BUREAU OF INDIAN STANDARDS

AGENDA

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Railway Electric Traction Equipments and Systems Sectional Committee, ETD 47	6th	Wednesday	18/12/2024	11:00 hrs	Online mode **WebEx link:** Join Here

CHAIRMAN: Shri Jagdish Kumar **MEMBER SECRETARY:** Shri Emanuel Abhishek Murmu

Item 0 WELCOME & OPENING REMARKS BY THE CHAIRPERSON

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 The minutes of the last meeting (5th meeting) of Railway Electric Traction Equipments and Systems Sectional Committee, ETD 47 held on 16 May 2024 through video conferencing were circulated vide email dated 12 June 2024. In view of no technical comments received, the committee may formally approve the Minutes of last meeting.

The committee may formally confirm the minutes.

Item 2 ACTIONS ARISING OUT OF PREVIOUS MEETING

Sl. No.	Item no. of last minutes	Subject	Decision taken during the last meeting	Action/ Remarks
1	**4.1.1**	Review of IEC 60913: 2024, 'Railway applications - Fixed installations - Electric traction overhead contact lines systems' and explore the possibility of its adoption as Indian Standard	The committee requested Mr Anand Kumar, DMRC to review IEC 60913: 2024 and explore the possibility of its adoption as Indian Standard.	***Mr Anand Kumar, DMRC may brief the committee.***
2	**4.1.1**	Review of 'Power Quality Restorer (PQR) for 25kV and 2x25kV Traction Substation in Indian Railways' by RDSO as Indian Standard	The committee requested DMRC and NHSRCL to review and ratify the standard for its adoption as Indian Standard.	***DMRC and NHSRCL may brief the committee.***

Item 3 PROPOSED WORKING PANELS TO BE CREATED TO STRENGTHEN THE WORK OF THE COMMITTEE

Panel 1
Scope: Rolling Stock

Sl. No.	Member
1.	Mr Anand Kumar, DMRC
2.	Mr Ramesh Kumar Pal, RDSO
3.	Mr Yugal Agarwal, CPRI
4.	Mr K.V. Koteshwara Rao, Medha Servo Drives Private Limited
5.	Mr Sujeet Mishra, IRITM
6.	Mr Ravi Agarwal, MRVCL
7.	Mr Vinay Gupta, NHSRCL

Panel 2
Scope: Fixed Installations and Overhead Equipment

Sl. No.	Member
1.	Mr Anand Kumar, DMRC
2.	Mr Jitendra Kumar, RDSO
3.	Mr S. Sudhakar Reddy, CPRI
4.	Mr Arvind Kumar Maurya, DFCCIL
5.	Mr Ravi Singh, ERDA
6.	Mr Uttam Kumar, IEEMA
7.	Mr Vinod Kumar Mehra, MRVCL

Panel 3
Scope: Power Supply Installations

Sl. No.	Member
1.	Mr Anand Kumar, DMRC
2.	Mr Ramesh Kumar Pal, RDSO
3.	Mr Vikas Kumar, Autometers Alliance Limited
4.	Mr Sushil Kumar, BHEL
5.	Mr Alok Kumar, CEA
6.	Mr Vivek Arora, IEEMA
7.	Mr Amit Kumar Tripathi, NHSRCL

The committee may review and appoint convenor for each Panel.

Item 4 PROPOSED PLAN FOR WORKING PANELS

Sl. No.	PROPOSED SUBJECTS	
	RDSO/ IEC Standard	Equivalent EN Standard
1.	IEC 60494 (Part-1): 2013 - Railway applications - Rolling stock - Pantographs - Characteristics and tests - Part 1: Pantographs for main line vehicles (**Panel 1**)	EN 50206-1: 2010 - Railway applications - Rolling stock - Pantographs: Characteristics and tests - Part 1: Pantographs for main line vehicles

