

**FOR BIS USE ONLY.**



**AGENDA**

<b>MEETING</b>	<b>DAY and DATE</b>	<b>Venue &amp; TIME</b>
<b>27<sup>th</sup> Meeting of Turbo Machinery Sectional Committee, MED 22</b>	<b>20 December 2024 (Friday)</b>	<b>Conference Room, Dept of Electrical Engineering (South Campus), College of Engineering Pune (COEP) Technological University, Maharashtra-411005 (Physical)  11: 00 AM</b>

**CHAIRPERSON:** Shri K. Ravi, In Personal Capacity

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

**ITEM 0 GENERAL**

**0.1 Welcome by Head (MED)**

**0.2 Opening remarks by Chairperson, MED 22**

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

The Minutes of 26<sup>th</sup> Meeting of Turbo Machinery Sectional Committee MED 22, held on 20 Sept 2024 were circulated to the members vide our letter no. MED 22/A-2.26 dated 04 October 2024. The last date for comments was 19 October 2024.

*No comments have been received.*

*There being no comments on the minutes of the last meeting, the Committee may formally confirm the minutes of the last meeting.*

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

### **2.1 SCOPE**

During its last meeting, the Committee reviewed its scope and decided to modify it as follows:

- a) Formulation of standards for compressors, blowers, exhausters, turbines, **expanders**, and their related accessories. It also covers methods of measuring various quantities connected with the testing and code of practices.
- b) Preparation of technical supply conditions and acceptance tests for, reciprocating, rotary, and dynamic compressors **(centrifugal and axial)**, blowers, exhausters, turbines, **and expanders**.
- c) Co-ordination of work with ISO/TC 192 (Gas turbines) and ISO/TC 118 (Compressors, Pneumatic Tools and Pneumatic machines and its sub-Committees).
- d) Co-ordination of work with IEC/TC 4 (Hydraulic turbines) and IEC/TC 5 (Steam Turbines).

Recommendations of the Committee has been submitted to MEDC for discussion in its upcoming committee meeting to be held on 18 Dec 2024.

*The Committee may kindly note.*

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

**2.2.1** The composition of the Sectional Committee as last reviewed is given at **Annex-A** (Page 18-19).

**2.2.2** Co-option of the new organizations in P-4 (Hydraulic Turbines) of MED 22:

- a) During the last meeting, the Committee decided to send a reminder to following organization(s) for their co-option in the **Panel 4 on ‘Hydraulic Turbines’**:
  - i) M/s Kirloskar Bros. Ltd, Pune
  - ii) Bharat Heavy Electricals Limited, New Delhi
  - iii) M/s Voith Hydro Pvt Ltd, Noida
  - iv) SJVN Ltd, Himachal Pradesh
  - v) BBMB, Chandigarh

MS vide his email dated **06 Nov 2024** sent a reminder to above mentioned organizations for their co-option in the **Panel 4 on ‘Hydraulic Turbines’**.

**Nomination from** BBMB, Chandigarh has been received. However, nominations from other organizations are still awaited.

*The Committee may kindly note and decide.*

**2.2.3** As per the BIS guidelines, Committees should represent all interest groups such as organized consumers/users, industry, technologist and regulatory bodies/NGOs etc. However, consumer interests shall as far as possible predominate. Where non-industry interests are less than 2/3, it may be reviewed. Stakeholders such as manufacturers/service providers as well as consumer activists should as far as possible represent industries association and organizations and not individual companies. Also, it may be desirable to induct and involve new people in the work of Sectional Committees with an aim to infuse fresh ideas and it is suggested that member organizations may like to keep this aspect in view while nominating their representations in the technical Committees.

Also, the Committee may **IDENTIFY** and **INVOLVE** talent available in the country related to the subject of the Committee and also suggest methodology to involve them in the proceedings of the Committee.

Recently towards encouraging the participation of young professionals representing the member organizations on the Committee, it was decided by BIS that an additional member up to the age of 37 years may also be nominated by each organization.

*The Committee may note and suggest any addition/deletion/modification in the composition.*

#### **2.2.4 Gender Responsive Standards Initiative**

Bureau of Indian Standards is a signatory to the UNECE Gender Responsive Standards Declaration. The UNECE Gender Responsive Standards Initiative aims to provide a practical framework for standards bodies seeking to make the standards they develop, and the standards development process they follow, gender responsive. Established in 2016, the Initiative has the objectives of:

- a) Strengthening the use of standards and technical regulations as powerful tools to attain SDG 5 (Achieve gender equality and empower all women and girls);
- b) Integrating a gender lens in the development of both standards and technical regulations; and
- c) Elaborating gender indicators and criteria that could be used in standards development.

