

Subject 213

December 15, 2017

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Rubber Gasketed Fittings for Fire-Protection Service, UL 213, are being proposed:

1. Addition of Requirements for Fire Testing for Elastomer Lined Change of Direction Fittings (Elbows and Tees) in New Paragraph 7.4 and New Section 16A

STP BALLOTS AND ALL COMMENTS DUE: January 15, 2018

UL's goal is to have no interest category comprise more than one-third of the STP membership balance. To improve the current balance for STP 213, UL is looking for participants in the AHJ, Commercial / Industrial Users, Consumer, Government, Supply Chain, Testing & Standards Org. interest categories. Definitions for these interest categories are available on the Standards STP Internet site:

<http://ulstandards.ul.com/develop-standards/participation/interest-categories/>

If you are interested in applying for STP 213 membership or are aware of potential candidates for this STP, please contact the STP Project Manager, griff.edwards@ul.com.

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~.

1. Addition of Requirements for Fire Testing for Elastomer Lined Change of Direction Fittings (Elbows and Tees) in New Paragraph 7.4 and New Section 16A

RATIONALE

Proposal submitted by: Jeff Hebenstreit, Underwriters Laboratories LLC

The 4th edition of UL 213 does not contain requirements to assess change in direction fittings with an elastomeric lining that are used in dry pipe systems. Fittings of designs such that the elastomeric lining is within the internal diameter of the water way pose a greater risk of causing blockage or flow restriction if the gasket is damaged in a fire event on a dry pipe system. Melting or deformation of an elastomeric lining internal to the waterway in a change in direction fitting has the potential to enter, block, or restrict the waterway if used as part of a dry pipe system.

Traditional rubber gasketed fittings used on dry systems are designed such that the elastomeric component is external to the pipe internal diameter and thus not in the direct waterway. In the event of a fire occurrence, if the gasket is damaged it is generally considered to be very low risk that the gasket could enter the waterway and cause blockage or restriction of the water way. This is proven by the successful use of traditional rubber gasketed fittings over several decades.

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These same concerns are considered to be very low risk for products of both design used in wet systems due to the pressure and water in the system.

It is the proposal submitter's opinion that this proposal represents a new test requirement.

PROPOSAL

7.4 Rubber gasketed fittings that are change in direction fittings, lined with an elastomeric material, and intended for use with dry pipe systems shall be subjected to the Fire Test indicated in Section 16A. Change in direction fittings include fittings such as elbows and tees.

16A Fire Test

16A.1 Rubber gasketed fittings designed as indicated in 7.4 intended for dry pipe systems shall be subjected to fire testing in accordance with Test III and Test IV from the Fire Test Section, 16 in the Standard for Metallic Sprinkler Pipe for Fire Protection Service, UL 852, with the following modifications:

- a) The pipe located directly above the fire shall have a joint such that the fitting under test is centered directly above the fire;
- b) Schedule 10 or schedule 40 pipe shall be used;
- c) There shall be no water in the fitting prior to the test;
- d) The pipe size shall be the same size as the fitting; and
- e) The acceptance criteria is as described in 16A.2.

16A.2 Subsequent to the fire test, the elastomeric lining shall be inspected, and shall not show evidence of melting or deformation of the material internal to the waterway. In addition the sprinkler downstream of the fitting shall be removed and inspected, and shall not show evidence of debris from the elastomeric lining collected at the orifice.

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