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BUREAU OF INDIAN STANDARDS

Draft AGENDA

Name of the Committee	No. of Meeting	Day	Date	Time	Venue
Electrical Appliances Sectional Committee, ETD 32	39 th	Friday	24 June 2022	11.00 h	Online

CHAIRMAN: Shri A K Rajput MEMBER SECRETARY: Shri Sreejith Mohan J

Item 0 WELCOME AND OPENING REMARKS

Item 1 CONFIRMATION OF MINUTES OF THE LAST MEETING

1.1 The minutes of the last meeting (38th meeting) of Electrical Appliances Sectional Committee, ETD 32 held on 28 July 2021 online, circulated vide BISDG letter no. ETD 32/A-2.38 dated 01 July 2021. No comments have been received.

Item 2 SCOPE AND COMPOSITION OF ELECTRICAL APPLIANCES SECTIONAL COMMITTEE, ETD 32

2.1 The present composition of Electrical Appliances Sectional Committee, ETD 32 is given at Annex-1.

The Committee may consider the participation status of the member organizations and review the composition. The Committee is also requested to give suggestions for improvement in participation status of the members.

2.2 The Committee is requested to identify and involve talent available in the country related to the scope of the committee and suggest methodology to involve them in the proceedings of the Committee.

Item 3 ISSUES ARISING OUT OF PREVIOUS MEETINGS

Item 4 DRAFT STANDARDS/AMENDMENTS FOR FINALIZATION

4.1 Following draft Indian standards have completed wide-circulation and is put up for consideration and approval.

SI. No	. Doc No	TITLE Remarks
1	ETD 32 (17877) (IS 302-2-2)	Safety of Household And Similar Electrical No comments received. Appliances Part 2 Particular Requirements Section 2 Vacuum Cleaners And Water-Suction Cleaning Appliances
2	ETD 32 (17858) (IS 302-2-4)	Safety of Household And Similar Electrical No comments received. Appliances Part 2 Particular Requirements Section 4 Spin Extractors
3	ETD 32 (17878) (IS 302-2-6)	Safety of Household And Similar Electrical Comments received from Bajaj is Appliances Part 2 Particular Requirements placed at Annex-3. Section 6 Cooking Ranges Hobs Ovens and Similar Appliances
4	ETD 32 (17880) (IS 302-2-7)	Safety of Household And Similar Electrical No comments received. Appliances Part 2 Particular Requirements Section 7 Domestic Electric Clothes Washing Machines
5	ETD 32 (17884) (IS 302-2-15)	Safety of Household And Similar Electrical Comments received from Bajaj is Appliances Part 2 Particular Requirements placed at <u>Annex 4</u> . Section 15 Appliances for Heating Liquids
6	ETD 32 (17882) (IS 302-2-9)	Safety of household and similar electrical Comments received from Bajaj is appliances part 2 particular requirements section placed at <u>Annex 5</u> . 9 particular requirements for grills toasters and similar portable cooking appliances
7.	ETD 32 (16833) (IEC 60456)	Domestic electric clothes washing machines for Comments received on the WC household use specification document is under consideration of the panel.
8.	ETD 32 (16992)	Household electric cooking appliances Comments received from Bajaj & performance requirements of electric hobs Dyson is placed at Annex 6 .

4.2 Following draft amendments to Indian standards have completed wide-circulation and is put up for consideration and approval.

SI. No	. Doc No	TITLE	Remarks
1	ETD 32 (17945) (IS 374)	Specification for electric ceiling type fans and regulators (Third Revision) Amendment - 1	Comments received have been considered by the panel constituted for the purpose and the draft amendment incorporating the decisions of panel is enclosed at Annex-7 .
2	ETD 32 (17946) (IS 302-2-80)	Safety of Household and similar electrical appliances - Safety: Part 2 - 80 particular requirements for fans (First Revision) Amendment - 1	
3	ETD 32 (19649) (IS 302-2-30)	Safety of household and similar electrica appliances: Part 2 particular requirements: Sec 30 room heaters (First Revision) Amendment - 3	

Item 5 DRAFT STANDARD/ AMENDMENTS FOR APPROVAL FOR WIDE CIRCULATION

Item 6 DRAFTS UNDER PREPARATION

6.1 Draft standard of IS 4250



Draft Indian standard is under consideration of the panel.

