



April 28, 2008

TO: PARTIES INTERESTED IN EVALUATION REPORTS ON TAPPING SCREW FASTENERS

SUBJECT: Proposed Revision to the Acceptance Criteria for Tapping Screw Fasteners, Subject AC118-0508-R1 (KS)

Hearing Information:

Wednesday, May 28, 2008

8:00 a.m.

Sheraton Gateway Suites Chicago O'Hare Airport

6501 North Mannheim Road

Rosemont, Illinois 60018

(847) 699-6300

Dear Madam or Sir:

The ICC-ES Evaluation Committee has approved several changes to the subject criteria over the last year, with the intent of clarifying the testing requirements. Enclosed is a proposal from industry, in a letter dated March 19, 2008, suggesting additional changes to Table 1 of the criteria. Also enclosed is a letter from Jack Pekar, dated April 2, 2008, regarding the use of ASTM F 1470. Staff is in agreement that some additional changes may be necessary and has the following comments on Table 1 attached to the industry letter, and Mr. Pekar's letter.

1. Tests (qualification) involving Items 1b, 2, 4, 6, 8, 9, 11, 13 and 14 (staff has added item numbers to the proposed table) should be conducted as qualification tests by an independent third-party accredited testing agency, with a minimum of 10 samples for each type of screw. Sampling of the screws for the qualification tests should be in accordance with Section 2.5 of the criteria.
2. Tests (quality control) involving Items 1 through 14 should be conducted by the manufacturer as part of a quality control program. The number of samples tested should comply with Section 10 of ASTM C1513 or, in cases where the test is not covered in ASTM C1513, sampling should be in accordance with ASTM F1470.

3. Additional appropriate changes will be needed to the criteria text to be consistent with the agreed upon testing requirements.
4. Staff feels that the changes proposed in this letter will resolve Mr. Pekar's concern.

Staff intends to consider any comments received on this item and, if possible, prepare a staff memo and revised criteria draft for posting on our website prior to the hearing.

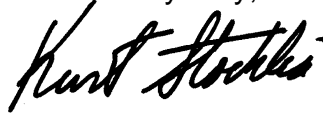
You are cordially invited to submit written comments on agenda items, or to attend the Evaluation Committee hearing and present verbal comments. If you wish to contribute to the hearing, please note the following:

1. Written comments that are received by the Los Angeles business/regional office by **May 14, 2008**, will be forwarded to the committee prior to the hearing, and will be posted on the ICC-ES web site shortly after the comment deadline.
2. Written comments received up to ten days before the meeting, and staff memos responding to comments, will be posted to the web site on **May 23, 2008**.
3. ICC-ES is no longer providing printed copies at the meeting of proposed acceptance criteria, staff memos or public comments. These documents will be available on a limited number of CDs at the meeting, for uploading to computers; and ICC-ES will make arrangements with the hotel business center to have hard copies available for photocopying.
4. Written comments that miss the deadline noted in item (1), above, will only be available at the meeting if you provide 35 copies, collated, stapled, and three-hole punched, either at the meeting itself or to the Los Angeles business/regional office by **May 23, 2008**.
5. If you plan to speak for more than 15 minutes, or offer a visual presentation lasting longer, you should notify ICC-ES staff as far as possible in advance. There will be a computer, projector, and screen available at the meeting for anyone wishing to make a visual presentation, and presentations in most cases will need to be in PowerPoint format. Also, ICC-ES will need to be provided with your presentation at least a half-hour before the start of the relevant meeting session (morning or afternoon) on either a CD or a flash card.
6. If you have any special needs related to a presentation, you should contact ICC-ES staff well in advance of the meeting.
7. Any visual aids for viewing at committee meetings (charts, overhead transparencies, slides, videos, electronic presentations, etc.) will be permitted only if a copy is provided to ICC-ES, before the presentation, in a medium that can be retained with other records of the meeting.

