



National Fire Protection Association

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MEMORANDUM

(AMENDMENT)

TO: Code-Making Panel 13

FROM: Mark Earley, *Staff Liaison*

DATE: June 17, 2013

SUBJECT: Proposed 2014 Edition of NFPA 70, Letter Ballot on Amendment 70-31

At the June 13, 2013 Technical Session, NFPA 70 was amended by the acceptance of the following:

Amendment: To Accept Comment 13-101 and Thereby Reject Proposal 13-167

In accordance with Section 4.7 of the *Regulations Governing Committee Projects*, the Technical Committee must now be balloted on the Association meeting action. Should the ballot not pass, the wording of that portion of the Report affected by the amendment would return to the text of the previous edition, if any. If there is no previous edition text, the text is simply deleted.

Please review this item, complete the attached ballot, and return it to NFPA as soon as possible, but no later than **Wednesday, June 26, 2013**. If you disagree or abstain on an amendment please indicate your reason(s) for doing so.

The transcripts from the Annual 2013 Association Technical Meeting (June 12 and June 13) will be available within two weeks at: www.nfpa.org/techsession.

Note: Please remember that the return of ballots and attendance at Committee Meetings is required in accordance with Section 3.1.3.1 of the *Regulations Governing Committee Projects*.

**NFPA 70, NATIONAL ELECTRICAL CODE ®
TC BALLOT FOR CODE-MAKING PANEL 13
JUNE 2013 ASSOCIATION AMENDMENT 70-31**

Amendment: Accept Comment 13-101 and thereby Reject Proposal 13-167

NOTE: This Association Amendment (“Amendment”) is being submitted for a ballot for the Technical Committee pursuant to section 4.7.1 of the *Regulations Governing Committee Projects (“Regs”)*. Under the *Regs.*, if an Amendment fails the ballot of the Technical Committee, the text affected by the Amendment returns to previous edition text. *See Regs.* at 4.7.1(c). Please note that the Amendment that is the subject of this ballot recommends 708.10(C)(2) be returned to previous edition text. In this case, the result is:

(2) Fire Protection for Feeders. Feeders shall meet one of the following conditions:

(1) Be a listed electrical circuit protective system with a minimum 2-hour fire rating

Informational Note: UL guide information for electrical circuit protection systems (FHIT) contains information on proper installation requirements to maintain the fire rating.

(2) Be protected by a listed fire-rated assembly that has a minimum fire rating of 2 hours

(3) Be encased in a minimum of 50 mm (2 in.) of concrete

This means that, whether this ballot agrees or disagrees with the Amendment, the default recommendation to the Standards Council will be to return to previous edition text. While the Standards Council generally defers to the default recommendation prescribed by the *Regs.* that recommendation is not binding, and in the event of an appeal to the Standards Council, the Technical Committee ballot results will be reviewed and considered by the Council as part of its deliberations. It is important, therefore, that you provide your vote and reasoning for the consideration of the Council.

Agree

Do Not Agree*

Abstain*

*Please give reasons for voting “Do Not Agree” or “Abstain”:

Please return as soon as possible, but no later than **Wednesday, June 26, 2013**, to kshea@nfpa.org or via fax to 617-984-7070:

Signature: _____

Name - Please Print: _____

Date: _____

ACCEPT Comment 13-101

13-101 Log #961 NEC-P13 **Final Action: Reject**
(708.10(C))

Submitter: William A. Wolfe, Steel Tube Institute
Comment on Proposal No: 13-167

Recommendation: Reject this proposal and retain the text in 2011 NEC.
Substantiation: This proposal removes the allowance for 2" of concrete which has for years been a recognized method of providing fire and mechanical protection for conductors. Sufficient substantiation for removing this long-held option was not provided. The submitter states that it is documented in the International Building Code (IBC) that 2 inches of concrete is not equivalent to 2-hr. fire protection. In fact, the 2012 IBC Section 909.20.6.1 (provided) allows control and power wiring to be encased in 2" of concrete as an alternative to the use of 2 hour rated cable, fire barriers, etc. The IBC does not require a "listed" concrete assembly.

The permission for concrete encasement should also be retained in the NEC as a viable alternative to the other methods listed. The NEC 2011 Handbook describes the difference between - not equivalency of - the other 2 methods allowed in 695.6(A)(2)(d): a 2-hour fire rating of an electrical circuit and a 2-hour fire-resistance rating of a structural member, such as a wall. In September 2012, UL removed several Electrical Circuit Protective Systems as allowed in 695.6(A)(2)(d)(3) from the UL Fire Resistive Directory.

Note: Supporting material is available for review at NFPA Headquarters.

Panel Meeting Action: Reject

Panel Statement: See the panel action and substantiation on 13-102a (Log #CC1304).

Number Eligible to Vote: 21

Ballot Results: Affirmative: 18 Negative: 3

Explanation of Negative:

DEGNAN, J.: See my statement on comment 13-72.

ODE, M.: See my statement on Comment 13-46.

SPINA, M.: See my statement on comment 13-46.

