

MINUTES

MEETING	NO. OF MEETING	DAY & DATE	TIME	VENUE
Secondary Cells and Batteries Sectional Committee, ETD 11	29 th	Wednesday 15 th May 2024	1030 h	Hybrid (Physical + online webex) https://bismanak.webex.com/bismanak/j.php?MTID=m33b21d694d44c19c74f32bcebd47c5b2

CHAIRMAN: Shri Pankaj Batra

MEMBER SECRETARY: Shri Neeraj Kushwaha

Participants:-

S.No.	Organization	Member Name
1.	INDIVIDUAL CAPACITY	Shri Pankaj Batra (<i>Chairperson</i>)
2.	Bharat Test House Private Limited, New Delhi	Shri Vaibhav Gupta
		Shri Lalit Aggarwal
3.	CSIR - Central Electrochemical Research Institute, Karaikudi	Shri Sundar Mayavan
4.	Central Power Research Institute, Bengaluru	Dr P. Chandra Sekhar
		Shri Mohit Padwal
5.	Controllerate of Quality Assurance, New Delhi	Deputy Controller E
6.	Electrical Research and Development Association, Vadodara	Shri Rakesh Patel
7.	Exide Industries Limited, Kolkata	Shri Anjan Roy
8.	Engineers India Limited, New Delhi	Shri Viswa Teja Yerramathi
9.	Indian Electrical and Electronics Manufacturers Association, New Delhi	Shri Kumar Rahul
10.	Luminous Power Technologies Private Limited, Gurugram	Shri Thayanath P
11.	NTPC Limited, New Delhi	Shri Vijay Kumar
12.	National Test House, Kolkata	Shri Sayantan Das
13.	Nuclear Power Corporation of India Limited, Mumbai	Ms Swati R. Patil
14.	Shreenath Smart Technologies Private Limited, Ahmedabad	Shri Rahil Patel

		V. Manjunath
15.	UL India Private Limited, Bengaluru	Shri Anand Kumar
16.	Voluntary Organisation in Interest of Consumer Education (VOICE), New Delhi	H. Wadhwa

Item 0 Welcome and Opening Remarks

Shri Pankaj Batra Chairperson ETD 11 extended a hearty welcome to all the members present. He appreciated the presence of the members and encouraged them to participate in the meeting. He explained the importance of Secondary cells and batteries used in our day to day life and how important it is to contribute in the committee for all the members. He requested all the members to be interactive and participate actively in the meeting.

Member Secretary, Shri Neeraj Kushwaha welcomed all the members and requested them to participate actively in the work of this committee.

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 There being no comments, the committee formally confirmed the minutes of 28th meeting of Secondary Cells and Batteries Sectional Committee, ETD 11 held on 05th January 2024, which were circulated vide BIS DG letter dated 15th February 2024.

1.2 ACTION ARISING OUT OF PREVIOUS MEETING

Item no of last minutes	Decision of previous meeting	Decision
2.1	CSIR – CECRI: To update nominations as below: <i>Principal Member</i> – Dr. Sundar Mayavan <i>Alternate Member</i> – To be nominated Dr. Sundar Mayavan was requested to send the nomination for the alternate member.	Dr. Sundar Mayavan was again requested to send the nomination for the alternate member.
	HBL Power System Ltd. To update alternate member as below: <i>Alternate Member</i> – Shri Manoj Jagirdar (Shri Sanjeev Kumar was requested to send mail along with filled-in nomination proforma)	The committee decided to seek the nomination of alternate member again.

