



# भारतीय मानक ब्यूरो

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

## BUREAU OF INDIAN STANDARDS

(Ministry of Consumer Affairs, Food & Public Distribution, Govt. of India)

मानक भवन, 9 बहादुरशाह जफर मार्ग नई, दिल्ली-110002

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi-110002

Phones: 23230131 / 23233375 / 23239402

Website: www.bis.org.in, www.bis.gov.in

### Basic Details

|    |                                  |   |
|----|----------------------------------|---|
| 1. | Sectional Committee No. & Title: | MED 20-Pumps  |
| 2. | IS No :                          | IS 5120 : 1977  |
| 3. | Title :                          | Technical requirements for rotodynamic special purpose pumps (First Revision) |
| 4. | Date of Review:                  | 2016  |

### 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     | IS 5120-1977   | Technical requirements for rotodynamic special purpose pumps (First Revision) | No  | No            | assistance has not been taken. |

#### 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 | If the corresponding IS is revised with reference to the referred Standards | Action proposed |
|------------------|--------------------------|----------------------------|--|---|---|-----------------|
| No records found |                          |                            |  |   |   |                 |

#### 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     | ISO 5198:1987     | Centrifugal, mixed flow and axial pumps — Code for hydraulic performance tests —<br>PrecisCentrifugal, mixed flow and axial pumps —<br>Code for hydraulic performance tests —<br>Precision gradeion grade | Section two - measurement method, can be considerable.  | To be considered. |
| 2     | CEN/TR 13931:2009 | Rotodynamic pumps - Forces and moments on flanges - Centrifugal, mixed flow and axial flow horizontal and vertical shafts pumps   | Clause 4 'Validity of force and moment values – Effects of materials and temperature' of this slovenski standard can be provided in this current revision. This standard already adopted by British standard institute. | To be considered. |

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

| S.No.            | Source | Clause of IS | Comment | Action proposed |
|------------------|--------|--------------|---------|-----------------|
| No records found |        |              |         |                 |

**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-    | Research Papers | Effects of speed variation on Rotodynamic pumps.<br><a href="https://electrical-engineering-portal.com/effects-of-speed-variation-on-rotodynamic-pumps">https://electrical-engineering-portal.com/effects-of-speed-variation-on-rotodynamic-pumps</a> | new clause to be added.  | To be considered. |

**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 records found |                             |                  |  |   |                 |

**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 sampling requirement                 |
| 2-    | IS 14220-2018              | Openwell submersible pumpsets - Specification (First Revision)   | Refer in clause 3 for unit's requirement.                      |
| 3-    | IS 8472-2019               | Centrifugal regenerative pumps for clear, cold water - Specification (Second Revision)   | Refer in clause 5.1 for Units, terminology and classification. |
| 4-    | IS 9694 : Part 1-1987      | Code of practice for the selection, installation, operation and maintenance of horizontal centrifugal pumps for agricultural applications: Part 1 selection (First Revision) | Refer in Annex D for applicable to agriculture pump.           |

**Other Details**

|    |  |  |
|----|--|--|
| 6. | Any other observation:   | 1. Few point should be added in clause 10 of factor affecting pump performance. i) Vibration. ii) Pump misalignment. iii) Lubrication.   |
| 7. | Supporting Document:   | <a href="#">5120.pdf</a>   |
| 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: | <div style="border: 1px solid black; padding: 5px;">           Committee must take action on following points. 1. Refer grades in this standard should be updated with new grades. 2. Refer superseded/withdrawn standard designation should be updated in this current new revision.         </div> |