8. Any materials submitted for committee consideration are considered nonconfidential and available for public discussion, as noted in Section 2.7 of the ICC-ES Rules of Procedure for the Evaluation Committee.
9. Prior to the meeting, you should refrain from trying to communicate directly with committee members about agenda items, either verbally or in writing. Committee members reserve the right to refuse such communications.

Your cooperation with these guidelines is much appreciated, as is your interest in the deliberations of the Evaluation Committee. If you have any questions, please contact the undersigned at (800) 423-6587, extension 3283. You may also reach us by e-mail at es@icc-es.org.

Yours very truly,



Kurt Stochlia
Vice-President, External Operations

KS/gh

Enclosures

cc: Evaluation Committee



ICC EVALUATION SERVICE, INC., RULES OF PROCEDURE FOR THE EVALUATION COMMITTEE

1.0 PURPOSE

The purpose of the Evaluation Committee is to monitor the work of ICC-ES, in issuing evaluation reports; to evaluate and approve acceptance criteria on which evaluation reports may be based; and to sponsor related changes in the applicable codes.

2.0 MEETINGS

2.1 The Evaluation Committee shall schedule meetings that are open to the public in discharging its duties under Section 1, subject to Section 3.

2.2 All scheduled meetings shall be publicly announced.

2.3 Two-thirds ($\frac{2}{3}$) of the voting Evaluation Committee members shall constitute a quorum. A majority vote of members present is required on any action.

2.4 In the absence of the nonvoting chairman-moderator, Evaluation Committee members present shall elect an alternate chairman from the committee for that meeting. The alternate chairman shall be counted as a voting committee member for purposes of maintaining a committee quorum and to cast a tie-breaking vote of the committee.

2.5 Minutes of the meetings shall be kept.

2.6 An electronic audio record of meetings shall be made by ICC-ES; no other audio, video, electronic or stenographic recordings of the meetings will be permitted. Visual aids (including, but not limited to, charts, overhead transparencies, slides, videos, or presentation software) viewed at meetings shall be permitted only if the presenter provides ICC-ES before presentation with a copy of the visual aid in a medium which can be retained by ICC-ES with its record of the meeting and which can also be provided to interested parties requesting a copy. A copy of the ICC-ES recording of the meeting and such visual aids, if any, will be available to interested parties upon written request made to ICC-ES together with a payment as required by ICC-ES to cover costs of preparation and duplication of the copy. These materials will be available beginning five days after the conclusion of the meeting but will no longer be available after one year from the conclusion of the meeting.

2.7 Parties interested in the deliberations of the committee should refrain from communicating, whether in writing or verbally, with committee members regarding agenda items. All written communications and submissions regarding agenda items should be delivered to ICC-ES. All such written communications and submissions shall be considered nonconfidential and available for discussion in open session of an Evaluation Committee meeting, and shall be delivered at least ten days before the scheduled Evaluation Committee meeting if they are to be forwarded to the committee. Materials delivered to ICC-ES at least ten

days before the scheduled meeting will be posted on the ICC-ES web site (www.icc-es.org) prior to the meeting. After this time, parties wishing to submit materials for consideration by the Evaluation Committee must deliver a sufficient number of copies as directed by ICC-ES. Consideration of materials not received by ICC-ES at least ten days before the meeting is at the discretion of the Evaluation Committee. Following the meeting, ICC-ES will make all materials considered by the Evaluation Committee available on the web site for a maximum period of one year following the meeting. The committee reserves the right to refuse recognition of communications which do not comply with the provisions of this section.

3.0 CLOSED SESSIONS

Evaluation Committee meetings shall be open except that the chairman may call for a closed session to seek advice of counsel.

4.0 ACCEPTANCE CRITERIA

4.1 Acceptance criteria are established by the committee to provide a basis for issuing ICC-ES evaluation reports on products and systems under codes referenced in Section 2.0 of the Rules of Procedure for Evaluation Reports. They also clarify conditions of acceptance for products and systems specifically regulated by the codes.