	NTPC Ltd. To request for fresh nominations	The committee noted the information provided.
2.2 (a)	To drop following organizations in view of no participation/repetition - M/s AMCO Batteries Ltd - Kirloskar Batteries Private Limited, Bengaluru - M/s High Energy Batteries (India) Ltd	The committee noted the information provided.
2.4 (a)	Shri Subhakar Chakraborty suggested to include M./s Exide Leclanche India Pvt. Ltd. Shri Chakraborty to discuss the matter with CA(Competent Authority) and to send formal cooption request.	M/s Exide industries informed that Exide Lechlanche India is now changed as Exide Energy. The committee requested M/s Exide industries to follow up with Exide energy and request them to send formal co-option request for joining ETD 11.
2.4 (b)	To co-opt ARAI To co-opt MHI	Contact Details of ARAI to be provided by Shri Pankaj Batra sir. Contact Details of MHI to be provided by EIL.
5 (a)	<p>Comments received from DHI: The committee reviewed the comments (ANNEX-1) provided by DHI and constituted following panel for thorough review of the comments:</p> <p>Shri Rakesh Patel, ERDA – Convener Dr. Kuldeep Rana, MNRE Dr. R Sindhuja, CECRI Dr. Rashi Gupta UL India ARAI Exide energy Pvt. Ltd.</p> <p>The panel was requested to submit its report highlighting the changes required in the existing Indian Standards basis which the revision work shall be taken up on to priority.</p> <p>The panel was requested to submit report within 01 month.</p> <p>Member Secretary was requested to provide the relevant standards to the panel members and also to</p>	<p>The committee requested the panel to study the comments, need of incorporating the cell level testings in IS 16046 and provide its report within 3 months.</p> <p>It was also decided to take CPRI in the panel.</p>

	circulate the DHI comments to Shri Sanjeev Kumar, M/s HBL Power System Limited.	
5 (b)	<p>Comments from MeitY on IS 16046: IS 16046 does not stipulate the ratings, weight, size etc of the batteries that are covered under its scope. BIS may kindly take up and clearly indicate the said parameters to identify the batteries covered under the scope of IS 16046.</p> <p>The committee considered the comment received and after detailed deliberation constituted following panel for providing a proposal on the subject:</p> <p>MeitY – Chair UL Shri Rakesh Patel, ERDA CPRI</p> <p>The panel agreed to review the comments from Meity and submit the report/ draft revision standard by 31st October 2023.</p> <p>It was also decided to add Kuldeep Rana from MNRE and BTH in the panel.</p>	The committee requested the panel working for comments on DHI to also review these comments and provide their report within 3 months.
5 (c)	<p>Luminous comments of ETD 11 standards: The committee considered the comments received and decided as below:</p> <p>IS 6071: 1986 Specification for synthetic separators for lead - Acid batteries</p> <p>To prepare a draft revision document incorporating the comments received from M/s Luminous and to send the same for wide circulation for a period of 02 months.</p> <p>IS 13568: 1992 Lead acid light weight storage batteries for motor cycles and similar vehicles fitted with ac circuitry – Specification</p> <p>It was informed that JIS D5302 is being followed in</p>	<p>i) Shri Thayanath P updated that they had already shared the inputs on 04th January 2024. The member secretary was requested to study the inputs and prepare the draft document with the help of M/s Luminous and wide circulate the draft for 60 days.</p> <p>ii) The committee decided to request again to M/s Exide to provide a draft</p>

	<p>the industry for testing of these batteries. After detailed deliberation, M/s Exide was requested to provide a draft revision document within 02 months incorporating the requirements and test procedures being followed in the industry.</p> <p>The committee decided to request again to M/s Exide to provide a draft revision document within 02 months incorporating the requirements and test procedures being followed in the industry.</p>	<p>revision document within 02 months incorporating the requirements and test procedures being followed in the industry.</p>
5.1 (b)	<p>Comments from BHEL and RICO on IS 1652:2013, Stationary cells and batteries, lead - Acid type with plante positive plates - Specification (Fourth Revision)</p>	<p>The committee approved the ToR as placed in Annex 2 of the agenda.</p> <p>Regarding keeping clause 5.5.3 in abeyance, the committee deliberated the matter and it was decided that the constructional requirements to be kept in abeyance but the clearances should be there in the standard to prevent short circuiting in the battery.</p> <p>The committee decided to wide circulate the draft amendment for 30 days.</p>

Item 2 REVIEW OF COMPOSITION OF SECONDARY CELLS AND BATTERIES SECTIONAL COMMITTEE, ETD11

2.1 The committee reviewed the composition and decided to

- a) Co-opt Log9 Materials – Shri Kumar Rahul from IEEMA to provide contact details.
- b) Co-opt M/s Saft Batteries

2.2 The committee noted the information provided.

2.3 The committee reviewed the co-option requests and decided to co-opt the following:

- a) REACT Laboratories
- b) EESL
- c) Enphase Energy

The committee decided to drop the remaining co-option requests.

