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BUREAU OF INDIAN STANDARDS
(NEW DELHI)

MINUTES

Geosynthetics Sectional Committee, 32nd Meeting
TXD 30

Date/Day	Time	Venue
13 November, 2024 (Wednesday)	1100 h	Through Video Conferencing

ATTENDEES:

Sl No.	Attendees	Organization
1.	Dr. Amit Prashant **(In Chair)**	Indian Institute of Technology, Gandhinagar
2.	Smt. Deepali Plawat	Ahmedabad Textile Industries Research Association, Ahmedabad
3.	Prof. K. Rajagopal	Andhra University, Visakhapatnam
4.	Shri Satish Naik	Best Geotechnique Pvt. Ltd., Mumbai
5.	Dr. P.S. Prasad	Central Road Research Institute, New Delhi
6.	Dr. Shanmugasundaram O. L.	Central Coir Research Institute, Alappuzha
7.	Smt. Sumy Sebastian	-do-
8.	Dr. R. Chitra	Central Soil and Materials Research Station, New Delhi
9.	Dr. Manish Gupta	-do-
10.	Shri Somesh Kumar	Central Water Commission, New Delhi
11.	Shri C. R. Devaraj	Green Tex Global, Alappuzha
12.	Shri C. D. Athul Raj	-do-
13.	Prof. (Dr.) Swapan Ghosh	Department of Jute and Fibre Technology, University of Kolkata, Kolkata
14.	Dr. Shirish Kumar Vhanbatte	DKTE Centre of Excellence in Nonwovens, Ichalkaranji
15.	Shri N. N. Shankar	Ganga Flood Control Commission, Patna
16.	Shri Rajendra Ghadge	Garware Technical Fibers Ltd., Pune
17.	Shri Ravikant Sharma	Geosynthetics Testing Services Pvt Ltd, Ahmedabad
18.	Prof. Dalli Naidu Arnepalli	Indian Institute of Technology, Madras
19.	Shri Samir Kumar Chandra	Indian Jute Mills Association, Kolkata

20.	Dr. Anup Rakshit	Indian Technical Textiles Association, Mumbai
21.	Prof. G. L. Sivakumar Babu	International Geosynthetics Society, India Chapter, New Delhi
22.	Smt. Dola Roychowdhury	-do-
23.	Shri V. N. Gore	In Personal Capacity
24.	Shri Pradip Kumar Choudhury	In Personal Capacity
25.	Smt. Soumita Chowdhury	Indian Jute Industries Research Association, Kolkata
26.	Dr. Ratnakar Mahajan	Maccaferri Environmental Solutions Pvt Ltd, Navi Mumbai
27.	Shri Soumyadipta Datta	Office of The Jute Commissioner, Kolkata
28.	Shri Amitabh Goenka	Premier Polyfilm Ltd., Ghaziabad
29.	Shri Praveen Kumar	-do-
30.	Dr. K. Balan	Rajadhani Institute of Engineering & Technology, Trivandrum
31.	Shri Vinod Kumar	Reliance Industries Ltd, Mumbai
32.	Shri Chetan Patil	-do-
33.	Shri Ashish Mohan	RMG Polyvinyl India Pvt. Ltd., Ghaziabad
34.	Shri Venkata Mayur	Sahastra Engineers Pvt Ltd, Noida
35.	Shri Shahrokh Bagli	Strata Geosystems (I) Pvt Ltd, Mumbai
36.	Shri Suraj Vedpathak	-do-
37.	Shri Saurabh Vyas	Techfab India, Mumbai
38.	Dr. Manisha Mathur	The Synthetics & Art Silk Mills Research, Association, Mumbai
39.	Dr. Prasanta K. Panda	The Bombay Textile Research Association, Mumbai
BIS DIRECTORATE GENERAL:		
40.	Shri J. K. Gupta (Head, Textiles)	Bureau of Indian Standards, New Delhi
41.	Shri Himanshu Shukla (Scientist B & Member Secretary)	-do-
42.	Shri Abhishek Gupta (Executive Assistant)	-do-

ITEM 0 WELCOME AND INTRODUCTORY REMARK BY THE CHAIRMAN

0.1 Member Secretary informed to the committee that Dr. A. N. Desai, Chairperson, TXD 30, was unable to attend the meeting due to his health issues. In his absence, Member Secretary requested the committee to elect a member to chair the meeting. The committee unanimously elected Dr. Amit Prashant, IIT Gandhinagar to act as Chairperson for the meeting and lead the proceedings.