Acceptance criteria may involve a product, material, method of construction, or service. Consideration of any acceptance criteria must be in conjunction with a current and valid application for an ICC-ES evaluation report, an existing ICC-ES evaluation report, or as otherwise determined by the Evaluation Committee.

4.2 Procedure:

4.2.1 Proposed acceptance criteria shall be developed by the ICC-ES staff and discussed in open session with the Evaluation Committee during a scheduled meeting, except as permitted in Section 5.0 of these rules.

4.2.2 Proposed acceptance criteria shall be available to interested parties at least 30 days before discussion at the committee meeting.

4.2.3 The committee shall be informed of all pertinent written communications received by ICC-ES.

4.2.4 Attendees at Evaluation Committee meetings shall have the opportunity to speak on acceptance criteria listed on the meeting agenda, to provide information to committee members.

4.3 Approval of acceptance criteria shall be as specified in Section 2.3 of these rules.

4.4 Actions of the Evaluation Committee may be

ICC EVALUATION SERVICE, INC., RULES OF PROCEDURE FOR THE EVALUATION COMMITTEE

appealed in accordance with the ICC-ES Rules of Procedure for Appeal of Acceptance Criteria or the ICC-ES Rules of Procedure for Appeals of Evaluation Committee Technical Decisions.

5.0 COMMITTEE BALLOTING FOR ACCEPTANCE CRITERIA

5.1 Acceptance criteria may be issued without a public hearing following a 30-day public comment period and a majority vote for approval by the Evaluation Committee when, in the opinion of ICC-ES staff, one or more of the following conditions have been met:

1. The subject is nonstructural, does not involve life safety, and is addressed in nationally recognized standards or generally accepted industry standards.
2. The subject is a revision to an existing acceptance criteria that requires a formal action by the Evaluation Committee, and public comments raised were resolved by staff with commenters fully informed.
3. Other acceptance criteria and/or the code provide precedence for the revised criteria.

5.2 Negative votes must be based upon one or more of the following, for the ballots to be considered valid and require resolution:

- a. *Lack of clarity:* There is insufficient explanation of the scope of the acceptance criteria or insufficient description of the intended use of the product or system; or the acceptance criteria is so unclear as to be unacceptable. (The areas where greater clarity is required must be specifically identified.)
- b. *Insufficiency:* The criteria is insufficient for proper evaluation of the product or system. (The provisions of the criteria that are in question must be specifically identified.)
- c. *The subject of the acceptance criteria is not within the scope of the applicable codes:* A report issued by ICC-ES is intended to provide a basis for approval under the codes. If the subject of the acceptance criteria is not regulated by the codes, there is no basis for issuing a report, or a criteria. (Specifics must be provided concerning the inapplicability of the code.)

d. *The subject of the acceptance criteria needs to be discussed in a public hearings.* The committee member requests additional input from other committee members, staff or industry.

5.3 An Evaluation Committee member, in voting on an acceptance criteria, may only cast the following ballots:

- Approved
- Approved with Comments
- Negative: Do Not Proceed

6.0 COMMITTEE COMMUNICATION

Direct communication between committee members, and between committee members and an applicant or concerned party, with regard to the processing of a particular acceptance criteria or evaluation report shall take place only in a public hearing of the Evaluation Committee. Accordingly:

6.1 Committee members receiving an electronic ballot should respond only to the sender (staff). Committee members who wish to discuss a particular matter with other committee members, before reaching a decision, should ballot accordingly and bring the matter to the attention of ICC-ES staff, so the issue can be placed on the agenda of a future committee meeting.

6.2 Committee members who are contacted by an applicant or concerned party on a particular matter that will be brought to the committee will refrain from private communication and will encourage the applicant or concerned party to forward their concerns through the ICC-ES staff in writing, and/or make their concerns known by addressing the committee at a public hearing, so that their concerns can receive the attention of all committee members. ■

Effective March 18, 2008

Kurt Stochlia
Vice-President
ICC Evaluation Service, Inc.
Los Angeles Business/Regional Office
5360 Workman Mill Road
Whittier, CA 90601

March 19, 2008

Subject: AC118 Changes

Dear Mr. Stochlia:

The undersigned manufacturers would like to formally request that AC118 (effective February 5, 2008) be put on the agenda for the May 2008 ICC-ES public hearing or revised through the alternative acceptance criteria process at the earliest opportunity.

