



Canadian Standards Association  
Mississauga, Ontario  
**To the Part I Committee**

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Subject No. 3020

Chair: M.D. Gardener

Date: January 28, 2004

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Title: Marking of Maximum Voltage on Raceways, Rule 12-1608

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**Submitted by:** Ed Wesley of The Wiremold Co., 60 Woodlawn St., West Hartford, CT, 06133-0639, (860) 233-6251, ed.wesley@wiremold.com; Neil Sutton, Wiremold Canada Inc., 850 Gartshore St., Box 158, Fergus, Ontario, N1M 2W8, (519) 843-4332, neil.sutton@wiremold.com; **and** Brian Haydon, CSA International, 178 Rexdale Blvd., Etobicoke, Ontario, M9W 1R3, (416) 747-4006, brian.haydon@csa-international.org on February 21, 2001

**Proposal:** Modify 12-1608 as shown:

The voltage between conductors contained in surface raceways shall not exceed 300 V unless the metal has a thickness of not less than 1.016 mm (0.040 in) nominal. Raceways less than 1.016 mm (0.040 in) nominal shall be marked 300 V MAXIMUM or equivalent.~~the raceways are marked for a higher voltage.~~

**Reasons for Request:**

1. CSA TIL No.A-26, issued August 31,2000, requires raceway systems, C22.2 No. 62, to be marked “600 V MAXIMUM” or equivalent, if intended to contain conductors for voltages greater than 300 V between conductors. The TIL was issued to comply with the existing wording of CEC Rule 12-608.
2. The proposed change would coincide with:

**NEC Section 352.1 Uses**  
**(b) Not Permitted.**  
"The use of surface metal raceways shall not be permitted in the following: ... (2) Where the voltage is 300 volts or more between conductors, unless the metal has a thickness of not less than 0.040 in. (1.016mm) nominal."
3. Why impose an added marking requirement to existing raceways that already meet the thickness requirement for 600 volts. The majority of raceways produced are 0.040 in. or above.
4. Proposed CSA Standards, binational draft C22.2 No. 62.1 / UL 5A, and existing UL Standards address the marking requirements for raceways having a thickness less than 0.040 in. (1.016mm) nominal, as follows:

"Each length of raceway provided with a metal cover less than 1.02 mm (0.40 in) thick shall be marked "300 V maximum" or equivalent."

5. Additional imprints, "600 V MAXIMUM", to Surface Raceways detract from the aesthetic look for which they are designed.
6. This proposal is intended to allow the withdrawal of CSA TIL No.A-26 and make the marking of "600 V MAXIMUM" optional, instead of mandatory.

**Chair's Comments:** After come discussion with the submitters, we agreed to another version of the proposal.

The original proposal has some design specific requirements that is governed by Part II product standards and is not necessary to be included in Part I.

The alternate or revised proposal will now read as:

#### **12-1608 Maximum Voltage**

Each length of surface raceways shall be suitable for use at 600 volt maximum unless identified otherwise.

I'm leaving the "Reason for Request" as is since the information is still pertinent.

The new rule would now require surface raceways (metallic and nonmetallic) to be rated for 600 volts (which to my understanding that most raceways are manufactured for this rating.).

If the surface raceway is not manufactured for 600 volts, then the surface raceway will have to be marked or identified for the suitable voltage.

**Subcommittee Deliberations:** There were eight members who responded in favour of the amended version of the proposal and two members who voted against the proposal.

Both members commented that the existing rule deals with the maximum voltage between conductors installed in a surface raceway and that the new amended proposal does not take this into account. The present wording of the rule indicates that the maximum voltage between conductors in a surface raceway cannot exceed 300 V unless the surface raceway is marked for the higher voltage.

I'm not sure if this will be an issue since the new proposal will state that surface raceways will have to be rated for use a 600 V maximum.

This would mean that the thickness of surface raceway will have to be manufactured greater than 1.016 mm (0.04 inches) to meet the 600 V requirement. This would allow conductors with a voltage rating up to 600 V to be installed in a surface raceway without marking the raceway.

If the surface raceway is manufactured with a thickness of less than 1.016 mm (0.04 inches) then the surface raceway is not approved for the 600 V rating and would have to be marked for lower voltage rating.

**Subcommittee Recommendation:** To accept the revised proposal.

**12-1608 Maximum Voltage**

Each length of surface raceway shall be suitable for use at 600 V maximum unless identified otherwise.