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**भारतीय मानक ब्यूरो**  
**BUREAU OF INDIAN STANDARDS**

**MINUTES**

<b>MEETING</b>	<b>DAY and DATE</b>	<b>TIME</b>
<b>28<sup>th</sup> Meeting of Boilers &amp; Pressure Vessels Sectional Committee, MED 01</b>	<b>06 September 2024</b>	<b>10:30 AM</b> <b>(Hybrid Meeting)</b> <b>(MNIT Jaipur, Jaipur, Rajasthan)</b>

**CHAIRPERSON:** Shri Sandeep Sadanand Kumbhar, Technical Adviser (Boilers) & Secretary, Central Boilers Board, Ministry of Commerce and Industry.

**MEMBER SECRETARY:** Shri Lokraj Meena, Sc. 'C' & Deputy Director, MED, BIS HQ, New Delhi.

**MEMBERS PRESENT:** Please see *Annex-A* for details.

**0.1 Welcome by Head (MED)**

Shri K.V Rao, Sc-F and Head (MED) welcomed all the members present during the meeting. He apprised the members about the recent initiative of BIS to support R&D work in its all sectional committees. He sensitized the members about the BIS initiative of signing MoU(s) with academic institutes such as IIT, NIT and others. He also thanked Prof. Jyotirmay Mathur, BIS-Chair Professor and Prof. Tapas Bajpai for agreeing to host the BIS meeting and making necessary arrangements.

**0.2 Opening remarks by Chairperson, MED 01**

Shri Sandeep Sadanand Kumbhar, Chairperson, MED 01 welcomed all the members present in the meeting both physically and virtually. He appreciated the work done by Shri ESG Pragasam,

Convenor and panel members for finalizing the draft revision of IS 2825. He also thanked Prof. Jyotirmay Mathur and Prof. Tapas Bajpai for agreeing to host the BIS meeting and making necessary arrangements. He further suggested all the panel members and panel convenors to expedite on the pending drafts. At last, he hoped that Committee will have good, fruitful deliberations during the meeting on various agenda items.

## **ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING**

There being no other comments on the minutes of the last meeting, the Committee formally confirmed the minutes of the last meeting.

## **ITEM 2 SCOPE AND COMPOSITION OF COMMITTEE**

**2.1** The Committee noted the information given in the agenda.

### **2.2 COMPOSITION OF THE COMMITTEE**

**2.2.1** The Committee discussed on the composition of the Committee and recommended the names of following organizations for removal/deletion from Committee composition citing their non-participation in the meetings:

- a) Bharat Heavy Electrical Limited, New Delhi
- b) Bharat Heavy Electricals Limited, Project Engineering Management, Noida
- c) Hindustan Petroleum Corporation Limited, Mumbai
- d) MECON Limited, Ranchi

The Committee further suggested Member Secretary (MS) to send a reminder to the following organizations for seeking their active participation in the Committee meetings.

- a) Larsen and Toubro Limited, Mumbai
- b) Petroleum and Explosives Safety Organisation, Nagpur
- c) IIT, Delhi
- d) Tema India Ltd, Mumbai
- e) Central Electrical Authority, New Delhi

### **2.2.2 Co-option of new members and nomination update of existing members**


The Committee decided to add MNIT, Jaipur to represent the academia group in the Committee. Further, it requested MS to seek their details in the prescribed nomination proforma.

**2.2.3** The Committee noted the information given in the agenda.

**2.2.4** The Committee noted the information given in the agenda.

## **Item 3 ACTIONS ARISING OUT OF THE MINUTES OF THE 27<sup>th</sup> MEETING**

The summary of actions taken on the minutes of the 27<sup>th</sup> Meeting of Boiler & Pressure Vessels Sectional Committee, MED 01 and present status is given below:

