



भारतीय मानक ब्यूरो

(उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय, भारत सरकार)

**BUREAU OF INDIAN STANDARDS**

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## Review Document

### Basic Details

|    |                                  |  |
|----|----------------------------------|--|
| 1. | Sectional Committee No. & Title: | MED 20 - Pumps   |
| 2. | IS No :                          | IS 9137 : 2019   |
| 3. | Title :                          | Code for Hydraulic Performance Acceptance Tests for Centrifugal, Mixed and Axial Flow Pumps - Class C (First Revision) |
| 4. | Date of Previous Review:         | December, 2017   |

### Review Analysis

#### 5.1 Status of standard(s), if any from which assistance had been drawn in the formulation of this IS.

| S.No. | Standard (No.) | Standard (Title)   | Whether the standard has since been revised | Major changes | Action proposed |
|-------|----------------|--|---|---------------|-----------------|
| 1     | ISO 9906-2012  | Roto dynamic pumps & Hydraulic performance acceptance tests & Grades 1, 2 and 3. | There is no new revision                    | No change     | No change       |

**5.2 Status of standard referred in the IS.**

| S.No. | Referred standards (No.)                | Referred standards (Title)  | Since revised IS no. of the corresponding IS | Changes in the referred Standards since last review of IS   | Changes in the referred standard which are affecting the standard under review | Action proposed  |
|-------|---|---|--|---|--|--|
| 1     | 1248 : 2003                             | Direct acting indicating analogue electrical measuring instruments and their accessories  | Revised in 2021                              | The cross refer standard has been divided in following nine parts:<br>Part 1: Definitions and general requirements common to all parts<br>Fifth Revision Part 2: Special requirements for ammeters and voltmeters Part 3: Special requirements for wattmeters and varmeters Part 4: Special requirements for frequency meters Part 5: Special requirements for phase meters power factor meters and synchrosopes Part 6: Special requirements for ohmmeters impedance meters and conductance meters Part 7: Special requirements for multi-function instruments Part 8: Special requirements for accessories Part 9: Recommended test methods | -  | It is requested to committee members please provide a suitable standard for the subject. |
| 2     | 4889 : 1968                             | Methods of determination of efficiency of rotating electrical machines  | There is no new revision                     | No change   | -  | No change  |
| 3     | 6062 : 1971                             | Method of measurement of flow of water in open channels using standing wave flume-fall  | There is no new revision                     | No change   | -  | No change  |
| 4     | 6063 : 1971                             | Method of measurement of flow of water in open channels using standing wave flume   | There is no new revision                     | No change   | -  | No change  |
| 5     | 9108 : 2013                             | Hydrometry $\alpha$ Open channel flow measurement using thin-plate weirs  | Revised in 2020                              | The standard has been adopted ISO 1438 : 2017 in this current revision. The refer subject information is available in this current revision.  | -  | The cross refer standard should be update with current revision.                         |
| 6     | 10572 : 1983                            | Methods of sampling for pumps   | There is no new revision                     | No change   | -  | No change  |
| 7     | 14615 (Part 1) : 1999/ISO 5167-1 : 1991 | Measurement of fluid flow by means of pressure differential devices: Part 1 Orifice plates, nozzles and venturitubes inserted in circular cross-section conduits running full | Revised in 2018                              | Refer subject requirement is provided in the current revision.  | -  | No change  |
| 8     | IS/ISO 5199 : 2002                      | Technical specifications for centrifugal pumps $\alpha$ Class II  | There is no new revision                     | No change   | -  | No change  |
| 9     | IS/ISO 80000-1 : 2009                   | Quantities and units: Part 1 General  | Revised in 2022                              | No change   | -  | No change  |
| 10    | IS/ISO 80000-4 : 2006                   | Quantities and units: Part 4 Mechanics  | Revised in 2019                              | No change   | -  | No change  |

