BUREAU OF INDIAN STANDARDS

AGENDA

Cement and Concrete Sectional Committee, CED 2 : Fortieth Meeting

Thursday, 12 December 2024 : 1400 hrs to 17:30 hrs

Hybrid Meeting (from White Room, Manak Bhawan, BIS HQ, New Delhi)

Chairperson: Shri Jose Kurian **Member Secretaries:** Shri Jitendra Kumar Chaudhary & Smt Divya S.

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Meeting Link:	https://bismanak.webex.com/bismanak/j.php?MTID=m8699c2869d6d668b1121c812c81271c1
Meeting ID:	2518 142 0585
Password:	Ced@123

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ITEM 0 OPENING REMARKS

ITEM 1 CONFIRMATION OF THE MINUTES OF LAST MEETING

1.1 The Minutes of the last (thirty ninth) meeting of the Committee held on 06 September 2024 were circulated vide BIS DG letter No. CED 2/A-2.39 vide email dated 08 October 2024. No comments were received on the Minutes.

The Committee may **CONFIRM**.

ITEM 2 REVIEW OF COMPOSITION

2.1 The present composition of the Sectional Committee is given at **Annex 1 (separate PDF)**. Co-option request has been received from the following organizations for representation in the Committee.

a) Dr Aradhana Mehta, Associate Professor (Department of Civil Engineering), Chandigarh College of Engineering and Technology, Chandigarh (*detailed profile given at* **Annex 2**)
b) Dr Sahil Bansal, Associate Professor (Department of Civil Engineering), Indian Institute of Technology Delhi (*detailed profile given at* **Annex 3**)
c) Shri Suneel Kumar Arora for participating in in-personal capacity

The Committee may **CONSIDER**.

2.2 The present compositions of the subcommittees under CED 2 as listed below are detailed in **annexes (as a separate PDF**):

a) Cement, Pozzolana and Cement Additives Subcommittee, CED 2:1 A**nnex 4**
b) Concrete Subcommittee, CED 2:2 **Annex 5**

The Committee may **NOTE.**

2.3 The compositions of the following Panels working under the Sectional Committee and its subcommittees are given as per the following details:

Panel	***Reference to Composition***
Under CED 2	
a) Panel for Work relating ISO/TC 71 and ISO/TC 74, CED 2/P1	**Annex 6**
Under CED 2:1	
b) Panel for Revision of Cement Standards CED 2:1/P1	**Annex 7**
Under CED 2:2	
c) Panel for Review/Revision of IS 3370, CED 2:2/P1	**Annex 8**
d) Panel for IS 456 and IS 1343, CED 2:2/P5	**Annex 9**
e) Panel for Revision of Indian Standards on Test Methods for Concrete, CED 2:2/P7	**Annex 10**
f) Panel for Aggregates from Natural and other Sources, CED 2:2/P8	**Annex 11**
g) Panel for Ferrocement Construction, CED 2:2/P9	**Annex 12**
h) Panel for Revision for IS 2386, CED 2:2/P10	**Annex 13**

The Committee may **NOTE.**

2.4 The following Working Groups exist under CED 02 and its Subcommittees and Panels:

Revision of IS 4926, **CED 2:2/WG1**
Revision of IS 9103, **CED 2:2/WG2**
Revision of IS 10262, **CED 2:2/WG3**
Revision of IS 456:2000, WG2, WG3 & WG4 under CED 2:2/P5
Anchor fastenings, **CED 2:2/WG4**
Revision of IS 383, **CED 2:2/P8/WG1**
Guidelines for construction and detailing of liquid retaining structures, **CED 2:2/P1/WG1**

The Committee may **NOTE.**

ITEM 3 NEW WORK ITEM PROPOSAL

3.1 Determination of flow behaviour of superplasticized cement paste using Marsh cone and Mini-slump test methods

Dr. Jayasree Chakkamalayath, Chief Technology Officer, Building Materials and Construction Management Division, Department of Civil Engineering, Indian Institute of Technology Madras proposed for development of Indian Standards for determining the flow behaviour of superplasticized cement paste using Marsh Cone test and Mini-slump test. A background on the subjects are given at **Annex 14 and Annex 15 (separate PDFs)**, respectively.