Sl No.	Item no	Decision taken in 27 <sup>th</sup> meeting	Actions taken on the decisions of 27 <sup>th</sup> meeting	Decision taken during 28 <sup>th</sup> meeting
1.	3, Sl no 1	<p>The Committee deliberated on the agenda point and requested Shri ESG Pragasam, M/s ISGEC, Noida (<b>Convenor</b>) to conduct the meeting of Panel-5 '<b>Revision of IS 2825 : 1969 'Code for Unfired Pressure Vessels'</b> in the month of June 2024 for discussion among the members and provide the draft revision of IS 2825 at their earliest.</p> <p>Shri ESG Pragasam agreed to hold the Panel meetings and provide the draft revision of IS 2825 by 15th July 2024.</p> <p>After the receipt of the draft revision, the Committee further decided to circulate it among the Committee members for 15 days.</p> <p>If no comments received till last date, then document will be sent into wide circulation for 60 days in consultation with the Chairperson.</p>	<p>As decided, Shri ESG Pragasam, M/s ISGEC (<b>Convenor</b>) conducted a series of Panel meetings in the month of June and July 2024. On the basis of the recommendations of the Panel, the draft was modified and was received dated 14 August 2024.</p> <p>The draft revision as received from the Panel has been enclosed below:</p> <div style="text-align: center;">  <p>IS 2825 Compressed (1).docx</p> </div> <p>The Committee may kindly discuss and decide for the wide circulation of the draft.</p>	<p>The Committee noted the information given and deliberated on the draft revision of <b>IS 2825: 1969 (Code for Unfired Pressure Vessels)</b> received from Panel (P-5) and decided to put up the draft document into wide circulation for 60 days. The Committee also authorized the MS to do the editorial corrections, if any.</p> <p>During the meeting, Prof. Tapas Bajpai suggested that some provisions on sustainability and circular economy also need to be incorporated in this standard. The Committee requested him to share his inputs via email.</p>
2.	3, Sl no 2	<p>Please see <b>Item no. 6</b> for details.</p> <p><b><u>Background</u></b></p>	<p>Please see <b>Item no. 6</b> for details.</p>	<p>Please see Item 6 for decision.</p>

**Review of Standards for  
feedback**

**(a), (b), (c), (d), (e), (h)** Action complete.

**(f), (g)** (IS 13445 Part 1 & Part 2) The Committee requested MS to incorporate comments received till date in word format and circulate the same to Committee members. The Committee to decide on the revision of these documents in the next meeting.

**(i)** The Committee decided to withdraw IS 13619 : 1993 Industrial steam and hot water boiler plants – Maintaining log and summary sheets – Recommendations.


**(j)** The Committee decided to circulate the comments from BEE on IS 13979: 1994 ‘Method of calculation of efficiency of packaged steam boilers’ to all members to seek their opinion. If no comments are received, the document will not be changed.

Mr Lokesh Chaudhary and Mr Rohinton Engineer requested to send to him IS 13979 along with comments from M/s BEE.

**(k)** The Committee decided to update IS 13980: 1995 Acceptance tests on industrial boilers – Code of practice as per editorial updates. No technical change required.

**(l)** The Committee decided to make no changes to IS 15685: 2006 Purchaser’s data sheet for

		power boiler, including no editorial revision as it is not a Pre-2000 standard.		
3.	3, SI no 3	<p>The Committee noted the information given.</p> <p><b><u>Background</u></b></p> <p>Both the standards have been already taken up for revision and are currently under print.</p> <p>The Committee may kindly note and decide.</p> <p>The Committee decided to take up merging of IS 4049 (Part 1): 1988, Specification for formed ends for tanks and pressure vessels: Part 1 based on outside diameter (Second Revision) and IS 4049 (Part 2): 1996, Formed ends for tanks and pressure vessels - Specification: Part 2 inside diameter basis (First Revision) after its publication.</p>	<p>The draft standards IS 4049 (Part 1): 1988, '<i>Formed ends for tanks and pressure vessels: Part 1 based on outside diameter (Second Revision)</i>' and IS 4049 (Part 2): 1996 '<i>Formed ends for tanks and pressure vessels - Specification: Part 2 inside diameter basis (First Revision)</i>' have been published.</p> <p>Complimentary copies of the standards have been also shared with all the members.</p> <p>The Committee may kindly note.</p>	The Committee noted the information given in the agenda point.
4.	3, SI no 4	<p>The committee deliberated on the agenda point and decided to send once again a reminder to Shri Lokesh Manohar Chaudhary, M/s IBMA for creation of Standardization Cell. The committee further suggested Shri Lakshmana Rao V of M/s Tata Consulting Engineers Limited, Navi Mumbai to follow up.</p>	<p>A mail dated <b>26 June 2024</b> was sent to Shri Lokesh Manohar Chaudhary, M/s Indian Boilers Manufacturers Association, Mumbai (IBMA).</p> <p>However, no response has been received till date.</p> <p>The Committee may kindly discuss and decide.</p>	The Committee noted the information given and decided to again send a reminder to Shri Lokesh Manohar Chaudhary, M/s IBMA for creation of standardization cell within IBMA and his active participation in the Committee meetings.
5.	5.4, SI no	Mr Lakshmana Rao, M/s Tata Consulting Engineers Limited,	A letter dated <b>26 June 2024</b> and reminder dated	The Committee discussed on the agenda item and