In line with these objectives, BIS aims to work towards:


- i) Gender responsive standards;
- ii) Gender balance at all levels in all Committees including leadership positions; and
- iii) Enhanced expertise to create and deliver gender inclusivity.

The Committee members **ARE REQUESTED** to work in tandem with these aims to create a gender balance environment in all walks of life through standards.

*The Committee may kindly **REVIEW** the composition considering the above.*

**Item 3 ACTIONS ARISING OUT OF THE MINUTES OF THE 26<sup>th</sup> MEETING**

The summary of actions taken on the minutes of 26<sup>th</sup> Meeting of Turbo Machinery Sectional Committee, MED 22 and present status are given below:

Sl No.	Item *	Actions taken on the decision of 25 <sup>th</sup> meeting	Committee decision during 26 <sup>th</sup> meeting	Actions taken on the decision of 26 <sup>th</sup> meeting
1.	<b>3.1 (3)</b>	<p>The draft document MED/22/24282 (First Revision of IS 11461 – Code of Practice for Compressor Safety) is currently under print.</p> <p>The Committee may kindly note.</p>	The Committee noted the information given.	<p>The draft document MED/22/24282 ‘IS 11461 – Code of Practice for Compressor Safety (First Revision)’ has been published in the month of Sept 2024.</p> <p>A complimentary copy of the standard has also been shared with the Committee members.</p> <p>The Committee may kindly note.</p>
2.	<b>9.4</b>		The Committee noted the information given in the agenda and requested MS to share the copies of relevant ISO standards on ' <b>Centrifugal and Rotary Compressors</b> ' among the members for seeking their views regarding the possible adoption.	<p>As decided, soft copies of relevant ISO standards on '<b>Centrifugal and Rotary Compressors</b>' have been shared among all the members dated 27 Nov 2024 seeking their inputs.</p> <div style="text-align: center;">               ISO adoptions.zip         </div> <p>However, inputs are still awaited.</p> <p>The Committee may kindly note and decide.</p>

3.			<p>MS informed the members that recently, Ministry of Heavy Industries has issued Machinery and Electrical Equipment Safety (Omnibus Technical Regulations) Order, 2024 dated 28 August 2024. As per the order, all the machines and electrical equipment and their assemblies, sub-assemblies and components mentioned in the first Schedule of the order will need to have standard mark under a license from the Bureau; or issued with a certificate of conformity in case of machine, or as the case may be, electrical equipment, is not desired to be manufactured on a continuous basis as provided in the Scheme X of the Conformity Assessment Regulations. The detailed order along with the schemed X of BIS is enclosed below for kind reference of all:</p> <p><a href="https://drive.google.com/file/d/1Ne8XTDWfnOuFAgqcWJbMnMXFzEEZSSHG/view?usp=sharing">https://drive.google.com/file/d/1Ne8XTDWfnOuFAgqcWJbMnMXFzEEZSSHG/view?usp=sharing</a></p> <p><a href="https://drive.google.com/file/d/1z-wN14Mjugv5oKbWUczNy38-0B4IkZyx/view?usp=sharing">https://drive.google.com/file/d/1z-wN14Mjugv5oKbWUczNy38-0B4IkZyx/view?usp=sharing</a></p>	<p>As per the Machinery and Electrical Equipment Safety (Omnibus Technical Regulations) Order, all types of compressors are required to conform to the labeling and marking requirements as provided in the Scheme X of the Conformity Assessment Regulations. Further, there are Type C standards also mentioned in schedule 3 of the order.</p> <p>The Commitete may kindly note and decide for the review/development of Type C safety standards for compressors.</p>
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\* The Item number refers to the proceedings of the last meeting of MED 22.

**ITEM 4 DRAFT INDIAN STANDARDS FOR FINALIZATION**


No draft standard is pending for finalization.

*The Committee may kindly note.*

**ITEM 5 INDIAN STANDARDS TAKEN FOR REVIEW**

The Committee in its previous meeting decided that all the Panel(s) shall have their 1<sup>st</sup> meeting before the 15 July 2024 and recommendations arising out from the panel meeting shall be submitted to the Committee. It requested all the Convenor(s) to comply with the given timelines. It also advised the members of all the Panel(s) to keep reviewing the ISO/IEC standards available on the subject and recommend for possible adoption as an Indian Standard.

