



## BUREAU OF INDIAN STANDARDS

### MINUTES

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Power Cables Sectional Committee, ETD 09	29 <sup>th</sup>	Tuesday	30 <sup>th</sup> January 2024	1030 hrs.	Hybrid (Virtual + Physical) BIS HQ

**CHAIRPERSON: Smt. Meena K.P.**

**MEMBER SECRETARY: Md. Israfil**

#### Members Present

Sr.No.	Organization	Member Name	Member Email
1.	Central Power Research Institute, Bengaluru	Smt. Meena K.P. (Chairperson)	meena@cpri.in
2.	Bureau of Indian Standards	Mohammad Israfil (Member Secretary)	eetd@bis.gov.in
3.	3 M Electro & Communication India Private Limited	Shri Sanjay Jha	sjha@mmm.com
		Shri Permeet Singh	psingh@mmm.com
		Shri Ashish Agarwal	aagrawal@mmm.com
4.	Apar Industries Limited, Mumbai	Shri Amit Kumar Samanta	ak.samanta@apar.com
		Shri Bharat Patel	bharat.patel@apar.com
5.	Bharat Heavy Electrical Limited, New Delhi	Ms. TI Santha	tis@bhel.in
6.	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Arnab Guha	arnab.guha@rpsg.in
7.	Central Electricity Authority, New Delhi	Shri Bhanwar Singh Meena	bhanwar.cea@gov.in
8.	Central Power Research Institute, Bengaluru	Shri Shrimati R. Arunjothi	arunjothi@cpri.in
		Dr. Neha Adhikari	nehaadhikari@cpri.in
		Shri P.V.Satheesh Kumar	pvs Kumar@cpri.in
		Shri Thirumurthy	thiru@cpri.in
9.	Delhi Metro Rail Corporation Limited, Delhi	Shri Ashish Arora	ashish_delhimetro@yahoo.co.in
10.	Electrical Research and Development Association, Vadodara	Shri Sheetal Panchal	sheetal@erda.org
		Shri Shailesh Patel	shailesh.patel@erda.org
11.	Engineers India Limited, New Delhi	Shri A. Sai	achutuni.sai@eil.co.in
12.	Finolex Cables Limited, Pune	Shri P.N. khairnar	pkhairnar@finolex.com
		Shri Bipin Patil	bipin_patil@finolex.com
13.	Finolex J-Power Systems Limited, Pune	Shri Pranav Vasani	pranav.vasani@finolexjpover.com



14.	Gujarat Energy Transmission Corporation Limited, Vadodara	Shri A.A. Joshi	deeng.getco@gebmil.com
		Ms. Dhara D. Bhatt	deengg5.getco@gebmil.com
15.	Indian Electrical and Electronics Manufacturers Association, New Delhi	Shri Vivek Arora	vivek.arora@ieema.org
16.	International Copper Association India, Mumbai	Shri Amol Kalsekar	amol.kalsekar@copperalliance.org
		Ms. Jyotish Pande	jyotish.pande@copperalliance.org
17.	KEC International Limited, Mumbai	Ms Rajani Pande	pandera@kecrpg.com
		Shri Bhoopendra Singh	singhbc@kecrpg.com
18.	Lapp India Private Limited, Jigani	Shri Kumar Krishna S.	krishna.kumar@lappindia.com
19.	National Capital Region Transport Corporation, New Delhi	Shri Pavan Kumar P.	pavan.kumar@ncrtc.in
		Shri Afroz Ansari	afroz.ansari@ncrtc.in
20.	National Hydroelectric Power Corporation, Faridabad	Shri Pankaj Prasoon	pankajprasoon@nhpc.nic.in
		Ms. Rashmi Sraswat	rashmisaraswat@nhpc.nic.in
21.	Nuclear Power Corporation of India Limited, Mumbai	Shri Ananthachari Mannepalli	ananthachari@npcil.co.in
22.	Polycab Wires Private Limited, Mumabi	Shri Bharat Sehgal	bharat.sehgal@polycab.com
23.	RR Kabel Limited, Silvassa	Shri Jose Thomas	jose.thomas@rrglobal.com
		Shri Ranadip Bhaumik	ranadip.bhaumik@rrglobal.com
		Shri Ronak Bhatt	ronak.bhatt@rrglobal.com
		Shri Balachandran Dharman	Balachandran.Dharman@rrglobal.com
24.	Raychem RPG Private Limited, Chennai	Shri R.S. Anekar	ranekar@raychemrpg.com
25.	Shakun Polymers Limited, Vadodara	Shri Priten Shah	technical@shakunpolymers.com
		Shri. Pratik Nayak	qcdaman@shakunpolymers.com
26.	Sterlite Power Transmission Limited, New Delhi	Shri Kamal Khanna	Kamal.Khanna@sterlite.com
27.	Tata Consulting Engineers Limited, Navi Mumbai	Shri G.V. Chandra Shekhar	gvchandrashkhar@tce.co.in
28.	Tata Power Delhi Distribution Limited, New Delhi	Shri Sanjeev Atri	sanjeev.kumar@tatapower-ddl.com
29.	Universal Cables Limited, Satna	Shri Yogendra Singh Tiwari	yogendra.tiwari@unistar.co.in
		Shri C.S. Mohanty	csmohanty@unistar.co.in



