

BUREAU OF INDIAN STANDARDS**MINUTES**

Hydraulic Gates & Valves Sectional Committee, WRD 12		24th Meeting
Day, Date and Time	Venue	Contact details
Wednesday, 03 April 2024 11:00 AM	ONLINE (WEBEX PLATFORM)	wrd@bis.gov.in
Chairman: Mr. M. K. Singh, GM (D&E), NHPC		Member Secretary: Shri Vaibhav Yadav, Sc-B, WRD

PARTICIPANTS:

S. No.	Name	Email
1	Shri Abhay Prasad Pattanaik, In Personal Capacity	ap0339278@gmail.com
2	Shri Aditya Mishra, CWC	adityamishra.hal@gmail.com
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5	Shri Arvinderpal Singh Panesar, M/s GMW Pvt. Ltd.	as@gmw.in
6	Shri Patil Prakash R, WRD Maharashtra	secdogate@gmail.com
7	Shri Chandan Ranjan Goswami, Texmaco Ltd.	cr.goswami@texmaco.in
8	Shri Baboo Lal Tyagi, DGM (Civil), NHPC	baboolal@nhpc.nic.in
9	Shri Punit Masiwal, Manager (Mech), NHPC	punitmasiwal@nhpc.nic.in
10	Dr Mukulesh Debnath, Texmaco Ltd, Kolkata	hydrostructural@gmail.com
11	Dr. Surya Anantapantula, PES Engineers Ltd	docavsurya@peseng.net
12	Shri H. L. Kamboj, BBMB	kamboj1967@gmail.com
13	Shri Hari Saxena, AFRY India Pvt. Ltd.	hari.saxena@afry.com
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16	Shri N. Kannaiah Naidu, In Personal Capacity	bhmech@gmail.com

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ITEM 0 WELCOME REMARKS OF THE CHAIRMAN

The Chairman welcomed all the members to the 24th meeting of the WRD 12 Sectional Committee. The Chairman requested all the members for their contribution and regular participation in the meeting so that long pending documents in the Committee can be finalized.

ITEM 1 CONFIRMATION OF THE MINUTES OF THE LAST MEETING

The Committee noted that no comments had been received on the circulated minutes of the 23rd meeting of the Committee. The Committee, therefore, confirmed the minutes of the previous meeting as circulated.

ITEM 2 COMPOSITION OF WRD 12

2.1 The Committee noted the present Composition of the Committee as given in **ANNEX 1** of the agenda.

2.2 The Committee noted that a reply was awaited from the IIT Roorkee for a fresh nomination. The Committee decided to request IIT Roorkee once again for a fresh nomination to the committee.

2.3 The Committee noted Item 2.3 of the agenda and the following decisions were taken.

S. No.	Member Organization	Suggestion in 23rd meeting	Status	Decision in the meeting
1	Tehri Hydro Development Corporation Limited	NHPC suggested that they communicate with Tehri Hydro Development Corporation Limited and provide the contact details to BIS	Reply is awaited	The committee decided to request once again for nominations.
2	Bekem infra projects Pvt. Limited, Hyderabad	Dr. V Surya Anantapantula from PES Engineers Private Limited, Hyderabad, suggested that he communicate with Bekem Infra Projects Pvt. Ltd., Hyderabad, and provide the contact details to BIS	Reply is awaited	
3	Butterfly Valve Manufacturers	Shri N Kannaiah Naidu suggested to the committee that he will provide the contact details of Butterfly valve manufacturers to BIS.	Reply is awaited	

2.4 The Committee noted Item 2.4 of the agenda, and the following decisions were taken.

S. No	Organizations	Decision in the meeting
1	Kwality Shutters Trichy, Tamil Nadu	The committee decided to contact once again for nominations.
2	AVG Valves Manufacturing	
3	VAG-Valves India Pvt. Ltd.	
4	VAAS Valves Manufacturers	
5	Indian Valve Private Limited, Nasik, Maharashtra	
6	Orbinox Group	The committee decided to contact the organization for nominations in the committee.
7	Voith Hydro Pvt. Limited	
8	ANDRITZ Hydro	NHPC agreed to provide contact details for these two organizations.
9	FOURESS Engineering Private Limited	

