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**BUREAU OF INDIAN STANDARDS**

**(MECHANICAL ENGINEERING DEPARTMENT)**

***MINUTES***

|  |  |
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| **PUMPS SECTIONAL COMMITTEE, MED 20***in joint session with***AGRICULTURE AND DOMESTIC PUMPS SUBCOMMITTEE, MED 20:5****UTILITY AND INDUSTRIAL APPLICATION PUMPS SUBCOMMITTEE, MED 20:6** | **23rdMeeting****16thMeeting****16th Meeting** |

 **DATE, DAY & TIME VENUE**

 **09th August 2023 Webex**

 **Wednesday**

 **12:00 hours**

**CHAIRPERSON:**SHRI A K NIJHAWAN IN PERSONAL CAPACITY

**MEMBER SECRETARY:**SHRI AMAN DHANAWAT, SCIENTIST ‘B’, MED

***Members Present***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL. NO.** | **ORGANISATION**  | **MEMBER** | **E-MAIL** | **MOBILE NO.** |
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|  | Kalsi Metal Works, Jalandhar | Shri Barinder Kalsi | kalsi@kalsigroup.com | - |
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|  | WILO Mather and Platt Pumps Pvt Ltd, Pune | Shri Kishor A Dumbre | Kishor.dumbare@wilo.com | 9552504874 |
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|  | BIS Secretariat | Shri Aman Dhanawat | med@bis.gov.in | 2323 2509 |

#### Invitees:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL. NO.** | **ORGANISATION**  | **MEMBER** | **E-MAIL** | **MOBILE NO.** |
| 1. | BIS CMD III | Shri Rakesh Kumar  | cmd3@bis.gov.in | 011 23233219 |

#### ITEM 0 GENERAL

#### 0.1 Welcome by Head (MED)

Due to some prior commitments, Shri Navindra Gautam, Head (MED) didn’t join the meeting.

#### 0.2 Opening remarks by Chairperson, MED 20

Shri A K Nijhawan, Chairperson, MED 20 extended a hearty welcome to members of the Committee. He wished good health to all the members and their families. He told the members of the committee and subcommittees that the convener of subcommittee MED 20:5 Shri G. Rajendran, due to his commitments in other domestic and international works, is occupied and won't be able to devote much time in the Committee work. So to avoid any lagging of subcommittee work and for the smooth functioning of subcommittee it is needed to handover the Convenorship of MED 20:5 to other active member.

The Chairperson proposed, Dr C. Murugesan to take convenorship of the subcommittee MED 20:5, all the members agreed for the proposal and Dr C. Murugesan accepted the convenorship of MED 20:5.

The Chairperson further informed that he had attended the BIS Chairperson’s meeting at NITS in the month of July and had shared with the members some important issues which were emphasized by DG BIS. He said that we need to bring young generation members for new ideas and premier institutions to help in the work of technical committee, and we should improve the quality of our standards to compare with international standards.

The Chairperson shows dissatisfaction with very few members being active in the work of the committee, he requested all the members to please increase their contribution in the work of the committee. He hoped that committee will have fruitful technical deliberations during the meeting on various agenda items.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

There being no comments, the committee confirmed the minutes of the **22nd** Meeting of Pumps Sectional Committee, MED 20, held in joint session with **15th**Meeting of Agriculture and Domestic Pumps Sub Committee, MED 20:5 & **15th** Meeting of Utility and Industrial Application Pumps Sub Committee, MED 20:6 on **11th January 2023** at CWPRS, Pune.

The Chairperson sir requested to all members of the committee that, if the member secretary circulates the minutes of the meeting, please comment on the same, if you have no comment, reply no comment.