As suggested, PFA, the two proposals for "Developing Indian Standard for Determining the Flow Behaviour of Superplasticized Cement Paste using (i) Marsh cone test (ii) mini-slump test.

Background
Even though different types of superplasticizers are widely used in the construction industry in India, a specific IS code for determining its dosage for different binder compositions is not available. Marsh cone and mini-slump tests are the two simple tests used to select the dosage of the superplasticizer for a particular mix in the laboratory as well as in the field. Several doctoral, post graduate theses and journal papers have been published from IIT Madras involving the studies with Marsh cone and mini slump for understanding the cement-superplasticizer interaction and to determine the saturation dosage of the superplasticizer. Considering several cases of cement-superplasticizer incompatibility issues in the field, it is important to have an IS code mentioning the test methods for Marsh cone test and mini-slump test, test conditions, regulatory requirements, and to meet the technological and material advancements related to additive manufacturing (3D printing of concrete), ultra high-performance concrete etc.

Please consider the proposal for developing suitable IS codes for both test methods.

Once it is approved, we can send the document in the required format.

The Committee may **CONSIDER** and **ADVISE.**

3.2 Specifications for Dry Mix Mortar

The specifications on dry mix mortar was considered by CED 02 in its earlier meetings held in 2018-19 and thereafter the Committee referred it to CED 2:1/P1 Panel on cement standards for its further development. The latest copy of the working draft prepared by the Working Group under the Cement Panel and headed by Shri A. K. Jain and is attached at **Annex 16**. As the draft is on mortar, it is proposed to refer it to another suitable panel under CED 02 for its development.
The Committee may **CONSIDER** and **ADVISE.**

3.3 Antimicrobial Cement Additives

In the last meeting of CED 02, a proposal had been received from Dr Barsha Dash from Institute of Minerals and Materials Technology, Bhubaneshwar to formulate an Indian Standard specification on Antimicrobial Cement Additives. The Committee considered the proposal and thereafter decided to invite the proposer in the next meeting so as to give the background and more clarity on the subject. A background on the subject is given at **Annex 17 (separate PDF)**.

The Committee may **CONSIDER** and **ADVISE.**

3.4 Proposal for a panel on corrosion of reinforcement

A proposal for development of a panel on corrosion of reinforcement has been received from Dr Shashank Bishnoi, IIT Delhi as reinforcement corrosion had led to severe premature damage to concrete structures in most of the projects leading to huge loss of property and material. This Panel may deal with 'Corrosion of reinforcement: Detection, Prevention and Repair' and could develop standards related to it.

The Committee may **CONSIDER** and **ADVISE.**

Item 4 COMMENTS RECEIVED ON PUBLISHED INDIAN STANDARDS

4.1 The following comments were received from Dr. V Ramachandra, Principal Advisor (Tech), UltraTech Cement Ltd., Mumbai.

This has reference to IS 16415 – composite cement & Its amendment no 1 Table 1 Clause 5.1 & subsequent amendment No. 6 June 2024 to IS :456 :2000 Clause 5.1.3, we would like to submit the followings:

1. To include/ amend Composite cement in table 4 of IS 456 – Requirement for concrete exposed to sulphate attack (Clause 8.2.4 &9.1.2) in appropriate place in class 1 to 5 where ever PPC & PSC is included.

2. Suggest to include PPC & composite cement in IS :457 for mass concrete in which only PSC & OPC cement is mentioned. Heat of Hydration in PPC & Composite cement is comparatively much lower than OPC which is desirable for mass concreting. Hence, composite cement should be included in mass concrete code IS:457.

Including composite cement in IS 456 with linkages in respective tables & clauses & Other IS Codes for RCC and mass concrete will provide clarity and facilitate users to use it in construction.

The Committee may **CONSIDER** and **ADVISE**.