Sl. No.	PROPOSED SUBJECTS	
	RDSO/ IEC Standard	Equivalent EN Standard
2.	IEC 60494 (Part-2): 2013 - Railway applications - Rolling stock - Pantographs - Characteristics and tests - Part 2: Pantographs for metros and light rail vehicles (**Panel 1**)	EN 50206-2: 2010 - Railway applications - Rolling stock - Pantographs: Characteristics and tests - Part 2: Pantographs for metros and light rail vehicles
3.	IEC 62486: 2017 - Railway applications - Current collection systems - Technical criteria for the interaction between pantograph and overhead contact line (**Panel 1**)	EN 50367: 2020 - Railway applications - Fixed installations and rolling stock - Criteria to achieve technical compatibility between pantographs and overhead contact line
4.	IEC 62128 (Part-3): 2013 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 3: Mutual interaction of a.c. and d.c. traction systems (**Panel 2**)	EN 50122-3: 2022 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 3: Mutual Interaction of AC and DC traction systems
5.	IEC 60913: 2024 - Railway applications - Fixed installations - Electric traction overhead contact lines systems (**Panel 2**)	EN 50119: 2020 - Railway applications - Fixed installations - Electric traction overhead contact lines
6.	IEC 62128 (Part-1): 2013 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 1: Protective provisions against electric shock (**Panel 2**)	EN 50122-1: 2022 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 1: Protective provisions against electric shock
7.	IEC 62128 (Part-2): 2013 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 2: Provisions against the effects of stray currents caused by d.c. traction systems (**Panel 2**)	EN 50122-2: 2022 - Railway applications - Fixed installations - Electrical safety, earthing and the return circuit - Part 2: Provisions against the effects of stray currents caused by DC traction systems
8.	IS/RDSO - TI/0002: 2023 - Indian Railway Standard for Power Quality Restorer (PQR) for 25kV and 2x25kV Traction Substation in Indian Railways (**Panel 3**)	-
9.	IEC 62695: 2014 - Railway applications - Fixed installations - Traction transformers (**Panel 3**)	EN 50329: 2003 - Railway applications - Fixed installations - Traction transformers
10.	IEC 60850: 2014 - Railway applications - Supply voltages of traction systems (**Panel 3**)	EN 50163: 2004 - Railway applications - Supply voltages of traction systems

Item 5 INTERNATIONAL ACTIVITIES

5.1 India is a Participating member ('P' member) in IEC TC 9. The publications issued and position of work of IEC TC 9 can be accessed with the hyperlinks:

Link to access
IEC TC 9 Work Programme
IEC TC 9 Publications

5.2 As a 'P' member of above IEC TC, India has an obligation to send voting on IEC drafts and comments wherever necessary. The details of voting/comments sent since the last meeting of ETD 47 is given at **Annex 1**.

5.3 Nomination of Experts in IEC TC 9 WG/PT/MT

Sl. No.	IEC TC/SC	WGs/ PTs/MTs	Titles	Expert Nominated
1.	TC 9 (P)	WG 40	Railway applications-Urban Guided Transport Management and Command/Control Systems	-
2.	TC 9 (P)	WG 43	Railway applications - Train communication network (TCN)	-
3.	TC 9 (P)	WG 46	Onboard multimedia systems for railways	-
4.	TC 9 (P)	WG 48	ODIS - On board Driving Information System	-
5.	TC 9 (P)	WG 50	Railway applications – Fixed installations – Electronic power converter	-
6.	TC 9 (P)	PT 641	Railway applications - Fixed installations - Requirements for the validation of simulation tools used for the design of traction power supply systems	-
7.	TC 9 (P)	PT 62848-3	Railway application – Fixed installations – D.C. surge arresters and voltage limiting devices – Part 3: Application Guide	-
8.	TC 9 (P)	PT 62973-2	Railway applications - Batteries for auxiliary power supply systems - Part 2: Nickel Cadmium (NiCd) batteries	-
9.	TC 9 (P)	PT 62973-3	Railway applications – Rolling stock – Batteries for auxiliary power supply systems – Part 3: Lead acid batteries	-
10.	TC 9 (P)	PT 62973-4	Railway applications - Rolling stock - Batteries for auxiliary power supply systems - Part 4: Secondary sealed nickel-metal hydride batteries	-
11.	TC 9 (P)	PT 62973-5	Railway applications - Rolling stock - Batteries for auxiliary power supply systems - Part 5: Lithium-ion batteries	-
12.	TC 9 (P)	PT 63341-2	Railway applications - Rolling stock - Fuel cell systems for propulsion - Part 2: Hydrogen storage system	-
13.	TC 9 (P)	PT 63438	Railway applications - Fixed installations – Protection principles for AC and DC electric traction power supply systems	-
14.	TC 9 (P)	PT 63452	Railway applications – Cybersecurity	-
15.	TC 9 (P)	PT 63453	Railway applications - Current collection systems - Validation of simulation of the dynamic interaction between pantograph and overhead contact line	-