**ITEM 2 REFORMS IN THE PROCESS OF STANDARDISATION**

*The committee noted the information as given in the agenda.*

**ITEM 3 THE ROLLING ANNUAL ACTION PLAN FOR THE YEAR 2023-24**

The committee noted the information as given in the agenda and accepted the rolling action plan for 2023-24*.*

**ITEM 4 ACTIONS ARISING OUT OF THE LAST MEETING**

**4.1** The summary of Committee decisions taken during the meeting held dated **09.08.2023** are given below:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S No** | **\*Item No.** | **Action Taken on Minutes of 21th Meeting** | **Decision taken during 22nd Meeting** | **Action Taken on Minutes of 22nd** | **Decision taken during 23rd Meeting** |
|  | **Item no. 2.2 Sl no. 2** | As directed by the Committee, the modified draft amendments were received from the Panel dated 28.09.2022, and as decided by the Committee the draft amendments as received had been circulated as wide circulation dated 06.10.2022 for the period of 30 days, the last date for the comments was 07.11.2022.During the wide circulation period the comments received were collated and shared with the Panel for their disposal.The Panel meeting to dispose off the comments has been scheduled to be held dated 10.01.2023.The Committee may note. | During the meeting Member Secretary informed that a panel meeting to dispose off the comments received was held dated 10.01.2023, following members attended the Panel meeting:- Shri AK Nijhawan, Chairperson MED 20- Shri C Murugesan, Aquasub Engineering- Shri KV Karthik, SIEMA- Shri Sudhir Mali, Kirloskar Brothers Pvt. Ltd.- Shri Sachin Bhandari, Shakti Pump- Shri Rahul Patidar, Shakti Pump- Shri Sanjeev Chaudhary, Grundfos Pumps- Shri AK Jain, In personal capacity- Representative of Laxmi Drunken Components Pvt Ltd.During the Panel meeting, Panel discussed the comments in length and recommended the following:a) Amendment no. 2 to IS 8034: 2018, Amendment no. 1 to IS 9079: 2018 and Amendment no. 1 to IS 6595 (Part 1): 2018 may be finalized after the incorporation of the comments and making necessary editorial changes.b) Comment provided by M/S Shakti Pumps Pvt Ltd. on clause 16.4.1 (a) of draft Amendment no. 1 to IS 14220: 2018 regarding horizontal multistage pump may be discussed among the Committee members in the upcoming meeting to be held dated 11.01.2023.The Committee noted the recommendation of the Panel and decided the following:a) A Panel meeting to be convened to incorporate the comments in the Amendment no. 2 to IS 8034: 2018, Amendment no. 1 to IS 9079: 2018 and Amendment no. 1 to IS 6595 (Part 1): 2018 and modified amendments as provided by the Panel may directly be sent for publication with prior approval of Chairperson MED 20.b) The comment was discussed in length and Committee decided and requested the Panel to add ‘horizontal multistage’ in 16.4.1 (b), and after the incorporation of the comments the modified amendment as provided by the Panel may directly be sent for publication with prior approval of Chairperson MED 20.Committee further decided that to avoid any confusion the ‘Minimum Efficiency Index (MEI)’ may be replace with ‘Minimum Efficiency Level (MEL) in above amendments’.It was agreed to conduct a Panel meeting on 13th January to discuss the all commentsand finalize the draft amendment with due consideration to the comments received. | As decided by the Committee the modified draft amendments to IS 8034: 2018, IS 9079: 2018, IS 14220: 2018, IS 6595 (Part 1): 2018 as received from Dr. C Murugesan were sent for publication with prior approval of Chairperson MED 20.During the process of publication the standards with any active license are to be sent to CMD III, to review the changes in the standards for its implications during certification process.In view of the above, the amendments were sent to CMD III, and CMD III have provided their comments enclosed below, and circulated to all the Committee members dated 24 July 2023.Committee may consider and decide.  | During the meeting Committee discussed each comment in length. After subsequent discussion held with the CMD 3 and Panel members, the comment wise decision of the Committee for each amendment is enclosed as **Annex 1**. |
