

BUREAU OF INDIAN STANDARDS

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MINUTES

TENTH MEETING OF ELECTROMAGNETIC COMPATIBILITY SECTIONAL COMMITTEE, LITD 09

DATE & TIME DATE : 11th August 2021 DAY : Wednesday TIME : 1430h (02:30 PM)	VENUE Meeting Mode (WEBEX): https://bisindianbureau.in/jitsvc/jitsvc/0a05704e23f3c7f4c2fae8cd0a05704e2cba Meeting number : 170 790 3820 Meeting password : 170790 3820 Password : LTD9
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Members Present :

1. Chairman Dr. Subbarao B

2. Member Secretary Shri Bipin Jambholkar

3. S K Srivastava All India Radio (AIR)
4. Shri Akhilesh Prasad All India Radio (AIR)
5. Shri Abhijit Mulay Automotive Research Association of India (ARAI)
6. Shri Nishit Shankar Automotive Research Association of India (ARAI)
7. Shri Nitin Jain BNN Speag, Test and Calibration Laboratory Indian Pvt ltd
8. Shri Bharat Jain BNN Speag, Test and Calibration Laboratory Indian Pvt ltd
9. Shri R S Chaudhary Consumer Electronics and Appliance Mfrs. Ass. (CEAMA)
10. Shri Srinivasu Moturi Consumer Electronics and Appliance Mfrs. Ass. (CEAMA)
11. Shri D S Nagi Dte. General of Aeronautical Quality Assurance (DGAQA)
12. Shri DP Singh Directorate General Doordarshan, Prasar Bharati (DD)
13. Shri Rajesh Meena Directorate General Doordarshan, Prasar Bharati (DD)
14. Dr. Ashish Saurikha Electronics Component Industries Association (ELCINA)
15. Col. Vikas Sahgal Joint Communications & Electronic Staff (JSES)
16. Dr. S.K.Dubey National Physical Laboratory (NPL)
17. Shri Saurabh Nag Samsung India Electronics Private Limited
18. Ms Manisha Telecom Equipment Manufactures Assn. of India (TEMA)
19. Mr. Abdul Rahman TUV Rheinland India Pvt. Ltd.
20. Shri H Wadhwa Voluntary Orgn. in Interest of Consumer Education (VOICE)

Invitee

21. Shri Anand Balasubramanian Consumer Electronics and Appliance Mfrs. Ass. (CEAMA)
22. Shri B N Tripathi Consumer Electronics and Appliance Mfrs. Ass. (CEAMA)

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| 23. | Ms. Disha Patil | Consumer Electronics and Appliance Mfrs. Ass. (CEAMA) |
| 24. | Shri Jujhar Singh | Consumer Electronics and Appliance Mfrs. Ass. (CEAMA) |
| 25. | Mohinder Singh | Consumer Electronics and Appliance Mfrs. Ass. (CEAMA) |
| 26. | Mr. Aseem Shaikh | Consumer Electronics and Appliance Mfrs. Ass. (CEAMA) |
| 27. | Shri Sumit Chopada | Emerson Innovation Centre |

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| 28. | Shri Sulekh Chand | Electronics Regional Test Lab. (North) |
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ITEM 0 WELCOME

0.1 Member Secretary welcomed all the members present in tenth meeting of LITD 09 on behalf of BIS. He hoped all members and their family are healthy and doing well. He informed during last five years the Committee has reviewed a large number of Standards and approx. 50 Indian Standards which were either obsolete/old/outdated were revised as per latest IEC/CISPR Standards or withdrawn/superseded by new Indian Standard.

He also informed the members that all Standardization work is being carried out through BIS portal only. He requested all members to login themselves if not already done so. In case of any difficulty, they may contact member secretary for resolution.

0.2 The Chairman welcomed the members to tenth meeting of LITD. He said that through webex (video conferencing), members can easily participate and contribute in committee work. He said that presently India has good number of recognized labs for EMC testing and also Industry is ready to comply with EMC requirements not only in Indian requirements but also to export the products worldwide.

ITEM 1 FORMAL CONFIRMATION OF THE MINUTES OF LAST MEETING

1.1 The minutes of the last meeting of Electromagnetic Compatibility Sectional Committee, LITD 09 were circulated vide BISDG letter No. 09/A-2.9 dated 23rd December 2020. The minutes of the last meeting were formally confirmed by the Committee.