30.	IN PERSONAL CAPACITY	Shri Sitaraman Rama Prasath	ramaprasath25@gmail.com
31.	IN PERSONAL CAPACITY	Shri B. Nageshwar Rao	nageshburjupati@gmail.com

## Item 0 GENERAL

### 0.1 OPENING REMARKS BY THE CHAIRPERSON

The Chairperson, Smt. Meena K.P. welcomed all the members present in the 29<sup>th</sup> meeting. She requested all the members to actively participate in the discussions during the meeting to arrive at the decision for documents under consideration. She apprised the members regarding discussions/decisions on various subjects/ documents during the meeting and the new subjects taken by IEC TC 20 for formulation of new standards. She requested subcommittee/Panel members to actively work on the assigned committee work.

### ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

- 1.1 The committee formally confirmed the minutes of the last meeting (28<sup>th</sup> meeting) of Power Cables Sectional Committee, ETD 09 held on 07<sup>th</sup> July 2023 in CPRI Bengaluru.

### Item 2 ACTIONS ARISING OUT OF PREVIOUS MEETING

S. No.	Item of the last minutes	Draft Indian Standard/Document	Action Taken	Decision of the committee
1.	2.25	NWIP received to formulate Indian standard based on IEC 62895: 2017 (High voltage direct current (HVDC) power transmission - Cables with extruded insulation and their accessories for rated voltages up to 320 kV for land applications - Test methods and requirements)	Panel-1 recommended to adopt IEC 62895	Committee decided to consider for adoption
2.	2.3	IS 14255: 1995 Aerial Bunched Cables for working voltages up to and including 1100Volts – Specification a) To revise IS 14255:1995 i.e. <b>IS 14255(Part 1)</b> Aerial Bunched Cables for Working Voltages upto and Including 1.1 kV. b) To formulate IS <b>14255(Part 2)</b> - Aerial Bunched Cables for Working Voltages from	Document for revision of IS 14255-1 under P-draft (comments, Annex-0)	Committee decided to wide circulate the document

