File Ex643

Project 92NK11714 Project 97NK19855 Project 03NK09286

Issued: June 11, 1993
Revised: October 03, 2003

REPORT

on

AUTOMATIC SPRINKLERS

Viking Corporation Hastings, MI

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File Ex643 Page G1 Issued: 6-11-93 Revised: 9-12-97

GENERAL

INTRODUCTION:

This Report describes the investigation of automatic sprinklers intended to be installed in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13.

OBJECT:

The object of this investigation was to determine compliance *of the Model M Quick Response ELO Extended Coverage Light Hazard pendent and recessed pendent sprinklers utilizing a 3 mm XS glass bulb rated 135, 155, and 175°F with the Standard For Automatic Sprinklers For Fire Protection Service, UL 199.

PLAN:

* The investigation of the Model M Quick Response ELO Extended Coverage Light Hazard pendent and recessed pendent sprinklers utilizing a 3 mm XS bulb rated 135, 155, and 175°F consisted of conducting a product conformance evaluation and performance testing as described in UL 199.

File Ex643 Page 1 Issued: 1993-06-11

Revised: 2003-10-03

DESCRIPTION

PRODUCT COVERED:

Model M Quick Response ELO Extended Coverage Light Hazard pendent (VK608), recessed pendent (VK608) and concealed pendent (VK618) sprinklers, utilizing a 3 mm XS bulb rated 135, 155 and 175°F.

CONSTRUCTION DETAILS:

The devices have been examined and found to comply with the Standard For Automatic Sprinklers in effect as of the date of this Report.

USE:

The product covered by this Report is for use in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13, and the manufacturer's installation instructions (see Fig. 2).

<u>C O N C L U S I O N</u>

Samples of the products covered by this Report have been found to comply with the requirements covering the class and the products are judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the Laboratories' Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the Laboratories' Mark are considered as Listed by Underwriters Laboratories Inc.

Report by: DUANE HANSON Engineering Aide Reviewed by:

GEORGE E. LAVERICK Engineering Group Leader

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File Ex643 Project 91NK8404 Project 92NK8181 Project 92NK4717 Project 92NK22931 Project 93NK11446 Project 94NK6187 Project 98NK11873 Project 99NK39499 Project 01NK33 Project 03NK08138 Project 07NK12030 Project 06NK25809 Project 07NK16274 Project 08CA44585 Project 09CA26950

Issued: April 23, 1992 Revised: August 28, 2009

REPORT

on

SPRINKLERS, AUTOMATIC AND OPEN

Viking Corporation Hastings, MI

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Revised: 2009-08-28

GENERAL

INTRODUCTION:

* This Report describes the investigation of automatic sprinklers intended to be installed in accordance with the the National Fire Protection Association's Standard for the Installation of Sprinkler Systems, NFPA 13.

OBJECT:

The object of this investigation was to determine compliance of the automatic sprinklers with the Standard For Automatic Sprinklers For Fire Protection Service, UL 199 and the Canadian Standard for Automatic Sprinklers for Fire Protection Service, ULC/ORD C199-03.

PLAN:

The investigation of the automatic sprinklers consisted of conducting a product conformance evaluation and performance testing as described in UL199, $11^{\rm th}$ Edition and ULC C199-03, $2^{\rm nd}$ Edition.

Revised: 2009-08-28

DESCRIPTION

PRODUCT COVERED:

Automatic sprinklers incorporating frangible 3 mm or 5mm glass bulbs manufactured by Norbulb or Job GmbH, and (+) as an alternate extra strong 3mm glass bulbs manufactured by Norbulb, of the following models, types:

	Issue	Description
USL, CNL	+ VK608 (3.0 mm XS bulb)	Standard and Quick Response Extra Large Orifice Extended Coverage Light Hazard
USL, CNL	+ VK618 (3.0 mm XS bulb)	Pendent Standard and Quick Response Extra
USL, CNL	+ VK616 (3.0 Hull AS BUID)	Large Orifice Extended Coverage Light Hazard Concealed Pendent
USL, CNL	+ VK532, VK534 (3.0 mm XS bulb)	Extra Large Orifice Extended Coverage Ordinary Hazard Pendent and Upright
USL, CNL	+VK532, VK534 (3.0 mm XS bulb)	Quick Response Extended Coverage Light Hazard Upright and Pendent
USL, CNL	++VK530 (5mm bulb)	Standard Response Extra Large Orifice Upright, Specific Application Storage Sprinkler
USL, CNL	VK531 (3.0 mm XS bulb)	Quick Response Extra Large Orifice Specific Application Storage Sprinkler Upright
USL, CNL	VK377 (3.0 mm XS bulb)	Quick Response Extra Large Orifice Specific Application Storage Sprinkler Pendent
USL, CNL	VK536 (5 mm bulb)	Standard Response Extra Large Orifice Specific Application Storage Sprinkler Pendent

- ++ May Use A5054 wax for installation where ambient temperature does not exceed 150°F for Temperature rating 286°F.
- + May use an extra strong 3mm glass bulbs manufactured by Job GmbH or Norbulb Sprinkler Elemente GmbH as an alternate.

Revised: 5-14-93

USE:

The Model M extra large orifice sprinklers are intended for use with automatic sprinkler equipment as covered by the Standard of the National Fire Protection Association for the Installation of Sprinkler Systems, NFPA 13 and installed in accordance with the manufacturer's installation instructions.

MARKING:

Location	Marking
Wrench Head	"Viking" + and year of manufacture on opposite; model designation.
*Deflector - Pendent	"Pendent", "QR", temperature rating °F and °C, control number, UL in circle symbol.
*Deflector - Upright	"Upright", "QR", temperature rating $^{\circ}F$ and $^{\circ}C$, control number, UL in circle symbol.

$\underline{C} \ \underline{O} \ \underline{N} \ \underline{C} \ \underline{L} \ \underline{U} \ \underline{S} \ \underline{I} \ \underline{O} \ \underline{N}$

Samples of the product covered by this Report have been found to comply with the requirements and the products are judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the Laboratories' Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the Laboratories' Mark are considered as Listed by Underwriters Laboratories Inc.

Report by: STEVEN J. WISNIEWSKI Engineering Assistant Reviewed by:

GEORGE E. LAVERICK Engineering Group Leader