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BUREAU OF INDIAN STANDARDS

MINUTES

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Electrical Installations Sectional Committee, ETD 20	**41st**	**Tuesday**	**18 June 2024**	**10.30 AM**	**https://bismanak.webex.com/bismanak/j.php?MTID=m3cf5000a7a0ae3d62ccf93df8354de36** **(Virtual meeting)**

List of members attended the meeting is at **Annexure –1** .

Chairperson : Ms Sumita Anand, In personal Capacity **Member Secretary :** Shri Ritwik Anand

Item 0 WELCOME AND OPENING REMARKS BY CHAIRMAN

Ms Sumita Anand, Chairperson, extended a warm welcome to all the members present in the meeting. She wished all the members for fruitful discussions during the meeting. She also requested members to take up revision of all Pre- 2000 published standards on priority by sending comments on the draft documents circulated by BIS.

Shri A K Maharana, Head (ETD), extended a warm welcome to the committee members. Highlighting the latest reforms in standardization, he informed the members that robust participation is vital to sustain their committee membership, especially with respect to comments on P-drafts. He also mentioned action research projects and R&D projects as the new cornerstones for reviewing Indian Standards, unless sectional committee takes a conscious call on the lack of their necessity. Head (ETD) request the members to adhere to time frames in development of standards, as well as to look into possibilities of swift harmonisation of Indian Standards with IEC standards.

Member Secretary thanked and welcomed all the participants present in the meeting. He requested the committee members to have thorough discussion on each and every agenda point and to arrive at useful conclusion.

The meeting started with a brief introduction of all members.

Item 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

1.1 There being no comments, the minutes of the last meeting (40th) of Electrical Installations Sectional Committee, ETD 20 held on 19th March 2024 were confirmed.

Item 2 COMPOSITION OF THE SECTIONAL COMMITTEE.

2.1 Committee noted the information provided in **ANNEXURE 1** of the agenda. It was decided that the organizations may share the updated nomination through email wherever updation is required .

2.2 It was also decided that the committee shall make efforts to create awareness among academic institutions. Members were requested to provide contact details of technical experts from academic institutions relevant to the committee's scope, particularly for institutions that have signed MoUs with BIS (the list of MoU institutions is enclosed as **ANNEXURE- 9) .**

Item 3 ACTIONS ARISING OUT OF PREVIOUS MEETING

S.No	Subject	Decision of the committee
1	**Revision of Standard on Earthing, IS 3043**	The composition of panel is given below : 1. Ms Shalini Verma, EIL (Convener) 2. Shri Himanshu Maheshwari, CAMTECH 3. Shri Gopa Kumar, Cape Electric Private Limited, 4. Dr Rajesh Arora, Delhi Transco 5. Shri Anand Kumar , DMRC 6. Representative from CPRI 7. Shri Sanjay Kolathkar 8. Shri Krish Theobald Shri Gopa Kumar provided a briefing to the committee regarding the revision of IS 3043. He informed the committee that the panel has initiated the revision process of IS 3043 and the preparation of the draft of the revised IS 3043 is currently in its final stages and will be ready before the next meeting of the committee.
2	**Revision of: IS 8884:1978** Code of practice for the installation of electric bells and call system	A panel was formed with the following members to prepare the draft for wider circulation: 1. Shri C S Kore 2. Shri Raj Kumar , DGMS 3. Shri Suresh Deotalu 4. Shri Sanjay Kolhatkar 5. Shri C.K. Varma *It was decided panel will provide revised draft standard within a period of 1 month .*

3	**Revision of IS 8923:1978** Warning symbol for dangerous voltages.	A panel was formed with the following members to prepare the draft for wider circulation: 1. Shri G. V. Chandra Shekhar, M/s Tata Consulting Engineers Ltd. 2. Dr K Janaki Raman, M/s Obo Bettermann India Pvt Ltd. 3. Shri Mahendra Venkata Chilukuri, VIT Vellore. *It was decided to circulate the draft document prepared by the panel as P-draft for 1 month for comments.*
4	ETD 20 (19840)/ **Revision of: IS 2551:1982** DANGER NOTICE PLATES	A panel was formed with the following members to prepare the draft for wider circulation: 1. Shri G. V. Chandra Shekhar, M/s Tata Consulting Engineers Ltd. 2. Dr K Janaki Raman, M/s Obo Bettermann India Pvt Ltd. 3. Shri Mahendra Venkata Chilukuri, VIT Vellore. *It was decided to circulate the draft document prepared by the panel as P-draft for 1 month for comments.*
5	**Revision of IS 8969:1978** Code of Practice for Installation And Maintenance of Impulse And Electronic Master and Slave Electric Clock Systems	Committee decided to Archive this standard.
6	**Revision of: IS 4648:1968** Guide for Electrical Layout in Residential Buildings	It was decided to circulate the draft document prepared by Shri Hemant Sali as P-draft for 1 month for comments.
7	**Revision of IS 5216-1:1982** Recommendations on safety procedures and practices in electrical work part 1 General	The draft standards were circulated as P-draft for members to review and comment vide email dated 20th May 2024 . Last date of sending comments – 20th June 2024.
8	**Revision of IS 5216-2:1982** Recommendations on Safety Procedures and Practices In Electrical Work Part 2 Life Saving Techniques	
9	**Revision of IS 7752:1975** Guide for Improvement of Power Factor in Consumers	It was decided that Dr Rajesh Arora and Shri Mahendra Venkata Chilukuri will provide revised draft standard within a period of 3 months.

	Installations Part 1 Low And Medium Supply Voltages	The panel was also requested to submit a detailed proposal for R&D, if required for the revision of this standard.
10	**Revision of IS 7689 : 1989** Guide for control of undesirable static electricity *(First Revision)*	Shri Suresh Deotalu and Shri Ulhas Vajre agreed to provide the final draft within a period of 2 months. The committee requested the panel to also consider the IEC 613450 series of standards during the review process.
11	**R&D Projects :**	Committee during its last meeting approved the R&D projects on following subjects : i. Study of Lightning accidents and Early warning systems in India to assess Lightning Safety Measures. ii. Study of Chemical/ Maintenance Free Earthing System used in India. **iii.** Study of Fire initiation and spread due to defects in electrical installations. Member Secretary informed the committee that none of the proposals received during the bidding process qualified the technical bid. It was decided to re-host the bids.