During the last meeting, the Committee decided to constitute following Panel(s) to work on the standards due for review/reaffirmation in the 2023-24:

Sl No.	Category	IS/ISO/IEC No.	Title	Panel/ Experts	Committee Decision during 26 <sup>th</sup> meeting	Action taken on the decision of 26 <sup>th</sup> Meeting
1.	Working Panel 1 on 'Compressors'	(a) IS 17093 : 2019  (b) IS 15879 : 2009  (c) IS/ISO 3857-1: 1977  (d) IS/ISO 3857-2: 1977	(a) Technical supply conditions for reciprocating air compressors for general purpose and industrial applications  (b) Breathing air compressor package – Specification  (c) Compressors, pneumatic tools and	a) Shri Dileep Patil, M/s Ingersoll Rand ( <b>Convenor</b> ); b) Shri Jayesh Raval, M/s Dresser India Pvt. Ltd; c) Shri Harendra Singh, M/s Reliance Industries; d) Shri A. Bhaskar Prabhune, M/s Burckhardt Compression India; e) Shri Chirag Prajapati, M/s Nayara Energy Ltd.; f) Chairperson ; and g) Member	Ms Lakshmi Shree Nair, M/s Ingersoll Rand briefed the Committee about the work of the Panel. The Committee appreciated the same and requested her to submit the consolidated comments to the Member Secretary, so it may be circulated among all the members for their views/suggestions. On the basis of the comments received from the members, further decision will be taken by the Committee.	Consolidated comments were received Ms Lakshmi Shree Nair, M/s Ingersoll Rand dated 07 Oct 2024 and also circulated among the members for their views.   Comments_received_from Panel 1.zip  No adverse comments have been received.  The Committee may kindly note and decide.

			<p>machines - Vocabula ry: Part 1 general</p> <p>(d) Compres sors, pneumati c tools and machines - Vocabula ry: Part 2 compress ors</p>	Secretary.		
2.	Working Panel 2 on 'Steam Turbines',	<p>(a) IS 14198 (Part 1) : 1994/I EC Pub 953-1(1990)</p> <p>(b) IS 14198 (Part 2) : 1994/I EC Pub 953-2(1990)</p> <p>(c) IS 14205 (Part 1) :</p>	<p>(a) Rules for steam turbine thermal acceptance tests: Part 1 method A - High accuracy for large condensing steam turbines</p> <p>(b) Rules for steam turbines thermal acceptance tests</p> <p>(c) Steam turbine: Part 1 specification</p>	<p>a) Shri M. N. Goyal, NFL, Noida (<b>Conve nor</b>);</p> <p>b) Shri Sankar B., M/s Triveni Turbine s;</p> <p>c) Shri Kandar p Brahmhatt, M/s Siemen es;</p> <p>d) Shri Nokesh Aggarwal, M/s</p>	<p>The Committee discussed on the comments received from the Panel and requested the Conevenor to hold a meeting in the month of October to finalize them.</p> <p>Further, it also assigned the conevnorship of the Panel to Shri Sankar B and also agreed to add Shri Harendra Singh, M/s Reliance Industries in the Panel.</p>	<p>An email dated 13 Nov 2024 and further, a reminder dated 03 December 2024 was sent to the panel convenor to conduct the panel meeting at the earliest.</p> <p>However, panel meeting is yet to be conducted.</p> <p>The Committee may kindly note and decide..</p>

		1994/I EC Pub 45- 1:199 1		<p>Boldroc chi India Pvt. Ltd. ;</p> <p>e) Shri Jatinder Singh Duggal, EIL;</p> <p>f) Shri Harendr a Singh, M/s Relianc e Industri es;</p> <p>g) Represe ntative from BHEL</p> <p>h) Chairpe rson ; and</p> <p>i) Member Secretar y.</p>	
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3	Working Panel 3 on 'Gas Turbines'	<p>(a) IS 15664 : 2006 /ISO 2314: 1989</p> <p>(b) IS 15665 : 2006/ISO 11086 :1996</p> <p>(c) IS 15667 : 2006/ISO 19860 :2005</p>	<p>(a) Gas turbines - Acceptance tests</p> <p>(b) Gas turbines - Vocabulary</p> <p>(c) Gas turbines - Data acquisition and trend monitoring system requirements for gas turbine installations</p>	<p>a) Shri B.K. Rai, M/s ONGC (<b>Convenor</b>)</p> <p>b) Representative from M/s Bharat Heavy Electrical Limited;</p> <p>c) Shri H V Ramana Murthy, BHEL GE Gas Turbine Service;</p> <p>d) Shri Kandarp Brahmabhatt, M/s Siemenes</p> <p>e) Shri Thenavranajan, CSIR-NAL</p> <p>f) Chairperson ; and</p> <p>g) Member Secretary.</p>	<p>The Committee deliberated on the comments received from the Panel at length. After the discussion, it was of the view that some comments need further deliberation in the Panel. So, it requested the Shri B.K. Rai, Convenor to hold a meeting in the month of October 2024 for discussion among the members.</p>	<p>An email dated 13 Nov 2024 and further, a reminder dated 03 December 2024 was sent to the panel convenor to conduct the panel meeting at the earliest.</p> <p>However, panel meeting is yet to be conducted.</p> <p>The Committee may kindly note and decide.</p>
4.	Working Panel 4 on 'Hydraulic Turbines'	IS/IEC 41 :1991	Field acceptance tests to determine the hydraulic performance of hydraulic turbines,	<p>(a) Dr. Arun Kumar, IIT Roorkee (<b>Convenor</b>)</p> <p>(b) Shri Vikas Kumar, NHPC</p> <p>c) Representative from BHEL</p>	<p>The Committee noted the information given and requested Convenor to hold a meeting in the Month of October 2024.</p>	<p>An email dated 13 Nov 2024 and further, a reminder dated 03 December 2024 was sent to the panel convenor to conduct the</p>