2.5 The Committee noted the fresh nominations received from the member organizations.

S. No.	Organization	Members
1	Central Electricity Authority, New Delhi	Principal: Shri Reetesh Tiwari, Deputy Director Alternate: Shri Shyam Singal, Assistant Director
2	Central Water & Power Research Station, Pune	Principal: Dr. K. C. Sahu, Scientist-C Alternate: Shri A. P. Meshram, Scientist-B
3	Central Water Commission, New Delhi	Principal: Shri Amit Ranjan, Director, Gates E&NE Alternate: Shri Rahul Kumar Singh, Director, Gates, E&NE
4	Water Resources Department, Maharashtra	Principal: Shri Patil Prakash R, Superintending Engineer, Gates Circle
5	R.M. Sinha & Co., Kolkata	Alternate: Shri Rudrajit Sinha

2.6 The Committee noted item 2.6 of the agenda and the following decisions were taken.

S. No.	Organization	Members	Decision in the meeting
1	AFRY India Private Limited	Principal: Hari Swarup Saxena, Vice President (Tech)/Chief Technical Principal Alternate: Kamal Nayan, Senior Engineer, Hydromechanical	The committee requested for the Biodata/CV of the nominated members so that a decision can be made in the next meeting.
2	Swadeshi Professional Solution & Services	Principal: T. Sudhakar, Dam Gate Expert Alternate: G. S. Pravallika, General Manager – Electrical Engineer	
3	M/s GMW Private Limited	Principal: Shri Onkar Singh Panesar, Chairman Alternate: Shri Arvinderpal Singh Panesar, Director	The committee approved the co-optation of M/s GMW Private Limited to the committee.

ITEM 3 PROGRAMME OF WORK

3.1 The Committee noted the Programme of work of WRD 12.

3.2 Five-Yearly Review of Published Standards

The Committee noted Item 3.2 of the agenda. The Committee observed that all Indian Standards shall be reviewed periodically, at least once in five years by the concerned Sectional Committee. In this regard, the Committee decided to reaffirm the following standards for the time being and further decided to circulate the following standards among the members for input.

S. No.	IS No.	Title of Standard	Last Reaffirm	Decision
1	IS 10096 (Part 1/Sec 1): 2014	Recommendations for Inspection, Testing and Maintenance of Radial Gates and their Hoists: Part 1 Inspection, Testing and Assembly at the Manufacturing Stage: Sec 1 Gates	Feb 2020	Reaffirmed & to be circulated for comments.
2	IS 10096 (Part 1/Sec 2): 2014	Recommendations for Inspection, Testing and Maintenance of Radial Gates and Rope Drum Hoists: Part 1 Inspection, Testing and Assembly at the Manufacturing Stage: Sec 2 Rope Drum Hoists	Jun 2019	Reaffirmed & to be circulated for comments.
3	IS 10096 (Part 2): 1983	Recommendations for Inspection, Testing and Maintenance of Radial Gates and their Hoists: Part 2 Inspection, Testing and Assembly at the Time of Erection	Mar 2020	Reaffirmed & to be circulated for comments.
4	IS 11793: 1986	Guidelines for Design of Float Driven Hoisting Mechanism for Automatic Gated Control	Mar 2020	Reaffirmed & to be circulated for comments.
5	IS 4410 (Part 16/Sec 2): 1981	Glossary of Terms Relating to River Valley Projects: Part XVI Gates and Valves: Sec 2 Valves	Feb 2020	Reaffirmed & to be circulated for comments. CWC informed that it will share inputs with NHPC

6	IS 6938: 2005	Design of Rope Drum and Chain Hoists for Hydraulic Gates – Code of Practice	Feb 2020	Reaffirmed & to be circulated for comments.
7	IS 9349: 2006	Recommendations for Structural Design of Medium and High Head Slide Gates	Mar 2020	Reaffirmed & to be circulated for comments.
8	IS 13591: 2019	Criteria for Design of Lifting Beams	Aug 2019	Reaffirmed & to be circulated for comments.
9	IS 5620: 2020	Recommendations for Structural Design Criteria for Low Head Slide Gates	Feb 2020	Reaffirmed & to be circulated for comments.