Item 4 DRAFT INDIAN STANDARDS UNDER WIDE CIRULATION

Sl. No.	IS NO / Doc No	TITLE	REMARKS
1.	ETD 20 (24754)/ **Revision of: IS 8061:1976**	Code of Practice for Design Installation and Maintenance of Service Lines up to and Including 650 V *It was decided that Mr. Gopa Kumar and Mr Hemant Sali will provide revised draft standard within a period of 1 month .*	It was decided to wide circulate the draft document prepared by Mr Gopa Kumar for 1 month for eliciting public comments.
2.	**ETD/20/24498** **(Identical To: IEC 62561-1-2023)**	**Lightning protection system components LPSC - Part 1: Requirements for connection components**	The committee approved the documents for final printing by incorporating suggestions shared by M/s Cape Electric Ltd in the foreword of the standards.
3.	ETD/20/24499 (Identical To: IEC 62561-2-2018)	**Lightning protection system components LPSC Part 2: Requirements for conductors and earth electrodes**	
4.	ETD/20/24500 (Identical To:	**Lightning protection system components LPSC Part 3: Requirements for isolating spark gaps ISGs**	

	IEC 62561-3-2023)		
5.	ETD/20/24501 (Identical To: IEC 62561-4:2023)	**Lightning protection system components LPSC Part 4: Requirements for conductor fasteners**	
6.	ETD/20/24502 (Identical To: IEC 62561-5:2023)	**Lightning protection system components LPSC Part 5: Requirements for earth electrode inspection housings and earth electrode seals**	
7.	ETD/20/24503 (Identical To: IEC 62561-6:2023)	**Lightning protection system components LPSC Part 6: Requirements for lightning strike counters LSCs**	
8.	ETD/20/24504 (Identical To: IEC 62561-7:2018)	**Lightning Protection System Components LPSC Part 7: Requirements for earthing enhancing compounds**	
9.	ETD/20/24505 (Identical To: IEC 62561-8-2018)	**Lightning protection system components LPSC Part 8: Requirements for components for isolated LPS**	

Item 5 Proposals for Amendment in National Electrical Code of India 2023

Two proposals have been received for amendment in National Electrical Code of India :

i. **Proposal 1 -** M/s Cargill India Private Limited suggested on for change in clause Part 1- General and Common aspects, clause four: Designs and layout, Notes (1) from section 4.25 are not as per IS 16899:2023. **(Detailed proposal is placed at Annexure - 6) -- The committee discussed in detail and it was decided that Shri Hemant Sali and Shri Appavoo will review the proposal and submit their report in the next meeting of the committee .**

ii. **Proposal 2 -** M/s ProtegoPlus Electrotech Pvt. Ltd proposed to amend the requirements for AFDDs in SP 30:2023 (Detailed proposal is placed at **Annexure - 7**) -- It was decided that Member Secretary will circulate the proposal to all members for their review & comments will be discussed in the next meeting of the committee **--- The proposal was discussed in detail and in view of safety issues related to installation of AFDD , it was decided the matter will only be considered after publication of revised IEC 60364-4-42 standard.**

Item 6 Comments received from the Office of the Chief Electrical Inspector to Government of Kerala regarding "Installation of Roof Top DG Sets in Buildings - contradiction in National Building Code, 2016 & National Electric Code, 2023" .

Sir,

Subject: Department of Electrical Inspectorate – Installation of Roof Top DG Sets in Buildings - contradiction in National Building Code, 2016 & National Electric Code,2023 - Clarification requested-Regarding

Ref:
1. National Building Code -2016 & National Electric Code -2023
2. Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023

Please refer to the above. Your attention is invited to the above subject regarding installation of roof-top DG sets, in which conflict exists between NBC 2016 and NEC 2023.

In notes of clause 6.3.1 of Part 2, section 1 (ELECTRICAL INSTALLATION OF STAND-BYGENERATING STATIONS) of National Electrical code of India 2023, it is mentioned that " In case of roof top Gen-sets, OEM shall be informed in advance and the recommended pre-installation check list shall be followed". Also in notes of 6.3.5.1, it is mentioned as "In case of Fuel Tank of Gen-sets on roof top, Specific Rules mandatory as per Local Fire Authority and Petroleum Rules shall be followed in respect of placement and capacity."

But ,Part 8, sub section 4.3.1 of section 2 of The National Building Code, 2016 states that "The emergency power supply (such as generating sets) should not be allowed to be installed above ground floor or below the first basement level of the building". Hence inconsistency is present regarding the installation of DG set on roof top, as NEC 2023 and NBC 2016 has contradictory clauses as given above. Besides, as per regulation 14 (2) of Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2023, the relevant standards including National Electrical Code and National Building Code shall be followed to carry out the purpose of the regulations. Therefore, it is requested to give necessary clarification on this matter.

The committee deliberated on the above issue and decided that

The location 'rooftop' as stated in the code is not generic and is subject to other conditions as stated in Note 3 under 6.3.5.1. It shall be looked upon from the perspective of 6.2 (j), which states 'Location from the point of view of safety to sustain operation during emergency'. This emergency may be a natural disaster like floods due to heavy or abnormal rainfalls. Under flood situations, low lying areas, portions of the building like the basement/ground floor or sometimes even upper floor, get submerged. Such news are nowadays becoming very common in metros like Mumbai, Chennai. Due to this flooding, the equipment forming part of the supply source as well as distribution infrastructure installed on the ground/basement/mezzanine gets submerged. Under such situations, restoration of supply is time-consuming. A standby source of supply hence becomes an important

requirement to operate emergency/critical services. Under the context, the decision in this regard is expected to be taken judiciously and not in derogation with any other regulatory requirements.

