

For BIS Use Only

BUREAU OF INDIAN STANDARDS

AGENDA

NAME	No. of Meeting	Day	Date	Time	Venue
Rotating Machinery Sectional Committee ETD 15	36th	Friday	27th September 2024	14:30	Virtual

CHAIRMAN : Shri Mukesh Maravi

MEMBER SECRETARY : Mr. Jatin Tiwari

ITEM 0 GENERAL

0.1 Welcome all members and chairman

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

- 1.1 The minutes of the 35st meeting of the Rotating Machinery Sectional Committee, ETD 15 held on 22th March 2024 were circulated
- 1.2 No comments received.

The Committee may note and formally confirm the minutes of the last meeting.

ITEM 2- COMPOSITION

Composition with attendance in last two meetings is in Annexure-1

ITEM 3- NEW ITEMS AND UPDATES

- 3.1.** Request for Inputs and contact numbers on Alternator standard revision IS 13364-1 and 2
- 3.2.** Need for Standard on small PMSM motors - Elin Motors.

3.3. As per directions of BIS, Meetings can be held in MoU institutes (full list is in Annex-2). As there is no academia representation in the **committee member may recommend an institute** in which the next physical meeting may be held so that it is easy to travel and organize the meeting. This will help include more academic experts in the committee.

3.4. Single numbering of IEC 60034 series-

As it has been discussed in previous meetings, single numbering has been pushed by many members. As per BIS regulations, BIS has recommended dual numbering for IEC adopted standards except for special IEC standards or series. Hence, to adopt in single numbering system following points need to be confirmed by all members-

1. There is no national difference to be addressed with IECs being adopted under identical numbering.
2. IECs which have to be modified have to be published with different numbers altogether.
3. Country specific concerns have already been taken care of by members in IEC working groups. (Item 5)
4. Industry associations have to confirm that all the manufacturers large or small have no difficulty in implementation of IEC being adopted under identical numbering.
5. In addition, the adoption under identical numbers has the additional benefits of expanding access to international markets, ease of testing in Labs, and avoiding confusion in implementation of the standard.

ITEM 4- ACTIONS ARISING OUT OF PREVIOUS MEETINGS

Sl. No.	IS No.	TITLE	Progress/Status	ACTION TO BE TAKEN
1	IS 12065 : 1987	Permissible limits of noise levels for rotating electrical machines	Standard Sent for printing	
2	IS 12075 : 2008	Mechanical vibration of rotating electrical machines with shaft heights 56 mm and higher - Measurement, evaluation and limits of vibration severity (First Revision)	Pending for gazette, Publication is complete	
3	IS 12615 : 2018	Line operated three phase AC motors (IE Code) "Efficiency classes and performance specification" (Third Revision)	Amendment issued. Revision due , working group has to finalize draft incorporating more clarity in language , tables, referencing to IEC 60034- Shri Prasad Hardikar, Siemens- Convener Shri Dilip Bhave, In personal capacity Shri Praveen Vijayraghavan, Integrated Electric Shri Ravi Singh, ERDA V Krishnamoorthy, SITARC Shri Praveen Kumar, IEEMA Member secretary,ETD 15	
4	IS 13364 (Part 1)	Ac generators driven by reciprocating internal	P draft circulated , More inputs needed	Approve for Finalized WC

