
From: Chris LaVine <clavine@strongtie.com>
Sent: Wednesday, December 16, 2020 10:12 AM
To: Manuel Chan; es
Subject: Proposed Revisions to the Acceptance Criteria for Expansion Anchors in Masonry Elements, Subject AC01-02210R1
Attachments: Simpson review of Proposed Revisions to AC01.docx

Mr. Chan,

Simpson has reviewed the Proposed Revisions to the Acceptance Criteria for Expansion Anchors in Masonry Elements, Subject AC01-02210R1 dated November 30, 2020. Our review prompted the attached list of comments for your consideration.

Please let me know if you have any questions regarding these comments.

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Review of Proposed Revisions to the Acceptance Criteria for Expansion Anchors in Masonry Elements, Subject AC01-0221-R1

| SECTION/LINE | COMMENTS |
|------------------------------|---|
| Section 1.3.10, Line 75 | Change "CI 318-14, -11" to "ACI 318-14, -11". |
| Table 4.3, Test No. 11 | Change batch number from "2" to "1". |
| Section 4.6.3.1.5, Line 1348 | Section is not needed. Information already exists in section 4.6.3.1.3. |
| Table 4.9 | Section 1.2 caps the maximum anchor diameter at 1" (25 mm). Table 4.9 covers drill bit sizes through 2" (52 mm). Shouldn't Table 4.9 be reduced in scope? |
| Section 6.8.2, Line 1726 | N_k is defined in section 1.6, but what is not clear in this section is if the value of N_k is taken from a reference test (Table 4.1, Test 1a; Table 4.2, Test 1a; Table 4.3, Test 1a; Table 4.4, Test 1b). |
| Section 6.9.2.1.1, Line 1825 | $N_{st,mean}$ is not defined in this section or in section 1.6. |
| Section 6.9.2.1.1, Line 1831 | Change " $f_{m,test,i}$ = measured compressive strength of the grout used for the screw anchor reference test" to " $f_{m,ref}$ = measured compressive strength of the grout used for the screw anchor reference test". |
| Section 6.9.2.1.1, Line 1839 | $N_{u,resid}$ is not defined in this section or in section 1.6. |
| Section 6.9.2.2.1, Line 1891 | $N_{st,mean}$ is not defined in this section or in section 1.6. |
| Section 6.9.2.2.1, Line 1897 | Change " $f_{m,test,i}$ = measured compressive strength of the grout used for the screw anchor reference test" to " $f_{m,ref}$ = measured compressive strength of the grout used for the screw anchor reference test". |
| Section 6.9.2.2.1, Line 1905 | $N_{u,resid}$ is not defined in this section or in section 1.6. |
| Section 6.10.3.3, Line 2001 | In (6-1), change " f_{ut} " to " f_{uta} ". |
| Section 6.10.3.3, Line 2001 | In (6-1), $f_{u,test}$ is not defined in this section or in section 1.6. |
| Line 2174 | Remove one of the words "in". |
| Line 2178 | Remove one of the words "in". |
| Line 2179 | Remove one of the words "in". |
| Lines 2174 – 2180 | Not sure that the wording in these lines match what is detailed in Tables 4.1 through 4.4 for the seismic test, and the reference test to be used in (7-4). |
| Line 2211 | Change "Equation (7-4)" to "Equation (7-7)". |

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| Section 7.7.2.2 | This section states that testing should be conducted in cracked masonry for anchors evaluated per Table 4.2. However, Table 4.2 Test 15 states the test is conducted in uncracked masonry. What is the correct masonry description for this test? |
| Section 7.8.3, Line 2251 | Change “shear load applied parallel to the crack ...” to “ shear load applied parallel to the bed joint ...”. |
| Lines 2256 -2261 | The wording here only addresses grouted CMU. The wording does not address ungrouted CMU and brick masonry. SUGGESTION: Change lines 2256 – 2261 to read “For grouted CMU, following completion of the simulated seismic shear cycles, open the crack to a width not less than the crack opening width as measured at the end of the cyclic shear test and load the anchor parallel to the crack in shear to failure. Record the maximum shear load or residual capacity and the corresponding displacement and plot the load-displacement response.” Add additional language for ungrouted CMU and brick masonry as follows: “For ungrouted CMU and brick masonry, following completion of the simulated seismic shear cycles, load the anchor parallel to the bed joint in shear to failure. Record the maximum shear load or residual capacity and the corresponding displacement and plot the load-displacement response”. |
| Lines 2717 – 2722 | Formatting issue – Replace the numbers 3 & 4 with a & b. |
| Lines 2724 - 2743 | Formatting issue – Replace the numbers 5 & 6 with a & b. |
| Line 2817 | “concrete type” and “concrete compressive strength” need to be replaced with “masonry type” and “masonry compressive strength”. |
| Table 10.1 | The table addresses min. edge distance, but is this for the distance to the head joint or to the edge of the wall for top of wall installations? |