Item 7 Review of IS 16168 : 2014 - Guidelines for infrared thermography inspection of electrical installations.

Following proposal has been received from NFE on IS 16168 : 2014: Guidelines for Infrared Thermography Inspection of Electrical Installations.

IEC 60364 didn't recognise Thermography as a reliable measure to ensure safety in LOW VOLTAGE ELECTRICAL INSTALLATION. The recommended practice in IEC 60364-6 has been adopted in IS732 & NEC 2023, These standards require 18 subjects of inspection and 19 tests as a part of verification in LV electrical installation to make them safe.However IS 16168 is on a different subject and claim "Inspection of Electrical Installations" and is in conflict with IS732 / NEC 2023.
The referred standard IS 16168: 2014 diverts the seriousness of the safety subjects included in IS732 & NEC 2023. Several users believe that "THERMOGRAPHY as per IS 16168 : 2014" is the best and the alternate method of verification in LV installation and endanger the complete installation. Hence, we request you to withdraw the standard as quickly as possible, or Remove "Inspection of Electrical Installations" from the name of the standard and its contents. The FOREWORD and SCOPE shall include "THERMOGRAPHY IS NOT A RECOGNISED SAFETY MEASURE IN LOW VOLTAGE ELECTRICAL INSTALLATION". ISO, in which the draft proposal of Thermography for electrical installations are withdrawn. ISO/WD 5750 - Non-destructive testing — Infrared thermography — Electrical equipment testing

Copy of IS 16168:2014 is enclosed as **Annexure – 8**

The committee deliberated on the above proposal, and experts from DMRC, ECAM, ICAI, etc., informed that the thermography method is widely used by the industry for maintenance of their installations. As a result, they proposed not to withdraw the complete standard. It was decided that other members may also submit their comments in writing for further discussions on the subject.

Item 7 PROGRAMME OF WORK

7.1 The committee noted the present position of work under Safety of Electrical Installations Sectional Committee, ETD 20 as given in **Annexure 2** of the agenda.

Item 8 INTERNATIONAL ACTIVITIES

8.1 The Committee noted the information given in the agenda. The Chairman emphasized the need for active participation at the IEC Level and informed the members to provide comments on IEC documents and agenda of IEC TC 64 and IEC TC 81 meeting that are suitable for Indian conditions.

8.2 The committee reviewed the representation of Experts from IN NC in various sub groups of IEC TC 64 and decided to add Shri Himanshu Maheshwari, Joint Director/CAMTECH at the Ministry of Railways as member in MT2 , MT 12 and MT 17 of IEC TC 64.

Item 9 PROCESS REFORMS IN BIS

a) Annual Action Plan for the year 2024-25

The committee reviewed the Annual Action Plan for the year 2024-25 given at **Annexure-4** and decided to wide circulate following IEC standards for a period of 1 month for the public comments:

- IEC 60364-8-3 Low-voltage electrical installations - Part 8-3 : Functional aspects - Operation of prosumer's electrical installations.
- IEC 60364-8-82 Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations.
- IEC 60364-5-57:2022 Low-voltage electrical installations - Part 5-57: Selection and erection of electrical equipment - Erection of stationary secondary batteries.

b) Annual Calendar of Technical Committee meetings

Annual Calendar of Technical Committee meeting for ETD 20 as approved by committee are mentioned below:

i. **Date of 41 st meeting – 18th June 2024**
ii. **Date of 42nd meeting – 18th Sept 2024**
iii. **Date of 43rd meeting – 18th Dec 2024**
iv. **Date of 44th meeting – 18th March 2025**

Item 10 ANY OTHER BUSINESS

There being no further business, the meeting ended with a vote of the thanks to the chair.

ANNEXURE 1

(*Composition of ETD 20*)

SI. No.	Organization	Member Name	Member Email
1.	In Personal Capacity	Ms. Sumita Anand (*Chairperson*)	sumita.anand18@gmail.com
2.	Bureau of Indian Standards	Shri Ritwik Anand (*Member Secretary*)	eetd@bis.gov.in
3.	Brihan Mumbai Electric Supply And Transport Undertaking, Mumbai	Shri S. N. Inchanalkar	deccdward@bestundertaking.com
4.	Calcutta Electric Supply Corporation Limited, Kolkata	Shri Bratin Banerjee	bratin.banerjee@rpsg.in
		Shri Sujit Kumar Pathak	sujit.pathak@rpsg.in
5.	Cape Electric Private Limited, Kancheepuram	Shri S. Gopa Kumar	gk@capeindia.net
		Shri Anandu Gopan	ag@capeindia.net
		Shri Nandu Gopan	ng@capeindia.net
6.	Central Electricity Authority, New Delhi	Shri Mukul Kumar	gupta.mukul@gov.in
7.	Central Power Research Institute, Bengaluru	Shri Jithin Pauly P	jithin@cpri.in
		Shri C. Prabhakar	prabhakar@cpri.in
8.	Central Public Works Department, New Delhi	CE &ED NDPZ	cpmndpz@gmail.com
9.	Centre For Advanced Maintenance Technology, Gwalior	Shri Himanshu Maheshwari	direlcamtech@gmail.com
10.	Delhi Metro Rail Corporation Limited, Delhi	Shri Anand Kumar	anand.kumar@dmrc.org
11.	Delhi Transco Limited, Delhi	Dr. Rajesh Kumar Arora	drrpdarora@gmail.com
12.	Directorate General Of Mines Safety, Dhanbad	Shri Raj Kumar	rajdgmse@gmail.com
		Shri Anil Toppo	aniltoppo1972@gmail.com
13.	Directorate General Of Quality Assurance, New Delhi	Cdr Brij Bhushan Singh	dqawp@navy.gov.in
14.	Electrical Contractors Association Of Maharashtra, Mumbai	Shri Ulhas Vajre	ulhasvajre@gmail.com
15.	Engineers India Limited, New Delhi	Shri Parmod Kumar	parmod.kumar@eil.co.in
		Shri Manish Singhal	manish.singhal@eil.co.in
16.	Government Of Assam, Chief Electrical Inspector, Guwahati	Shri Nilamani Sarma	sarma.nilamani@gmail.com
17.	Government of Kerala, Chief Electrical Inspectorate,	Shri Vinod G	vinodkpm93@gmail.com