	<p><b>1 &amp; 3</b></p>	<p>Navi Mumbai and Mr Tarun Kumar, M/s Engineers India Limited, New Delhi kindly agreed to provide their comments/views within 15 days.</p> <p>The Committee noted the above and decided that after the receipt of the comments, MS to modify the draft revision and circulate among the members for further suggestions/views.</p> <p>If no comments received till last date, then document will be sent into wide circulation for 60 days in consultation with the Chairperson.</p>	<p><b>06 August 2024</b> was sent to Shri Lakshmana Rao, M/s Tata Consulting Engineers Limited to provide the comments on IS 4503.</p> <p>However, no comments have been received till date.</p> <p>The Committee may kindly note and decide.</p>	<p>requested Shri Lakshmana Rao, M/s Tata Consulting Engineers Ltd to provide his comments on IS 4503 within a week.</p>
<p><b>6.</b></p>	<p><b>5.4.1 , SI No. 1</b></p>	<p>The Committee noted the information given and decided that IS 10470 will be taken for revision on the basis of the report to be submitted by Shri Chirag Jain, NIT Bhopal. Further, it also requested the members to share their views/suggestions, if any.</p> <p><b><u>Background</u></b></p> <p>As decided, the editable copy of IS 10470 was circulated to Mr Sumit Roy, M/s Regional Labour Institute, Faridabad seeking their views/comments.</p> <p>However, inputs are still awaited. Further, it may be also noted that this standard has been also allocated to Shri Chirag Jain, NIT Bhopal for review under internship program of BIS.</p> <p>The Committee may kindly note and decide.</p>	<p>Shri Chirag Jain, NIT Bhopal has submitted the internship report which is enclosed below.</p> <div data-bbox="850 1073 919 1142" style="text-align: center;">  </div> <p style="text-align: center;">pre std report ACHE by CHIRAG JAIN .pd</p> <p>The Committee may kindly discuss and decide.</p>	<p>The Committee noted the information and discussed on the report received from Shri Chirag Jain, Intern.</p> <p>Further, it requested MS to circulate a copy of the report of Shri Chirag Jain among all the members for their inputs. On the basis of the inputs received from the members, the draft revision of IS 10470 will be prepared and put up into wide circulation for 60 days.</p>