|  | **Item 2.3, S No 1** | During the 13th meeting of Sectional Committee, MED 20 held dated 4 September 2015 it was decided that to increase the participation in international standardization activity, Conveners of MED 20:5 and MED 20:6 subcommittees nominated the members to represent BIS in WG of IS/TC 115.The Committee may note. | Committee noted the information and decided that member secretary to see from previous records and list out the members who have been previously nominated in WG of ISO/TC 115. | From the record of minutes of the previous meetings, it was found out that following members were nominated by the Committee in various ISO subcommittees and working groups:1) nominations for ISO/TC 115/SC 2/WG 4 - Rotodynamic pumps - Hydraulic performance acceptance tests using a model pump :Shri Chidambar Deshpande, KBL, and Shri G. Rajendran, CRI Pumps/ Shri Nirmal Tiwari2) Shri I C Jain for ISO/TC 115/SC 3/WG 2 - Joint ISO/TC 115/SC 3 - ISO/TC 67/SC 6 WG: Positive displacement pumps for petroleum and natural gas industries3) Dr. Ravindra S Birajdar, Convener, MED 20:6 for ISO/TC 115/SC 3/WG 6 - Joint ISO/TC 115/SC 3 - ISO/TC 67/SC 6 WG: Shaft sealing systems for centrifugal and rotary pumps4) Shri Uttkarsh Chhaya, M/s IPMA has been registered as ‘Expert’ in ISO/TC 115/SC 2/WG 2 - Rotodynamic pumps test codes.The Committee may go through the scope, program of work of ISO/TC 115, its Subcommittees and Working Groups ate **Item 10.4** and decide.BIS higher authorities have also directed that Committees shall increase their participation in International Committee work.Committee may go through the following BIS guidelines ‘Guidelines for Payment of TA/DA to Members of BIS Technical Committees under BIS Funds’: | Committee noted the information and decided that a separate Panel may be constituted for commenting on ISO ballots.Committee further decided that the Conveners MED 20:5 and MED 20:6 may discuss this agenda point in the upcoming meeting for pruning of Composition of Committee and its Subcommittees and propose the members for above Panel and for nominating in different ISO working groups. |
|  |  |  |  | Following revised nominations were received from M/s Aquasub Group Pvt. Ltd. | Committee noted the information and directed the MS to update same in Committee Composition.No further action required on this agenda point. |
|  |  |  |  | Some queries have been received from Ministry regarding the comparison of our Indian Standards with ISO or IEC standards. Accordingly, BIS higher authorities have directed the following:a) If any ISO or IEC standard exist corresponding to our Indian Standard, then provide the detailed comparison and reason for formulating our Indian Standard, instead of adopting the corresponding ISO or IEC standard.b) If no ISO or IEC standard exist corresponding to our Indian Standard, then same may be proposed as NWIP in ISO or IEC.The Committee may consider and decide. | Committee noted the information and requested Conveners of Subcommittees MED 20:5 and MED 20:6 to constitute different Panels and allocate the standards to Panels pertaining to their respective Subcommittees, for analysis as given in the Agenda. |
|  |  |  |  | BIS to reconstitute technical committees having members who have served more than 5 years of their tenure in their personal capacity or belonging to any private institutions. |  |

