Comparing Fire Test Methods: NFPA 285 versus FM 4880

NFPA 285 Standard Test Method has been part of the International Building Code and previous model building code requirements for many decades. NFPA 285 is used to evaluate the suitability of exterior wall assemblies that are constructed using combustible materials or that incorporate combustible components where exterior walls are required to be non-combustible.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>NFPA 285</th>
<th>FM 4880 (16' Parallel Panel Test)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test standard replicates/evaluates a fire originating in a room at flashover, breaking out a window, and spreading externally. The fire exposure included in the test standard is based on actual data from an interior compartment fire hazard, which provides a consistent basis of determining acceptable performance.</td>
<td>✓</td>
<td>✗ No window or “opening” in the test standard to evaluate this scenario.</td>
</tr>
<tr>
<td>Test standard evaluates fire performance of a complete wall assembly (e.g., exterior surface, interior surface, insulation, weather barriers, sheathing, window area).</td>
<td>✓</td>
<td>✗ Evaluates the surface material only. Does not detect a fire within the wall assembly.</td>
</tr>
<tr>
<td>Test standard simultaneously exposes interior wall, components within the wall, window area (header/jambs/sill), and exterior wall to fire hazard.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Test standard evaluates effects of a window opening and the details around the window (i.e., bucks, installation materials, etc.) on flame propagation.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Test standard evaluates the entire wall assembly for hazard of vertical and lateral flame propagation.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Test standard evaluates the entire wall assembly for hazard of flame propagation from floor to floor.</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Test standard carries 30 years of historical performance and precedent as a referenced standard in the model building codes (adopted by many states, cities, and jurisdictions).</td>
<td>✓</td>
<td>✗</td>
</tr>
<tr>
<td>Test standard is appropriate for the evaluation of a variety of exterior wall assembly systems, including EIFS, MCM, and cavity wall construction.</td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>

Support the Committee Action for Disapproval of FS74-18 and FS149-18.