Final Brief Report on Workshop held at Maulana Azad National Institute of Technology (MANIT), Bhopal on 28 November 2023

Overview:

Following the Memorandum of Understanding (MOU) between BIS and MANIT, a workshop was conducted in the Auditorium of Civil Block, MANIT, Bhopal, on November 28, 2023. The purpose of the workshop was to raise awareness among the Director, Deans, and faculty about the standardization framework of BIS. Additionally, the event aimed to share insights into the provisions of Research & Development, contributing to the advancement of the research and sustainability landscape of the country.

Around 100 participants, including Director (MANIT), Deans (MANIT), professors, faculty and scholars of MANIT attended this workshop.

BIS Team:

The leadership of this workshop was entrusted to a team composed of Sh P S Mandal, Head (BPBO), Smt Shalu Varshney, Scientist D (Nodal Officer for MANIT), Sh Tushar Sharma (Scientist D), Sh Devansh Deolkar (Scientist D), Sh Phalendra Kumar (Scientist C), Sh Vipin Bhaskar (Scientist C), Sh Sridhar Pandhey, Standard Project Officer (Bhopal), and Ms. Maryada, Standard Project Officer (Bhopal).

Inaugural Session:

Sh Pramod Kumar Tiwari, Director General (DG, BIS), kindly agreed to inaugurate this event through video conferencing, in the presence of Dr. Karunesh Kumar Shukla, Director (MANIT). The occasion provided a platform for discussing the alignment of academic excellence with industry standards, focusing on various emerging areas within various verticals of Engineering science.

During his introductory remarks, the Director General (DG, BIS) underscored the significance of standardization and recognized the crucial role that academic institutions play in fostering innovation and maintaining elevated standards. He emphasized upon the importance of collaboration with academic institutions, pointing out the potential benefits of this partnership in formulating and implementing Indian Standards for the advancement of the country. During the workshop he emphasized the significance in sensitizing faculty and students to Standards and Standardization activities. He also highlighted its importance in developing a roadmap for R&D projects related to standards formulation and designing a curriculum that incorporates Indian Standards.

During the keynote address, Dr. Karunesh Kumar Shukla, Director (MANIT), conveyed appreciation for the collaboration and pledged support, including providing access to state-of-the-art laboratories for research and development. As a Civil Engineering professional, he eloquently underscored the importance of integrating Indian Standards right from the inception of the engineering curriculum. He also hinted at the MANIT's consideration of introducing a course related to standardization in the common curriculum.

Throughout the event, participants gained insight into the overview of BIS, including its core activities and the national and international standardization ecosystem. The session featured a demonstration of the BIS website, highlighting its key features, and introduced various digital initiatives like the BIS Care App. Participants learned about accessing Indian Standards, the process of becoming a member, and how to provide comments on Indian Standards. The BIS team delivered detailed, discipline-specific presentations for their respective areas, emphasizing the Program of Work and SNAP action points. These presentations piqued the curiosity and garnered the attention of the participants.

Technical Sessions:

During the workshop, BIS identified the strengths of MANIT that can be leveraged by BIS in standardization across various engineering fields. MANIT is actively engaged in Research & Development in these areas, and their expertise presents valuable opportunities for BIS to enhance its standardization efforts.

Department of Civil Engineering

- Structural Health Monitoring (IS-1893:2016) for earthquake analysis.
- Concrete and Steel Testing
- Mixed Design
- Soil Testing facilities that include strength parameters of soil, liquid limit, plastic limit.
- Transportation Laboratory
- Environment & Survey (Geo-Informatics) for research and development works that includes filter alum testing, filter sand testing, drinking water kit testing.

Department of Mechanical Engineering

- Computer Aided Design (CAD) Laboratory.
- Material Characterisation Laboratory
- Manufacturing Laboratory
- Metrology and Measurement Laboratory
- Nano Composite Laboratory
- Nano Lubricants Research Laboratory
- Additive Manufacturing Laboratory

Department of Chemical Engineering

- Chemical Analysis of TMT Bar.
- Chemical Analysis of Cement
- Chemical Analysis of Concrete Mixture
- Chemical Analysis of Brick and Thermal Conductivity
- Chemical Analysis of Soil

Department of Materials & Metallurgical Engineering

- Universal Testing Machine

- Hardness Testing
- Impact Testing
- Wear Testing
- X Ray Diffraction
- Scanning Electron Microscope
- Optical Microscope

Department of Electronics & Communication Engineering

- 5G Laboratory (IOT and communication)
- Antenna Testing (SEKO)
- VLSI Cadence Testing
- OptiWave Software for Optical Communication
- MATLAB software for image processing and signal processing
- Projects related to above testing facilities that include signal processing, communication, IOT, 5G, drone technology.

Conclusion:

The prospective incorporation of a course focused on Standardization into the curriculum seamlessly aligns with the strengths of the institution. This standardization initiative can creates avenues for students to interact with different stakeholders, domain experts in industry across diverse engineering fields, enriching their academic experience with a practical understanding of applications.

In summary, the Sensitization Programme at MANIT, in partnership with BIS, underscores the institution's strengths in crucial research areas. The event stands as evidence of MANIT's dedication to fostering innovation and academic excellence.