The specific subjects to be considered are the testing requirements of Section 3.1 and Table 1. As screw fastener manufacturers, we believe these requirements are overly stringent. The two primary justifications for modifying / adjusting these requirements are as follows.

1. The tests and sample sizes listed in Table 1 are based upon requirements given in ASTM F 1470 and are intended for manufacturing quality control purposes and should not be used for ICC-ES third party qualification test purposes. ICC-ES has established a precedent by accepting data from quality control tests performed within the manufacturing facility for most of the required tests.
2. Many of the tests listed in Table 1 involve the installation performance of the screw fastener and not the in-service or load performance of the installed fastener. We believe that the tests designed to evaluate the installation process of the fastener should not be considered critical for load performance or safety and, therefore, should not be required to be performed by a third party lab. These should only be provided as part of manufacturing quality control documentation as previously required.

Based upon these two points, we have provided comments and recommendations for each Table 1 test. These suggestions include whether the test should remain a third party qualification test to be performed by an independent laboratory, and, if so, a more reasonable sample size (see attached sheet). The consistent sample size recommended is five (5). This is based upon the ASTM C 1513 (Section 10) test standard sample size recommendation. We believe that this should be consistent and is satisfactory for the other third party qualification tests.

The remaining Table 1 test results would be provided to ICC-ES, but would be provided as data from the manufacturing facility.

The undersigned manufacturers agree in principle to the revisions presented in this letter. We look forward to working with ICC-ES in order to create a useful and reasonable acceptance criteria for the evaluation of screw fasteners. We welcome an opportunity to continue this dialogue prior to the meeting. Please contact Drew Liechti at (918) 294-5805 and he will facilitate a conference call.

Regards,

Andrew T. Liechti, P.E.
Technical Services Engineer
Hilti, Inc.

Jeff Ellis, P.E., S.E.
Sr. Engineering Project Manager
Simpson Strong-Tie Co., Inc.