	Thiruvananthapuram		
18.	Government Of Madhya Pradesh, Chief Electrical Inspectorate, Sagar	Shri Sudhir Chourey	cevsbho@nic.in
19.	Government of Maharashtra, Chief Electrical Inspector, Mumbai	Shri Ashok Kanase	ashok.kanase43@gmail.com
20.	Electrical Installation Engineers' Welfare Association, Coimbatore, Tamil Nadu	Shri Gopalkrishnan. S	vinpowerindia@gmail.com
21.	Government Of Orissa, Chief Electrical Inspectorate, Bhubaneswar	Shri Pyarimohan Mishra	ceinzblsr-od@gov.in
22.	Government Of Tamil Nadu, Chief Electrical Inspectorate, Chennai	Shri P. Palani	eitech@tn.gov.in
23.	Havells India Limited, Noida	Shri Ashish Gupta	ashish.gupta@havells.com
		Shri Lalit Rai	lalit.rai@havells.com
24.	International Copper Association India, Mumbai	Shri Amol C Kalsekar	amol.kalsekar@copperalliance.org
		Shri Manas Kundu	manas.kundu@internationalcopper.org
		Shri Jyotish Pande	jyotish.pande@internationalcopper.org
25.	Legrand India Private Limited, Mumbai	Shri Suresh Deotalu	suresh.deotalu@legrand.co.in
26.	National Federation of Engineers for Electrical Safety, Chennai	Shri S. Appavoo	appavoo_s@yahoo.com
27.	NTPC Limited, New Delhi	Shri Somanath Kumar Majhi	skmajhi@ntpc.co.in
		Shri S. N. Tripathi	shaktintripathi@ntpc.co.in
28.	OBO Bettermann India Private Limited, Oragadam	Shri K. Janaki Raman	kjr@oboindia.com
29.	Protegoplus Electrotech Private Limited, Mumbai	Shri Krish Theobald	krish@gmail.com
30.	Schneider Electric India Private Limited, Gurugram	Shri C. S. Kore	chandrashekhar.kore@lntebg.com
		Shri Srinivas R Kulkarni	srinivas.kulkarni@non.se.com
31.	Tata Consulting Engineers Limited, Navi Mumbai	Shri G.V. Chandra Shekhar	gvchandrasekhar@tce.co.in
32.	The Shipping Corporation Of India, Mumbai	Shri Nitin Takpere	nitin.takpere@sci.co.in
		Shri Abhishek Kashyap	abhishek.kashyap@sci.co.in
33.	Vellore Institute Of Technology, Vellore	Shri Mahendra Venkata Chilukuri	mahendra.chilukuri@vit.ac.in
34.	In Personal Capacity	Shri Chaitanya Kumar Verma	ck_varma@yahoo.co.in
		Shri Hemant M Sali	hemant.sali1@gmail.com
35.	Bureau of Indian Standards	Shri Asit K. Maharana (*Head ETD*)	heetd@bis.gov.in

ANNEXURE - 2

(*Program of work ETD 20*)

S.N.	IS No.	Title	Decision of the committee/ Latest IEC/	
1.	SP 30 : 2023	National Electrical Code of India 2023 (*Second Revision*)		
2.	SP 31 : 1986	Treatment for electric shock	Committee decided to Archive this standard	
3.	IS 732 : 2019	Code of practice for electrical wiring installations(*Fourth Revision*)	-	
4.	IS 2551 : 1982	Danger notice plates *(First Revision)*	Revised draft under wide circulation	
5.	IS 3043 : 2018	Code of practice for earthing (*Second Revision*)	-	
6.	IS 4648 : 1968	Guide for electrical layout in residential buildings	Revised draft under wide circulation	
7.	IS 5216 (Part 1) : 1982	Recommendations on safety procedures and practices in electrical work Part 1 general *(FirstRevision)*	Revised draft under wide circulation	
8.	IS 5216 (Part 2) : 1982	Recommendation on safety procedures and practices in electrical work Part 2 life saving techniques	Revised draft under wide circulation	
9.	IS 7689 : 1989	Guide for control of undesirable static electricity *(First Revision)*	*It was decided that Mr Suresh Deotalu will provide revised draft standard within a period of1 month.*	
10.	IS 7752 (Part 1) : 1975	Guide for improvement of power factor in consumer installations Part 1 low and mediumsupply voltages	Revised draft under wide circulation	
11.	IS 8061 : 1976	Code of practice for design installation and maintenance of service lines up to and including650 V	Revised draft under wide circulation	
12.	IS 8884 : 1978	Code of practice for the installation of electric bells and call system	Revised draft under wide circulation	
13.	IS 8923 : 1978	Warning symbol for dangerous voltages	Revised draft under wide circulation	
14.	IS 8969 : 1978	Code of practice for installation and maintenance of impulse and electronic master and slave electric clock systems	Revised draft under wide circulation	
15.	IS 10118 (Part 1) : 2018	Code of Practice for Selection, Installation and Maintenance of Switchgear and Controlgear Part 1 General (First Revision)		

