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# APPROVAL REPORT

**PIPE HANGER COMPONENTS FOR FIRE  
PROTECTION SPRINKLER SYSTEMS  
MODELS TK16 M10, TK16Ø 11, TK16 3/8", TK16 M12,  
TK16Ø 13, TK16 1/2", TK16 M16, TK16Ø 17 and  
TK16 5/8"**

**Prepared for:**

**VS Guss AG  
Parallelstrasse 17  
D-42719 Solingen  
Germany**

**Project ID: 3018213**

**Class: 1951**

**Date of Approval: 16 March 2004**

**Authorized by:**

  
Roger L. Allard, Group Manager-Hydraulics

FM Approvals  
743A Reynolds Road  
West Glocester, RI 02814

**PRIMARY MATERIALS LIST**

<b>COMPANY NAME</b> ERFINIGTE SCHLUSSELFABRIKEN AG		<b>JOB IDENTIFIER</b> 1ROA6.AH
<b>EQUIPMENT CLASSIFICATION(S)</b> Class 1951		<b>PROJECT ENGINEER</b> F. A. Lague
<b>SOCL/TYPE NO.(S) INVOLVED</b> K-10 Beam Clamps K-12 Beam Clamps		<b>DATE</b> May 24, 1989

<b>PRIMARY CONTROL DRAWINGS DESCRIPTION</b>	<b>Drawing No.</b>	<b>Material</b>
Beam Clamp	4/16/89	TK-10 3/4 through 4 in.
Beam Clamp	4/26/89	TK-12 5 through 8 in.

MENTS

# APPROVAL REPORT

## PIPE HANGER COMPONENTS FOR AUTOMATIC SPRINKLER SYSTEMS

Model TKN10 Beam Clamps

Prepared For:

VS Guss AG  
Parallelstrasse 17  
D-42719 Solingen  
Germany

JI 3005242

Class 1951

Date: November 1, 2000

FACTORY MUTUAL | 

1151 Boston-Providence Turnpike  
P.O. Box 9102  
Norwood, Massachusetts 02062



## Factory Mutual Research

1151 Boston-Providence Turnpike  
P.O. Box 9102  
Norwood, Massachusetts 02062

1ROA6.AH  
(1951)

May 24, 1989

PIPE HANGER COMPONENTS  
FOR  
AUTOMATIC SPRINKLER SYSTEMS  
MODELS TK-10 AND TK-12

from

VEREINIGTE SCHLUSSELFABRIKEN AG  
565 SOLINGEN 19 (WALD)  
PARALLELSTRASSE 17  
P.O. BOX 190560  
WEST GERMANY

### I INTRODUCTION

1.1 Vereinigte Schluselfabriken AG requested an Approval examination of their Models TK-10 and TK-12 beam clamps to support sprinkler system piping.

1.2 The Model TK-10 will support 3/4 through 4 in. sprinkler system piping using a 10 mm hanger rod and the TK-12 will support 5 through 8 in. piping using a 12 mm hanger rod.

### II DESCRIPTION

2.1 The attached manufacturer's detail drawings show views of the beam clamps along with other pertinent information.

### III MARKING

3.1 Cast on the beam clamps is the following information: Manufacturer's logo, model number, and the Factory Mutual Research Corporation (FMRC) Approval Mark.

3.2 The shipping carton carries the following information: Manufacturer's name and address, maximum pipe size, product designation, and the Factory Mutual Research Corporation Approval Mark.

### IV TESTS AND EXAMINATION

4.1 The Models TK-10 and TK-12 were assembled with other Approved components to form hangers and were tested on a universal tensile testing apparatus to determine their holding power. The applied loads were increased beyond the required minimums in order to determine the clamps' ultimate strengths. The attached Appendix shows the satisfactory results.

4.2 The samples submitted for this Approval examination were found to represent the design adequately. The applicable drawings are on file at FMRC.

4.3 Since this facility is currently audited in consequence of this manufacturer's currently Approved products, no special audit was required.

#### V CONCLUSION

The Vereinigte Schlusselfabriken AG Models TK-10 and TK-12 beam clamps, as described within the scope of this report, meet all Approval requirements. The Approval is effective when the Approval Agreement is signed and returned to Factory Mutual Research Corporation.

TESTS AND EXAMINATION BY: Fred A. Lague


ORIGINAL DATA: Notebook No. 89-210

ATTACHED: Manufacturer's Detail Drawings  
Primary Materials List  
Appendix

REPORT BY:

  
Fred A. Lague  
Senior Engineering Assistant  
Hydraulics Section

REVIEWED BY:

  
A. V. Brandao, P.E.  
Assistant Manager  
Hydraulics Section

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