

## BUREAU OF INDIAN STANDARDS

### Draft Minutes

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Conductors and accessories for overhead lines Sectional Committee, ETD 37	20 <sup>th</sup>	Thursday	09-02-2023	10:30 h	Online Meeting

**Chairman:** Shri Anish Anand

**Member Secretary:** Shri Ashok Kumar

### **List of Participants:**

S.No	Organization	Name	Email
1.	Power Grid Corporation of India, Gurugram	Shri Anish Anand	anish@powergrid.in
2.	Anvil Cables Private Limited, Kolkata	Shri Bikram Behera	bikram@anvilcables.in
		Shri Tapan Ghosh	tapan@anvilcables.in
3.	Apar Industries Limited, Mumbai	Shri Pradeep Agnihotri	pradeep.agnihotri@apar.com
		Shri Srimanta Kumar Jana	sk.jana@apar.com
4.	Central Board of Irrigation and Power, New Delhi	Shri Chauhan	mrchauhan@cbip.org
5.	Central Electricity Authority, New Delhi	Shri Manoj	manojhp.cea@gov.in
		Shri Mohit Mudgal	mohitmudgal@nic.in
6.	Central Power Research Institute, Bengaluru	Dr.M.Selvaraj	msraj@cpri.in
7.	Electrical Research and Development Association, Vadodara	Shri Kartik Kulkarni	kartik.kulkarni@erda.org
8.		Shri Uday Puntambekar	uday.puntambekar@erda.org
9.	J S K Industries Private Limited, Silvassa	Shri Selesh Gupta	coo@jskindia.in
10.	Power Grid Corporation of India, Gurugram	Shri Chandra Kant	chandra.kant@powergrid.in
11.	Skipper Limited, Kolkata	Shri Sujalkumar Shah	sujalkumarshah1977@gmail.com
12.	Sterlite Power Transmission Limited, New Delhi	Shri Anantha Kumar	ananthakumar.r@sterlite.com
		Shri Prabhat Jain	prabhat.jain@sterlite.com
13.	TAG Corporation, Chennai	Shri Murthy	murthy@tagcorporation.net
		Shri Vivek T.Chari	vivek@tagcorporation.net

14.		BIS	eetd@bis.gov.in
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**Item 0 WELCOME AND OPENING REMARKS BY CHAIRMAN**

Shri Anish Anand, Chairman ETD 37, extended a warm welcome to all the members present in the virtual meeting. He appreciated the significant work done by all the three subcommittees to review the standards assigned to them specifically SC-3 for proactively working on revision of IS 5613 Series and conducting sub-committee meeting taking forward the draft standards for wide circulation. He requested more involved participation from all the committee members to ETD 37 Sectional Committee. With these words, he wished all the members to have fruitful discussion during the meeting.

Shri Ashok Kumar, Scientist B (ETD), welcomed all the participants and wished for a successful discussion on all Agenda points.

**Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING**

**1.1** The Committee formally approved the minutes of 19th meeting of Conductors and accessories for overhead lines Sectional Committee, ETD 37 held on 2 March 2022.

**Item 2 ACTIONS ARISING OUT OF PREVIOUS MEETING**

SI No.	Subject	Decision taken during the last meeting	Action / Remarks	Decision taken
1.	<p>Revision of <b>IS 2121(Part 1) :1981</b>, Specification for conductors and earth wire accessories for overhead lines, Part 1 : Armour rods, binding wires, and tapes for conductors.</p> <p>Revision of <b>IS 2121(Part 2) :1981</b>, Specification for conductors and earth wire accessories for overhead lines, Part 2 : Mid-span joints and repair sleeves for conductors.</p> <p>Revision of <b>IS 2121(Part 3) :1992</b>, Conductors and earth wire accessories for overhead lines, Part 3 : Accessories for earth wire – Specification.</p> <p>Revision of <b>IS 2121(Part 4) :1991</b>, Conductors and earth wire accessories for overhead lines, Part 4: Non-tension wires – Specification.</p>	<p>Recommendations for revision of IS:2121 ( Part-1): 1981 &amp; IS:2121 ( Part-2) : 1981 received on 26th Aug 2021.</p> <p>With proposed changes, SC-2 was requested to kindly hold meeting and come out with working drafts</p>	<p>Recommendations for revision of IS:2121 ( Part-3): 1992 &amp; IS:2121 ( Part-4) : 1991 received on 31st March 2022.</p> <p>Drafts on IS 2121 (Part 1): 1981, IS 2121 (Part 2): 1981, IS 2121 (Part 3): 1992 and IS 2121 (Part 4): 1991 prepared as per the recommendations received from CPRI and sent to CPRI.</p> <p>Mosdorfer India Private Limited, Igatpuri and TAG Corporation, Chennai also provided recommendations on IS 2121 Series.</p>	<p>After deliberate discussion, Shri M. Selvaraj (Convener SC-2) was requested to kindly plan the SC-2 meeting within 1 month time to discuss these drafts and send the finalized drafts to BIS.</p> <p>SC-2 approved drafts will be circulated to all the committee members for the period of 15 days before wide circulation with the approval of chairman.</p>
3.	<p>Drafts of <b>ACSS</b> and <b>ACCC</b> standards</p>	<p>SC-1 had separate meetings but members could not arrive on final format of standards. Different sizes can be indicated for conventional conductors but for</p>	<p>Shri Chandra Kant (Convener SC-1) requested to kindly update the committee regarding the progress of work</p>	<p>SC-1 was requested to kindly hold meetings in the last week of Feb 2023 to finalize the drafts.</p> <p>SC-1 will work on these drafts of ACSS and</p>

