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BUREAU OF INDIAN STANDARDS

MINUTES

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Low Voltage Switchgear and Controlgear Sectional Committee, ETD 07	29 th	Thursday	27 July 2023	1030h	Virtual (BIS Webex)

CHAIRMAN: Shri Anupam Awasthi

MEMBER SECRETARY: Shri Ashok Kumar

Members present:

SL. No.	Organization	Name
1	Chairperson (ETD 07) In Personal Capacity	Shri Anupam Awasthi
2	Member Secretary (ETD 07) Bureau of Indian Standards (BIS)	Shri Ashok Kumar
3	ABB India Limited, Bengaluru	Shri Shelesh Kumar Tiwari
4	BCH Electric Limited, New Delhi	Shri Vishank Aggarwal Shri Patro UAK
5	Bharat Heavy Electrical Limited, New Delhi	Shri Debasisa Rath
6	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Bratin Banerjee Shri Sujit Kumar Pathak
7	Central Electricity Authority, New Delhi	Ms. Arti Singh
8	Central Power Research Institute, Bengaluru	Shri B R Vasudevamurthy
9	Consumer Guidance Society of India, Mumbai	Shri Goutam Bhatia
10	Electrical Research and Development Association, Vadodara	Shri Y.L. Pathan Shri Gautam Som
11	Elmex Controls Private Limited, Vadodara	Shri Robin Virani
12	Engineers India Limited, New Delhi	Mr C. Abhinay Mrs Shirali Aggarwal
13	Hager Electro Private Limited, New Delhi	Shri Shirish Zope
14	Haryana Vidyut Prasaran Nigam Limited, Panchkula	Er. Parveen Mund
15	Havells India Limited, Noida	Shri Manoj Kumar Gupta
16	HPL Electric and Power Limited, Noida	Shri Rishi Seth Shri Brajesh Tomer
17	IN PERSONAL CAPACITY	Shri Anil Pandit
18	Indian Electrical and Electronics Manufacturers Association, New Delhi	Shri Navdeep Singh Dr Saad Faruqui
19	Larsen and Toubro Limited, Mumbai	Shri Ritesh Kumar Patel
20	Panasonic Life Solutions India Private Limited, Thane	Shri Vijay Wedhane



21	Schneider Electric India Private Limited, Gurugram	Shri Anilesh K. Shri Saravanan Shanmugam
22	Siemens Limited, Mumbai	Shri Rahul Srivastava
23	Small Scale MCD Manufactures Welfare Association, New Delhi	Shri Pramod K. Jain
24	UL India Private Limited, Bengaluru	Shri Madhusudan BK
25	Western India Switchgear Manufacturers Association, Mumbai	Shri Chandresh N. Shah
26	C & S electric ltd	Shri Nitin Rastogi

Item 0 GENERAL

0.1 WELCOME & OPENING REMARKS BY THE CHAIRMAN

The Chairman welcomed the members present in the meeting. He provided comprehensive insights into the significance of workshop on structural reforms in standardization activities. He shared key suggestions proposed by chairpersons, including funding for individual committees, strengthening international participation, creating an expert database, identifying new areas for standard formulation, and encouraging industry-led standardization work. He appreciated the efforts of various working groups of the committee actively contributing to the process of standardization and hoped for a fruitful discussion on all Agenda points

0.2 Member Secretary welcomed the members to the meeting and briefed the members regarding various agenda points which required detailed discussions and solicited the co-operation of the members for completing the agenda in time.

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The committee confirmed the minutes of the 28th meeting of Low Voltage Switchgear and Controlgear Sectional Committee, ETD 07, held on 29 December 2022 virtually.

Item 2 COMPOSITION OF LOW VOLTAGE SWITCHGEAR AND CONTROLGEAR SECTIONAL COMMITTEE, ETD 07

2.1 The committee noted the information given in the agenda.

2.2 ETD 07 members listed below agreed to share contact details of relevant personnel from the following organizations and to follow up with them in order to have active participation from the respective organizations in the committee work:

- a) Mr. Anil Pandit reached out to **DRDO** and **Sur Iron and Steel Company Private Limited**, requesting updated nominations. As of now, there has been no confirmation from these organizations. Mr. Anil Pandit will once again contact them to provide contact details of nominated person for the committee. The decision on their membership in the committee will be taken in the next committee meeting.
- b) **Jasper Engineers Pvt. Ltd.** – Mr Patro and Mr Vishank, M/s BCH Electric Ltd. agreed to provide contact details of the person within one month.
- c) **GE Energy Management System** – Mr Kuril, M/s ABB India Ltd. agreed to follow up with them to get their nomination for the committee.
- d) **Rural Electrification Corporation Limited, New Delhi** – Mr. Anil Pandit agreed to follow up with



them to get their nomination for the committee.