\* The Item number refers to the proceedings of the last meeting of MED 20.

**4.2**The summary of decision taken during 23rd Meeting of Pumps Committee, MED 20 held dated **09.08.2023** are given below:

| **S No** | **\*Item No.** | **Action Taken on Minutes of 21th Meeting** | **Decision taken during 22nd Meeting** | **Action Taken on Minutes of 22nd** | **Decision taken during 23rd Meeting** |
| --- | --- | --- | --- | --- | --- |
|  | **Item 2.1****Sl No. 2** | The meeting is yet to be convened. | Committee requested the Conveners to expedite and convene a meeting to review the composition of MED 20 and its subcommittees MED 20:5 and MED 20:6.Committee further decided that a letter may be written to concerned branch offices of BIS, requesting them to recommend young technical members with whom they are meeting during the inspections, to co-opt them in the Committee. | The meeting will be convened in due course of time. | Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting. |
|  | — | **1)** As directed by the Committee the revision draft of IS 12225 and IS 6595 (Part 2) were circulated as wide circulation dated 31.08.2022 and 19.10.2022 respectively for the period of 30 days.It may be noted that comments (from manak Manthan) received on revision draft of IS 12225 were discussed during the Panel meeting held dated 03.10.2022. The recommendation of the Panel was circulated to all the Committee members dated 13.10.2022 for 1 week. After no comment was received, the above draft has been sent for publication with the approval of Chairperson MED 20 dated 04.11.2022.**2)** Rajkot Branch office conducted a Manak Manthan on revision draft of IS 6595 (Part 2), comments received are enclosed in the email with agenda. The Committee may consider. | 1) The Committee noted the information and decided that after publication of the standards a complimentary copy may be shared with all the Committee members.2) The Committee was of the view that the comments received on IS 6595 (Part 2) are related to the IS 11346.Committee requested ERDA and Rajkot Engineering Association to take up the revision of IS 11346 and go through the above comments for their incorporation in revision of IS 11346. ERDA and Rajkot Engineering Association agreed for above and informed that by April 2nd week they will provide the revision draft of IS 11346 incorporating above comments also.Committee further decided that revision draft of IS 6595 (Part 2) may be sent for publication. | 1) Revision drafts of IS 12225 and IS 6595 (Part 2) are still under publication.2) Editable soft copy of IS 11346 and the comments were circulated to ERDA and REA dated 20 Jan 2023 and 14 June 2023.Revision draft is awaited. | Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting. |
|  | — | Conveners MED 20:5 and MED 20:6 to update. | Convener MED 20:6 informed that the requirements of horizontal split case pumps are have been covered in IS 5120. Committee noted the information and decided that Shri KV Karthik, SIEMA may go through the revision draft of IS 5120 to check the requirements of horizontal split case pumps covered under revision draft of IS 5120, and provide his comments/suggestions.If no technical comment received the above draft may be circulated as wide circulation for the period of 30 days. | See action at **Item 4.4 Sl no. 1** below. | Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.Based on earlier 22nd meeting, Shri KV Karthik, SIEMA may go through the revision draft of IS 5120 to check the requirements of horizontal split case pumps covered under revision draft of IS 5120, and provide his comments/suggestions. |
|  |  | A new work item proposal (NWIP) was received on DC Water Pump, details of the proposal is enclosed in the mail with the Agenda. | Committee noted the information and decided that this NWIP may be transferred to MED 20:7 subcommittee for their review and suggestions, and based on the suggestions received and discussion with Convener MED 20:7 the above NWIP may be transferred to ETD 15. | As directed by the Committee the NWIP has been sent to Subcommittee MED 20:7 for further necessary course of action. | Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting. |

\* The Item number refers to the proceedings of the last meeting of MED 20:5.

4.3 The summary of decision taken during 16th Meeting of Agricultural and Domestic Pumps Sub Committee, MED 20:5 held dated 09.08.2023 are given below:

| **Sl No** | **\*Item No.** | **Action Taken on Minutes of 14th Meeting** | **Decision taken during 15th Meeting** | **Action Taken on Minutes of 15th Meeting** | **Decision taken during 16th Meeting** |
| --- | --- | --- | --- | --- | --- |
|  | **Item no. 2.2 Sl no. 1** | The amendment no. 1 to IS 17292: 2020 has been drafted and is yet to be circulated as wide circulation. | Committee noted the information. | To be wide circulated  | ~~Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.~~ Need to update based on revised draft |
|  | Item no. 6.1 | **1)**The Committee may note that comments were received from CMD III, BIS on revision draft of IS 10805, comments were discussed during the Panel meeting held dated 03.10.2022. The recommendation of the Panel was circulated to all the Committee members dated 13.10.2022 for 1 week. After no comment was received, the above draft has been sent for publication with the approval of Chairperson MED 20 dated 04.11.2022.The draft revision has been published as IS 10805: 2022. The complimentary of the standard has been circulated to all the Committee members.**2)** As directed revision draft of IS 11501 has been sent for publication.**3)** The revision draft of IS 11745 is yet to be prepared.**4)** The comments received on IS 9694 (Part 1 to 4) were discussed during the Panel meeting held dated 03.10.2022. The recommendation of the Panel was circulated to all the Committee members dated 13.10.2022 for 1 week. After no comment was received, the above drafts have been sent for publication with the approval of Chairperson MED 20 dated 04.11.2022. | 1) The Committee noted the information.2) Committee noted the information.3) The Committee noted the information and decided that this standard may be allocated to Shri Utkarsh Chhaya, Shri Yogesh Mistri and representatives from Roto Pumps and Tushaco Pumps.Committee decided that a letter may be written to Roto Pumps and Tushaco Pumps requesting them to provide their nominations for MED 20 and its subcommittees.4) The Committee noted the information and decided that after publication of the standards a complementary copy may be shared with all the Committee members. | 3) An invitation letter to Roto Pumps and Tushaco Pumps (Circor) requesting them to become the Committee members and provide their nominations for MED 20 and its subcommittees has been sent, their response is awaited. | Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting. |

\* The Item number refers to the proceedings of the last meeting of MED 20:6.

