BUREAU OF INDIAN STANDARDS

AGENDA

Cement and Concrete Sectional Committee, CED 2 : Thirty Seventh Meeting

Friday, 01 March 2024 : 1030 AM to 1 PM

Virtual Meeting

Chairman: 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=m1508bc9f42f41260b337394189ef1942
Meeting ID:	2513 325 3822
Password:	12345

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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 sixth) meeting of the Committee held on 08 November 2023 were circulated vide BIS DG letter No. CED 2/A-2.36 vide email dated 15 November 2023. No comments received on the Minutes as circulated.

The Committee may **CONFIRM** the Minutes.

Item 2 REVIEW OF COMPOSITION

2.1 The present composition of the Sectional Committee is given at **Annex 1 (separate PDF)**. Also, the various co-option request received from BIS portal as well as through email for representation on CED 02 Sectional Committee are given at **Annex 2**.

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 **Annex 3**
b) Concrete Subcommittee, CED 2:2 **Annex 4**

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 5**
Under CED 2:1	
b) Panel for Revision of Cement Standards CED 2:1/P1	**Annex 6**
Under CED 2:2	
c) Panel for Review/Revision of IS 3370, CED 2:2/P1	**Annex 7**
d) Panel for IS 456 and IS 1343, CED 2:2/P5	**Annex 8**
e) Panel for Revision of IS 457, CED 2:2/P6	**Annex 9**
f) Panel for Revision of Indian Standards on Test Methods for Concrete, CED 2:2/P7	**Annex 10**
g) Panel for Aggregates from Natural and other Sources, CED 2:2/P8	**Annex 11**
h) Panel for Ferrocement Construction, CED 2:2/P9	**Annex 12**
i) 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**
Anchorages in concrete, **CED 2:2/WG4**

The Committee may **NOTE.**

Item 3 DRAFT INDIAN STANDARDS FOR FINALIZATION

3.1 Draft Indian Standards Glossary and Terms relating to cement concrete IS 6461 (Parts 1 to 12)

Based on the decisions of the last meeting, BIS issued the working drafts of IS 6461 (Part 1 to 12) Glossary and terms relating to cement concrete into wide circulation for a period of 30 days for eliciting public comments. The comments received on the wide circulation drafts are compiled and attached at **Annex 14**.

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

Item 4 NEW WORK ITEM PROPOSALS

4.1 Specification for Curing Compounds

Shri Narender Kumar Goel (In Personal Capacity) submitted a new work item proposal towards standardization of curing compounds used in the construction projects as there is scarcity of water at different places of India.

The Committee may **CONSIDER** and **DECIDE.**

4.2 Method of Test for Concrete – Rapid Chloride Penetration Test (RCPT)

Shri Narender Kumar Goel (In Personal Capacity) submitted a new work item proposal towards formulation of standard on Rapid Chloride Penetration Test (RCPT) as this is an important test for durability which is opted by many big clients across the country for studying durability aspects. This standard requires to conduct RCPT as per Indian conditions.

The Committee may **CONSIDER** and **DECIDE.**

4.3 Product Specification on Utilization of Marble Waste for concrete production

Shri Jeetendra Singh Khichad (MNIT, Jaipur) submitted a new work item proposal towards formulation of standard on utilization of marble waste in the country for concrete production as part of sustainable construction practices. A short description of the subject is given at **Annex 15.**

The Committee may **CONSIDER** and **DECIDE.**

Item 5 ISSUES ARISING OUT OF PREVIOUS MEETING

5.1 Draft Standard on Portland Limestone Cement (PLC)

The initial working draft on Specifications for Portland Limestone Cement (PLC) along with the studies carried out at NCB on PLC as received from NCB are attached at **Annex 16** and **Annex 17,** respectively.

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

Item 6 AMENDMENTS TO VARIOUS INDIAN STANDARDS

6.1 Amendment No. 6 to IS 456: 2000

The draft amendment No. 6 to IS 456: 2000 [CED 2(13804) WC] was issued in wide circulation on 29 March 2019 for a period of 60 days. The comments received on the draft amendments were considered by the Panel CED 2:2/P5 in its meeting held in June 2023. The updated draft amendment as finalized and recommended by the Panel in its meeting held on 08 February 2024 is given at **Annex 18**.

The Committee may **CONSIDER** and **FINALIZE.**

Item 7 PROGRESS OF WORK

7.1 A list of standards under the Sectional Committee and work in progress is given in **Annex 19 (separate PDF)** for information.

The Committee may **NOTE**.

