

REPORT ON THE ANNUAL CONVENTION OF DEANS OF CIVIL ENGINEERING DEPARTMENTS AT MOU INSTITUTES

INTRODUCTION

The Annual Convention for the Deans of Civil Engineering Departments across various MoU Institutes was held over two days, bringing together academic leaders to discuss the progress and future roadmap for enhancing the role of academia in standardization. This report outlines the key discussions, decisions, and future directions from the convention, emphasizing the critical role of collaboration between academic institutions and the Bureau of Indian Standards (BIS).

DAY 1: OPENING AND STRATEGIC DISCUSSIONS



The convention commenced with a warm welcome by Smt. Kanika Kalia, Sc E & Head, Jaipur Branch Office followed by an opening address from Shri Pramod Kumar Tiwari, Director General of BIS. Shri Tiwari highlighted the importance of the convention in fostering collaboration between BIS and academic institutions. He emphasized that while 91 MoUs have already been signed, there is a need to revisit and strengthen these partnerships to build a robust standardization ecosystem.

Shri Tiwari underscored the unique position of civil engineering departments, which already incorporate standards in their curricula, facilitating a deeper connection with BIS. However, he noted that other engineering disciplines, such as mechanical and electrical engineering, are more familiar with international standards like ASME, ASTM, and IEEE, rather than Indian Standards (IS). This gap, he argued, underscores

the need for greater alignment between academia and BIS, particularly in engaging more faculty members in the standards-making process.

The DG drew attention to India's limited presence in international standardization bodies like ISO and IEC, where India is often seen as a passive participant rather than a proactive standards maker. He stressed that a significant factor behind this is the lack of synergy between government, industry, and academia in India, which is in stark contrast to the coordinated efforts seen in Europe.

To address this, Shri Tiwari proposed a more active involvement of academic institutions in BIS's activities, particularly in the formulation of standards. He pointed out that while India is a P-member in many ISO Technical Committees, there is a dearth of Indian representation in the working groups that draft these standards. He emphasized the need for academic experts to lead these efforts, which would ensure that India's genuine interests are represented at the international level.



The DG also highlighted the potential for academic institutions to contribute to BIS's R&D projects, which often require empirical and validation studies. He suggested that faculty members and research scholars could benefit from small-scale projects, offering them valuable industry exposure. The involvement of students through internships, particularly those in their 7th semester, was also encouraged, with BIS facilitating visits to industries to bridge the gap between theoretical knowledge and practical application.

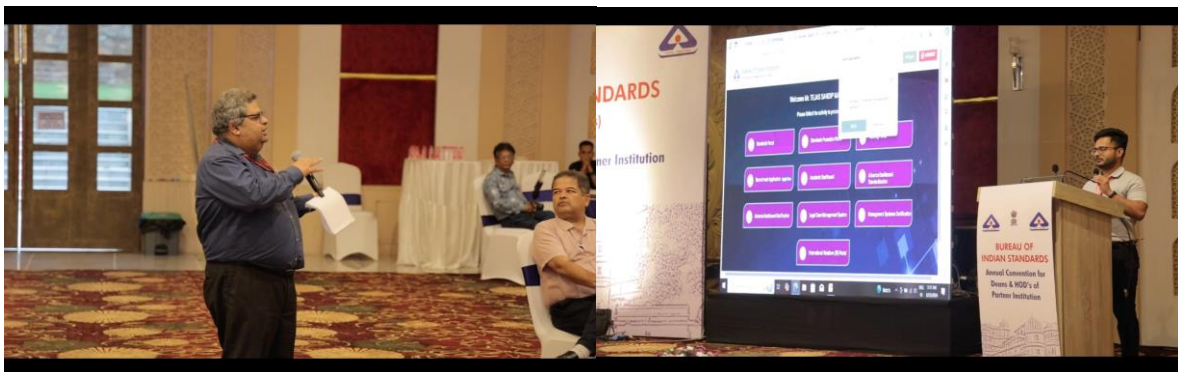
Presentations



Several presentations were made on Day 1, covering critical aspects of standardization:

1. **Areas Covered by Standardization in Civil Engineering Department of BIS** — This presentation provided an overview of the vast areas BIS is involved in, highlighting the importance of standards across various sectors of Civil Engineering.
2. **Standard Formulation Activities and Processes at BIS** — An insightful look into the mechanisms and processes involved in the formulation of standards, underscoring the collaborative efforts required between BIS and academic institutions.
3. **Soil Mechanics & Foundation Engineering — An Insight into Indian Standards** — This presentation delved into specific standards related to soil mechanics and foundation engineering, offering an in-depth understanding of the subject.
4. **Standards Covered by WRD Department** - Focused on the standards developed by the Water Resources Department (WRD), this presentation provided a comprehensive view of the regulations and guidelines governing water resources.

Additionally, a quiz consisting of 30 questions was conducted to test the participants' knowledge of BIS and its activities. The interactive session helped in reinforcing the understanding of BIS's role and its various initiatives.



Digital Solutions by BIS

A significant presentation on the digital solutions offered by BIS was also delivered, introducing tools such as the BIS Care App and the BIS website. These digital platforms are designed to enhance accessibility to standards, ensuring stakeholders can easily access and apply them in their work.

DAY 2: DISCUSSIONS AND NEW SUBJECTS FOR STANDARDIZATION

Day two of the convention was dedicated to group discussions, where participants delved into specific areas for collaboration and standardization. Dr. Nishant provided illustrative examples of how Indian Standards can be integrated into academic curricula, making them a mandatory part of course content.

Participants from various institutes shared their experiences and suggestions. A recurring theme was the need for greater visibility and involvement of BIS in academic activities. The suggestion to use platforms like Manak Manthan to share experiences and the integration of BIS-related content in online courses, such as those on NPTEL, was well received.

Discussions also focused on the challenges of involving a broader range of institutes in the standards-writing process. With only 36 institutes currently participating, it was agreed that there is a need for more effective channels of communication and engagement. Additionally, the role of BIS in funding research and lab facilities was discussed, with participants urging for clearer guidelines and more inclusive funding opportunities.

The convention also highlighted the importance of disseminating standards effectively. Participants emphasized that professional bodies should play a key role in this, similar to how it is done in the United States.

Day 2 was dedicated to in-depth discussions on the way forward for the MoU between BIS and the participating academic institutions. Various new subjects were proposed for the formulation of standards, reflecting the collective wisdom and foresight of the attendees. The suggestions of the various groups are as follows:

Group 1:

1. **Bamboo Reinforced Concrete:** Development of specifications similar to IS 1786, including preservation techniques for bamboo used in structural applications.
2. **Bitumen Mechanical Properties:** Resolve conflicts between IRC and IS codes, specifically regarding polymer-modified bitumen.
3. **IRC 81 Conflicts:** Address internal conflicts in IRC 81 and recommend a unified value in alignment with BIS.
4. **Concrete Codes:**
 - Develop a code for the combination of PPC-based concrete.
 - Explore the durability of PCC-based concrete.
5. **Structural Strength Assessment:** Create guidelines for assessing the structural strength of existing buildings (RCC, steel, or timber) after exposure to fire.

Group 2:

1. **Ground Improvement Techniques:** Formation of a dedicated committee.
2. **Erosion Control in Urban Development:** Development of guidelines.
3. **Construction Noise Control:** Standards for managing noise in construction.
4. **Water Diversion from Boulder Streams:** Guidelines for using trench weirs.
5. **Controlled Low Strength Material:** Management of excavated soil.
6. **Remedial Measures for Liquefaction:** Development of best practices.
7. **Cloud Burst Analysis:** Formulation of analytical guidelines.
8. **Rehabilitation of Geotechnical Structures:** Development of standards.
9. **Durability Test for Stabilized Soil:** Establishment of testing procedures.
10. **Particulate Removal by Turbulent Settling Chamber:** Standardization of techniques.
11. **Constant Rate of Strain (CRS) for Soil Consolidation:** Guidelines for application.
12. **Committee for Mining Geo-Mechanics:** Formation and task allocation.
13. **Mining and Industrial Tailing Waste:** Standardization of management practices.
14. **Tailing Storage Facilities:** Development of design and safety standards.
15. **Municipal Solid Waste Management:** Formulation of comprehensive standards.
16. **Groundwater Recharge in Hilly Regions:** Innovative system design guidelines.
17. **Urban Drainage Management System:** Standards for efficient management.
18. **Impact Resistance of Concrete:** Establishing benchmarks and testing methods.