Item 3 APPROVAL OF DOCUMENTS/AMENDMENTS FOR FINALIZATION/PRINTING

The committee noted the information provided.

Item 4 APPROVAL OF DOCUMENTS/AMENDMENTS FOR WIDE CIRCULATION

S.No.	Draft Indian Standard	Circulated vide BISDG letter No. & date	Remarks
a)	Amendment No. 1 to IS 1652:2013, stationary cells and batteries, lead-acid Type with plante positive Plates	NIL (Recommendation of ETD-11/WG-02)	The committee deliberated the matter and it was decided that the constructional requirements to be kept in abeyance but the clearances should be there in the standard to prevent short circuiting in the battery. The committee decided to wide circulate the draft amendment for 30 days.

Item 5 COMMENTS/QUERIES ON INDIAN STANDARDS

5.1 Comments: -

S No.	Indian Standard	Commentator	Comments
a)	IS 17882:2022, Methods of test for measurement of Energy density and Cycle life of Advanced Chemistry Cells ACCs	IFCI Ltd. & MHI	The committee reviewed the comments received on IS 17882:2022 and it was decided to create a working group consisting of following experts for resolving the comments received: a) National Test House(Convener) b) Engineers India Ltd. c) UL India Pvt. Ltd. d) Bharat Test House e) Central Power Research Institute
b)	IS 17882:2022, Methods of test for measurement of Energy density and Cycle life of Advanced Chemistry Cells ACCs	Viswa Teja Yerramathi, EIL, Pradeep Sharma, EIL, Udit Kaul, ICAT	

			The working group is requested to co-opt other experts as required and submit a report within a week.
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5.2 Queries/Clarification: -

The committee noted the information provided.

Item 6 PRESENT POSITION OF WORK

6.1 The committee noted the information provided.

The committee may consider.

6.2 Present status of work as identified during previous meetings of ETD 11 are given below:

Sl. No.	IS No.	Actions	Decisions
1.	IS 1146 : 1981 Specification for rubber and plastics containers for lead - Acid storage batteries Second Revision	Committee decided to prepare a draft revision document incorporating the comments received from ERDA and previous amendments issued. Draft document to be sent for wide circulation. Draft is being sent with the agenda.	The committee decided to wide circulate the draft document for 60 days.
2.	IS 2512 : 1978 Specification for miners cap - Lamp batteries Lead - Acid Type First Revision	Committee decided to request DGMS whether batteries covered under this standard are still being used for miner's caps. If not, then which type of batteries are being used and specification being followed for the same. DGMS requested the committee to send the document for review. Member secretary was requested to send the document to DGMS. Standard shared to DGMS. No reply received.	The committee decided to archive this standard, till any reply is received from DGMS.

SI. No.	IS No.	Actions	Decisions
3.	IS 6071 : 1986 Specification for synthetic separators for lead - Acid batteries First Revision	<p>Committee decided to prepare draft document incorporating the comments received from M/s Luminous and to send the same for wide circulation for 02 months.</p> <p>Draft revision document IS 6071 is ready.</p> <p>It was decided to write to luminous again for the input in the draft IS 6071.</p>	<p>iii) Shri Thayanath P updated that they had already shared the inputs on 04th January 2024. The member secretary was requested to study the inputs and prepare the draft document with the help of M/s Luminous and wide circulate the draft for 60 days.</p>
4.	IS 6848 : 1979 Specification for lead - Acid batteries for train lighting and airconditioning services First Revision	<p>Committee decided to request RDSO whether batteries covered under this standard are being used for train lighting and air-conditioning services or not.</p> <p>A decision for revision will be taken on the basis of reply received.</p> <p>Information sought from RDSO. No reply received.</p>	<p>The committee decided to archive this standard, till any reply is received from RDSO.</p>
5.	IS 7624 : 1990 Lead - Acid starter batteries for diesel - locomotives and rail cars - Specification First Revision	<p>Committee decided to request RDSO whether batteries covered under this standard are being used for diesel - locomotives and rail cars or not.</p> <p>A decision for revision will be taken on the basis of reply received.</p> <p>Information sought from RDSO. No reply received.</p>	<p>The committee decided to archive this standard, till any reply is received from RDSO.</p>
6.	IS 7660 : 1988 Specification for lead - Acid batteries for electric locomotives and electrical multiple units First Revision	<p>Committee decided to request RDSO whether batteries covered under this standard are being used for electric locomotives and electrical multiple or not.</p> <p>A decision for revision will be taken on the basis of reply received.</p> <p>Information sought from RDSO.</p>	<p>The committee decided to archive this standard, till any reply is received from RDSO.</p>

