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RESEARCH REPORT: RR 24330
(CSI #06090)

BASED UPON ICC ES LEGACY REPORT
NO. ER-3741

REEVALUATION DUE DATE:
February 1, 2009

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

DETAILS

The above products are approved under the description, identification and findings in Legacy Report No. ER-3741, dated June, 2006, of the ICC Evaluation Service, Incorporated. The report, in its entirety, is attached and made part of this general approval.

Tru-Weld Stud Connectors of 1/2", 5/8", 3/4" and 7/8" 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 2205.10 of the Los Angeles Building Code. The manufacturing shall furnish the certificate to the Department inspector.
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 2001-46.

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3. Installation of the studs shall also comply to the following:
- a. The studs shall be installed only by operators approved by the manufacturer 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 full circle around the perimeter of the stud shall be replaced or repaired in accordance with AWS Standard. 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:

Stud Size	Max. Material Thickness	Max. Amount Galvanized (oz./sq ft.)	Special Equipment
3/4"	Single No. 20 ga.	.80	
3/4"	Double No. 20 ga.	.80	
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.

*Special equipment required for these procedures are as follows:

- a) Nelson TR 2400 with NS-20 H.D. gun.
- b) Nelson Nelwelder 2000-A with NS-20 H.D. Control & NS-20 H.D. gun.

DISCUSSION

Equipment and material for welding of the studs are as follows:

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

- Tru-Weld PS1600 Power Source ($\frac{5}{8}$ " - $\frac{7}{8}$ " studs to plate welding).
- Tru-Weld PS1800 Power Source ($\frac{1}{2}$ " studs to plate welding).
- Hobart M2300 Power Source ($\frac{3}{4}$ " - $\frac{7}{8}$ " studs through steel deck welding).
- WC700 Tru-Weld Control Unit (for all welding).
- Tru-Weld SC-1800 Power/Control Unit ($\frac{3}{4}$ " studs through steel deck welding of double No. 20 gage and single No. 16 gage thickness).
- WC700 Tru-Weld Handgun (for all welding).
- High Temperature Resistant Ceramic Ferrules (for all welding).

This general approval will remain effective provided the Legacy 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 Legacy Report No. ER-3741 (2 Pages)