

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

Meeting #9 - Minutes

November 27, 2023

Chair: Gary Klein

Vice Chair: Philip Parisi

Secretariat- Ramiro Mata

The ninth meeting of the ICC 815 Sizing Water Distribution, Drainage and Venting Standard Consensus Committee (IS-SWDDV) was held on November 27, 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 – Vice Chairman, Phil Parisi, convened the meeting and welcomed attendees at 2:04pm EST along with Staff Secretariat, Ramiro Mata. Chairman, Gary Klein, sent notification that he would be joining the meeting late. 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.
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 type="checkbox"/>	Richard Grace	<input checked="" type="checkbox"/>	Gary Klein	<input checked="" type="checkbox"/>	Dave Parney	<input checked="" 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"/>	Juneseok Lee PhD, PE	<input type="checkbox"/>	Kyle Thompson PE	<input checked="" type="checkbox"/>	Tim Keane
		<input checked="" type="checkbox"/>	Philip Parisi Jr. PE			SDO/Test Lab	
		<input checked="" type="checkbox"/>	Tom Wise			<input checked="" type="checkbox"/>	Kathryn (Katie) Foster

ICC Staff – Tom Roberts

Interested Parties and Guests – Dan Cole, Drew Rich, Natascha Milesi-Ferretti, Michael Cudahy, Jim Richardson, Adam Smith, Jeremy Williams, Dr. Atif Mustafa, David Nickelson

3. Quorum and Membership Review - With 15 committee members in attendance, Mata indicated the threshold of 10 for quorum has been met.
4. Agenda Review and Approval –Motion by MacNevin to approve, seconded by Lansing. Motion approved.

5. Approval of Meeting #8 Minutes from October 30, 2023 – MacNevin noted that there is an error on item 10.a.i. The material should read PE-RT, not PEXT-RT. Motion by Lansing to approve revised minutes, seconded by Foster. Motion approved.
6. Research Update – Rich provided the following update:
 - a. Completed the SPADE (System Performance Assessment and Data Extraction) procedure that will be submitted to the CIB W062 conference in Wales next year.
 - b. Reviewing building regulations and highlighting key differences that exist between them from the sanitary point of view. Reviewing the design process to see where there are variations.
 - c. Requesting help in identifying design standards for different countries or legislation that restricts the use of water or requires efficient fixtures or green building codes.
 - d. Presented a list of standards that have been translated to English. Looking at diagrams that we can use as kind of a starting point.
7. Working Groups Updates
 - a. Measurement – Lansing (Chair). Rich gave the following updates
 - i. There are a total of ten flow meters that will be used for the Stanford building.
 - ii. The floor plans for the building on campus have been completed. Request for the Measurement working group for suggestions on where to install the instruments.
 - iii. Will contact the university’s facilities group to begin the process of installing the instruments.
 - iv. The next WG meeting is scheduled for January 18, 2024
 - v. Milesi-Ferretti, Keane, Elmer, and Wakefield were added to the working group.
 - b. Supply System –Wise (Chair)
 - i. The domestic water supply working group met on November 17th with members discussing Australian research project dealing with pipe sizing using a modified Wistorts method.
 - ii. Discussed using this new methodology only for new buildings and having separate codes for existing buildings because applying the new requirements to existing buildings would cause problems.
 - iii. MacNevin, Cole, Elmer and Keane were added to the working group.
 - c. Waste and Vent – Lansing (Chair)
 - i. Lansing led the first meeting where they reviewed topics under consideration for scope of work, which included everything related to waste and vent potential. They will schedule another meeting in January 2024 depending upon everyone's availability.
 - ii. Lansing pointed out that there are some good conversion tables in the EN 12056 and EN 806 European water supply drainage standards, which will be a good reference point for minimum internal diameter of pipes.
 - iii. Cole was added to the working group.
 - d. Rosetta Stone – MacNevin (Chair)
 - i. Tom Roberts presented an Australian construction dictionary that puts together various standards, building codes, and guidance documents into one dictionary. It sets out a hierarchy of terms based on regulatory framework level including plumbing terms grouped by different types like drainage, waste vents, supply pipes as well as fixtures and appliances.