16.	IS 10118 (Part 2) : 1982	Code of practice for the selection installation and maintenance of switchgear and controlgear Part 2 selection	.	
17.	IS 10118 (Part 3) : 1982	Code of practice for selection installation and maintenance of switchgear and controlgear Part 3 installation		
18.	IS 10118 (Part 4) : 1982	Code of practice for selection installation and maintenance of switchgear and controlgear Part 4 maintenance		
19.	IS 10242 (Part 1/Sec 1) : 2023 IEC 60092-101:2018	Electrical installations in ships - Specification Part 1 general Sec 1 definitions and general requirements (First Revision)	IEC 60092-101:2018 Electrical installations in ships - Part 101: Definitions and general requirements As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
20.	IS 10242 (Part 2/Sec 1) : 2023 IEC 60092-201:2019	Specification for electrical installation in ships Part 2 system design Sec 1 general	IEC 60092-201:2019 Electrical installations in ships - Part 201: System design – General As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
21.	IS 10242 (Part 2/Sec 2) : 2023 IEC 60092-202:2016	Specification for electrical installations in ships Part 2 system design Sec 2 protection	IEC 60092-202:2016 RLV Electrical installations in ships - Part 202: System design – Protection As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published

22.	IS 10242 (Part 3/Sec 1) : 2023 IEC 60092-301:1980	Specification for electrical installations in ships Part 3 equipment Sec 1 generators and motors	IEC 60092-301:1980 Electrical installations in ships - Part 301: Equipment - Generators and motors As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
23.	IS 10242 (Part 3/Sec 2) : 2023 IEC 60092-302-2:2019	Specification for electrical installations Part 3 equipment Sec 2 switchgear and controlgear in ships assemblies	IEC 60092-302-2:2019 Electrical installations in ships - Part 302-2: Low voltage switchgear and controlgear assemblies - Marine power As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
24.	IS 10242 (Part 3/Sec 3) : 2023 IEC 60092-303:2023	Specification for electrical installations in ships Part 3 equipment Sec 3 transformers for power and lighting	IEC 60092-303:1980 Electrical installations in ships - Part 303: Equipment - Transformers for power and lighting As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
25.	IS 10242 (Part 3/Sec 4) : 2023 IEC 60092-304:2022	Specification for electrical installations in ships Part 3 equipment Sec 4 semiconductor convertors	IEC 60092-304:2022 Electrical installations in ships - Part 304: Equipment - Semiconductor converters As no comments received during wide circulation stage, it was decided to send these documentsfor printing.	Published

26.	IS 10242 (Part 3/Sec 5) : 2023 IEC 60092-305:1980	Electrical installations in ships Part 3 equipment Sec 5 accumulator Storage batteries - Specification	IEC 60092-305:1980 Electrical installations in ships - Part 305: Equipment - Accumulator (storage) batteries As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
27.	IS 10242 (Part 3/Sec 6) : 2023 IEC 60092-306:2022 RLV	Specification for electrical installations in ships Part 3 equipment Sec 6 luminaires and accessories	IEC 60092-306:2022 RLV Electrical installations in ships - Part 306: Equipment - Luminaires and lighting accessories As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
28.	IS 10242 (Part 3/Sec 7) : 2023 IEC 60092-307:1980	Electrical installations in ships - Specification Part 3 equipment Sec 7 heating end cooking appliances	IEC 60092-307:1980 Electrical installations in ships. Part 307: Equipment - Heating and cooking appliances As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
29.	IS 10242 (Part 3/Sec 10) : 2023 IEC 60092-350:2020	Electrical installations in ships Part 3 equipment Sec 10 general construction and test requirements for low voltage shipboard power cables - Specification	IEC 60092-360:2021 RLV Electrical installations in ships - Part 360: Insulating and sheathing materials for shipboard and offshore units, power, control, instrumentation and telecommunication cables As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published

30.	IS 10242 (Part 3/Sec 12) : 2023 IEC 60092-352:2005	Specification for electrical installations in ships Part 3 equipment Sec 12 choice and installation of cables for low - Voltage power systems	IEC 60092-352:2005 Electrical installations in ships - Part 352: Choice and installation of electrical cables As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
31.	IS 10242 (Part 3/Sec 13) : 2023 IEC 60092-353:2016 RLV	Electrical installations in ships Part 3 equipment Sec 13 single and multicore cable with extruded solid insulation for rated voltages 0 6 1 KV - Specification	IEC 60092-353:2016 RLV Electrical installations in ships - Part 353: Power cables for rated voltages 1 kV and 3 kV As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
32.	IS 10242 (Part 3/Sec 26) : 2023 IEC 60092-376-2017 RLV	Specification for electrical installations in ship Part 3 equipment Sec 26 shipboard telecommunication cables shipboard multicore cables for control circuits	IEC 60092-376:2017 RLV Electrical installations in ships - Part 376: Cables for control and instrumentation circuits 150/250 V (300 V) As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
33.	IS 10242 (Part 4) : 2023 IEC 60092-401:1980	Electrical installations in ships Part 4 installation and test of completed installation - Specification	IEC 60092-401:1980 Electrical installations in ships - Part 401: Installation and test of completed installation As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published

34.	IS 10242 (Part 5/Sec 1) : 2023 IEC 60092-501:2013	Electrical installations in ships - Specification Part 5 special features Sec 1 electric propulsion plant	IEC 60092-501:2013 Electrical installations in ships - Part 501: Special features - Electric propulsion plant As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
35.	IS 10242 (Part 5/Sec 2) : 2023 IEC 60092-502-1999	Electrical installations in ships - Specification Part 5 special features Sec 2 tankers	IEC 60092-502:1999 Electrical installations in ships - Part 502: Tankers – Special features As no comments received during wide circulation stage , it was decided to send these documents for printing.	Published
36.	IS 10242 (Part 5/Sec 3) : 2023 IEC 60092-503-2021	Electrical installations in ships - Specification Part 5 special features Sec 3 AC supply systems with voltages in the range above 1 KV up to and including 11 KV	IEC 60092-503:2021 Electrical installations in ships - Part 503: Special features - AC supply systems with voltages in the range of above 1 kV up to and including 36 kV As no comments received during wide circulation stage, it was decided to send these documents for printing.	Published
37.	IS 10242 (Part 5/Sec 4) : 2023 IEC 60092-504-2016 RLV	Electrical installations in ships Part 5 special features Sec 4 control and instruments - Specification	IEC 60092-504:2016 RLV Electrical installations in ships - Part 504: Automation, control and instrumentation. As no comments received during wide circulation stage, it was decided to send these documents for	Published