	: 1992	combustion engines - Specification: Part 1 alternators rated up to 20 kVa		when inputs have been added
5	IS 13364 (Part 2) : 1992	Ac generators driven by reciprocating internal combustion engines - Specification: Part 2 alternators rated above 20 kVa and up to 1250 kVa	P draft circulated , More inputs needed	Approve for Finalized WC when inputs have been added
6	IS 13466 : 1992	Brushes for electrical machines - Specification	P draft being drafted by Assam carbon	Approval for WC when draft is finalized
7	IS 13525 : 1992	Flexible conductors for carbon brushes - Specification	P draft being drafted by Assam carbon	Approval for WC when draft is finalized
8	IS 13584 : 1993	Brush materials for electrical machinery - Specification	P draft being drafted by Assam carbon	Approval for WC when draft is finalized
9	IS 14376 : 1996	Brush holders for electrical machines - Specification	P draft being drafted by Assam carbon	Approval for WC when draft is finalized
10	IS 9919 : 1999	Guide for selection and use of carbon brushes in electrical rotating machines (First Revision)	P draft being drafted by Assam carbon	Approval for WC when draft is finalized
11	IS 14377 : 1996	Specification for three - Phase induction motors for fans used in air - Conditioning and ventilation	P draft being floated	Approval for WC when draft is finalized
12	IS 14578 : 1999	Three - Phase induction motors for use in nuclear power plants - Specification	P draft done	Approve for WC
13	IS 14582 : 2021	Single-phase small ac electric motors for centrifugal pumps for agricultural applications	Mr. Anil Akole, and IPMA may update on this	
14	IS 14889 : 2000	Copper tamping powder for carbon brushes - Specification	P draft being drafted by Assam carbon	Archive
15	IS 15429 : 2004	Storage, installation and maintenance of DC motors - Code of practice	P draft being floated	Approval for WC when draft is finalized
16	IS 15880 : 2009	Three phase cage induction motors when fed from IGBT converters - Application guide	IEC TS 60034-25:2022 WC is complete	Approve for finalization
17	IS 2223 : 1983	Dimensions of flange mounted AC induction motors	ABB may provide update	Approval for WC when draft is finalized
18	IS 2253 : 1974	Designations for types of construction and mounting arrangements of rotating electrical machines (First Revision)	Standard published	
19	IS 2254 : 1985	Dimensions of vertical shaft motors for pumps (Second Revision)	IPMA may provide update	Approval for WC when draft

				is finalized
20	IS 2972 (Part 1) : 1979	Specification for textile motors: Part 1 loom motors (First Revision)	ATIRA was contacted , other textile associations were also contacted but either no response was met or Input was that motors used are following mostly IEC standards or come with the assembly integrated into it. Hence standards may be withdrawn	Approve for withdrawal
21	IS 2972 (Part 2) : 1979	Specification for textile motors: Part 2 card motors (First Revision)	ATIRA was contacted , other textile associations were also contacted but either no response was met or Input was that motors used are following mostly IEC standards or come with the assembly integrated into it. Hence standards may be withdrawn	Approve for withdrawal
22	IS 4029 : 2010	Guide for testing three phase induction motors (First Revision)	P draft being prepared by Member secretary incorporating updates and corrections, will be floated	Approval for WC when draft is finalized
23	IS 7572 : 1974	Guide for testing single - Phase AC and universal motors	RAVI SINGH, ERDA may provide update	
24	IS 8151 : 1976	Specification for single - Speed three - Phase induction motors for driving lifts	Standard Published	
25	IS 9283 : 2013	Motors for submersible pumpsets - Specification (Second Revision)	Pending for gazette, Publication is complete	
26	IS 9320 : 1979	Guide for testing direct - Current (DC) machines	WC complete	Approved for finalization and publication
27	IS 996 : 2009	Single phase a.c. induction motors for general purpose (Third Revision)	WC comments incorporated as discussed in last meeting	Approved for finalization and publication
28	IS 15999 (Part 1) : 2021	Rotating electrical machines - Part 1 : Rating and performance	IEC 60034-1:2022 WC complete;	Approve for finalization under dual numbering
29	IS 15999 (Part 2/Sec 1) : 2023	Rotating Electrical Machines Part 2-1: Standard Methods for Determining Losses and Efficiency from Tests Excluding Machines for Traction Vehicles	IEC 60034-1:2022 WC complete	Approve for finalization under single numbering