SI. No.	IS No.	Actions	Decisions
		No reply received.	
7.	IS 9814 : 1981 Specification for lead - Acid storage batteries for marine use	The committee decided to revise this standard updating the referred standards (without any technical change). Draft is being sent with the agenda.	The committee decided to wide circulate the draft document for 60 days.
8.	IS 10893 : 1984 Specification for sealed nickel cadmium button type rechargeable single cells	Committee requested Shri Sanjeev Kumar, M/s HBL to compare the requirements specified in this standard with IS 16048 and to give his report regarding revision of this standard. Shri Sanjeev Kumar, M/s HBL may update the committee.	The committee decided to write to M/s HBL for their report.
9.	IS 10918 : 1984 Specification for vented type nickel cadmium batteries	Committee requested M/s Saft to provide draft revision document as discussed during earlier meeting of the committee. Also, to specifically review the Note give under type test list. M/s Saft may update the committee.	The committee requested M/s Saft batteries to provide draft revision document within a month and give a presentation in the next committee meeting.
10.	IS 12013 : 1987 Specification for lead acid batteries for 110 volts train lighting system with monobloc containers	Committee decided to request RDSO whether batteries covered under this standard are being used for train lighting system or not. A decision for revision will be taken on the basis of reply received. Information sought from RDSO. No reply received	The committee decided to archive this standard, till any reply is received from RDSO.
11.	IS 13300 : 1992 Nickel cadmium aircraft batteries Aerobatic Andnon - Aerobatic - Specification	The committee decided to request M/s Saft for providing the draft revision document. M/s Saft may update the committee.	The committee requested M/s Saft batteries to provide draft revision document within a month and give a presentation in the next committee meeting.

SI. No.	IS No.	Actions	Decisions
12.	IS 13595 : 1992 Silver oxide zinc batteries for aircraft - Specification	<p>The committee decided to request M/s Saft to review the standard and provide draft revision document.</p> <p>M/s Saft may update the committee.</p>	<p>The committee requested M/s Saft batteries to provide draft revision document within a month and give a presentation in the next committee meeting..</p>
13.	IS 14217 : 1994 Miners cap lamp batteries Alkaline Type - Specification	<p>Committee decided to request DGMS whether batteries covered under this standard are being used for miner's caps. If not, then which type of batteries are being used and specification being followed for the same.</p> <p>DGMS requested the committee to send the document for review.</p> <p>Member secretary was requested to send the document to DGMS.</p> <p>Standard shared to DGMS. No reply received.</p>	<p>The committee decided to archive this standard, till any reply is received from DGMS.</p>
14.	IS 14218 : 1994 Sealed cylindrical type rechargeable nickel cadmium cells - Specification	<p>Committee requested Shri Sanjeev Kumar, M/s HBL to compare the requirements specified in this standard with IS 16048 and to give his report regarding revision of this standard.</p> <p>Shri Sanjeev Kumar, M/s HBL may update the committee</p>	<p>The committee decided to write to M/s HBL for their report.</p>
15.	Revision of IS 15549 Stationary Valve Regulated Lead Acid Batteries — Specification	<p>The committee discussed the comments received.</p> <p>Shri Subhankar Chakraborty informed that he has prepared the draft requirements for Gel type batteries which also need to be incorporated in the existing document as per discussion held during the 23rd meeting. The committee requested</p>	<p>The committee deliberated and decided to revise IS 15549 in two parts. Part 1 would cover VRLA batteries, and Part 2 would cover gel type VRLA batteries.</p>

