

**ICC 815 Sizing Water Distribution, Drainage and
Venting Standard Consensus Committee (IS-SWDDV)**

Meeting #15 - Minutes

May 20, 2024

Chair: Gary Klein

Vice Chair: Philip Parisi

Secretariat- Ramiro Mata

The fifteenth meeting of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held on May 20, 2024, in virtual format. The meeting was conducted in accordance with ICC’s Consensus Procedures. https://www.iccsafe.org/wp-content/uploads/ICC-Consensus-Procedures-ANSI-approved-8_2_21-BOD-apprvd-8_27_21.pdf

- Welcome – Chairman, Gary Klein, convened the meeting and welcomed attendees at 2:03pm Eastern time along with Staff Secretariat, Ramiro Mata. Mata reminded attendees about the ICC Code of Ethics and the Anti-Trust Policy, both of which can be found on the ICC 815 (IS-SWDDV) webpage. Mata also announced that the meeting will be recorded for internal reference only and that recording by anyone other than ICC staff is prohibited.
- Roll Call – Klein called the meeting to order with a roll call of ICC 815 (IS-SWDDV) committee members – Symbol indicates present, indicates absent.

Committee Members

Regulator		User		Manufacturer		Builder	
<input checked="" type="checkbox"/>	Jim Richardson	<input checked="" type="checkbox"/>	Esber Andiroglu PhD, PE	<input checked="" type="checkbox"/>	Marcus Elmer	<input checked="" type="checkbox"/>	Dan Buuck
<input checked="" type="checkbox"/>	Richard Grace	<input checked="" type="checkbox"/>	Gary Klein	<input checked="" type="checkbox"/>	Dave Parney	<input type="checkbox"/>	Joshua Trujillo
<input checked="" type="checkbox"/>	Terry Haughn	<input checked="" type="checkbox"/>	John Lansing	<input checked="" type="checkbox"/>	Lance MacNevin PE	Consumer	
<input checked="" type="checkbox"/>	Ross Wakefield	<input type="checkbox"/>	Philip Parisi Jr. PE	<input type="checkbox"/>	Kyle Thompson PE	<input type="checkbox"/>	Tim Keane
		<input checked="" type="checkbox"/>	Tom Wise			SDO/Test Lab	
						<input checked="" type="checkbox"/>	Kathryn (Katie) Foster

ICC Staff – None

Interested Parties and Guests – Drew Rich, Natascha Milesi-Ferretti, David Nickelson, Dan Cole, Adam Smith, Michael Gormley, John Koeller, Michael Cudahy

- Quorum and Membership Review - With 13 committee members in attendance, Mata announced the threshold of 9 for quorum was met.
- Approval of Meeting #15 Minutes from May 20, 2024 – Moved to approve by MacNevin, seconded by Richardson – Approved.
- Agenda Review and Approval – Moved to approve by Richardson, seconded by Grace – Approved.
- Research Update – Andiroglu/Rich

- a. Phase II Supply –
 - i. Andiroglu and Rich discussed their research involving an extensive review of drainage codes from various countries. They highlighted using artificial intelligence to analyze definitions across different codes, aiming to inform international standards based on global best practices. They emphasized that this work would influence future revisions of the ICC 815 standard based on strengths identified across different global standards.
 - ii. A question was raised about aligning pipe sizing requirements with existing research findings globally. Rich elaborated that they aimed to draw insights from diverse international codes such as those in Bangladesh while incorporating recent research into accepted practices within an international code framework.
 - b. Phase I DWV – Andiroglu anticipated completion of the draft by the end of May.
7. Presentations
- a. Aliaxis Lift Tower Laboratory (video and slide deck provided by Steve White from Aliaxis)
 - i. Michael Gormley provided commentary on what was being shown in the video and slide deck.
 - ii. Discussions revolved around videos showing an air admittance valve and drainage flow patterns within the stack.
8. Working Group Updates
- a. Measurement – Lansing
 - i. Rich elaborated on challenges related to testing motivations and resources required for sample collection, including control samples and preservation techniques.
 - ii. The team discussed financial constraints related to collecting samples for testing biofilm and pathogens from piping segments at the University of Miami building. Andy Jacques estimated \$20,000 for multi-floor sample collections and analyses.
 - iii. The team deliberated over the labor-intensive process of collecting pipe samples while ensuring minimal contamination, preserving biofilm integrity through freezing or immersion in collected water, as well as conducting mass analysis for corrosive properties determination.
 - iv. With limited time remaining for sample collection efforts due to complex procedures involved and the lack of flow rate and pressure data, the committee elected to cease the pipe sampling effort and focus on the next building for data collection.
 - v. Discussed the translation of Japanese codes and specific codes for water supply equipment design and construction standards. Rich explained his process of going through different codes section by section to compare relevant sections for supply sizing. The plan is to compare various codes with existing research publications to identify discrepancies or missing information in modern codes.
 - b. Water Service – Wise shared highlights from the May 2, 2024, working group meeting.
 - i. Discussed congested vs single family use of building water systems.

