



उत्पाद मैनुअल

आई एस 14106: 2018 के अनुसार

डायरेक्ट एक्शन हैंडपंप

दस्तावेज संख्या - पी एम/आई एस 14106/1/फरवरी 2021

भारतीय मानक ब्यूरो की स्कीम-1 (अनुरूपता मूल्यांकन) विनियम, 2018 के तहत यह उत्पाद मैनुअल प्रमाणीकरण के प्रचालन में रीति और पारिशिष्ट 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 DIRECT ACTION HANDPUMPS ACCORDING to IS 14106: 2018

Document No.- PM/IS 14106/1/February 2021

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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1.	Product	:	IS 14106: 2018
	Title	:	Direct Action Handpumps
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	Please refer ANNEX – <u>A</u>
b)	Grouping guidelines	:	Not Applicable
c)	Sample Size	:	One Handpump
3.	List of Test Equipment	:	Please refer ANNEX – <u>B</u>
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – <u>C</u>
5.	Possible tests in a day	:	All Tests
6.	Scope of the Licence		
	Licence is granted to use Standard Mark on Direct Action Handpump as per IS 14106: 2018.		

ANNEX A**Raw Material**

Material	Requirement
uPVC pipes	IS 12818 (Cl. 4.2 of IS 14106)
PVC injection moulded fittings	IS 7834 (Part 1) (Cl. 4.5 of IS 14106)
HDPE parts	IS 7328 (Cl. 4.6 of IS 14106)
Solvent cement	IS 14182 (Cl. 4.8 of IS 14106)
Nitrile rubber components	Cl. 4.9 and Annex C of IS 14106
Steel Plate/ Sheet	IS 2062 (Cl. 4.10 of IS 14106)
Spring Steel wire	IS 4454 (Part 1) (Cl. 4.11 of IS 14106)
Stainless Steel components	IS 6603 (Cl. 4.12 of IS 14106)
Stainless Steel bolts and nuts	IS 1367 (Part 14/Sec 1, 2 and 3), IS 1363 (Part 3) (Cl. 4.14 of IS 14106)
Carbon Steel bolts and nuts	IS 1367 (Part 2), IS 1363 (Part 3) (Cl. 4.14 of IS 14106)
Washers	IS 2016 (Cl. 4.15 of IS 14106)
Steel tubes	IS 1239 (Part 1) (Cl. 4.16 of IS 14106)
CI casting	IS 210 (Cl. 4.17 of IS 14106)

ANNEX B**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.	Dimensions	Steel Scale, measuring tape, feeler gauge, snap gauge, plain plug gauge, thread plug gauge, ring gauge, fillet gauge, vernier calliper, micrometre.
2.	Leakage test (Cl. 6.3.1), Test for Joints (Cl. 6.4.1)	Hydraulic pressure test setup, pressure gauges, stop watch.
3.	Discharge test (Cl. 6.3.2)	Water tank, measuring jar.
4.	Load Test (Cl. 6.4.2)	Tensile testing machine.

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 requirement of IS 14106.

4. CONTROL UNIT – All direct action handpumps assembled in a week or 100 numbers whichever is less 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 Standards and covered by the licence should be marked with Standard Mark.

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				
4	General Requirements						
	Raw Material	4.2 to 4.12, 4.14 to 4.17	IS 14106	S	One	Each Consignment	Please see Note 1
5	Anti-corrosive treatment						
5.1	Electro galvanising	5.1	IS 14106	S	One	All components/ assembly of each type galvanised at a time	-
5.2	Galvanising	5.2					
6	Testing						
6.1	Visual Test	6.1	IS 14106	-	Each pump		-
6.2	Dimensional and Other Tests	4.1, 6.2		R	Two	Each Control Unit	

6.3	Routine Test						
	Leakage Test	6.3.1	IS 14106	R	Two	Each Control Unit	In case of failure, each hand pump shall be tested. The original frequency shall be restored when five consecutive samples are found satisfactory.
	Discharge Test	6.3.2					
	Test for PVC pipes	6.3.3					-
6.4	Test for Joints	6.4.1	IS 14106	R	One	Each Control Unit	-
	Load Test	6.4.2			Two		

Note-1: Raw materials which are covered under mandatory certification of BIS shall be ISI marked and received along with manufacturers test certificate. For other materials, no further testing is required if received along with test certificate or ISI marked.

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

Note-3: 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.