ITEM 2 COMPOSITION OF LITD 09

2.1 The Committee reviewed the composition of the Committee.

2.2 BIS has received the request from the following request for Co-option in personal capacity in the Committee. After deliberating on their request for Co-option, it was decided that they would be included in the mailing list of the committee for wide circulation/any other documents.

- a) Shri Akhilesh Sidapara- In Personal Capacity
- b) Ms Manjeeri Gopal - In Personal Capacity
- c) Shri Rajender Saini - In Personal Capacity
- d) Ms. Mayuri Simaria Jain - In Personal Capacity
- e) Prof. Ranjit Singh Momi

It was also decided, if any organization contribute in the Committee work, their co-option request may be considered in future meeting of LITD 09.

2.3 It was informed by member secretary that Co-option request was sent to ERDA. Till date no response was received.

2.4 Following organizations have not attended the last three or more meetings.

- i) Broadcast Engineering Consultants India Ltd (BECIL)
- ii) Bharat Electronics Ltd. (BEL)
- ii) Central Electricity Authority (CEA)
- iv) Cellular Operators Association of India (COAI)
- v) Ministry of Electronics & Information Technology (MeitY)
- vi) Wireless Planning and Coordination Wing

It was felt most of the above mentioned Organizations are important Stakeholders. It was decided that BIS will write a letter (physical) to all giving them a warning that in case of no response their membership would be withdrawn without any further Communication.

2.5 Following change of Nomination was reported in Committee.

All India Radio (AIR)

Shri S K Srivastava Principal Member
Shri Akhilesh Prasad Alternate Member

Automotive Research Association of India (ARAI)

Shri Abhijit Mulay Principal Member
Shri Nishit Shankar Alternate Member

Consumer Electronics and Appliance Mfrs. Ass. (CEAMA)

Shri Srinivasu Moturi Principal Member

Shri R S Chaudhary Alternate Member

TUV Rheinland India Pvt. Ltd.

Mr. Abdul Rahman Principal Member

ITEM 3 DRAFT INDIAN STANDARDS FOR FINALIZATION

3.1 The Committee examined the following document and decided as given below:

Sl. No.	Draft Indian Standards	Circular No. and Date	Remarks
1.	Doc. No. : LITD 09 (17072) IS 10052 (Part 1/Sec 6) CISPR 16-1-6: 2014 Specification for radio disturbance and immunity measuring apparatus and methods Part 1 Radio disturbance and immunity measuring apparatus Section 6 EMC antenna calibration ICS 33.100.10; 33.100.20	LITD 09/ T- 77, Dt 26th Mar 21	The Committee approved the document for printing as dual number Standard
2.	Doc. No. : LITD 09 (17073) IS/CISPR TR 29: 2020 Television broadcast receivers and associated equipment – Immunity characteristics – Methods of objective picture assessment ICS 33.100.20	LITD 09/ T- 78, Dt 26th Mar 21	The Committee approved the document for printing as single number Standard
3.	Doc. No. : LITD 09 (17074) IS/IEC/IEEE 62209-1528: 2020 Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices Part 1528 Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz) ICS 17.220.20 NOTE : The committee noted that IEC/IEEE 62209-1528: 2020 cancels and replaces IEC 62209-1:2016, IEC 62209-2:2010, IEC 62209-2:2010/AMD1:2019 However in India, both IEC 62209-1 & 2 are referred in Telecommunication Engineering Centre (TEC), Min. of Communications notifications. Hence it was decided that unless TEC viewpoint are received on IEC 62209-1 & 2 are obtained, both IS/IEC 62209-1: 2016 and IS/IEC 62209-2: 2019 will run concurrently along with IS/IEC/IEEE 62209-1528: 2020 in India without any time limit.	LITD 09/ T- 79, Dt 26th Mar 21	The Committee approved the document for printing as single number Standard.

