Rosalind Fazel

Subject: FW: AC409 Comments

Attachments: Evaluation_-_light_gauge_steel_lintels_2-2-09.doc

From: Gary Crane [mailto:garycrane@mail.com]
Sent: Wednesday, February 11, 2009 11:56 AM
To: Mahmut Ekenel
Cc: johne@powerssteel.com; darcy@powerssteel.com; Paul Scott; bill@powerssteel.com; Diane Eisenbacher
Subject: Re: FW: pdf of Light gage steel response

Dear Mahmut:

As promised, I have attached our engineer's formal response to the five questions raised by your peer review committee for ICC-ES File #07-10-08 Acceptance Criteria for light gauge galvenized steel lintel used in masonry construction. You will note that each response reflects the conference call we had with you and ICC-ES staff on January 16 and Question #4 has been answered even though you recently recinded it.

We are pleased to see the draft AC has been posted for public comment on your website and look forward to hearing from you or any committee member regarding our response. If you would like the response on signed letterhead, please let me know. Meanwhile, please note the response is in MS Word .doc not Adobe .pdf. format.

Gary Crane (714)348-5272 anytime
On behalf of Power Steel & Wire
Phoenix, Arizona

February 2, 2009

To: PARTIES INTERESTED IN EVALUATION REPORTS ON COMPOSITE LIGHT GAGE STEEL AND MASONRY LINTELS

Subject: Proposed Acceptance Criteria for Composite Light Gage Steel and Masonry Lintels, Subject AC409-0209-R1 (ME/BG)

ICC-ES staff has the following comments on the draft:

1. More details regarding lintel load testing, as specified in Section 4.1, are needed. Staff questions whether Section 4.1 can adequately address the verification of design equations and assumptions used in the structural analysis of the composite action of the cold rolled light gage steel and the solid grouted masonry, or whether additional tests are required.

   Response:
   The full scale load tests are the most effective method to verify the design equations and assumptions regarding bond, bearing, flexure and shear because the lintels being tested are exactly what is to be built in the walls of a building.

2. Section 3.2.4 of the draft criteria states that provisions regarding safety factors are outlined in Chapters 17, 19 and 22 of the IBC. Staff questions whether this reference can properly address the safety factor issue, and requests more information regarding the safety factor and/or phi factor to be used in engineering analysis of test results.

   Response:
   Change 3.2.4 to factors of safety shall be per the IBC provisions. This leaves the responsibility of the appropriate factor of safety to the applicant and doesn't inadvertently leave out some part of the IBC.

3. Staff seeks comments on the minimum galvanization coating weight necessary for the corrosion protection of the steel shapes.

   Response:
   The lintel is galvanized to a G60 standard. Additional corrosion protection is usually accomplished by painting the lintel or placing stucco on the lintel and then painting the stucco.

4. Staff wonders how far the steel shapes are extended beyond each side of the openings and whether this extension will interfere with the design of masonry walls.

   Response:
   The light gage steel shape bears 2" on the masonry at each end of the lintel. The final design uses the solid grouted lintel to extend 8" past the opening and provide for the composite lintel bearing. See attached info regarding bearing.

5. Staff questions the content of any evaluation report published in accordance with this proposed criteria. Will the content only cover load/span tables and/or design stresses and design methodology?

   Response:
   The AC and Evaluation Report is intended to demonstrate the composite light gage steel and masonry lintels can be designed per the provisions of the IBC. The testing demonstrates the light gage steel acts as reinforcing just as reinforcing bars would be reinforcing for solid grouted masonry lintels. Therefore, the report may or may not have allowable load tables.