Sl. No.	IEC TC/SC	WGs/ PTs/MTs	Titles	Expert Nominated
16.	TC 9 (P)	PT 63477	Coordination requirements and energy-saving performance evaluation for EFS in DC Traction Power Systems	-
17.	TC 9 (P)	PT 63488	Railway applications - Technical criteria for the co-ordinations in neutral-section passing system for train	-
18.	TC 9 (P)	PT 63495	Interoperability and safety of dynamic wireless power transfer (WPT) for railways	-
19.	TC 9 (P)	PT 63498	System Energy Efficiency	-
20.	TC 9 (P)	PT 63536	Railway applications - Signalling and control systems for non UGTMS Urban Rail systems	-
21.	TC 9 (P)	PT 63593	Railway Applications - Rolling Stock - Specification and verification of energy consumption	-
22.	TC 9 (P)	MT 60310	Railway applications - Traction transformers and inductors on board rolling stock	-
23.	TC 9 (P)	MT 60310	Electric traction - Rotating electrical machines for rail and road vehicles	-
24.	TC 9 (P)	MT 60913	Railway applications – Fixed installations – Electric traction overhead contact lines	-
25.	TC 9 (P)	MT 61373	Railway applications - Rolling stock equipment - Shock and vibration tests	-
26.	TC 9 (P)	MT 62128	Revision of IEC 62128 series	-
27.	TC 9 (P)	MT 62278	Railway applications – Specification and demonstration of reliability, availability, maintainability and safety (RAMS)	-
28.	TC 9 (P)	MT 62425	Railway applications – Communication, signalling and processing systems – Safety related electronic systems for signalling	-
29.	TC 9 (P)	MT 62427	Railway applications – Compatibility between rolling stock and train detection systems	-
30.	TC 9 (P)	MT 62486	Railway applications – Current collection systems – Technical criteria for the interaction between pantograph and overhead line (to achieve free access)	-
31.	TC 9 (P)	MT 62888	Railway applications – Energy measurement on board trains	-
32.	TC 9 (P)	MT 62973-1	Railway applications – Rolling stock – Batteries for auxiliary power supply systems – Part 1: General requirements	-

The committee may review and also nominate experts for the Working Groups as there are no Experts nominated from India.

5.4 Review of the Projects under IEC TC 9 and designation of experts

- Focus will now be on participating in the making of IEC standards on the basis of the Level of Interest established in respect of a NWIP or draft standard.

- The Member Secretary, in consultation with the Chair of the Sectional Committee and the Head of the Department, and if necessary, with the entire Sectional Committee, shall determine and specify the Level of Interest for each NWIP or draft standard received from IEC.

- The next step is to designate one or two members of the Sectional Committee to represent BIS for standards categorized as Level H (High) and M (Medium). These designated experts will act as face and voice of BIS for the project at the IEC level.

The IEC TC 9 current projects are as follows:

Sl. No.	Project No.	Project	Level of Interest	IEC TC	Working Group	Experts to be designated
1.	9/3158/CD	IEC 62625-3 ED1 Electronic railway equipment - On board driving data recording system - Part 3: Audio and video recording		TC 9	WG48	-
2.	9/3147/CD	IEC 61375-2-5 ED2 Electronic railway equipment - Train communication network (TCN) - Part 2-5: Ethernet train backbone		TC 9	WG43	-
3.	9/3137/NP	IEC 63615 ED1 Railway Applications – Fixed Installations – Power SCADA (Supervisory Control and Data Acquisition System) for management of electric traction power supply system		TC 9	WG yet to be assigned by IEC	-
4.	9/3135/CD	IEC TS 63498 ED1 Railway applications - System energy efficiency		TC 9	PT 63498	-
5.	9/3123/CD	IEC 60349-2 ED4 Electric traction - Rotating electrical machines for rail and road vehicles - Part 2:		TC 9	MT 60349	-

Sl. No.	Project No.	Project	Level of Interest	IEC TC	Working Group	Experts to be designated
		Electronic converter-fed alternating current motors				
6.	9/3108/CD	IEC 63593 ED1 Railway applications – Rolling stock – Specification and verification of energy consumption		TC 9	PT 63593	-
7.	9/3083/CD	IEC 63488 ED1 Railway applications - Technical criteria for the coordinations in neutral-section passing system for train		TC 9	PT 63488	

The committee may review on the level of interest and also designate one or two experts for the projects categorized as Level H (High) and M (Medium).

Item 6 COMPOSITION OF SECTIONAL COMMITTEE, ETD 47

6.1 The present composition of ETD 47 is given in **Annex 2**.

6.2 Instructions for the Effective Implementation of the Process Reforms Aimed at the Strengthening of the Standardization Ecosystem in the Country

As per instruction received from DG BIS, absence from two consecutive and less than 50 percent of the meetings of the technical committee held in a year shall invite termination of the membership except in special circumstances acknowledged in the writing by the Divisional Council on the basis of the recommendation of the technical committee to this effect. **A person whose membership is terminated on the ground of absence from the meetings or not responding to the Preliminary Draft standard shall not be eligible to be re-inducted as a member in any of the technical committees of BIS for two years from the date of termination.** The status of participation of members in the previous two meetings of ETD 01 are given at **Annex 3**.

The committee may review the participation.

6.3 Request for co-option is received from following organisation:

Sl. No.	Organization	Name
1.	Axis Electrical Components (I) Pvt Ltd, Mumbai	Mr Abhijnan Chowdhuri

The details of above nomination is placed at **Annex 4.**

The committee may consider.

ITEM 7 DATE AND PLACE OF NEXT MEETING

ITEM 8 ANY OTHER BUSINESS