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Powers Fasteners, Inc. 2 Powers Lane Brewster, New York 10509

Attn: Patrick Buckley (914) 235-6300

RESEARCH REPORT: RR 25810 (CSI # 03151)

BASED UPON ICC ES EVALUATION SERVICE REPORT NO. ESR-2272

REEVALUATION DUE DATE:

August 1, 2010

Issued Date: August 1, 2009 Code: 2008 LABC

GENERAL APPROVAL - Powers Snake+ Anchors for Cracked and Uncracked Concrete

DETAILS

The above assemblies and/or products are approved when in compliance with the description, use, identification and findings of ICC Evaluation Services Report No. ESR-2272 dated September 1, 2008, revised June 2009, 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-2272 which are excluded on the attached copy have been removed by the Los Angeles Building as not being included in this approval.

The approval is subject to the following conditions:

- 1. The allowable and strength design values listed in the attached report and tables are for the fasteners only. Connected members shall be checked for capacity (which may govern).
- 2. The anchors shall be identified by labels on the packaging indicating the manufacturer's name and product designation.

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- 3. The anchors shall be installed as per the attached manufacturer's instructions except as otherwise stated in this report. Copies of the installation instructions shall be available at each job site.
- 4. Design values and minimum embedment requirements shall be per Tables in ICC ES Report No. ESR-2272.
- 5. The concrete shall have attained its minimum design strength prior to installation of the anchors.
- 6. Special inspection in accordance with Section 91.1704 of the 2008 Los Angeles City Building Code shall be provided for anchor installations.
- 7. Anchors may be installed at embedment less than minimum depth per Table 1911.2 of the 2008 Los Angeles City Building Code for the following conditions:
 - a. Anchors are limited to the installation of Plumbing/fire sprinkler system, HVAC and electrical conduit.
 - b. 10 percent of the bolts are field load tested after installation. The bolt shall develop 300 percent of the allowable capacities listed in tables 5 through 13. If a failure occurs, then test 25% of the bolts.
- 8. The use of anchors is limited to dry interior locations.
- 9. The anchors are not approved for masonry application.
- 10. Calculations demonstrating that the applied loads or factored loads are less than the allowable load values or design strength level values respectively, described in this report shall be submitted to the plan check Engineer at the time of permit application. The calculations shall be prepared by a Civil or Structural Engineer registered in the State of California.

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DISCUSSION

The report is in compliance with 2008 Los Angeles Building Code.

The approval is based on tests in accordance with ICC ES Acceptance Criteria for Mechanical Anchors in Concrete Elements (AC 193), dated February 2009, which incorporate requirements in ACI 355.2-04, for use in cracked and uncracked concrete, and quality control documentation.

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

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.

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.

Powers Fasteners offers software to assist in the design of anchorages using Powers Fasteners products. The software "PDA Powers Design Assist" includes selectable Strength Design methodology utilizing ICC-ES AC193-compliant data to generate designs in conformance with the 2008 Los Angeles City Building Code. The PDA Software may be downloaded at www.Powers.com.

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Attachment: ICC ES Report No. ESR-2272 (9 Pages)