0.2 Shri J K Gupta, HTXD, extended a hearty welcome to Dr. Amit Prashant, In Chair, all the members and invitees present in the meeting and expressed his appreciation for the active involvement of the members in the committee works. 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.

0.3 Dr. Amit Prashant (In Chair) welcomed all the attendees present in the meeting and expressed his gratitude for entrusting him with the responsibility of chairing the meeting. He highlighted the important subjects with the committee and requested the members to complete the assigned task in a time bound manner as the meetings of TXD 30 are now being convened frequently.

0.4 Member Secretary also extended a hearty welcome to the Dr. Amit Prashant (In Chair), Shri J. K. Gupta, HTXD and all attendees present in the meeting.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE PREVIOUS MEETING

In view of no comments received, the committee confirmed the minutes of the 31st meeting of TXD 30 held on 09 August, 2024 circulated vide letter No. TXD 30/A2.31 dated 31 August 2024.

ITEM 2 COMPOSITION AND SCOPE OF TXD 30

2.1 The committee reviewed the present scope and composition of TXD 30 as given in **Annex 1** to the agenda and decided as under :

a) Shri S. K. Chandra and Shri Bhudipta Saha shall represent Indian Jute Mills Association, Kolkata as principal member and alternate member respectively.
b) Shri C. R. Devaraj informed that his company name has changed from 'Charankattu Coir Mfg. Co. (P) Ltd, Kerala' to 'Green Tex Global, Alappuzha, Kerala'. Shri C. R. Devaraj and Shri Athul Raj shall represent as principal member and alternate member respectively.

2.2 The committee considered the co-option requests received from Dr. Anand Hulagabali, Terre Armee India Pvt. Ltd., New Delhi, Dr. Deepak Manjunath, Terre Armee India Pvt. Ltd., New Delhi and M/s Shahi Garg, Ventara Hi-Tech fabric as given in **Annex 2** to the Agenda.

After deliberations the committee did not agree to the co-option requests of above-mentioned organizations on TXD 30 in view of having sufficient representation from Industries and emphasized on keeping industry representations not more than one third of total composition in order to safeguard consumer interests and maintain a balanced committee composition. However, the committee decided to include the above industries in the BIS mailing list for circulation of draft documents for their comments.

ITEM 3 ISSUES ARISING OUT OF THE PREVIOUS MEETINGS OF TXD 30

3.1 The committee noted the summary of actions taken on the decisions arrived at during 31st meeting of TXD 30 as given in **Annex 3** to the agenda.

ITEM 4 DRAFT STANDARDS FOR FINALIZATION

4.1 The committee considered the wide circulation draft on 'Textiles — Coir Non-Woven Stitched Composite Geotextiles for Erosion Control Applications — Specification [Doc. No. TXD 30 (25914)]' as given in **Annex 4** to the Agenda along with the comments received from Shri Pradip Kumar Choudhary, In Personal Capacity as given in **Annex 5** to the Agenda.

After detailed deliberations, the committee decided to rewrite the clause B-2.1 as follows:

'B- 2.1 The stages of laying of coir non-woven stitched composite geotextiles on slopes for rain water or surface wind erosion control are as under.'

The committee further decided that the above draft standard is held to have been FINALIZED for publication as Indian Standard after incorporating the above-mentioned change. BIS may carry out the editorial changes in the draft, if required.

4.2 The committee scrutinized the following draft standards as issued in wide circulation for two months for eliciting technical comments from stake holders, as given in Annex 6 to the Agenda:

i) Geotextiles and geotextile — related products - Strength of internal structural junctions (Part 2) : Geo-composites (first revision) [Doc. No. TXD 30 (26515)].
ii) Guidelines for the determination of the long-term strength of geosynthetics for soil reinforcement (first revision) [Doc. No. TXD 30 (26517)].
iii) Geotextiles and geotextile-related products — Screening test methods for determining the resistance to acid and alkaline liquids (first revision) [Doc. No. TXD 30 (26519)].
iv) Geotextiles and geotextile-related products — Determination of water flow capacity in their plane — Part 1: Index test (first revision) [Doc. No. TXD 30 (26520)].
v) Geotextiles and Geotextile-related Products — Determination of Water Flow Capacity in their Plane Part 2: Performance Test (first revision) [Doc. No. TXD 30 (26521)].

