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UL 203A

OUTLINE OF INVESTIGATION
FOR
SWAY BRACE DEVICES FOR SPRINKLER SYSTEM PIPING

Issue Number 3

February 13, 2013

Summary of Topics

This Third Issue of Outline UL 203A includes a reference to the restraining methods for rigid sway brace devices in the Load Test.

The UL Foreword is no longer located within the UL Standard. For information concerning the use and application of the requirements contained in this Standard, the current version of the UL Foreword is located on ULStandardsInfoNet at: <http://ulstandardsinfo.net/ulforeword.html>

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INTRODUCTION

1 Scope

1.1 These requirements cover sway brace devices intended to protect sprinkler system piping in locations subject to earthquakes. These devices are intended for installation in accordance with the Standard for Installation of Sprinkler Systems, NFPA 13.

2 Units of Measurement

2.1 Values stated without parentheses are the requirement. Values in parentheses are explanatory or approximate information.

3 Components

3.1 Except as indicated in 3.2, a component of a product covered by this Outline of Investigation shall comply with the requirements for that component.

3.2 A component is not required to comply with a specific requirement that:

- a) Involves a feature or characteristic not required in the application of the component in the product covered by this Outline of Investigation; or
- b) Is superseded by a requirement in this Outline of Investigation.

3.3 A component shall be used in accordance with its rating established for the intended conditions of use.

3.4 Specific components are incomplete in construction features or restricted in performance capabilities. Such components are intended for use only under limited conditions, such as certain temperatures not exceeding specified limits, and shall be used only under those specific conditions.

4 Glossary

4.1 For the purposes of this Outline of Investigation, the following definitions apply.

4.2 **LOAD RATING** – The published maximum force to be applied to a rigid sway brace fitting or non-rigid assembly where permanent deformation is evaluated, before application of the 1.5 design factor at which slip is evaluated (See 8.1 and 8.7). The load rating for non-rigid sway brace assemblies must be less than or equal to the manufacturer's specified minimum breaking strength of the cable divided by 1.5.

4.3 **NPS (NOMINAL PIPE SIZE)** – A dimensionless designator for pipe sizes defined in standards including ASTM A 53/A 53M, ASTM A 135/A 135M and ASTM A 795/A 795M used to replace terms such as "Nominal Diameter" and "Nominal Size."

4.4 **PERMANENT DEFORMATION** – The distortion of any sway brace fitting, structural attachment fitting, braced pipe (system pipe), or any other part of the brace assembly in excess of 1/8 in. (3 mm) from its original shape after assembly or after the release of test loads.

4.5 **RESTRAINT DEVICE** – A mechanism that is intended to limit interaction of the pipe with other portions of the structure and to limit stresses in the pipes to permissible limits. These devices are permitted to be a part of a Listed hanger assembly or a separate device.