Item 5 PROGRESS OF WORK

5.1 The list of published Indian Standards under CED 02 and work in progress is given at **Annex 18 (separate PDF)** for information.

The Committee may **NOTE**.

5.2 Ongoing revision of IS 456

In the last meeting of CED 02, the BIS Secretariat informed that few corrected chapters of IS 456 revision were not received from the Working Groups and Once all the corrections will be done, BIS will issue the Preliminary Draft of IS 456 to all members of CED 02, its Subcommittees, Panels and Working Groups for commenting along with the concerned Panel under NBC. In this regard, it is to inform that all the revised chapters had been received by BIS and the same are being included in one single draft so as to issue the draft for commenting. The P-draft will be issued by 15 December 2024.

The Committee may **NOTE**.

5.3 R&D Projects

In the last meeting of CED 02, the Committee requested BIS Secretariat to invite the Principal Investigators of the following projects in the next meeting to kindly give the progress of the project.

The following projects are under progress in CED 02:

Project Code	Project Title	Awarded to	Status	Principal Investigator	BIS Terms of Reference	Interim Project Report
CED 0128	Study of durability properties of composite cement (a type of hydraulic cement) currently being manufactured by the cement industry in India.	NIT Calicut	Project sanctioned and first installment was released in June 2024	Dr K. Jayachandran (Assistant Professor)	CED0128	The interim project report is received and given at **Annex 19 (separate PDF)**.
CED 0237	Study on physical and uniformity test requirements of chemical admixtures used in making cement concrete.	NIT Calicut	Project sanctioned and first installment was released on 27 September 2024	Dr Chandru P (Assistant Professor)	CED0237	Not yet received. Will be tabled during the meeting.

The Committee may **CONSIDER** and **ADVISE**.

Item 6 CONCRETE, REINFORCED CONCRETE AND PRESTRESSED CONCRETE, ISO/TC 71

6.1 India is P member of ISO/TC 71 'Concrete, Reinforced Concrete and Prestressed Concrete'. Cement and Concrete Sectional Committee, CED 02 is the National Mirror Committee of ISO/TC 71.

a) ISO/TC 71 comprises 96 countries as members and includes 31 as 'P' member and 62 as 'O' members.

b) Scope of ISO/TC 71: Standardization of the technology of concrete, of the design and construction of concrete, reinforced concrete and prestressed concrete structures, so as to ensure progressive development both in quality and in price reduction; and of definitions and terms, as well as testing procedures, to facilitate international exchange of research work.

c) The Secretariat of ISO/TC 71 is held by JISC, Japan.

d) Detail about ISO TC 71, its Sub-committees/Working Groups and the standards published and those under development can be checked at https://www.iso.org/committee/49898.html

The Committee may **NOTE**.

6.2 Ballots

The following ballots are received/voted on/after the last meeting of CED 02.

Sl No.	ISO/Technical Committee	Opening date of voting	ISO/IEC document number	End date of voting	Voted with comments (VC)/ Voted without comments (V)	Approval/ Disapproval/ Confirm/ Abstention, Yes, etc.	Date ballot cast
1	ISO/TC 71	2024-07-09	ISO/FDIS 16521	2024-09-03	V	Approve	2024-08-08
2	ISO/TC 71	2024-07-17	ISO/TC 71/SC 7 Chair Extension	2024-09-11	V	Yes	2024-09-09
3	ISO/TC 71	2024-08-13	ISO/DIS 22040-3	2024-11-05	V	Approval	2024-10-04
4	ISO/TC 71	2024-09-14	ISO TC 71/SC 3 Chair Nomination	2024-11-09	V	Abstention	2024-10-04
5	ISO/TC 71/SC 1	2024-04-15	ISO 1920-1:2004 (vers 4)	2024-09-02	V	Abstain	2024-06-28
6	ISO/TC 71/SC 1	2024-08-14	ISO/CD 23945-2	2024-10-09	V	Abstain	2024-10-04
7	ISO/TC 71/SC 1	2024-08-14	ISO/CD 23945-3	2024-10-09	V	Abstain	2024-10-04