4.4 The summary of decision taken during 16thMeeting of Utility and Industrial Application Pumps Sub Committee, MED 20:6 held dated 09.08.2023 are given below:

| **S No** | **\*Item No.** | **Action Taken on Minutes of 14th Meeting** | **Decision taken during 15th Meeting** | **Action Taken on Minutes of 15th Meeting** | **Decision taken during 16th Meeting** |
| --- | --- | --- | --- | --- | --- |
|  | **Item 2.3, S No 4** | Panel meeting is yet to be convened, Convener MED 20:6 to update for revision of IS 5120. | Convener MED 20:6 informed that the requirements of horizontal split case pumps are have been covered in IS 5120. Committee noted the information and decided that Shri KV Karthik, SIEMA may go through the revision draft of IS 5120 to check the requirements of horizontal split case pumps covered under revision draft of IS 5120, and provide his comments/suggestions.If no technical comment received the above draft may be circulated as wide circulation for the period of 30 days. | The draft revision of IS 5120 was circulated to Shri KV Karthik dated 3 April 2023 for comments.Comments are awaited. | ~~Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.~~Based on earlier 22nd meeting, Shri KV Karthik, SIEMA may go through the revision draft of IS 5120 to check the requirements of horizontal split case pumps covered under revision draft of IS 5120, and provide his comments/suggestions. |

**ITEM 5 SCOPE AND COMPOSITION OF COMMITTEE**

Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.

**ITEM 6 DRAFT STANDARDS/AMENDMENTS**

Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.

**ITEM 7 REVIEW OF PUBLISHED INDIAN STANDARD**

Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.

**ITEM 8 COMMENTS ON PUBLISHED STANDARDS**

Due to paucity of time, the Committee decided to discuss this agenda point in the next Committee meeting.

