

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

Subject No. 3146Chair: L. RadomDate: January 22, 2004Title: Connection of High-Voltage Cables, Rule 34-406(2)

**Submitted by:** Electrical Technical Council (*Contact: René Leduc – Tel:* (780) 415-0481, *E-mail: rene.leduc@gov.ab.ca* on September 26, 2003.

**Proposal:** Add a new Subrule (2) to Rule 34-406 as follows:

(2) Notwithstanding Rule 34-400(1), where a high-voltage cable is required to be exposed for connection to the high-voltage terminal of a neon supply or for connection to or interconnection of neon tubing, the cable shall:

- (a) be run inside GTO sleeving to a point at least 50 mm inside the raceway (where a raceway is provided); and
- (b) be spaced at least 38 mm from conducting or combustible material for installations operating at 100 Hz or less or at least 44 mm for installations operating at more than 100 Hz; and
- (c) not exceed 300 mm in length.

**Reasons for Request:** If we apply Rule 34-400(1) literally, GTO cable would not be permitted to extend outside the raceways listed in that Subrule hence the "notwithstanding" clause. High voltage cable must be able to extend from a raceway for some distance to make a connection to a neon supply or to neon tubing. It is also impracticable to enclose the GTO cable in raceway for the short distance when interconnecting neon tubing. The proposal intends to address this discrepancy while at the same time limiting the length that high-voltage cable can be run outside of raceway.

**Supporting Information:** A task force of representatives from the Alberta Sign Association, the City of Edmonton inspection agency, the Northern Alberta Institute of Technology and inspectors reviewed this subject and the Electrical Technical Council agrees with their recommendation.

Chair's Comments: The submittor is proposing 2 changes:

- The addition of notwithstanding clause to correct literal wording of Rule 34-400(1) so that high voltage cable may be run exposed.
- The additional requirement for maximum length of 300 mm.

The proposal is presently written to go in Rule 34-406 Connections of High-Voltage Cables. To avoid duplication, I would like to suggest this should fall in Rule 34-400 High-Voltage Wiring Methods, which currently has a similar rule in 34-400(6)

With regards to the requirements for 300 mm maximum length, there appears to be a conflict with Rule 34-404(2), which presently states the length shall be as short as practicable.

I look forward to hearing Subcommittee comments on whether or not the length restriction will cause problems.

Based on the above, and after discussion with the submittor, I am proposing the following:

## Chair's Proposal;

Revise Rule 34-400(6) to read as follows:

340499(6) Notwithstanding Rule 34-400(1), where cable used for high-voltage wiring of signs and outline lighting is exposed, the cable shall:

- (a) be run inside GTO sleeving to a point at least 50 mm inside the raceway (where a raceway is provided); and
- (b) be spaced at least 38 mm from conducting or combustible material for installations operating at 100 Hz or less or at least 44 mm for installations operating at more than 100 Hz; and
- (c) not exceed 300 mm in length.

## **Subcommittee Deliberations**

Five of the ten Subcommittee members responded, all in favor of the revised proposal. One member had this comment:

The beginning of the Chair's proposal should read:

34-400(6) Notwithstanding Subrule (1), where .....

## **Chair's Comments:**

I agree with the comment, and based on the above, I believe we have consensus on this subject.

## Subcommittee Recommendation

To accept the Chair's proposal with above editorial revision as follows:

34-400(6) Notwithstanding Subrule(1), where cable used for high-voltage wiring of signs and outline lighting is exposed, the cable shall:

- (a) be run inside GTO sleeving to a point at least 50mm inside the raceway (where a raceway is provided); and
- (b) be spaced at least 38mm from conducting or combustible material for installations operating at 100Hz or less or at least 44mm for installations operating at more than 100Hz; and
- (c) not exceed 300mm in length.