



**PRODUCT MANUAL FOR  
HORIZONTAL CENTRIFUGAL PUMPS  
FOR CLEAR, COLD WATER - GENERAL PURPOSE  
(OTHER THAN AGRICULTURAL AND RURAL WATER SUPPLY)  
ACCORDING TO IS 6595 (PART 2): 1993**

*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>	:	IS 6595 (Part 2): 1993
	<b>Title</b>	:	Horizontal Centrifugal Pumps for Clear, Cold Water - General Purpose (Other than Agricultural and Rural Water Supply)
	<b>No. of Amendments</b>	:	Nil
2.	<b>Sampling Guidelines:</b>		
a)	<b>Raw material</b>	:	As per clause 6 of IS 6595 (Part 2): 1993
b)	<b>Grouping guidelines</b>	:	Each Type of Horizontal centrifugal pump shall be tested for GoL/ CSoL.
c)	<b>Sample Size</b>	:	One Pump
3.	<b>List of Test Equipment</b>	:	Please refer <a href="#">ANNEX – A</a>
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer <a href="#">ANNEX – B</a>
5.	<b>Possible tests in a day</b>	:	All tests
6.	<b>Scope of the Licence</b>	:	Please refer <a href="#">ANNEX – C</a>

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

<b>Sl. No.</b>	<b>Tests used in with Clause Reference</b>	<b>Test Equipment</b>
1	Hydrostatic test of casing (Clause. 9.1 and 10.4)	- Hydrostatic pressure testing apparatus with pressure gauge - Stop watch
3	Balancing of impeller (Clause 9.2)	- Statically and dynamically impeller balancing machine
4	Dimensional measurements	- Micrometer - Vernier caliper - Dial bore gauge - Snap gauge
5	<b>Pump test, tolerance and verification of guarantee on pump performance (Clause 10)</b>	
a)	Discharge measurement	- Flow meter/ Venturi tube/ orifice plate/ volumetric tank - Stop watch
b)	Pressure measurement	- Pressure/ vacuum gauge (Bourdon tube type) or Liquid column manometer
c)	Speed of pump measurement	- Tachometer
d)	For various electrical parameters measurements	- Test panel consists of following: a) Watt meter b) Voltmeter c) Ammeter d) Power factor meter e) Frequency meter f) Variable transformer,

*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 (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 equipments.

**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 6595 (Part 2): 1993.

**4. 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.

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

**5. 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**

<b>(1)</b>				<b>(2)</b>	<b>(3)</b>		
<b>Test Details</b>				<b>Test equipment requirement R: required (or) S: Sub-contracting permitted</b>	<b>Levels of Control</b>		
<b>Cl.</b>	<b>Requirement</b>	<b>Test Method</b>			<b>No. of Sample</b>	<b>Frequency</b>	<b>Remarks</b>
		<b>Clause</b>	<b>Reference</b>				
6	Material of construction	6.1	IS 6595 (Part 2)	-	Conformity to the relevant Indian Standard may be established.		
7	Direction of rotation	7.1 to 7.2	IS 6595 (Part 2)	-	Each pump	-	-
8	Design limitation	8.1 to 8.3	IS 6595 (Part 2)	R	One sample of each identical type and design out of every 100 pump sets or every month whichever is earlier		
9	General requirements	9.3 to 9.7	IS 6595 (Part 2)	-	Each pump	-	-
9.1	Pump Casing	9.1, 10.4	IS 6595 (Part 2)	R	Each casing	-	-
9.2	Balancing of impeller	9.2	IS 6595 (Part 2)	R	Each impeller	-	-
10	Pump test, tolerances and verification of guarantee of pump performance	10.1	IS 6595 (Part 2)	R	One sample of each identical type and design out of every 100 pump sets or every month whichever is earlier		

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.