- e) Letter to be sent to **International Copper Association India**, Mumbai to seek updated nominations.

2.3 Co-option requests received via Standardization portal which was also attached in Annex 1 and was considered by the committee. The following was decided:

- a) It was decided to co-opt M/s Schaltbau india pvt ltd. Gurugram, given the organization's wide experience in the Low voltage switchgear field.
- b) It was decided to invite Mr. Gopakumar, President, National federation of engineers for electrical safety to give the presentation about the company. The committee will decide about the co-option of the National Federation of Engineers after the presentation.

Item 3 ACTIONS ARISING OUT OF PREVIOUS MEETING

The committee noted the information given in the agenda.

Item 4 PRESENT POSITION OF WORK

The committee noted the present position of work under the scope of **ETD 07**.

The committee also examined the list of IEC standards against which no Indian Standards exist as had been identified by member secretary for consideration of the committee for harmonization.

- I. The committee discussed the response received from the Elmex Controls Private Limited, Vadodara regarding identical adoption of **IEC 60947-7-1: 2009 and IEC 60947-7-2: 2009** as Indian Standard. Members from Electrical Research and Development Association, UL India Private Limited and Central Power Research Institute are requested to kindly review the full scope of these standards and testing facilities and submit the report to BIS within 2 months. The decision on adoption of these standards will be taken in the next committee meeting.
- II. It was decided to circulate the **IEC 62423: 2009** '*Type F and type B residual current operated circuit-breakers with and without integral overcurrent protection for household and similar uses*' to all the committee members to review. The **WG 5** members are requested to kindly assess the suitability of implementation of this IEC standard and submit the report to BIS within 1 month from the date of circulation.
- III. The committee further reviewed the list of IEC standards given at Annex 3 of the agenda against which no Indian Standards exist and decided to allocate the task of initial review of all other standards to
 - WG 3 (For review of standards under IEC TC 121 and SC 121A),
 - WG 4 (For review of standards under IEC SC 121B) and
 - WG 5 (For review of standards under IEC SC 23E) (refer Item 7.4 of Minutes of last meeting for WG composition).

These working groups were advised to carry out the assessment of the list of respective IEC committee standards given at Annex 3 of the agenda to:

- a) Assess the suitability of implementation of these IEC standards in India after identical adoption
- b) Testing infra/Feasibility of test



- c) Feedback for making infrastructure changes as per new requirements by manufacturers.

4.1 DRAFTS FINALIZED FOR PRINTING

The following documents are under printing stage.

Sl. No.	IS/IEC no.
1	Doc ETD 07 (21504) Amendment 1 to IS 17120: 2019 In-Cable control and protection device for mode 2 charging of electric road vehicles IC – CPD
2	Doc ETD 07 (21507) First Revision of IS/IEC 60898 (Part 2) : 2003 Electrical accessories - Circuit - Breakers for overcurrent protection for household and similar installations: Part 2 circuit - Breakers for ac and dc operation
3	Doc ETD 07 (21510) First Revision of IS/IEC 60947-6-1: 2013 Low-Voltage Switchgear and Controlgear: Part 6 Multiple Function Equipment, Section 1 Transfer switching equipment
4	Doc ETD 07 (21514) First Revision of IS/IEC 60947-6-2: 2007 Low-voltage switchgear and controlgear: Part 6 Multiple function equipment Section 2 Control and protective switching devices or equipment CPS
5	Doc ETD 07 (21531) First Revision of IS/IEC 61439-1: 2011 Low-Voltage Switchgear and Controlgear Assemblies: Part 1 General Rules
6	Doc ETD 07 (21532) First Revision of IS/IEC 61439-2: 2011 Low Voltage Switch Gear and Controlgear Assemblies: Part 2 Power Switch Gear and Control Gear Assemblies
7	Doc ETD 07 (21534) First Revision of IS/IEC/TS 61439-7: 2014 Low-Voltage Switchgear and Controlgear Assemblies: Part 7 Assemblies for Specific Applications such as Marinas, Camping Sites, Market Squares, Electric Vehicles Charging Stations
8	Doc ETD 07 (21528) IEC 60898-3:2019+AMD 1: 2022 CSV Electrical accessories - Circuit-breakers for overcurrent protection for household and similar installations - Part 3: Circuit-breakers for DC operation
9	Doc ETD 07 (21523) IS 14577/ IEC 61363-1:1998 Electrical installations of ships and mobile and fixed offshore units Part 1: Procedures for calculating short-circuit currents in three-phase ac
10	Doc ETD 07 (19623) IS/IEC 60947 : Part 5 : Sec 2: 2007 Low-Voltage Switchgear And Controlgear: Part 5-2 Control Circuit Devices And Switching Elements Proximity Switches
11	Doc ETD 07 (21525) IS 14614 / IEC 61543: 2022