**ITEM 9 SELECTION OF SUBJECTS/NEW SUBJECTS**

*The committee noted the information given in the agenda.*

**ITEM 10 INTERNATIONAL ACTIVITIES**

10.1*The committee noted the information given in the agenda.*

10.2*The committee noted the information given in the agenda.*

10.3*The committee noted the information given in the agenda.*

10.4*The committee noted the information given in the agenda.*

10.5*The committee noted the information given in the agenda.*

10.6*The committee noted the information given in the agenda.*

**ITEM 11 PROGRAMME OF WORK**

**11.1** *The committee noted the information given in the agenda.*

11.2 *The committee noted the information given in the agenda.*

**ITEM 12 LETTER OF APPRECIATION TO COMMITTEE MEMBERS**

*The committee noted the information given in the agenda.*

**ITEM 13 NATIONAL AND INTERNATIONAL LEVEL EVENTS TO BE PARTICIPATED IN**

*The committee noted the information given in the agenda.*

**ITEM 14 SCIENTIFIC JOURNALS AND PERIODICALS TO BE SUBSCRIBED**

*The committee noted the information given in the agenda.*

**ITEM 15 CREATION OF POOL OF EXPERTS**

*The committee noted the information given in the agenda.*

**ITEM 16 RESEARCH PROJECT TO BE TAKEN UP FOR INCLUSION OF EMPIRICAL DATA AND INSIGHTS**

*The committee noted the information given in the agenda.*

**ITEM 17 RECENT INITIATIVES IN THE STANDARD DEVELOPMENT PROCESS OF BIS**

17.1*The committee noted the information given in the agenda.*

17.2 *The committee noted the information given in the agenda.*

ITEM 18 GUIDELINES FOR MEMBERS OF TECHNICAL COMMITTEES

*The committee noted the information given in the agenda.*

**ITEM 19 NEW INITIATIVES IN STANDARDIZATION**

a)*The committee noted the information given in the agenda.*

b)*The committee noted the information given in the agenda.*

c)*The committee noted the information given in the agenda.*

d)*The committee noted the information given in the agenda.*

e)*The committee noted the information given in the agenda.*

**ITEM 20 UNECE GENDER RESPONSIVE STANDARDS DECLARATION**

*The committee noted the information given in the agenda.*

**ITEM 21 SUSTAINABILITY PERSPECTIVE IN INDIAN STANDARDS**

*The committee noted the information given in the agenda.*

**ITEM 22 ACCESSIBILITY**

*The committee noted the information given in the agenda.*

**ITEM 23 DATE AND PLACE FOR THE NEXT MEETING**

The Committee noted the information and decided that the next meeting may be planned in consultation with Chairperson, MED 20.

**ITEM 24 ANY OTHER BUSINESS**

There being no other business, the meeting ended with a hearty note of thanks to the Chairperson, Convener and the Committee Members present.

Annex 1

(*Item* 4.1 *Sl no.* 1)

Decision of Committee on the comments of CMD 3 on Amendments

1) CMD 3 comments on Amendment No. 1 to IS 6595 (Part 1): 2018- Horizontal Centrifugal Pumps for Clear, Cold Water –Part 1- Agricultural and rural Water Supply Purposes

|  |  |  |
| --- | --- | --- |
| **Sl No.** | **Comment of CMD 3** | **Decision of the Committee** |
|  | Though Cl. 8.2 has been amended to specify that minimum pump efficiency shall be in accordance with efficiency calculated as per Cl. 8.4, Clause 12.2 and Cl. 12.2.3 have not been amended. Cl. 12.2 and Cl. 12.2.3 still specify that the efficiency of the pump shall not be less than those values given in Fig. 1 to 4. This anomaly needs to be corrected. | AcceptedPanel has done the necessary modifications. |
|  | Efficiency levels have not been defined in the Standard. | Rejected |
|  | MEL 0.2 is the minimum required efficiency level. Therefore, instead of “Minimum Efficiency Level” it should be “Efficiency level”. Further, instead of MEL 0.2, MEL 0.3, it would be more significant to define the efficiency levels as MEL1, MEL2 etc., as MEL 0.3 Pump is more efficient than MEL 0.2 Pump | RejectedNo changes required. |
|  | As per Note 1 under Cl. 8.4, efficiency corresponding to MEL 0.2 is taken as the minimum pump efficiency and other MEL values are for the guidance of the manufacturer and to upgrade to higher values of pump efficiency. This indicates that the manufacturer shall declare the efficiency level and minimum declared efficiency level shall be MEL 0.2. However, it has not been specified that manufacturer have to declare the efficiency level. | The Committee rejected the comment after members agreed that BIS will endorse only the efficiency of the pump and not the efficiency level.No changes required. |
|  | **Calculation of required and observed value of Pump efficiency** - As per Cl. 8.4, the Discharge rate and Head per stage used in calculation of pump efficiency are values at “Best Efficiency Point (BEP)”. Method for determination of BEP has not been given in the Standard. Further, as per Cl. 12.2.3 (a), the pump efficiency shall be within limits specified in IS 11346. As per applicable Clause of IS 11346 (Cl. 8.2 of IS 11346), the pump shall be deemed to conform to the Head and Discharge requirements, if the guaranteed duty point lies below the Q-H Curve. Thus, observed value is corresponding to the declared duty point, whereas the required value is calculated at BEP. This does not appear to be correct. At BEP, the efficiency is always higher than that at the declared duty point, which is observed through testing of sample. Therefore it does not give correct evaluation of the efficiency. **It is felt that both required value and observed value should be at the same point and at declared duty point.** | Committee noted and agreed for the same. Committee decided that in the amendment delete word ‘BEP’ and ‘Best Efficiency Point’ where ever it is written. |

