



BUREAU OF INDIAN STANDARDS
ELECTRONICS & IT DEPARTMENT

MINUTES	
TWELFTH ELECTRONIC MEASURING INSTRUMENTS, SYSTEMS AND ACCESSORIES SECTIONAL COMMITTEE (LITD 08)	
DATE: 9th August 2024 (Friday)	MODE: Hybrid
TIME: 10:30 AM to 1:00 PM	VENUE: Anushilan (Copper room) Manak Bhawan, BIS Headquarter, New Delhi, India
CHAIRPERSON: Shri Atul Gupta	https://bismanak.webex.com/bismanak/j.php?MTID=me45487ceb9608c31d938e343853b4148
MEMBER SECRETARY: Shri Priyanshu Sharma	

PRESENT:

Sl. No.	Name	Organization
3.	Mr. Animesh Biswas	Atomic Energy Regulatory Board
4.	Mr. Neeraj Kumar	Atomic Energy Regulatory Board
5.	Mr. A.A.P.S.R. Acharyulu	Atomic Minerals Directorate for Exploration and Research
6.	Ms. Neelam Ghai	Ashbee Systems
7.	Mr. Abhimanyu Chowdhury	Bhabha Atomic Research Centre
8.	Dr. Sourav Mukhopadhyay	Bhabha Atomic Research Centre
9.	Ms. Kum. Diana Denice	Bhabha Atomic Research Centre
10.	Shri Kaushik Mondal	Bharat Electronics Limited
11.	Dr. R.K. Vishwakarma	CSIR - Central Institute for Mining and Fuel Research
12.	Mr. Anuj Kansal	Development Commissioner Micro-Small and Medium Enterprises
13.	Mr. S.V. Sharma	Development Commissioner Micro-Small and Medium Enterprises
14.	Mr Akhilesh Jha	Development Commissioner Micro-Small and Medium Enterprises
15.	Smt. K. Lakshmi Latha	Electronics Corporation of India Limited
16.	Mr Saurav Bhagabati	Electronics Corporation of India Limited
17.	Ms. K. Kameswari	Indira Gandhi Centre for Atomic Research
18.	Mr Aditya Gour	Indira Gandhi Centre for Atomic Research
19.	Ms Aruna Thakar	Institute for Plasma Research
20.	Mr. Aveg Kumar	Institute for Plasma Research
21.	Mr Praveen Kumar	Institute for Plasma Research
22.	Dr. Aravind Kilaru	K L University

23.	Mr. Vijayganesh Annadurai	Kistler Instruments India Private Limited
24.	Mr. Ashutosh Agarwal	Legal Metrology Department, Ministry of Consumer Affairs, Food and Public Distribution, Department of Consumer Affairs
25.	Mr. Bipin Sharma	Legal Metrology Department, Ministry of Consumer Affairs, Food and Public Distribution, Department of Consumer Affairs
26.	Ms. Sadhana Verma	Standardization Testing and Quality Certification
27.	Ms. C Sailaja	Tata Consulting Engineers Limited
28.	Dr. Sandip Pal	Variable Energy Cyclotron Centre

ITEM 0 WELCOME AND OPENING REMARKS

- 1.1 The Member Secretary extended a warm welcome to the participants. He briefed the members on the agenda of the meeting and requested them to kindly introduce themselves.
- 1.2 After introduction of the members, the Member Secretary requested the Chairperson to kindly initiate the proceedings.
- 1.3 The Chairperson welcomed the participants and apprised them of the purpose of the meeting, emphasizing its significance due to the numerous standards requiring review. He encouraged active participation and meaningful contributions from the members in the formulation of these standards. The Chairperson highlighted that while some domains have adequate expertise within the committee, there are some areas we may need to identify more relevant specialists. He requested members to suggest potential experts and volunteer for the co-option of additional members to ensure comprehensive reviews in all areas and active contributions from all domain experts in the committee work to spearhead National Standardization efforts in this domain.

ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF LAST MEETING

- 1.1 There being no comments received from members, the committee formally **confirmed** the minutes of the (11th) meeting of the committee held on 27th October 2023.

