

3A Composites USA, Inc.
Comments
to the
Proposed Revisions
to the
Acceptance Criteria for Metal Composite Material
AC25
7/1/10

1. Since the main purpose for the proposed revisions to AC25 is to update it to be consistent with the 2009 International Building Code (IBC), it is not clear as to why there are so many references to the 2006 IBC included throughout the document. It is strongly recommended that the references to the 2006 IBC be deleted from the document unless absolutely necessary for some very specific reason. The current version of AC25 is already based on the 2006 IBC so there does not appear to be a need to reference it in this next version which is to be based on the 2009 IBC.

It seems to me that it would be simpler and less confusing if you simply maintain the availability of the current version of AC25 (which is based on the 2006 IBC) so that it can be referenced by those who are interested in seeing how it applied to the 2006 IBC. Then the newest version can be used specifically for application to the 2009 IBC, thus avoiding the need to include references to the 2006 IBC throughout.

2. Basically, we concur with the seven items noted in the letter dated June 1, 2010 signed by Gary G. Nichols, Vice President/Birmingham Operations, regarding the proposed revisions to AC25.

3. In response to the staff comment contained in the letter dated June 1, 2010 signed by Gary G. Nichols, we do not believe that it is necessary to require testing in accordance with NFPA 286 to satisfy the requirements of Section 803.12 High-Density Polyethylene (HDPE) in

the 2009 IBC for MCM used as interior finish. Obviously, the MCM that use an HDPE core cover the HDPE core with metal skins as specified in AC25, so the HDPE would not be directly exposed to flames from a fire where installed as an interior finish. However, if ICC-ES staff is so inclined, a conditional provision could be incorporated for installations where the HDPE core is exposed after installation as an interior finish, requiring it to be tested in accordance with NFPA 286 to meet the criteria specified in Section 806.1.2 Room Corner Test for Interior Wall or Ceiling Finish Materials in the 2009 IBC. It should be noted that Code Change FS165-07/08 that was approved to include new Section 803.12 in the 2009 IBC was based on fire tests conducted on toilet room privacy partitions constructed of panels where the HDPE was completely exposed to the interior of the room in which it was installed (Also see Code Change FS166-07/08).

4. Revise new Section 3.1.4.3 as follows:

~~(For 2009 IBC only) Reports of fire-resistance tests of exterior wall assemblies in accordance with ASTM E119 or UL 263 without the MCM system installed are permitted in establishing the fire-resistance of an exterior wall system when~~ The MCM system is installed on the outer surface of the fire-resistance-rated exterior wall in a manner such that the attachments do not penetrate through the entire fire-resistance-rated exterior wall assembly, provided the MCM system does not contain foam plastic insulation.

Since 3.1.4.3 is a subsection of 3.1.4 as a condition to allowing MCM to be installed on a fire-resistance-rated exterior wall assembly without negating its fire-resistance rating, there is no need for the text shown stricken. It should also be made very clear that this provision only applies if the MCM system does not contain foam plastic insulation.

5. Section 3.2.3 Fire-resistance-rated Construction. Delete the phrase “and the fire-resistance rating of the assembly with the MCM system shall be determined in accordance with 2009 and 2006 IBC Section 703 and with Section 3.1.4 of this criteria.” Typically, an interior finish material applied over a fire-resistance-rated interior wall is not required to demonstrate that its installation does not adversely affect the required fire-resistance rating of the wall assembly. The operable provision in IBC Section 703.2 states: “Where materials, systems, or devices that have not been tested as part of a fire-resistance-rated assembly are incorporated into the building element, component or assembly, sufficient data shall be made available to the building official to show that the required fire-resistance rating is not reduced.” The operable

term in this requirement is “incorporated into”. Interior finishes are applied over or on top of a fire-resistance-rated assembly and are not incorporated into the assembly. This is further substantiated by Section 803.11 Application of Interior Finish Materials to Fire-Resistance-Rated Structural Elements which is also referred to in this section of the Acceptance Criteria. It provides the criteria for how to install interior finish materials on fire-resistance-rated walls, ceilings, and structural elements. This concept is also consistent with new Section 1405.3 in the 2009 IBC which is recognized in Section 3.1.4.3 of this Acceptance Criteria.

If we are not successful in convincing ICC-ES staff to delete the above noted phrase, then as a minimum we would request that the requirement be clarified by not referencing IBC Section 703 and simply maintaining the reference to Section 3.1.4 of this criteria since that will allow for the application of Section 3.1.4.3 of this criteria which is not a part of IBC Section 703.

6. Section 3.2.4 Types I, II, III, and IV Construction. Delete this section in its entirety. It is simply not applicable to MCM used as interior finish. There is no basis in the IBC for this requirement being applicable to Types I, II, III, and IV construction buildings. The use of interior finish materials is regulated by Chapter 8 and is independent of the building type of construction. This criterion appears to be based on Section 1407.10.3 Thermal Barrier Not Required. However, that section is only applicable to MCM installed as exterior wall coverings on buildings of Types I, II, III, and IV construction. It is not intended to apply to interior finish applications. Furthermore, there are no similar requirements in Chapter 8. And there is no technical justification for such a requirement.

This concludes our comments on the proposed revisions to the Acceptance Criteria for Metal Composite Material AC25 proposed June, 2010. Thank you for the opportunity to offer our comments. Should you have any questions, require clarification of any of our comments, or wish to discuss them in more detail, please feel free to contact us at your convenience.

