

BUREAU OF INDIAN STANDARDS**AGENDA**

Name of the Committee	No. of Meeting	Day	Date	Time	Mode
Instrument Transformers Sectional Committee, ETD 34	25 th	Tuesday	17.12.2024	1100 h	Hybrid

Item 0 GENERAL**0.1 Welcome and Opening Remarks by the Chairman****Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING**

1.1 The minutes of the 24th meeting of Instrument Transformers, Sectional Committee, ETD 34 held on 25-09-2024 was circulated vide BISDG letter No. ETD 34 dated 22-11-2024. No comments have been received.

The Committee may formally confirm the minutes.

Item 2 COMPOSITION OF ETD 34- INSTRUMENT TRANSFORMERS SECTIONAL COMMITTEE AND WORKING PANELS UNDER ETD 34 SECTIONAL COMMITTEE.

2.1 The present composition of ETD 34 Sectional Committee and Working Panels under ETD 34 is given in [Annex 1](#).

The committee may note

2.2 Status of Participation of Members in the Previous Two Meetings.

The status of participation of Members in previous two meetings is attached at [Annex 2](#)

The Committee may note.

2.3 Sector Wise Classification of ETD 34 Sectional Committee

The sector wise classification of ETD 34 Sectional Committee is given at [Annex 3](#)

The committee may note

2.4 Performance Evaluation of the members of ETD 34 Sectional Committee.**Item 4 ACTIONS ARISING OUT OF PREVIOUS MEETING**

Sl. No.	Item No. of last minutes	Subject	Decision taken during the last meeting	Remarks
1	Sl. No. 2 of table under Item No. 5.	Preparation of new Indian standard on " Condition Monitoring of Instrument Transformers ".	The Member Secretary presented the draft submitted by the working Panel P/01 for the review of the committee. Sh. G V Akre, Convenor of working panel P/01 highlighted the contents of the draft. The draft was reviewed by the committee and it was noted that the scope was missing and requested the panel to include it in the draft. Further inputs with respect to the Title of the draft, terminology and figures provided in the draft were provided by the committee.	<i>The panel may update the committee.</i>

			The committee requested working panel P/01 to review the draft and submit the updated draft after incorporating the inputs provided during the meeting by 30.09.2024.	
2	Sl. No. 3 of table under Item No. 5.	Revision of IS 4146: 1983 Application guide for voltage transformers and IS 4201:1983 -Application guide for current transformers	The convenor of the panel Sh. G V Akre informed that the work on the drafts were under progress and it would require one month for completion. The committee noted and requested working panel P/02 to submit the drafts of IS 4146:1983 and IS 4201:1983 by 31.10.2024. The committee also decided to include Mr. Vrajesh J Desai and Mr. Pramod Govind Rao in Working Panel 02.	<i>The panel may update the committee.</i>
4	Sl. No. 4 of table under Item No. 5.	Revision of IS 5547: 1983 Application guide for Capacitor Voltage Transformers and IS 6949:1973 - Summation current transformers	The convenor of the panel Sh. G V Akre informed that the work on the drafts were under progress and it would require one month for completion. The committee noted and requested working panel P/02 to submit the drafts of IS 5547:1983 and IS 6949:1973 by 31.10.2024. The committee also decided to include Mr. Vrajesh J Desai and Mr. Pramod Govind Rao in Working Panel 02.	<i>The panel may update the committee.</i>
5	Sl. No. 5 of table under Item No. 6.	Revision of IS 16227 (Part 1): 2016/IEC 61869-1:2007- Instrument transformers: Part 1 general requirements	The convenor of the panel Sh. G V Akre informed that the study of IEC 61869-1:2023 is under progress and requested for providing additional time for completion of the same. The committee noted and requested working panel 02 to complete the study of IEC 61869-1:2023 and submit a report on the changes in the revised standard by 30.11.2024	<i>The panel may update the committee.</i>
6	Sl. No. 10 of table under Item No. 10	New Work Item Proposal (NWIP) for formulation of Indian Standard on Maintenance and Installation of Current Transformers and Potential Transformers.	The member secretary presented the draft submitted by working panel P/03 for the review of the committee. Sh. V. Rajasekharan Nair highlighted the contents of the draft. The draft was reviewed by the committee and it was noted that the scope was missing. The committee requested working panel P/03 to include the foreword, scope, references, terminology in the draft. Further, the committee also requested the panel to elaborate the	<i>The panel may update the committee.</i>

			installation and maintenance procedures as per the existing practice, review the pre-commissioning testing specified in the draft and submit the updated draft after incorporating the inputs provided during the meeting by 31.10.2024.	
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Item 5 PRESENT POSITION OF WORK

The Programme of Work under ETD 34 Instrument Transformers Sectional Committee is given in [Annex 4](#).

The committee may note.

Item 6 REVIEW OF INDIAN STANDARDS FOR REVISION/REAFFIRMATION

6.1 The Standards due for review are given in [Annex 5](#).

The committee may review.

6.2 Indian Standards adopted from IEC which are due for review:

List of Adopted Indian Standards are given in [Annex 6](#).

The committee may review.

6.3 Review of Indian Standards exceeding the timelines

Sl. No.	IS No.	Title	Last Review done
1	IS 4146: 1983	Application guide for voltage transformers	2016
2	IS 4201:1983	Application guide for current transformers	2016
3	IS 5547: 1983	Application guide for Capacitor Voltage Transformers	2016
4	IS 6949:1973	Summation current transformers	2016
5	IS 16227 (Part 1):2016/ IEC 61869-1:2007	Instrument transformers: Part 1 general requirements	--

Item 7 COMMENTS RECEIVED ON INDIAN STANDARDS UNDER ETD 34 INSTRUMENT TRANSFORMERS SECTIONAL COMMITTEE

The following comments on Indian Standards under ETD 34 have been received.