After deliberation, the committee decided that, in view of no comments received above wide circulation drafts are held to have been finalized for publication as Indian Standards under identical dual numbering system. BIS may carry out the editorial changes in the drafts, if required.

ITEM 5 COMMENTS ON INDIAN STADNARDS

5.1 Comments on IS 17373 : 2020 'Geosynthetics — Geogrids Used in Reinforced Soil Retaining Structures — Specification'

The committee considered the comments received from Shri Soumendra Banerjee, Terre Armee, New Delhi on IS 17373 : 2020 'Geosynthetics — Geogrids Used in Reinforced Soil Retaining Structures — Specification' as given in Annex 7 to the Agenda.

After deliberation the committee decided to issue an amendment to IS 17373 : 2020 'Geosynthetics — Geogrids Used in Reinforced Soil Retaining Structures — Specification' incorporating the following changes:

(Page 2, clause 4, *see also* Amendment No. 2) — Substitute the following for existing:

'**4 TYPES OF GEOGRIDS**

Geogrids shall be of the following three types based on the tensile strength and aperture size:

a) Type 1 — Polyester knitted or woven geogrids having tensile strength in machine direction from 60 kN/m to 400 kN/m with aperture size in machine direction and cross machine direction from 10 mm to 50 mm.
b) Type 2 — Polyester bonded geogrids having tensile strength in machine direction from 30 kN/m to 300 kN/m with aperture size in machine direction from 50 mm to 1000 mm and cross machine direction from 10 mm to 300 mm.
c) Type 3 — Polyester bonded geogrids having tensile strength in machine direction from 300 kN/m to 1600 kN/m with aperture size in machine direction from 50 mm to 1000 mm and cross machine direction from 50 mm to 500 mm.

(Page 4, Table 2) — Substitute the following for existing:

Table 2 Requirements of Uniaxial Polyester Geogrids (Type 2, Bonded)

(*Clause* 6.2)

Sl No	Characteristic	Requirements																Method of Test, Ref to
		30/5	40/5	50/5	60/5	70/5	80/5	90/5	100/5	120/5	130/5	140/5	150/5	175/5	200/5	250/5	300/5	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(17)
i	Ultimate tensile strength, kN/m, *Min* (*See* Note 2)																	IS 16635
	a) MD	≥30	≥40	≥50	≥60	≥70	≥80	≥90	≥100	≥120	≥130	≥140	≥150	≥175	≥200	≥250	≥300	
	b) CD	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	≥5	
ii	Elongation at designated load, percent	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	IS 16635
iii	UV resistance, strength retained after 500 h exposure, percent	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 13162 (Part 2)
iv	Chemical resistance, strength retained after 72 h	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 17363

	immersion, percent																	
v	Width, m	1 to 6 (tolerance ± 10 mm)																-
vi	Roll length, m	25 to 200 (tolerance + 1 m with no negative tolerance)																-

MD : Machine Direction, CD: Cross Direction

NOTES

1) For weathering and chemical degradation having a range of products identical except for mass per area, it is sufficient to subject only the product with the lowest mass per area to the test. The result of the test may be applied for the other products in the range, unless they have been tested separately.

2) Geogrids with intermediate ultimate tensile strength in machine direction other than those specified above may also be manufactured, provided they conform to all the requirements specified in this table.

(Page 5, Table 3) — Substitute the following for existing:

'Table 3 Requirements of Uniaxial Polyester Geogrids (Type 3, Bonded)

(*Clause* 6.2)

Sl No.	**Characteristic**	**Requirements**															**Method of Test, Ref to**
		300	**350**	**400**	**500**	**600**	**700**	**800**	**900**	**1000**	**1100**	**1200**	**1300**	**1400**	**1500**	**1600**	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(20)
i)	Ultimate tensile strength (kN/m), *Min* (*See* Notes 2 and 3) a) MD b) CD	 300 1	 350 1	 400 1	 500 1	 600 1	 700 1	 800 1	 900 1	 1000 1	 1100 1	 1200 1	 1300 1	 1400 1	 1500 1	 1600 1	IS 16635
ii)	Elongation at designed load in MD and CD, *percent*	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	≤12	IS 16635
iii)	UV resistance, strength retained after 500 h exposure, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 13162 (Part 2)
iv)	Chemical resistance, strength retained after 72 h immersion, *percent*	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	≥70	IS 17363
v)	Width, m	1 to 6 (Tolerance ± 10 mm)															
vi)	Roll length, m	25 to 200 (Tolerance +1 m with no negative tolerance)															

MD : Machine Direction, CD: Cross Direction

NOTES

1) For weathering and chemical degradation having a range of products identical except for mass per area, it is sufficient to subject only the product with the lowest mass per area to the test. The result of the test may be applied for the other products in the range, unless they have been tested separately.