			storage pumps and pump - Turbines	(d) Deepak Raj Pokharna, Flovel Energy Pvt Ltd, Faridabad e) Prof. Dhiman Chatterjee, IIT Madras (f) Davinder Sethi, BBMB g) Representative from SJVN ( <i>Nomination Awaited</i> )	Further, it requestd Ms Y.V. Rama Lakshmi to provide the names of experts from BHEL in the panel.`	panel meeting at the earliest.  However, panel meeting is yet to be conducted.  Also, names of expert from BHEL to be co-opted in the panel are also awaited from M.s Y.V. Rama Lakshmi.  The Committee may kindly note and decide.
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**ITEM 6 STATUS OF INDIAN STANDARDS UNDER BIS CERTIFICATION**

The following standards prepared by MED 22 are under certification:

<i>Sl. No.</i>	<i>IS No. and Title</i>	<i>No. of Licenses</i>
1	IS 5456 : 2006 ‘Code of practice for testing of positive displacement type air compressors and exhausters’	03

*The Committee may kindly note.*

**ITEM 7 POSITION OF WORK**

**7.1** BIS Management is very much concerned about revision of Standards based on latest technology and their utilization by concerned stakeholders. It has been observed that many standards have been published long back and there is no change in the specification through amendment/revision. It is not known whether these standards are being used by anyone. Therefore, technical Committee is requested to examine whether these standards may be withdrawn if they cover either obsolete technology or are not used in the country. Accordingly, the PoW of MED 22 is enclosed below:



pow\_302\_2024-12-03.pdf

*The Committee may kindly note and decide.*

**ITEM 8 SELECTIONS OF SUBJECTS**

As per the policy and guidelines, before any new subject is taken up for formulation of National Standard the following issues are to be examined by BIS.

- i) Whether the subject is financed by the proposer;
- ii) Sale ability of the standard;
- iii) Standards shall be user friendly; and
- iv) Social needs with regards to safety, health and environment.

Only after assessing the above aspects it will be possible for BIS to consider the formulation of Indian standard. The proposal should essentially be taken in the prescribed Performa given in ***Annex - B***. When members propose in the Technical Committee (TC) meeting, they have to fill-in the Performa beforehand which is then be considered by the TC.

*The Committee may kindly note.*

**ITEM 9 INTERNATIONAL ACTIVITY**

**9.1** India is having membership on following ISO & IEC Committees related to MED 22:

**ISO Committees:**

<b>TC Committee</b>	<b>Title</b>	<b>Member</b>
TC 118	Compressors and pneumatic tools, machines and equipment	‘P’ Member
TC 118/ SC1	Process Compressors	‘P’ Member
TC 118/SC3	Pneumatic tools and machines	‘O’ Member (Pertains to PGD dept. of BIS)
TC 118/SC4	Compressed air treatment technology	‘P’ Member
ISO/TC 118/SC 6	Air compressors and compressed air systems	‘P’ Member
ISO/TC 192	Gas Turbines	‘P’ Member

**IEC Committees:**

<b>TC Committee</b>	<b>Title</b>	<b>Member</b>
IEC/TC 4	Hydraulic Turbines	‘P’ Member
IEC/TC 5	Steam Turbines	‘P’ Member

*The Committee may kindly note.*

**9.2** In case of ‘P-membership’ of ISO Technical Committees, it is obligatory on the part of Member Organization (country) to send ballots on documents. Committee drafts (CD), Draft International Standards (DIS) and Final Draft International Standards (FDIS) are received from the respective ISO Secretariat of the Technical Committee through E-mail only. The documents are sent to members of the Committee through E-mail for eliciting their comments. The comments so received are reviewed and collated by BIS Secretariat and then put up to Chairperson of the Committee and a final decision is taken as to whether to send an approval/ disapproval or abstention ballot. The approval/ disapproval ballots can be sent with comments also. Once approval ballot is sent on the document, as per WTO, the member organization may be under obligation to use the ISO Standard in International Trade. It is not practically feasible to send the documents by post; accordingly, all members are requested to keep BIS Secretariat updated about E-mail addresses of their respective members.