SI. No.	IS No.	Actions	Decisions
		<p>Shri Subhankar to share the draft document.</p> <p>Member Secretary to incorporate the requirements for Gel type batteries into the existing document and to wide circulate the same for 02 months.</p> <p>The draft document requirements for gel type batteries is pending.</p>	<p>For 1st part, the committee requested Shri Sundar Mayavan to provide the draft document which is to be circulated to all the members for 15 days. If no comments received, the document need to be wide circulated for 60 days.</p> <p>For 2nd part, the committee requested M/s Exide to provide draft document within 2 months.</p>
16.	Revision of IS 13315 'Nickel Cadmium Batteries for Electric Locomotives'	<p>The committee noted the comments received and to incorporate the same in the draft document.</p> <p>Committee decided to wide circulate the draft document for 02 months.</p> <p>Shri Sanjeev Kumar, M/s HBL may provide the draft document incorporating the changes.</p>	The committee decided to write to M/s HBL for draft revision document.
17.	Formulation of new standard for testing, safety and performance and application of second-life batteries	<p>The committee noted the following information provided during the meeting and requested concerned panel to expedite the draft document preparation:</p> <p>Initial working draft has been prepared based on the IEC draft documents.</p> <p>The committee also decided to request Shri Ashok Rajput, Chief Engineer R&D, CEA to chair this panel.</p>	The committee after deliberate discussion decided to drop this subject from ETD 11 as it is already under development in ETD 52, Electrical Energy Storage Systems sectional committee.

SI. No.	IS No.	Actions	Decisions
		<p>Member secretary updated the committee regarding the work going on. The base IEC document which was used to draft the standard had been changed by IEC.</p> <p>It was decided to circulate the changed document among panel members.</p> <p>The panel was requested to prepare the draft document in one month.</p>	
18.	Progress of work of 'Panel for studying Indian Ambient conditions'	<p>The committee noted the following information provided during the meeting and requested concerned panel to submit its final report:</p> <p>“In principal, 27 degrees has been accepted as the ambient temperature for Indian conditions. A formal confirmation is being sought from all the panel members’ basis which a final report will be submitted for the consideration of the ETD 11 committee”.</p> <p>Shri Kuldeep Rana informed the committee that there was some tolerance that was considered by the panel.</p> <p>The committee decided to write Shri A.K. Rajput, convenor of the panel give report in a month time.</p>	The committee decided to write to Central Electricity Authority, for their inputs and report in a month.
19.	Progress of work of 'Panel for formulation of Standards on New Battery Technologies'	<p>The committee noted the request received from Shri Kuldeep Rana expressing his inability to chair the panel due to his organizational work pressure.</p> <p>The committee requested Member Secretary to suggest Convener in consultation with the Chairperson</p>	The working group(ETD11/WG0 1) updated the committee that a meeting has been conducted and it was decided to involve QCI and UL India in the working group.

SI. No.	IS No.	Actions	Decisions
		<p>which will be placed before the committee during its next meeting.</p> <p>Regarding batteries for drone application, it was informed that Dr. Rana has prepared an initial working draft which will be shared with the committee shortly.</p> <p>After detailed deliberation, The committee formed the following panel for working on this standard:</p> <p>Dr Rashi Gupta (Convenor) Dr Kuldeep Rana Dr Sundar Mayavan Shreenath Smart Technologies Private Limited BTH</p>	<p>The committee requested the working group to provide the draft within 2 months.</p>
20.	Progress of work of 'Panel for Accelerated Test method for life test'	<p>The committee noted the following information provided during the meeting and requested concerned panel to submit its final report:</p> <p>03 meetings have been held Log9 has proposed a testing protocol which has been tested and verified by them Panel is working on the comments received from panel members on the test protocol and sequencing First draft will ready by 01st week of November.</p> <p>Panel details:</p> <p>a) Shri Manjunath V, UL b) Shri A.K. Rajput, CEA c) Shri Kuldeep Rana d) NITI Aayog e) SECI f) IIT Bombay/IIT Delhi</p>	<p>The following panel is requested to provide the draft revision document within 3 months:</p> <ol style="list-style-type: none"> 1. Shri Manjunath V, UL (Convenor) 2. Shri A.K. Rajpur, CEA 3. Shri Kuldeep Rana, MNRE 4. Shri Sundar Mayavan, CECRI 5. SECI 6. IIT Mumbai/IIT Delhi, 7. EESL 8. Log9 9. EIL