ITEM 2 SCOPE AND COMPOSITION COMMITTEE

- 2.1 The committee noted the scope and composition given in Annex-1 of the agenda and requested the Member Secretary to write letters for the review of nominations to the members who were not present in the last two meetings.
- 2.2 The committee deliberated on the co-option requests given in item 2.2 of the agenda and **rejected** the co-option of **Terre Armee India, New Delhi** – Dr. Anand Hulagabali since his expertise was not relevant to the scope of the committee. Further, the committee **decided** to add the following experts to the additional mailing list for now, and based on their comments on the WC drafts emanating from the committee, their co-option requests may be considered later:

- **Secure Meters Limited** – Mr. Lokesh Kumar Gupta
- **Socomec Innovative Power Solutions** – Mr. Pradeep Gupta
- **Gujarat Technological University** – Dr. Makwana Gautam Durlabhji

- 2.3** The committee noted the revised nominations given in item 2.3 of the agenda and formally welcomed the experts from **BARC** and **Ashbee System** to the committee.
- 2.4** The committee noted the nominations given in item 2.4 of the agenda and formally welcomed the experts from **SCCL** to the committee.
- 2.5** The committee recommended to **withdraw** Shri Amar Singh Bhaisare (In personal capacity) since he has superannuated and communicated his inability to continue his participation.

ITEM 3 REVIEW OF PUBLISHED/UNDER DEVELOPMENT STANDARDS

3.1 The committee reviewed list of Indian standards given in item 3.1 of the agenda and recommended formal reaffirmation of these standards on the BIS portal and initiate the review of these standards as given below. The committee **requested** members to **review the corresponding standards and provide a suitable recommendation within two months from the date circulation of approved MoM:**

SI No.	IS No.	Title	Review due on	Base Standard	Committee decision
1.	IS 3437 : 1972	General requirements for direct reading pointer indicator type electronic voltmeter (First Revision)	August, 2023	IEC 217 : 1967	Mr. Kaushik Mondal, BEL volunteered to review this standard.
2.	IS 14989 : 2001	Recommended practices for seismic qualification of electrical equipment of the safety system for nuclear generating stations	July, 2017	IEC 60980	The committee decided to revise the standard in line with latest version of IEC/IEEE 60980-344:2020 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
3.	IS 13875 (Part 1) : 1993	Digital measuring instruments for measurement and control: Part 1 general specifications concerning terms Tests and data sheet details	July, 2023	IEC 66(SEC) 49	Dr. Sandip Pal, VECC volunteered to review these standards.
4.	IS 13875 (Part 2) : 1993	Digital measurement instruments for measurement and control: Part 2 terms test and data sheet details of instruments for measuring analog quantities	July, 2023	IEC 66(SEC) 50	

5.	IS 13875 (Part 3) : 1993	Digital measuring instruments for measurement and control: Part 3 terms, tests and data sheet details of instruments for measuring digital quantities	July, 2023	IEC 66(SEC) 51	
6.	IS 13897 : 1993	In - Core instrumentation for neutron fluence rate (Flux) measurements in power reactors	July, 2023	IEC 60568	The committee decided to revise the standard in line with latest version IEC 60568:2006 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
7.	IS 14189 : 1994	Expression of properties of frequency counters (Up to a frequency of 1 GHz)	July, 2023	Indigenous	Dr. Sourav Mukhopadhyay, BARC volunteered to review this standard
8.	IS 14501 (Part 2) : 1998	Pulse techniques and apparatus: Part 2 pulse measurement and analysis, general considerations	July, 2023	IEC 60469-2	The committee decided to revise the standard in line with latest version of IEC 60469:2013 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
9.	IS 1885 (Part 47) : 1977	Electrotechnical vocabulary: Part 47 digital electronic equipment	July, 2023	IEC 60485 : 1974	The recommended to archive this standard.
10.	IS 1885 (Part 63) : 1985	Electrotechnical vocabulary: Part 63 nuclear instrumentation	July, 2023	IEC 60050-391(1975)	The committee decided to revise the standard in line with latest version of IEC 60050-395:2014 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
11.	IS 2320 : 1963	Methods of measurements for amplitude modulated radio frequency signal generators (30 Kc/s To 30 Mc/s)	July, 2023	IEC 60106	Dr. Aravind Kilaru, K L University volunteered to review these standards.
12.	IS 2321 : 1963	Requirements for general purpose amplitude modulated radio frequency signal generators (30 Kc/s To 30 Mc/s)	July, 2023	Indigenous	
13.	IS 3886 : 1966	Minimum requirements for general purpose audio frequency signal generators (30 C/s To 30 Kc/s)	July, 2023	Indigenous	