3.3 Review of Pre-2000 Standards

The Committee noted Item 3.3 of the agenda. The Committee deliberated and decided to take the following pre-2000 standards for review and the following decisions were taken for review of standards.

S. No.	IS No.	Title	Last Reaffirm	Decision in the meeting
1	IS 7326 Part 1: 1992	Penstock and Turbine Inlet Butterfly Valves for Hydro Power Stations and Systems Part 1 Criteria for Structural and Hydraulic Design First	Mar 2018	BHEL agreed to review the standards.
2	IS 7332 Part 2: 1993	Spherical Valves for Hydro Power Stations and Systems Part 2 Selection of Control Equipment	Mar 2018	
3	IS 7326 Part 2: 1992	Penstock and Turbine Inlet Butterfly Valves for Hydro - Power Stations and Systems Part 2 Guidelines for Design and Selection of Control Equipment	Mar 2018	The committee decided to circulate the standard among the members for inputs.
4	IS 7332 Part 1: 1991	Spherical Valves for Hydro Power Stations and Systems Part 1 Criteria for Structural and Hydraulic Design	Mar 2018	

5	IS 7332 Part 3: 1994	Spherical Valves for Hydro Power Stations and Systems Part 3 Recommendations for Operation and Maintenance of Spherical Valves	Mar 2018	
6	IS 13623: 1993	Criteria for Choice of Gates and Hoists	Mar 2018	

3.4 The Committee noted Item 3.4 of the agenda. The Committee deliberated on the standards allotted to the members and the following decisions were taken for revision of standards.

S. No.	IS No.	Title	Decision of the Committee in 24th meeting
1	IS 4410 (Part 16 / Sec 1): 1999	Glossary of Terms Relating to River Valley Projects - Part 16 Gates and Valves - Section 1 Gates and Terms Related with Gates	CWC informed the committee that they will submit the inputs to NHPC within one week's time. NHPC was further requested to send their inputs by incorporating the changes suggested by CWC and send it to BIS for circulation among the members for inputs.
2	IS 4410 (Part 16 / Sec 2): 1981	Glossary of Terms Relating to River Valley Projects Part 16 Gates and Valves Section 2 Valves	
3	IS 4410 (Part 23): 1999	Glossary of Terms Relating to River Valley Projects Part 23 Hoist, Cranes and Other Related Terms	
4	IS 10210: 1993	Criteria for Design of Hydraulic Hoists for Gates	CWC Agreed to submit their inputs by 1 st week of May 2024.
5	IS 11793:19 86	Guidelines for Design of Float-driven Hoisting Mechanism for Automatic Gated Control	Shri Abhaya Prasad Pattanaik agreed to provide his inputs within a short period of time.
6	IS 7326: Part 3: 1976	Penstock and Turbine Inlet Butterfly Valves for Hydropower Stations and Systems Part 3 Recommendations for Operations and Maintenance	Texmaco Rail and Engineering Ltd. informed the committee that they will provide their comments shortly by collaborating with the valve manufacturers.
7	IS 11855: 2017	Design and Use of Rubber Seals for Hydraulic Gates - Recommendations	The Committee agreed to circulate the document as WC Draft.

3.5 The Committee noted Item 3.5 of the agenda. The Committee deliberated on the comments of Mr. V. K. Gupta, and after careful consideration, decided to circulate the document as WC Draft after incorporating all the received comments.

3.6 Standards National Action Plan (2022 – 27)

3.6.1 The Committee noted Item 3.6.1 of the agenda. The Committee decided to wait for the final document as finalized by the Working Group.