*The Committee may kindly note.*

**9.3** India has established itself as a significant manufacturing hub and has a considerable stake in international trade. To ensure our active involvement in trade-related norms set by different countries, it is essential for us to participate in the standardisation process of ISO and provide input for the betterment of our industries. Standardisation is the key to influence these norms, and a **closer examination of new work item proposals** received from ISO/IEC is necessary for us to standardise products at the international level. This activity will benefit Indian manufacturers at all levels to keep up with or enter into international level trade, ultimately improving their competitiveness in the global market. Currently no NWIPs ballot has been received from ISO/IEC, however there are some new standards already under development. Details of such type of work items are given below:

Sl No.	Committee	ISO Document No	Title of the Subject	Status
1)	ISO/TC 118/SC 3	ISO/CD 11148-13	Hand-held non-electric power tools — Safety requirements — Part 13: Fastener driving tools	Under development
2)	ISO/TC 118/SC 3	ISO/DIS 17104	Rotary tools for threaded fasteners — Impulse and impulsing tools — Performance test method	Under development
3)	ISO/TC 118/SC 3	ISO/CD 20643	Mechanical vibration — Hand-held and hand-guided machinery — Principles for evaluation of vibration emission	Under development
4)	ISO/TC 118/SC 6	ISO/DIS 18623-1	Air compressors and compressed air systems — Part 1: Air compressor safety requirements	Under development
5)	ISO/TC 192	ISO/AWI 2314	Gas turbines — Acceptance tests	Under development
6)	ISO/TC 192	ISO/AWI 18888	Gas turbine combined cycle power plants — Thermal performance tests	Under development

7)	IEC/TC 5	IEC 60953-4 ED1	Rules for steam turbine thermal acceptance tests - Part 4: Routine testing	Under development
8)	IEC/TC 4	IEC 60041 ED4	Field acceptance tests to determine the hydraulic performance of hydraulic turbines, storage pumps and pump-turbines	Under development

*The Committee may kindly note.*

**9.4 List of International Standards formulated by ISO/TC 118, its SC's, ISO/TC 192, IEC TC/4 and IEC TC/5 can be accessed with following links respectively:**

- a) <https://www.iso.org/committee/51850/x/catalogue/>
- b) <https://www.iso.org/committee/54432/x/catalogue/p/1/u/0/w/0/d/0>
- c) <https://bit.ly/402TD2v>
- d) <https://bitly.cx/i6JNc>

*The Committee may kindly note.*

## **ITEM 10 RECENT INITIATIVES IN THE STANDARD DEVELOPMENT PROCESS OF BIS**

In the recent months, several initiatives have been undertaken to reform the standard making process in BIS with the aim to make the delivery mechanism in tune with the National needs and aspirations. These initiatives are both process initiatives as well as technical initiatives. Some of the important initiatives are:

### **10.1 Green Initiative by BIS**

As part of the 'Green Initiative' to conserve resources, the Bureau of Indian Standards (BIS) has decided to communicate with all the technical committee members only through electronic media. From 01 January 2014 onwards, the meeting notice, agenda, minutes of all technical committee meetings of BIS and other documents associated with technical committee work, such as P-drafts, WC-drafts etc. are being sent in Electronic Form only at the email addresses provided by the technical committee members. No printed documents of any kind shall thereafter be sent to the technical committee members. It may be noted that the activities of sectional committees namely, Programme of work, Composition of sectional committees, Draft standards in circulation, etc. are also available on [www.bis.gov.in](http://www.bis.gov.in). Further, formats for comments on drafts and also proposals for new work items are available on the BIS website. Members are encouraged to visit BIS website on a periodical basis to be acquainted with the latest status in standards development process.

*The Committee may kindly note.*

### **10.2 Interaction with SDO**

A number of Standards Developing Organizations (SDOs) under various Govt. Departments exist which cater to the needs of specific sectors by developing standards. It has been identified that an effort may be made to adopt such standards developed by these SDOs as Indian Standards so as to avoid duplication of work. Further these standards will also be upgraded as Indian Standards.

*The Committee may kindly note.*

### **10.3 Training of Committee Members**

BIS Management has decided to organise a two-day residential training programme for Committee members for making them familiar with BIS working, drafting of standards etc. A brief overview is given at **Annex-C**.

*The Committee may kindly note.*

### **ITEM 11 LETTER OF APPRECIATION TO COMMITTEE MEMBERS**

Objective: To recognize significant contribution of members of technical committees in developing standard(s) that can be considered to be a major development in the subject area and in national/international standardization.

Any individual can be nominated in his/her capacity as a member of a Committee/Subcommittee/panel including their Chairperson/Convenor. Candidates may be nominated by fellow members, by the Chairperson/Convenor or Member Secretary of the relevant technical committee in the prescribed form.