Sl. No.	IS No. & Title	Commentator	Comments	Decision taken in previous meetings	Remarks
1	IS 16227 (Part 4): 2015/ IEC 61869-4:2013- Instrument transformers Part 4 additional requirements of combined transformers	M/s MGVCL, Vadodara	Applicability on 11kV CTPT unit (Three Single Phase CTs and One Three Phase PT) since IS 16227 (Part 4) does not specifically applicable to combined CTPT unit having three single phase CTs	The committee has decided to seek clarification from IEC TC 38 regarding applicability of IS 61869-4:2013 on the combined Instrument transformers unit with the combination of Three Single Phase CTs	Clarification is being sought from IEC 38 on IEC 61869-4:2013. <i>The committee may note</i>

			and one three phase PT.	and One Three Phase PT against the comments on IS 16227 (Part 4):2015/IEC 61869-4:2013 received from M/s MGVCL, Vadodara since IS 16227 (Part 4):2015 is an identical adoption of IEC 61869-4:2013 and the applicability of IEC 61869-4:2013 on the combined Instrument Transformers other than the combination of 1 CT and 1 PT is not specified in the said IEC standard.	
2	IS 2705 (Part 1):1992-Current transformers - Specification: Part 1 general requirements (Second Revision)	Central Electricity Authority (CEA), New Delhi	It is to be informed that IS 2705 (Current Transformers-Specification) may be withdrawn after release of IS 16227. IS 2705 part-1 being still active. This is creating conflict for manufacturing and type testing. In this regard, instruction may be circulated to all concerned to stop using IS 2705 in testing and others.	The committee has been decided to withdraw IS 2705 (Part 1):1992 (Current Transformers-Specification: Part 1 general requirements) since another standard i.e. IS 16227 (Part 1):2016/IEC 61869-1:2007 (Instrument Transformers: Part 1 general requirements) has already been published and is in use at present.	Sent for Gazette Notification with respect to Withdrawal. <i>The committee may note.</i>

Item 8 PROPOSAL RECEIVED THROUGH ANNUAL STANDARDIZATION PLAN (2024-2025) OF DEPARTMENT OF ATOMIC ENERGY, MUMBAI FOR FORMULATION OF INDIAN STANDARD

Sl. No.	Subject	Decision taken during last meeting	Remarks
1	Fly Back Transformers	The committee has decided to collect necessary inputs on the new work item proposal i.e. Formulation of Indian Standard on 'Fly Back transformers' received from Department of Atomic Energy, Mumbai before taking decision on the same.	Inputs is being sought. <i>The committee may note.</i>

Item 9 INTERNATIONAL ACTIVITIES

9.1 India is a 'P' (Participating) Member in the corresponding IEC/TC 38. Close interaction is being maintained with this Technical Committees by way of voting, sending India's comments on the documents received from IEC and participating in the various IEC TC 38 meetings by the experts nominated.

The Programme of Work (POW) of IEC TC 38 is given in [Annex 7](#).

9.2 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 23rd meeting of ETD 34 is given in [Annex 8](#).

The committee may note

9.3 Identification of IEC publications for harmonization

The Indian standards which were formulated/revised based on the IEC standards, are to be reviewed when the corresponding IEC standards are revised.

The committee may consider.

The list of published IEC Standards corresponding to IEC TC 38 is given at [Annex 9](#).

9.4 Review of Nominated Experts in IEC TC 38

The list of nominated experts in various working groups under IEC TC 38 is given in [Annex 10](#). The committee may nominate experts in the Working Groups in which there are no Experts nominated from India.

9.5 Review of the Projects under IEC TC 38 and designation of experts

The experts designated against the ongoing projects under IEC TC 38 are given below.

Sl. No.	Project No.	Title of the Project	TC	WG/MT/PT	Level of Interest (High/Medium/Low)	Designated Expert
1	38/792/NP	Instrument transformers - Part 201: General requirements for Instrument Transformers for low voltage applications (≤ 1000 V AC and 1500 V DC)	TC 38		High	a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida b. Mr. Chetas Parikh, Narayan Powertech Pvt. Ltd, Vadodara
2	38/793/CD	Instrument transformers - Part 7: Specific requirements for electronic Voltage Transformers	TC 38	WG 37	Medium	a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida b. Mr. Vrajesh J Desai, In Individual Capacity
3	38/794A/CD	Instrument transformers - Part 8: Specific requirements for Electronic Current Transformers	TC 38	WG 37	Medium	a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida b. Mr. Vrajesh J Desai, In Individual Capacity
4	38/802/CD	Instrument Transformers integrated with other devices - Requirements and tests	TC 38	WG 54	Medium	Mr. Pradeep Deshpande, Gilbert and Maxwell Transformers Pvt. Ltd, Nashik
5	38/797/CD	Instrument transformers - Part 14: Additional requirements for current transformers for DC applications	TC 38	MT 59	Medium	Mr. Mayank Yadav, GE (T & D) India Limited, Noida
6	38/798/CD	Instrument transformers - Part 15: Additional requirements for voltage transformers for DC applications	TC 38	MT 59	Medium	a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida. b. Mr. Sunil Nannaware, Hitachi Energy India Ltd., Bangalore
7	38/799/CD	Instrument transformers - Part 2: Additional requirements for current transformers	TC 38	MT 58	High	a. Mr. G. V Akre, Hivoltrans, Gujarat b. Ms. Geeta Joshi, Hitachi Energy India Ltd., Bangalore

						<p>c. Mr. Chetas Parikh, Narayan Powertech Pvt. Ltd, Vadodara</p> <p>d. Mr. Vrajesh J Desai, In Individual Capacity</p>
8	38/800/CD	Instrument transformers - Part 3: Additional requirements for inductive voltage transformers	TC 38	MT 58	High	<p>a. Mr. G. V Akre, Hivoltrans, Gujarat</p> <p>b. Mr. Chetas Parikh, Narayan Powertech Pvt. Ltd, Vadodara</p> <p>c. Mr. Vrajesh J Desai, In Individual Capacity</p>
9	38/801/CD	Instrument transformers - Part 5: Additional requirements for capacitor voltage transformers	TC 38	MT 58	High	<p>a. Mr. Mahesh Dorlikar, Hitachi Energy India Ltd., Bangalore</p> <p>b. Mr. Vrajesh J Desai, In Individual Capacity</p>
10	38/715/CD	Amendment 1 - Instrument transformers - Part 9: Digital interface for instrument transformers	TC 38	WG 37	Medium	<p>a. Mr. Pradeep Deshpande, Gilbert and Maxwell Transformers Pvt. Ltd, Nashik</p> <p>b. Mr. Mahesh Dorlikar, Hitachi Energy India Ltd., Bangalore</p>

The committee may review.

9.6 Participation in the future IEC TC 38 Meetings

Item 10 DATE AND PLACE FOR THE NEXT MEETING

Item 11 TERMS OF REFERENCE (TORS) FOR RESEARCH AND DEVELOPMENT

The committee may submit Research and Development Proposals wherever necessary for the formulation of New Indian Standards or Review of Existing Indian Standards.