	Residual current-operated protective devices RCDs for household and similar use Electromagnetic compatibility (First Revision)
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4.2 DRAFTS FOR FINALIZATION

The committee noted the information given in the agenda.

4.3 DRAFTS FOR APPROVAL FOR WIDE CIRCULATION

Sl No.	IS No.	Decision Taken in the last meeting	Action reported in the agenda	Decision Taken
1.	<p>IS 12640 (Part 1): 2016 Residual current operated Circuit Breakers without integral overcurrent protection for household and similar uses RCCBs: Part 1 general rules (Second Revision)</p> <p>Equivalent IEC: Identical to IEC 61008-1: 2010+Amd 1: 2012 CSV</p> <p>Latest Base IEC: IEC 61008-1:2010+AMD1:2012 +AMD2: 2013 CSV</p>	<p>The committee members requested for 30 days additional time from the date of the meeting to examine and review the list of changes proposed by Mr C S Kore, M/s Schneider Electric India Pvt. Ltd. and submit their comments, if any.</p>	<p>It was decided that in case of receipt of comments within the above mentioned period, the comments shall be put up for consideration of the committee.</p> <p>In case no comments are received from the committee members, the IEC Amd 2: 2013 shall be put in wide circulation for 60 days for adaptation as Amd 1 to IS 12640 (Part 1): 2016.</p>	<p>No comments were received on list of changes proposed by Mr C S Kore, M/s Schneider Electric India Pvt. Ltd.</p> <p>It was decided to Wide Circulate the amendment 2 of IEC 61008-1 as amendment 1 of IS 12640 (Part 1): 2016 for the period of 2 months</p>
2.	<p>IS 12640 (Part 2): 2016 Residual current operated circuit - Breakers with integral overcurrent protection for household and similar uses (RCBOs): Part 2 General rules</p> <p>Equivalent IEC: Identical to IEC 61009-1:2010+AMD1:2012 CSV</p> <p>Latest Base IEC: IEC 61009-1:2010+AMD1:2012 +AMD2: 2013 CSV</p>	<p>Mr Chandrakumar S, M/s UL India Pvt. Ltd. agreed to prepare a list of changes being introduced by the amendment 2 of IEC.</p> <p>List of inputs awaited from Mr S Chandrakumar, M/s UL India Pvt. Ltd</p>	<p>Mr S Chandrakumar, M/s UL India Pvt. Ltd. Informed that he is not able to take up the subject task due to change in current job portfolio and he is not involved with this standard currently. The committee may discuss to nominate expert to prepare the list of changes required.</p>	<p>Mr Madhusudan BK, M/s UL India Pvt. Ltd. agreed to prepare a list of changes being introduced by the amendment 2 of IEC within 2 months from the date of meeting.</p> <p>Committee members were requested to examine the list once circulated and provide their comments, if any, on the same within 30 days from the date of circulation.</p>



				It was decided that in case of receipt of comments within the above mentioned period from committee members, the comments shall be put up for consideration of the committee. In case no comments are received from the committee members, the IEC Amd 2: 2013 shall be put in wide circulation for 60 days for adaptation as Amd 1 to IS 12640 (Part 2): 2016.
3.	IEC 62955: 2018 Residual direct current detecting device (RDC-DD) to be used for mode 3 charging of electric vehicles	The committee considered and decided to issue the IEC standard in wide circulation for 60 days inviting comments for identical adoption of these IEC standards as Indian Standards	The document is in Wide circulation.	It was decided to circulate the copy of IEC 62955: 2008 among WG 5 member to examine the standard.