ITEM 5- INTERNATIONAL ACTIVITIES




5.1 The present position of work of the corresponding IEC Technical Committee IEC/ TC 2 on Rotating Machinery is given at [IEC TCs mapped onto ETD 15 or https://www.iec.ch/dyn/www/f?p=103:22:600961044507047:::FSP_ORG_ID,FSP_LANG_ID:1221,25](https://www.iec.ch/dyn/www/f?p=103:22:600961044507047:::FSP_ORG_ID,FSP_LANG_ID:1221,25)

New Procedure for participation in IEC WGs

As has been observed, members have been participating individually. But the reformed procedure for participation in IEC WGs is

- 1) Circulate meeting notice and agenda with all members (through email or whatsapp group)
- 2) After all inputs have been gathered, one point of view/strategy may be formulated for meetings.
- 3) Points of view are put in meeting of working group
- 4) Circulate meeting minutes and agenda with all members (through email or whatsapp group).
Take action on indigenous standards / new standards or update IEC adopted standards.
- 5) Voting and commenting on documents is also mandatory.

Documents for voting and comments:

S. NO.	Reference, Title	  Circulation Date	 Closing Date
1	2/2209/CDV IEC 60034-30-1 ED2: Rotating electrical machines - Part 30-1: Efficiency classes of line operated AC motors (IE code)	2024-08-30	2024-11-22
2	2/2208/CDV IEC 60072-2 ED2: Dimensions and output series for rotating electrical machines - Part 2: Frame numbers 355 to 1000 and flange numbers 1180 to 2360	2024-08-23	2024-11-15

3	2/2204/CDV IEC 60034-1 ED15: Rotating electrical machines - Part 1: Rating and performance	2024-08-09	2024-11-01
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4	2/2199/CDV IEC 60034-15 ED4: Rotating electrical machines - Part 15: Impulse voltage withstand levels of form-wound stator coils for rotating a.c. machines	2024-07-26	2024-10-18
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5	2/2213/CD IEC 60034-18-31 ED3: Rotating electrical machines - Part 18-31: Functional evaluation of insulation systems - Test procedures for form-wound windings - Thermal evaluation and classification of insulation systems used in rotating machines	2024-08-09	2024-10-04
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ITEM 6- ANY OTHER BUSINESS

ANNEX 1
COMPOSITION

Note - Attendance is counted organization wise. One organization's attendance is counted once only.

<u>S.No.</u>	<u>Organization</u>	<u>Member Name</u>	<u>Attendance</u>
1	<u>Bharat Heavy Electricals Limited, Bhopal</u>	<u>Shri Mukesh Kumar Maravi</u>	<u>2/2</u>
2	<u>Asea Brown Boveri Limited, Faridabad</u>	<u>Sumit Tyagi</u>	<u>2/2</u>
3	<u>Asea Brown Boveri Limited, Faridabad</u>	<u>Lokesh B M</u>	
4	<u>Bharat Bijlee Limited, Mumbai</u>	<u>Shri Salil Kumar</u>	<u>2/2</u>
5	<u>Bharat Bijlee Limited, Mumbai</u>	<u>Bhagyashree Sanjay Pawar</u>	
6	<u>Bharat Heavy Electrical Limited, New Delhi</u>	<u>Shri Krushna Chandra Panda</u>	<u>0/2</u>
7	<u>Bharat Heavy Electrical Limited, New Delhi</u>	<u>Shri P Dali Naidu</u>	
8	<u>Central Electricity Authority, New Delhi</u>	<u>Jitesh Shrivastava</u>	<u>2/2</u>
9	<u>Central Electricity Authority, New Delhi</u>	<u>Sh. Rishabh Gaur</u>	
10	<u>Central Power Research Institute, Bengaluru</u>	<u>Shri S Prashob</u>	<u>2/2</u>
11	<u>Electrical Research and Development Association, Vadodara</u>	<u>Ravi Singh</u>	<u>2/2</u>
12	<u>Electrical Research and Development Association, Vadodara</u>	<u>Jitendra Tahilwani</u>	