Item 7 COMMENTS ON PUBLISHED STANDARDS

7.1 IS 302-2-24: 1994 Safety of household and similar electrical appliances Part 2 particular requirements Sec 24 refrigerators food - Freezers and ice – Makers

Comments received from Shri. P K Mukherjee – The standard needs revision as the same is very old and as the corresponding IEC standard is revised.

7.2 IS 2082: 2018: Stationery storage type electric water heaters

Proposal for inclusion of new testing methodology received from BEE. Please see Annex-8.

Comments received from Shri. P K Mukherjee – The standard needs revision to consider the efficiency in terms of both active and standby unlike the existing standby power mode.

Item 8 NEW SUBJECTS

8.1 Adoption of IEC 63008: 2020 'Household and similar electrical appliances – Accessibility of control elements, doors, lids, drawers and handles'

The committee may kindly examine the standard IEC 63008: 2020 'Household and similar electrical appliances – Accessibility of control elements, doors, lids, drawers and handles' for adoption to address the need of accessibility for electrical consumer items and appliances. ISO/IEC GUIDE 71:2014 and IEC 63008 - Household and similar electrical appliances – Accessibility of control elements, doors, lids, drawers and handles is enclosed at Annex-9.

Item 9 TECHNICAL ISSUES

Item 10 INTERNATIONAL ACTIVITIES

Item 11 PROGRAMME OF WORK

11.1 The present position of work under ETD 32 is given at Annex-2.

11.2 Review of Published Standards for Revision/Reaffirmation

BIS has identified a list of Indian Standards which are older than 2000. The committee may review the list of standards and inform the committee if there are any latest standards available for the same or if they are relevant to present conditions.

Item 12 DATE AND PLACE FOR THE NEXT MEETING

Item 13 ANY OTHER BUSINESS



Annex-1

S. No.	Organization	Member Name	Member Designation	Role	Status of Participation
1	Central Electricity Authority, New Delhi	Shri Ashok Kumar Rajput	Chief Engineer (Research and Development Division), CEA	Chairperson	3/3
2	BSH Household Appliances	Shri Balasubramanian Anand	Product Approval Engineer	Alternate Member	3/3
2	Manufacturing Private Limited, Chennai	Shri Madhanraj Ramalingam	Product Approval Specialist	Principal Member	3/3
		Shri Chandra Veer Singh	Sr. GM Quality Assurance	Principal Member	
3	Bajaj Electricals Limited, Mumbai	Socratees C	Sr. Manager - Design Quality & Compliances	Alternate Member	3/3
		Anuj Mujumdar	Dy. Manager - Product Certification	Alternate Member	<u> </u>
	Bureau of Energy	Ms Deepshikha Wadhwa	Project Engineer	Alternate Member	
4	Efficiency, New Delhi	Shri Kamran Shaikh	Joint Director	Alternate Member	1/3
		Ms P Samal	Director	Principal Member	
	CG Power and	Shri Mayur Nadkarni	Sr Manager-Design - (T&QA)	Principal Member	
5	Industrial Solutions, Mumbai	Shri Anoop Singh	Genaral Manager	Alternate Member	3/3
	Willioai	Shri Satyendra P. Singh		Alternate Member	
	Central Electricity	Shri O.P. Suman	Dy. Director (DP &R)	Principal Member	
6	Authority, New Delhi	Shri Omkishore	Assistant Director (DP & R)	Alternate Member	3/3
7	Central Power Research Institute, Bengaluru	Shri D. Venkatesh	Engineering Officer Gr. 2	Principal Member	1/3
8	Central Public Works	Shri A. K. Goel	SE(E)S&S	Alternate Member	0/3
	Department, New Delhi	Shri Mukesh Vij	Chief Engineer (E) DR	Principal Member	0/3
9	Consumer Education and Research Centre, Ahmedabad	Ms. Shweta Mahajan	7	Principal Member	1/3
	Consumer Electronics	Parkash Atam		Alternate Member	
10	and Appliances Manufacturers Association (CEAMA),	Ramesh Khanna	Executive Secretary	Alternate Member	1/3
	Noida	J.K. Oberoi		Principal Member	
11	Consumer Voice, New Delhi	Mr. B.K. Mukhopadhyay	Head technical	Alternate Member	2/3
	Defence Research and	Prafulla Chandra	DSE(TL-AC System Design)	Principal Member	
12	Development Organization,	Suresh Chandra	ADE/Electrical (D)	Alternate Member	0/3
	Hyderabad	A.K. Shukla		Alternate Member	
13	Development Commissioner Micro- Small and Medium Enterprises	Shri S. Dharmaselvan	JD(Elecl)	Alternate Member	0/3
14	Dyson Technology India Pvt Ltd, Gurugram, Haryana.	Shekh Tazimul Haque Faridi		Principal Member	2/3
15	Electrical Research and Development	Shri Rakesh Patel		Principal Member	3/3
13	Association, Vadodara	Dr. Vinod Gupta	Asst. Director & Head (Quality System, Secondary Equipment & Calibration)	Alternate Member	