Group 3:

1. **Tunnel Analysis and Design:** Methods for analysis and design of tunnels and their components.
2. **Ground Improvement Techniques:** Expansion of existing methods.
3. **Soil-Rock Mixture Characterization:** Standardization of characterization techniques.
4. **Structural Health Monitoring:** Guidelines for ongoing assessment.
5. **Foundation Assessment:** Methods for evaluating foundation integrity.
6. **Aquifer Mapping:** Development of mapping guidelines.
7. **River Erosion Management:** Use of porcupines as a pro-siltation measure.
8. **Construction Over Alluvial Rivers:** Guidelines for building structures.
9. **Energy-Efficient Structures:** Formulation of design standards.

Group 4:

1. **Heat-Resistant Concrete Structures:** Design and specification guidelines.
2. **Shrinkage Limit of Soil:** Testing methods without mercury.
3. **Foam Concrete Mix Design:** Development of standardized procedures.
4. **Liquefaction Potential of Soil:** Procedures for assessment.
5. **Self-Healing Concrete:** Guidelines for application and testing.
6. **Permeability of Pervious Concrete:** Establishment of testing methods.
7. **Recycled Coarse Aggregate:** Use in construction, design, and specifications.
8. **Design of Filler Slabs:** Standardization of techniques.
9. **Rat Trap Bond in Wall Construction:** Guidelines for implementation.
10. **Geosynthetic Clay Liners in Landfills:** Development of standards.
11. **Waste Plastic in Bituminous Mixtures:** Guidelines for incorporation.
12. **Microbially Induced Carbonate Precipitation:** Use in construction materials.
13. **Conduits in RC Elements:** Guidelines for concealing conveyance lines.

Group 5:

1. **Anchor Bolt Design:** Incorporation into CED 02, referencing AC1-318 Appendix-D.
2. **Bond Strength of Mortar to Masonry Units:** Testing methods, possibly aligning with ASTM standards.
3. **Design of Tall Buildings:** Development of comprehensive guidelines.
4. **Recycled Aggregates:** Specifications for the use of recycled coarse aggregates.
5. **Maintenance of RC and Steel Buildings:** Requirements and best practices.

Group 6:

1. **Concrete Structures for Blast/Impact Loading:** Design guidelines.
2. **FRP Retrofitted Concrete Structures:** Design and implementation standards.
3. **Self-Compacting Concrete:** Guidelines and best practices.
4. **Offshore Structures Design:** Standards for design and construction.
5. **Reinforced Earth Walls:** Design guidelines.
6. **Performance-Based Fire Safety:** Establishment of performance criteria.
7. **Geopolymer Concrete:** Development of guidelines.
8. **Soil Nailing Construction:** Design and construction guidelines.
9. **Vibration Isolation and Damping Devices:** Standards for structural applications.
10. **Multi-Layered Metallic Structures:** Design and performance standards.

Group 7:

1. **Passive and Active Control Codes:** Recommendations for IS 1893.
2. **Rainwater Harvesting:** Guidelines specific to hilly regions.
3. **Geo-Tech RE Walls:** Development of standards in line with IRC.
4. **GPR for Soil Investigation:** Guidelines for application.
5. **Climate Change Adaptation in Building Development:** Sustainable practices.
6. **Retrofitting Structures Using FRP:** Development of methods and standards.
7. **FRP Testing Procedures:** Establishment of comprehensive testing methods.
8. **NDT Procedures for Rock:** Standardization of non-destructive testing.
9. **Urban Water Management:** Guidelines for effective management.
10. **Seismic Testing of Structures:** Development of testing procedures.
11. **Underwater Testing of Explosives:** Establishment of safety and testing standards.
12. **Contaminated Light Aggregate:** Guidelines for usage.
13. **Helical Piles:** Specification and design standards, including the use of drilling mud with polymers.