Backup Proposal 13-167

13-167 Log #13 NEC-P13 **Final Action: Accept in Principle**
(708.10(C)(2))

Note: This Proposal appeared as Comment 13-179 (Log #1641) which was held from the A2010 ROC on Proposal 13-273. The Recommendation on Proposal 13-273 was: **Revise Text** as follows:

708.10(C)(2) Fire Protection for Feeders. Feeders shall meet one of the following conditions:

(1) Be a listed electrical circuit protective system with a minimum ~~24~~-hour fire rating when installed in accordance with the listing requirement

(2) Be protected by a fire-rated assembly listed to achieve a minimum fire rating of ~~24~~ hour

(3) Be embedded in not less than 50 mm (2 in.) of concrete with a sufficient thickness to achieve a minimum 2 hour fire rating

~~(4) Be a cable listed to maintain circuit integrity for not less than 1 hour when installed in accordance with the listing requirement.~~

Submitter: Technical Correlating Committee on National Electrical Code®,
Recommendation: The Technical Correlating Committee directs that this comment be reported as "Hold" as it introduces new material and is not in accordance with 4.4.6.2.2 of the NFPA Regulations Governing Committee Projects.

The concept of 4 inches of concrete equated to a 2 hour fire-rating has not had public review.

Substantiation: This is a direction from the Technical Correlating Committee on National Electrical Code Correlating Committee in accordance with 3.4.2 and 3.4.3 of the Regulations Governing Committee Projects.

Panel Meeting Action: Accept in Principle

Revise 708.10(C)(2) to read as follows:

(1) no change.

Informational Note: no change.

(2) Be protected by a listed fire-rated assembly, consisting of gypsum wallboard, concrete or other material that has a minimum fire rating of 2 hours

(3) Be encased in a minimum 50mm (2 in.) of concrete.

Panel Statement: CMP-13 agrees with the submitter that there is no evidence that 2 in. of concrete will attain a 2-hr fire rating. The language is consistent with language throughout the NFPA standards pertaining to construction requirements.

Number Eligible to Vote: 18

Ballot Results: Affirmative: 17 Negative: 1

Explanation of Negative:

ODE, M.: See the Negative Statement in Proposal 13-67.

Referenced Comment 13-102a, 13-72, and 13-46

13-102a Log #CC1304 NEC-P13 **Final Action: Accept**
(708.10(C)(2))

Submitter: Code-Making Panel 13,
Comment on Proposal No: 13-167

Recommendation: Revise the action on Proposal 13-167 as follows:

(2) Fire Protection for Feeders. Feeders shall meet one of the following conditions:

(1) Be a listed electrical circuit protective system with a minimum 2-hour fire rating

Informational Note: UL guide information for electrical circuit protection systems (FHIT) contains information on proper installation requirements to maintain the fire rating.

(2) Be protected by a listed fire-rated assembly that has a minimum fire rating of 2 hours

(3) Be encased in a minimum ~~50~~ 100 mm (~~2~~ 4 in.) of concrete

(4) Be installed under not less than 50 mm (2 in.) of concrete on grade

Substantiation: The committee acknowledges that 2 inches of concrete is not sufficient to provide 2 hours of fire rating for areas other than a slab on grade. The committee continues to accept the 4 inches of concrete concept that was submitted during the 2011 cycle. The committee considers the 4 inch concept to be enforceable.

Panel Meeting Action: Accept

Number Eligible to Vote: 21

Ballot Results: Affirmative: 17 Negative: 4

Explanation of Negative:

CZARNECKI, N.: The allowance for 2" concrete encasement has been an acceptable method for providing protection for years in this section of the Code and no substantiation has been provided to show there is a problem with its use. Contrary to the substantiation in Proposal 13-68, Section 909.20.6.1 of the International Building code does allow control and power wiring to be encased in 2" of concrete as an alternative to the use of 2 hour rated cable, fire barriers, etc. The NEC has long allowed the use of 2" concrete as a viable alternative to other methods allowed and the 2011 NFPA Handbook describes the difference between the allowable methods in 695.6(A)(2)d, not necessarily their equivalency.

DEGNAN, J.: See my statement on comment 13-72.

ODE, M.: See my statement on Comment 13-46.

SPINA, M.: See my statement on comment 13-46.

13-72 Log #1473 NEC-P13 **Final Action: Reject**
(700.9(D)(1))

Submitter: John R. Kovacik, UL LLC

Comment on Proposal No: 13-101

Recommendation: Reject Proposal 13-101.

Substantiation: There were no incidents cited or problems identified that justify the removal of this requirement. The 2 in of concrete is a long-standing requirement that has a history and proven track record of providing adequate fire protection for conductors.

The added requirement that concrete or other material be listed to achieve a minimum fire rating is impractical for concrete. UL does not test concrete alone for a fire rating and such a program would be difficult if not impossible to develop based on the variables involved in preparation, finishing, curing, treating, etc.

The proponents of this proposal have argued that 2 in. of concrete does not equate to 2 hours of fire protection on the basis that the 2 in. concrete requirement was in the NFPA 20 Fire Pump Standard when the required fire rating for conductors was 1 hour, and the 2 in. concrete requirement was left unchanged when the fire rating for conductors was increased to 2 hours. The 2 in. of concrete has never been claimed to provide a specific time-sensitive fire rating or been considered to equate to a specific fire rating. It is an alternative method of protection for conductors and its removal from the NEC will cause a hardship in that it will force installers to use protection methods that may not be superior to 2 in. of concrete.

Panel Meeting Action: Reject

Panel Statement: See 13-75a (Log #CC1303).

Number Eligible to Vote: 21

Ballot Results: Affirmative: 18 Negative: 3

Explanation of Negative:

DEGNAN, J.: While temperature performance issues have been identified with 2" of concrete, it is not clear that they will be resolved with 4" concrete. If the panel changes the code they should be able to cite field performance data that substantiates that 2" of concrete has resulted in loss of life in a statistically significant number of building fires, and that this will be corrected by extension to 4" of concrete.

ODE, M.: See my statement on Comment 13-46.

SPINA, M.: See my statement on comment 13-46.