

For BIS Use Only

BUREAU OF INDIAN STANDARDS
MINUTES

| Name of the Committee | No. of Meeting | Day | Date | Time | Venue |
|--|------------------|-----------|------------|----------|--------------|
| Electrical Insulators and Accessories Sectional Committee ETD 06 | 23 rd | Wednesday | 20-11-2024 | 11:00 AM | WebEx Online |

CHAIRMAN: Shri S.S. Mishra

MEMBER SECRETARY: Mr Nitish Kumar Jain

Members Present:

Electrical Insulators and Accessories Sectional Committee ETD 06

| Sl. No. | Organization | Member Name | Member E Mail |
|---------|--|---|----------------------------------|
| 1. | In Personal Capacity | Shri Shiv Shankar Mishra (<i>Chairperson</i>) | ssmishra_7@yahoo.com |
| 2. | Bureau of Indian Standards, New Delhi | Shri Nitish Kumar Jain (<i>Member Secretary</i>) | eetd@bis.gov.in |
| 3. | Calcutta Electric Supply Corporation Limited, Kolkata | Shri Sutripta Mukherjee | sutripta.mukherjee@rpsg.in |
| 4. | Electrical Research and Development Association, Vadodara | Shri Shailesh Patel | shailesh.patel@erda.org |
| 5. | Electrical Research and Development Association, Vadodara | Shri Tirtha Vishwakarma | tirtha.vishwakarma@erda.org |
| 6. | Epsilon Asia Group , New Delhi | Shri Neelesh Arora | neelesh.arora@epsilonasiasia.com |
| 7. | In Personal Capacity | Shri Aseem Dhamija | dhamijaaseem@gmail.com |
| 8. | In Personal Capacity | Dr. N. Vasudev | vasudev.dr@gmail.com |
| 9. | Indian Electrical and Electronics Manufacturers Association, New Delhi | Shri Seetharaman K. | k.seetharaman@ieema.org |
| 10. | JG&P | Shri Romana Karnail Singh | sales@dataceramics.co.in |
| 11. | Modern Insulators Limited, Abu Road | Shri Vaibhav Jain | vaibhavjain.iec@gmail.com |
| 12. | National Capital Region Transport Corporation, New Delhi | Shri Ajay Kumar | ajay.kumar@ncrtc.in |
| 13. | Power Grid Corporation of India, Gurugram | Shri Ashish Kumar Singh | ashishsingh@powergrid.in |

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|-----|---|-------------------------------|-------------------------------------|
| 14. | Research Designs and Standards Organization (RDSO), Lucknow | Shri Girraj Kishore | dti5rdso@gmail.com |
| 15. | Sukrut Electric Company Private Limited, Pune | Shri Pritesh Devidas Dehadray | pritesh.dehadray@sukrutelectric.com |
| 16. | Yash High Voltage Limited, Vadodara | Shri. Pramod Govind Rao | pramodrao@yashhv.com |

ITEM 0 GENERAL

0.1 Welcome and Opening Remarks by the Chairman

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

As there were no further comments, the minutes of the last meeting (22nd meeting) of Electrical Insulators and Accessories Sectional Committee, ETD 06 held on 14 May 2024 at BIS HQ, New Delhi, circulated vide BISDG letter No. ETD 06/A-2.22 dated 20 May 2024 has been formally confirmed.

ITEM 2 COMPOSITION OF ELECTRICAL INSULATORS AND ACCESSORIES SECTIONAL COMMITTEE, ETD 06

2.1 The committee noted the information given in the Agenda.

2.2 The Committee reviewed the composition & decided to co-opt following into the committee:

- Hitachi Energy
- General Electric
- Dr. Kulkarni, *IIT Bombay*

Shri. Pramod Govind Rao, *Yash High Voltage Limited* agreed to provide the contact details.