14.	IS 3915 : 1966	Methods of measurements on audio frequency signal generators (30 C/s To 30 Kc/s)	July, 2023	Indigenous		
15.	IS 4330 : 1967	Methods of measurements on cathode - Ray oscilloscope (DC To 10 Mc/s)	July, 2023	Indigenous		
16.	IS 4755 : 1987	Reference zero for the calibration of pure tone air conduction audiometers (First Revision)	July, 2023	ISO 389-1985	The committee decided to revise the standard in line with latest version of ISO 389-1:2017 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.	
17.	IS 6700 : 1972	Requirements for general purpose cathode - Ray oscilloscope	July, 2023	Indigenous	The committee recommended to archive this standard as CROs has been replaced by DSOs. Further, Mr. Kaushik Mondal, BEL volunteered to prepare draft on “ Requirements for general purpose of Digital Storage Oscilloscope ”, which will be reviewed by the committee in the next meeting.	
18.	IS 6767 (Part 1) : 1972	Specification for direct reading pointer indicator type AC/DC electronic voltmeter: Part 1 methods of measurements	July, 2023	Indigenous	Mr. Saurav Bhagabati, ECIL volunteered to review these standards.	
19.	IS 6767 (Part 3) : 1972	Specification for direct reading pointer indicator type AC/DC electronic voltmeter: Part 3 up to 300 MHz	July, 2023	IEC 60217 : 1967		
20.	IS 6769 (Part 1) : 1972	Specification for direct reading pointer indicator type ac electronic millivoltmeter: Part 1 methods of measurements	July, 2023	Indigenous		
21.	IS 6769 (Part 2) : 1972	Specification for direct reading pointer indicator type ac electronic millivoltmeter: Part 2 with a frequency range of 2 Hz to 1 MHz	July, 2023	Indigenous		
22.	IS 8290 : 1976	Specification for general purpose audio frequency output power	July, 2023	Indigenous		Dr. R.K. Vishwakarma, CSIR-CIMFR volunteered to review this standard.

		meters			
23.	IS 8573 : 1977	Specification for digital electronic DC voltmeters and dc electronic analogue - To - Digital converters	July, 2023	IEC 60 485-1974	Member Secretary volunteered to identify if any ISO/IEC standard has superseded this standard.
24.	IS 9177 : 1979	Method for specifying the functional performance of stabilized power supply apparatus	July, 2023	IEC 60443 : 1974	Member Secretary volunteered to identify if any ISO/IEC standard has superseded this standard.
25.	IS 9281 (Part 1) : 1979	Specification for electronic weighing systems: Part 1 terms and definitions	July, 2023	Indigenous	The committee decided to formulate the Panel with the leadership of Legal Metrology department for thorough review of IS 9281 series of standards in line with the Legal Metrology Act. The committee will further decide panel composition through correspondence.
26.	IS 9281 (Part 2) : 1979	Specification for electronic weighing systems: Part 2 methods of measurements	July, 2023	Indigenous	
27.	IS 9281 (Part 3) : 1981	Specification for electronic weighing systems: Part 3 requirements	July, 2023	Indigenous	
28.	IS 9281 (Part 4) : 1983	Specification for electronic weighing systems: Part 4 code of practice for use and installation	July, 2023	Indigenous	
29.	IS 9285 (Part 1) : 1979	Specification for direct reading pointer indicator type AC electronic RF millivoltmeter: Part 1 methods of measurements	July, 2023	Indigenous	
30.	IS 9285 (Part 2) : 1979	Specification for direct reading pointer indicator type AC electronic RF millivoltmeter: Part 2 requirements	July, 2023	Indigenous	The committee delegated experts from IDEMI for the review and requested them to review these standards.
31.	IS 9298 (Part 1) : 1979	Specification for television pattern generators: Part 1 requirements	July, 2023	Indigenous	The committee delegated experts from Prasar Bharti for the review and requested them to review these standards.