Item 12 ANY OTHER BUSINESS

ANNEX 1

ETD 34 – Instrument Transformers Sectional Committee Composition

S.No.	Organization	Member Name	Member Email	Member Phone	Role
1	IN INDIVIDUAL CAPACITY	Shri Dinkar Devate	dinkar.devate@gmail.com	9650992237	Chairperson
2	Bharat Heavy Electrical Limited, New Delhi	Shri Kulamani Naik	kmnaik@bhel.in	9425604732	Principal Member
		Shri Rakesh Yoganandi	ryoganandi@bhel.in		Alternate Member
		Shri Satendra Kumar	satendrakumar@bhel.in		Alternate Member
3	CG Power and Industrial Solutions, Mumbai	Mr. Uday Sanvatsarkar	uday.sanvatsarkar@cgglobal.com	9673333932	Principal Member
		Shri Santosh Bhong	santosh.bhong@cgglobal.com		Alternate Member
4	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Santosh Chattopadhyay	santosh.chattopadhyay@rpsg.in	9163361863	Principal Member
		Shri Rajiv Kumar Singh	rajiv.singh1@rpsg.in	9831869165	Alternate Member
5	Central Electricity Authority, New Delhi	Shri Bhanwar Singh Meena	bhanwar.cea@gov.in	8750251805	Principal Member
		Ms. Shivani Sharma	shivani.cea@gov.in	9717686780	Alternate Member
		Pankaj Kumar Verma	kvermap@nic.in	9654565269	Alternate Member
6	Central Power Research Institute, Bengaluru	Swaraj Kumar Das	skdas@cpri.in	9886643757	Alternate Member
		Shri S. Bhattacharya	bhattacharya@cpri.in	9425300080	Principal Member
7	Electrical Research and Development Association, Vadodara	Shri Ravi Nandwana	ravi.nandwana@erda.org	9887113514	Principal Member
		Shri Shailesh Patel	shailesh.patel@erda.org	9978940468	Alternate Member
8	GE T&D India Limited, Noida	Shri Subhash Kulkarni	subhash.kulkarni@ge.com	9740983954	Principal Member
		Mayank Yadav	mayank.yadav@ge.com	9740983956	Alternate Member
9	Gilbert and Maxwell Transformers Private Limited, Nashik	Shri Pradeep Deshpande	deshpandepa@hotmail.com	9822612511	Principal Member
10	Heptacare Power Industries Pvt. Ltd, Meerut	Sh. Vinay Kumar	vinay061022@gmail.com	9837001235	Principal Member
		Sh. Nalin Nehra	nehranalin99@gmail.com	9927911138	Alternate Member
11	Hitachi Energy India Ltd., Karnataka, Bangalore	Ms. Geeta Joshi	geetha.joshi@hitachienergy.com	9601268745	Principal Member
		Shri Sunil Nannaware	sunil.nannaware@hitachienergy.com	9970994051	Alternate Member
		Shri Mahesh Dorlikar	mahesh.dorlikar@hitachienergy.com	9673336479	Alternate Member
12	Hivoltrans, Halol, Gujarat	Shri Shitij Khattar	shitij@vishalgroup.in	9897022000	Alternate Member
		Shri Chowdhury Roy.A.	aroy@hivoltrans.com		Alternate Member
		Shri Akre G.V.	gvakre@hivoltrans.com	9824063410	Principal Member
13	Indian Electrical and Electronics Manufacturers Association, New Delhi	Pragati Sohoni	pragati.sohoni@ieema.org	9820071173	Principal Member
		Shri Kumar Rahul	kumar.rahul@ieema.org	8789098209	Alternate Member
14	Instrans Engineering and Manufacturing Private Limited, Bengaluru	Shri V. Rajasekharan Nair	instrans@zoho.com	9841544083	Alternate Member
		Shri Kishor S. Jinsiwale	instrans@dataone.in	9845033173	Principal Member
15	Kappa Electricals, Chennai	Dr. Mira Parasuram	mira@kappaelectricals.com	9840047979	Principal Member
16	Ministry of Heavy Industries and Public Enterprises, New Delhi	Gaurav Joshi	joshi.gk@gov.in	7767001479	Principal Member
		Sureshwar Singh Bonal	dirhei-mhi@gov.in	9718667619	Alternate Member
17	NTPC Limited, New Delhi	Shri S. N. Tripathi	shaktintripathi@ntpc.co.in	9650999688	Principal Member
		Shri Amit Kumar Sah	amitkumarsah@ntpc.co.in	9437579976	Alternate Member
18	Narayan Powertech Private Limited, Vadodara	Chetas Parikh	chetas@narayanpowertech.com	9227569367	Principal Member
19	Nortex, Jokhabad	Shri Saseendran V.	nortexmarketing@gmail.com	9899168373	Alternate Member
		Shri S.K. Sharma	nortex_delhi@hotmail.com	9810076230	Principal Member
20	Power Grid Corporation of India, Gurugram	Shri S B R Rao	sbrao@powergrid.in	9971399088	Alternate Member
		Shri Dheeraj Srivastava	dheeraj@powergridindia.com	9717890976	Alternate Member
		Shri A.P. Gangadharan	apganga@powergrid.in	9910378122	Principal Member

21	Siemens Limited, Mumbai	Shri Jyotirmoy Dutta	vyotirmoy.dutta@siemens.com	9860442059	Principal Member
		Shri Vishnu Ingle	vishnu.ingle@siemens.com	9049990054	Alternate Member
22	Yadav Measurements Private Limited, Udaipur	Balmukund M Vyas	Balmukund.vyas@yadavmeasurements.com	9829267374	Principal Member
		Shri Narendra Paliwal	narendra.paliwal@yadavmeasurements.com	9784635386	Alternate Member
		Vivek Jaiswal	Vivek.Jaiswal@yadavmeasurements.com	8586831503	Alternate Member
23	In Personal Capacity	Sh. Pramod Govind Rao	pramodrao@yashhv.com	9673333926	Personal Capacity
24	In Personal Capacity	Sh. Vrajesh J Desai	desaivrajesh58@gmail.com	9724334146	Personal Capacity

Composition of Working Panels under ETD 34 Sectional Committee

Working Panel 1- Formulation of Indian standard on "Condition Monitoring of Instrument Transformers"