7.	<p><b>Item 3, SI no. 3.2.1</b></p>	<p>The Committee noted the information given and requested Convenor, Panel to conduct panel meeting at the earliest in the month of June 2024.</p> <p>Shri Rohinton R. (Convenor) Engineer, M/s Industrial Boilers Limited, New Delhi kindly agreed to have a meeting in the month of June 2024 for having the discussion among the members and submit the working draft to the Committee by 31 July 2024.</p> <p><b><u>Background</u></b></p> <p><b>Solar Powered Hybrid Boilers</b> No Panel meetings have been conducted till date.</p> <p>The Committee may kindly note and decide.</p>	<p>A mail dated <b>26 June 2024</b> and <b>06 August 2024</b> was sent to Shri Rohinton R. Engineer (<b>Convenor</b>), M/s Industrial Boilers Limited, New Delhi to conduct meeting on Solar Power Hybrid boilers.</p> <p>However, no comments have been received till date.</p> <p>The Committee may kindly note and decide.</p>	<p>During the meeting, Shri Rohinton R. Engineer informed that he is not able to find relevant international standards or any other literature on the <b>‘Solar Powered Hybrid Boilers’</b> for initiating the work.</p> <p>The Committee noted the same and requested him to call a Panel meeting in the month of September 2024 whereby manufacturers of hybrid boilers may also be invited to give their inputs. The Committee also requested him to provide the details of manufacturers of Solar Powered Hybrid Boilers to MS for inviting them to the meeting.</p>
8.	<p><b>Item 3, SI no. 3.2.2</b></p>	<p>The Committee deliberated on the agenda point and was of the view that it is required to have a literature survey on Pressure vessels for storage/transport of Green Hydrogen.</p> <p>The Committee further also requested to explore and suggest the name of some manufacturers of pressure vessels for purposes of green hydrogen for onboarding them in the Panel. Chairperson suggested the name of Dr. Suhas P. Deshmukh for</p>	<p>A mail dated <b>26.06.2024</b> and <b>06.08.2024</b> was sent to Shri Lakshmana Rao, M/s Tata Consulting Engineers Limited, Navi Mumbai (<b>Convener</b>) to conduct panel meeting on <b>‘Pressure vessels for storage/transport of Green Hydrogen’</b>.</p> <p>However, no response has been received.</p>	<p>The Committee noted the information given and deliberated on the agenda item.</p> <p>After the discussion, it was of the view that word ‘Green’ should be deleted from the scope of the subject. The Panel shall also consult PESO before drafting the standard on the subject. The Committee also requested Shri Lakshamana Rao (<b>Convener</b>) to call a</p>

		<p>inclusion in the Panel. The Committee agreed for the same.</p> <p><b><u>Background</u></b></p> <p><b>Pressure vessels for storage/transport of Green Hydrogen</b></p> <p>No Panel meetings have been conducted till date.</p> <p>The Committee may kindly note and decide.</p>	<p>The Committee may kindly discuss and decide on the above.</p>	<p>meeting in the month of Sept 2024.</p>
9.	Item 8	<p>The Committee noted the information given in the agenda and requested the following panel to identify Emerging Areas as well as Gap Analysis in existing standards:</p> <ul style="list-style-type: none"> <li>a) Mr Lakshmana Rao, Tata Consulting Engineers Limited, Navi Mumbai (<b>Convener</b>)</li> <li>b) Mr Karthik T, L&amp;T-Sargent &amp; Lundy Limited, Vadodara</li> <li>c) Mr ESG Prasagasam, India Sugar and General Engineering Corporation, Noida</li> <li>d) Mr Vivek Gangwar, NTPC Limited, New Delhi</li> <li>e) Member Secretary, Bureau of Indian Standards (MS)</li> </ul> <p>Further, the Committee requested the <b>Convener, Panel</b> to have a meeting at the earliest for exploring the possibility of new</p>	<p>Recommendations of the Panel are still awaited.</p> <p>The Committee may kindly note and decide.</p>	<p>The Committee deliberated on the agenda point and requested Shri Lakshmana Rao, M/s Tata Consulting Engineers Limited to conduct the panel meeting on the same and share the recommendations to the Committee.</p> <p>Further, MS informed the Committee about a new work item proposal received from NTPC on '<b>Standard for Seamless Stainless Steel tubes for high temperature application</b>'. The Committee requested him to share it with all the members for seeking their inputs/suggestions.</p>



		subjects for standard formulation and submit its recommendations to the Committee.		
<b>10.</b>	<b>Item 9</b>	The Committee noted the information given and appreciated this initiative of BIS for supporting the R&D projects. Further, it also requested Shri Rahut Bhat, M/s IRS to provide Terms of References (ToR) for R&D project for formulation of draft standard on ' <b>Pressure Vessels for Human Occupancy</b> ' within one week.	Terms of References (ToR) for R&D project for formulation of draft standard on ' <b>Pressure Vessels for Human Occupancy</b> ' is still awaited.  The Committee may kindly note and decide.	The Committee noted the information given in the agenda and requested Shri Rahul Bhat to share the draft ToR on ' <b>Pressure Vessels for Human Occupancy</b> ' at the earliest.

#### **ITEM 4 DOCUMENTS UNDER PUBLICATION/PRINT**


The Committee noted the information given in the agenda.

#### **ITEM 5 REVIEW OF PUBLISHED INDIAN STANDARDS**




The Committee noted the information given in the agenda.