			printing.	
38.	IS 13234 : 2017 IEC 60909-0:2016	Short - Circuit currents in three - Phase A C systems Part 0 calculation of currents (First Revision)		
39.	IS 13234 (Part 1) : 2017 IEC 60909-1:2002	Short - Circuit currents in three - Phase A C systems Part 1 factors for the calculation of short - Circuit currents according to is 13234 Part 0		
40.	IS 13234 (Part 2) : 2017 IEC 60909-2:2008	Short - Circuit currents in three - Phase A C systems Part 2 data of electrical equipment for short - Circuit current calculations		
41.	IS 13234 (Part 3) : 2017 IEC 60909-3:2009	Short - Circuit currents in three - Phase A C systems Part 3 current during two separate simultaneous line - To - Earth short circuits and partial short - Circuit currents flowing through earth		
42.	IS 13234 (Part 4) : 2017 IEC 60909-4:2000	Short - Circuit currents in three - Phase A C systems Part 4 examples for the calculation of short - Circuit currents		
43.	IS 13235 : 1991 IEC Pub 865 (1988)	Calculation of the effects of short - Circuit currents	It was decided to withdraw this standard as requirements are covered in IS 13235 (Part 1) : 2019 and IS 13235 (Part 2) : 2019.	
44.	IS 13235 (Part 1) : 2019 IEC 60865-1 : 2001	Short-Circuit Currents Calculation of Effects Part 1 Definitions and Calculation Methods (First Revision)		
45.	IS 13235 (Part 2) : 2019 IEC 60865-2 : 2015	Short-Circuit Currents Calculation of Effects Part 2 Examples of Calculation (First Revision)		
46.	IS 14479 : 1998 IEC 60533: 1977	Electrotechnical compatibility of electrical and electronic installations in ships - Specification	It was decided to archive this standard as substantial expertise about revision of this standard is not available in the committee at present .	
47.	IS 16996 : 2018 IEC 60364-8-1 : 2014	Low-Voltage Electrical Installations Energy Efficiency		
48.	IS 16997 : 2018 IEC 60364-7-712	Requirements for Low-Voltage Special Electrical Installations or Locations Solar Photovoltaic PV Power Supply Systems		
49.	IS 17512 : 2021	Requirements for Electrical Installations in Medical Locations		

50.	IS/IEC 60479:2018 IEC 60479-1:2018	Effects of current on human beings and livestock - Part 1 General Aspects	It was decided to revise this standard and wide circulate latest version of IEC for eliciting public comments.	
51.	IS/IEC 60479-2 : 2019 IEC 60479:2019	Effects of current on human beings and livestock - Part 2 Special Aspects		
52.	IS/IEC 60479-3 : 1998 IEC 60479-3 : 1998	Effects of current on human beings and livestock Part 3 effects of currents passing through the body of livestock	It was decided to Withdraw the standard as requirements are covered in IEC 60479-1:2018	
53.	IS/IEC 60479-4 : 2004 IEC/TR 60479-4 : 2004	Effects of current on human beings and livestock Part 4 effects of lightning strokes on human beings and livestock		
54.	IS/IEC 60479-5 : 2007 IEC/TR 60479-5 : 2007	Effects of current on human beings and livestock Part 5 touch voltage threshold values for physiological effects		
55.	IS 62305 (Part 1) : 2010	Protection against lightning Part 1 general principles		
56.	IS/IEC 62305-2 : 2010	Protection against lightning Part 2 risk management		
57.	IS/IEC 62305-3: 2010 IEC 62305-3	Protection against lightning Part 3 physical damage to structures and life hazard		
58.	IS/IEC 62305-4 : 2010	Protection against lightning Part 4 electrical and electronic systems within structures		
59.	IS 10242 (Part 360) : 2023 IEC 60092-360:2021	Electrical Installation In Ships Part 360 Insulating and Sheathing Materials For Shipboard and Offshore Units Power Control Instrumentation And Telecommunication Cables		New Standards
60.	IS 18732 : 2023	Guide For Implementation Of Electrical Installation Standards In Building		New Standards
61.	IS/IEC/TR 62713 : 2013	Safety Procedures For Reduction Of Risk Outside A Structure		New Standards
62.	IS/IEC 62793 : 2020	Thunderstorm Warning Systems Protection Against Lightning		New Standards
63.	IS/IEC 62858 : 2019	Lightning Density Based On Lightning Location Systems General Principles		New Standards

ANNEXURE 3

(*Program of Work TC 64*)

TC64 publications generated on 2024-05-31

SI. No	Reference	Title
1.	IEC 60364-1:2005/COR1:2009	Low-voltage electrical installations - Part 1: Fundamental principles, assessment of general characteristics, definitions
2.	IEC 60364-4-41:2005+AMD1:2017 CSV/COR1:2018	Low voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock
3.	IEC 60364-4-41:2005/AMD1:2017	Amendment 1 - Low voltage electrical installations - Part 4-41: Protection for safety - Protection against electric shock
4.	IEC 60364-4-42:2010+AMD1:2014 CSV	Low-voltage electrical installations - Part 4-42: Protection for safety - Protection against thermal effects
5.	IEC 60364-4-43:2023	Low-voltage electrical installations - Part 4-43: Protection for safety - Protection against overcurrent
6.	IEC 60364-4-44:2007+AMD1:2015+AMD2:2018 CSV	Low-voltage electrical installations - Part 4-44: Protection for safety - Protection against voltage disturbances and electromagnetic disturbances
7.	IEC 60364-5-51:2005	Electrical installations of buildings - Part 5-51: Selection and erection of electrical equipment - Common rules
8.	IEC 60364-5-52:2009/COR1:2011	Low-voltage electrical installations - Part 5-52: Selection and erection of electrical equipment - Wiring systems
9.	IEC 60364-5-53:2019+AMD1:2020 CSV	Low-Voltage electrical installations - Part 5-53: Selection and erection of electrical equipment - Devices for protection for safety, isolation, switching, control and monitoring
10.	IEC 60364-5-54:2011+AMD1:2021 CSV	Low-voltage electrical installations - Part 5-54: Selection and erection of electrical equipment - Earthing arrangements and protective conductors
11.	IEC 60364-5-55:2011+AMD1:2012+AMD2:2016 CSV	Electrical installations of buildings - Part 5-55: Selection and erection of electrical equipment - Other equipment
12.	IEC 60364-5-56:2018	Low-voltage electrical installations - Part 5-56: Selection and erection of electrical equipment - Safety services