Sl. No.	Name of the Member	Name of the Organization
1	Shri G.V. Akre- Convenor	M/s Hivoltrans, Gujrat
2	Ms Seema Soni	PGCIL, Gurugram
3	Shri Uday Sanvatsarkar,	M/s CG Power and Industrial Solutions, Mumbai
4	Ms. Geetha Joshi	M/s Hitachi Energy India Ltd, Bangalore
5	Shri Swaraj Kumar Das	CPRI, Bengaluru
6	Shri Shailesh Patel	ERDA, Vadodara
7	Shri Kiran Kelapure	Yadav Measurements Pvt. Ltd, Udaipur
8	Shri Y.V. Joshi	GETCO, Gujarat

Working Panel 2- Revision of IS 4146:1983, IS 4201:1983 IS 5547:1983, IS 6949:1973 and IS 16227 (Part 1):2016

Sl. No.	Name of the Member	Name of the Organization
1	Shri G.V. Akre- Convenor	M/s Hivoltrans, Gujrat
2	Shri Uday Sanvatsarkar,	M/s CG Power and Industrial Solutions, Mumbai
3	Ms. Geetha Joshi	M/s Hitachi Energy India Ltd, Bangalore
4	Shri Shailesh Patel	ERDA, Vadodara
5	Shri Kiran Kelapure	Yadav Measurements Pvt. Ltd, Udaipur
6	Shri Pradeep Deshpande	M/s Gilbert & Maxwell Trans. Pvt. Ltd
7	Sh. Pramod Govind Rao	In Personal Capacity
8	Sh. Vrajesh J Desai	In Personal Capacity

Working Panel 3- Formulation of Indian Standard on "Maintenance and Installation of Instrument Transformers

Sl. No.	Name of the Member	Name of the Organization
1	Shri G.V. Akre- Convenor	M/s Hivoltrans, Gujrat
2	Shri Mayank Yadav	M/s GE (T & D) India Limited, Noida
3	Dr. A. J. Chavda	GETCO, Gujarat
4	Shri V. Rajasekharan	M/s Instrans Engineering and Manufacturing Pvt. Ltd, Bengaluru
5	Shri Chetas Parikh	M/s Narayan Powertech Pvt. Ltd, Vadodara
6	Shri S.K. Sharma	M/s Nortex, Jokhabad
7	Shri S B R Rao	PGCIL, Gurugram

ANNEX 2

Sl. No	Organization	Member Name	Member email	Member Phone	Role	Last 2 Meetings Attendance		
						23 rd	24 th	Total
1.	In Individual Capacity	Shri Dinkar Devate	dinkar.devate@gmail.com	9650992237	Chairperson	P	P	2/2
2.	Bharat Heavy Electrical Limited, New Delhi	Shri Kulamani Naik	kmnaik@bhel.in	9425604732	Alternate Member	A	P	1/2
		Shri Mritunjay Kumar	mritunjay@bhel.in	9912954457	Principal Member			
3.	CG Power And Industrial Solutions, Mumbai	Shri Uday Sanvatsarkar	uday.sanvatsarkar@cgglobal.com	9673333932	Principal Member	P	A	1/2
		Shri Santosh Bhong	santosh.bhong@cgglobal.com		Alternate Member			
4.	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Santosh Chattopadhyay	santosh.chattopadhyay@rpsg.in	9163361863	Principal Member	P	A	1/2
		Shri Rajiv Kumar Singh	rajiv.singh1@rpsg.in	9831869165	Alternate Member			
5.	Central Electricity Authority, New Delhi	Shivani Sharma	shivani.cea@gov.in	9717686780	Alternate Member	P	P	2/2
		Shri Bhanwar Singh Meena	bhanwar.cea@gov.in	8750251805	Principal Member			
		Pankaj Kumar Verma	kvermap@nic.in	9654565269	Alternate Member			
6.	Central Power Research Institute, Bengaluru	Shri Swaraj Kumar Das	skdas@cpri.in	9886643757	Alternate Member	P	P	2/2
		Shri S. Bhattacharya	bhattacharya@cpri.in	9425300080	Principal Member			
7.	Electrical Research and Development Association, Vadodara	Shri Shailesh Patel	shailesh.patel@erda.org	9978940468	Principal Member	A	P	1/2
		Shri Krunalkrushanan Patel	krunalkrushanan.patel@erda.org	7069037980	Alternate Member			
8.	GE T&D India Limited, Noida	Shri Subhash Kulkarni	subhash.kulkarni@ge.com	9740983954	Principal Member	P	P	2/2
		Mayank Yadav	mayank.yadav@ge.com	9740983956	Alternate Member			
9.	Gilbert and Maxwell Transformers Private Limited, Nashik	Shri Pradeep Deshpande	deshpandepa@hotmail.com	9822612511	Principal Member	P	P	2/2
10.	Hitachi Energy India Ltd., Karnataka, Bangalore	Ms. Geeta Joshi	geetha.joshi@hitachienergy.com	9601268745	Principal Member	A	P	1/2
		Shri Sunil Nannaware	sunil.nannaware@hitachienergy.com	9970994051	Alternate Member			
		Shri Mahesh Dorlikar	mahesh.dorlikar@hitachienergy.com	9673336479	Alternate Member			
11.	Hivoltrans, Halol, Gujarat	Shri Shitij Khattar	shitij@vishalgroup.in	9897022000	Alternate Member	P	P	2/2
		Shri Chowdhury Roy.A.	aroy@hivoltrans.com		Alternate Member			
		Shri Akre G.V.	gvakre@hivoltrans.com	9824063410	Principal Member			