ITEM 4 PRESENT POSITION OF WORK (POW) OF LITD 09

4.1 The Committee reviewed the present position of work (POW) of LITD 09 is given in Annex 3 (Pg 15-20) of Agenda.

ITEM 5 REVIEW OF PUBLISHED INDIAN STANDARDS

5.1 The Committee decided to reaffirm 14 Indian Standards which were due for reaffirmation from their due date, which are as follows:

Sl. No	IS.No. & Title	Date of Reaffirmation
1.	IS 10052 (Part 1/Sec 3) :2018 Radio disturbance and immunity Measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 3 Ancillary equipment - Disturbance power	Jul 2021
2.	IS 10052(Part 1/Sec 4) :2018 Radio disturbance and immunity measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 4 Antennas and test sites for radiated disturbance measurements	Jul 2021
3.	IS 10052(Part 1/Sec 5) :2018 Radio disturbance and immunity Measuring apparatus and methods Specification Part 1 Radio disturbance and immunity measuring apparatus Section 4 Antennas calibration sites and reference test sites for 5 MHz to 18 GHz	Jul 2021
4.	IS 10052(Part 2/Sec 1) :2018 Specification for radio disturbances and immunity measuring apparatus and methods: Part 2 Methods of measurement of disturbances and immunity Section 1 Conducted distribution (Second revision)	Jul 2021
5.	IS 10052(Part 4/Sec 4) :2018 Radio disturbance and immunity Measuring apparatus and methods Specification Part 4 Uncertainties, statistics and limit modeling Section 4 Statistics of complains and a model for the calculation of limits for the protection of radio services	Jul 2021
6.	IS 12233(Part 1): 2018 Radio interference characteristics of overhead power lines and high voltage equipment - Part 1 Description of phenomena	Sep 2021
7.	IS 12233(Part 3):2019 Radio Interference Characteristics of Overhead Power Lines and High-Voltage Equipment Part 3 Code of Practice for Minimizing the Generation of Radio Noise (Second Revision)	Jul 2021

8.	IS 14700(Part 4/Sec 14): 2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 14 Voltage fluctuation immunity test for equipment with input current not exceeding 16 A per phase	May 2021
9.	IS 14700(Part 4/Sec 17): 2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 17 Ripple on d.c. input power port immunity test	May 2021
10.	IS 14700(Part 4/Sec 24):2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 24 Test method for protective devices for HEMP conducted disturbance(First Revision)	Jul 2021
11.	IS 14700(Part 4/Sec 25):2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques Sec 25HEMP immunity test methods for equipment and systems.	May 2021
12.	IS 14700(Part 4/Sec 32):2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 32 High-Altitude Electromagnetic pulse HEMP Simulator Compendium	May 2021
13.	IS 14700(Part 4/Sec 33):2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 33 Measurement method for high power transient parameters	Jun 2021
14.	IS 14700(Part 4/Sec 35):2018 Electromagnetic Compatibility (EMC) - Part 4 Testing and measurement techniques: Sec 35 HPEM simulator compendium	May 2021
15.	IS 14700(Part 6/Sec 3):2018 Electromagnetic compatibility (EMC) Part 6 Generic standards Section 3: Emission standards for residential, commercial and light industrial environment (First Revision)	May 2021
16.	IS/IEC 62209-1 : 2016 Human exposure to radio freq. fields from hand-held and body-mounted wireless comm. devices- Human models, inst. and procedures-Part 1 Procedure to determine the specific absorption rate(SAR)for hand-held devices used in close proximity to the ear	Dec 2021
17.	IS 62226(Part 3/Sec 1):2018 Exposure to electric or magnetic fields in the low and intermediate frequency range- Methods for calculating the current density and internal electric field induced in the human body Part 3 Exposure to electric fields Section 1 Analytical and 2D numerical	Jul 2021
18.	IS 62369(Part 1):2009 Evaluation of human exposure to electromagnetic fields from short range devices (SRDS) in various applications over the frequency range 0 GHz to 300 GHz - Part 1: Fields produced by devices used for electronic article surveillance, radio frequency id	Apr 2021

19.	IS 62479:2010 Assessment of the compliance of low - power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)	Jul 2021
20.	IS 62577:2009 Evaluation of human exposure to electromagnetic fields from a stand-alone broadcast transmitter (30 MHz - 40 GHz)	Jul 2021

5.2 Draft Indian Standards Approved For Wide Circulation

5.2 The Committee considered the list of documents given in Agenda and decided to issue following documents based on latest standards or Final Draft Documents of IEC/CISPR directly in Wide Circulation for the period of two month.

