



**PRODUCT MANUAL FOR  
DEEP WELL HAND PUMPS  
ACCORDING to IS 15500 (Part 2): 2004**

*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.	<b>Product</b>	:	<b>IS 15500 (Part 2):2004</b>
	<b>Title</b>	:	<b>DEEP WELL HAND PUMPS</b>
	<b>No. of Amendments</b>	:	3 (combined amendment for Part 1 to Part 8)
2.	<b>Sampling Guidelines:</b>		
a)	<b>Raw material</b>	:	Please refer <a href="#">ANNEX – A</a>
b)	<b>Grouping guidelines</b>	:	Each Type of Hand Pump shall be tested
c)	<b>Sample Size</b>	:	One Hand pump
3.	<b>List of Test Equipment</b>	:	Please refer <a href="#">ANNEX – B</a>
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer <a href="#">ANNEX – C</a>
5.	<b>Possible Tests in a day :</b>		
	Dimensions, Workmanship, Discharge of Pumps		
6.	<b>Scope of the Licence :</b>		
	Licence is granted to use Standard Mark on Deep well Hand pumps Type _____ as per IS 15500 (Part 2): 2004.		

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ANNEX - A

Raw Material

<b>Raw Material</b>	<b>Clause No. of IS 15500(Part 1)</b>
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****Major test equipment required to test as per the Indian Standard**

<b>Sr. No.</b>	<b>Test Equipment</b>	<b>Component to be tested (Figure No.)</b>
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. 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 requirements of IS 15500 (Part 2).

**4. CONTROL UNIT** – All Deep well Hand Pumps of the same type, assembled in 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.

**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	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, Subassembly, Dimensions	4, 5, 8 2.2, 2.3	IS 15500 (Part 1) IS 15500 (Part 2)	S	One	Each consignment	Please see Note 1 #
	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 2
	Dimensional and other tests	9.4.1, 9.4.2, 9.4.3.2, 9.4.4	IS 15500 (Part 1)	R	Each Assembly		#
		9.4.3.1			Five Assembly		
		9.4.3.3, 9.4.3.4			Two Assembly		
Anticorrosive treatment	6	IS 15500 (Part 1)	S	One Component	Each Batch	#	

# No further testing is required, if accompanied with test certificate or ISI marked

**NOTE-1:** The material, dimensions and tolerances of individual components shall meet the requirements of the relevant part(s) of IS 15500.

**NOTE-2:** The pump/components found defective shall be rejected. In case of rectification of defects, pump/components shall be re-examined.

**NOTE-3:** Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

**NOTE-4:** 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