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16	Electronics Regional and Test Laboratory (North), New Delhi	Manjula Bhati		Principal Member	0/3
17	Government of Gujarat (IW), Energy and Petrochemical Department, Gandhinagar	Shri Mishra N.J.	Electrical Inspector (QC)	Principal Member	0/3
	Havells India Limited,	Pramod Deshpande	Senior Manager	Alternate Member	
18	Noida	Shri Diwan Singh Kholia	Deputy Gen Manager	Alternate Member	3/3
		Rajeev Kumar Gupta	Senior General Manager,	Principal Member	
	Ministry of Commerce and Industry,	S.K. Jain	Industrial Adviser	Principal Member	
19	Department for Promotion of Industry and Internal Trade, New Delhi	Shri Mohd.Zakaria Khan Yusuf Zai	ADO	Alternate Member	0/3
20	National Test House, Kolkata	Uma Bhakta Shri T. Roy Barman	Scientist SD (Civil)	Principal Member Alternate Member	0/3
21	National Water Mission Department of Water Resources, RD and GR Ministry of Jal Shakti, New Delhi	Shri Suneel Kumar Arora	Advisor (C&M)	Principal Member	0/3
	Petroleum Conservation	Surendra Pratap	Director (R & D)	Principal Member	
22	Research Association,	Shri M P Bangwal		Principal Member	0/3
	New Delhi	Shri P K Purkayashta	Additional Director (R&D)	Alternate Member	
	Philips India Limited,	Vivek Sharma		Alternate Member	
23	Gurugram	L.A. Kulkarni	Manager (Desn & Devt)	Principal Member	3/3
		P.V. Kotasthane	Manager (Q&BI)	Alternate Member	
24	Racold Thermo	Ms. Trishala Chougule	Sr. Engineer QA, Ceritification	Alternate Member	2/3
	Limited, Pune	Shri Mahesh Bhangale	Manager(Quality Assurance)	Principal Member	
25	S.S. Enterprises, Mumbai	Shri Ramsundar	Proprietor	Principal Member	0/3
26	UL India Private Limited, Bengaluru	Shri V. Manjunath	Regional Standards Manager	Principal Member	2/3
	Venus Safety and	Shri I. Ram Kumar		Alternate Member	
27	Health Private Limited, Navi Mumbai	Shri R. Iyadurai	Director	Principal Member	1/3
28	Whirlpool Corporation,	Balajee S Prasad		Alternate Member	0/3
∠8	Gurugram	Poonam Dake	Manager GSR	Principal Member	0/3
29	IN PERSONAL CAPACITY	Shri P K Mukherjee	Personal Capacity	Principal Member	2/3