From: [Gary Nichols](mailto:gary.nichols@codeinc.com)
To: [Rosalind Fazel](mailto:rosalind.fazel@codeinc.com)
Subject: FW: Revisions to AC25 Proposed June 2010 3A Composites USA, Inc. #82-0201
Date: Wednesday, July 07, 2010 10:21:37 AM

From: THECODEINC@aol.com [mailto:THECODEINC@aol.com]
Sent: Thursday, July 01, 2010 5:41 PM
To: Gary Nichols
Subject: Revisions to AC25 Proposed June 2010 3A Composites USA, Inc. #82-0201

Hello, Gary,

Per the **NOTE** on the ICC-ES Criteria Public Comments Form for AC25, I am including in this email my suggested revisions to the criteria draft being proposed with a date of June 2010 for your consideration. My proposed revisions have been extracted from the comments I submitted using the ICC-ES Criteria Public Comments Form for AC25. As I understand the **NOTE** to that form, I am supposed to send you the suggested revisions in a separate email.

The revisions I am proposing are indicated below using the section references in the sequence provided in the AC25 Draft.

1. Revise new Section 3.1.4.3 as follows:
(~~For 2009 IBC only~~) ~~Reports of fire-resistance tests of exterior wall assemblies in accordance with ASTM E119 or UL 263 without the MCM system installed are permitted in establishing the fire-resistance of an exterior wall system when~~ The MCM system is installed on the outer surface of the fire-resistance-rated exterior wall in a manner such that the attachments do not penetrate through the entire fire-resistance-rated exterior wall assembly, provided the MCM system does not contain foam plastic insulation.

Since 3.1.4.3 is a subsection of 3.1.4 as a condition to allowing MCM to be installed on a fire-resistance-rated exterior wall assembly without negating its fire-resistance rating, there is no need for the text shown stricken. It should also be made very clear that this provision only applies if the MCM system does not contain foam plastic insulation.

2. Revise Section 3.2.3 Fire-resistance-rated Construction as follows:
3.2.3. Fire-resistance-rated Construction: Where MCM panels are applied as an interior finish on walls, ceilings, or structural elements required to have a fire-resistance rating, the installation of the MCM system shall comply with IBC Section 803.11 (2009 IBC) and Section 803.4 (2006 IBC), ~~and the fire-resistance rating of the assembly with the MCM system shall be determined in accordance with 2009 and 2006 IBC Section 703 and with Section 3.1.4 of this criteria.~~

Typically, an interior finish material applied over a fire-resistance-rated interior wall is not required to demonstrate that its installation does not adversely affect the required fire-resistance rating of the wall assembly. The operable provision in IBC Section 703.2 states: "Where materials, systems, or devices that have not been tested as part of a fire-resistance-rated assembly are incorporated into the building element, component or assembly, sufficient data shall be made available to the building official to show that the required fire-resistance rating is not reduced." The operable term in this requirement is "incorporated into". Interior finishes are applied over or on top of a fire-resistance-rated assembly and are not incorporated into the assembly. This is further substantiated by Section 803.11 Application of

Interior Finish Materials to Fire-Resistance-Rated Structural Elements which is also referred to in this section of the Acceptance Criteria. It provides the criteria for how to install interior finish materials on fire-resistance-rated walls, ceilings, and structural elements. This concept is also consistent with new Section 1405.3 in the 2009 IBC which is recognized in Section 3.1.4.3 of this Acceptance Criteria.

3. Revise Section 3.2.4 Types I, II, III, and IV Construction by deleting it in its entirety.
3.2.4 Types I, II, III, and IV Construction: ~~Where MCM panels are installed as an interior wall finish in buildings classified as Types I, II, III, and IV construction, the MCM system shall be tested in accordance with UL 1040 or UL 1715 in the configuration intended for use. Testing shall be performed with the MCM in the maximum thickness intended for use, and the MCM system shall include seams, joints and other typical details used in the installation. Installation of the MCM system shall comply with IBC Section 803.11 (2009 IBC) and Section 803.4 (2006 IBC).~~

It is simply not applicable to MCM used as interior finish. There is no basis in the IBC for this requirement being applicable to Types I, II, III, and IV construction buildings. The use of interior finish materials is regulated by Chapter 8 and is independent of the building type of construction. This criterion appears to be based on Section 1407.10.3 Thermal Barrier Not Required. However, that section is only applicable to MCM installed as exterior wall coverings on buildings of Types I, II, III, and IV construction. It is not intended to apply to interior finish applications. Furthermore, there are no similar requirements in Chapter 8. And there is no technical justification for such a requirement.

If you have any questions regarding these proposed revisions to the AC25 Draft, please feel free to contact me at your convenience. Thanks for the opportunity to offer my suggested revisions to the updating of AC25 for the 2009 IBC.

Rick

Very truly yours,

Rick Thornberry, PE
The Code Consortium, Inc.
2724 Elks Way
Napa, CA 94558-3500
(707)253-2633 phone
(707)253-2639 fax

From: bill@alpolic.com
To: [Rosalind Fazel](#)
Subject: AC25 Comments
Date: Wednesday, June 02, 2010 9:56:00 AM

Comments on Criteria AC25.

William Yannetti
Mitsubishi Plastics Composites America, Inc
757-382-5768
bill@alpolic.com

Comments:

I found it interesting that section 803.12 references HDPE only. Would this section apply to low density PE or linear low density PE? Many of the core materials used for MCM panels are low or linear low density PE and not HDPE.