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Subject: Proposed Revisions to the Acceptance Criteria for Rim Board Products, Subject AC124-0214-R3 (DC/KS)

Mr. Stocklia

Your letter dated December 27, 2013 regarding Proposed Revisions to the Acceptance Criteria for Rim Board Products, Subject AC124-0214-R3 (DC/KS), included several items that I have provided comments on below. In addition, I am taking this opportunity to suggest several additional revisions that clarify how these new coated / overlay products are evaluated and labeled.

7.1.1 Fire-retardant overlays and coatings shall be applied to the front and back faces and the top and bottom faces of the rim board, except that the overlays and coatings may be applied to only the front and back faces of the rim board if the top and bottom faces are not exposed in application.

Comment:

The Acceptance Criteria For Fire-Retardant-Treated Wood (AC66), Section 6.5 states:

“The fire-retardant-treated lumber shall not be ripped or milled as this will alter the surface-burning characteristics and invalidate the flame-spread classification.”

This statement and general practice indicates that there is some importance placed on the fact that all surfaces of the wood are treated in such a way as to ensure code compliance. If the code requires that all material in say a Type III exterior wall be noncombustible than why is so much time and energy being spend splitting hairs about what surfaces within said wall need to be treated, coated, or overlaid. The Committee is being asked needlessly to make an exception (uncoated surfaces) to an exception (FRT wood as noncombustible). Fire-retardant overlays and coatings should be applied to all surfaces since this is the intent of the code.

7.7 Quality Control:

7.7.1 The fire-retardant overlay or coating shall be manufactured and factory-applied under an approved quality control program in accordance with Section 8.0. Quality control requirements shall be based on the production and testing of qualification material and shall address provisions including but not limited to: composition, verification of chemical formation, product handling, storage, surface preparation and application rates.

Comment:

As I am sure you are aware, on December 2, 2013 ICC-ES staff placed the Acceptance Criteria for Fire-Retardant-Treated Wood (AC66) on the Alternative Criteria Development Agenda. ES staff indicated that commercially available FRTW products were independently sampled and tested in accordance with ASTM E84 to verify compliance with the 30-minute extended burn requirement required under Section 2303.2 of the IBC...The staff letter goes on to indicate that the results were noncompliant with the code and that a review of quality control procedures is warranted; proposed revisions were made.

There are now (6) letters available at the ICC-ES website in response to the proposed revisions to AC66 by ES staff; some in support, some in opposition, and some offering additional proposed revisions. Upon review of these letters and the test information that instigated the proposed AC66 revisions in the first place it is hard for me to imagine asking the Criteria Development Committee to accept proposed revisions to AC124, including the quality control provisions in Section 7.7, while the quality control requirements for the very process upon which equivalence is build is in a state of complete uncertainty.

The proposed revisions for AC124 should be held for further study until the quality control procedures for FRT wood are defined, understood, and implemented with success. Considering that these coating and overlay products are claiming equivalence to FRT wood I am hopeful that this is seen as a reasonable and prudent request.

Section 2303.2.4 of the International Building Code requires the FRT wood to be labeled with the following information:

“Fire-retardant-treated lumber and wood structural panels shall be labeled. The label shall contain the following items:

- 1. The identification mark of an approved agency in accordance with Section 1703.5.*
- 2. Identification of the treating manufacturer.*
- 3. The name of the fire-retardant treatment.*
- 4. The species of wood treated.*
- 5. Flame spread and smoke-developed index.**
- 6. Method of drying after treatment.*
- 7. Conformance with appropriate standards in accordance with Sections 2303.2.2 through 2303.2.5.*
- 8. For fire-retardant-treated wood exposed to weather, damp or wet locations, include the words “No increase in the listed classification when subjected to the Standard Rain Test” (ASTM D 2898).”*

Given that this criteria is being developed for products that are deemed equivalence to FRT Wood it stands to reason that they should be labeled with the same information as FRT Wood. The following additional language is suggested for consideration within AC124:

7.8 Labeling: The Fire-retardant overlay or coating shall be labeled in accordance with Section 2303.2.4 of the 2012 IBC and 2009 IBC, Section 2303.2.1 of the 2006 IBC and shall include the following information:

1. ICC-ES evaluation report number.
2. ASTM E84 or UL 723 10 minute test indices (flame spread and smoke development), and statement indicating no evidence of significant progressive combustion when the test is extended to 30 minutes.
3. Name of manufacturer and location of overlay or coating application.