**5.3 Any other standards available related to the subject & scope of the standard being reviewed (International/regional/other national/association/consortia, etc or of new or revision of existing Indian Standard).**

| S.No. | Standard (No.)    | Standard (Title)   | Provisions that could be relevant while reviewing the IS  | Action proposed  |
|-------|-------------------|--|---|--|
| 1     | ANSI/HI 14.6-2016 | Rotodynamic Pumps for Hydraulic Performance Acceptance Tests | This standard covers the uniform testing and acceptance of rotodynamic pumps (centrifugal, mixed flow, and axial flow pumps). These test types include Hydraulic Performance, Hydrostatic Pressure, Mechanical Integrity, and NPSH. | The committee may consider the ANSI standard while reviewing the standard. |

**5.4 Technical comments on the standard received, if any.**

| S.No.                       | Source | Clause of IS | Comment | Action proposed |
|-----------------------------|--------|--------------|---------|-----------------|
| No entry made in this table |        |              |         |                 |

**5.5 Information available on relevant technical developments**

| S.No. | Source                  | Development  | Relevant clause of the IS under review that is likely to be impacted (Clause & IS No.) | Action proposed   |
|-------|-------------------------|--|--|---|
| 1     | Government Organization | DC MSME has been published a report on <a href="https://dcmsme.gov.in/09centrifugal20pump20by20KH20Shah-converted.pdf">Project Report On Centrifugal Pump Suction And Delivery 150 mm X 150 mm</a> Link: <a href="https://dcmsme.gov.in/09centrifugal20pump20by20KH20Shah-converted.pdf">https://dcmsme.gov.in/09centrifugal20pump20by20KH20Shah-converted.pdf</a> | -  | The committee may consider the project report while reviewing the standard. |

**5.6 Issues arising out of changes in any related IS or due to formulation of new Indian Standard.**

| S.No.                       | Related IS (revised or new) | Related IS Title | Provision in the IS under review that would be impacted & the clause no. or addition of new clause/provision | Changes that may be necessary in the Standards under review | Action proposed |
|-----------------------------|-----------------------------|------------------|--|---|-----------------|
| No entry made in this table |                             |                  |  |   |                 |

**5.7 Any consequential changes to be considered in other IS.**

| S.No. | Related IS to get impacted | Related IS Title  | Requirements to be impacted   |
|-------|----------------------------|---|---|
| 1     | IS 15301-2003              | Installation and Maintenance of Fire Fighting Pumps - Code of Practice  | Refer in clause 7.3.3 for inspection requirement.   |
| 2     | IS 10596 : Part 1-1983     | Code of practice for selection, installation, operation and maintenance of pumps for industrial applications: Part 1 selection                                | Refer in Annex A for related Indian standard pumps.   |
| 3     | IS 8418-1999               | Pumps - Centrifugal self priming - Specification (First Revision)   | Refer in clause 15 for permissible inaccuracy in the measurement.                           |
| 4     | IS 6595 : Part 2-1993      | Horizontal centrifugal pumps for clear, cold water: Part 2 general purpose (Other than agricultural and rural water supply) - Specification (Second Revision) | Refer in 10.1 for Pump tests, tolerances and verification of guarantee on pump performance. |
| 5     | IS 9542-1980               | Specification for horizontal centrifugal monoset pumps for clear, cold, fresh water   | Refer in 11.1 and 11.3 for Pump tests, tolerances and guarantees on pump performance.       |
| 6     | IS 10572-1983              | Methods of sampling for pumps   | Refer in clause 6.1 and 6.2 for pump performance and efficiency.                            |
| 7     | IS 1710-2021               | Vertical Turbine Pumps - Specification ( Third Revision )   | Refer in clause 9.2.10.4 and 16 for guarantee of the pumps with Class C ratings.            |

**Other Details**

|    |                               |   |
|----|-------------------------------|---|
| 6. | Any other observation:        | ☞ The cross refer standard should be updated with current revision. |
| 7. | Upload Supporting Document(s) |   |

|                           |   |
|---------------------------|---|
| <b>7.1 ARP Report</b>     | <a href="#">68_16407_231206100157_ARP_Report.docx</a> |
| <b>7.2 Draft Document</b> | No Document Uploaded                                  |

|    |  |  |
|----|--|--|
| 8. | Recommendations - On the basis of the analysis of the info available as mentioned above consideration of sectional committee is solicited on the following aspects of the IS under review: | The committee may consider the above information and take the standard for revision/reaffirmation. |
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