The person nominating shall consider those individuals who have made significant contribution in an important recent standardization project. The following aspects shall be considered while recommending for letter of appreciation:

- a) Leadership in initiating a project.
- b) Technical inputs provided on standard(s) developed including during preparation of the draft standard.
- c) Draft document(s) developed (new Indian Standards/revision of existing Indian Standards).
- d) Technical comments/inputs provided on ISO/IEC documents/deliverables or major contributions made in developing International Standards.
- e) Exceptional contributions in leading standardization projects at national/international level.
- f) Initiatives taken/contributions in standards promotion work through workshops, conferences, seminars and trainings.

*The Committee may kindly note.*

### **Item 12 NATIONAL AND INTERNATIONAL LEVEL EVENTS TO BE PARTICIPATED IN**

BIS has envisaged participation in events organised at national and international level as these events showcases the latest trends in the field of standardisation and technological advancements. Considering

the importance of these events committee may please suggest such event where participation of BIS can benefit development of national standards.

*The Committee may kindly note and suggest name of few events.*

### **Item 13 SCIENTIFIC JOURNALS AND PERIODICALS TO BE SUBSCRIBED**

BIS has taken a new initiative to subscribe to scientific journal and periodicals relevant to committee work. It is also envisaged that relevant articles from these journal and periodicals are shared with members of sectional committee.

*The Committee members may please suggest important journals and magazines that may benefit this committee.*

### **Item 14 CREATION OF POOL OF EXPERTS**

As part of its initiative to develop a pool of experts for standardization activities, BIS has established standardization chairs in technical institutes of national repute, including IITs, NITs, and others. In addition, BIS plans to establish standardization cells in various manufacturer's associations to further this effort. By tapping into the knowledge and skills available in the country, this initiative can assist BIS in developing more effective and technically sound standards. This approach can also ensure that technical experts are linked with the National Standards Body to foster a high-quality ecosystem in India.

*The Committee may kindly note.*

### **Item 15 RESEARCH PROJECT TO BE TAKEN UP FOR INCLUSION OF EMPIRICAL DATA AND INSIGHTS**

BIS has recognized the importance of including research to generate empirical data in its standardization process for the development of Indian standards. Decision making without evidence can be challenging, and it may result in dropping some crucial projects related to standard-making. In this regard, empirical data can help the committee to make informed decisions on such issues. By incorporating research-based empirical data, the standardization process can become more evidence-based, accurate, and effective, ultimately leading to the development of better and more relevant Indian standards. This type of project may be granted to experts in the relevant field.

*The Committee may deliberate on this topic and identify standards that require empirical data for their development or revision*

### **ITEM 16 GUIDELINES FOR MEMBERS OF TECHNICAL COMMITTEES**

**The committee may please note the following Guidelines provided by Competent Authority of BIS for implementation:**

- i) Status of participation of members in the previous three meetings inviting suggestions for improvement (pl refer composition of the committee at **Annex-1, Page 16**),

- ii) Status of comments received from various members during the last three years inviting suggestions for ensuring active participation,
- iii) Identification and involvement of talent available in the country related to the subject dealt by the committee and methodology to involve them in the proceedings of the Committee,
- iv) Status of standardization in the areas dealt by the committee at international level and suggestions for improving participation in the related committees of ISO/IEC, and
- v) Future plans and strategies to be adopted by the committee during the next 5 years aiming at contribution in related standardization activity at national and international level.

*The Committee may consider and give directions.*

#### **Item 17 TRANSLATION OF INDIAN STANDARDS FROM ENGLISH TO HINDI**

This is for the information of committee members that there is a provision in BIS to translate the Indian Standards in Hindi by committee members. For this purpose they will be paid Rs. 250/- per page of A-4 size (Approx 300 words). Those members who are interested to do this job of translation can register their name with BIS details available at: <http://www.bis.org.in/other/EOIHT.html>.

*The Committee may kindly note.*

#### **Item 18 DATE AND PLACE FOR THE NEXT MEETING**

#### **Item 19 ANY OTHER BUSINESS**



**ANNEX A**

(See Item 2.2.1)

**COMPOSITION OF TURBO MACHINERY SECTIONAL COMMITTEE, MED 22**

No. of Meeting	Date	Place
24 <sup>th</sup>	23 January 2024	Virtual
25 <sup>th</sup>	21 June 2024	Virtual
26 <sup>th</sup>	20 Sept. 2024	BHEL Office, Hyderabad (Physical )