12.	Indian Electrical and Electronics Manufacturers Association, New Delhi	Shri Pragati Sohoni	pragati.sohoni@ieema.org	9820071173	Principal Member	P	P	2/2
		Shri Kumar Rahul	kumar.rahul@ieema.org	8789098209	Alternate Member			
13.	Instrans Engineering and Manufacturing Private Limited, Bengaluru	Shri V. Rajasekharan Nair	instrans@zoho.com	9841544083	Alternate Member	P	P	2/2
		Shri Kishor S. Jinsiwale	instrans@dataone.in	9845033173	Principal Member			
14.	Ministry of Heavy Industries and Public Enterprises, New Delhi	Shri Gaurav Joshi	joshi.gk@gov.in	7767001479	Principal Member	-	A	0/1
		Shri Sureshwar Singh Bonal	dirheimhi@gov.in	9718667619	Alternate Member			
15.	NTPC Limited, New Delhi	Shri S. N. Tripathi	shaktintripathi@ntpc.co.in	9650999688	Principal Member	-	P	1/1
		Shri Amit Kumar Sah	amitkumarsah@ntpc.co.in	9437579976	Alternate Member			
16.	Narayan Powertech Private Limited, Vadodara	Shri Chetas Parikh	chetas@narayanpowertech.com	9227569367	Principal Member	P	P	2/2
17.	Nortex, Jokhabad	Shri Saseendran V.	nortexmarketing@gmail.com	9899168373	Alternate Member	P	A	1/2
		Shri S.K. Sharma	nortex_delhi@hotmail.com nortexmarketing@gmail.com	9810076230	Principal Member			
18.	Power Grid Corporation of India, Gurugram	Shri S B R Rao	sbrao@powergrid.in	9971399088	Alternate Member	P	A	1/2
		Shri Dheeraj Srivastava	dheeraj@powergridindia.com	9717890976	Alternate Member			
		Shri A.P. Gangadharan	apganga@powergrid.in	9910378122	Principal Member			
19.	Yadav Measurements Private Limited, Udaipur	Shri Balmukund M Vyas	balmukund.vyas@yadavmeasurements.com	9829267374	Principal Member	P	P	2/2
		Shri Narendra Paliwal	narendra.paliwal@yadavmeasurements.com	9784635386	Alternate Member			
		Shri Vivek Jaiswal	vivek.jaiswal@yadavmeasurements.com	8586831503	Alternate Member			
		Shri Vrajesh Desai	desaivrajesh58@gmail.com	9724334146	Personal Capacity	-	-	1/1

ANNEX 3

	Sectors under ETD 34 Sectional Committee	Sub Sectors under ETD 34 Sectional Committee	IS No	Title of Indian Standard
Sectional Committee	Instrument Transformers	Current and Voltage Transformers	IS 16227 (Part 1) : 2016	Instrument transformers: Part 1 general requirements
			IS 16227 (Part 2) : 2016	Instrument transformers: Part 2 additional requirements for current transformers
ETD 34- Instrument Transformers Sectional Committee			IS 16227 (Part 3) : 2015	Instrument transformers: Part 3 additional requirements for inductive voltage transformers
			IS 16227 (Part 4) : 2015	Instrument transformers: Part 4 additional requirements for combined transformers
			IS 16227 (Part 5) : 2015	Instrument transformers: Part 5 additional requirements for capacitors voltage transformers
			IS 16227 (Part 6) : 2018	Instrument transformers: Part 6 additional general requirements for low - Power instrument transformers
			IS 16227 (Part 9) : 2018	Instrument transformers: Part 9 digital interface for instrument transformers
			IS 16227 (Part 100) : 2018	Instrument transformers: Part 100 guidance for application of current transformers in power system protection
			IS 16227 (Part 102) : 2018	Instrument transformers: Part 102 ferroresonance oscillations in substations with inductive voltage transformers
			IS 16227 (Part 103) : 2018	Instrument Transformers part 103 The use of instrument Transformers for power quality Measurement
			IS 16855 (Part 1) : 2018	Current and voltage sensors or detectors, to be used for fault passage indication purposes: Part 1 general principles and requirements
			IS 16855 (Part 2) : 2018	Current and Voltage Sensors or Detectors to be used for Fault Passage Indication Purposes part 2 System Aspects
			IS 16855 (Part 100) : 2019	Current and voltage sensors or detectors to be used for fault passage indication purposes: Part 100 requirements and proposals for the is/iec 61850 series data

			model extensions to support fault passage indicators applications
		IS 2705 (Part 1) : 1992	Current transformers - Specification: Part 1 general requirements (Second Revision)
		IS 4146 : 1983	Application guide for voltage transformers (First Revision)
		IS 4201 : 1983	Application guide for current transformer (First Revision)
		IS 5547 : 1983	Application guide for capacitor voltage transformers (First Revision)
		IS/IEC 60044-7 : 1999	Instrument transformers: Part 7 electronic voltage transformers
		IS/IEC 60044-8 : 2002	Instrument transformers: Part 8 electronic current transformers
		IS 6949 : 1973	Specification for summation current transformers

ANNEX 4
ETD 34 – Instrument Transformers Sectional Committee
Programme of Work (POW)

Sl. No.	IS No.	TITLE	Degree of Equivalence.
1	IS 16227 (Part 1): 2016/ IEC 61869-1: 2007	Instrument transformers: Part 1 general requirements	Identical under dual numbering
2	IS 16227 (Part 2): 2016/ IEC 61869-2: 2012	Instrument transformers: Part 2 additional requirements for current transformers	Identical under dual numbering
3	IS 16227 (Part 3) :2015/ IEC 61869-3: 2011	Instrument transformers: Part 3 additional requirements for inductive voltage transformers	Identical under dual numbering
4	IS 16227 (Part 4):2015/ IEC 61869-4: 2013	Instrument transformers: Part 4 additional requirements for combined transformers	Identical under dual numbering
5	IS 16227 (Part 5) :2015/ IEC 61869-5: 2011	Instrument transformers: Part 5 additional requirements for capacitors voltage transformers	Identical under dual numbering
6	IS 16227 (Part 6): 2018/ IEC 61869-6:2016	Instrument transformers: Part 6 additional general requirements for low - Power instrument transformers	Identical under dual numbering
7	IS 16227 (Part 9): 2018/ IEC 61869-9:2016	Instrument transformers: Part 9 digital interface for instrument transformers	Identical under dual numbering
8	IS 16227 (Part 100): 2018/ IEC 61869-100:2017	Instrument transformers: Part 100 guidance for application of current transformers in power system protection	Identical under dual numbering
9	IS 16227 (Part 102): 2018/ IEC/TR 61869-102:2014	Instrument transformers: Part 102 ferro resonance oscillations in substations with inductive voltage transformers	Identical under dual numbering
10	IS 16227 (Part 103): 2018/ IEC/TR 61869-103: 2012	Instrument Transformers part 103 the use of instrument Transformers for power quality Measurement	Identical under dual numbering
11	IS 16855 (Part 1): 2018/ IEC 62689 -1: 2016	Current and voltage sensors or detectors, to be used for fault passage indication purposes: Part 1 general principles and requirements	Identical under dual numbering
12	IS 16855 (Part 2):2018/ IEC 62689-2: 2016	Current and Voltage Sensors or Detectors to be used for Fault Passage Indication Purposes part 2 System Aspects	Identical under dual numbering
13	IS 16855 (Part 100): 2019/ IEC 62689-100: 2016	Current and voltage sensors or detectors to be used for fault passage indication purposes: Part 100 requirements and proposals for the IS/IEC 61850 series data model extensions to support fault passage indicators applications	Identical under dual numbering
14	IS 2705 (Part 1) :1992	Current transformers - Specification: Part 1 general requirements (Second Revision)	Indigenous

