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Hytek Fasteners Inc.
415 Mountain Vista Pkwy.
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Attn: Amador Fajardo
(925) 980-0114

RESEARCH REPORT: RR 25948
(CSI # 06095)

BASED UPON IAPMO EVALUATION SERVICE
REPORT NO. ER- 0160

REEVALUATION DUE

DATE: December 1, 2013

Issued Date: December 1, 2012

Code: 2011 LABC

GENERAL APPROVAL – Pneumatic or Manually Driven Nails

DETAILS

The above assemblies and/or products are approved when in compliance with the description, use, identification and findings of IAPMO ES Report No. ER-0160 reissued July 2010, revised August 17, 2012 of the IAPMO Evaluation Service. The report, in its entirety, is attached and made part of this general approval.

The parts of Evaluation Report No. ER-0160 marked by an asterisk are deleted by the Los Angeles City Building Department from this approval.

The approval is subject to the following conditions:

1. Installation of the nails shall be per the manufacturer's instructions and the attached IAPMO ES Report No. ER-0160, copies which shall be available at the job site.
2. The material fastened shall be investigated for compliance with accepted design criteria and code requirements by California licensed Architect, Civil, or Structural engineer.
3. Use of the high strength nails is limited to fasten steel side plate to lumber, wood and engineered wood materials.
4. All nails shall have a uniform round head and smooth shanks.

RR 25948
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Hytek Fasteners Inc.
RE: Pneumatic or Manually Driven Nails

DISCUSSION

The report is in compliance with the 2011 Los Angeles City Building Code.

The approval was based on data in accordance with ICC-ES Acceptance Criteria for Nails and Spikes (AC116), dated October 2006.

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.

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.

ALLEN PEERY, Chief
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KH
RR25948/MSWord2010
R11/7/12
5D3/106.2.6

Attachments: ICC-ES Evaluation Report No. ER-0160 (3-pages)

EVALUATION REPORT



Report Number: 0160
Originally Issued: 07/2010
Revised: 08/17/2012
Valid Through: 07/2013

DIVISION: 06—WOOD AND PLASTICS
Section: 06095—Nails

REPORT HOLDER:

HY-TEK FASTENERS INCORPORATION
415 MOUNTAIN VISTA PKWY.
LIVERMORE, CA 94551
Phone: (877) 588-3065
Website: www.hytekfasteners.com

EVALUATION SUBJECT:

PNEUMATIC OR MANUALLY DRIVEN NAILS

1.0 EVALUATION SCOPE

1.1 Compliance with the following code

- 2009 International Building Code® (IBC)
- 2009 International Residential Code® (IRC)
- 2006 International Building Code® (IBC)
- * • ~~2006 International Residential Code® (IRC)~~

1.2 Evaluated in accordance with

- ICC-ES AC116 approved October 2006

1.3 Property evaluated

- Structural

2.0 USES

High strength nails are used to fasten steel side plate to lumber, wood and engineered wood materials.

3.0 DESCRIPTION

The 0.148-inch diameter high strength nail is a smooth shank nail with a diamond-shaped point at one end and a full round head at the other. The length of nail is 2 inches. It has 0.290-inch diameter head and a diamond tapered tip. The nail has either a polymer or vinyl coating and packaged in collated plastic strips or in bulk.

3.1 Fastener Tolerance

Hy-Tek fasteners conform to tolerance specified in ASTM F 1667-03 (Standard Specification for Driven Fasteners: Nails, Spikes and Staples) and its amendments. The nail is formed from C1020 through C1050 steel wire.

4.0 DESIGN AND INSTALLATION

4.1 Design

4.1.1 Nail Bending Yield Strength (F_y): The 0.148-inch diameter high strength nail has a minimum average bending yield strength, F_y , of 220,000 psi.

4.1.2 Lateral Design Values (Z): Lateral (Z) nominal design values are shown in Table A.

4.1.3 Withdrawal Design Values (W): The withdrawal (W) nominal design values are shown in Table B.

4.2 Installation

The nails must be installed in accordance with this evaluation report, the codes listed in Section 1 of this report, and the manufacturer's installation instruction. Nail installation must also comply with applicable requirements in Section 11.1.5 of the NDS. The nail is driven either pneumatically or manually.

