>					
6.6	Neck Design	6.6.1, IS 7285 (Part1) 6.6.2	-	Each cylinder		-
	Valve Fittings	6.6.3 IS 7285(Part 1)	-	Each cylinder		-
6.7	Foot Ring	6.7 IS 7285 (Part 1)	-	Each cylinder		If provided in the Cylinder
6.8	Neck Ring	6.8 IS 7285 (Part 1)	-	Each cylinder		If provided in the Cylinder
<b>7</b>	<b>MANUFACTURE</b>					
7.2	Wall thickness	7.2 IS 7285 (Part 1)	-	Each cylinder		-
7.3	Surface defects	7.3, IS 7285 (Part 1) <b>Annex-A</b>	-	Each cylinder		

7.4	Out - of - roundness	7.4 IS 7285 (Part 1)	-	Each cylinder	-
7.5	Mean Diameter	7.5 IS 7285 (Part 1)	-	Each cylinder	-
7.6	Straightness	7.6 IS 7285 (Part 1)	-	Each cylinder	-
7.7	Verticality	7.7 IS 7285 (Part 1)	-	Each cylinder	-
7.8	Stability	7.8 IS 7285 (Part 1)	-	Each cylinder	-
7.10	Water Capacity	7.10 IS 7285 (Part 1)	-	Each cylinder	-
7.11	Neck Thread	6.8 IS 7285 (Part 1)	-	Each cylinder	-
<b>9, 9.1, 9.2</b>	<b>TYPE APPROVAL PROCEDURE</b>				
9.2.3	Hydraulic Bursting Test	9.2.3 IS 7285 (Part 1)	One cylinder	Each new design of cylinder as well as any change in design as per the details given in <i>clause 9.1</i> of IS 7285 (Part 1): 2018 shall be subjected to prototype testing. If the results are satisfactory type approval certificate shall be issued as per <i>clause 9.3</i> of IS 7285 (Part 1): 2018.	
9.2.4	Pressure Cycling Test	9.2.4 IS 7285 (Part 1)	One cylinder		
9.2.5	Base Check (for Cylinder made from Tube only)	9.2.5 IS 7285 (Part 1)	One cylinder		
<b>10</b>	<b>BATCH TESTS</b>				
10.2	Tensile Test	IS 7285 (Part 1)	One cylinder from each Batch. Number of test specimen shall be as given below: <b>(i) Tensile Test:</b> One in longitudinal direction <b>(ii) Impact Test:</b> Three each in longitudinal or transverse direction <b>(iii) Bend Test:</b> Two in circumferential direction <b>(iv) Flattening Test:</b> One Cylinder.	Each new design of cylinder as per details given in <i>clause 9.1</i> of IS 7285 (Part 1): 2018 as well as cylinders with any change of design shall also be subjected to these tests for prototype testing.	
10.3	Impact Test	IS 7285 (Part 1)			
10.4	Bend Test and Flattening Test	IS 7285 (Part 1)			

11	<b>TEST ON EVERY CYLINDER</b>				
11.2	Hydrostatic Stretch Test	11.2 IS 7285 (Part 1)	-	Each cylinder	-
11.3	Hardness Test	11.3 IS 7285 (Part 1)	-	Each cylinder	-
11.4	Leakage Test	11.4 IS 7285 (Part 1)	-	Each cylinder	-
11.5	Capacity Check	7.10 IS 7285 (Part 1)	-	Each cylinder	
13	Colour Identification	13 IS 7285 (Part 1)	-	Each cylinder	-

**PROFORMA - 1**  
**PROFORMA FOR OBTAINING PRODUCTION DETAILS**

Period covered	
Name of Licensee CM/L No.	
Name of Articles (s)	
Grade/Type/Size/Variety/Class/Rating	IS No.
1.1	Brand/Trade/Name(s) of BIS Certification Marked Products
2.0	Total production of the articles(s) Licensed for certification marking
2.1	Total production of the article(s) Conforming to Indian Standard
3.0	Production covered with BIS Certification Mark and its Value : a) Quantity b) Value (Rs.)
3.1	Brand Name used on production covered under BIS Certification Mark
3.2	Calculation of marking fee on unit-rate basis; Marking Fee per unit a) Unit  (b)Quantity covered with BIS Certification Mark  (c )Marking fee rounded off in whole rupees as obtained by applying unit rates given in (a) on quantity given in (b)  <b>NOTE:</b> In case a clause is not applicable, suitable remarks may be given against it
4.0	Quantity not covered with BIS Certification Mark. If any,  reasons for such non-coverage
4.1	Brand Name under with non-certified goods were sold
5.0	Quantity Exported with BIS Standard Mark and its value
5.1	Brand Name under which BIS Certified goods are exported
6.0	Authentication by Chartered Accountant