15	IS 4146: 1983	Application guide for voltage transformers (First Revision)	Indigenous
16	IS 4201: 1983	Application guide for current transformer (First Revision)	Indigenous
17	IS 5547: 1983	Application guide for capacitor voltage transformers (First Revision)	Indigenous
18	IS/IEC 60044-7:1999	Instrument transformers: Part 7 electronic voltage transformers	Identical under single numbering
19	IS/IEC 60044-8 :2002	Instrument transformers: Part 8 electronic current transformers	Identical under single numbering
20	IS 6949: 1973	Specification for summation current transformers	Indigenous

ANNEX 5

List of Indian Standards due for Review

Sl. No	Title of Indian Standard	IS No.	Degree of Equivalence
1	Application guide for capacitor voltage transformers (First Revision)	IS 5547 : 1983	Indigenous
2	Specification for summation current transformers	IS 6949 : 1973	Indigenous
3	Application guide for voltage transformers	IS 4146:1983	Indigenous
4	Application guide for current transformers	IS 4201:1983	Indigenous
5	Instrument transformers: Part 1 general requirements	IS 16227 : Part 1 : 2016/ IEC 61869-1:2007	Identical under Dual Numbering
6	Instrument transformers: Part 100 guidance for application of current transformers in power system protection	IS 16227 : Part 100:2018/ IEC 61869-100:2017	Identical under Dual Numbering
7	Instrument transformers: Part 3 additional requirements for inductive voltage transformers	IS 16227 : Part 3 : 2015/ IEC 61869-3: 2011	Identical under Dual Numbering
8	Instrument transformers: Part 5 additional requirements for capacitors voltage transformers	IS 16227 : Part 5 : 2015/ IEC 61869-5: 2011	Identical under Dual Numbering
9	Instrument transformers: Part 4 additional requirements for combined transformers	IS 16227 : Part 4 : 2015/ IEC 61869-4: 2013	Identical under Dual Numbering
10	Instrument transformers: Part 2 additional requirements for current transformers	IS 16227 : Part 2 : 2016/ IEC 61869-2: 2012	Identical under Dual Numbering
11	Instrument transformers: Part 8 electronic current transformers	IS/IEC 60044 : Part 8 :2002	Identical under Single Numbering
12	Current and voltage sensors or detectors, to be used for fault passage indication purposes: Part 1 general principles and requirements	IS 16855 : Part 1 : 2018/ IEC 62689-1: 2016	Identical under Dual Numbering.
13	Instrument Transformers part 103 The use of instrument Transformers for power quality Measurement	IS 16227 : Part 103: 2018/ IEC/TR 61869-103:2012	Identical under Dual Numbering
14	Current and Voltage Sensors or Detectors to be used for Fault Passage Indication Purposes part 2 System Aspects	IS 16855 : Part 2 : 2018/ IEC 62689-2 : 2016	Identical under Dual Numbering
15	Instrument transformers: Part 102 ferro resonance oscillations in substations with inductive voltage transformers	IS 16227 : Part 102 : 2018/ IEC/TR 61869-102: 2014	Identical under Dual Numbering
16	Current and voltage sensors or detectors to be used for fault passage indication purposes: Part 100 requirements and proposals for the IS/IEC 61850 series data model extensions to support fault passage indicators applications	IS 16855 : Part 100 : 2019/ IEC 62689-100 : 2016	Identical under Dual Numbering
17	Instrument transformers: Part 6 additional general requirements for low - Power instrument transformers	IS 16227 : Part 6 : 2018/ IEC 61869-6 : 2016	Identical under Dual Numbering.

ANNEX 6

Adopted Indian Standards due for Review

Sl. No.	Title of Indian Standards	IS No.	Status of IEC Standard	Degree of Equivalence	Status
1	Instrument transformers: Part 1 general requirements	IS 16227 : Part 1 : 2016/ IEC 61869-1:2007	IEC 61869-1:2023	Identical under Dual Numbering	IEC 61869-1:2023 under review
2	Instrument transformers: Part 100 guidance for application of current transformers in power system protection	IS 16227 : Part 100:2018/ IEC 61869-100:2017	IEC TR 61869-100:2017	Identical under Dual Numbering	Decided for Reaffirmation
3	Instrument transformers: Part 3 additional requirements for inductive voltage transformers	IS 16227 : Part 3 : 2015/ IEC 61869-3: 2011	IEC 61869-3: 2011	Identical under Dual Numbering	Decided for Reaffirmation
4	Instrument transformers: Part 5 additional requirements for capacitors voltage transformers	IS 16227 : Part 5 : 2015/ IEC 61869-5: 2011	IEC 61869-5: 2011	Identical under Dual Numbering	Decided for Reaffirmation
5	Instrument transformers: Part 4 additional requirements for combined transformers	IS 16227 : Part 4 : 2015/ IEC 61869-4: 2013	IEC 61869-4: 2013	Identical under Dual Numbering	Decided for Reaffirmation
6	Instrument transformers: Part 2 additional requirements for current transformers	IS 16227 : Part 2 : 2016/ IEC 61869-2: 2012	IEC 61869-2: 2012	Identical under Dual Numbering	Decided for Reaffirmation
7	Instrument transformers: Part 8 electronic current transformers	IS/IEC 60044 : Part 8 :2002	IEC 60044 : Part 8 :2002	Identical under Single Numbering	Decided for Reaffirmation
8	Current and voltage sensors or detectors, to be used for fault passage indication purposes: Part 1 general principles and requirements	IS 16855 : Part 1 : 2018/ IEC 62689-1: 2016	IEC 62689-1: 2016	Identical under Dual Numbering	Decided for Reaffirmation
9	Instrument Transformers part 103 The use of instrument Transformers for power quality Measurement	IS 16227 : Part 103: 2018/ IEC/TR 61869-103:2012	IEC/TR 61869-103:2012	Identical under Dual Numbering	Decided for Reaffirmation
10	Current and Voltage Sensors or Detectors to be used for Fault Passage Indication Purposes part 2 System Aspects	IS 16855 : Part 2 : 2018/ IEC 62689-2 : 2016	IEC 62689-2 : 2016	Identical under Dual Numbering	Decided for Reaffirmation
11	Instrument transformers: Part 102 ferro resonance oscillations in substations with inductive voltage transformers	IS 16227 : Part 102 : 2018/ IEC/TR 61869-102: 2014	IEC/TR 61869-102: 2014	Identical under Dual Numbering	Decided for Reaffirmation
12	Current and voltage sensors or detectors to be used for fault passage indication purposes: Part 100 requirements and proposals for the IS/IEC 61850 series data model extensions to support fault passage indicators applications	IS 16855 : Part 100 : 2019/ IEC 62689-100 : 2016	IEC TR 62689-100:2016	Identical under Dual Numbering	Decided for Reaffirmation
13	Instrument transformers: Part 6 additional general requirements for low - Power instrument transformers	IS 16227 : Part 6 : 2018/ IEC 61869-6 : 2016	IEC 61869-6:2016 has been withdrawn and replaced by IEC 61869-1:2023.	Identical under Dual Numbering	Decided for Review