5.0 CONDITION OF USE

The Hy-Tek Fasteners nails described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

5.1 Lateral design values in Table A and withdrawal design loads in Table B must be multiplied by all applicable adjustment factors in the NDS and codes listed in Section 1 of this report.

5.2 When required by the code official, calculations demonstrating that the applied loads are less than the design values specified in this report must be submitted for approval. Calculations must be prepared by a registered design professional where required by the statutes of the jurisdiction in which the project is to be constructed.

EVALUATION REPORT



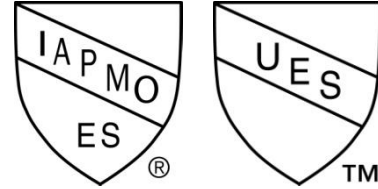
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6.0 EVIDENCE SUBMITTED

Data in accordance with the Acceptance Criteria for Nails and Spikes (AC116), editorially revised July 2010, approved October 2006, calculations, and a quality control manual. Test results are from laboratories in compliance with ISO/IEC 17025.

7.0 IDENTIFICATION

Nails are identified by labels on their containers or cartons bearing the Hy-Tek Fasteners name & logo, the evaluation report number (ER-0160), quantity or net weight, the production code, and the description (nail diameter, length and coating type and minimum average bending yield strength, F_{yb}). IAPMO ES Mark of Conformity and the evaluation report number.



IAPMO #0160

A handwritten signature in black ink, appearing to read "Amir Zamanian".

Amir Zamanian, PE
Technical Director of Evaluation Service

A handwritten signature in black ink, appearing to read "Russ Chaney".

GP Russ Chaney
CEO, The IAPMO Group

EVALUATION REPORT



Report Number: 0160
Originally Issued: 07/2010
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Table A
 NOMINAL LATERAL DESIGN VALUES (Z) ^[1] FOR METAL CONNECTOR NAILS FOR METAL SIDE PLATE OF TENSILE STRENGTHS

ASTM-A-653-00-HSLAS- GRADE 50-TYPE A STEEL, Fu = 65 ksi MIN (448 Mpa)		
Steel Side Plate (thickness)	Nail Diameter (inches) ^[2,4]	SPECIES OF MAIN MEMBER (Specific Gravity) ^[3]
		Douglas Fir-Larch 0.50 ^[5] Z (lbs.)
3 gauge ts = 0.239"	0.148	197
7 gauge ts = 0.179"	0.148	197
10 gauge ts = 0.134"	0.148	197
12 gauge ts = 0.105"	0.148	197
14 gauge ts = 0.075"	0.148	197
16 gauge ts = 0.060"	0.148	187
18 gauge ts = 0.048"	0.148	187

For SI: 1 inch = 25.4 mm, 1 lbf = 4.45 N, 1 psi = 6.89 kPa

- ¹ Tabulated lateral design values must be multiplied by all applicable adjustment factors in the code.
- ² Bending yield strength is based on minimum 220,000 psi.
- ³ Design values for one species of wood are also applicable to other species having the same or higher dowel bearing strength.
- ⁴ Minimum penetration into receiving or main member has to equal to 10 times the nail shank diameter, defined in the NDS.
- ⁵ See Table 11.3.2 of NDS for dowel bearing strength.

Table B
 NORMAL WITHDRAWAL DESIGN LOADS (W) ^{[1][3]} FOR METAL CONNECTOR NAILS

Nail Size (inches)	SPECIES OF MAIN MEMBER (Specific Gravity) ^[2]
	Douglas Fir-Larch 0.50 W (lbs/in)
** 0.148	84 36

FOR SI: 1 lb. = 4.45 N, 1 inch = 25.4 cm, 1 psi = 6.89kPa

- ¹ Tabulated withdrawal design values are in pounds per inch of penetration into side grain of member.
- ² Design values for one species of wood are also applicable to other species having the same or higher specific gravity.
- ³ Tabulated withdrawal design loads must be multiplied by all applicable adjustment factors in the code.