2) CMD 3 comments on Amendment No. 2 to IS 8034: 2018- Submersible Pump sets

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| **Sl No.** | **Comment of CMD 3** | **Decision of the Committee** |
|  | Cl. 11.1.2- It is now being mentioned that after applying the tolerance, overall efficiency value shall not be less than that derived as per Cl. 11.4.1 (a) and Cl. 11.4.1 (b). Cl. 11.4.1 (a) and Cl. 11.4.1 (b) specifies the calculation method for pump efficiency and not the overall efficiency. This anomaly needs to be corrected. | AcceptedPanel has done the necessary modifications. |
|  | Efficiency levels have not been defined in the Standard. | Rejected |
|  | MEL 0.2 is the minimum required efficiency level. Therefore, instead of “Minimum Efficiency Level” it should be “Efficiency level”. Further, instead of MEL 0.2, MEL 0.3, it would be more significant to define the efficiency levels as MEL1, MEL2 etc., as MEL 0.3 Pump is more efficient than MEL 0.2 Pump. | RejectedNo changes required. |
|  | As per Note 1 under Cl. 8.4, efficiency corresponding to MEL 0.2 is taken as the minimum pump efficiency and other MEL values are for the guidance of the manufacturer and to upgrade to higher values of pump efficiency. This indicates that the manufacturer shall declare the efficiency level and minimum declared efficiency level shall be MEL 0.2. However, it has not been specified that manufacturer have to declare the efficiency level. | The Committee rejected the comment after members agreed that BIS will endorse only the efficiency of the pump and not the efficiency level.No changes required. |
|  | **Calculation of required and observed value of Pump efficiency-** As per Cl. 11.4.1, the Discharge rate and Head per stage used in calculation of pump efficiency are values at “Best Efficiency Point (BEP)”. Method for determination of BEP has not been given in the Standard. Further, as per Cl. 11.1.2, the pump efficiency shall be within limits specified in IS 11346. As per applicable Clause of IS 11346 (Cl. 8.2 of IS 11346), the pump shall be deemed to conform to the Head and Discharge requirements, if the guaranteed duty point lies below the Q-H Curve. Thus, observed value is corresponding to the declared duty point, whereas the required value is calculated at BEP. This does not appear to be correct. At BEP, the efficiency is always higher than that at the declared duty point, which is observed through testing of sample. Therefore it does not give correct evaluation of the efficiency. **It is felt that both required value and observed value should be at the same point and at declared duty point.** | Committee noted and agreed for the same. Committee decided that in the amendment delete word ‘BEP’ and ‘Best Efficiency Point’ where ever it is written. |
|  | Meaning of abbreviation BIS-MEL 0.2 used in Annex B, is not given. | AcceptedIn Annex B ‘BIS-MEL 0.2’ to be replaced with ‘MEL 0.2’  |
|  | Change in calculation method of required Pump efficiency has not been mentioned in the Foreword. | AcceptedPanel has done the necessary modifications. |

3) CMD 3 comments on Amendment No. 1 to IS 9079: 2018- Monoset Pumps for clear, Cold Water for Agricultural and Water Supply Purposes

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| **Sl No.** | **Comment of CMD 3** | **Decision of the Committee** |
|  | Cl. 13.1.2- Second sentence which used to mention that after applying the tolerance, overall efficiency value shall not be less than that derived from Fig. 3 to Fig. 6, has now been deleted. However, it should have been amended as “after applying the tolerance, overall efficiency value shall not be less than that obtained after multiplying the motor efficiency and Pump efficiency as derived from Cl. 13.4.1”. | AcceptedPanel has done the necessary modifications. |
|  | Efficiency levels have not been defined in the Standard. | Rejected |
|  | MEL 0.2 is the minimum required efficiency level. Therefore, instead of “Minimum Efficiency Level” it should be “Efficiency level”. Further, instead of MEL 0.2, MEL 0.3, it would be more significant to define the efficiency levels as MEL1, MEL2 etc., as MEL 0.3 Pump is more efficient than MEL 0.2 Pump. | RejectedNo changes required. |
|  | As per Note 1 under Cl. 13.4.1, efficiency corresponding to MEL 0.2 is taken as the minimum pump efficiency and other MEL values are for the guidance of the manufacturer and to upgrade to higher values of pump efficiency. This indicates that the manufacturer shall declare the efficiency level and minimum declared efficiency level shall be MEL 0.2. However, it has not been specified that manufacturer have to declare the efficiency level. | The Committee rejected the comment after members agreed that BIS will endorse only the efficiency of the pump and not the efficiency level.No changes required. |
|  | **Calculation of required and observed value of Pump efficiency-** As per Cl. 13.4.1, the Discharge rate and Head per stage used in calculation of pump efficiency are values at “Best Efficiency Point (BEP)”. Method for determination of BEP has not been given in the Standard. Further, as per Cl. 13.1.2, the pump efficiency shall be within limits specified in IS 11346. As per applicable Clause of IS 11346 (Cl. 8.2 of IS 11346), the pump shall be deemed to conform to the Head and Discharge requirements, if the guaranteed duty point lies below the Q-H Curve. Thus, observed value is corresponding to the declared duty point, whereas the required value is calculated at BEP. This does not appear to be correct. At BEP, the efficiency is always higher than that at the declared duty point, which is observed through testing of sample. Therefore it does not give correct evaluation of the efficiency. **It is felt that both required value and observed value should be at the same point and at declared duty point.** | Committee noted and agreed for the same. Committee decided that in the amendment delete word ‘BEP’ and ‘Best Efficiency Point’ wherever it is written. |