13.	IEC 60364-5-57:2022	Low-voltage electrical installations - Part 5-57: Selection and erection of electrical equipment - Erection of stationary secondary batteries
14.	IEC 60364-6:2016/COR1:2017	Low voltage electrical installations - Part 6: Verification
15.	IEC 60364-7-701:2019	Low-voltage electrical installations - Part 7-701: Requirements for special installations or locations - Locations containing a bath or shower
16.	IEC 60364-7-702:2010	Low-voltage electrical installations - Part 7-702: Requirements for special installations or locations - Swimming pools and fountains
17.	IEC 60364-7-703:2004	Electrical installations of buildings - Part 7-703: Requirements for special installations or locations - Rooms and cabins containing sauna heaters
18.	IEC 60364-7-704:2017	Low-voltage electrical installations - Part 7-704: Requirements for special installations or locations - Construction and demolition site installations
19.	IEC 60364-7-705:2006	Low-voltage electrical installations - Part 7-705: Requirements for special installations or locations - Agricultural and horticultural premises
20.	IEC 60364-7-706:2024	Low-voltage electrical installations - Part 7-706: Requirements for special installations or locations - Conducting locations with restricted movement
21.	IEC 60364-7-708:2017	Low-voltage electrical installations - Part 7-708: Requirements for special installations or locations - Caravan parks, camping parks and similar locations
22.	IEC 60364-7-709:2007+AMD1:2012 CSV	Low-voltage electrical installations - Part 7-709: Requirements for special installations or locations - Marinas and similar locations
23.	IEC 60364-7-710:2021	Low-voltage electrical installations - Part 7-710: Requirements for special installations or locations - Medical locations
24.	IEC 60364-7-711:2018 RLV	Low-voltage electrical installations - Part 7-711: Requirements for special installations or locations - Exhibitions, shows and stands
25.	IEC 60364-7-711:2018	Low-voltage electrical installations - Part 7-711: Requirements for special installations or locations - Exhibitions, shows and stands
26.	IEC 60364-7-712:2017	Low voltage electrical installations - Part 7-712: Requirements for special installations or locations - Solar photovoltaic (PV) power supply systems

27.	IEC 60364-7-713:2013	Low-voltage electrical installations - Part 7-713: Requirements for special installations or locations - Furniture
28.	IEC 60364-7-714:2011	Low-voltage electrical installations - Part 7-714: Requirements for special installations or locations - External lighting installations
29.	IEC 60364-7-715:2011	Low-voltage electrical installations - Part 7-715: Requirements for special installations or locations - Extra-low-voltage lighting installations
30.	IEC 60364-7-716:2023	Low-voltage electrical installations - Part 7-716: Requirements for special installations or locations – ELV DC power distribution over information and communications technology (ICT) cable infrastructure
31.	IEC 60364-7-717:2009	Low-voltage electrical installations - Part 7-717: Requirements for special installations or locations - Mobile or transportable units
32.	IEC 60364-7-718:2011	Low-voltage electrical installations - Part 7-718: Requirements for special installations or locations - Communal facilities and workplaces
33.	IEC 60364-7-721:2017	Low-voltage electrical installations - Part 7-721: Requirements for special installations or locations - Electrical installations in caravans and motor caravans
34.	IEC 60364-7-722:2018	Low-voltage electrical installations - Part 7-722: Requirements for special installations or locations - Supplies for electric vehicles
35.	IEC 60364-7-729:2007	Low-voltage electrical installations - Part 7-729: Requirements for special installations or locations - Operating or maintenance gangways
36.	IEC 60364-7-740:2000	Electrical installations of buildings - Part 7-740: Requirements for special installations or locations - Temporary electrical installations for structures, amusement devices and booths at fairgrounds, amusement parks and circuses
37.	IEC 60364-7-753:2014	Low-voltage electrical installations - Part 7-753: Requirements for special installations or locations - Heating cables and embedded heating systems
38.	IEC 60364-8-1:2019/COR1:2019	Low-voltage electrical installations - Part 8-1: Functional aspects - Energy efficiency
39.	IEC TS 60364-8-3:2020	Low-voltage electrical installations - Part 8-3 : Functional aspects - Operation of prosumer's electrical installations

40.	IEC 60364-8-82:2022	Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations
41.	IEC 60479-1:2018	Effects of current on human beings and livestock - Part 1: General aspects
42.	IEC 60479-2:2019	Effects of current on human beings and livestock - Part 2: Special aspects
43.	IEC TR 60479-4:2020	Effects of current on human beings and livestock - Part 4: Effects of lightning strokes
44.	IEC TR 60479-5:2007/COR1:2013	Effects of current on human beings and livestock - Part 5: Touch voltage threshold values for physiological effects
45.	IEC 61140:2016	Protection against electric shock - Common aspects for installation and equipment
46.	IEC TR 61200-52:2013	Electrical installation guide - Part 52: Selection and erection of electrical equipment - Wiring systems
47.	IEC TS 61200-53:1994/COR1:1995	Electrical installation guide - Part 53: Selection and erection of electrical equipment - Switchgear and controlgear
48.	IEC TS 61200-101:2018	Electrical installation guide - Part 101: Application guidelines on extra-low-voltage direct current electrical installations not intended to be connected to a public distribution network
49.	IEC TS 61200-102:2020	Electrical installation guide - Part 102: Application guidelines for low-voltage direct current electrical installations not intended to be connected to a public distribution network
50.	IEC TS 61201:2007	Use of conventional touch voltage limits - Application guide
51.	IEC TR 62066:2002	Surge overvoltages and surge protection in low-voltage a.c. power systems - General basic information

