

*CED 39 Earthquake Engineering Sectional
Committee*

60th Meeting
MINUTES

*29 November 2024
02:00 pm to 05:30 pm
Hybrid*



Bureau of Indian Standards
*9 Bahadur Shah Zafar Marg
New Delhi*

This page is left blank intentionally.

CED 39 Earthquake Engineering Sectional Committee

60th Meeting

29 November 2024

02:00 pm to 05:30 pm (Hybrid)

Draft Minutes

The following were present at the meeting:

S.No.	Affiliation	Person
Chairperson		
1	Indian Institute of Technology Madras, Chennai	C. V. R. Murty
Member-Secretary		
2	Bureau of Indian Standards, New Delhi	Jitendra Kumar Chaudhary
Members		
(a) Academia		
3	Indian Institute of Technology Bhubaneswar	Suresh Ranjan Dash
4	Indian Institute of Technology Bombay	Ravi Sinha
5	Indian Institute of Technology Delhi	Dipti Ranjan Sahoo
6	Indian Institute of Technology Madras	Rupen Goswami
7	Indian Institute of Technology Gandhinagar	Manish Kumar
8	Indian Institute of Technology Roorkee	Yogendra Singh
9	Malaviya National Institute of Technology, Jaipur	S. D. Bharti
10	National Institute of Technology Goa	Harikumar M.
11	IIIT, Hyderabad	Sunitha Palissery
(b) Practitioners		
12	<i>In Personal Capacity</i>	Indrajit Chowdhury
13	<i>In Personal Capacity</i>	S. K. Thakkar
14	<i>In Personal Capacity</i>	I. D. Gupta
15	Atomic Energy Regulatory Board, Mumbai	A.D. Roshan
16	B&S Engineering Consultants PL, New Delhi	Alok Bhowmick
17	Bharat Heavy Electrical Limited, New Delhi	S K Mahato
18	Central Water Commission, New Delhi	S. K. Sharma
19	Central Public Works Department, New Delhi	Dinesh K Ujjainia A. K. Jalan
20	CSIR Central Building Research Institute, Roorkee	R. Pradeep Kumar Ajay Chourasia (C, WG)
21	CSIR National Geophysical Research Institute, Hyd.	Prantik Mandal
22	CSIR Structural Engineering Research Institute, Chennai	R. Sreekala
23	DDF Consultants, New Delhi	Pratima Rani Bose
24	Engineers India Limited, Gurugram	Sudip Paul
25	Geological Survey of India, Kolkata	L. H. Moirangcha Snehasis Bhattacharya
26	Indian Concrete Institute, Chennai	Debashish Bandopadhyay

Minutes of 60th Meeting of CED 39

27	Indian Association of Structural Engineers, New Delhi	Manoj Mittal
28	National Centre for Seismology, New Delhi	Himangshu S. Mandal
29	National Thermal Power Corporation Limited, Delhi	Praveen Khandelwal
30	National Disaster Management Authority, New Delhi	Ranu Chauhan
31	Nuclear Power Corporation of India Limited, Mumbai	Rajiv Ranjan
32	Research Design and Standards Organization, Lucknow	Sandeep Agarwal
33	R. S. Mandrekar Associates, Mumbai	Jaswant N. Arlekar
34	Steel Authority of India Limited (SAIL), Ranchi	K. K. Singh
35	Tandon Consultants Private Limited, New Delhi	Mahesh Tandon
36	Tata Consulting Engineers Limited, Mumbai	C. R. Arjun
37	VMS Consultants Private Limited, Mumbai	Alpa R. Sheth
(c) Manufacturers		
	None	-

60.0 OPENING REMARKS**60.01 Member-Secretary**

On behalf of BIS, the *Member-Secretary* welcomed the *Chairperson* and *Members* to the 60th Meeting of CED 39. He presented the background of agenda items of the meeting and requested the members for their kind involvement and active participation in the discussions of the meeting.

