



उत्पाद मैनुअल
आई एस 15500 (Part 2) : 2021 के अनुसार
गहराई से पानी निकालने वाले हथबर्मे- भाग 2- हथबर्मे के लिए

दस्तावेज संख्या – पी एम/आई एस 15500 (Part 2)/3/फरवरी 2024

भारतीय मानक ब्यूरो की स्कीम-I (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
DEEP WELL HAND PUMPS- HANDPUMPS
ACCORDING TO IS 15500 (Part 2) : 2021

Document No - PM/ IS 15500 (Part 2)/3/ February 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.

भारतीय मानक ब्यूरो
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**PRODUCT MANUAL FOR
DEEP WELL HAND PUMPS-
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1.	Product	:	IS 15500 (Part 2):2021
	Title	:	DEEP WELL HAND PUMPS
	No. of Amendments	:	One
2.	Sampling Guidelines:		
a)	Raw material	:	Please refer ANNEX – A
b)	Grouping guidelines	:	Each Type of Hand Pump shall be tested
c)	Sample Size	:	One Hand pump
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 :		
	Dimensions, Workmanship, Discharge of Pumps		
6.	Scope of the Licence :		
	Licence is granted to use Standard Mark on Deep well Hand pumps, Type _____ as per IS 15500 (Part 2): 2021.		

BUREAU OF INDIAN STANDARDS
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ANNEX - A**Raw Material**

Raw Material	Clause No. of IS 15500(Part 1)
Steel	Clause 5.1
Stainless Steel	Clause 5.2
Cast Iron	Clause 5.3
Brass	Clause 5.4
Bronze	Clause 5.5
Rubber	Clause 5.6
Red Oxide Primer, Synthetic Enamel Paint	Clause 6.3
Welding Electrode	Clause 7.5
Riser Pipes	Clause 8

ANNEX - B**List of Test Equipments*****Indicative list of major test equipment required to test as per the Indian Standard (For guidance only)***

Sr. No.	Test Equipment	Component to be tested (Figure No.)
1.	Measuring tape	Length of Riser Pipe
2.	Rod Mandrel	Riser Pipe
3.	Steel Scale	Head assembly (Stroke length)
4.	Steel Rod Mandrel threaded and guide bush	Head assembly (Alignment of chain)
5.	Custom made welding fillet gauges	Head, Handle, Water Tank
6.	Water tank	All Cylinder Assembly (Discharge test or performance test) 3.5,3.7, 3.9, 3.11
7.	Discharge test apparatus (Head assembly & water tank)	
8.	Measuring Cans	
9.	Vernier Callipers	Head Assembly (Handle Lateral Play), 4.8A, 4.8B, 4.9, 4.21, 4.22, 4.23, 5.1, 5.2,5.3, 5.4, 5.6A, 5.6B, 6.3, 6.4, 6.5, 6.6, 6.7, 6.11, 6.13, 6.15, 7.1, 7.2, 7.5,7.9
10.	Feeler Gauge	Head Assembly (Handle and Bracket Clearance)
11.	Elcometer/Coat Meter	Galvanized Components
12.	Weighing Scale	Galvanized Components
13.	Plain Plug Gauge	4.3G , 4.3H, 4.8D, 6.12,6.15
14.	Thread Plug Gauge	4.9, 4.21, 4.18F,4.28, 4.18G, 4.29, 4.18J, 4.30, 4.21, 4.22, 4.23, 4.24, 4.25, 5.4, 5.5A, 5.5B, 5.6A, 6.2,6.11, 6.12, 6.14, 6.16
15.	Dial Calipers	4.14A, 4.14B
16.	Snap Gauge	4.24
17.	Thread Ring Gauge	5.1, 5.2,5.3, 6.2, 6.6, 6.7, 6.8,6.9,6.13
18.	Taper Plug Gauge	5.5B,5.6 A, 5.6 B
19.	Micrometer (Ball Ended)	6.1
20.	Plain Ring gauge	6.4, 6.5
21.	Rockwell Hardness Tester	6.2 to 6.16 (Bronze components only)
22.	Dial thickness gauge	7.3 to 7.8
23.	Shore Hardness Tester	7.1 to 7.16

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

ANNEX - C

Scheme of Inspection and Testing

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit i.e. Batch and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4 below.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 **Control Unit:** For the guidance of manufacturers, the recommended definition of Control Unit is quantity of Deep well Hand Pumps of the same type, assembled in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1 below**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in-house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer, and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in-house as “R” or other tests which can be sub-contracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory

having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. LABELLING AND MARKING – As per the requirement of IS 15500 (Part 2):2021. The Standard Mark, as given in the Schedule of the licence, shall be marked on each Hand pump provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package as follows: “For details of BIS certification please visit www.bis.gov.in”.

4. REJECTION - All the production which conforms to the Indian Standard and covered under scope of the licence shall be marked with Standard Mark. 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	Levels of Control		
Cl.	Requirement	Test Methods		R: required (or) S: Sub-contracting permitted	No. of Sample	Frequency	Remarks
		Clause	Reference				
2.	Raw Material, Components	4, 5, 8	IS 15500 (Part 1)	S	One	Each Consignment	Please see Note 1 and Note 2
	Subassembly, Dimensions	2.2, 2.3	IS 15500 (Part 2)	S	One	Each Consignment	
	Components	9.4.5	IS 15500 (Part 1)	R	Each Component		
	Assembly	2.1	IS 15500 (Part 2)	R	Two	Each Control Unit	
1.3	Workmanship	7	IS 15500 (Part 1)	R	Each Hand pump		Please see Note 3
	Dimensional and other tests	9.4.1, 9.4.2, 9.4.3.2, 9.4.4	IS 15500 (Part 1)	R	Each Assembly		Please see Note 1
		9.4.3.1	IS 15500 (Part 1)	R	Five Assembly		
		9.4.3.3, 9.4.3.4	IS 15500 (Part 1)	R	Two Assembly		
	Anticorrosive Treatment	6	IS 15500 (Part 1)	S	One Component	Each Consignment	Please see Note 1 and Note 2

NOTE-1: No further testing is required, if accompanied with test certificate or ISI marked.

NOTE-2: The material, dimensions and tolerances of individual components shall meet the requirements of the relevant part(s) of IS 15500.

NOTE-3: The pump/components found defective shall be rejected. In case of rectification of defects, pump/components shall be re- examined.