Annex-2

ETD32 : Electrical Appliances

Scope : To prepare standards for electrical appliances for household and similar purposes, including associated controls

Liaison:

IEC TC- 61B, 61H, 61J SC- 61B, 61H, 61J (P): Safety of household and similar electrical appliances IEC TC- 59A, 59C, 59D, 59F, 59L SC- 59A, 59C, 59D, 59F, 59L (P): Performance of household and similar electrical appliances

		Published Standards
O.T.	IC N	
SI. No.	IS No.	TITLE
1	IS 302 : Part 1 : 2008	Safety of household and similar electrical appliances Part 1 general requirements Sixth Revision
2	IS 302 : Part 2 : Sec 2 : 1997	Safety of household and similar electrical appliances Part 2 particular requirements Sec 2 vacuum cleaners and water suction cleaning appliances
3	IS 302 : Part 2 : Sec 3 : 2007	Safety of household and similar electrical appliances Part 2 particular requirements Sec 3 electric iron First Revision
4	IS 302 : Part 2 : Sec 4 : 1993	Safety of household and similar electrical appliances Part 2 particular requirements Sec 4 spin extractors
5	IS 302 : Part 2 : Sec 6 : 2009	Safety of household and similar electrical appliances Part 2 particular requirements Sec 6 cooking ranges hobs ovens and similar appliances
6	IS 302 : Part 2 : Sec 7 : 2010	Safety of household and similar electrical appliances Part 2 particular requirements Sec 7 domestic electric clothes washing machines First Revision
7	IS 302 : Part 2 : Sec 8 : 1994	Safety of household and similar electrical appliances part 2 particular requirements section 8 electrical shavers hair clippers and similar appliances
8	IS 302 : Part 2 : Sec 9 : 2009	Safety of household and similar electrical appliances Part 2 particular requirements Sec 9 toasters grills roasters and similar appliances First Revision
9	IS 302 : Part 2 : Sec 11 : 1994	Safety of household and similar electrical appliances Part 2 particular requirements Sec 11 tumbler dryers
10	IS 302 : Part 2 : Sec 12 : 1993	Safety of household and similar electrical appliances - Specification Part 2 particular requirements Sec 12 warming plates and similar appliances
11	IS 302 : Part 2 : Sec 13 : 1994	Safety of household and similar electrical appliances Part 2 particular requirements Sec 13 frying pans deep fat fryers and similar appliances
12	IS 302 : Part 2 : Sec 14 : 2009	Safety of household and similar electrical appliances Part 2 particular requirements Sec 14 electric kitchen machines First Revision
13	IS 302: Part 2: Sec 15: 2009	Safety of household and similar electrical appliances Part 2 particular requirements Sec 15 appliances for heating liquids First Revision
14	IS 302 : Part 2 : Sec 21 : 2018	Safety of household and similar electrical appliances Part 2 particular requirements Sec 21 stationary storage type electric water heaters
15	IS 302 : Part 2 : Sec 23 : 2009	Safety of household and similar electrical appliances Part 2 particular requirements Sec 23 appliances for skin or hair care First Revision
16	IS 302 : Part 2 : Sec 24 : 1994	Safety of household and similar electrical appliances Part 2 particular requirements Sec 24 refrigerators food - Freezers and ice - Makers
17	IS 302 : Part 2 : Sec 25 : 2014	Safety of household and similar electrical appliances Part 2 Particular requirements Section 25 Microwave ovens
18	IS 302 : Part 2 : Sec 26 : 2014	Safety of household and similar electrical appliances Part 2 particular requirements Sec 26 clocks First Revision
19	IS 302 : Part 2 : Sec 30 : 2007	Safety of household and similar electrical appliances Part 2 particular requirements Sec 30 room heaters First Revision