Composition of WG 01:

1. Shri N Kannaiah Naidu – Convener
2. R.M. Sinha & Co.
3. CWC
4. NHPC
5. Shri Manoj Kumar Sharma.

ITEM 4 FINALIZED DOCUMENTS (Under Printing)

4.1 IS 9349: 2006 Recommendations for Structural Design of Medium and High Head Slide Gates

{Earlier Doc. WRD 12 (11587)}

The Committee noted that the document was sent for approval by the WRDC Chairperson and is currently under review. The Committee has decided to circulate the document as a WC Draft among the members, making necessary changes as and when it is received from the WRDC Chairperson. These comments can then be deliberated upon and further finalised before printing.

4.2 IS 4623: 2000 Recommendation for Structural Design of Radial Gates

{Earlier Doc. No. WRD 12(682)}

The Committee noted and deliberated on the comments received from the WRDC Chairperson. In view of the technical comments received, the committee decided to recirculate the document afresh as a WC Draft under a new document number after incorporating the changes received from the WRDC Chairperson among the members for comments. These comments can then be deliberated upon and further finalised for printing.

ITEM 5 NEW SUBJECTS UNDER CONSIDERATION

5.1 Recommendations for Structural Design Criteria for Stoplogs

{Earlier Document WRD 12 (14342) P}

(Subject approved in 20th Division Council meeting)

The Committee noted Item 5.1 of the agenda. The Committee deliberated on the status of the draft document pending from the Working Group (WG 02) and further requested working group members to expedite the pending document and submit the draft document for further circulation among the members as a P-Draft for comments.

Composition of WG 02:

1. Shri Aditya Mishra, CWC (Convener)
2. Shri Rajeev Mundada, WRD Maharashtra
3. Shri Baboo Lal Tyagi, NHPC
4. Dr. V. Surya Anantapantula, P.E.S. Engg. P. Ltd,
5. Shri S.K. Sinha, RM Sinha & Co.
6. Shri Abhaya Pattanaik, Odisha Construction Corp. Ltd.
7. Shri V. K. Gupta, Jaypee Infra Ventures P. Ltd.

5.2 Recommendations for Structural Design of Adit Gates(Approval of subject in 20th Division Council meeting)

The Committee noted that the draft was awaited from Dr. V. Surya Anantapantula. Dr. V. Surya Anantapantula informed the committee that the document is still under preparation. He assured the committee that he would provide the draft with the help of CWC and NHPC. The Committee further requested BIS to circulate the document once it is received from Dr V. Surya Anantapantula among the members as a P-Draft circulation.

ITEM 6 NEW SUBJECTS FOR STANDARDIZATION

6.1 The Committee noted Item 6 of the agenda and the following decisions were taken.

S. No.	New Subjects for Standardization	Decision in the meeting
1	Design of lock gates	The Committee noted the inputs received from Shri N Kannaiah Naidu and decided to circulate the inputs among members. The committee would then deliberate on the comments received from the members in the next meeting of the committee. The committee also requested R.M Sinha to provide their inputs on the document.
2	Automation of radial gates	The Committee deliberated on the status of the draft document awaited from Shri V. K. Gupta and Shri Prakash Patil (MERI) and further constituted a panel for the preparation of the draft standard. The composition of the panel is as follows. 1. Shri R. M. Sinha & Co. 2. Shri V. K. Gupta 3. Shri Patil Prakash R, MERI 4. Shri Tanweer Ahmed, NHPC 5. Central Water Commission 6. Central Electricity Authority

6.2 The Committee deliberated on the document received from Shri Amit Ranjan, CWC regarding the specifications of Flume Gates. The Committee decided to circulate the document received from Shri Amit Ranjan, CWC among the members to provide their views on taking it as a new subject in this sectional committee.

ITEM 7 RESEARCH & DEVELOPMENT PROJECTS FOR FORMULATION AND REVIEW OF STANDARDS

The Committee noted Item 7 of the agenda and requested all the committee members to submit the subjects and TORs for the Research and Development Projects related to the WRD 12 sectional committee.

ITEM 8 ANY OTHER BUSINESS

The Committee took note of the query received and was of the view that “total load” means the resultant of all the loads being transferred through the trunnion hub.