7.2 Comprehensive Exercise of Review of Old Indian Standards

7.2.1 BIS has taken up a comprehensive exercise of review of Indian Standards. Particularly those standards which were published quite sometime back (which were mostly in A5 size) are the focus of such a review. The next in the priority are rest of the standards published prior to the year 2000.

In the above, while taking up the review, the following may also be considered:

a) Grouping of similar standards, say a series of methods of test of a product or a set of specifications of similar products which may need similar treatment for updating the same.
b) To the extent possible older standards may be taken up for review first and progressively the later ones.
c) Those standards coming up for 5 yearly periodic review (out of the above A5 size standards) may be taken up accordingly.

The review exercise may lead to revision of as many standards as possible to incorporate various updations, such as:

1) Updating of the cross-referred Indian Standards which might have been since revised/amalgamated with other standards.
2) Specifically, updating the grades/varieties of raw materials in view the same having undergone changes as specified in cross-referred standards which have been since revised/amended.
3) Changes required considering technological development in the country and worldwide. These would also require review of international literature/research papers apart from international standards and that of other countries having expertise in such technological domains.
4) Other changes, such as switching over to SI units and latest format of A4 size standards.

The outcome of the above exercise may be the preparation of draft standards (a) which may be issued in wide circulation for eliciting public comments, or (b) in case the changes are non-controversial in nature, the direct finalization of such revised standards for adoption and publication waiving their wide circulation.

7.2.2 Based on the recent process reforms in the standardization activity, any standard can be reviewed using the following options:

1) Research Interns (only for formulation of new standards)
2) Consultants
3) Small R&D projects (for which Terms of Reference to be prepared)
4) Action Research Projects (ARP)
5) Archiving the standards

Also, in the 27th Meeting of Civil Engineering Division Council, the Council authorized that:

'In particular, the Council authorized the Sectional Committees/BIS to prepare and issue directly in wide circulation, those standards published before year 2000 including those particularly having even one amendment.'

7.2.3 In accordance with the above, the following Indian Standards are due for 5-yearly review:

a) During Jul 2023 to Dec 2023

Sl No.	IS No.	Title
1.	*IS 516:1959	Methods of tests for strength of concrete
2.	*IS 1199:1959	Methods of sampling and analysis of concrete
3.	IS 1344:1981	Specification for calcined clay pozzolana (second revision)
4.	IS 1727:1967	Methods of test for pozzolanic materials (first revision)
5.	IS 2502:1963	Code of practice for bending and fixing of bars for concrete reinforcement
6.	IS 3466:1988 IS 3466:1988 (B)	Specification for masonry cement (second revision)
7.	IS 3535:1986	Methods of sampling hydraulic cements (first revision)
8.	IS 3558:1983	Code of practice for use of immersion vibrators for consolidating concrete (first revision)
9.	IS 4031 (Part 2):1999	Methods of physical tests for hydraulic cement: Part 2 Determination of fineness by Blaine air permeability method (second revision)
10.	IS 4845:1968	Definitions and terminology relating to hydraulic cement
11.	IS 5512:1983	Specification for flow table for use in tests of hydraulic cement sand pozzolanic materials (first revision)
12.	IS 5515:1983	Specification for compacting factor apparatus (first revision)
13.	IS 5525:1969	Recommendations for detailing of reinforcement in reinforced concrete works

14.	IS 6925:1973	Methods of test for determination of water soluble chlorides in concrete admixtures
15.	IS 7246:1974	Recommendations for use of table vibrators for consolidating concrete
16.	IS 7320:1974	Specification for concrete slump test apparatus
17.	IS 7325:1974	Specification for apparatus for determining constituents of fresh concrete
18.	IS 8125:1976	Dimensions and materials of cement rotary kilns, components and auxiliaries (dry process with suspension preheater)
19.	IS 8229:1986	Specification for oil-well cement (first revision)
20.	IS 9013:1978	Method of making, curing and determining compressive strength of accelerated-cured concrete test specimens
21.	IS 9103:1999	Concrete admixtures — Specification (first revision)
22.	IS 9376:1979	Specification for apparatus for measuring aggregate crushing value and ten percent fines value
23.	IS 9377:1979	Specification for apparatus for aggregate impact value
24.	IS 9399:1979	Specification for apparatus for flexural testing of concrete
25.	IS 9459:1980	Specification for apparatus for use in measurement of length change of hardened cement paste, mortar and concrete
26.	IS 9799:1981	Specification for pressure meter for determination of air content of freshly mixed concrete
27.	IS 10070:1982	Specification for machine for abrasion testing of coarse aggregates
28.	IS 10078:1982	Specification for jolting apparatus for testing cement
29.	IS 10079:1982	Specification for cylindrical metal measures for use in tests of aggregates and concrete
30.	IS 10080:1982	Specification for vibration machine
31.	IS 10510:1983	Specification for vee-bee consistometer
32.	IS 10850:1984	Specification for apparatus for measurement of water retentivity of masonry cement
33.	IS 10890:1984	Specification for planetary mixer used in tests of cement and pozzolana
34.	IS 11262:1985	Specification for calorimeter for determination of heat of hydration of hydraulic cement
35.	IS 11263:1985	Specification for cylinder measures for determination of air content of hydraulic cement mortar
36.	IS 11993:1987	Code of practice for use of screed board concrete vibrators
37.	IS 12089:1987	Specification for granulated slag for the manufacture of Portland slag cement
38.	IS 12119:1987	General requirements for pan mixers for concrete
39.	IS 12803:1989	Methods of analysis of hydraulic cement by X-ray fluorescence spectrometer
40.	IS 12813:1989	Method of analysis of hydraulic cement by atomic absorption spectrophotometer