32.	IS 9298 (Part 2) : 1980	Specification for television pattern generators: Part 2 methods of measurements	July, 2023	Indigenous	
33.	IS 9711 : 1980	Specification for synchronizing pulse generator	July, 2023	Indigenous	
34.	IS 9741 (Part 1) : 1981	Specification for video test signal generator: Part 1 methods of measurements	July, 2023	Indigenous	
35.	IS 9741 (Part 2) : 1981	Specification for video test signal generator: Part 2 requirements	July, 2023	Indigenous	
36.	IS 9782 : 1981	Specification for television sweep generators	July, 2023	Indigenous	
37.	IS 9858 : 1981	Safety requirements for electronic measuring apparatus	July, 2023	IEC 60348 : 1978	The committee decided to revise the standard in line with the latest version IEC 61010:2010/AMD1:2016/COR1:2019 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
38.	IS 15398 : 2003	Software for computers in the safety systems of nuclear and radiation facilities	July, 2023	IEC 60880	The committee decided to revise the standard in line with the IEC 60880:2006 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
39.	IS 15399 : 2003	Hardware for computers in the safety system of nuclear and radiation facilities	July, 2023	IEC 60987	The committee decided to revise the standard in line with the IEC 60987:2021 and circulate P-draft for a period of 30 days followed by wide circulation for a period of 60 days.
40.	IS 6756 : 2001	Electrical and electronic measuring equipment – Documentation (First Revision)	July, 2023	Indigenous	
41.	IS 10767 (Part 1) : 2018	Higher performance protocol for the standard digital interface for programmable instrumentation: Part 1 general (Second Revision)	July, 2024	IEC 60488-1 : 2004	Ms. C Sailaja, TCE volunteered to review these standards.
42.	IS 10767 (Part 2) : 2018	Standard digital interface for programmable instrumentation: Part 2	July, 2024	IEC 60488-2 :2004	

		codes, formats, protocols and common commands (Second Revision)			
43.	IS 11424 : 2018	Nuclear instrumentation - Portable gamma radiation meters and spectrometers used for prospecting - Definitions, requirements and calibration (First Revision)	July, 2024	IEC 61239 : 1993	The organizations from Department of Atomic Energy -DAE (BARC, IGCAR, AERB, etc.) volunteered to review these standards. Further, it was informed by their experts that they would discuss internally and communicate regarding which of these standards will be reviewed by IGCAR, which ones by BARC, etc. Accordingly, the review of these standards may be taken up by DAE organizations.
44.	IS 11797 : 2018	Nuclear power plants - Instrumentation important to safety - Radiation detectors - Characteristics and test methods (First Revision)	July, 2024	IEC 60515 : 2007	
45.	IS 11866 : 2018	Radiation protection instrumentation - Alpha, beta and alpha/beta (Beta Energy > 60 KeV) contamination meters and monitors (First Revision)	July, 2024	IEC 60325 : 2002	
46.	IS 11868 : 2018	Nuclear instrumentation - Constructional requirements and classification of radiometric gauges (First Revision)	July, 2024	IEC 62598 : 2011	
47.	IS 12761 (Part 1) : 2018	Equipment for continuous monitoring of radioactivity in gaseous effluents: Part 1 general requirements (First Revision)	July, 2024	IEC 60761-1: 2002	
48.	IS 12761 (Part 2) : 2018	Equipment for continuous monitoring of radioactivity in gaseous effluents: Part 2 specific requirements for radioactive aerosol monitors including transuranic aerosols (First Revision)	July, 2024	IEC 60761-2: 2002	
49.	IS 12761 (Part 3) : 2018	Equipment for continuous monitoring of radioactivity in gaseous effluents: Part 3	July, 2024	IEC 60761-3:2002	

		specific requirements for radioactive noble gas monitors (First Revision)			
50.	IS 12761 (Part 4) : 2018	Equipment for continuously monitoring radioactivity in gaseous effluents: Part 4 specific requirements for Radioactive Iodine Monitors (First Revision)	July, 2024	IEC 60761-4:2002	
51.	IS 14481 (Part 1) : 2018	Nuclear power plants - Instrumentation important to safety - Radiation monitoring for accident and post - Accident conditions: Part 1 general requirements	July, 2024	IEC 60951-1 : 2009	
52.	IS 14888 : 2000	VSWR meter - Performance requirements	July, 2024	Indigenous	Dr. Aravind Kilaru, K L University volunteered to review this standard.
53.	IS 9176 : 2018	Electrical and electronic measurement equipment - Expression of performance (Second Revision)	July, 2024	Indigenous	Ms Aruna Thakar, IPR volunteered to review this standard,
54.	IS 13109 (Part 12) : 2014	Electronic equipment/systems for use in coal and metalliferous mines - Specification: Part 12 requirements for cable fault locators	November, 2023	Indigenous	The committee delegated experts from SCCL for the review and requested them to review this standard.
55.	IS/IEC 60469 : 2013	Transitions, Pulses and Related Waveforms Terms, Definitions and Algorithms	October, 2024	IEC 60469 : 2013	Member Secretary to review this standard.

3.2 The committee noted the action taken report on the decisions taken in the last committee meeting for the review of Indian standards, as listed in item 3.2 of the agenda. In addition to the standards which were formally reaffirmed (S.no 1 to 13), the committee **requested** the experts from SCCL, DGMS & BCCL to thoroughly review the **IS 13109 series of standards “Specification for electronic equipment/systems for use in coal and metallic ferrous mines”**.