2.3 Member Secretary informed the committee about the monitoring process being implemented to assess the contribution of members participating in the ETD 06 Sectional Committee. The evaluation will be based on several key factors, including but not limited to:

- Providing comments on P-drafts and WC-drafts circulated from time to time.
- Reviewing Indian Standards (IS).
- Providing comments on IEC documents being circulated for review.
- Regular attendance in committee meetings.

It was further conveyed that inactive members will be considered for replacement with individuals who are willing to actively contribute to the work of the committee. All members were reminded to adhere to this compliance to ensure active participation and effective functioning of the committee.

Item 3 OVERVIEW OF THE ACTIVITIES OF THE COMMITTEE

3.1 The present position of work under Electrical Insulators and Accessories Sectional Committee ETD 06 is given below:

| Sl. No. | Item No. of last minutes | ITEM | Action Taken | Decision |
|---------|--------------------------|------|--------------|----------|
|---------|--------------------------|------|--------------|----------|

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|----|-------|---|--|--|
| 1. | 3.1 | IS 12676: 1989 Oil impregnated paper insulated condenser bushings - Dimensions and requirements | Comparison sheet provided by Shri J K Boppa, NPCIL was shared to CEA for comments vide email dated 16 July 2024. <i>Response awaited from CEA.</i> | The committee requested Member Secretary to circulate the comparison sheet for their review. <i>Shri Pramod Rao agreed to follow up with CEA.</i> |
| 2. | 3.2 | IS 13312: 1992 Dimensions of porcelain oil filled transformer bushings Rated 52 kV for medium polluted atmospheres) ITMA comments: The standard is applicable for 52 kV normally polluted atmosphere. Request to add dimensions for heavily polluted atmosphere also. The current rating specified 630 A and 1000 A only. For higher ratings of 2000, 3150 & 5000 A use only Oil Filled Paper Condenser Bushing. Hence, we cannot include the above ratings in this standard. Need to specify that the porcelain shall be single piece and without any joints. | Committee decided that BHEL may have expertise. Hence, BHEL to take the standard for revision. Request for inputs was sent vide email dated 16 July 2024. <i>Response awaited from BHEL.</i> | <i>Shri Aseem Dhamija agreed to follow up with BHEL for the revision of IS 13312.</i> |
| 3. | 3.3 | IS 16685: 2018/ IEC 62223: 2009 Insulators - Glossary of terms and definitions IEC withdrawn. | Committee decided that the document would be considered for withdrawal after consultation with manufacturers other than members of ETD-06. IEEMA to share the information with the manufacturers. Request for inputs was sent vide email dated 16 July 2024. <i>Response awaited from IEEMA.</i> | The committee decided to withdraw IS 16685: 2018/ IEC 62223: 2009 Insulators - Glossary of terms and definitions. |
| 4. | 5.3.1 | IS 1441:1989, Insulator stalks for telegraph and telephone lines - Specification | Committee decided to withdraw the standard. Under process for withdrawal. | <i>Committee noted the information.</i> |
| 5. | 5.3.2 | IS 283:1976, Specification for porcelain insulators for telegraph and telephone lines | Committee decided to withdraw the standard. Under process for withdrawal. | <i>Committee noted the information.</i> |

Item 4 REVIEW OF INDIAN STANDARDS FOR REVISION/ REAFFIRMATION

4.1 The committee reviewed the standards due for review and following members agreed to take up revision of following Indian Standards:

| Sl. No | IS No. | Title | Decision |
|--------|-------------------------------|---|--|
| 1. | IS 13134 : 1992 | Guide for the selection of insulators in respect of polluted conditions | <i>Dr. N. Vasudev agreed to take up revision and provide the inputs for revision within 1 month.</i> |
| 2. | IS 2486 (Part 1) : 1993 | Metal fittings of insulators for overhead power lines with nominal voltage greater than 1 000 V - Specification: Part 1 general requirements and tests (Second Revision) | <i>Shri Ashish Kr Singh, PGCIL agreed to take up revision and provide the inputs within 1 month.</i> |
| 3. | IS 2486 (Part 2) : 1989 | Insulator fittings for overhead power lines with nominal voltage greater than 1 000 V - Specification: Part 2 dimensional requirements (Second Revision) | Modern Insulator Comments: Dimensional parameters of ball and socket size: To add 28mm & 32mm as per IEC 60120. <i>Shri Ashish Kr Singh, PGCIL agreed to take up revision and provide the inputs within 1 month.</i> |
| 4. | IS 2486 (Part 3) : 1974 | Specification for insulator fittings for overhead power lines with a nominal voltage greater than 1 000 volts: Part 3 locking devices | <i>Shri Ashish Kr Singh, PGCIL agreed to take up revision and provide the inputs within 1 month.</i> |
| 5. | IS 2486 (Part 4) : 1981 | Specification for insulator fittings for overhead power lines with a nominal voltage greater than 1 000 V: Part 4 tests for locking devices | <i>Shri Ashish Kr Singh, PGCIL agreed to take up revision and provide the inputs within 1 month.</i> |
| 6. | IS 3347 (Part 1/Sec 1) : 1979 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part 1 up to and including 1 kV: Sec 1 Porcelain parts (First Revision) | <i>Sukrut Electric agreed to take up the revision of IS 3347 series and provide the necessary inputs for within 6 months.</i> |
| 7. | IS 3347 (Part 1/Sec 2) : 1979 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part i up to and including 1 kV: Sec 2 Metal parts (First Revision) | |
| 8. | IS 3347 (Part 2/Sec 1) : 1979 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part ii 3.6 kV bushings: Sec 1 Porcelain parts (First Revision) | |
| 9. | IS 3347 (Part 2/Sec 2) : 1979 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part ii 3.6 kV bushings: Sec 2 Metal parts (First Revision) | |
| 10. | IS 3347 (Part 3/Sec 1) : 1988 | Dimensions for porcelain transformer bushings for use in 1 lightly polluted atmospheres: Part 3 17.5 kV bushings: Sec 1 Porcelain parts (Second Revision) | |
| 11. | IS 3347 (Part 3/Sec 2) : 1982 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part iii 12 and 17.5 kV bushings: Sec 2 Metal parts (First Revision) | |
| 12. | IS 3347 (Part 4/Sec 1) | Dimensions for porcelain transformer bushings for use | |

| | | | |
|-----|----------------------------------|---|--|
| | : 1988 | in lightly polluted atmospheres: Part 4 24 kv bushings: Sec 1 Porcelain parts (Second Revision) | |
| 13. | IS 3347 (Part 4/Sec 2) : 1982 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part 4 24 kV bushings: Sec 2 Metal parts (First Revision) | |
| 14. | IS 3347 (Part 5/Sec 1) : 1979 | Dimension for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part 5 36 kV bushings: Sec 1 Porcelain parts (Second Revision) | |
| 15. | IS 3347 (Part 5/Sec 2) : 1979 | Dimensions for porcelain transformer bushings for use in normal and lightly polluted atmospheres: Part 5 36 kV bushings: Sec 2 Metal parts (First Revision) | |
| 16. | IS 3347 (Part 8/Sec 1) : 1988 | Dimensions for porcelain transformer bushings for use in lightly polluted atmospheres: Part 8 52 kV bushings: Sec 1 Porcelain part | |
| 17. | IS 3347 (Part 8/Sec 2) : 1992 | Dimensions for porcelain transformer bushings for use in lightly polluted atmospheres: Part 8 52 kV bushings: Sec 2 Metal parts | |

4.2 The committee decided to create Panel and Working Groups as per Item 4.2 of the Agenda. Nominations for conveners and members will be sought via Google form through email, and the final composition shall be determined in consultation with the Chairperson.

