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Subject 352

333 Pfingsten Road
Northbrook, IL 60062-2096
February 18, 1994

TO: Fire Council of Underwriters Laboratories Inc.,
Subscribers to UL's Standards Service for Pipe
Connector for Flammable and Combustible Liquids and
LP-Gas,
and
Others Interested

SUBJECT: Request for Comments on Proposed Requirements for the
Sixth Edition of the Standard for Constant-Level Oil
Valves, UL 352; and PROPOSED EFFECTIVE DATES

SUMMARY OF TOPICS

This bulletin proposes the following change in requirements:

1. Replace the Mercurous Nitrate Immersion Test, Section 20, with a 10-day Moist Ammonia Test.

COMMENTS ON THIS PROPOSAL DUE: March 18, 1994

This bulletin proposes requirements for UL 352 for your review and comment.

Please note that proposed requirements are of a tentative and early nature and are for review and comment only. Current requirements are to be used to judge a product until these requirements are published in final form.

PROPOSED EFFECTIVE DATE

Since these proposed requirements will not necessitate a review or additional testing of currently Listed products, UL proposes that the new requirements become effective upon publication.

Request for Comments on Proposals

Please provide the following:

1. Your comments concerning the proposed requirements; and
2. Your comments concerning the proposed effective dates, should the proposals be adopted.

A not-for-profit organization
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committed to quality service

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Written comments should be sent to the attention of Mary Jo Borja at UL's Northbrook office, 333 Pfingsten Road, Northbrook, IL 60062-2096. Please reference all correspondence to Subject 352.

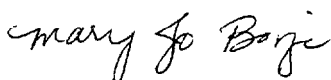
All comments should be sent by March 18, 1994.

Questions regarding the interpretation of requirements should be directed to the responsible UL staff. Please see Appendix B to this Bulletin regarding designated responsibility for the subject product category.

Unless specifically requested to do otherwise, UL will not acknowledge comments indicating concurrence with these proposals.

UNDERWRITERS LABORATORIES INC.

REVIEWED BY:



MARY JO BORJA (Ext.42281)
Engineer
Standards Department



MARSHALL ISSEN (Ext.43146)
Engineering Group Leader
Engineering Services - 416A

SR:JTM

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PROPOSED REQUIREMENTS ARE OF A TENTATIVE AND EARLY NATURE AND ARE FOR REVIEW AND COMMENT ONLY. CURRENT REQUIREMENTS ARE TO BE USED TO JUDGE A PRODUCT UNTIL THESE REQUIREMENTS ARE PUBLISHED IN FINAL FORM.

A P P E N D I X A

PROPOSED REQUIREMENTS AND PROPOSED EFFECTIVE DATES FOR THE SIXTH EDITION OF THE STANDARD FOR CONSTANT-LEVEL OIL VALVES, UL 352

* * * * *

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown ~~lined-out~~. Proposed new requirements are identified by (NEW). In the case of extensively revised paragraphs, the original text is identified by (CURRENT) and is followed by the proposed text identified by (PROPOSED). A paragraph that is proposed to be deleted is identified by (DELETED) and is shown ~~lined-out~~.

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RATIONALE

Parts made of brass alloys containing more than 15 percent zinc, are subject to applied and residual stresses during forming that may result in cracking or delamination of the part in end-use applications. This cracking or delamination can occur at room temperature and in other common environments. To determine that such parts can be considered acceptable for end-use applications, they are subjected to a mercurous nitrate immersion test. During this test, parts are immersed in a solution containing mercury, water, and nitric acid for 30 minutes.

The disposal of the mercurous nitrate waste material (coated parts and solution) in an environmentally-sound manner has become increasingly difficult. Also, there are potential health risks involved if the test is not conducted according to specific procedures.