60.02 Chairperson

The *Chairperson* welcomed *Members* to the 60th Meeting of the CED 39. He gave an overview of the *Agenda Items* of the meeting, and requested *Members* to share their valuable inputs on the *Agenda Items* of the meeting during the meeting. Further, he requested all *Working Groups* to prepare commentaries and presenting the drafts of the same at the ensuing meetings of CED 39.

With these introductory remarks, he requested the *Member-Secretary* to take up the *Agenda Items* for discussion.

The *Earthquake Engineering Sectional Committee* (CED 39) discussed the *Agenda Items* and took the following decisions:

60.1 MINUTES OF PREVIOUS MEETING**60.11 Confirmation of Minutes of the 59th Meeting**

Since no comment was received, the Committee confirmed the *Minutes* of the 59th Meeting as circulated on 17 November 2024.

60.2 NEW STANDARDS and NEW CLAUSES

60.21 Working Draft of Earthquake Testing of Structures

The Committee considered the *Working Draft of Earthquake Testing of Structures* as presented by S. D. Bharti (C, WG). Based upon the deliberations during the meeting, the Committee suggested the following remarks on the draft standard:

- 1) Title of the standard to be revised as *Testing of Structures for Earthquake Effects*.
- 2) Clause 1.4 may be reviewed to provide a general requirement instead of making it mandatory or completely abiding.
- 3) Definition of *Yield Force* may be reviewed.
- 4) In Clause 5.1.1,
 - (a) strength degradation and strength determination are independent quantities, and hence they be separated; and
 - (b) under each critical quantity, guidelines related to distress and damage mapping be included.
- 5) In Clause 5.1.2(a), the term *design criteria* may be removed.
- 6) Material tests may be included under *Laboratory Tests* in Clause 5.2.1.
- 7) In Clause 6.1(a), the term *high* may be replaced with *adequate*, and the term *feeble* may be dropped.
- 8) In Clause 6.2(a)(1), the phrase '*The force induced by the shaking device shall be less than 0.1% of the weight of the structure*' may be rewritten to specify that the force induced by the shaking device should not damage the structure.
- 9) In Clause 6.2(a)(2), *closed-loop controller* may be replaced with *feedback controller*.
- 10) The foreword may clarify that the nonlinear material specifications provided in the standard are not for the purpose of qualifying the bars.
- 11) Illustrative pictures and figures may be added for different types of tests specified in the standard.
- 12) In Clause 7.2(a), the definition of *sensor* may be reviewed.
- 13) Clause 7.3.1(6) should clarify that the rules specified are for the purpose of validation only.
- 14) In Clause 7.3.2, a separate sentence be added to suggest that '*Reduced scale tests should comply with the laws of dynamic similitude, as applicable.*'
- 15) In Clause 9.2.3.1, the range of frequency rating of actuators be stated to be small, say < 10 Hz.
- 16) In Clause 9.2.4.1(a), the range be modified to 0.1–30 Hz.

In view of the above, the Committee requested the Working Group to address the above suggestions, revise the draft and send the updated draft for discussion at the ensuing meeting of CED 39.