2) Geogrids with intermediate ultimate tensile strength in machine direction other than those specified above may also be manufactured, provided they conform to all the requirements specified in this table.

3) If required by the buyer, geogrids with ultimate tensile strength ≥ 5 kN/m in the cross-machine direction may also be supplied.

The committee further decided that as the matter is urgent and non-controversial, the wide circulation of the above amendment shall be waived off under Rule 22 (4) of BIS Rules 2018 notified vide GSR 584 (E) dated 25 June 2018; and draft amendment be held to have been FINALIZED for publication. BIS may carry out the editorial changes in the draft amendment if required.

5.2 Comments on IS 15909 : 2020 'PVC Geomembranes for Lining — Specification'

The committee considered the comments received Shri Ashish Mohan, RMG Polyvinyl India Limited on IS 15909 : 2020 'PVC Geomembranes for Lining — Specification' as given in Annex 8 to the Agenda.

After deliberation the committee decided as follows:

a) To delete clause 1.2.
b) To rewrite the clause 3.2 as follows:

'3.2 Category B — PVC waterproofing membrane for unexposed applicable shall be made from virgin raw material and shall have a smooth surface. Water soluble compounding ingredient shall not be used. Plasticizers that are resistant to migration and bacterial growth shall be used. The membrane shall be manufactured in twin colour with white signal layer (top layer) to allow visual check of the condition of membrane in case of any damage during the installation. The bottom part of the membrane shall preferably be in light orange colour and shall consist multiple layers (minimum 3 layers) which shall laminated together by heat fusion technology. Any dark colour like black, blue, grey and brown etc. shall not be used for manufacturing of bottom layers so as to avoid use of recycled material.'

c) To include the following requirements for PVC geomembrane; Category B in Table 2:

Sl No.	**Property**	**Requirements**			**Method of Test, Ref to**
		Type VI	Type VII	Type VIII	
i)	Construction of membrane (a) Signal layer thickness, mm (b) Number of layers in the bottom part of membrane, *Min*	0.20 ± 0.02 03			Relevant annexures on test methods, as given under Agenda item 6.2, shall be incorporated into the revision draft in consultation with Premier Polyfilm Ltd., Ghaziabad.
ii)	Peel Strength for each set of layers, N/50 mm, *Min*	100			

d) To incorporate the following durability tests for 100 years life expectancy for PVC geomembrane; Category B in Table 2A as type test:

Sl No.	Property	Requirements			Method of Test, Ref to
		Type VI	Type VII	Type VIII	
i)	Method of accelerated ageing under permanent exposure to elevated temperatures (70 days at 80°C in hot air oven)	Reduction in tensile strength and elongation at break ≤ 20 percent			Relevant annexures on test methods, as given under Agenda item 6.2, shall be incorporated into the revision draft in consultation with Premier Polyfilm Ltd., Ghaziabad.
ii)	Foldability at low temperatures	No cracks at – 20 °C			
iii)	Oxidation resistance (90 days at 85°C in a hot air oven)	Reduction in tensile strength and elongation at break ≤ 20 percent			
iv)	Behaviour after immersion in aqueous solutions of Ca $(OH)_2$ saturated limewash) for 360days at 50°C	Reduction in tensile strength & elongation at break ≤ 25 percent Reduction in impact load (drop height)≤ 40 percent Mass change ≤ 7 percent			
v)	Behaviour after immersion in aqueous solutions (0.5% sulphuric acid) (360days at 50 °C)	Reduction in tensile strength & elongation at break ≤ 25 percent Reduction in impact load (drop height)≤ 40 percent Mass change ≤ 7 percent			
vi)	Behaviour after immersion in hot water (360 days at 70 °C)	Reduction in tensile strength & elongation at break ≤ 25 percent Mass change ≤ 7 percent Reduction in impact load (drop height) ≤ 40 percent Dimensional change ≤ 5 percent			
vii)	Microbiological resistance	Reduction in tensile strength & elongation at break ≤ 25 percent Mass change ≤ 10 percent			Test method shall be incorporated as Annexure to IS referring to EN 12225 'Geosynthetics — Method for determining the microbiological resistance by a soil burial test'.

