

## NFPA 285-Proposed 2018 Edition

### Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

TIA Log No.: 1264

Reference: 1.1.1\*, 1.2, A.1.1.1

Comment Closing Date: June 15, 2017

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1. Revise paragraph 1.1.1\* to read as follows:

**1.1.1\*** This standard provides a test method for determining the fire propagation characteristics of exterior non-load-bearing wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components, ~~and that are intended to be installed on buildings required to have exterior walls of noncombustible construction.~~

2. Revise section 1.2 to read as follows:

**1.2 Purpose.** The purpose of this standard is to provide a standardized fire test procedure for evaluating the suitability of exterior non-load-bearing wall assemblies and panels used as components of curtain wall assemblies that are constructed using combustible materials or that incorporate combustible components ~~for installation on buildings where the exterior walls are required to be noncombustible.~~

3. Revise annex material A.1.1.1 to read as follows:

**A.1.1.1** The fire test method described is intended to evaluate the inclusion of combustible components within wall assemblies/panels ~~of buildings that are required to have exterior walls of noncombustible construction.~~

The test apparatus described in this standard is commonly referred to as the intermediate-scale multistory test apparatus (ISMA).

**Substantiation:** In both NFPA 5000 and the IBC, NFPA 285 is being used to assess vertical and lateral flame propagation for exterior walls containing combustible components. The NFPA 285 test standard was originally developed for the evaluation of combustible materials installed on non-combustible buildings (Types I and II construction). The NFPA 285 test standard is now being used to assess the fire performance of combustible materials which can be installed in all types of buildings, irrespective of the Type of construction, including buildings constructed using combustible components (FRTW Wood framing). As the building codes are being actively revised to reflect current construction practices, such as podium construction, the use of FRTW wood in Type III Buildings, and the use of heavy timber/tall wooden building construction, a conflict between the scope of the standard and the common practice now exists. This conflict is preventing the use of the NFPA 285 test standard for the evaluation of combustible materials in these new construction arenas.

For example, NFPA 5000-2015 includes testing to NFPA 285 for exterior non-bearing walls of any type in 7.2.3.2.12.2, for exterior non-bearing walls of Type III construction without limitation in 7.2.4.2.3, for exterior non-bearing walls of Type IV construction without limitation in 7.2.5.6.8, for exterior walls of Types I, II, III and IV construction containing MCM materials in 37.4.4, for exterior walls of Type I, Type II, Type III, and Type IV buildings of any height containing foam plastics in 48.4.1.5.1. Similarly, the International Building Code (IBC-2015) also contains multiple requirements for use of NFPA 285 without any requirement that the wall (or the building) be of combustible construction. In NFPA 5000, a second revision also added NFPA 285 testing to section 37.1.5 for exterior non-bearing walls. The fire test standard itself should not differentiate between the type of wall construction materials. This precedent has been taken in many other fire performance test standards, including NFPA 252, NFPA 257, NFPA 268, NFPA 286, ASTM E119, and ASTM E814.

At the first revision stage, during the development of NFPA 285 the NFPA Fire Tests committee decided to make a change in the scope to clarify that NFPA 285 is applicable to any type of construction. That first revision received no public comments. However, during the second revision meeting it was argued that, if exceptions to the noncombustible requirement need to be made, they should be made within the building codes and not within the test method. The technical committee accepted that argument and reinstated the original scope.

Unfortunately, after the second revision was issued it was brought to the attention of the technical committee that the wording in the scope was being used (without adequate technical justification) by an ICC Ad-Hoc committee for the IBC (ICC Ad Hoc Committee for Tall Wood Buildings) for excluding NFPA 285 from use for new tall buildings composed of combustible exterior construction. The IBC committee was created by the ICC Board of directors to explore the building science of tall wood buildings with the scope being to investigate the feasibility of and take action on developing code changes for tall wood buildings. This is a multi-year effort with the objective of the submission of code changes for the 2018 Group A Cycle (IBC) in January/2018. So, in fact, the Fire Tests Committee was incorrect in their conclusion during the second revision meeting. This error needs to be corrected.

NFPA 285 is a multi-story test of an exterior wall construction that contains a window and is unique in being able to assess both the upwards flame spread and the potential for window penetration from exterior fires. No other fire test that is in use today contains that unique feature. However, if the scope is not changed the ICC committee will encounter serious difficulties for proposing the use of NFPA 285 to assess upwards flame spread and flame penetration for buildings of combustible construction and other, less appropriate, tests will be used. In fact, it is almost a certainty that NFPA 285 would not be able to be used for the next edition of the IBC, with proposals due January 2018, since the next NFPA 285 edition, following the traditional development process, would not issue until too late in the development process of the code.

Similarly, the same arguments would prevent NFPA 285 from being able to be used in similar applications in the next edition of NFPA 5000.

NFPA 285 is on a 5-6 year revision schedule (the last edition having been issued in 2012).

**Emergency Nature:** The standard contains an error or an omission that was overlooked during the regular revision process. The proposed TIA intends to correct a previously unknown existing hazard. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation. The proposed TIA intends to accomplish a recognition of an advance in the art of safeguarding property or life where an alternative method is not in current use or is unavailable to the public. The proposed TIA intends to correct a circumstance in which the revised NFPA Standard has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process or was without adequate technical (safety) justification of the action.

The timing of this TIA is such that changes to the 2018 edition of NFPA 285 can be made in order for NFPA 285 to be able to be used in this new application for tall wood buildings in the next edition of the International Building Code (and in the next edition of NFPA 5000). Following the traditional revision process for NFPA 285 will make it near impossible for this to apply in the ICC for Tall Wood Buildings. In turn, this could even jeopardize the entire effort of including these buildings in the code. The previous edition of NFPA 285 was dated 2012 and the next one will be dated 2023 or 2024.

*Anyone may submit a comment by the closing date indicated above. To submit a comment, please identify the number of the TIA and forward to the [Secretary, Standards Council, 1 Batterymarch Park, Quincy, MA 02169-7471](#).*