8	ISO/TC 71/SC 3	2024-07-04	ISO/DIS 12439 (Ed 2)	2024-09-26	V C	Approval	2024-09-26
9	ISO/TC 71/SC 3	2024-08-17	Draft Resolution 2/2024 to re-appoint WG 1 convenor	2024-10-18	V	Yes	2024-10-04
10	ISO/TC 71/SC 3	2024-09-11	Draft Resolution 3/2024 to re-appoint WG 3 convenor	2024-10-18	V	Yes	2024-10-04
11	ISO/TC 71/SC 3	2024-09-10	ISO/DIS 22965-2 (Ed 2)	2024-12-03	V	Abstention	2024-11-26
12	ISO/TC 71/SC 3	2024-09-11	ISO/DIS 22965-1 (Ed 2)	2024-12-04	V	Abstention	2024-11-26
13	ISO/TC 71/SC 5	2024-07-29	ISO/PWI 24949	2024-10-21	V	Abstain	2024-10-04
14	ISO/TC 71/SC 5	2024-10-28	CIB for ISO/PWI 24949	2024-11-24	V	Abstain	2024-11-04
15	ISO/TC 71/SC 5	2024-09-08	ISO/PWI 22556.2.3	2024-12-01	V	Approve	2024-11-27
16	ISO/TC 71/SC 5	2024-07-15	ISO 18408:2019	2024-12-02	V	Confirm	2024-11-26
17	ISO/TC 71/SC 6	2024-09-02	Call for Nomination of SC6 WG2 Convenor	2024-11-01	V	No	2024-10-04
18	ISO/TC 71/SC 6	2024-09-16	ISO/CD 10406-1	2024-11-11	V	Abstain	2024-10-04
19	ISO/TC 71/SC 6	2024-09-16	ISO/CD 10406-2	2024-11-11	V	Abstain	2024-10-04
20	ISO/TC 71/SC 6	2024-09-16	ISO/CD 10406-4	2024-11-11	V	Abstain	2024-10-04
21	ISO/TC 71/SC 6	2024-09-16	ISO/CD 18319-1	2024-11-11	V	Abstain	2024-10-04
22	ISO/TC 71/SC 6	2024-07-15	ISO 10406-3:2019	2024-12-02	V	Abstain	2024-11-26
23	ISO/TC 71/SC 6	2024-07-15	ISO 21914:2019	2024-12-02	V	Abstain	2024-11-26
24	ISO/TC 71/SC 7	2024-09-05	ISO/CD 18726	2024-10-31	V	Abstain	2024-10-04
25	ISO/TC 71/SC 8	2024-07-18	CIB on SC8 decision to SR ballot of ISO 13315-8	2024-09-01	V	Yes	2024-08-21
26	ISO/TC 71/SC 8	2024-07-15	ISO 13315-6:2019	2024-12-02	V	Abstain	2024-11-26

The Committee may **NOTE.**

6.3 Debriefing of 29th Plenary Meeting of ISO/TC 71 and its Subcommittees

The 29th Plenary meeting of ISO/TC 71 'Concrete, Reinforced Concrete and Prestressed Concrete' and its Sub-Committees were held during 19 to 22 November 2024 in the Hybrid mode from Bangkok, Thailand (*ISO/TC 71/SC 1 Meeting was held separately on 13 November 2024*). India had participated actively in all the meeting in the Virtual mode by the delegation approved by CED 02 in its last meeting. The resolutions of the ISO/TC 71 Plenary Meeting along with its Subcommittees is attached at **Annex 20** (separate PDF).