Sl. No	IEC No. / IEC Comm.No. /Title / Revision Status or New
1	CISPR 14-1:2020 TC/SC CISPR/CIS/F Electromagnetic compatibility - Requirements for household appliances + electric tools and similar apparatus - Part 1: Emission (Fifth Revision to IS 6873 (Part 2/Sec 1))
2	CISPR 14-2:2020 TC/SC CISPR/CIS/F Electromagnetic compatibility - Requirements for household appliances + electric tools and similar apparatus - Part 2: Immunity - Product family standard (Fifth Revision to IS 6873 (Part 2/Sec 2))
3	CISPR 16-1-4:2019+AMD1:2020 TC/SC CISPR/CIS/ASpecification for radio disturbance and immunity measuring apparatus and methods - Part 1-4: Radio disturbance and immunity measuring apparatus - Antennas and test sites for radiated disturbance measurements
4	IEC 61000-4-3:2020 TC/SC TC 77/SC 77B Electromagnetic compatibility (EMC) - Part 4-3 : Testing and measurement techniques - Radiated + radio-frequency + electromagnetic field immunity test (Second Revision to IS 14700 (Part 4/Sec 3))
5	IEC 61000-6-3:2020 TC/SC CISPR/CIS/H Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for equipment in residential environments (Second Revision to IS 14700 (Part 6/Sec 3))

ITEM 6 INTERNATIONAL STANDARDIZATION ACTIVITIES

6.1 The Committee noted the list in which India is Participating, Observer in IEC/CISPR Committees along with the list of Liaisons with International Committees in which LITD 09 acts as National Mirror Committee.

6.2 Committee felt that India being P-Member of IEC/TC 77, 77A, 77B, 106 and CIS-B, members should try to participate at least in the virtual meetings in the International Committee.

6.3 The Committee noted the list of International Standards given in the Annex 3 of Agenda. It was decided to circulate the list of Standards along with the minutes so that members can go through the list.

6.4 The Committee noted the list of working groups under IEC/TC 77, 106 and all CISPR Sub-Committees given in the Agenda

6.4.1 The Committee added the list of experts nominated in various working groups of IEC/TC 77, IEC/SC 77A, IEC/SC 77B, IEC/TC 106 and IEC /CIS/B.

The List of Experts in Working group are as follows:

Sr No	Title	Subcommittee/Working Groups	Expert
1	TC 77 Electromagnetic compatibility	WG 13 Generic EMC Standards - Maintenance of IEC 61000-2-5	Dr. B Subba Rao Shri Bipin Jambholkar

Sr	Title	Subcommittee/Working Groups	Expert
2	IEC/SC 77A EMC - Low frequency phenomena	WG 1 Harmonics and other low-frequency disturbances	Dr. B Subba Rao Shri Sulekh Chand Shri Ashutosh Pandey, Ms. Neha Upadhyay,
		WG 2 Voltage fluctuations and other low-frequency disturbances	Dr. B Subba Rao Shri Ravindra Kumar Shri Ashutosh Pandey, Ms. Neha Upadhyay,
		WG 6 Low frequency immunity tests	Dr. B Subba Rao Ms. Neha Upadhyay, Shri Manish Kumar Singh,
		WG 8 Description of the electromagnetic environment associated with the disturbances present on electricity supply networks	1. Dr. B Subba Rao
		WG 9 Power Quality measurement methods	1. Dr. B Subba Rao

Sr	Title	Subcommittee/Working Groups	Expert
3	SC 77B High frequency phenomena	WG 10 Radiated and conducted continuous phenomena immunity tests	Dr. B Subba Rao Shri Ravindra Kumar Ms. Neha Upadhyay, Shri Manish Kumar Singh,
		JTF REV Joint Task Force CISPR/A/SC77B on Reverberation chambers linked to CIS/A	1. Dr. B Subba Rao
		JTF TEM Joint Task Force CISPR/A/SC77B on TEM Waveguides linked to CIS/A	1. Dr. B Subba Rao
		JTF FAR Joint Task Force between CISPR/A and SC77B on Fully anechoic rooms (FARs) Managed by CIS/A	1. Shri G.Subba Rao

Sr	Title	Subcommittee/Working Groups	Organization
4	TC 106 Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure	WG 8 Addressing methods for assessment of contact current related to human exposures to electric, magnetic and electromagnetic fields	Shri Ashutosh Pandey, Shri Harshit Modi, Dr.S.K.Dubey Bipin Jambholkar
		WG 9 Addressing methods for assessment of Wireless Power Transfer (WPT) related to human exposures to electric, magnetic and electromagnetic fields	Ms. Neha Upadhyay, Shri Harshit Modi, Dr.S.K.Dubey Shri Nitin Jain