4.4 P-DRAFTS UNDER PREPARATION

Sl No.	IS No.	Decision Taken in last meeting	Action reported in the agenda	Decision taken
1.	IS 13032: 1991 'A.c. miniature circuit Breaker boards for voltages not exceeding 1000 V - Specification'	The committee members discussed the NWIP again along with the reports submitted. Mr Surendran was once again invited to the meeting and he presented the requirements, proposal for modifications and respective justifications along with the FAT shared by him. Committee opined that IS/IEC 61439-3 covers both 220V and 415V and many household DBs have been tested and supplied after ensuring	The WG 6 meeting was conducted in March and following recommendations were submitted (presentation for the WG6 comments and recommendations attached at Annex 4 of the agenda): 1. All the scenario's / concerns that were raised by Mr Narayanan Surendran are due to nonadherence to the respective product standards and some of them were purely an integration error or an lapse from the electrician / integrator during installation. 2. The product standard IS13032 that was under discussion was not the appropriate product standard for the said product application.	The committee discussed the recommendations submitted by WG 6 and it was decided that there is no need to advocate for a separate standard as the requirements submitted by Mr. Surendran are already covered in IS/IEC61439-1/3 . The applicability of IS 13032 also discussed during the meeting. Mr Saravanan informed that most of the manufacturers are



		<p>compliance to the above standard.</p> <p>A new Working Group WG 6 was formed with the following scope of work:</p> <p>i) Map the requirements mentioned by Mr Narayan Surendran against IS/IEC 61439-3. (Mr Surendran to be invited to the WG meetings for the purpose).</p> <p>ii) In addition, IS 13032 being a pre-2000 standard, the WG 6 shall prepare a draft revision document of IS 13032. The draft shall be submitted by the working group within 1 month period.</p> <p>WG 6 composition as decided by the committee is given below:</p> <ol style="list-style-type: none"> 1. Shri S.Saravanan, M/s Schnieder Electric – Convener 2. Shri Anil Kumar Pandit, In personal capacity (Member), 3. Shri Robin Virani, M/s Elmex Controls Private Limited (Member) <p>Shri Anilesh K, Schneider Electric India Pvt. Ltd. (Member)</p>	<p>3. The WG6 members elaborated Mr Narayan Surendran on the right product standard IS/IEC61439-1/3 for the said application and also explained the relevant standard clauses & guidelines for each and every scenario's that were highlighted by him.</p> <p>4. The WG6 members were also of the opinion that the installation of the home distribution boards, its wiring and adhering to the rules and guidelines of the respective standard lies purely with the electrician and the concern electricity board engineer and not in the scope of BIS.</p> <p>5. BIS will ensure that there are appropriate product standards /codes for various application / function including its development and maintenance. However the responsibility of establishing a list of electrical persons who is said to ensure safety and performance is not in the scope of BIS committee.</p>	<p>referring IS/IEC 61439 Part 1 and Part 3 in place of IS 13032.</p> <p>Members from Small Scale MCD Manufactures Welfare Association, New Delhi are requested to kindly review the applicability of IS 13032 and submit the report to BIS within 2 months from the date of meeting.</p> <p>As IS 13032: 1991 is for factory assembled A.C. MCB boards and IS 8623 has become obsolete, hence it was decided not to re-affirm the above standard in the next cycle, as another standard IS/IEC 61439-1/3 covers all the requirements.</p>
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Item 5 Review of Published Standards for Revision/Reaffirmation