Based on the above, the actionable points to be made by BIS on behalf of India are listed below:

Meeting, Date &Venue	**Indian Delegates attended the meeting**	**Important outcome and actional point for India**
31st meeting of ISO/TC 71/SC 1 Test methods for concrete held on 13 November 2024 in the virtual mode	a) Shri P. N. Ojha (NCCBM) b) Shri V. V. Arora (In Personal Capacity) c) Shri A. K. Jain (In Personal Capacity) d) Shri Jitendra Kumar Chaudhary (BIS)	Shri P. N. Ojha was reappointed as the project leader for the development of ISO 1920 (Parts 15 and 16) ISO 1920 Part 15 Air void content in hardened concrete ISO 1920 Part 16 Capillary Absorption of Concrete China, Israel, India, Japan and one more country to nominate experts for WG 8. WG 8 resolved to meet within six months after being confirmed.
15th Meeting of ISO/TC 71/SC 8 Environmental Management for concrete and concrete structures held on 19 November 2024	a) Shri Jose Kurian (In Personal Capacity) b) Dr Shashank Bishnoi (IITD) c) Dr K. V. L. Subramaniam (IIT Hyderabad) d) Smt Divya S. (BIS) e) Shri Jitendra Kumar Chaudhary (BIS)	India decided to nominate expert in the Working Group on development of ISO/NP 21282 (Parts 1 to 3) 'Determination of carbon dioxide sequestrated in concrete and concrete constituents' under ISO/TC 71/SC 8.
24th Meeting of ISO/TC 71/SC 5 Simplified design standard for concrete structures held on 20 November 2024	a) Prof Mahesh Tandon (Tandon Consultant Pvt. Ltd.) b) Dr Rupen Goswami (IIT Madras) c) Smt Divya S. (BIS) d) Shri Jitendra Kumar Chaudhary (BIS)	a) India volunteered to join the project of revision of ISO 18407 : 2018 "Simplified design of prestressed concrete tanks for potable water" under ISO/TC 71/SC 5. b) India decided to nominate expert for the development of standard on Simplified Performance Based

		Wind Design of Concrete Buildings under ISO/TC 71/SC 5.
Meeting of ISO/TC 71/SC 3 Concrete production and execution of concrete structures held on 20 November 2024	a) Shri V. V. Arora (In Personal Capacity) b) Shri A. K. Jain (In Personal Capacity) c) Shri Jitendra Kumar Chaudhary (BIS)	a) The comments made by India on ISO 12439 Mixing water for concrete were considered addressed. b) India decided to participate in AHG 2 Mass concrete using MEA under ISO/TC 71/SC 3.
Meeting of ISO/TC 71/SC 7 Maintenance and repair of concrete structures held on 20 November 2024	a) Shri Amandeep (Creative Design Consultants & Engineers Pvt Ltd.) b) Ms Lopamudra Sengupta (JSW) c) Shri P. N. Ojha (NCCBM) d) Smt Divya S. (BIS)	India decided to nominate expert in the Working Group on 'Assessment and repair of fire damaged concrete structures' under ISO/TC 71/SC 7.
ISO/TC 71/SC 6 Non-traditional reinforcing materials for concrete structures	a) Shri Amandeep (Creative Design Consultants & Engineers Pvt Ltd.) b) Shri Jitendra Kumar Chaudhary (BIS)	-
29th Plenary meeting of ISO/TC71 and its Subcommittees held during 19 to 22 November 2024 at Thailand in the Hybrid Mode	a) Shri P. N. Ojha (NCCBM) b) Shri V. V. Arora (In Personal Capacity) c) Smt Divya S. (BIS) d) Shri Jitendra Kumar Chaudhary (BIS) e) Shri Jose Kurian (In Personal Capacity) f) Prof Mahesh Tandon (Tandon Consultant Pvt. Ltd.) g) Shri Amandeep (Creative Design Consultants & Engineers Pvt Ltd.)	-

6.4 Nomination of experts in the ISO Working Groups

Based on the relevance of the work items proposed under the ISO working groups and willingness of the experts, the following experts had been nominated to participate in the working groups under ISO/TC 71.

1) Dr P. Harikrishna from CSIR-Structural Engineering Research Centre (SERC), in ISO/TC 71/SC 5/WG development of standard on Simplified Performance Based Wind Design of Concrete Buildings

The Committee may **NOTE**.

Item 7 ANY OTHER BUSINESS

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