- ii. MacNevin suggested that this document could exist outside of the ICC 815 standard.
8. Standard Outline
 - a. Ramiro shared a draft outline focusing mainly on two main chapters - Water Supply Systems & Waste/Vent Systems each containing subtopics such as Design Requirement Based on Flow/Performance Requirement etc. and noted that there has been no feedback received from the previous meeting.
 - b. There was a suggestion to add pressure drop limitations under performance report requirements along with building type demographics under design requirement subsections as well as an item for maximum design flow velocities or minimum self-cleansing velocities in section 5.1.
 - c. Discussed addressing possible causes of stoppages in drain systems such as fats oils and grease (FOG), uretic salts, hygiene products, tree roots etc., possibly under best management practices subsections 5.3 or 6.3.
 - d. Discussed non-fixture related flows such as wastewater pumping, rainwater drainage systems, gray water drainage systems (which have different clearing velocity needs than sanitary systems), urine diversion (already covered), etc., which should be considered while designing supply piping.
 - e. Discussed whether separate water supplies should be sized differently based on the type of water to be used, e.g., if gray water is being used for feeding toilets, then there should be separate piping system just for toilets with sizing done accordingly.
9. Working Group Work Plans - Working Groups to develop project plan (to include steps to be taken and due dates) by the January meeting – WG Chairs
10. Review of Action Items:
 - a. Cast Iron Presentation (Parney) – Postponed to next meeting
 - b. Copper Presentation (Elmer) –
 - i. Presented information on copper tube dimensions from the Copper Development Association, including common slang terms used in North America and around the world.
 - ii. Presented images and descriptions of different connection types for fittings, including male and female connections. He also discussed the differences between internal and external threads, as well as how fittings are referenced in the US versus internationally. Sought feedback was requested from attendees on any common terms or field terms that were missing
 - iii. Discussed the difference between copper tubes, pipes, and fittings.
 - iv. Provided DN standards for both applications as well as joining practices such as soldering or brazing.
 - v. Gave additional information on alternative joining methods such as flameless methods, push fit joints or push connect fittings, roll groove fittings, mechanically formed, or extruded outlets.
 - vi. The group thought that the format could be used for the Rosetta Stone document.
11. Fire Sprinkler Pipe Sizing – (Smith)

- a. Gave an overview of domestic supplied fire sprinkler systems which are different from traditional standalone fire sprinkler systems which function completely independent of domestic drinking water in buildings under NFP A 13 D & R combined system.
 - b. Explained the design of a fire sprinkler system, which involves picking up flow through different parts and turning it around. The system is designed to follow all sprinkler installation guidelines, including head placement and accounting for overhangs. The domestic waterline requirements are smaller than the actual fire sprinkler line requirements, so the main piping that feeds the building is increased to accommodate that flow.
 - c. Raised questions regarding NFPA 13 D & R standards related to shared pipeline versus dedicated pipeline scenarios where number being between six and twenty heads would require more calculations as compared with six or less heads scenario where they can share same distribution piping without having separate ones dedicated solely towards them like plumbing fixtures do.
 - d. Explained that the fire sprinkler flow is determined by the number of heads and size of the room. The size of each head dictates how much water pressure and volume is needed to protect a specific area. The sizing process for fire sprinklers is like domestic water pipe sizing, but it usually demands a higher flow rate and larger pipe.
12. New Action Items
- a. Send a copy of Copper Presentation to Mata – Elmer
 - b. Setup meeting with WG chairs - Mata
 - c. Meeting #10 on **December 18, 2023, is CANCELLED**
13. Next Meeting – January 25, 2024, at 1pm-5pm Central (2pm-6pm Eastern)
14. Meeting adjourned at 5:44pm EST.