		<p>HTLS conductors, it may not be feasible to add different sizes.</p> <p>SC-1 was requested to kindly hold meetings to finalize the working drafts for ACSS and ACCC standards.</p>		<p>ACCC standards on priority 2.</p>
4.	<p>ref. <b>ET:37/T-28</b> dated 2014-12-10 (doc:ETD-37(6777) for IS 398(Part 7)), Steel reinforced, thermal-resistant Aluminium alloy conductor – Specification</p>	<p>Shri Chandra Kant, Convenor (SC-1) and Shri S K Jana Co-convenor (SC-1) were requested to hold the SC-1 meeting ASAP to review all the documents and expedite the work.</p>	<p>Shri Chandra Kant (Convener SC-1) requested to kindly update the committee regarding the progress of work</p>	<p>It was decided to include Gupta Power Infrastructure Limited and Sterlite Power Transmission Limited in SC-1. Gupta Power Infrastructure Limited will be approached for active participations in the upcoming meeting.</p> <p>SC-1 will work on these draft standards on priority 3.</p>
5.	<p>ref. <b>ET:37/T-29</b> dated 2014-08-01(doc:ETD-37(6778) for IS 398(Part 8)), Super thermal resistant aluminium clad invar reinforced aluminium alloy stranded conductor – Specification</p>			
6.	<p>ref. <b>ET:37/T-30</b> dated 2014- 08-01(doc:ETD-37(6779) for IS 398(Part 9)), Gap type steel reinforced, super thermal resistant aluminium alloy stranded conductor – Specification</p>			
7.	<p>Revision of parts 1 to 5 of IS 398</p> <p><b>IS 398 (Part 1): 1996</b> (iec 60889) Aluminium conductors for overhead transmission purposes - Specification: Part 1 aluminium stranded conductors</p> <p><b>IS 398 (Part 2): 1996</b> (iec 60889) Aluminium</p>	<p>Shri Chandra Kant informed that these standards were discussed in SC-1 meeting and opinions from different manufacturers were invited but haven't received any such suggestions. Shri Chandra Kant, Convenor (SC1) was requested to hold SC-1 meeting and submit</p>	<p>Shri Chandra Kant (Convener SC-1) requested to kindly update the committee regarding the progress of work</p>	<p>These standards will be discussed in the SC-1 meeting tentatively planned in the last week of Feb 2023</p> <p>The committee members also deliberated upon the applicability of part 3. The decision on withdrawal of Part 3 will be taken in the SC-1 meeting.</p>

	<p>conductors for overhead transmission purposes - Specification: Part 2 aluminium conductors, galvanized steel</p> <p><b>IS 398 (Part 3) : 1976</b> Specification for aluminium conductors for overhead transmission purposes: Part 3 aluminium conductors, aluminized steel reinforced</p> <p><b>IS 398 (Part 4) : 1994</b> Aluminium conductors for overhead transmission purposes: Part 4 aluminium alloy stranded conductors (Aluminium - Magnesium - Silicon Type) - Specification IS</p> <p><b>398 (Part 5) : 1992</b> Aluminium conductor for overhead transmission purposes - Specification: Part 5 aluminium conductors - Galvanized steel - Reinforced for extra high voltage (400 KV And Above)</p>	<p>the working drafts to BIS.</p>		<p>SC-1 will work on the revision of existing standards of IS 398 series on priority 1.</p>
<p><b>8.</b></p>	<p>Revision of IS 5613 Series.</p>			
	<p>IS 5613 (Part 3/Sec 1) : 1989, Code of practice for design installation and maintenance for overhead power lines Part 3 400 kV lines Sec 1 design IS 5613 (Part 3/Sec 2) : 1989, Code of practice for design installation and maintenance of overhead power lines</p>	<p>PGCIL have certain comments on wide circulated drafts Documents 14358 and 14357. Which will be discussed in SC-3 meeting. SC-3 was requested to kindly hold meeting ASAP to resolve the comments and send them to BIS.</p>	<p>SC-3 meeting was held on 30 Jan 2022. Modified drafts incorporating PGCIL comments circulated to members and no further comment received.</p>	<p>Shri Chandra Kant requested to kindly review the figures of these draft standards and incorporate in the standard more explicit version of the drawings that are not legible. BIS will also explore the explicit version of these drawings.</p>