SI No.	ORGANISATION REPRESENTED	PRINCIPAL MEMBER/ ALTERNATE MEMBER	24 <sup>th</sup>	25 <sup>th</sup>	26 <sup>th</sup>	Total
1)	In Personal Capacity	Shri K. Ravi ( <b>Chairperson</b> )	Y	Y	Y	3/3
2)	Atlas Copco India Ltd, Pune	Shri Vijay Sharma	Y	Y	N	2/3
3)	Automotive Research Association of India, Pune	Shri Prasad Yadav Shri Atul Gaikwad (Alt)	N	Y	N	1/3
4)	Bharat Heavy Electricals Limited, New Delhi	Shri Y. V. Rama Lakshmi Shri Vineet Kumar Nema (Alt) Shri N Suguna (Alt) Shri Madhusudan (Alt) Shri Sai Pratap KUV (Alt)	Y	Y	Y	3/3
5)	BHEL-GE Gas Turbines Services Pvt Ltd., Hyderabad	Shri H.V Ramana Murthy Shri S. Venkadesh (Alt)	N	Y	Y	2/3
6)	Boldrocchi India Private Limited, Gurugram	Shri Nokesh Aggarwal Shri Piyush Goel (Alt)	N	N	Y	1/3
7)	Bharat Petroleum Corporation Limited, Kochi	Shri Kannan V. V.	N	Y	N	1/3
8)	Burckhardt Compression India Pvt Ltd, Noida	Shri Pradip P. Shejal Shri Atul B. Prabhune (Alt)	Y	Y	N	2/3
9)	CSIR - National Physical Laboratory, New Delhi	Prof (Dr) M. Singh Dr Rajesh Kumar (Alt)	Y	N	N	1/3

10)	CSIR - National Aerospace Laboratories, Bengaluru	Shri Thennavarajan S.	Y	Y	N	2/3
11)	Directorate General Of Quality Assurance, Ministry Of Defence, New Delhi	Lt Col Deepak Sharma Shri U. R. Raja (Alt)	Y	Y	N	2/3
12)	Dresser Rand India Pvt Ltd (A Siemens Business), Gujarat	Shri M.H. Vyas Shri J. B. Raval (Alt)	Y	N	Y	2/3
13)	Elgi Equipments Ltd, Coimbatore	Shri Jayaraj B. Shri S. Senthil Kumar (Alt)	Y	Y	Y	3/3
14)	Engineers India Limited, Gurugram	Shri J. S. Duggal Shri Mahesh Easwarn (Alt) Ms. Rima Singh (Alt)	Y	Y	N	2/3
15)	GAIL (India) Limited, New Delhi	Shri Upal Sengupta Shri Praseed Sahu (Alt)	N	Y	Y	2/3
16)	GE Vernova, Gas Power, Bangalore	Shri Dinesh Venugopal Setty Shri Joshy John (Alt)	Y	Y	N	3/3
17)	Hindustan Petroleum Corpn Ltd, Mumbai	Shri V. V. Rajasekhar Shri Munesh Kumar (Alt)	Y	Y	Y	3/3
18)	Indian Institute of Technology Roorkee, Roorkee	Prof. Arun Kumar Shri C S Pant (Alt)	Y	Y	N	2/3
19)	Indian Register of Shipping , Mumbai	Shri Suneet Digikar Shri Karthik. S. (Alt)	Y	Y	Y	3/3
20)	Ingersoll Rand India Limited, Ahmedabad	Shri Dileep Patil Ms Lakshmishree Nair (Alt) Shri Mahesh Kumar K.R (Alt)	N	Y	Y	2/3
21)	NHPC Ltd.	Shri Arun Kumar singh Shri Vikas Kumar (Alt) Shri Abhinav Kumar Singh (Alt)	N	N	N	0/3
22)	NTPC Limited, New Delhi	Shri Anuj Kumar Shahi Shri Doondeshwar V. (Alt)	Y	Y	Y	3/3
23)	National Fertilizers Limited, Noida	Shri M. N. Goyal Shri Rajeev Kumar Agarwal (Alt)	Y	Y	N	2/3
24)	Nayara Energy Limited, Mumbai	Shri Chirag Prajapati Shri Jigar Parikh (Alt)	Y	Y	Y	3/3

25)	Oil And Natural Gas Corporation Limited, New Delhi	Shri Braj Kishor Rai Shri Rituraj Hazarika (Alt)	Y	N	Y	2/3
26)	Reliance Industries Limited, Mumbai	Shri Manish H Shah Shri Harendra Singh (Alt)	N	Y	Y	2/3
27)	Research Designs and Standards Organization (RDSO), Lucknow	Shri Vijay Kumar Goel Shri Satnam Singh (Alt)	Y	Y	N	2/3
28)	Siemens Limited, Mumbai	Shri Kandarp Brahmbhatt Shri Shailendra Pali (Alt) Shri Giridhar Kumar Dhinne (Alt) Shri Shallu Thakur (Alt)	Y	Y	Y	3/3
29)	Tata Consulting Engineers Limited, Navi Mumbai	Shri Shireesh S. Swami Shri Aslam Basha B. (Alt)	Y	Y	N	2/3
30)	Triveni Turbines Ltd, Bangalore	Shri Sankar B. Shri Raghavendra Shetty(Alt)	NA	NA	Y	1/1