b) During Jan 2024 to June 2024

Sl No.	IS No.	Title
1.	IS 457:1957	Code of practice for general construction of plain and reinforced concrete for dams and other massive structures
2.	IS 2430:1986	Methods for sampling of aggregates for concrete (first revision)
3.	IS 4031 (Part 3):1988	Methods of physical tests for hydraulic cement: Part 3 Determination of soundness (first revision)
4.	IS 4031 (Part 4):1988	Methods of physical tests for hydraulic cement: Part 4 Determination of consistency of standard cement paste (first revision)
5.	IS 4031 (Part 5):1988	Methods of physical tests for hydraulic cement: Part 5 Determination of initial and final setting times (first revision)
6.	IS 4031 (Part 6):1988	Methods of physical tests for hydraulic cement: Part 6 Determination of compressive strength of hydraulic cement other than masonry cement (first revision)
7.	IS 4031 (Part 7):1988	Methods of physical tests for hydraulic cement: Part 7 Determination of compressive strength of masonry cement (first revision)
8.	IS 4031 (Part 8):1988	Methods of physical tests for hydraulic cement: Part 8 Determination of transverse and compressive strength of plastic mortar using prism (first revision)
9.	IS 4031 (Part 9):1988	Methods of physical tests for hydraulic cement: Part 9 Determination of heat of hydration (first revision)
10.	IS 4031 (Part 10):1988	Methods of physical tests for hydraulic cement: Part 10 Determination of drying shrinkage (first revision)
11.	IS 4031 (Part 11):1988	Methods of physical tests for hydraulic cement: Part 11 Determination of density (first revision)
12.	IS 4031 (Part 12):1988	Methods of physical tests for hydraulic cement: Part 12 Determination of air content of hydraulic cement mortar (first revision)
13.	IS 4031 (Part 13):1988	Methods of physical tests for hydraulic cement: Part 13 Measurement of water retentivity of masonry cement (first revision)
14.	IS 4031 (Part 14):1989	Hydraulic cement — Methods of physical tests: Part 14 Determination of false set
15.	IS 4031 (Part 15):1991	Methods of physical tests for hydraulic cement: Part 15 Determination of fineness by wet sieving
16.	IS 4032:1985	Method of chemical analysis of hydraulic cement (first revision)
17.	IS 4305:1967	Glossary of terms relating to pozzolana
18.	IS 4634:1991	Batch-type concrete mixers — Methods for testing performance (first revision)
19.	IS 5536:1969	Specification for constant flow type air-permeability apparatus (Lea and Nurse type)

20.	IS 6452:1989 IS 6452:1989 (B)	High alumina cement for structural use — Specification (first revision)
21.	IS 8041:1990	Rapid hardening Portland cement — Specification (second revision)
22.	IS 8043:1991	Hydrophobic Portland cement — Specification (second revision)
23.	IS 12330:1988	Specification for sulphate resisting Portland cement
24.	IS 12423:1988	Method for colorimetric analysis of hydraulic cement
25.	IS 12600:1989	Portland cement, low heat specification
26.	IS 14687:1999	False work for concrete structures — Guidelines

The Committee may **CONSIDER** all the above and **DECIDE**.

Item 8 CONCRETE, REINFORCED CONCRETE AND PRESTRESSED CONCRETE, ISO/TC 71

8.1 India is P member of ISO/TC 71 'Concrete, Reinforced Concrete and Prestressed Concrete'. Cement and Concrete Sectional Committee, CED 2 is the National Mirror Committee of ISO/TC 71.

a) ISO/TC 71 comprises 96 countries as members 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 pre-stressed 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 had online under: https://www.iso.org/committee/49898.html

The Committee may **NOTE**.