<u>13</u>	<u>Engineers India Limited, New Delhi</u>	<u>Shri Raman Sood</u>	<u>0/2</u>
<u>14</u>	<u>Engineers India Limited, New Delhi</u>	<u>Shree Ravish K. Raman</u>	
<u>15</u>	<u>Havells India Limited, Noida</u>	<u>ANIL SUKUMAR AKOLE</u>	<u>2/2</u>
<u>16</u>	<u>Havells India Limited, Noida</u>	<u>Vinayak Atre</u>	
<u>17</u>	<u>Hindustan Electric Motors, Mumbai</u>	<u>Shri Sanjay P. Jadia</u>	<u>2/2</u>
<u>18</u>	<u>Hindustan Electric Motors, Mumbai</u>	<u>Dilip Bhawe</u>	
<u>19</u>	<u>INTEGRATED ELECTRIC COMPANY PRIVATE LIMITED, Bengaluru</u>	<u>Shri Praveen Vijayraghavan</u>	<u>2/2</u>
<u>20</u>	<u>Indian Electrical and Electronics Manufacturers Association, New Delhi</u>	<u>Shri Seetharaman K.</u>	
<u>21</u>	<u>Indian Electrical and Electronics Manufacturers Association, New Delhi</u>	<u>Shri Praveen kumar</u>	<u>2/2</u>
<u>22</u>	<u>Indian Pump Manufacturers Association, Mumbai</u>	<u>Shri Utkarsh. A. Chhaya</u>	
<u>23</u>	<u>Indian Pump Manufacturers Association, Mumbai</u>	<u>Shri K.V. Karthik</u>	<u>2/2</u>
<u>24</u>	<u>Indian Pump Manufacturers Association, Mumbai</u>	<u>Shri ANOOP AGARWAL</u>	
<u>25</u>	<u>International Copper Association India, Mumbai</u>	<u>K N Hemanth Kumar</u>	
<u>26</u>	<u>International Copper Association India, Mumbai</u>	<u>Shri Jyotish Pande</u>	<u>2/2</u>

<u>27</u>	<u>International Copper Association India, Mumbai</u>	<u>Shri Mohit Gupta</u>	
<u>28</u>	<u>NTPC Limited, New Delhi</u>	<u>Shri S. N. Tripathi</u>	
<u>29</u>	<u>NTPC Limited, New Delhi</u>	<u>Shri BVVS Ganesh</u>	<u>2/2</u>
<u>30</u>	<u>Nuclear Power Corporation of India Limited, Mumbai</u>	<u>Shri Jayanth Kumar Boppa</u>	
<u>31</u>	<u>Nuclear Power Corporation of India Limited, Mumbai</u>	<u>Shri Ritesh M. Chovatia</u>	<u>2/2</u>
<u>32</u>	<u>PICL India Private Limited, Faridabad</u>	<u>Rabindra Sahoo</u>	<u>0/2</u>
<u>33</u>	<u>PICL India Private Limited, Faridabad</u>	<u>PANKAJ TANEJA</u>	
<u>34</u>	<u>Rotomag Motors and Controls Private Limited, Gujarat</u>	<u>SH UMESH BALANI</u>	<u>new</u>
<u>35</u>	<u>Scientific and Industrial Testing and Research Centre, Coimbatore</u>	<u>Dr. K ULAGANATHAN</u>	
<u>36</u>	<u>Scientific and Industrial Testing and Research Centre, Coimbatore</u>	<u>Krishnamoorthy V</u>	<u>2/2</u>
<u>37</u>	<u>Siemens Limited, Mumbai</u>	<u>Shri Ashish Shere</u>	
<u>38</u>	<u>Siemens Limited, Mumbai</u>	<u>Shri Prasad Hardikar</u>	<u>2/2</u>
<u>39</u>	<u>Southern India Engineering Manufacturers Association, Coimbatore</u>	<u>Dr. R. Subramanian</u>	
<u>40</u>	<u>Southern India Engineering Manufacturers Association, Coimbatore</u>	<u>Shri S. ARUNKUMAR</u>	<u>2/2</u>
<u>41</u>	<u>Thyssenkrupp Industrial Solutions (India) Private Limited, Mumbai</u>	<u>Shri Vaijnath G. Sangekar</u>	