- ii. Discussed the differences in plumbing systems across regions, highlighting the need to understand client preferences and failure criteria. They emphasized the importance of considering factors such as temperature fluctuation, pressure changes, and user comfort when designing plumbing systems.
 - iii. The conversation touched on thermal comfort criteria for fixtures based on research from Germany, which provides three performance levels catering to different client needs.
 - iv. Discussed pressure differentials and thermal comfort standards across various countries' plumbing codes. The dialogue touched upon differences in code requirements globally and their impact on user experience.
 - v. Deliberated on how engineering should respond to international user expectations related to pressure, temperature, flow parameters within tapware systems worldwide.
 - vi. Discussed considerations for hydronic balancing which led to commissioning processes and their role in addressing the impact on system design.
 - vii. A concern was expressed about the sizing of municipal water supply, particularly for fire protection and the need to differentiate between fire protection demand and domestic use, suggesting that separate piping supply lines might be necessary. The discussion emphasized the importance of understanding the scope and differentiating failure in residential, multi-tenant, commercial, industrial, and healthcare settings.
 - viii. Wise clarified that the working group's scope is multifamily but not limited to it when exploring parameters and engineering.
 - ix. Discussed whether there are ways to promote new technology through plumbing codes without unduly influencing market dynamics. It was suggested that setting specific parameters in plumbing codes could drive innovation towards improved user experiences.
- c. DWV – Lansing
- i. Lansing and Klein discussed the need to consider factors that could influence design procedures for plumbing systems, such as biofilm thickness in drainage stacks. They highlighted the importance of accounting for biofilm thickness in sanitary drainage systems when selecting gradients, sizing pipes, and considering water quality.
 - ii. Klein emphasized the significance of identifying dead spots in bathrooms due to preferred showers and stagnant spaces on each floor. The discussion also touched upon sampling plans for assessing biofilm issues.
 - iii. Lansing highlighted how modern fixtures like low-flush toilets are influencing drainage standards designed decades ago from 1940s onwards which affects vent piping performance due to organic matter accumulation.
- d. Rosetta Stone – MacNevin
- i. Discussed progress on creating main documents for pressure pipe and drainage pipe, including layouts and plans to develop a glossary of plumbing pipe acronyms.

- ii. Mentioned the need for information management system such as a database due to the large amount of data that is anticipated.
9. In-Person Meeting at ICC Annual Conference – Mata reported that the ICC 815 in-person meeting is being arranged. It is slated for October 19, 2024, 1pm – 5pm Pacific in Long Beach, California.
10. Utility Data Requests – Smith reported that the City of Austin is still in process of installing flow meters and therefore are not in a position to share data.
11. Review of Action Items
 - a. Follow up with Steve White, Lift Tower Lab Presentation – Completed
 - b. Send Poll for Potential In-Person Meeting at ICC ABM - Completed
 - c. Develop Working Group Work Plans – In Progress
 - d. Utility Data Requests - City of Austin data request – Completed
 - e. Dave Parney to send a copy of Cast Iron Presentation – Completed
12. New Action Items
 - a. Follow up on database creation for Rosetta Stone WG – Mata
 - b. Contact Steve White to request sharing of Lift Tower presentation and slides with committee - Mata
 - c. Develop Working Group Work Plans – Working Group Chairs
 - d. Submit draft of Phase I DWV Research Report – Andiroglu/Rich
13. New Business
14. Old Business
15. Next Meeting – June 20, 2024, at 1pm-3:30pm Central (2pm-4:30pm Eastern)
16. Adjournment – Moved by Lansing, seconded by Wise. Motion passed. Meeting adjourned at 2:55 Central (3:55pm Eastern).