Sr	Title	Subcommittee/Working Groups	Organization
5	CIS/B Interference relating to industrial, scientific and medical radio-frequency apparatus, to other (heavy) industrial equipment, to overhead power lines, to high voltage equipment and to electric traction	WG 1 Industrial, scientific and medical (I.S.M.) radio frequency apparatus	Shri Ashutosh Pandey, Shri Manish Kumar Singh, Shri Ravindra Kumar
		WG 2 Interference from overhead power lines, high-voltage equipment and electric traction	

6.5.1 The Committee in its last meeting has decided that Organizations mentioned below will try to contribute in following Committees work/documents in which India is Observer member, so that Committee may consider upgrading Indian Status from O-Member to P-Member.

Sr	Title	Subcommittee/Working Groups	Organization
1	CIS/A Radio-interference measurements and statistical methods	WG 1 EMC instrumentation specifications	DGAQA
		WG 2 EMC measurement techniques, statistical methods and uncertainty	DGAQA

Sr	Title	Subcommittee/Working Groups	Organization
2	CIS/F Interference relating to household appliances tools, lighting equipment and similar apparatus	WG 1 Household appliances incorporating electric motors and contact devices	ERTL (N)
		WG 2 Lighting equipment	-

Sr	Title	Subcommittee/Working Groups	Organization
3	CIS/H Limits for the protection of radio services	WG 1 A survey of EMC product standards on emission	AAI
		JWG 5 Use of medium-sized EUT volumes at alternative test sites SAC and FAR Managed by CIS/A	AAI

Sr	Title	Subcommittee/Working Groups	Organization
4	CIS/I Electromagnetic compatibility of information technology equipment, multimedia equipment and receivers	MT 7 Maintenance of CISPR 32	BECIL,DGAQA
		MT 8 Maintenance of CISPR 35	BECIL,DGAQA,TEC
		MT 9 Maintenance of CISPR 29	BECIL,DGAQA

6.5 All members were requested to regularly check www.iec.ch/votes for IEC/CISPR documents relevant to them so that they can write to BIS for draft documents or login into bis.gov.in for document depository of draft documents.

ITEM 7 WTO-TBT ENQUIRY POINT

7.1 The Committee noted the information given in Agenda.

7.2 BIS-IR&TISD Department serves as the WTO TBT Enquiry Point. The email of enquiry point are as follows:

a) ird@bis.gov.in ; b) tisd@bis.gov.in

ITEM 8 ELECTRONICS AND INFORMATION TECHNOLOGY GOODS (REQUIREMENTS FOR COMPULSORY REGISTRATION) ORDER, 2012

8.1 The Committee noted the information given in Agenda.

ITEM 9 INFORMATION ON E-SALE OF STANDARDS BY BIS

9.1 The Committee noted the information given in Agenda. It was also informed that indigenous Standards are available **free of cost in** <http://www.standardsbis.in/Gemini/home/Home.action>. In the website, information regarding identical/equivalent Standards along with scope is also available.

However, people will have to pay for Indian Standards, which has been adopted from other Standards bodies (like IEC/ISO etc.) but at much cheaper rate than its International editions.

ITEM 10. NATIONAL INSTITUTE OF TRAINING FOR STANDARDIZATION (NITS)

10.1 The Committee noted the information given in Agenda.

ITEM 11 Any Other Business

11.1 Shri Akhilesh Prasad from All India Radio informed that (in Chat box) radio broadcast signal are received in various Indian languages are related to national security matter. As per him, RF signal level allowed inside country need to be notified.

Standards of broadcast of radio signals, type of receivers and monitoring of RF levels may be included.

IS 6873 (CISPR Series) need to be considered in new solar/wind supply in residential equipments, since renewable power equipments generates Radio disturbances/interferences by vibration of solar panels from wind pressure, show falls etc.

11.2 Members were of the view that Government may consider bringing EMC Standards under Quality Control Order (QCO). In India, presently there are sufficient laboratories for complying with any QCO order on EMC. All members were requested to write the Indian Standards, which may be considered for QCO in first Stage by GOI, in case any query received by BIS in this regards.

ITEM 12 DATE AND PLACE FOR THE NEXT MEETING

12.1 Date and place for the next meeting will be decided in consultation with the chairman preferably within next six months. The meeting ended with vote of thanks to Chairman Sir and all the members.