<u>42</u>	<u>Thyssenkrupp Industrial Solutions (India) Private Limited, Mumbai</u>	<u>Charuta Vikram Mulay</u>	<u>2/2</u>
<u>43</u>	<u>Toshiba Mitsubishi-Electric Industrial Systems Corporation, Bengaluru</u>	<u>Mr. Sudheer Tapaskar</u>	
<u>44</u>	<u>Toshiba Mitsubishi-Electric Industrial Systems Corporation, Bengaluru</u>	<u>Manish Joshi</u>	<u>1/2</u>

ANNEX 2

MOU INSTITUTES LIST

<u>S.No</u>	<u>Institution</u>	<u>Date of MoU</u>
1	Birla Institute of Technology & Science, Pilani	29-08-2023
2	Manipal Academy of Higher Education, Manipal	29-08-2023
3	Indian Institute of Technology, Roorkee	11-03-2022
4	Indian Institute of Technology, Kanpur	31-10-2022
5	Indian Institute of Technology, Madras	28-11-2022
6	Indian Institute of Technology (ISM), Dhanbad	31-10-2022
7	Indian Institute of Technology-BHU, Varanasi	28-11-2022
8	Indian Institute of Technology, Indore	28-11-2022
9	Indian Institute of Technology, Guwahati	16-02-2023
10	Indian Institute of Technology, Gandhinagar	16-02-2023
11	Indian Institute of Technology, Patna	28-11-2022
12	National Institute of Technology, Rourkela	31-10-2022

13	National Institute of Technology, Tiruchirappalli	28-11-2022
14	National Institute of Technology, Calicut	16-02-2023
15	Malviya National Institute of Technology (MNIT), Jaipur	28-11-2022
16	Assam Engineering College, Guwahati	04-08-2023
17	Banasthali Vidyapith, Rajasthan	04-08-2023
18	Bhagalpur College of Engineering, Bhagalpur, Bihar	04-08-2023
19	Chandigarh College of Engineering and Technology, Chandigarh	04-08-2023
20	COEP Technological University, Pune	04-08-2023
21	Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT, Gandhinagar)	04-08-2023
22	Dr Babasaheb Ambedkar Technological University, Raigad	04-08-2023
23	Government College of Engineering, Nagpur	04-08-2023
24	Government College of Engineering, Amravati	04-08-2023
25	Guru Nanak Dev Engg. College, Ludhiana	23-06-2023
26	Indian Institute of Engineering Science and Technology, Shibpur, WB	04-08-2023
27	L D College of Engineering, Ahmedabad	04-08-2023
28	Madan Mohan Malviya University of Technology, Gorakhpur	04-08-2023
29	Maulana Azad National Institute of Technology (MANIT), Bhopal	04-08-2023
30	MBM University, Jodhpur	04-08-2023
31	National Dairy Research Institute, Karnal	11-08-2023
32	National Institute of Technical Teachers' Training and Research (NITTTR), Bhopal	04-08-2023
33	National Institute of Technology, Delhi	04-08-2023