Item 5 INTERNATIONAL ACTIVITIES

5.1 Member Secretary requested committee to review IEC TC 36 & SC 36A Publications (link shared in the Agenda) so that if any Indian Standard which is due for review can be revised with corresponding IEC. Also, since BIS is in MoU with IEEE, members are requested to share recommendations of any IEEE standards to be adopted/adapted.

5.2 & 5.3 The committee noted the information.

5.4 Experts nominated in IEC WG's/MT's, etc were requested to keep the committee informed of the developments taking place at IEC and any development which is important for India may be presented to the committee during the Sectional committee meeting of ETD 06.

5.5 The committee members were informed of the important projects under development and based on level of interest, priority and designated experts were finalized as below:

| Sl. No | Project Ref No | Project | Level of Interest | IEC TC | Working Group | Existing Experts |
|--------|----------------|--|-------------------|------------|---------------|---|
| 1. | 36A/247/CDV | IEC/IEEE 65700-19-03 ED2: Bushings for DC application | Low | IEC SC 36A | JMT 9 | - |
| 2. | 36/605/CD | Artificial pollution tests on high-voltage insulators made of hydrophobicity transfer materials to be used on a.c. and d.c. systems | High | IEC TC 36 | - | 1) Dr Vasudev |
| 3. | 36/600/NP | Composite insulated cross-arms with a.c. rated voltage greater than 1 000 V and d.c. voltage greater than 1 500 V – Definitions, design criteria, test | Medium | IEC TC 36 | WG 25 | 1) Dr Vasudev 2) Sh Ashish Kr Singh, |

| | | | | | | |
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| | | methods and acceptance criteria | | | | PGCIL |
| 4. | 36/607/DTS | Composite insulators with integrated optical fibres for AC voltages greater than 1000 V and DC voltages greater than 1500 V – Definitions, test methods and acceptance criteria | Low | IEC TC 36 | PT 63264 | - |
| 5. | 36A/251/NP | PNW TS 36A-251 ED1: General requirements for tap adapter of capacitance graded bushing | High | IEC SC 36A | - | 1) Sh Pramod Rao, Yash High Voltage Ltd. |
| 6. | 36A/253/CD | IEC TS 63493-1 ED1: Transformer bushings dimensional standardization - Part 1: Medium voltage bushings with Um from 12 kV up to and including 52 kV and Ir from 630 A up to and including 3150 A | High | IEC SC 36A | JWG 7 | 1. Mr Atul Subhash Bapat 2. Mr Dehadray Pritesh Devidas |

5.6 Members were requested to kindly send their nomination for participation in the upcoming meeting of IEC TC 36 & SC 36A is scheduled to be held in spring 2025 at China with detailed justification for participation by end of December 2024.

ITEM 6 ACTION ARISING OUT OF PREVIOUS MEETING

The committee noted the information given in the Agenda.

ITEM 7 ENGAGEMENT OF YOUNG PROFESSIONALS

7.1 Following nominations received for Manak Pravardhak programme:

| SI No. | Name | Organisation | Designation | Date of Birth | Email Address | Mobile No. | BIS Technical Committee(s) where the parent organisation of the candidate is a member | Technical Department |
|--------|------------------|-----------------------|--------------------|-------------------|--|-----------------|---|----------------------|
| 1 | Mr. Gautam Nikam | Yash Highvoltage Ltd. | Executive Director | 7th December 1990 | gautam@yashhv.com | +91 90990 86437 | ETD 06- Electrical Insulators And Accessories | ETD |

ITEM 8 INFORMATION ON e-SALE OF STANDARDS BY BIS

The committee noted the information given in the Agenda.

ITEM 9 NATIONAL INSTITUTE FOR TRAINING IN STANDARDISATION (NITS)

The committee noted the information given in the Agenda.

ITEM 10 DATE AND PLACE OF NEXT MEETING

The date and place of next meeting shall be decided in consultation with Chairperson.