

**MEETING LOG**  
**Directorate for Engineering Sciences**

**PRODUCT:** Adult Bath Tubs

**SUBJECT:** ASTM F15.03 Safety Standards for Bathtub and Shower Structures

**LOCATION:** Video Teleconference via Zoom

**DATE:** Thursday January 27, 2022 3:30pm-4:30pm ET

**ENTRY DATE:** Friday March 11, 2022

**LOG ENTRY SOURCE:** Susan M. Bowley, Ph.D. Mechanical and Biomedical Engineer, ESMC

**COMMISSION ATTENDEES (1):** Susan M. Bowley, Ph.D.

**NON-COMMISSION ATTENDEES:** Contact ASTM for a complete list of attendees

**MEETING SUMMARY:**

This ongoing meeting was held to revisit and discuss an overview of the withdrawn standard *ASTM F462* Standard Consumer Safety Specification for Slip-Resistant Bathing Facilities and obstacles to ASTM providing a new standard to address slip/fall hazards in bath tubs.

The *ASTM F462* standard was not based on human slip research and focused on use of only one slip resistance tester to determine coefficient of friction. The Task Group (TG) would like to focus development of a new standard that uses reference surfaces and human subject testing. To date TG members/Industry has not created any reference surfaces for testing. CPSC staff would like a new standard to address vulnerable populations, including the elderly.

The TG Chair discussed in detail the CPSC Contract Award to ASU/Forcon FY21 related to creating Reference Surfaces (RS) for testing and ongoing progress.

TG Chair presented slides depicting patterns to be tested with human subjects for porcelain/enamelled steel and 3D surfaces created by vacuum forming. Also showed high speed videos of testing using pendulum tribometer.

Questions from TG members brought up at *F13* Meeting: 1) Changes of skin with age effecting results; 2) Step-in height for step-in showers; 3) Mats.

No industry/manufacturers have volunteered for creation of Reference Surfaces (RS) – all being created by J. Leffler (Forcon) under CPSC Contract.

Ongoing tasks for future TG meetings (also related to deliverables for FY21 CPSC Contract Award to ASU/Forcon International):

- Review of current research concerning slip/fall in bath tubs and hot tubs/spas.
- Review the CPSC staff bid process used previously (May 2020) to allow for notification to a larger audience (no bids were received) and provide any publicly available information to the TG – *Completed and new CPSC Contract awarded on 9/30/21*
- Draft a human research study protocol – *Completed and approved by ASU IRB 1/10/22*
- Determine how NIST measures coefficient of friction
- Leverage other ASTM standards activity related to common slip/fall issues
- Plan for CPSC staff to place a new bid to gather human research data on slip/fall in bath tubs – *Completed and new CPSC Contract awarded on 9/30/21*
- Plan for CPSC staff to provide incident data on an ongoing basis related to elderly slip/fall incidents in bath tubs, showers, and hot tubs/spas – *Completed and data released on 11/23/21 TG Chair (Slip/Falls Bathtub and Hot Tub incident data spreadsheet covering 8/12/2010 to 8/12/2021 timeframe).*
- TG members to evaluate internal hurdles to producing reference surfaces
- Plan for CPSC staff to evaluate having Commission provide a letter to highlight the importance of a new standard to address this issue, and sponsoring human subject data to support a new standard.

Future meetings are planned to occur on a monthly basis to provide additional discussion, and updates and feedback on progress for tasks noted above.

**Meeting Adjourned at 5pm ET**