(*Program of Work TC 81*)

TC81 publications generated on 2024-06-03		
Sl. No.	**Reference**	**Title**
1.	IEC 62305:2024 SER	Protection against lightning - ALL PARTS
2.	IEC 62305-1:2010	Protection against lightning - Part 1: General principles
3.	IEC 62305-2:2010	Protection against lightning - Part 2: Risk management
4.	IEC 62305-3:2010	Protection against lightning - Part 3: Physical damage to structures and life hazard
5.	IEC 62305-4:2010	Protection against lightning - Part 4: Electrical and electronic systems within structures
6.	IEC 62561-1:2023	Lightning protection system components (LPSC) - Part 1: Requirements for connection components
7.	IEC 62561-2:2018/COR1:2019	Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes
8.	IEC 62561-3:2023	Lightning protection system components (LPSC) - Part 3: Requirements for isolating spark gaps (ISGs)
9.	IEC 62561-4:2023	Lightning protection system components (LPSC) - Part 4: Requirements for conductor fasteners
10.	IEC 62561-5:2023	Lightning protection system components (LPSC) - Part 5: Requirements for earth electrode inspection housings and earth electrode seals
11.	IEC 62561-6:2023	Lightning protection system components (LPSC) - Part 6: Requirements for lightning strike counters (LSCs)
12.	IEC 62561-7:2024	Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
13.	IEC TS 62561-8:2018	Lightning protection system components (LPSC) - Part 8: Requirements for components for isolated LPS
14.	IEC TR 62713:2013	Safety procedures for reduction of risk outside a structure
15.	IEC 62793:2020	Thunderstorm warning systems - Protection against lightning
16.	IEC 62858:2019	Lightning density based on lightning location systems - General principles

ANNEXURE 4

DRAFT ANNUAL ACTION PLAN OF ETD 20 FOR THE YEAR 2024-2025

S.No	Committee No	IS No/SUBJECT	NEW/REVISION
1.	ETD 20	Lightning protection system components LPSC - Part 1: Requirements for connection components	NEW
2.	ETD 20	Lightning protection system components LPSC Part 2: Requirements for conductors and earth electrodes	NEW
3.	ETD 20	Lightning protection system components LPSC Part 3: Requirements for isolating spark gaps ISGs	NEW
4.	ETD 20	Lightning protection system components LPSC Part 4: Requirements for conductor fasteners	NEW
5.	ETD 20	Lightning protection system components LPSC Part 5: Requirements for earth electrode inspection housings and earth electrode seals	NEW
6.	ETD 20	Lightning protection system components LPSC Part 6: Requirements for lightning strike counters LSCs	NEW
7.	ETD 20	Lightning Protection System Components LPSC Part 7: Requirements for earthing enhancing compounds	NEW
8.	ETD 20	Lightning protection system components LPSC Part 8: Requirements for components for isolated LPS	NEW
9.	ETD 20	Application guides complying with IS 732 for Uninterruptible Power Systems	NEW
10.	ETD 20	Application guides complying with IS 732 for Rotating generators	NEW
11.	ETD 20	IS 62305 (Part 1) : 2010 Protection against lightning: Part 1 general principles	REVISION
12.	ETD 20	IS/IEC 62305-2 : 2010 Protection against lightning: Part 2 risk management	REVISION
13.	ETD 20	IS/IEC 62305-3 : 2010 Protection against lightning: Part 3 physical damage to structures and life hazard	REVISION
14.	ETD 20	IS/IEC 62305-4 : 2010 Protection against lightning: Part 4 electrical and electronic systems within structures	REVISION
15.	ETD 20	IS 8061 : 1976 Code of practice for design, installation and maintenance of service lines up to and including 650 V	REVISION
16.	ETD 20	IS 4648 : 1968 Guide for electrical layout in residential buildings	REVISION
17.	ETD 20	IS 5216 (Part 1) : 1982 Recommendations on safety procedures and practices in electrical work: Part 1 general	REVISION
18.	ETD 20	IS 5216 (Part 2) : 1982 Recommendation on safety procedures and practices in electrical work: Part 2 life saving techniques	REVISION
19.	ETD 20	IS 10118 (Part 2) : 1982 Code of practice for the selection, installation and maintenance of switchgear and controlgear: Part 2 selection	REVISION
20.	ETD 20	IS 10118 (Part 3) : 1982 Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 3 installation	REVISION
21.	ETD 20	IS 10118 (Part 4) : 1982 Code of practice for selection, installation and maintenance of switchgear and controlgear: Part 4 maintenance	REVISION
22.	ETD 20	IEC TS 61201:2007 Use of conventional touch voltage	NEW

		limits - Application guide	
23.	ETD 20	IEC TR 62066:2002 Surge overvoltages and surge protection in low-voltage a.c. power systems - General basic information	NEW
24.	ETD 20	Electrical installation in ships - Primary DC distribution - System design architecture	NEW
25.	ETD 20	IS 3043 Code of practice for earthing	REVISION
26.	ETD 20	IS 2551 : 1982 Danger notice plates	REVISION
27.	ETD 20	IEC 60364-8-3 Low-voltage electrical installations - Part 8-3 : Functional aspects - Operation of prosumer’s electrical installations	NEW
28.	ETD 20	IEC 60364-8-82 Low-voltage electrical installations - Part 8-82: Functional aspects - Prosumer's low-voltage electrical installations	NEW
29.	ETD 20	IEC 60364-5-57:2022 Low-voltage electrical installations - Part 5-57: Selection and erection of electrical equipment - Erection of stationary secondary batteries	NEW