ANNEX 7
IEC TC 38 Work Programme

Project Reference	Online(Y/N)	Title	Document Reference	Current Stage Date	Current Stage	Next Stage Date	Next Stage	Working Group	Fcst. Publ. Date
PWI 38-6	N	IEC 61869-16: TEDS (Transducer Electronic Data Sheet) for Instrument Transformers		2017-02	PWI	2024-12	preP NW	WG 37	
PWI 38-10	N	Requirements of Instrument Transformers for travelling waves applications		2021-10	PWI	2024-12	preP NW	WG 47	
PWI 38-11	N	Requirements of Instrument Transformers for PMU applications		2021-10	PWI	2024-12	preP NW	WG 47	
PWI TR 38-12	N	IEC TR 61869-106: Selection and interfacing of Instrument Transformers for wide bandwidth applications		2021-12	PWI	2023-12		PT 61869-106	
PWI TR 38-13	N	Asset management and online monitoring of Instrument Transformers		2023-10	PWI	2025-10		WG 47	
PWI TR 38-14	N	Metrological stability of Instrument Transformers		2023-10	PWI	2025-10		WG 47	
PWI TR 38-15	N	Small rated values for inductive CTs		2023-10	PWI	2025-10		WG 47	
PWI 38-16	N	Requirements of Instrument Transformers for power quality measurement		2023-10	PWI	2025-10	preP NW	WG 47	
PWI TR 38-17	N	Influencing quantities on the accuracy of instrument transformers		2023-10	PWI	2025-10		WG 47	
PWI TR 38-18	N	Configuration and design of HV Instrument Transformers for DC applications in VSC converter substations		2023-10	PWI	2025-10		WG 47	
PWI TR 38-19	N	Network transients and instrument transformers		2023-10	PWI	2025-10		WG 47	
IEC 61869-2 ED2	N	Instrument transformers - Part 2: Additional requirements for	38/799/ CD	2024-11	ACD	2025-04	2CD	MT 58	2025-12

		current transformers							
IEC 61869-3 ED2	N	Instrument transformers - Part 3: Additional requirements for inductive voltage transformers	38/800/CD	2024-11	ACD	2025-04	2CD	MT 58	2025-12
IEC 61869-5 ED2	N	Instrument transformers - Part 5: Additional requirements for capacitor voltage transformers	38/801/CD	2024-11	ACD	2025-04	2CD	MT 58	2025-12
IEC 61869-7 ED1	N	Instrument transformers - Part 7: Specific requirements for electronic Voltage Transformers	38/793/CD	2024-09	ACDV	2024-10	TCD V	WG 37	2025-12
IEC 61869-8 ED1	N	Instrument transformers - Part 8: Specific requirements for Electronic Current Transformers	38/794A/CD	2024-09	ACDV	2024-10	TCD V	WG 37	2025-12
IEC 61869-9/AMD1 ED1	N	Amendment 1 - Instrument transformers - Part 9: Digital interface for instrument transformers	38/715/CD	2023-04	ACDV	2023-12	TCD V	WG 37	2026-02
PWI 61869-12	N	Instrument transformers - Part 12: Specific requirements for combined electronic Instrument Transformers and combined standalone sensors		2012-01	PWI		preP NW	WG 37	
IEC 61869-14 ED2	N	Instrument transformers - Part 14: Additional requirements for current transformers for DC applications	38/795/RR	2024-11	ACD	2025-04	2CD	MT 59	2026-06
IEC 61869-15 ED2	N	Instrument transformers - Part 15: Additional requirements for voltage transformers for DC applications	38/796/RR	2024-11	ACD	2025-04	2CD	MT 59	2026-06
IEC 61869-20 ED1	N	Instrument transformers – Part 20: Safety requirements of instrument transformers for high voltage applications	38/808A (F)/FDIS	2024-11	CFDIS	2024-12	PRV D	WG 57	2025-02

IEC/IEEE 61869-21 ED1	N	IEC/IEEE 61869-21 ED1: Instrument transformers - Part 21: Uncertainty evaluation in the accuracy test of Instrument Transformers	38/756/CDV	2024-09	AFDIS	2025-02	DEC FDIS	JWG 55	2025-09
IEC 61869-22 ED1	N	Instrument Transformers integrated with other devices - Requirements and tests	38/802/CD	2024-10	ACD	2025-02	2CD	WG 54	2025-12
PWI TR 61869-101	N	Standard Models for Instrument Transformers		2012-01	PWI			WG 45	
IEC 61869-201 ED1	N	IEC 61869-201: Instrument transformers - Part 201: General requirements for Instrument Transformers for low voltage applications (≤ 1000 V AC and 1500 V DC)	38/792/NP	2024-10	ACD	2025-06	CD	WG 60	2027-06

ANNEX 8

Balloting Done on IEC documents since 25/09/2024

Document Number	Last Date	Comments
38/792/NP	27/09/2024	In favour with comments
38/797/CD	25/10/2024	No comments
38/798/CD	25/10/2024	Comments Submitted
38/799/CD	25/10/2024	Comments Submitted
38/800/CD	25/10/2024	Comments Submitted
38/801/CD	25/10/2024	Comments Submitted
38/802/CD	04/10/2024	No Comments