20	IS 302 : Part 2 : Sec 31 : 2009	Safety of household and similar electrical appliances Part 2 particular
21	IS 302 : Part 2 : Sec 32 :	requirements Sec 31 range hoods Safety of household and similar electrical appliances Part 2 particular
21	1994	requirements Sec 32 massage appliances
22	IS 302 : Part 2 : Sec 35 :	Safety of household and similar electrical appliances Part 2 particular
	2017	requirements Sec 35 electric instantaneous water heaters Second Revision
23	IS 302 : Part 2 : Sec 45 :	Safety of household and similar electrical appliances Part 2 particular
2.1	1994	requirements Sec 45 electric heating tools
24	IS 302 : Part 2 : Sec 46 :	Safety of household and similar electrical appliances Part 2 particular
	1993	requirements Sec 46 electric steam cookers
25	IS 302 : Part 2 : Sec 59 :	Safety of household and similar electrical appliances Part 2 particular
26	1999	requirements Sec 59 insect killers
26	IS 302 : Part 2 : Sec 75 : 2018	Safety of Household and Similar Electrical Appliances Part 2 Particular Requirements Section 75 Commercial Dispensing Appliances and Vending
	2016	Machines Section 73 Commercial Dispensing Appliances and Vending
27	IS 302 : Part 2 : Sec 76 :	Safety of household and similar electrical appliances Part 2 particular
2,	1999	requirements Sec 76 electric fence energizers
28	IS 302 : Part 2 : Sec 80 :	Household and similar electrical appliances - Safety Part 2 - 80 particular
	2017	requirements for fans First Revision
29	IS 302 : Part 2 : Sec 201	Safety of household and similar electrical appliances Part 2 particular
	: 2008	requirements Sec 201 electric immersion water heaters First Revision
30	IS 302 : Part 2 : Sec 202	Safety of household and similar electrical appliances Part 2 particular
	: 1992	requirements Sec 202 electric stoves
31	IS 302 : Part 2 : Sec 203	Safety of household and similar electrical appliances Part 2 particular
	: 1994	requirements Sec 203 electric call bells and buzzers for indoor use
32	IS 302 : Part 2 : Sec 204	Safety of household and similar electrical appliances Part 2 particular
	: 1994	requirements Sec 204 electric water boilers
33	IS 302 : Part 2 : Sec 206 : 1994	Safety of household and similar electrical appliances Part 2 particular requirements Sec 206 electric coffee makers
34	IS 302 : Part 2 : Sec 207	Safety of household and similar electrical appliances Part 2 particular
	: 1994	requirements Sec 207 electric hot plates
35	IS 302 : Part 2 : Sec 208	Safety of household and similar electrical appliances Part 2 particular
	: 1994	requirements Sec 208 single walled baking ovens
36	IS 302 : Part 2 : Sec 209	Safety of household and similar electrical appliances Part 2 particular
	: 1994	requirements Sec 209 low speed food grinding machines
37	IS 365 : 1983	Specification for electric hot plates Second Revision
38	IS 366 : 1991	Electric iron - Specification Fourth Revision
39	IS 367 : 1993	Electric kettles and jugs for household and similar use - Specification
40	IS 368 : 2014	Electric immersion water heaters - Specification Fifth Revision
41	IS 369 : 2019	Household electric direct - Acting room heaters - Performance requirements Fourth Revision
42	IS 374 : 2019	Specification for electric ceiling type fans and regulators Third Revision
43	IS 555 : 1979	Specification for electric table type fans and regulators Third Revision
44	IS 959 : 1994	Specification for electric soldering irons Third Revision
45	IS 1169 : 1967	Specification for electric pedestal type fans and regulators First Revision
46	IS 1287 : 1993	Electric toasters - Specification Third Revision
47	IS 1401 : 2008	Protection of persons and equipment by enclosures - Probes for verification
48	IS 1415 : 1966	Specification for electric hand - Lamps Revised
49	IS 1416 : 1972	Specification for safety transformers First Revision
50	IS 2082 : 2018	Stationary storage type electric water heaters - Specification Fifth Revision
51	IS 2268 : 1994	Electrical call bells and buzzers for indoor use - Specification Third Revision
52	IS 2312 : 1967	Specification for propeller type AC ventilating fans First Revision



