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APPROVAL REPORT

Pipe Hanger Components

Prepared for:

**Inka Yapi Baglanti Elemanlari Sanayi ve Ticaret A.S.
Tuzla Mermereiler Organize Sanayi Bölgesi
Gazi Bulvari No: 7
34953 Tuzla
Istanbul, Turkey**

Project Identifier: 3030133

Class: 1951

Date of Approval: December 1, 2008

Authorized by:

Richard B. Dunne

Richard B. Dunne, Manager, Hydraulics Group

FM Approvals
1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, MA 02062

PIPE HANGER COMPONENTS

from

**INKA YAPI BAGLANTI ELEMANLARI SANAYI VE TICARET A.S.
TUZLA MERMERCILER ORGANIZE SANAYI BÖLGESİ
GAZI BULVARI NO: 7
34953 TUZLA
ISTANBUL, TURKEY**

I INTRODUCTION

- 1.1 INKA Yapi Baglanti Elemanlari Sanayi Ve Ticaret A.S. (INKA). requested an examination of the products listed in Section 1.3 below. Final Quality Control inspections for these products is conducted at the address above.
- 1.2 This Report may be freely reproduced only in its entirety and without modification.
- 1.3 **Listing:** The Pipe Hanger products will appear in the *Approval Guide*, an online resource of FM Approvals, under the heading “Automatic Sprinkler Systems\Pipe Hangers” as follows:

Product Designation	Component Description	Nominal Rod Size, in. (mm)	Nominal Pipe Sizes, in.
IEKCHL	Standard Clevis Hanger	3/8 (10)	¾ to 4
IEKCHL	Standard Clevis Hanger	½ (12)	5, 6
IEKSPS	Pipe Strap	N/A	¾ to 12
IEKSPSD	Pipe Strap for Cast Iron Piping	N/A	¾ to 12
IEKSPST	Pipe Strap for Ductile Iron Piping	N/A	4 to 12
IEKSS	Band Hanger	3/8 (10)	¾ to 4
IEKSS	Band Hanger	½ (12)	5 to 8
IEKSS	Band Hanger	5/8 (16)	10
IEKSP	Band Hanger	3/8 (10)	¾ to 4
IEKSP	Band Hanger	½ (12)	5 to 8
IEKSP	Band Hanger	5/8 (16)	10
Mengene M10	Beam Clamp	3/8 (10)	¾ to 4
Mengene M12*	Beam Clamp	½ (12)	5 to 8

M12 Beam Clamps are Approved for use with the set screw on the load side only.

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1.4 Standards

Title	Class Number	Date
Approval Standard Pipe Hanger Components for Automatic Sprinkler Systems	1951	September, 2003

II DESCRIPTION

- 2.1 The Beam Clamps are cast iron per DIN 1693 Grade GGG 42 with a hex head cup point screw and hex jam nut. Both sizes of beam clamp have an installation arrow cast in the part.
- 2.2 The IEKCHL Clevis hangers are made from rolled steel sheet per EN 10025 Grade S275 JRG2 with connecting rod and nuts.
- 2.3 The pipe straps and band hangers are also made from rolled steel sheet per EN 10025 Grade S275 JRG2.
- 2.4 IEKSS and IEKSP are identical except the IEKSS includes a captive knurled nut and the IEKSP is designed to use a standard hex nut to connect band hanger to a threaded rod.

III EXAMINATION AND TESTS

- 3.1 Components of sample products, deemed representative of products discussed in the Report were examined, compared to the drawings, and found to represent the design adequately. A complete set of drawings is kept on file at FM Approvals.
- 3.2 Tensile tests were performed in order to determine the ability of the items listed below to support five times the weight of water filled Schedule 40 steel pipe plus 250 pounds (93.3 kg) with a hanger spacing of 12 feet (3.7 m) without exceeding a vertical deflection of 3/16 in. (4.76 mm).
- 3.3 Tensile tests were performed on the following specific product variants:

Model No.	Description	Sizes Tested (Inch)
IEKCHL	Standard Clevis Hanger	¾, 2, 4, 6
IEKSPS	Pipe strap	¾, 2, 4, 6, 8
IEKSPSD	Pipe strap for cast iron piping	2, 4, 8, 10
IEKSPST	Pipe strap for ductile iron piping	4, 8, 10
IEKSS	Band Hanger	¾, 2, 4, 6, 8, 10
Mengene M10	M10 Beam Clamp	4
Mengene M12	M12 Beam Clamp	8

- 3.4 The test results were satisfactory. The M12 beam clamps should only be installed with the installation arrow up (opposite the load). The manufacturer's installation instructions contain this information.
- 3.5 Due to the similarity of the design to currently approved products, no other tests were deemed necessary.