Section 1.4 of ASTM E84 states the following:

“1.4 Testing of materials that melt, drip, or delaminate to such a degree that the continuity of the flame front is destroyed, results in low flame spread indices that do not relate directly to indices obtained by testing materials that remain in place.”

The following language should be added to this criteria to ensure that overlays or coatings that melt, drip, or delaminate are identified and excluded from further evaluation.

7.2.4 Overlays of coatings that melt, drip, or delaminate at any time during the 30-minute test are beyond the scope of this criteria. Evidence of these characteristics will be reported by the testing laboratory in accordance with Section 11.1.4 of ASTM E84.

Finally, we look forward to working with staff and other interested parties to develop test and evaluation procedures that meet building code requirements and a quality control program that is well defined, appropriate for coatings and overlays, and aligned with whatever comes out of the FRT Wood industry discussion.

Thank you for your time and attention,



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Engineering Manager, Codes and Standards

January 17, 2014

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RE: Proposed Revisions to the Acceptance Criteria for Rim Board Products, Subject AC124-0214-R3 (DC/KS)

Dear Kurt:

Thank you for the opportunity to comment on the proposed revisions to AC124. Weyerhaeuser supports the addition of section 7 for factory-applied fire-retardant overlays and coatings, including the changes proposed after the October hearing to address the Evaluation Committee's concerns.

The addition of section 7 has been considered by the committee twice, and the committee has identified a need for the E84 test specimen to address uncoated edges on the rim-board product. In addition, it was noted that the quality control section did not specifically address quality control requirements for the coating or overlay. This draft addresses both issues.

E84 Test Specimen

To address the concerns of the Evaluation Committee, section 7.1.1 clarifies that the overlay or coating must be applied to the front and back faces and to the top and bottom edges unless the top and bottom edges are not exposed in application. Where the top and bottom edges won't be coated or overlaid, the E84 test specimen is modified in 7.2.2 to address the effect of uncoated edges. Two options are given:

1. Specimen with continuous butt joint along the center of the tunnel
2. Specimen with FRT lumber attached along each edge

We strongly support option 1, because it is simple to apply, reasonably represents the application, and is consistent with similar requirements in AC264 Acceptance Criteria for Wood Structural Panels Laminated with an Inert, Inorganic Fire Shield.

In application, a rim board will be tightly butted to the wall top plate below, and the floor sheathing above. The weight of the structure ensures that no gaps will be present in these joints. The butt joint in the specimen for option 1 is a representation of the tight joint that will occur in application. This type of joint is also consistent with the requirements of AC264, Section 4.1.1, which states, "Test samples shall be constructed with a joint running the length of the tunnel..." A requirement for a gap, as has been proposed by some, does not accurately represent the application and is inconsistent with ICC-ES requirements for similar products.

Option 2 was added to address concerns expressed by some stakeholders just prior to the October hearing that a butt joint along the center of the specimen did not accurately represent the application. We support the inclusion of option 2 for those who feel that it better represents the application. However, we do not support it as the only option for the test.

The addition of another material (FRT lumber) in option 2 may cause a failure for reasons unrelated to the performance of the product being evaluated. Poor performance from the FRT lumber may result in a failed qualification for the rimboard product. The recent report from ICC-ES regarding significant deficiencies in FRT plywood (See AC66 December Alternative Agenda) provides evidence that these concerns are not unfounded. Successful use of this option may require the manufacturer of the coated or overlaid product to prescreen several FRT products to ensure that the FRT lumber meets the requirements of the code. This adds a significant cost burden to the manufacturer of the coated or overlaid product, with no clear benefit.

Quality Control

Section 7.7 is a good addition to ensure that a quality control program is in place for the overlay or coating in addition to the general requirements for quality control in Section 8. This language is consistent with similar provisions in AC14 for coatings used to protect wood I-joists.

Overall, Weyerhaeuser supports the proposed changes to AC124. In particular, the first option for the E84 test appears to be reasonably representative of the application, simple to apply, and consistent with requirements for similar products in AC264. We urge approval of this AC.

Sincerely,



Jeffrey D. Linville, P.E.
Senior Engineer, Industry and Code Activities