



SFPE Standards-Making Committee on Calculating Fire Exposures  
Database Working Group  
Meeting Report – August 22, 2016

**Present:** Sean Hunt (Working Group Leader), Jason Smart, Ulf Wickström and Chris Jelenewicz (Staff)

The following was discussed:

- **Open Items from 6/10/16 Working Group Meeting**

- A. **Sharepoint** – Sean set up a SharePoint site for the entire committee. The Database Working Group has its own folder that is being used to store old and new test data/reports.
- B. **Original database methods** – The screening process for the original database was discussed. A test/report was eliminated from the database if:
  1. Fire was fuel controlled
  2. Change in ventilation occurred during test
  3. Forced ventilation
  4. Test was conducted in a furnace
  5. Lack of data (no temperatures reported, e.g.)
  6. Excessively small scale (< 1 m<sup>3</sup>)
  7. Unknown boundary construction
  8. Multiple fire elevations
  9. Gas burner
  10. Combustible liquids (Subsequent removal – committee decision c. 2006)

The Working Group could not remember why tests that included forced ventilation, gas burner fires and combustible liquid fires were part of the screening criteria. There was general agreement that the Working Group should explore bringing these tests back into the database. This will be discussed at the next Working Group Meeting.

- C. **Determination of the mean** – In the original database, tests were reported to be screened for lack of average compartment data; only tests where the average temperature was reported were retained in database comparison plots.

In cases where the mean was not included, the Working Group will explore if there is any way to consider a method to compute a mean that makes sense so the data can be included in the database.

It was noted that using the maximum temperature as a function of time as opposed to the mean temperature may be a better measure when considering structural fire engineering. However, if this is the case, some data would be eliminated because only average data was provided, but at the same time some data would come back into the database. There will be more discussion about this topic at the next Working Group Meeting.

- D. **Literature search** – So far the Working Group has found new test data from the following:

- i. Fire Code Reform Center data – Sean will check w/ Craig.
- ii. Chow data – CJ received several test reports from Professor Chow and posted on the ShareDrive.
- iii. AWC World Trade Center data -- Jason provided reports for tests that involved timber construction. They need to be posted to the ShareDrive.
- iv. Cliff Barnett data – Vyto provided the test data. It is posted on the ShareDrive
- v. SP data (Wickstrom) – Ulf provided data from test that used propane burner. It was posted on the ShareDrive.
- vi. ECU – CJ still following up on data from ECU.

- **Next Steps**

- A. Literature searches -- It was noted that additional literature searches will not be needed at this time and the Working Group will move forward. If new data is found, it can be added later.
- B. **Data review** – For the next meeting the Working Group will finalize the approach for data screening.
- C. **Quality of Data** – There was a discussion on the quality of the data, specifically in regards to how temperature was measured. It was noted that plate thermometers are more effective because of their ability to record a temperature that is representable to

the heating conditions by convection and radiation of the fire exposed test objects. Other means may not be as effective.

It was agreed that if the temperature in the test exceeded 600°C, it could stay in the database no matter how the temperature was measured. However, the Working Group will continue this discussion at the next meeting.

**Calculation method review** – At the next Working Group meeting, there will be a discussion on the calculation methods. Specifically, if any new methods should be added to the analysis.

- **Next Meeting** – The next working group meeting will be held in the next month. CJ will schedule via a Doodle Poll.

**End of Report**