

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

Meeting #6 - Minutes

August 21, 2023

Chair: Gary Klein

Vice Chair: Philip Parisi

Secretariat- Ramiro Mata

The sixth meeting of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held on August 21, 2023 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

1. Welcome

Chairman, Gary Klein, convened the meeting and welcomed attendees at 2:03 pm EDT 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 in 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.

2. 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"/>	Joseph Alexander	<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 type="checkbox"/>	Terry Haughn	<input checked="" type="checkbox"/>	John Lansing	<input checked="" type="checkbox"/>	Lance MacNevin PE	Consumer	
<input checked="" type="checkbox"/>	Thomas Roberts	<input type="checkbox"/>	Juneseok Lee PhD, PE	<input checked="" type="checkbox"/>	Kyle Thompson PE	<input type="checkbox"/>	Tim Keane
<input checked="" type="checkbox"/>	Ross Wakefield	<input type="checkbox"/>	Philip Parisi Jr. PE			SDO/Test Lab	
						<input checked="" type="checkbox"/>	Kathryn (Katie) Foster

ICC Staff – Mark Fasel

Interested Parties and Guests – Dan Cole, Drew Rich, David Nickelson, Rich Houle, Tom Wise, Natascha Milesi-Ferretti, Jeremy Williams, Steve Deem, Frank Schmidt, Michael Gormley, Michael Cudahy

1. Quorum and Membership Review - With 13 committee members in attendance, Mata indicated the threshold of 10 for quorum has been met.
2. Agenda Review and Approval – Water Hammer (Cyclic Pressure) Presentation was postponed due to illness. Motion by Lansing to approve revised agenda, seconded by Grace. Motion approved.

3. Approval of Meeting #5 Minutes from July 27, 2023 – Motion by MacNevin to approve the minutes, seconded by Lansing. Motion approved.
4. University of Miami Research Update – Rich/Andiroglu
 - a. Drew Rich presented the finalized table of contents for the report, which includes an introduction, literature review, influential factors considered for inclusion, proposed solutions and frameworks for success. The report will also include exhibits on water reuse legislation and references.
 - b. Chapter five of the end-of-year report will define the work that the committee will engage in during the coming year. However, there are concerns about intellectual property rights related to proposed solutions that need further discussion.
 - c. Drew Rich provided an update on the grant submission for equipment quotes, including pressure sensors, ultrasonic flow meters, and digital in-line ones. They also discussed a low-cost solution using cameras inserted into pipes with machine learning to determine velocity. Additionally, they mentioned another grant due in October focused on data collection.
5. Measurement Working Group Update – Lansing
 - a. John Lansing reported progress on various sensors needed for monitoring systems in buildings. They are still working on tracking flow partially filled gravity drainage piping but will receive feedback at an upcoming symposium.
 - b. John Lansing updated that they have been in touch with the University of Miami regarding campus-wide monitoring. They plan to focus on maximum and minimum points such as pumps or pressure reduction valves where there is less hydraulic pressure and monitor those areas worst-case scenario-wise.
 - c. Rich mentioned a workforce development grant that could be used for acquiring equipment and described various sensors that could be used. Will want to look at minimum flow rate (most distant). Maybe able to install sensors during winter break when the building will be unoccupied.
 - d. Tom Wise also mentioned flow monitoring and data logging equipment for waste drains that are used in Australia.
 - e. Mata suggested adding location information about where sensors will be placed along with acquiring various sizes to fit 3", 4", 6" pipes for the supply system and 4", 6", 8", 10" pipes for the drain system.
 - f. Hot and Cold-Water Piping: Gary Klein proposed testing hot water system temperatures and suggested reconsidering plumbing construction techniques for better insulation. Cold-water piping is being considered separately from the hot water piping due to regional variations that may impact distribution piping.
6. Project Plan
 - a. The committee reviewed their project plan, which included creating an initial outline and developing working groups. They discussed adding rainwater catchment and piping as a topic under research questions.
 - b. Steve Deem suggested including QA/QC as a step in the project plan to ensure the data collected is valid.
7. Review of Action Items
 - a. Natascha Mileti-Ferretti regarding NIST Plumbing Research Presentation – Agreed to present on September 21, 2023

- b. Phil Woolhouse regarding Water Hammer (Cyclic Pressure) Research Presentation – Agreed to present but postponed due to illness
 - c. Pete DeMarco regarding Drain Line Carry Study - Declined
 - d. Frank Schmidt regarding German Waste/Drain Research – Not his field of expertise but offered to put us in contact with German researchers. Klein and Lansing will bring up the topic when they meet with Geberit, who is a plumbing product manufacturer and conducts research on waste and drain systems. Schmidt will also try to contact the person overseeing Geberit’s waste drain research.
8. New Business – Mata announced that a confidentiality agreement will be sent to all committee members and members of any working groups that are formed. The reasoning is to address intellectual property that may be shared because of the research and the standard development process.
9. Old Business
 - a. Suggested Sampling Locations for Pipe after Demolition of Stanford Building in the University of Miami
 - b. Naming Conventions – In Progress. Grace will continue to gather more photos and will present them to the committee at a future meeting.
 - i. Plumbing Fixtures/Appurtenances/Appliances
 - ii. Water Supply Piping, Hot/Cold
 - iii. Wastewater Piping, Black/Gray
 - iv. Recirculation Piping
 - v. Venting
 - vi. Occupancies/Building Types
 - vii. Urine Diversion Systems
10. Action Items –
 - a. Send Phase 1 Table of Contents to Mata – Rich
 - b. Letter to Request Data from Water Demand Calculator Study – Klein/Mata
 - c. Request for Dr. Gormley to Present DWV Modeling – Mata
 - d. Provide Definitions for Pipe Materials
 - i. Plastic – MacNevin
 - ii. Cast Iron – Parney
 - iii. Copper - Elmer
11. Old Business – None were presented.
12. Next Meeting – September 21, 2023, at 1pm-5pm Central (2pm-6pm Eastern)
13. Meeting Adjourned at 5:43pm EDT.