#187 BRICK VENEER ANCHORS

SIZE: Anchors are 16 gage Mill Galvanized Steel x 1-1/4" (31.75mm) wide x 3-1/2" (88.9mm) long with a 1-1/2" (38.1mm) bend. A 5/16" (7.938mm) diameter hole is centered in the bend. The steel conformed to ASTM A-527 G90.

APPLICATION: The Brick Veneer Anchors are used to anchor exterior veneer to an existing wall or to a stud/sheathing wall. They are usually fastened with screws or expansion anchors, depending on conditions. Spacing is usually 16" (406.4mm) o.c. vertically and horizontally.

TEST CONDITIONS: The anchors were embedded 2-3/8" (60.325mm) between two common bricks with Type N Mortar mixed 3-1 ratio and allowed to stand over 28 days (approximately 3500 psi). Mortar joints were approximately 5/8" (15.875mm) with the anchors centered in the joints permitting mortar to be on both sides of the corrugation. a 1/4"-20 Machine Screw was inserted through the hole of the anchor and threaded into a pulling fixture attached to the load cell. This test was to determine pullout of the anchor from the mortar and/or failure in the hole or bend. The samples were tested to failure at a crosshead speed of 0.5"/minute (12.7mm/minute).

<table>
<thead>
<tr>
<th>TEST RESULTS</th>
<th>NO. ANCHORS TESTED</th>
<th>AVERAGE PULLOUT</th>
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<tr>
<td>6</td>
<td>829 lbs</td>
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Anchor 1: The 90° bend in the anchor gradually and finally (at approximately 300 lbs. force) became straightened. The hole started to elongate at approximately 760 lbs. force, and the metal tore at one point under the head of the screw. The screw head was ultimately pulled through the hole at a maximum force of 878 lbs. The anchor did not pull out from the bricks.

Anchor 2: Similar to the initial results from #1, (i.e. straightening and hole elongation) However, at 840 lbs. force the anchor pulled out from the mortar joint at which time the bricks separated along the mortar joint.

Anchor 3: Maximum force of 846 lbs. Failure similar to #1.

Anchor 4: Maximum force of 868 lbs. Failure similar to #1.

Anchor 5: Maximum force of 860 lbs. Failure similar to #1.

Anchor 6: Maximum force of 684 lbs. Failure similar to #2.