#### **ITEM 6 PRE-2000 DOCUMENTS UNDER REVIEW BY TECHNICAL DEPARTMENT**


The Committee noted the information given in the agenda and decided as follows:


<b>Sl No.</b>	<b>IS No.</b>	<b>IS Title</b>	<b>Reaffirmation Details</b>	<b>Remarks</b>	<b>Decision taken in 27<sup>th</sup> Meeting.</b>	<b>Actions Taken</b>	<b>Decision taken during 28<sup>th</sup> Meeting.</b>
1	IS 2825 : 1969	Code for unfired pressure vessels	February, 2022	Pls see Sl No. 1	Pls see Item no 3, Sl no. 1 for decision	Pls see Item no 3, Sl no. 1 for decision.	Pls see Item no 3, Sl no. 1 for decision.
2	IS 4503 : 1967	Specification for shell and tube, type heat exchangers	September, 2018	 IS 4503_Kurdan (1).docx  Pls see Item No 3, Sl no 5	Pls see Item no 3, Sl no. 5 for decision	Pls see Item no 3, Sl no. 5 for decision.	Pls see Item no 3, Sl no. 5 for decision

3	IS 13979: 1994	Method of calculation of efficiency of packaged steam boilers	April, 2019	 IS 13979.docx  Pls see Item no 3, Sl No. 2 (j)	The Committee decided to revise the standard with editorial corrections and requested MS to prepare the draft revision and put up into wide circulation for 2 months.	The draft document MED 01/26387- IS 13979 has been put up into wide circulation on 19 August 2024.  The last date for comments is 18 October 2024.  The Committee may kindly note.	The Committee noted the information given and requested the members to share their comments on the document via portal.
4	IS 10470: 1983	Specification for air cooled heat exchangers	July, 2020	 IS 10470 (NEW).docx  Pls see Item No 3, Sl no 6	Pls see Item 3, Sl no 6 for decision.	Pls see Item 3, Sl no 6 for decision.	Pls see Item 3, Sl no 6 for decision.
5	IS 13619: 1993	Industrial steam and hot water boiler plants - Maintaining of log and summary sheets - Recommendations	April, 2019	Pls see Item no 3, Sl No. 2 (i) (Decision to withdraw )	The Committee noted the information given and requested MS to do the needful for the withdrawal of IS 13619.	The withdrawal request of IS 13619 to be sent to MEDC in the next meeting.  The Committee may kindly note.	The Committee noted the information given.

6	IS 13980: 1995	Acceptance tests on industrial boilers - Code of practice	April, 2019	Pls see Item no 3, Sl No. 2 (k)	The Committee decided to revise the Code of practice standard with editorial corrections and requested MS to prepare the draft revision and put up into wide circulation for 2 months.	The draft standard IS 13980 is under preparation for WC.  20221018_MED_01_IS_13980_WC_0.1.docx  The Committee may kindly note.	The Committee noted the information given and requested MS to wide circulate the draft document at the earliest.
7	IS 13445-1:1992	Suppliers Data Sheet for Industrial Water Tube Boilers: Part 1 Proposed Stage	February, 2022	MED 01 (IS 13445 P1)WC.docx  Pls see Item no 3, Sl No. 2 (f)	The Committee noted the information given and decided to circulate the copy of IS 13445-1 among the committee members for 10 days seeking their views/comments on the standard.  Shri ESG Pragasam kindly agreed to share his comments.	Shri ESG Pragasam vide his mail dated <b>27.06.2024</b> provided his comments on IS 13445 (Part 1 &2).  The same has been enclosed below.  IS13445-Format_BIS commenting template   esgp_cmnt-IS 13445 Part 1 1992.pdf	The Committee discussed on the comments received from Shri ESG Pragasam and agreed to incorporate these in the draft revision of IS 13445 (Part 1).  Further, it requested MS to put up the modified draft document into wide circulation for 60 days.

