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BUREAU OF INDIAN STANDARDS

(New Delhi)

Minutes

Smart Textiles Sectional Committee, TXD 41

1st Meeting

Date	Time	Venue
25 November, 2024 (Monday)	12:00 h	Video Conference through CISCO Webex

ATTENDEES:

1.	Prof Bhanu Nandan (Chairperson)	Indian Institute of Technology Delhi, New Delhi
2.	Smt Deepali Plawat	Ahmedabad Textile Industries Research Association, Ahmedabad
3.	Dr. Nandan Kumar	High Performance Textiles Private Limited, Panipat
4.	Dr. Sarang Prakash Gumfekar	Indian Institute of Technology Ropar, Punjab
5.	Dr Anup Rakshit	Indian Technical Textiles Association, Mumbai
6.	Shri Amit Jain	Shingora Textiles Private Limited, Ludhiana
7.	Shri Abhishek Kumar	-do-
8.	Dr. A. N. Desai	SITRA Council, Coimbatore
9.	Shri Pawan Kumar Gupta	Star Safety Hub, Faridabad
10.	Shri Naveen Gupta	-do-
11.	Smt Smita A. Baride	The Bombay Textile Research Association, Mumbai
12.	Smt Shreyasi Nandy	-do-
13.	Shri Shishir Tyagi	Wool Research Association, Thane
14.	Dr. Mrinal Choudhari	-do-

BIS DIRECTORATE GENERAL:

15.	Shri J. K. Gupta	Scientist E & Head Textiles
16.	Shri Gourav Mishra	Scientist-B/Assistant Director (Textiles) & Member Secretary TXD 41
17.	Ms. Shelly Sirohi	Executive Assistant (Textiles)

Item 0 WELCOME & INTRODUCTORY REMARKS

0.1 Shri J K Gupta, HTXD, extended a hearty welcome to the chairperson and all the members present in the meeting. He requested members to contribute for the development of standards on new subjects at ISO, submit comments on ballots received via the IRD portal and actively participate in international activities. Further, he informed the members that for smart textiles we might need expertise from multiple domains—textiles, electronics, and even biology and there might be overlap with the traditional textiles. From the Standardization aspects in smart textiles we need to address performance benchmarks for durability, washability, safety guidelines for material toxicity, testing methods for evaluating functionality under real-world conditions.

0.2 Prof. Bhanu Nandan, Chairperson TXD 41, welcomed all the attendees present in the meeting and expressed his gratitude for entrusting him with the responsibility of chairing the smart textiles committee. He highlighted the important subjects in the field of smart textiles that can be taken up for the standardization and also emphasize the synergic role of academia, R&D organizations and industry in developing the standards for smart textiles.

0.3 Member Secretary also extended a hearty welcome to chairperson, Shri J. K. Gupta, HTXD and all attendees present in the meeting.

Item 1 BACKGROUND FOR COMMITTEE CONSTITUTION

Committee NOTED the brief overview of the committee constitution for the smart textiles sectional committee.

Item 2 SCOPE AND COMPOSITION OF TXD 41

The committee reviewed the present composition of TXD 41 as given in Annex 1 to the agenda and decided as under:

- a) To recommend to Textile Division Council (TXDC), the co-option of the following organization in the TXD 41 sectional committee:
 - i) National Test House, nominations for principal and alternate members shall be sought from the organization.
 - ii) NIT, Jalandhar, nominations for principal and alternate members shall be sought from the organization.
 - iii) National Physical Laboratory, New Delhi, Shri Sanjya R. Dhakate will represent as Principal Member and Shri Suraj Parkash Khanna will represent as Alternate Member.
 - iv) M/s Tynor Orthotics, Mohali, nominations for principal and alternate members shall be sought from the organization.
 - v) M/s Kandui Industries, Mumbai, nominations for principal and alternate members shall be sought from the organization.
 - vi) IIT Roorkee, nominations for principal and alternate members shall be sought from the organization.

Item 3 INTERNATIONAL STANDARDIZATION ACTIVITIES

3.1 The committee considered the list of new standards published by **ISO/ TC 38/WG/32** in the field of Smart textiles as given under item **3.2** to the Agenda along with relevant extract of new standards published as placed during the meeting and after detailed deliberations, recommended as follows:

ISO standard	Usefulness/Relevance
ISO/TR 23383:2020 Textiles and textile products — Smart (Intelligent) textiles— Definitions, categorisation, applications and standardization needs	The standard is significant as it establishes an extensive framework for smart textiles, explicitly outlining various application areas and addressing challenges associated with standardizing smart textile products. In Indian context, it will serve as a guiding document to facilitate interdisciplinary collaboration among experts from various disciplines working on smart textiles. Additionally, it will contribute to harmonizing efforts in this field with ongoing standardization work in smart textiles within international organizations.
ISO 24584:2022 Textiles — Smart textiles — Test method for sheet resistance of conductive textiles using non-contact type	The standard specifies a non-destructive method for measuring the sheet resistance of conductive textiles and even scope covers the bulky, uneven surface, and coated textiles. It will be beneficial in the Indian context, as it will be widely applicable to evaluate the performance of conductive textiles in various applications such as energy storage, anti-shock clothing, EMI shielding etc. Additionally, this standard will establish a consistent testing procedure across various industries and testing organisations, ensuring that test results are both comparable and credible.

Also, the committee recommended the adoption of the aforementioned ISO standards after the approval of the competent authority, BIS, as Indian standards under the dual numbering system. Further, the committee decided that after the approval of CA, BIS shall prepare a draft Indian Standard for the same and shall be issued under wide circulation for a period of two months to elicit technical comments. BIS may carry out the editorial changes in the draft if required.

Item 4 COMMENCEMENT OF ISO BALLOTS RECEIVED UNDER TXD 41

4.1 The committee considered the draft ISO ballot ISO/DIS 17971 received under Smart textiles as given in **Annex 4** to the agenda. After detailed deliberations, committee designated it as a high priority subject for smart textiles and decided to nominate Prof. Bhanu Nandan as an expert for the above subject. The committee further requested all members to share their inputs/comments on the ISO ballot through IRD portal.

Item 5 DATE AND PLACE OF NEXT MEETING

5.1 The Committee **DECIDED** to hold the next meeting of TXD 41 in consultation with the Chairperson after all the actions are completed. The date and place of the meeting would be finalized in consultation with the Chairperson, TXD 41, in due course.

Item 6 ANY OTHER BUSINESS

6.1 There being no other business, the meeting ended with a hearty vote of thanks to the Chairperson.