	Part 3 400 kV lines Sec 2 installation and maintenance			<p>TNEB Limited will be approached for obtaining the explicit version of these drawing.</p> <p>These drafts will be wide circulated for the period of 2 weeks for review. The document will be sent for printing, in case no comments received.</p>
	IS 5613 (Part 1/Sec 1) : 1985 Code of practice for design installation and maintenance of overhead power lines Part 1 lines up to and including 11 kV Sec 1 design First Revision IS 5613 (Part 1/Sec 2) : 1985 Code of practice for design installation and maintenance of overhead power lines Part 1 lines up to and including 11 kV Sec 2 installation and maintenance	<p>A query related to the calculation of Tension in IS 5613 (Part 1/Sec 1) received. It is being informed that the tension formula mentioned in Appendix A of IS 5613 (Part 1/Sec 1) is wrong and doesn't cover the effect of wind force and other relevant factors.</p> <p>A joint meeting with Civil Dept. was held on 1st Dec 2022. The Scopes of IS 2713 (Part 13): 1980, IS 802 series and IS 5613 series are closely related to each other and the expert group decided to the revise these standards collectively. Shri Sujal kumar, skipper Limited agreed to provide the recommendations on IS 5613 series.</p>		<p>Shri Mohit Mudgal, CEA informed that transmission lines up to and including 11 kV are dealt by Distribution Department of CEA.</p> <p>Shri Mohit Mudgal to share contact details of experts from Distribution Department.</p> <p>Shri Sujal kumar, skipper Limited requested to kindly provide the recommendations on IS 5613 series.</p>
9.	<b>IS 15976:2013</b> – Steel Reels and Drums for bare conductors - Specification	SC-1 was requested to review the draft amendment to IS 15976 prepared by Shri S K Jana, APAR Industries. Afterward, it will be circulated amongst committee members as preliminary draft. In view of no comments, committee Agreed to circulate draft amendment to IS 15976:2013 as preliminary draft	No comments received for draft amendment to IS 15976.	Shri Chandra Kant informed that the amendment will be discussed in the SC-1 meeting before wide circulation.

10.	<b>IS 9708:1993</b> – Stockbridge Vibration Dampers For Overhead Power Lines.	IS 9708:1993 was assigned to SC-2 for revision.	Shri M. Selvaraj, CPRI (Convener SC-2) may kindly update the committee.	Shri M. Selvaraj, CPRI to share recommendation within 2 months.
11.	<b>IS 2532: 1965</b> - Specification for hard - Drawn copper wire for telegraph and telephone purposes  <b>IS 2665: 1964</b> - Specification for cadmium copper wire for telegraph and telephone purposes	It was decided to write letters to telecom department whether these standards are still used or not	Department of Telecommunications and Department of Post contacted regarding utilization of IS 2532: 1965 and IS 2665: 1964 in Telecommunication and Postal Sector. Department of Telecommunications informed that the DoT is not operating any system after formation of BSNL/MTNL. Reply awaited from BSNL/MTNL.	BSNL will be contacted once again regarding utilization of these standard.  The committee decided that these Indian standards will be put up for withdrawal if BSNL not referring these standards.

### Item 3 COMPOSITION OF THE SECTIONAL COMMITTEE

**3.1** The committee reviewed the composition and no changes were suggested. It was requested to all the participants to inform BIS regarding any change in their current organization. Shri Sujal Shah, Skipper Limited was requested to send contact details to BIS.

**3.2** All three Conveners were requested to review the composition of sub-committees in their respective meetings and suggest modifications, if any, to the committee during its next meeting for its consideration. It was decided to include J S K Industries to SC-3. It was also decided to include CTUIL in all the sub committees.

**3.3** Letters regarding update in nominations will be sent to all non-participating organizations.

### Item 4 DRAFT INDIAN STANDARDS UNDER WIDE CIRULATION

Sl. No	Draft Standards	Decision taken
1.	ETD 37 (14357) Code of Practice for Design Installation and Maintenance for Overhead Power Lines - Part 3 : 400 kV and 765 kV Lines - Section 1 : Design	Shri Chandra Kant requested to kindly review the figures of these draft standards and incorporate in the standard more explicit version of the drawings that are not legible. BIS will also explore the explicit version of these drawings.
2.	ETD 37 (14358) Code of Practice for Design Installation and Maintenance of Overhead Power Lines - Part 3 : 400 kV and 765 kV Lines - Section 2 : Installation and Maintenance	

		<p>TNEB Limited will be approached for obtaining the explicit version of these drawing.</p> <p>These drafts will be wide circulated for 2 the period of 2 weeks a before finalizing the draft for printing with the approval of chairman.</p>
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**Item 5 PROGRAMME OF WORK**

The Committee noted the information.

**Item 6 NEW SUBJECTS AND FUTURE PROGRAMME OF WORK**

**6.1** The Committee noted the information.

**Item 7 INTERNATIONAL ACTIVITIES**

The committee noted the information given in the agenda.

**Item 8 REVIEW OF INDIAN STANDARDS FOR REVISION/REAFFIRMATION**

**8.1** The committee noted the information given in the agenda.

**Item 9 IMPLEMENTATION OF INDIAN STANDARDS**

The committee noted the information given in the agenda.

**Item 10 DATE AND PLACE OF NEXT MEETING**

The following timelines were decided:

ETD 37: The date of Sectional committee meeting will be decided after conducting SC meetings. (in consultation with chairman)

**Item 11 ANY OTHER BUSINESS**