Section Sect
Electric water boilers - Specification Second Revision
Second
S7 IS 3588 : 1987 Specification for electric axial flow fans First Revision
Cartridge type heating elements Non - Embedded Type - Specification First Revision
Revision
System System Specification for resistance wires tapes and strips for heating elements
60 IS 3963 : 1987 Specification for roof extractor units First Revision 61 IS 4158 : 1986 Specification for solid embedded type electric heating elements First Revision 62 IS 4159 : 2021 Mineral Filled Sheathed Heating Elements 63 IS 4250 : 1980 Specification for domestic electric food - Mixers Liquidizers And Grinders 64 IS 4327 : 1967 Specification for electric fans and regulators for use in ships 65 IS 4894 : 1987 Specification for centrifugal fans First Revision 66 IS 5159 : 1969 Specification for centrifugal fans First Revision 67 IS 5161 : 1969 Specification for flexible electric shavers 68 IS 5579 : 1985 Specification for neon testers First Revision 69 IS 5790 : 1985 Specification for neon testers First Revision 70 IS 6272 : 1987 Specification for industrial cooling fans Man Coolers First Revision 71 IS 6390 : 1986 Specification for steam irons First Revision 72 IS 6365 : 1971 Laboratory Electric Ovens 73 IS 6390 : Part 2 : 1992 Domestic electrical clothes washing machines - Specification Part 2 requirements for tumbler dryers 74 IS 6446 : 1986 Specification for mica insulated heating elements First Revision 75 IS 6680 : 1992 Railway carriage fans - Specification First Revision 76 IS 7137 : 1973 Specification for portable hand - Held mains - Operated electric massagers 77 IS 7154 : 1994 Mains operated electric hair dryers First Revision 78 IS 7603 : 1975 Specification for portable low speed food grinding machines 79 IS 8506 : 1977 Specification for lectric instantaneous water heaters Second Revision 81 IS 8985 : 1978 Specification for electric instantaneous water heaters Second Revision 82 IS 10436 : 1983 Specification for electric frying pans and deep fat fryers 83 IS 10975 : 1984 Electric Gas Lighters 84 IS 11676 : 1995 Microwave ovens for household and similar purposes - Specification 85 IS 11879 : 1986 Specification for hand held electric engraving tools 86 IS 12289 : 1988 Specification for hand held electric engraving tools 87 IS 13231 : 1991 Method of centrifugal test for double inlet fans Industri
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Specification for domestic electric food - Mixers Liquidizers And Grinders
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89 IS 13588: 1993 Spring - Operated impact - Test apparatus and its calibration - Specification
90 IS 13836: 1993 Potato peeling machine Electrically Operated - Specification
91 IS 13850: 1993 Dish washing machine heavy duty ratchet type - Specification
92 IS 13886: 1993 Specification for bimetallic thermostats and thermal cutouts for use with electric
iron
93 IS 14144 : 1994 Electric coffee makers
94 IS 14145: 1994 Mains operated clocks specification
95 IS 14155: 1994 Domestic electric clothes washing machines for household use - Specification
96 IS 15644 : 2006 Safety of electric toys
97 IS/IEC 60730 : PART 1 Automatic electrical controls for household and similar use part 1 General
: 1999 Requirements
98 IS/IEC 60730 : Part 2 : Automatic Electrical Controls for Household and Similar Use Part 2 Particular
Sec 9 : 2011 Requirements Section 9 Temperature Sensing Controls