		<p><b>3.3 kV upto and including 33 kV</b></p> <p>c) To formulate <b>testing of Aerial Bunched Cables Accessories</b> covering voltages from 1.1 kV upto and including 33 kV- Test methods and test requirements</p>		
3.	2.10 & 2.11	<p><b>ETD 09 (22546)</b> IS 7098: part 3 (revision) Cross-linked polyethylene insulated thermoplastic sheathed cables- specification part 3 for working voltages above 33 kv and up to including 400 kv</p>	Document under WC stage (comments, Annex-0)	Comment from KEC regarding inclusion of semiconducting copper woven fabric tape to be considered. KEC and UCL to provide details
4.	2.27	<p>-Revision of IS 13573 (Part -2) :2011/ IEC 60502-4:2005 (Cable accessories for extruded power cables - Specification: Part 2 for working voltages from 3.3 kV(Ue) up to and including 33 kV(E) - Test requirements. -To formulate new standard 13573-4 and accessories</p>	Drop the subject for future consideration	Committee decided that draft will be submitted by Shri Permit Singh, 3M. BIS to circulate the doc as p draft.
5.	2.1	<p>a. Revision of IS 694 b. Draft Standard on screened cables c. Draft of revision of IS 4289 (Parts 1 &amp; 2) standards for lifts</p>	Panel 5 may update	Committee decided that draft will be submitted by Shri Ronak Bhatt. BIS to circulate the doc as p draft.
6.	2.2	Revision of IS 3961 (Part 3): 1968 & IS 3961(Part 5) : 1968	Document for revision of IS 3961-3 under P-draft stage	Committee decided to wide circulate IS 3961 (part 3) and. Panel-6 to provide draft IS 3961 (part 5)
7.	2.5 & 2.29	Revision of IS 1554 (part 1 & 2), IS 7098 (part 1)	Document for revision of IS 7098-1under WC (comment, Annex-0)	BIS to compile the comments and circulate to the committee members
8.	2.22	IS 13705: 1993 Transition joints of cables for working voltages from 11 kV upto and including 33 kV – Performance requirements and type tests	Standard may be considered for archiving	Committee decided to archive the Standard

9.	2.26	Lifts and Escalators Sectional Committee, ETD 25 has requested that ETD 09 may formulate Indian standard based on EN 50214:2006 (Flat polyvinyl chloride sheathed flexible cables) and/or other relevant IEC/ISO standard if there is no Indian Standard available for cables for use in lifts applications.	Panel-5 to update	Committee decided that draft will be submitted by Shri Ronak Bhatt. BIS to circulate the doc as p draft.
10.	2.16	IS 1255 Part 2: Code of practice for installation and maintenance of power cables from 66KV up to and including 500 KV rating.	Drop the subject for future consideration	Committee decided to modify the voltage rating i.e. from 33KV instead of 66 KV and draft to be shared with Panel-9
11.	2.15	NWIP on Power Cables for e-Vehicle Charging Systems	Panel recommended to adopt IEC 62893-1	Committee decided that draft will be submitted by Lapp India.
12.	2.4	IS 2465 "Cables for Motor Vehicles"	Draft awaited	Committee requested to Ms. Sheetal to submit the draft document.
13.	2.6	IS 10810 (Part 60) : 1988 Methods of test for cables: Part 60 Thermal stability of PVC insulation and sheath	Document under Printing Committee may note	Committee noted
14.	2.9	IS 17293:2020 Electric cables for photovoltaic systems for rated voltages 1 500 Volts	Doc to be circulated as p-draft	Committee noted
15.	2.14	IS 1255 (Part 1) Code of Practice for Installation and Maintenance of Power Cables upto and including 33 kV Rating ( <i>Third Revision</i> )	to be considered for revision through R&D.	Committee decided to revise the document through R&D.
16.	2.20	<b>ETD 09(24337)</b> NWIP on Instrumentation and control Cables	comments received to be finalized by working group	Committee decided that panel-5 will finalize the draft document.
17.	2.24	<b>ETD 09(24344)</b> - Methods of Test for Cables Part 65 Thermal Short Circuit Test Through Conductor/ Metallic Sheath/ Screen Armor	Doc under P-draft	Committee decided that CPRI will provide technical evaluation of the comments
18.	6.2	IS 10810 (Part 62) : 1993 Methods of test for cables: Part 62 Fire resistance for bunched cables	Pending with Lapp India	Committee requested Lapp India to submit comments within 01 month

19.	6.2	IS 10810 (Part 63) : 1993 Methods of test for cables: Part 63 Smoke density for electric cables under fire conditions	Pending with Lapp India	Committee requested Lapp India to submit comments within 01 month
20.	12.3	Amendment 3 to IS 9968-2:2002 (Specification for elastomer - Insulated cables: Part 2 for working voltages from 3.3 kV up to and including 33 kV ( <i>First Revision</i> ))	Comments received from CMD-3 deptt of BIS	Committee requested BIS to re-circulate the comments.