Y – Present    N – Absent    NA – Not applicable

**ANNEX-B**  
(See Item 8)

**PROFORMA FOR PROPOSING NEW SUBJECTS FOR NATIONAL STANDARDISATION**

<b>1</b>	Proposer Name & Complete Contact Details including Phone no and Email ID.	
<b>2</b>	Proposed Title of the standard <i>(Indicate whether the standard required is for product specification/methods of test/code of practice and define the subject in brief)</i>	
<b>3</b>	Scope of the proposed standard <i>(Define the limits to be considered)</i>	
<b>4</b>	Purpose and Justification	
<b>5</b>	Likely users of standards and their inputs	
<b>6</b>	Any related standard/series of standard/system standard required to make this subject standard complete	
<b>7</b>	When the final Standard would be required <i>(any time limit)</i>	
<b>8</b>	Any specific problem being faced without this standard	
<b>9</b>	Bearing with Govt. legislation regulation, etc	
<b>10</b>	Name and address of manufacturers/implementing industries/purchasing organisation/component supplier/raw material supplier, if any	
<b>11</b>	Status of the industry in the country	
<b>12</b>	Availability of test facilities in the country	
<b>13</b>	Whether related to variety reduction, export, health, safety, consumer protection, mass consumption, energy conservation, technology transfer, technology up-gradation, protection of the environment & other National priorities.	
<b>14</b>	Whether the subject requires consideration to be given to women/ girl issues in line with Sustainable Goal 5 of the UN. If so, whether the issues are proposed to be addressed suitably in the proposed standard.	
<b>15</b>	Relevant supportive documents/other national/international standards, company standards, technical & research papers, etc if any <i>(Please give a reference or attach a copy)</i>	
<b>16</b>	R&D work done in India	
<b>17</b>	Any foreign collaboration <i>(give details)</i>	
<b>18</b>	Liaison with any organisation(s)	
<b>19</b>	Preparatory work: <ul style="list-style-type: none"> <li>• Whether draft attached</li> <li>• Whether outline attached and draft can be prepared</li> <li>• No draft possible, if so, why?</li> </ul>	
<b>20</b>	Whether this project can be funded by your organisation or can it be sponsored by industry/ association/professional bodies/ministry? If yes, to what extent?	
<b>21</b>	Whether your organisation would be interested to opt for BIS Standard Mark once the standard is published?	

Dated:

Signature:

**NOTES:**

- i. It is desirable that information is provided by the proposer for all items of the proforma; in any case information against item 1 to 5 must be provided.
- ii. Write 'NA' wherever not applicable.
- iii. Add a separate sheet to elaborate.

**ANNEX-C**

(See Item 10.3)

**TRAINING OF COMMITTEE MEMBERS**

- 1) The Bureau of Indian Standards, the National Standards Body working under the aegis of the Ministry of Consumer Affairs, Govt. of India, formulates Indian Standards on products and processes in various technology areas. The Indian Standards are formulated by technical committees of experts constituted from various stakeholders from the relevant field. BIS also has an active association with international standards formulation bodies and therefore provides a global perspective to this work. Implementation of Indian Standards ensures improvement of quality of products and services and allows rational use of resources facilitates market access and provides customer protection.
- 2) At present, BIS has set-up more than 800 technical committees, involving more than 14000 experts involving different stakeholders. However, there is also a need to sensitise stakeholders on the standards setting process which requires training to new and existing members of Technical Committees on the concept and process of formulating standards so as to increase their awareness on Standards Formulation work.
- 3) These Training Programs on standards formulation process will be open for Technical Committee Members (Principal and Alternate members only) and will be mandatory for new members before they are allowed to attend the technical committee meetings and those old members who have not attended such training programs earlier.
- 4) The training imparted will be entirely free of cost (no participation/registration fee). Further, the following category of Technical Committee members (Principal and Alternate members only) shall be entitled for assistance under the plan funds:
  - a) Representatives of Universities/academic institutions;
  - b) Government nominee;
  - c) Representatives of PSU;
  - d) Representatives of consumer organisations;
  - e) Representatives of industry associations; and
  - f) Persons in individual capacity.
- 5) The above training will help the Members in making effective contributions in Technical Committee work. A certificate of attendance will be given to all participants.
- 6) BIS intends to do a series of such 'Training Programs'. The dates for the training Program in this series shall be informed in due course.
- 7) The Technical Committee members (Principal/Alternate) are requested to confirm their

participation in the above training programme and send their nominations (giving complete details of name, designation, organisation, postal address, email id, phone/Fax No.) as and when informed, by email.