						 esgp_cmnt-IS 13445 Part 2 1992.pdf  The Committee may kindly discuss and decide.	
8	IS 13445- 2:1992	Suppliers Data Sheet for Industrial Water Tube Boilers: Part 2 Post Order Stage	February, 2022	 MED 01 (IS 13445 P2)WC.docx  Pls see Item no 3, Sl No. 2 (g)	The committee decided to send the copy of IS 13445-2 to the committee members for 10 days for their views/comme nts on the standard.  The revision of the standard to be taken up after the comments of the committee members.	Shri ESG Pragasam vide his mail dated <b>27 June  2024</b> provided his comments on IS 13445 (Part 1 &2).  The same has been enclosed below.   IS13445-Format_B15 commenting templa   esgp_cmnt-IS 13445 Part 1 1992.pdf   esgp_cmnt-IS 13445 Part 2 1992.pdf  The Committee may kindly discuss and decide.	The Committee discussed on the comments received from Shri ESG Pragasam and agreed to incorporate these in the draft revision of IS 13445 (Part 2).  Further, it requested MS to put up the modified draft document into wide circulation for 60 days.

9.	IS 8596 : stationary steam boilers 1977	Recommended parameters of stationary steam boilers	February, 2022	Pls see Item no 3, SI No. 2 (a)	<p>The Committee noted the information given and requested Shri Lakshmana Rao V., M/s TCE Ltd. to provide his inputs/views within 15 days.</p> <p>Shri Lakshmana Rao kindly agreed to do the same</p>	<p>A mail dated <b>26 June 2024</b> and reminder dated <b>06 August 2024</b> was sent to Shri Lakshmana Rao, M/s TCE to provide his inputs on IS 8596.</p> <p>However, no inputs have been received till date.</p> <p>The Committee may kindly note and decide.</p>	<p>The Committee noted the information given and requested Shri Lakshmana Rao, M/s TCE to provide his comments within one week.</p>
10.	IS 9330 : Terminology for waste heat boilers and boilers for special purposes 1979	Terminology for parameters of waste heat boilers and boilers for special purposes	February, 2022	 IS 9330 MED 01 NK WC NEW 4.160X Pls see Item no 3, SI No. 2 (c)	<p>MS informed the committee that provisions of IS 9330 has been already incorporated in IS 8595 in its revision.</p> <p>The Committee noted the same and agreed to</p>	<p>The withdrawal request of IS 9330 to be sent to MEDC in the next MEDC meeting.</p> <p>The Committee may kindly note.</p>	<p>The Committee noted the information given.</p>

					<p>withdrawn IS 9330.</p> <p>Further, it requested MS to do the needful for withdrawal of IS 9330.</p>		
11.	IS 9332 : 1979	Recommended parameters of waste heat boilers and boilers for special purposes	February, 2022	 IS 9332.docx  Pls see Item no 3, Sl No. 2 (c)	<p>The Committee noted the information given and requested Shri Lakshmana Rao V., M/s TCE Ltd. to provide his inputs/views within 15 days. Shri Lakshmana Rao kindly agreed to do the same.</p>	<p>A mail dated <b>26 June 2024</b> and <b>06 August 2024</b> was sent to Shri Lakshmana Rao, M/s TCE to provide his inputs on IS 9332. However, no inputs have been received.</p> <p>The Committee may kindly note and decide.</p>	<p><b>IS 9332 : 1979 (Recommended parameters of waste heat boilers and boilers for special purposes)</b></p> <p>The Committee deliberated on the agenda point and suggested Shri Lakshmana Rao, M/s TCE to provide his comments on IS 8596 and IS 9332 within one week.</p>

#### ITEM 7 POSITION OF WORK

The Committee noted the information given in the agenda.

#### ITEM 8 SELECTIONS OF SUBJECTS

The Committee noted the information given in the agenda.

## **ITEM 9 STANDARDS WITH RESEARCH**

Member Secretary informed the Committee about the BIS R&D guidelines for carrying out research projects and encouraged the members to utilize the benefit of this initiative. Further, he also informed the members about the existing R&D projects being undertaken by following project leaders under the guidance of this Committee:

*(A) Study of latest technological developments and practices in the life cycle of shell and tube type heat exchangers (IS 4503) - Dr Vikas J. Lakhera Institute of Technology, Nirma University*

*Current Status:* Mid-term progress is awaited. After the receipt of the report, it will be circulated among the members

*(B) Study of latest technological developments and practices in the life cycle of Unfired Pressure Vessels (IS 2825) - Dr Tapas Bajpai, MNIT Jaipur*

*Current Status:* Mid-term progress has been received. The Committee discussed on the report received from Shri Tapas Bajpai and requested MS to circulate it among the members for their suggestions/inputs.