### ITEM 3.0 COMPOSITION OF SECTIONAL COMMITTEE AND PANELS

3.1 The committee noted the information given in the Agenda and decided to remove following members:

1. Tata Power Limited, Mumbai
2. Tamil Nadu Electricity Board, Chennai
3. Coal India Limited, Kolkata
4. Havells India Limited, Noida
5. NTPC Limited, New Delhi
6. Power Grid Corporation of India, Gurugram
7. Shriram Institute for Industrial Research, Delhi
8. Steel Authority of India Limited (SAIL), New Delhi

3.2 The committee considered the nominations for co-option in the committee for:

L. S. Cable India Pvt. Ltd. Rewari Haryana- Shri Ajay Kumar Mishra, Shri Dinesh Kumthekar

The committee noted the information given in the Agenda and revised composition of panel as:  
Dissolve panel-1 &3

### ITEM 4 PRESENT POSITION OF WORK UNDER THE SCOPE OF ETD 09

4.1 The committee noted the information given in the Agenda.

4.2 The committee noted the information given in the Agenda.

### ITEM 5 TECHNICAL ISSUES

1. Comments on IS 9968-1

Standard	Clause/ref.	Comment	Action proposed	Action Taken
IS 9968-1	Table-6	the use of silicon rubber cables is limited to a single core (given in the table-4) but the same is not allowed in Table 6 of the standard	Silicon rubber insulation is already mentioned in the clause 4.3 of IS 9968 Part-1. Further, if the same is not covered in table-6, we request you to kindly add the same in that because it has several advantages over the traditional cable:	Committee decided that Shri A K Samanta will provide draft amendment to IS 9968-1

			<ol style="list-style-type: none"> <li>1. Allow braiding for multicore silicon rubber cables</li> <li>2. PET polyester be added as a braiding material in table-6</li> </ol>	
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2. Comment from Polycab regarding inclusion of GI wire armouring in 1-core DC cables as per IS 7098 (part 2) was discussed

**Committee decided that Polycab will provide the draft amendment copy**

3. Merger of IS 10810 Series as a single standard with chapters.

**Committee decided to not consider the proposal**

4. Comments on 17048 from CPRI

IS	Clause of IS	Comment	Action proposed	Action Taken
17048	Clause 5.8 & 5.9	Toxicity test and Flex test are under consideration	For Toxicity test the procedure as per NES 713 standard can be incorporated	Committee decided that CPRI will provide the draft document for further consideration
-do-	10810 (Part-63)	Number of Test Specimen for cables of diameter less than 10 mm are under consideration and the recorded light transmittance needs to be normalized for cables of diameter greater than 20 mm	Amendment for test method 10810 (Part-63) needs to be issued in line with IEC 61034	

5. 4- core 16 sqmm flat cable requirement from South Western Railway (proposal to include variety in IS 694)

**Committee decided to not consider the proposal**

#### **ITEM 6 NEW WORK ITEM PROPOSAL**

FEP insulated single core shielded wire with FEP jacket. Product has UL standard 758 style 10618.

**Committee decided to take the subject in next meeting**

#### **ITEM 7 INTERNATIONAL ACTIVITIES**

The committee noted the information given in the Agenda.

#### **ITEM 8 NEW SUBJECTS AND FUTURE PROGRAMME OF WORK**

The committee noted the information given in the Agenda.



**ITEM 9 DATE AND PLACE OF NEXT MEETING**

The date and place of the next meeting shall be decided in consultation with the chairperson.

**ITEM 10 ANY OTHER BUSINESS**

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

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