34	National Institute of Technology, Agartala	04-08-2023
35	National Institute of Technology, Durgapur	04-08-2023
36	National Institute of Technology, Kurukshetra	04-08-2023
37	Parul University, Vadodara	04-08-2023
38	S V National Institute of Technology, Surat	04-08-2023
39	Veer Surendra Sai University of Technology (VSSUT), Burla, Odisha	04-08-2023
40	Vellore Institute of Technology (VIT), Chennai	04-08-2023
41	KLE Technological University, Hubli	04-08-2023
42	National Institute of Technical Teachers' Training and Research (NITTTR), Taramani, Chennai	17-11-2023
43	Govt College of Engineering and Technology, Jammu	25-10-2023
44	PSNA College of Engineering and Technology, Dindigul, Tamilnadu	27-09-2023
45	Sri Venkateswara College of Engineering, Chennai, Tamilnadu	17-11-2023
46	Vel Tech Multi Tech Dr Rangarajan Dr Sakunthala Engineering College, Chennai	17-11-2023
47	Sri Sai Ram Engineering College, Chennai	17-11-2023
48	SRM Institute of Science and Technology, Kattankulathur, Tamilnadu	04-08-2023
49	University of Visvesvaraya College of Engineering, Bengaluru	04-08-2023
50	Agricultural Engineering College and Research Institute, Coimbatore, Tamil Nadu	04-08-2023
51	Dr Shyama Prasad Mukherjee International Institute of Information Technology, Naya Raipur	04-08-2023
52	NIT Jalandhar	07-10-2023
53	Rajiv Gandhi University of Knowledge Technologies- RGUKT, AP IIIT, Nuzvid, Andhra Pradesh	04-08-2023
54	Institute of Technology, Nirma University, Ahemdabad	14-12-2023

55	Rajagiri School of Engineering, Kochi, Kerala	19-12-2023
56	Cochin University of Science and Technology, Kochi, Kerala	19-12-2023
57	NIT Mizoram	17-11-2023
58	College of Engineering, Andhra University, Visakhapatnam	04-08-2023
59	BMS Institute of Technology and Management, Yelahanka, Bengaluru	20-12-2023
60	Bundelkhand Institute of Engineering and Technology, Jhansi, Uttar Pradesh	27-12-2023
61	Shanti Lal Shah Engineering College, Bhavnagar, Gujarat	05-12-2023
62	Kurukshetra University, Kurukshetra	11-01-2024
63	Veermata Jijabai Technological Institute (VJTI), Mumbai	11-01-2024
64	National Institute of Technology, Jamshedpur	12-01-2024
65	National Institute of Technology, Sikkim	12-01-2024
66	Indian Institute of Technology, Kharagpur	16-10-2023
67	Gaya College of Engineering, Gaya	04-08-2023
68	Gujarat Technological University, Ahmedabad	16-01-2024
69	Birla Institute of Technology, Mesra, Ranchi, Jharkhand	15-12-2023
70	National Institute of Technology Raipur, Chhattisgarh	24-01-2024
71	Government Engineering College, Raipur	24-01-2024
72	National Institute of Technology, Uttarakhand	25-01-2024
73	Jorhat Engineering College, Jorhat, Assam	04-08-2023
74	National Institute of Technology, Patna	12-01-2024
75	Netaji Subhash University of Technology (NSUT), New Delhi	05-01-2024

76	Graphic Era Deemed to be University (GEU), Dehradun	03-01-2024
77	National Institute of Technology, Hamirpur, Himachal Pradesh	07-02-2024
78	Muzaffarpur Institute of Technology	04-08-2023
79	International Institute of Information Technology, Bhubaneswar	30-01-2024
80	Indian Institute of Technology, Jammu	09-02-2024
81	Indian Institute of Management, Mumbai	28-02-2024
82	National Institute of Advanced Manufacturing Technology, Ranchi	04-08-2023
83	National Institute of Technology, Srinagar, Jammu & Kashmir	27-03-2024
84	Indian Institute of Technology, Bombay	13-09-2023
85	G B Pant University of Agriculture and Technology, Pantnagar	29-08-2023
86	Thapar Institute of Engineering and Technology Patiala	09-05-2024
87	Bineswar Brahma Engineering College, Kokrajhar	13-03-2024
88	Biju Patnaik University of Technology, Odisha	15-03-2024
89	Uttar Pradesh Textile Technology Institute, Kanpur	08-02-2024
90	Indian Institute of Science	03-07-2024
91	Jadavpur University	29-07-2024