60.3 REVISION	
60.31 Updated Working Draft of IS 1893 (Part 6) Design Earthquake Hazard and Criteria for Earthquake Resistant Design of Structures Part 6: Base Isolated Buildings	
<p>The Committee considered the updated draft of IS 1893 (Part 6) '<i>Criteria for Earthquake Resistant Design of Structures Part 6 Base Isolated Buildings</i>,' as presented by S. D. Bharti (C, WG) based on the revised earthquake hazard. The Committee discussed the said document, and Members suggested some editorial changes.</p> <p>Based on the discussions, the Committee:</p> <ol style="list-style-type: none"> (1) Requested the WG to incorporate the changes suggested, and submit the revised document to the BIS; and (2) Recommended to issue the draft for wide circulation for a period of 30 days for eliciting public comments. 	
60.4 R&D PROJECTS	
60.41	None
60.5 NEW WORK ITEM PROPOSAL	
60.51	None
60.6 PROGRESS OF WORKING GROUPS	
No reports were provided by WGs beyond the inputs to the agenda items.	
60.7 WORK PROGRAMME	
60.71	Review of Work Program - List of Existing Standards and those under Publication
<p>The Committee noted the details of <i>Work Program</i> indicating the status of published standards and those under publication as referred to under the <i>Agenda Item</i> and given at Annexure 60.04 of the Agenda Papers of this meeting.</p>	
60.72	International Standardization
<p>The Committee noted the details regarding international standardization as given in Agenda of the meeting. The Committee requested Member of the WG on ISO Matters (Vasant Matsagar, IITD) to present a report on the last Plenary Meeting of ISO/TC 98 and the developments underway at the <i>Technical Committee</i>.</p>	
60.8 COMMITTEE MATTERS	
60.81	Review of Existing Technical Committee & Request for New Membership
<p>The Committee noted the <i>Guidelines for Participation</i> in the Technical Committee Work of BIS as given at Annexure 60.05 of the agenda, and the composition of CED39 as given in Annexure 60.06 to the <i>Agenda Papers</i>. The Committee considered the co-option request of <i>Deepal Yadav (IIT, Jammu)</i> and decided to share his information with <i>Convenor</i> of the <i>Working Group on Steel Buildings</i>, with a request to see how he can be co-opted in</p>	

the activities of the WG.	
60.82	Review of Existing Panels
<p>The Committee noted the composition of existing R&D <i>Panel</i> under CED 39 (given in <i>Annexure 60.08</i> of the Agenda Papers of this meeting). Also, the Committee requested any member who would like to participate and contribute in the Panel can send their nomination to BIS for consideration.</p>	
60.83	Review of Existing Working Groups
<p>The Committee noted the revised composition of <i>Working Groups</i> under CED 39 given in Annexure 60.10 of the Agenda Papers of this meeting in line with the process reforms of BIS made under standardization. The <i>Working Groups</i> will be restructured in keeping with the guidance given by DG, BIS, that <i>non-contributing</i> Members can be replaced by newer members.</p>	
60.9 CLOSING COMMENTS	
60.91	Any Other Item from Members
<p>The Committee considered the comment from Member, Mahesh Tandon, regarding <i>Clause 7.1 Table 6: Definition of Irregular Building - Vertical Irregularities</i> in IS 1893 (Part 1): 2016 and recommended for no change at this moment.</p> <p>Member, Alpa R. Sheth, mentioned that there is no Indian Standard presently available which provides design requirements for structures subjected to wind forces. On this matter, the BIS Secretariat agreed:</p> <ol style="list-style-type: none"> (1) that the proposal is need of the hour, and it needs to be discussed at the CEDC level. (2) to table it in the next CEDC meeting for a decision. 	
60.92	Member- Secretary
<p>The <i>Member-Secretary</i> thanked all <i>Members</i> and <i>Chairperson</i> for giving their valuable time to national standardization activity and participating actively in the discussions during the meeting. He requested <i>Conveners</i> of <i>Working Groups</i> to send the updated drafts of various standards as well as draft <i>Table of Contents</i> of the new standards so that the same can be moved to advanced stages of the <i>Standards Formulation</i> process.</p>	
60.93	Chairperson
<p>The Chairperson thanked all <i>Members</i> for maintaining high interest in the standardization work and sharing their valuable inputs on the Agenda Items presented during the meeting. In view of the urgency of harmonization underway of the earthquake engineering standards in line with the revised earthquake hazard, he reiterated the request to:</p> <ol style="list-style-type: none"> (1) <i>Conveners</i> of <i>Working Groups</i> that have completed the drafting of clauses of standards, to prepare the commentary and present the same for discussion at the ensuing meetings of CED39; and (2) <i>Working Groups</i> of IS 13920 and IS 13935 series to begin presenting the draft <i>Table of Contents</i> with the initial working drafts of the documents prepared by them. <p>He invited all members to attend the next meeting of CED 39, which is likely to be held in the last week of December 2024.</p>	

Minutes of 60th Meeting of CED 39

The meeting ended with *thanks* to all attendees.

...