The discussions underscored the importance of involving more academic institutions in the standards-writing process. Currently, only 36 institutes are part of BIS standards committees, and there was a strong consensus on expanding this participation. There was also a focus on improving the visibility of BIS activities among students and faculty, with suggestions such as incorporating BIS courses into NPTEL and conducting regional awareness programs



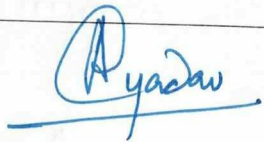
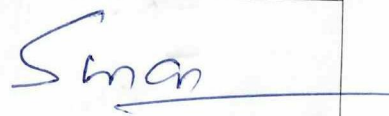
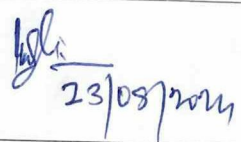
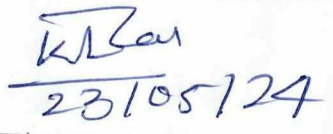
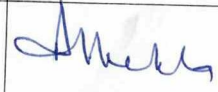

Key Outcomes and Recommendations

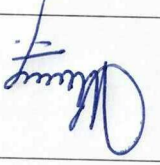
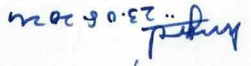

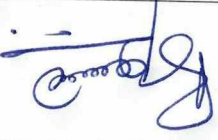

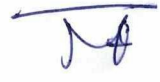
1. **Strengthening Collaboration:** The convention reinforced the importance of deepening collaboration between BIS and academic institutions. There was a consensus on the need to revisit and enhance existing MoUs, ensuring that they lead to tangible outcomes in the standardization process.
2. **Increased Academic Involvement in Standards Formulation:** The need for greater involvement of faculty members and research scholars in BIS's activities was stressed. This includes participating in working groups at the international level and contributing to the drafting of standards.
3. **Enhancing Research and Development:** The role of academic institutions in BIS's R&D projects was highlighted, with an emphasis on small-scale projects that offer practical exposure to students and faculty alike.
4. **Effective Dissemination and Implementation:** The convention underscored the importance of disseminating standards through professional bodies and called for the establishment of a professional licensing system in India to ensure their implementation.
5. **Future Directions:** Participants agreed on the need for regular brainstorming sessions and national symposiums to identify new standards and areas of collaboration. The importance of integrating BIS-related content into academic curricula was also emphasized.

Conclusion

The Annual Convention for the Deans of Civil Engineering Departments at MoU Institutes marked a significant step forward in aligning academic institutions with the standardization efforts of BIS. The discussions over the two days highlighted the critical role that academia can play in shaping and implementing standards, both at the national and international levels. As India strives to become a leader in global standardization, the active involvement of academic institutions will be crucial in achieving this goal. The convention concluded with a strong commitment from all participants to work together towards this vision.




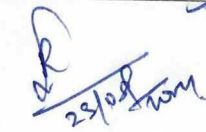


Attendance for Discipline-wise Annual Convention
(Civil Engineering) Udaipur

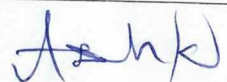

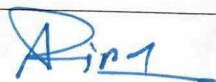

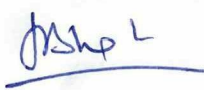

| SI No | Name & Designation | Name of the College | Signature |
|-------|---|--|--|
| 1 | Dr. Amit Yadav, Asst. Prof, NIT MIZORAM | NIT MIZORAM |  |
| 2 | SARAT DAS, IITCISM) Dhanbad | IITCISM) Dhanbad |  |
| 3 | Prof. Anil Kumar Singh, Dean (Acad) | IIT (ISM), Dhanbad |  23/05/24 |
| 4 | Dr. Animesh Kumar Rai | Muzabbarpur Institute of Technology, MUZ |  23/05/24 |
| 5 | Dr. Anadhana Anetha | CET, Cvd |  |
| 6 | Dr. George Mathew | RSET, Kozhik |  |