IV MARKING

The following information appears on the products (or the product packaging in the case of small items) identified in Section 1.3 and meets Standard requirements:

- Manufacturer's logo
- Nominal pipe size
- model reference
- The FM Approvals mark of Approval

V REMARKS

- 5.1 Installations shall comply with the relevant requirements of the applicable FM Global *Property Loss Prevention Data Sheets*.
- 5.2 Installations shall comply with the latest edition of the manufacturer's installation instructions.

VI FACILITIES AND PROCEDURES AUDIT

The products discussed in this report are Approved when final Quality Control inspections are conducted at the following facility:

Inka Yapi Baglanti Elemanlari Sanayi ve Ticaret A.S.
Tuzla Mermerciler Organize Sanayi Bölgesi
Gazi Bulvari No: 7
34953 Tuzla
Istanbul, Turkey

This manufacturing site was audited as part of this project and is subject to follow-up audit inspections. The facilities and quality control procedures in place have been found to be satisfactory to manufacture products identical to that examined and tested as described in this report.

VII MANUFACTURER'S RESPONSIBILITIES

- 7.1 Documentation considered critical to this Approval is on file at FM Approvals and listed in the Documentation File, Section VIII of this report. No changes of any nature shall be implemented unless notice of the proposed change has been given and written authorization obtained from FM Approvals. The Approved Product Revision Report, Form 797, shall be forwarded to FM Approvals as notice of proposed changes.
- 7.2 The manufacturer shall make available to users of the subject equipment installation drawings as required. The manufacturer shall make additional copies available upon request.

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VIII DOCUMENTATION

The drawings that describe the items discussed in this report are filed under Project ID: 3030133.

Drawing No	Revision	Title
ZS0K010	5	M10 Nut
90386720 A0	Feb 24 2004	Mengene M10 Assembly
90386720 B0	Feb 24 2004	Mengene M10 Beam Clamp
ZCC010040	Feb 24 2004	M10x40 8,8 Bolt
90386721 A0	Dec 27 2005	Mengene M12 Assembly
90386721 B0	Dec 27 2005	Mengene M12 Beam Clamp
IEKCHL-1	5	Standard Clevis Hanger, Small Diameter
IEKCHL-2	5	Standard Clevis Hanger, Small Diameter
IEKSPS	5	Pipe Straps
IEKSPSD	3	Pipe Straps for Cast Iron Piping
IEKSPST	3	Pipe Straps for Ductile Iron Piping
IEKSP00 A0	2	Band Hanger
ISOS	Feb 08 2004	Band Hanger Nut
IEKSS	2	Sprinkler Kelepce Band Hanger Assy
IEKSS B0	3	Inka Somunlu Sprinkler Kelepce
IEKSP 00 A0	2	INKA Sprinkler Kelepceler

IX CONCLUSIONS

The items described in this report are considered suitable for FM Approval when final Quality Control Inspections are conducted at the facility listed in Section 6. Since a duly signed Master Agreement is on file for this manufacturer, FM Approval for the aforementioned pipe hanger components discussed in this Report is effective the date of this Report

TESTING BY:

**Marc Masopust
Jim Horn
Bruce Wood**

EXAMINATION BY:


Bruce D. Wood

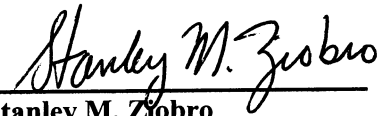
PROJECT DATA RECORD

Project ID: 3030133

REPORT BY:

REPORT REVIEWED BY:


Bruce D. Wood
Senior Engineer-Hydraulics


Stanley M. Zisbro
Technical Team Manager-Hydraulics