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RESEARCH REPORT: RR 25347
(CSI # 03210)

BASED UPON ICC EVALUATION SERVICE
REPORT NO. ESR-2764

REEVALUATION DUE

DATE: September 01, 2022
Issued date: September 01, 2020
Code: 2020 LABC

GENERAL APPROVAL – Reevaluation - HRC 500/510 XTENDER® Mechanical Coupler System

DETAILS

The above assemblies and/or products are approved when in compliance with the use, description, design, installation, conditions of approval, and identification of Evaluation Report No. ESR-2764 reissued March 2019, revised April 2020, of the ICC-ES Evaluation Services, LLC. The report, in its entirety, is attached and made part of this general approval.

Headed Reinforcement Corporation HRC 500/510 XTENDER® Mechanical Coupler system is used as either type 1 or type 2 mechanical splices of deformed steel reinforcing bars. These couplers are designed to mechanically butt-splice Nos. 5 (5/8 inch-diameter) through 14 (1-3/4 inch diameter) Grade 60 reinforcing steel conforming to ASTM A 615 or ASTM A 706 specifications. The couplers utilize external threaded male nuts and threaded female sleeves to secure upset ends of reinforcement bars intended to be spliced.

The approval is subject to the following conditions:

1. Continuous inspection by Deputy Inspectors shall be provided during installations of the couplers.

In addition to the normal duties, the Deputy Inspector shall:

- a) Verify the hardware and equipment.

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- b) Verify the cleaning and condition of the bars in accordance with the specifications and the requirements herein.
 - c) Verify the installation procedures in accordance with the specifications and the requirements herein.
2. Splices to be installed shall be selected at the job site by the Registered Deputy Inspector or the Building Inspector and shall be tested by a Los Angeles City approved testing agency. The tests shall be conducted on each different reinforcing bar size and the frequency of tests shall be as follows:

- 1 out of the first 10 splices
- 1 out of the next 90 splices
- 1 out of the next 100 splices

Splices shall develop in tension or compression, as required, at least 125 percent of the specified yield strength of the bar. In addition, splices identified as Type 2 shall develop 100 percent of the specified tensile strength, f_u , of the reinforcing bar.

3. If failure of the tested splice should occur prior to obtaining 125-percent of specified yield strength, then 25-percent of all couplers shall be tested.

If failure of the tested splice occurs with testing of the 25-percent requirement, as stated above, then all couplers shall be rejected.

4. The fabricator, in processing steel for the couplers through his works, shall maintain identity of the material and shall maintain suitable procedures and records attesting that the specified grade has been furnished in conformity with the applicable ASTM Standard. The ASTM or other specification designation shall be included near the erection mark on each shipping assembly or important construction component over any shop coat of paint prior to shipment from the fabricator's plant. The fabricator's identification mark system shall be established and on record prior to fabrication.

Steel which is not readily identifiable as to grade from marking and test records shall be tested to determine conformity to such standard. The fabricator shall, when requested, furnish an affidavit of compliance with such standard. Test data shall be provided upon request.

5. Except as specified herein, installation of the splices shall be in accordance with the manufacturer's specifications. A copy of the specifications shall be provided at the job site and be made available to all Deputy Inspectors on the job.
6. Splice locations shall be fully detailed on the plans.
7. Requirements for concrete cover and space between bars or sleeves shall be applicable at splices.

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DISCUSSION

This report is in compliance with the 2020 City of Los Angeles Building Code.

The approval is based on tests in accordance with ICC-ES Acceptance Criteria for Mechanical Connector System for Steel Reinforcing Bars (AC 133), dated May 2014.

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.

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RR25347
R09/14/2020
TLB2000162
ACI 318-14 18.2.7, 25.5.7

Attachment: ICC ES Report No. ESR-2764 (4 Pages)