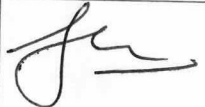

| SI No | Name & Designation | Name of the College | Signature |
|-------|--|----------------------------------|--|
| 7 | Chalok Hanuman Desai Assistant Professor | N. I. F. Kumbhar |  |
| 8 | Dr. ARUN GOEL Professor & Head, Civil Engg. Deptt | NIT Kumbharhira, Haryana. |  23.06.2024 |
| 9 | Dr. Sangeer Kumar, Professor Graphic Era University, Dehradun | CEU, Dehradun |  |
| 10 | Dr. Bipul Talwar Asst. Engg. College, Gurgaon | AEC, Gurgaon |  |
| 11 | Dr. S. S. Rastogi HOD, Govt College Engg, Nagpur | Govt. College of Engg, Nagpur |  |
| 12 | Dr. S. S. Gupta Prof. & Head, CIT, GURUAT, Panthapra | CIT GURUAT, Panthapra |  |

| Sl No | Name & Designation | Name of the College | Signature |
|-------|---|---|-------------|
| 13 | Dr. Shailam Choudhary Prof Professor | MGM University Jodhpur (Raj.) | 9414243583 |
| 14 | Dr. Rajib Kumar Bhattacharyya | IIT Guwahati | [Signature] |
| 15 | Dr. GP Madhavi Principal | Shri Lal Shah Engineering College Bhamburda | [Signature] |
| 16 | Registrar Dr. Lalit Kumar Gupta, Asst. Prof. F.D.M. | BMS Institute of Technology & Mgmt. Bengaluru | [Signature] |
| 17 | ANILAN K. SENGUPTA, Asst. Prof. IIT MADRAS | IIT MADRAS | [Signature] |
| 18 | Dr. Vikas B. Varkare, Asst. Professor VJTI, Mumbai | VJTI, Mumbai | [Signature] |

Attendance for Discipline-wise Annual Convention
(Civil Engineering)






| SI No | Name & Designation | Name of the College | Signature |
|-------|--|---|---|
| 19 1 | Dr. Shanmuga Sundaram Associate Professor & Head of Department Vellore Institute of Technology - Chennai | Vellore Institute of Technology - Chennai |  |
| 20 2 | Dr. C.N.V. Satyanarayana Reddy H.O.D. Civil Engineering Department A.U. College of Engineering Vishakhapatnam | A.U. College of Engg Vishakhapatnam |  |
| 21 3 | Sameer Patel, IIT Gandhinagar Assistant Prof. Civil and Chemical Engg Associate Dean, Undergraduate Studies | IIT Gandhinagar |  |
| 22 4 | Prof. Rajib Saha, Professor CE Dept. & Dean of Academic Affairs, NIT Agartala | NIT Agartala |  |
| 23 5 | Dr. Debabrata Giri, H.O.D. Civil Engg, VSSUT, Burla | VSSUT, Burla |  |
| 24 6 | Dr. P. Venkateswara Rao, Professor | Sri Venkateswara College of Engineering, Chennai |  |




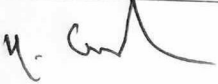


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|-------|--|-----------------------|---|
| 25 7 | Dr. K.S.A. DIVESH KUMAR PROFESSOR | NITTTR, CHENNAI - 113 |  |
| 26 8 | Prof Manish Kumar Nayak BIS chair prof & Dean | IIT Indore |  |
| 27 9 | Dr. Abhishek Rajput Asso. Prof & Head Civil Engrg. | IIT Indore |  |
| 28 10 | Manoj K Mishra Prof, MINING Engr. NIT RWA | NIT Rourkela |  |
| 29 11 | Prof. Jareed Ahmed Bha ² Head, Civil Engrg. Deptt. | MIT Srinagar |  |
| 30 12 | Amit Prashant | KT Gandhinagar |  |