ANNEX 9
IEC TC 38 Publication

Reference	Title
IEC 60044-7:1999	Instrument transformers - Part 7: Electronic voltage transformers
IEC 60044-8:2002	Instrument transformers - Part 8: Electronic current transformers
IEC 61869-1:2023	Instrument transformers - Part 1: General requirements
IEC 61869-2:2012	Instrument transformers - Part 2: Additional requirements for current transformers
IEC 61869-2:2012/ISH1:2022	Interpretation Sheet 1 - Instrument transformers - Part 2: Additional requirements for current transformers
IEC 61869-3:2011	Instrument transformers - Part 3: Additional requirements for inductive voltage transformers
IEC 61869-4:2013	Instrument transformers - Part 4: Additional requirements for combined transformers
IEC 61869-4:2013/COR1:2014	Corrigendum 1 - Instrument transformers - Part 4: Additional requirements for combined transformers
IEC 61869-5:2011	Instrument transformers - Part 5: Additional requirements for capacitor voltage transformers
IEC 61869-5:2011/COR1:2015	Corrigendum 1 - Instrument transformers - Part 5: Additional requirements for capacitor voltage transformers
IEC 61869-9:2016	Instrument transformers - Part 9: Digital interface for instrument transformers
IEC 61869-10:2017	Instrument transformers - Part 10: Additional requirements for low-power passive current transformers
IEC 61869-11:2017	Instrument transformers - Part 11: Additional requirements for low power passive voltage transformers
IEC 61869-11:2017/ISH1:2021	Interpretation sheet 1 - Instrument transformers - Part 11: Additional requirements for low-power passive voltage transformers
IEC 61869-13:2021	Instrument transformers - Part 13: Stand-alone merging unit (SAMU)
IEC 61869-14:2018	Instrument transformers - Part 14: Additional requirements for current transformers for DC applications
IEC 61869-15:2018	Instrument transformers - Part 15: Additional requirements for voltage transformers for DC applications
IEC 61869-99:2022	Instrument transformers - Part 99: Glossary
IEC 61869-99:2022/COR1:2023	Corrigendum 1 - Instrument transformers - Part 99: Glossary
IEC TR 61869-100:2017	Instrument transformers - Part 100: Guidance for application of current transformers in power system protection
IEC TR 61869-100:2017/COR1:2023	Corrigendum 1 - Instrument transformers - Part 100: Guidance for application of current transformers in power system protection
IEC TR 61869-102:2014	Instrument transformers - Part 102: Ferroresonance oscillations in substations with inductive voltage transformers

IEC TR 61869-103:2012	Instrument transformers - The use of instrument transformers for power quality measurement
IEC 62689-1:2016	Current and voltage sensors or detectors, to be used for fault passage indication purposes - Part 1: General principles and requirements
IEC 62689-2:2016	Current and voltage sensors or detectors, to be used for fault passage indication purposes - Part 2: System aspects
IEC TR 62689-100:2016	Current and voltage sensors or detectors, to be used for fault passage indication purposes - Part 100: Requirements and proposals for the IEC 61850 series data model extensions to support fault passage indicators applications
IEC/IEEE 63253-5713-8:2024	Station Service Voltage Transformers (SSVT)

ANNEX 10

List of experts Nominated under working groups of IEC TC 38

TC/SC (IEC website)	WG/PT/MT/J WG	Membership	Titles	ETD	Member Secretary	Expert Nominated
TC 38		P	Instrument Transformers	ETD 34	Abinash Bordoloi	NA
	WG 37		Instrument Transformers		Abinash Bordoloi	a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida b. Mr. Pradeep Deshpande, Gilbert and Maxwell Transformers Pvt. Ltd, Nashik. c. Mr. Mahesh Dorlikar, Hitachi Energy India Ltd., Bangalore d. Mr. Vrajesh J Desai, In Individual Capacity
		P	Specific Clauses for Electronic Voltage Transformers (future IEC 61869-7), for Electronic Current Transformers (future IEC 61869-8) and Digital Interface for Instrument Transformers (future IEC 61869-9).	ETD 34		
	WG 39			ETD 34	Abinash Bordoloi	Mr. Mayank Yadav, GE (T & D) India Limited, Noida
		P	IEV 321			
	WG 45		Standard Mathematical Models for Instrument Transformers	ETD 34	Abinash Bordoloi	No
		P				
	WG 47		Evolution of Instrument transformer requirements for the modern market	ETD 34	Abinash Bordoloi	(Mr. Mayank Yadav, GE (T & D Limited, Noida)
		P				
	WG 54		Instrument Transformers integrated with other devices	ETD 34	Abinash Bordoloi	Mr. Pradeep Deshpande, Gilbert and Maxwell Transformers Pvt. Ltd, Nashik.
		P				
	WG 57		Safety requirements of Instrument Transformers for high voltage applications	ETD 34	Abinash Bordoloi	No
		P				

	PT 61869-106	P	Selection and interfacing of Instrument Transformers for wide bandwidth applications	ETD 34	Abinash Bordoloi	No
	MT 58	P	Maintenance of IEC 61869-2, IEC 61869-3 and IEC 61869-5	ETD 34	Abinash Bordoloi	<p>a. Mr. G. V Akre, Hivoltrans, Gujarat</p> <p>b. Ms. Geeta Joshi, Hitachi Energy India Ltd., Bangalore</p> <p>c. Mr. Mahesh Dorlikar, Hitachi Energy India Ltd., Bangalore</p> <p>d. Mr. Chetas Parikh, Narayan Powertech Pvt. Ltd, Vadodara</p> <p>e. Mr. Vrajesh J Desai, In Individual Capacity</p>
	MT 59	P	Maintenance of IEC 61869-14 and IEC 61869-15	ETD 34	Abinash Bordoloi	<p>a. Mr. Mayank Yadav, GE (T & D) India Limited, Noida</p> <p>b. Mr. Sunil Nannaware, Hitachi Energy India Ltd., Bangalore</p>
	JWG 55	P	Uncertainty evaluation in the accuracy test of Instrument Transformers	ETD 34	Abinash Bordoloi	No
	JWG 56	P	Station Service Voltage Transformers (SSVT) linked to IEEE PES “The Power & Energy Society”	ETD 34	Abinash Bordoloi	No
	AG CAG	P	Chair’s Advisory Group	ETD 34	Abinash Bordoloi	No