5.1 The committee noted the information given in the agenda.

5.2 Action Research Projects (ARP) for Pre-2000 standards

SL no.	IS no. & Title	Decision taken in the last meeting	Action Reported in the agenda	Decision Taken
1	IS 5039: 1983 Specification for distribution pillars for voltages not exceeding 1000 V AC and 1200 V DC (First Revision)	<p>The committee had examined the Action Research Project (ARP) reports submitted by BIS officials to review and assess the Indian Standards given alongside.</p> <p>In the last meeting, it was decided that the Working Group WG 1 comprising of following:</p> <ol style="list-style-type: none"> 1. Smt Sumbul Munshi , CPRI (Convener), 2. Shri Rahul Srivastava, Siemens Ltd. (Member), 3. Shri Anil Kumar Pandit, In personal capacity (Member), 4. Shri Shri Madhusudan BK, UL India Pvt. Ltd. (Member) and 5. Shri Anilesh K, Schneider Electric India Pvt. Ltd. (Member)) <p>shall review the reports and submit its recommendations for consideration of the committee within 1 month.</p>	WG 1 to update the committee.	WG 1 requested to kindly review the Action Research Report on IS 5039 and submit its recommendations for consideration of the committee within 2 months.
2	IS 8588 (Part 1): 1977 Specification for thermostatic bimetals: Part 1 General requirements and methods of tests	<p>The following members were allocated the work to draft a revision document after due consultation with Mr Akhil, M/s Shivalik:</p> <ol style="list-style-type: none"> 1) Shri Anil Kumar Pandit, In personal capacity 2) Shri Anilesh K, Schneider Electric India Pvt. Ltd. 	Shri Anil Kumar Pandit and Shri Anilesh K were requested to kindly update the committee.	<p>Shri Anil Kumar Pandit informed that lot of DIN standards are now referred for thermostatic bimetal in place of IS 8588 (Part 1): 1977.</p> <p>Representatives from IEEMA are requested to kindly check the followings within their membership and submit the report to BIS within 2 months from the date of meeting:</p> <ol style="list-style-type: none"> 1) Applicability of IS 8588 (Part 1): 1977



				2) DIN standard referred by industries for thermostatic bimetal in place of IS 8588 (Part 1): 1977
3	IS 8623 (Part 2): 1993 Specification for low - Voltage switchgear and controlgear assemblies: Part 2 Particular requirements for bus-bar trunking systems busways (first revision)	Recommendation by WG 1: Withdraw IS 8623 (Part 2): 1993 Decision of the committee: The committee agreed that the requirements of IS 8623 (Part 2): 1993 are now covered under IS/IEC 61439-6:2012. It was, therefore, decided to withdraw IS 8623 (Part 2): 1993.	The Standard is Withdrawn.	The committee noted the information given in the agenda.
4	IS 8623 (Part 3): 1993 Specification for low - Voltage switchgear and controlgear assemblies: Part 3 Particular requirements for equipment where unskilled persons have access for their use	Recommendation by WG 1: Withdraw IS 8623 (Part 3): 1993 Decision of the committee: The committee agreed that the requirements of IS 8623 (Part 3): 1993 are now covered under IS/IEC 61439-3:2012. It was, therefore, decided to withdraw IS 8623 (Part 3): 1993.	The Standard is Withdrawn.	The committee noted the information given in the agenda.

Item 6 IMPLEMENTATION OF INDIAN STANDARDS

6.1 The committee noted the information given in the agenda.

Item 7 INTERNATIONAL ACTIVITIES

7.1 Programme of Work and List of Published Standards

The committee noted the information given in the agenda.

Item 8 FUTURE PLANS AND STRATEGIES

The new Standards National Action Plan (SNAP) has listed developing Indian Standards on:

- a. LV Switchgear and Controlgear and
 - b. DC Switchgear
- as focus areas.

The Sectional Committee agreed to prioritize among different projects and develop Indian Standards on the subjects identified in SNAP. WG3, WG 4 and WG 5 were advised to identify suitable application areas



for developing and harmonizing standards on the above subjects.

8.1 Mr. Anilesh K from Schneider Electric India Private Limited shared the latest updates on the formulation of standards for **DC-RCBO in IEC SC 23E**. He offered to give presentation on the re-structuring of IEC 61009 and 61008 series, along with the adoption of IEC standards numbering system as Indian Standards, during the next committee meeting.

8.2 Mr. Anil Kumar Pandit proposed the formulation of a standard on Arc fault detection devices (AFDD). **IEC 62606: 2013** '*General requirements for arc fault detection devices*' will be reviewed for adoption as Indian Standards.

Item 9 DATE AND PLACE OF NEXT MEETING

It was decided to hold the next meeting of the sectional committee tentatively in Nov 2023 in physical mode.

The final date and place of the meeting shall be decided in consultation with the Chair of the committee.

Item 10 ANY OTHER BUSINESS

There being no other business, the meeting ended with a vote of thanks to the Chair.