The Committee further decided that BIS shall prepare the draft revision in consultation with Premier Polyfilm Ltd., Ghaziabad, incorporating the above-mentioned changes and the draft shall be issued in wide circulation eliciting the technical comments from stakeholders for one month time period. BIS may carry out the editorial changes in the draft, if required.

5.3 Comments on IS 18591 : 2024 'Geosynthetics Reinforced Soil Structures — Code of Practice'

The committee considered the comments received from Shri Aanand Jain, Green Infrastructures Systems Pvt. Ltd., Mumbai on IS 18591 : 2024 'Geosynthetics Reinforced Soil Structures — Code of Practice' as given in Annex 9 to the Agenda.

After deliberation, the members informed that the issue of panel thickness had been extensively discussed during the panel meetings held for the preparation of the draft of IS 18591 : 2024.

The panel considered that, with the increasing use of multiple systems for panel connections and the construction of taller structures in India, particularly in Road Over Bridge (ROB) projects, where wall heights can range from 12 to 18 meters depending on ground and road levels. These factors necessitate the consideration of higher stresses on the reinforcement-panel connection. It was also noted that while developed countries often use panels with a thickness of 140 mm, these are typically produced in controlled environments such as pre-casting factories. In contrast, in India, segmental panels are generally cast on-site, where quality control is less stringent.

These factors were adequately considered in the determination of the panel thickness. During the preparation of draft, the panel also referred to national guidelines such as MOR&TH, Section 3100, Clause 3105.1, which specifies a minimum panel thickness of 180 mm, including facing textures, logos, and embellishments.

After detailed discussion, the panel responsible for the formulation of IS 18591 : 2024 concluded that a minimum thickness of 160 mm, excluding architectural finishes, is considered suitable to ensure the safety of reinforcement-panel connections, withstand significant shear forces and maintain the overall stability of the structure.

Therefore, after considering the above factors the committee decided that the panel thickness of 160 mm shall remain unchanged.

5.4 Comments on IS 16391 : 2015, 'Geosynthetics — Geotextiles Used in Sub-Grade Separation in Pavement Structures — Specification,' and IS 16392:2015, 'Geosynthetics — Geotextiles for Permanent Erosion Control in Hard Armor Systems — Specification.'

The committee considered the query received from Shri Vijendar Rao, Maccaferri Environmental Solutions Pvt. Ltd. related to IS 16391 : 2015, 'Geosynthetics — Geotextiles Used in Sub-Grade Separation in Pavement Structures — Specification,' and IS 16392 : 2015, 'Geosynthetics — Geotextiles for Permanent Erosion Control in Hard Armor Systems — Specification' as given in Annex 10 to the Agenda. The committee also examined the test reports submitted by Maccaferri Environmental Solutions Pvt. Ltd. for flame retardancy (FR) properties,

blowing sand abrasion strength, chemical resistance (resistance to diesel fuel and de-icing fluids) as given in Annex 10 to the Agenda and as placed during the meeting.

During the meeting, committee evaluated the application of non-woven geotextile in *defencell*, wherein non-woven geotextiles are used to line welded mesh boxes which are used to act as barricades/defensive barriers against potential threats of blast, fire and hostile vehicle intrusion. The committee also noted that the geotextiles used in *defencell* are chemically treated and demonstrates fire-retardant properties.

After detailed deliberations, the committee concluded the followings:

a) Geotextiles used in *defencell* does not fall under the scope of IS 16391 : 2015, 'Geosynthetics — Geotextiles Used in Sub-Grade Separation in Pavement Structures — Specification,' and IS 16392:2015, 'Geosynthetics — Geotextiles for Permanent Erosion Control in Hard Armor Systems — Specification.'
b) The committee clarified that the term hard armor systems used in IS 16392:2015 pertains to erosion control solutions used in civil engineering applications at hydraulic, river or coastal structures, such as stones or tetrapods and not relevant to applications like *defencell*.

