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RESEARCH REPORT: RR 24330  
(CSI #03153)

BASED UPON ICC EVALUATION SERVICE  
REPORT NO. ESR-2577

REEVALUATION DUE  
DATE August 1, 2014  
Issued Date: July 1, 2012  
Code: 2011 LABC

**GENERAL APPROVAL** - Reevaluation - Tru-Weld Stud Connectors of 1/2", 5/8", 3/4", 7/8" and 1" diameter.

### DETAILS

The above assemblies and/or products are approved when in compliance with the description, use, identification and findings of Report No. ESR-2577 reissued October 1, 2010 of the ICC Evaluation Service, Incorporated. The report in its entirety is attached and made part of this general approval.

The parts of Report No. ESR-2577 which are excluded on the attached copy have been removed by the City of Los Angeles Building and Safety Department as not being included in this approval.

Tru-Weld Stud Connectors of 1/2", 5/8", 3/4", 7/8" and 1" diameters are approved for use as shear connectors for steel-concrete composite beams.

### The approval is subject to the following requirements:

1. Each container of studs is required to be certified in writing by the manufacturer certifying that the studs in the container complies with the requirements of Section 2204.1 of the 2011 City of Los Angeles Building Code. The manufacturing shall furnish the certificate to the Department inspector.

RR 24330  
Page 1 of 3

2. Installation of the studs and design of steel-concrete composite beams using the studs shall be in accordance with Department Information Bulletin P/BC 2011-46. Concrete shall have a minimum of  $F'c = 3000$  psi.
3. Installation of the studs shall also comply to the following:
  - a. The studs shall be installed only by operators qualified in accordance with AWS D1.1 Section 7.7.4 and who are thoroughly familiar with the installation equipment. A copy of the operating instructions for the equipment shall be at the job site at all times.
  - b. Any stud with weld showing less than a 360 degree flash around the perimeter of the stud shall be replaced or repaired in accordance with AWS D1.1 Section 7.7.3 and 7.7.5. Before welding a new stud where a defective one has been removed, the area shall be ground smooth and flush, or in the case of a pullout of the base metal, the pocket shall be filled with weld metal using the shielded metal arc process with low hydrogen welding electrodes and then ground off flush.
  - c. Where the studs are to be welded through steel deck units, the following limitations apply:

<b>Stud Size</b>	<b>Max. Material Thickness</b>	<b>Max. Amount Galvanized (oz./sq ft.)</b>
3/4"	Single No. 20 ga	.80
3/4	Double No. 20 ga	.81
3/4"	Single No. 16 ga.	1.15
3/4"	Double No. 18 ga.	1.16

The amount of galvanizing shall be determined in accordance with ASTM A525. Lesser thickness deck material may be used in each case.

4. The approval includes Tru-Weld threaded studs with the same geometry, flux, arc shield, and of the same diameters (and diameters smaller by not less than 1/8-inch) specified in the attached ICC-ES evaluation report. Allowable loads shall be determined in accordance with the Los Angeles Building Code. Special Inspection as specified in Section 4.3 of the attached ICC-ES evaluation report shall be provided.

## **DISCUSSION**

This report is in compliance with the 2011 City of Los Angeles Building code.

The approval is based on Manufacturer's Stud Base Qualification Tests specified in AWS D1.1.

Tru-Fit Products Corporation  
RE: Tru-Weld Stud Connectors

This general approval will remain effective provided the Evaluation Report is maintained valid and unrevised with the issuing organization. Any revisions to the report must be submitted to this Department, with appropriate fee, for review in order to continue the approval of the revised report.

This general approval of an equivalent alternate to the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by Department of Building and Safety Engineers and Inspectors.

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Attachments: ICC ES Evaluation Report No. ESR-2577 (3 Pages)