UL 870

STANDARD FOR SAFETY

Wireways, Auxiliary Gutters, and Associated Fittings

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UL Standard for Safety for Wireways, Auxiliary Gutters, and Associated Fittings, UL 870

Ninth Edition, Dated March 3, 2016

Summary of Topics

This revision of ANSI/UL 870 dated March 18, 2019 includes a clarification of Knockout Performance Testing.

Text that has been changed in any manner or impacted by UL's electronic publishing system is marked with a vertical line in the margin.

The new requirements are substantially in accordance with Proposal(s) on this subject dated October 26, 2018.

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Standard for Wireways, Auxiliary Gutters, and Associated Fittings

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Ninth Edition

March 3, 2016

This ANSI/UL Standard for Safety consists of the Ninth Edition including revisions through March 18, 2019.

The most recent designation of ANSI/UL 870 as an American National Standard (ANSI) occurred on March 18, 2019. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page.

The Department of Defense (DoD) has adopted UL 870 on April 14, 1987. The publication of revised pages or a new edition of this Standard will not invalidate the DoD adoption.

Comments or proposals for revisions on any part of the Standard may be submitted to UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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INTRODUCTION

1 Scope

1.1 These requirements cover wireways, auxiliary gutters, and associated fittings to be employed in accordance with the National Electrical Code, NFPA 70.

1.2 These requirements do not cover rigid or flexible conduit, surface raceways, underfloor raceways, nor other products of a similar nature that are covered by individual requirements.

2 Glossary

2.1 For the purpose of this standard the following definitions apply.

2.2 ACCESSIBLE EDGES – Edges that are subject to contact by persons installing, using or maintaining the product.

2.3 ASSOCIATED FITTING – A part that is used in the assembly of a complete wireway system, such as an elbow, tee, cross, end closer, or hanger.

2.4 AUXILIARY GUTTER – A section of wireway used to supplement the wiring space at a distribution center, switchboard, or similar location in a wiring system.

2.5 WIREWAY, METAL – A sheet-metal trough with a hinged or removable cover for housing and protecting electric wires and cables and in which conductors are laid in place after the wireway system has been installed as a complete system.

2.6 WIREWAY, NONMETALLIC – A flame-retardant, nonmetallic trough with removable covers for housing and protecting electric wires and cables in which conductors are laid in place after the wireway has been installed as a complete system.

3 Units of Measurement

3.1 If a value for measurement is followed by a value in other units in parentheses, the first stated value is the requirement. The second value may be only approximate.

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4 Undated References

4.1 Any undated reference to a code or standard appearing in the requirements of this standard shall be interpreted as referring to the latest edition of that code or standard.

CONSTRUCTION

5 General

5.1 Construction requirements identified for wireways, auxiliary gutters and associated fittings apply to both nonmetallic and metal devices, unless specifically noted.

5.2 Wireways, auxiliary gutters, and associated fittings shall employ materials that are acceptable for the particular use, and shall be made and finished with the degree of uniformity and grade of workmanship practicable in a well-equipped factory.

5.3 A wireway system shall include all wireways and fittings required to make a complete installation in accordance with the National Electrical Code, ANSI/NFPA 70.

5.4 Unless otherwise noted, auxiliary gutters and fittings shall comply with all of the requirements for wireways.

5.5 Nonmetallic wireways, auxiliary gutters and fittings shall additionally comply with construction requirements in the Standard for Nonmetallic Surface Raceways and Fittings, UL 5A.

5.6 Wireways, auxiliary gutters and fittings marked for use with an environmental rating, including enclosure types, shall comply with the applicable requirements specified in the Standard for Enclosures for Electrical Equipment, Environmental Considerations, UL 50E.

5.7 Ferrous steel enclosures with an opening/openings for connection of a wiring system closed with a knockout (see 11.1) shall comply with the UL 514A requirements for Strength of knockouts, (See 12.6) and Flat areas surrounding knockouts, (See 12.7).

6 Design

6.1 A metal wireway shall be constructed, such that the interconnection of sections, covers, and fittings will provide a rigid mechanical assembly and provide electrical conductivity complying with the requirements for the Electrical Continuity Test – Metal Wireways, Auxiliary Gutters, Covers, and Associated Fittings, Section 19.

6.2 A wireway shall be formed and assembled so that it will have the strength and rigidity necessary to resist the abuses to which it is likely to be subjected, without resulting in a risk of fire, electric shock, or injury to persons due to total or partial collapse with resulting damage to conductors, loosening or displacement of parts, or other serious defects.

6.3 The wireway and associated fittings shall be free from burrs and sharp corners or edges that may abrade the insulation on conductors or otherwise damage wiring or constitute a risk of injury to persons. Screws and bolts, however used, shall not project into the wireway unless sharp ends and threaded sections are covered or otherwise prevented from coming in contact with wires.

Exception: A threaded section of a screw or bolt not having a sharp point need not be prevented from coming in contact with wires provided the screw or bolt does not project more than 1/32 in (0.8 mm) into the wireway.

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