SI. No.	IS No.	Actions	Decisions
21.	Formulation of new standard for Lead-acid starter batteries - Part 6: Batteries for Micro-Cycle Applications	<p>These batteries are commonly called "starter batteries" and are used for micro-cycle applications in vehicles which can also be called Start-Stop (or Stop-Start, idling-stop system, micro-hybrid or idle-stop-and-go) applications. In cars with this special capability, the internal combustion engine is switched off during a complete vehicle stop, during idling with low speed or during idling without the need of supporting the vehicle movement by the internal combustion engine. During the phases in which the engine is switched off, most of the electric and electronic components of the car need to be supplied by the battery without support of the alternator. The batteries under these applications are stressed in a completely different way compared to classical starter batteries.</p> <p>The committee agreed to the proposal and requested Dr. Mayavan, Principal Scientist, CSIR-CECRI to provide the draft document within 01 month for further consideration of the committee.</p>	<p>The following working group is requested to provide the draft revision document within 3 months:</p> <ol style="list-style-type: none"> 1. Shri Sundar Mayavan (Convenor) 2. M/s Exide 3. Amara Raja 4. Tata Green batteries (IEEMA to provide details) 5. Vehicle manufacturers as needed
22.	Adoption of IEC 63193: 2020 'Lead-acid batteries for propulsion power of lightweight vehicles - General requirements and methods of test'	<p>The committee requested Dr. Mayavan to review the IEC Standard and to provide working draft within 01 month considering the Indian ambient conditions.</p> <p>The committee requested Dr. Mayavan to provide the draft document within 01 month.</p>	<p>The committee requested Dr. Mayavan to provide the draft document within 01 month.</p>

Item 7 REVIEW/REAFFIRMATION OF PUBLISHED INDIAN STANDARDS

7.1 The committee noted the information provided. The committee requested Shri Lalit from Bharat Test House to review the documents mentioned in the agenda and provide a report and presentation in the next committee meeting.

Item 8 NEW SUBJECTS AND FUTURE PROGRAMME OF WORK

8.1 The committee noted the information provided.

Item 9 INTERNATIONAL ACTIVITIES

9.1 IEC TC meeting information: The committee noted the information provided.

9.2 Details of Balloting: The committee noted the information provided.

9.3 The committee reviewed the publications of IEC TC 21 and SC 21A and decided that the following IEC publications are to be adopted as Indian standards in toto.

1. Secondary Cells and Batteries – Marking symbols for identification of their chemistry
2. Flow battery energy systems for stationary applications – Part 1: Terminology and general aspects
3. Flow battery energy systems for stationary applications – Part 2-1: Performance general requirements and test methods
4. Flow battery energy systems for stationary applications – Part2-2: Safety requirements

The committee approved Wide circulation of the all the identified IEC publications for 60 days.

9.4 The committee reviewed the Indian representation in IEC TC 21 and IEC SC 21A working groups and decided:

- a) To update Indian representations in WGs of IEC TC 21:
 - WG 2 - Shri Sundar Mayavan
 - WG 3 - Shri Sundar Mayavan
- b) To update Indian representations in WGs of IEC SC 21A:
 - WG 4 - Shri Neeraj Kushwaha
 - WG 5 - Shri Viswa Teja

Item 10 PROCESS REFORMS IN BIS

10.1 Process Reforms in Formulation of Standards

The committee noted the information provided.

10.2 Latest structural and process reforms

The committee noted the information provided.

Item 11 DATES AND PLACE FOR THE NEXT MEETING

The committee note the information provided. The next meeting of ETD 11 is planned on 08th August 2024.

Item 12 ANY OTHER BUSINESS

There being no other business, the chairperson ended the meeting with vote of thanks.