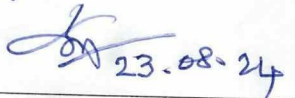
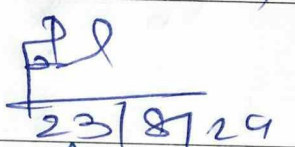
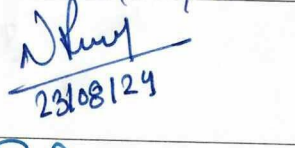

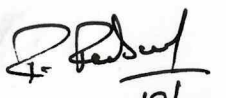
| SI No | Name & Designation | Name of the College | Signature |
|-------|---|--|---|
| 31 13 | Dr. Kamal S. Patel | Govt Engg College Raipur. |  |
| 32 14 | Bhargab Maitra Professor & Dean (SA) | IIT Kharagpur |  |
| 33 15 | Abhishek B. Kamad Mishra Asst. Professor - School of Civil Engg. | KLE Technological University, Hubballi. Karnataka. |  |
| 34 16 | Dr. A.K. Verma, IIT Patna | IIT Patna |  |
| 35 17 | Maj Dr C S Sanghi | LDCE, Albad |  |
| 36 18 | Prof. Susmita Mishra | NIT, Rourkela | S. Mishra |

↳ Travel as spouse of Mr. Manoj Mishra.

Attendance for Discipline-wise Annual Convention
(Civil Engineering)

| SI No | Name & Designation | Name of the College | Signature |
|---------|--|--------------------------------------|---|
| 37 1 | Prof. Anupam Singh Head, Civil Engg. | BITS Pilani |  |
| 38 2 | Prof. Arpita Chatterjee HOD, Civil Engg. | Toront Engineering College |  |
| 39 3 | Prof. Mahesh V. Ghosh Head, Applied Mechanics, (Associate Prof) | Shankar Shah Engg. College Dharmadam | ? |
| 40 4 | Pradip Sarkar, Professor, CE National Institute of Tech. Rourkela | NIT Rourkela |  |
| 41 5 | Prof. J. A. Amin | GTU, Ahmedabad |  |
| 42 6 | Dr. Neelam Kani, Assistant Professor, NIT Jalandhar | NIT Jalandhar |  |

| SI No | Name & Designation | Name of the College | Signature |
|------------------|--|---|---|
| 43 ⁷ | Prof Praveen Kumar, Head, CED, IITR | IIT Roorkee |  |
| 44 ⁸ | K. Karthikeyan Associate Professor, | VIT Chennai |  |
| 45 ⁹ | Prof. Navleen Kaur Assoc. Dean, Thapar Institute of Engg. & Tech. Patiala Punjab | TIET Patiala |  |
| 46 ¹⁰ | Prof. K. Srinivasa Rao Dean, Engineering works Andhra University, Visakhapatnam | Andhra University College of Engineering Visakhapatnam. |  |
| 47 ¹¹ | SUSHILA SHARMA Assistant Prof. CCE, GAYA | CCE Gaya |  |
| 48 ¹² | ARAHYA DEB DEAN INFRASTRUCTURE, IIT KGP | IIT KHARAGPUR |  |

| SI No | Name & Designation | Name of the College | Signature |
|----------|--|--|--|
| 13 49 | Prof. K. Muthukumarasam BLS Chair Prof & Head | NIT TRICHY |  |
| 14 50 | Prof. S. Mandal, Prof & Head, member CED 57, SSD 22, | IIT (BANARAS HINDU UNIV.) VARANASI |  23.08.24 |
| 15 51 | Prof. R. K. Panigrahi, Civil Dept, VSSUT, Bena | VSSUT, Bena Odisha |  23/8/24 |
| 16 52 | Dr. Nishant Roy, Head, National Centre for Disaster Mitigation and Management | Malaviya National Institute of Technology Jaipur (MNIT Jaipur) |  23/08/24 |
| 17 53 | Dr. P.T. Ravichandran, Prof & Head SRM IST, Chennai | SRM Institute of Science & Technology, Chennai |  23/8/24 |
| 18 54 | Dr. R. Rama Subramani, Asst. Professor SRMIST, Chennai | SRM Institute of Science and Tech - Chennai |  23/8/24 |

~~54 Naveen Kwatra (Attended)~~