ITEM 6 REVIEW OF STANDARDS

6.1 The committee considered the comments received from Dr. Ratnakar Mahajan, Maccaferri Environmental Solutions Private Limited, Gurugram, Shri Rajendra Ghadge, Garware Technical Fibers, Pune and Shri V. N. Gore, In personal capacity, Smt. Soumita Chowdhury, IJIRA, Kolkata, Shri Sauabh Vyas, Techfab India Pvt. Ltd., Mumbai on IS 16090 : 2013 'Geotextiles Used as Protection (or Cushioning) Material' during the circulation period.

After deliberation the committee decided as follows:

a) To delete clause 1.5 and include a reference to the existing guidelines for the installation and construction of geotextiles.;
b) To specify dissolution method (i.e. IS 667) for testing the weight of polymers (polypropylene, polyethylene or polyesters) used for manufacturing geotextiles;
c) To rewrite the clause 4.3 as follows:

'Polyolefin material shall be UV stabilized by adding suitable UV stabilizer and/or carbon black. Polyolefin material, if manufactured by using carbon black shall contain 2 to 3 percent of carbon black by mass with satisfactory dispersion. Only virgin polymers shall be used in the manufacturing of geotextiles, recycled polymers shall not be used in the manufacturing of geotextiles. In case of polyester geotextiles, the isophthalic acid content of the virgin polyester shall be nil when tested according to the method prescribed in Annex B. Woven slit film geotextiles (that is, geotextiles made from yarns of a flat, tape-like character) shall not be used.'

d) To specify the roll length as '50 or 100 or as agreed' and roll width as '2.0 or 5.0 or as agreed';

e) To specify the elongation at break 50 percent minimum;
f) To modify the marking and labelling and packaging and sampling requirements in line with the current practices;
g) To modify the clause on 'Identification, delivery, storage and handling' in line with the latest practices;
h) To give due consideration to 'GT 12 (b) : 2017 Standard for Test methods and properties for non-woven geo-textiles used as protection (or cushioning) materials (*Revision* 2)' while preparation of draft revision.

The committee further decided that BIS shall prepare the draft revision of IS 16090 'Geotextiles Used as Protection (or Cushioning) Material' incorporating the aforementioned changes and in consultation with Dr. Ratnakar Mahajan, Maccaferri Environmental Solutions Private Limited and Shri Sauabh Vyas, Techfab India Pvt. Ltd., Mumbai. The revised draft as prepared shall be issued in wide circulation for two months time period eliciting the technical comments from stakeholders. BIS may carry out the editorial changes in the draft, if required.

ITEM 7 INTERNATIONAL ACTIVITIES

7.1 The committee noted that the agenda and meeting documents of next meeting of ISO/TC 221 'Geosynthetics' and ISO TC/221/WG 6 'Design Using Geosynthetics' scheduled to be held on 19th November 2024 in hybrid mode.

After deliberation, the committee decided as follows:

a) For the document on ISO DTR 18228-5 'Design using Geosynthetics : Part 5 Stabilization', the committee noted that the current document poses challenges for stabilization due to its non-applicability to all geosynthetics and reliance on AASHTO's structural number, which has been replaced by strain-based methods in many regions across the world, and decided to present India's stance on this in the upcoming meeting.
b) Committee noted that ISO TC 221 is working in the area of sustainability and considering the importance of sustainability in geosynthetics for promoting environmentally responsible and economically viable infrastructure development, the committee emphasized on active participation in the ongoing work of this committee.

7.2 The committee considered the new work item proposal, ISO/NP TS 25332 'Geosynthetic Cementitious Mats (GCCMs) and Barriers (GCCBs)' received from ISO TC 221 'Geosynthetics' and experts nominated from India on ISO/NP TS 25332. After discussion, the committee noted the similar subject has also been undertaken in TXD 30. Considering the importance of subject, the committee urged the nominated experts to actively participate during the development of the document.

7.3 A demonstration of newly developed IRD portal was given by the member secretary highlighting the key features, including modules for accessing ballots, submitting comments, managing member roles, and accessing meeting details. Members were encouraged to utilize this portal for ISO-related activities and actively contribute their inputs on ballots circulated through the IRD portal.

ITEM 8 ANY OTHER BUSINESS

As there being no other business, the meeting ended with a hearty vote of thanks to and from the chair.