

Subject 2239

August 17, 2018

SUMMARY OF TOPICS

The following changes in requirements to the Standard for Hardware for the Support of Conduit, Tubing, and Cable, UL 2239, are being proposed:

1. Addition of Requirements to Certify Conduit and Tubing Supports for Rooftops and Duct Banks

2. Clarification of Load Ratings for Hangers, Staples, and Straps

STP BALLOTS AND ALL COMMENTS DUE: October 1, 2018

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

If you are interested in applying for STP 2239 membership or are aware of potential candidates for this STP, please contact the STP Project Manager, Joshua.Johnson@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 to Certify Conduit and Tubing Supports for Rooftops and Duct Banks

RATIONALE

Proposal submitted by: David Gerstetter, UL LLC

Proposal to document the long-time existing requirements employed by UL for evaluating of conduit or tubing supports intended to be installed without fastening to a structure, for both aboveground (free floating or roof top) and belowground (concrete encased electrical duct-bank) applications.

The load values employed are already accepted load values from the standard for the pull force requirements for hangers which were developed taking in to account; weight of the raceway, maximum fill of conductors and the distance of the support spans, noted in NFPA 70 the National Electrical Code.

PROPOSAL

3.1A ABOVEGROUND SUPPORT: A HARDWARE DEVICE, other than a STAPLE, that is intended to secure conduit, cable, or tubing to a building structure or other support assembly.

3.3A BELOWGROUND SUPPORT: A means to provide both:

a) support for raceways intended to be encased in concrete electrical duct banks prior to the pouring the concrete, and

b) to maintain conduit/tubing spacing in concrete electrical duct banks prior, during and after the pouring of the concrete.

5.4 Conduit spacing for belowground conduit/tubing supports

5.4.1 Horizontal support intervals are limited to the maximum spacing between supports for the specific conduit type to be installed in accordance with the applicable installation codes and standards.

5.4.2 In Canada, a belowground conduit/tubing support shall space conduit a minimum of 190 mm on center.

In the United States, this requirement does not apply.

10A Product Testing for Aboveground (Free Floating or Roof-Top) and Belowground Conduit/Tubing Supports

10A.1 Load test

10A.1.1 As a result of the test described in 10A.1.2 to 10A.1.5, the conduit or tubing support for use above ground and/or below ground shall not crack, break, or show other damage that could impair the devices performance.

10A.1.2 For conduit or tubing support for use:

a) Aboveground the load force specified in 10A.1.3 or three times the manufacturer's marked LOAD RATING, whichever is greater, shall be used for the tests specified in 10A.1.4 and 10A.1.5, and

b) Belowground the load force specified in 10A.1.3, shall be used for the tests specified in 10A.1.4 and 10A.1.5.

10A.1.3 Each sample from 10A.1.4 and 10A.1.5 shall be subjected to, and maintain, a compressive load for 5 min, applied normal to the mounting surface. The force shall be as specified in Tables 10 and 11.

10A.1.4 Conduit or tubing supports shall be placed between two flat rigid plates at least 150 mm (6.0 in) long and 10 mm (0.4 in) thick, and a compressive force equal to that specified in Tables 10 and 11 shall be applied with a tension/compression type machine at a rate of 12.7 mm/min (0.5 in/min). For above ground supports the load shall be applied through a conduit or tubing with an external diameter equivalent to the largest trade size raceway the support is intended for use with. For below ground supports, the load shall be directly applied to a vertically oriented sample by the plates.

10A.1.5 For a conduit or tubing support of a polymeric material, or having a polymeric component, each support from 10A.1.4 shall be tested in accordance with and deemed compliant with 6.6 prior to conducting the load test described in 10A.1.3. The samples shall cool to room temperature before being subjected to the load test.