8.2 Ballots

The following ballots are received/voted on/after the last meeting of CED 2.

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/SC 8	08/09/2023	Approval of Chair extension	03/11/2023	V	Yes	02/11/2023
2	ISO/TC 71/SC 8	28/10/2023	ISO/FDIS 13315-1	28/11/2023	V	Approval	24/11/2023
3	ISO/TC 71/SC 1	15/07/2023	ISO 1920-11 (2013)	02/12/2023	V	Confirm	02/12/2023
4	ISO/TC 71/SC 5	15/07/2023	ISO 28841: 2013	02/12/2023	V	Abstain	02/12/2023
5	ISO/TC 71/SC 4	11/11/2023	Reappointment of WG 1 Convener	04/12/2023	V	Yes	02/12/2023
6	ISO/TC 71/SC 4	03/12/2023	Approval of Scope for ISO 19338	31/12/2023	V	Yes	11/12/2023
7	ISO/TC 71/SC 3	09/11/2023	ISO CD 18985	04/01/2024	V	Approved	28/12/2023
8	ISO/TC 71	07/12/2023	Approval of Scope for TC 71/SC 5	18/01/2024	V	Yes	13/01/2024
9	ISO/TC 71	30/10/2023	ISO/DIS 16521	22/01/2024	V	Abstain	13/01/2024
10	ISO/TC 71/SC 7	26/12/2023	NP 7N443	23/01/2024	V	Yes	13/01/2024
11	ISO/TC 71/SC 7	08/12/2023	ISO/FDIS 16311-4	02/02/2024	V	Approved	13/01/2024
12	ISO/TC 71/SC 1	14/11/2023	ISO/PWI 23945-2.2	06/02/2024	V	Abstain	05/02/2024
13	ISO/TC 71/SC 1	14/11/2023	ISO/PWI 23945-3.2	06/02/2024	V	Abstain	05/02/2024
14	ISO/TC 71/SC 8	15/11/2023	ISO/DIS 13315-2	07/02/2024	V	Approved	05/02/2024
15	ISO/TC 71/SC 3	15/12/2023	Draft Resolution 1 – Establishment of New AHG MEA	15/02/2024	V	Abstain	05/02/2024
16	ISO/TC 71/SC 7	21/12/2023	ISO/FDIS 16311-2	15/02/2024	V	Approved	05/02/2024
17	ISO/TC 71/SC 7	21/12/2023	ISO/FDIS 16311-3	15/02/2024	V	Approved	05/02/2024

The Committee may **NOTE.**

8.3 Change in Nomination of Indian Expert in ISO/TC 71/AHG 1 'Concrete Materials Terminology'

Earlier, CED 2 had nominated Dr Shashank Bishnoi in the above Working Group of ISO/TC 71 representing India but due to his other important engagement, he could not be able to participate.

Hence, it is proposed to nominate Shri Brijesh Singh from NCB in the above Working Group considering his willingness to participate in the formulation of the ISO draft standard. He had also attended last two meetings of the Working Group on behalf of India.

The Committee may **CONSIDER** and **DECIDE.**

8.4 Establishment of Working Group for development of ISO 1920 (Part 15 and 16) in ISO/TC 71/SC 1

As per the decisions of the last meeting of ISO/TC 71 and its Subcommittees held in November 2023, India had confirmed to lead in the development of the following documents:

1) ISO 1920 (Part 15) Air Void content in hardened concrete
2) ISO 1920 (Part 16) Capillary Absorption of concrete

Shri P. N. Ojha from NCB volunteered to lead the group on preparation of the above documents.

In view of the above, it is proposed to establish a separate Working Group to prepare the above documents.

The Committee may **CONSIDER** and **DECIDE.**

Item 9 ANY OTHER BUSINESS

9.1 Proposal from Ms I R Technology Pvt Ltd for providing automatic testing solutions for the cement industry

Ms I R Technology Pvt Ltd, Mumbai is an Indian local partner of a German organization, Ms Tony Technik Building Materials Testing Systems, Berlin which is specialized in the sophisticated quality control testing systems for the building materials industry. It aims to provide automatic, digitalized and reliable testing solutions for cement industry in India.

They want to qualify their following automated products with the National Testing Agencies of India involved in building materials and construction for the equipment qualification:

1. **ToniMIX**: Automatic Mortar Mixer
2. **ToniPERM:** Automatic Blaine Fineness Analyzer
3. **ToniSET:** Automatic Vicat Setting Time Measurement device
4. **ToniZEM:** Compression testing machine for cement mortar

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

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