During the life of above projects, MS requested all the members to cooperate with the projects leaders for any visit to be undertaken by them to their factories or laboratories.

## **ITEM 10 INTERNATIONAL ACTIVITY**

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.

## **ITEM 11 RECENT INITIATIVES IN THE STANDARD DEVELOPMENT PROCESS OF BIS**

The Committee noted the information given in the agenda.

## **ITEM 12 GUIDELINES FOR MEMBERS OF TECHNICAL COMMITTEES**

The Committee noted the information given in the agenda.

**ITEM 13 GUIDELINES FOR INTENSIFYING PARTICIPATION OF STAKEHOLDERS  
IN BIS TECHNICAL COMMITTEE MEETING**

The Committee noted the information given in the agenda.

**ITEM 14 SUSTAINABILITY PERSPECTIVE IN INDIAN STANDARDS**

The Committee noted the information given in the agenda.

**ITEM 15 DATE AND PLACE FOR THE NEXT MEETING**

The Committee discussed and finalized IIT Bombay as the venue for the next meeting which will be held tentatively in the month of December 2024.

**ITEM 16 ANY OTHER BUSINESS**

There being no other comments, the meeting ended with a hearty vote of thanks to the Chair and the Committee members.



**ANNEX A**  
(Item 2.2.1)

Sl. No	Organization	Member	Email
1.	Department for Promotion of Industry and Internal Trade, New Delhi	Shri Sandeep Sadanand Kumbhar ( <i>Chairperson</i> )	sandeep.kumbhar7@gov.in
2.	Bureau of Energy Efficiency, New Delhi	Shri Kamran Shaikh Shri Nishant Batra ( <i>Representative</i> )	kamran.shaikh@beeindia.gov.in nbatra@clasp.ngo
3.	Bureau Veritas India Private Limited, Noida	Shri Ranjit D. Naik	ranjit.naik@bureauveritas.com
4.	Bharat Petroleum Corporation Limited, Mumbai	Shri Sathyan V. ( <i>Alt</i> )	sathyanv@bharatpetroleum.in
5.	CSIR - Central Mechanical Engineering Research Institute, Durgapur	Dr. Atanu Saha	atanu@cmeri.res.in
6.	Directorate General Factory Advice Service and Labour Institutes, Mumbai	Shri Ramesh Singh Rawat	ramesh.rawat28@dglasli.nic.in
7.	Engineers India Limited, New Delhi	Shri PVS Satyanarayana ( <i>Alt</i> )	satyanarayana.pvs@eil.co.in
8.	Godrej & Boyce Manufacturing Company Limited, Mumbai	Shri Jayvant G. Pingale ( <i>Alt</i> )	jaivant@godrej.com
9.	India Sugar and General Engineering Corporation, Noida	Shri ESG Pragasam ( <i>Alt</i> )	esgpragasam@isgec.co.in
10.	Indian Register of Shipping, Mumbai	Shri Rahul T. Bhat	rahul.bhat@irclass.org
11.	Industrial Boilers Limited, Nehru Place, New Delhi	Shri Cyrus R. Engineer Shri R. R. Engineer ( <i>Alt</i> )	cyrus@indboilers.com rohinton@indboilers.com
12.	L&T-Sargent & Lundy Limited, Vadodara	Shri Karthik T. ( <i>Alt</i> )	karthik.t@Lntpower.com
13.	NTPC Limited, New Delhi	Shri Anubhav Dahiya Shri Vivek Gangwar ( <i>Alt</i> )	anubhavdahiya@ntpc.co.in vivekgangwar@ntpc.co.in
14.	Oil Industry Safety Directorate, Noida	Shri Shivendra Singh Parihar ( <i>Alt</i> )	ssprihar.oid@gov.in
15.	Project and Development India Limited, Noida	Shri Bhag ( <i>Representative</i> )	bhag@pdilin.com
16.	Tata Steel Limited, Kolkata	Shri Braj B. Prasad	bbpdqa@tatasteel.com

17.	Invitee (MNIT, Jaipur)	Prof Jyotirmay Mathur Prof Tapas Bajpai	jmathur.mech@mnit.ac.in tapas.mech@mnit.ac.in
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