Michael Gong, PhD
Senior Project Engineer
ITW Buildex

Martin Kehoe
Grabber Construction
Products Division, JWA

Gregg Melvin
Senior Applications Engineer
Elco® Construction Products, LLC

cc Michael Beaton, Peter Bahlo and Brian Gerber



TABLE 1—SAMPLE SIZE FOR TESTS SPECIFIED IN SCREW STANDARDS REFERENCED IN SECTION 3.1 OF THIS CRITERIA

CHARACTERISTIC	EXISTING TABLE 1 SAMPLE SIZE	RECOMMENDATION / COMMENTS	PROPOSED THIRD PARTY QUALIFICATION TEST SAMPLE SIZE	PROPOSED MANUFACTURING LOCATION TEST SAMPLE SIZE ¹
Assembly Tension Section 6.2 of ASTM C954; Section 12.6.3 of ASTM C1002	15	Section 6.2.1.1 of ASTM C 954 -- This test involves the proper seating of screw fasteners for drawall attachment. This has little to do with the strength of the attachment. Therefore, recommend removing this as a third party qualification test. Section 6.2.1.2 of ASTM C 954 -- This test involves the proper functioning of an installed screw fastener. Recommend keeping this test requirement, but with the AISI Test Standard sample size for consistency.	5	15
Case Depth	15	Recommend keeping this test requirement, but with the ASTM C 1513 Test Standard sample size for consistency.	5	15
Chemistry ²	-	Recommend keeping this test requirement and providing mill certificates	-	-
Corrosion resistance (salt-spray testing)	15	Recommend keeping this test requirement, but the ASTM C 1513 Test Standard sample size for consistency.	5	15
Drill Capacity	29	This test involves the installability of the screw fastener and not with the performance of the installed screw fastener. Recommend removing this as a third party qualification test.	-	29
Drill Drive	29	This test involves the installability of the screw fastener and not the performance of the installed screw fastener. Recommend removing this as a third party qualification test.	-	29
Drill Hole Size Section 5.4 of SAE J78	29	This test is not needed due to addition of the dimensional checks. Recommend removing this as a third party qualification test.	-	29
Ductility	15	Recommend keeping this test requirement, but with the ASTM C 1513 Test Standard sample size for consistency.	5	15
Hardness ³	15	Recommend keeping this test requirement, but with the ASTM C 1513 Test Standard sample size for consistency.	5	15
Hydrogen embrittlement	15	Recommend removing this as a third party qualification test. ASTM C 1513 does not have this as a requirement and therefore there is no acceptance criteria that covers hydrogen embrittlement.	-	15
Plating/coating thickness	29	Recommend removing this as a third party qualification test because the required salt spray test evaluates the corrosion resistance of the screw fastener.	-	29
Spin out (Section 6.1 of ASTM C954)	6	This test involves the installability of the screw fastener. Recommend removing this as a third party qualification test.	-	6
Torsional Strength	6	Recommend keeping this test requirement, but with the ASTM C 1513 Test Standard sample size for consistency.	5	6
Dimensional Checks ⁴	-	Add dimensional check requirement. Dimensions to be measured are shank length, major and minor thread diameter, threads per inch, head dimensions, drill point length and diameter.	5	-

¹Qualification tests from manufacturing facility should be provided for lot of fasteners tested per Section 4.1 or Section 4.2.

²A certified copy of the material's chemical or product analysis, which is traceable to the lot of test specimens, shall be furnished.

³Hardness requirement in ASTM C 954 is done during manufacturing, therefore third party testing is not required or possible.

⁴The average of five measurements of same dimension should be evaluated to manufacturer's drawing dimensions and tolerances.

Item
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Pekar, Todd & MacNamara
8564 Gentry St. NW
Massillon, Ohio 44646-8707
330-837-4243

April 2, 2008

RECEIVED

Kurt Stochlia
Vice-President
ICC Evaluation Service Inc.
Los Angeles Business/Regional Office
5360 Workman Mill Road
Whittier, CA 90601

APR 07 2008

ICC-ES Los Angeles

Subject: ASTM F1470 Stand Guide for Fastener Sampling for Specified Mechanical Properties and Performance Inspection

Dear Mr. Stochlia:

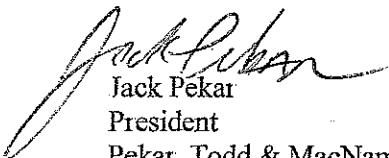
It was brought to my attention that AC118 intends to evoke ASTM F1470 as a third-party inspection plan. I am the author and developer of F1470, and I would ask that you consider the following information before proceeding with your decision to use F1470 as a third-party inspection plan:

F1470 was developed for the sole purpose of providing a Final Inspection Plan for manufacturers and a Receiving Inspection Plan for end-users. It was never intended for use by third-party accreditation bodies. The current issue of F1470 is now under review, and the new revision will make this point clear.

Fastener manufacturers that apply F1470 are those that deploy either a detection or a prevention system of quality control in their manufacturing processes, and therefore may utilize the sampling scheme in F1470 for quality assurance. In my opinion, evoking F1470 by a third party would be a gross overkill, because a much lower sampling size would be adequate for product conformance evaluation.

Based on the information provided on F1470, and based on my professional opinion, I suggest you drop the use of F1470 for use in AC118. I believe a more reasonable plan would be in order.

Respectfully,



Jack Pekar
President
Pekar, Todd & MacNamara
Chairman ASTM F16.93 on Quality Assurance Provisions for Fasteners

cc: J. Ellis, P. E., S. E. M., Simpson-Strong-Tie Co., Inc.
M. Gong, PhD, ITW Buildex
M. Kehoe, Graber Construction
A. I. Liechti, P.E., Hilti, Inc
G. Melvin, Elco Construction Products, LLC