4) CMD 3 comments on Amendment No. 1 to IS 14220: 2018- Openwell Submersible Pumpsets

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| **Sl No.** | **Comment of CMD 3** | **Decision of the Committee** |
|  | Cl. 16.1.2- Second sentence which used to mention that after applying the tolerance, overall efficiency value shall not be less than that calculated from Fig. 5 to Fig. 7, has now been deleted. However, it should have been amended as “after applying the tolerance, overall efficiency value shall not be less than that obtained after multiplying the motor efficiency and Pump efficiency as derived from Cl. 16.4.1”. | AcceptedPanel has done the necessary modifications. |
|  | Efficiency levels have not been defined in the Standard. | Rejected |
|  | MEL 0.2 is the minimum required efficiency level. Therefore, instead of “Minimum Efficiency Level” it should be “Efficiency level”. Further, instead of MEL 0.2, MEL 0.3, it would be more significant to define the efficiency levels as MEL1, MEL2 etc., as MEL 0.3 Pump is more efficient than MEL 0.2 Pump. | RejectedNo changes required. |
|  | As per Note 1 under Cl. 16.4.1 (a) and 16.4.1 (b), efficiency corresponding to MEL 0.2 is taken as the minimum pump efficiency and other MEL values are for the guidance of the manufacturer and to upgrade to higher values of pump efficiency. This indicates that the manufacturer shall declare the efficiency level and minimum declared efficiency level shall be MEL 0.2. However, it has not been specified that manufacturer have to declare the efficiency level. | The Committee rejected the comment after members agreed that BIS will endorse only the efficiency of the pump and not the efficiency level.No changes required. |
|  | **Calculation of required and observed value of Pump efficiency-** As per Cl. 16.4.1, the Discharge rate and Head per stage used in calculation of pump efficiency are values at “Best Efficiency Point (BEP)”. Method for determination of BEP has not been given in the Standard. Further, as per Cl. 16.1.2, the overall efficiency shall be within limits specified in IS 11346. As per applicable Clause of IS 11346 (Cl. 8.2 of IS 11346), the pump shall be deemed to conform to the Head and Discharge requirements, if the guaranteed duty point lies below the Q-H Curve. Thus, observed value is corresponding to the declared duty point, whereas the required value is calculated at BEP. This does not appear to be correct. At BEP, the efficiency is always higher than that at the declared duty point, which is observed through testing of sample. Therefore it does not give correct evaluation of the efficiency. **It is felt that both required value and observed value should be at the same point and at declared duty point.** | Committee noted and agreed for the same. Committee decided that in the amendment delete word ‘BEP’ and ‘Best Efficiency Point’ wherever it is written. |
|  | Formula for calculation of required pump efficiency for Vertical single stage pump has not been given. | Committee discussed the comment in length and agreed with the comment.Panel has done the necessary modifications. |
|  | Change in calculation method of required Pump efficiency has not been mentioned in the Foreword. | AcceptedPanel has done the necessary modifications. |