After consideration of these difficulties, UL has decided to discontinue use of the mercurous nitrate immersion test. In searching for an acceptable alternate test, UL obtained information from ASTM and conducted evaluation tests to find a test that would provide results comparable to those obtained using the existing mercurous nitrate immersion test. As a result of these efforts, UL has determined that a 10-day moist ammonia air stress cracking test would be a suitable replacement. Accordingly, UL proposed to eliminate the Mercurous Nitrate Immersion Test and replace it with a 10-Day Moist Ammonia Air Stress Cracking Test.

IMPACT

The proposals, if adopted, will not require a review, retest, or modification of presently Listed equipment.

PROPOSALS

4.9 A part made of drawn brass or machined from a brass rod shall be capable of withstanding, without cracking, the ~~Mercurous Nitrate Immersion Test~~ 10-Day Moist Ammonia Test for copper and copper alloys. See Section 20A.

4.9 revised (date of publication)

(DELETED)

20 Mercurous Nitrate Immersion Test

Section 20 deleted (date of publication)

~~20.1 Brass parts, as described in 4.9, made of copper alloy containing more than 15 percent zinc shall withstand without cracking a total immersion of 30 minutes in an aqueous mercurous nitrate solution containing 10 grams of mercurous nitrate and 10 milliliters of nitric acid (specific gravity 1.42) per liter of~~

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~~solution.~~

~~20.2 Instructions for the preparation of solutions and procedures for replenishment, together with descriptions for cleaning and degreasing of samples, are covered in the Mercurous Nitrate Tests for Copper and Copper Alloys, ASTM B154-1989.~~

~~20.3 A test sample is to be subjected to the stress normally imposed on or within a part as the result of assembly with other components of the valve. Such stresses are to be applied prior to and be effective during the test.~~

~~20.4 CAUTION Testing with mercury is a definite health hazard; it is recommended that equipment for the removal of mercury vapor produced in volatilization be provided. Rubber gloves should be used during testing.~~

(NEW)

20A 10-Day Moist Ammonia Air Stress Cracking Test

Section 20A added (date of publication)

20A.1 After being tested as described in 20A.2 - 20A.4, a brass part containing more than 15 percent zinc shall show no evidence of cracking or delamination when examined using 25x magnification.

20A.2 Each test sample is to be subjected to the physical stresses normally imposed on or within a part as the result of assembly with other components. Such stresses are to be applied to the sample prior to and be effective during the test.

20A.3 Three samples are to be degreased and then continuously exposed in a set position for ten days to a moist ammonia-air mixture maintained in a glass chamber approximately 12 by 12 by 12 inches (305 by 305 by 305 mm) having a glass cover .

20A.4 Approximately 600 ml of aqueous ammonia having a specific gravity of 0.90 is to be maintained at the bottom of the glass chamber below the samples. The samples are to be positioned 1-1/2 inches (38.1 mm) above the aqueous ammonia solution and supported by an inert tray. The moist ammonia air mixture in the chamber is to be maintained at atmospheric pressure with the temperature constant at approximately 93°F (34°C).

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APPENDIX B
Designated Responsibility for UL
Product Category

MGJT, Heating and Heating-Cooling Appliance Accessories, (Valves)
MGJT2, Heating and Heating-Cooling Appliance Accessories,
(Valves)

The following individual is involved with the investigation of products covered under the subject categories. The Primary Designated Engineer (shown in UPPERCASE letters) coordinates the establishment and uniform interpretation of UL requirements applicable to the product category. The Designated Engineers (shown in lowercase letters) work with the primary Designated Engineer to interpret requirements and maintain standards

M. ISSEN — at UL's Northbrook Office (Ext. 43146)

Should you have questions regarding the interpretation of the requirements proposed in this bulletin or any adopted requirements that affect your product, you are encouraged to contact him.

The Industry Advisory Conference (IAC) Chairman for the subject category is John Hawley at UL's Northbrook Office. The IAC Chairman oversees the significant interpretations made by the Primary Designated Engineer and arbitrates any differences regarding interpretation of UL requirements.

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● Constant-Level Oil Valves



Underwriters Laboratories Inc.

● Standard 1