- Part 1 definitions, general requirements and tests
- Part 2 requirements for automatic telephone systems
- Part 3 requirements for battery powered amplifier telephone systems
- Part 4 requirements for sound powered magneto telephone systems
- Part 5 requirements for loud hailing telephone systems

- Part 6 requirements for leaky feeder communication systems
- Part 7 requirements for cage communication systems
- Part 8 requirements for radio paging systems
- Part 9 requirements for insulation resistance testers
- Part 10 requirements for monitoring systems: Sec 1 production monitoring systems
- Part 10 metallic ferrous mines requirements - For monitoring systems: Sec 2 status monitoring systems
- Part 11 requirements for goaf temperature monitoring systems
- Part 21 requirements for mine environmental telemonitoring systems

3.3 The committee noted the information given at item 3.3 of the agenda regarding withdrawal of Indian standards.

3.4 The committee discussed the agenda item 3.4 and **decided** the following:

SI No.	Doc . No.	Title	Committee decision
1.	LITD/08/25 354 (Identical To: IEC 61226: 2020)	Nuclear power plants - Instrumentation, control and electrical power systems important to safety - Categorization of functions and classification of systems	The last date of Wide Circulation was 05 August 2024 . However, during the meeting, members from IGCAR & BARC requested for more time for the review of this draft standard (by around 8 weeks) and requested for a copy of the draft standard to be shared with them. The committee agreed and requested them to provide their inputs no later than 9 October 2024. In case no inputs are received by 09 October 2024 , the draft standard will be considered finalized and will be sent for publication by the BIS Secretariat.

ITEM 4 PROGRAM OF WORK

4.1 The committee noted the information given in Annex-3 of the agenda.

ITEM 5 INTERNATIONAL STANDARDIZATION ACTIVITIES

5.1 The committee noted the information given at 5.1 of the agenda.

5.2 The committee noted the information given at Annex -4 of the agenda.

5.3 The Member Secretary apprised the committee about the list of standards published by IEC/TC 45, IEC/SC 45A, and IEC/SC 45B, given in Annex-5 of the agenda. Further, members were requested to review these standards for their suitability for adoption as Indian Standards.

ITEM 6 NATIONAL STANDARDIZATION ACTIVITIES

6.1 COMMENT ON IS 9281(Specification for electronic weighing systems) series

6.1.1 The committee **decided** to formulate the Panel with the leadership of Legal Metrology department for thorough review of IS 9281 series of standards in line with the Legal Metrology Act.

Representatives from Legal Metrology informed that this subject may also require inputs from the state

Legal Metrology departments and existing licensees of the IS 9281 standard. The committee **decided** to finalize the panel composition via correspondence, with the approval of Chairperson, LITD 08 and the panel may take up the review of IS 9281 series of standards.

6.2 NEW WORK ITEM PROPOSAL

6.2.1 The committee noted the New Work Item proposal received from CSIR bodies as given in item 6.2 of the agenda. Since many proposals only had the title and scope of the New proposals given with no additional information and NPL was also not present in the meeting, the committee **decided** to seek more information on the specific requirements of the proposers (CSIR bodies) for these proposals. It was agreed that it is not practical to initiate such new work item proposals unless clarity on exact need, requirements, and appropriate inclusions is received from the proposers. The Member Secretary was requested to seek the relevant information from proposers through email. Based on the inputs received, the committee may discuss these new proposals in the next meeting.

Further, the committee recommended that the NWIP at S.no 1,3 & 4 of the agenda pertains to the scope of LITD 11 and may be accordingly taken up by LITD 11.

ITEM 7 GUIDELINES ON RESEARCH PROJECTS

7.1 Member secretary apprised the members of the recent BIS initiative to support research supporting standards wherein guidelines were issued for research & development (R&D) projects for the formulation and review of standards inviting potential (R&D) projects from the committee members along with the ToR template and the action required from the committee members. He further explained the guidelines to the committee.

Member Secretary encouraged the committee members to share proposals on potential R&D projects with the BIS Secretariat for the committee's consideration since this is an ongoing continuous exercise.

ITEM 8 DATE AND PLACE FOR THE NEXT MEETING

8.1 The committee **decided** to schedule the next meeting tentatively in the last week of November 2024 or first half of December 2024. The exact date and mode of meeting may be finalized in consultation with the Chairperson based on the inputs received from members.

ITEM 9 ANY OTHER BUSINESS

9.1 There being no other items to be discussed, the meeting ended with vote of thanks to the members and chairperson.

