



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3218

Chair: E. Zebedee

Date: April 5, 2005

Title: Installations Near Gas Meters, Rule 2-322(1)

Submitted by: John Marshall of Enbridge Gas Distribution, 500 Consumers Rd., PO Box 650, Toronto, Ontario, M2J 1P8, Tel: (416) 495-5388, Fax: (416) 495-5871 on December 1, 2004.

Proposal: Delete Rule 2-322(1)

Reasons for Request: The existing Electrical Code, Rule 2-322 requires that arc producing electrical equipment not be installed within 900 mm of a gas meter. These requirements in the Electrical Code were the result of the same restrictions in the CSA Z662 Oil and Gas Pipeline Systems. The new edition of the CSA Z662-03 has removed that restriction. Therefore the Electrical Code should be updated to remove that requirement as well.

Subcommittee Deliberation: Three members voted in favor of this proposal, two with comments and two members voted negative. Of the two members who had voted negative on this subject, one member withdrew his negative after receiving further information from the Z662 Committee. Comments were as follows:

Here is some more information on why the CSA Z662 Committee removed this requirement. I hope that will satisfy any concerns of the electrical group. First let me clarify a couple of issues:

1. I am only looking for requirements in sub clause (1) of clause 2.322 to be deleted. No change to (2). These requirements have been removed from the latest edition of the CSA Z662. It is my understanding that these were only in the Electrical Code because of the gas code requirements.
2. There is no relief valve in the gas meter, if a regulator is used it is separate component.
3. This old requirement was the result of old style tinned case meters that are no longer used. Please see the expanded background below.

I would like to propose a change to the Canadian Electrical Code to delete sub clause (1) of clause 2-322 only.

Background

The existing electrical code, Rule 2-322 (1) requires that arc producing electrical equipment not be installed within 900 mm of a gas meter.

These requirements in the electrical code were the result of the same restrictions in the CSA Z662 Oil and Gas Pipeline Systems.

The new edition of the CSA Z662-03 (clause 12.4.10.3) has removed that restriction. This is the

rationale from the Z662 TC - Restrictions on the location of customer's meters in relation to combustible stairways, unventilated places, and proximity to sources of ignition was based upon a concern that meters might leak. Such concern was relevant when tinned case meters were used; however, these types of meters are no longer manufactured or used. It is estimated that tinned case meters have not been manufactured for 35 years in North America. In Canada when these meters were removed they were destroyed. The last tinned case meters were removed 15 years ago.

Further the potential for leaks is no different from that of threaded fittings. The CSA B149.1 does not restrict the location of threaded fittings.

Therefore the electrical code should be updated to remove that requirement as well. I am proposing that Rule 2-322 (1) be deleted.

I am not sure how many still have concerns or if they have just not responded yet. I would be glad to explain the proposed change, but I don't really have to much more I can add, but here is a little additional information:

- The location restrictions with respect combustible stairways, unventilated places and distance requirements to sources of ignition, should only be applicable to devices that are likely to relief gas as part of normal operations or upset conditions. These devices would include regulators and other pressure relief devices but not meters.
- Gas meters that are properly designed, tested and installed do not relieve gas and the potential for leaks is no different from threaded fittings such as unions and flanges. The CSA B149 does not restrict the location of threaded fittings from sources of ignition in fact, most residential appliances have threaded fittings and connections that are very close to the sources of ignition such as pilot light, burners and electrical controls.
- Meters are designed and tested to ANSI B109 series of standards.
- The previous restrictions in the Z662 originated from tin-case meters that are no longer manufactured or used.
- From a practical point of view there will be some separation just by virtue of having to exchange meters from time to time. In fact the Z 662 requires that meters be accessible for proper maintenance and reading as well as protection from thermal stresses and sources of heat.
- This is more than a paper change, the Z662 subcommittee and the Technical Committee gave this careful consideration before making the change.
- Not changing the electrical code will leave two National Code in conflict.

I hope this helps clarify the rationale for the change.

Subcommittee Recommendation: Accept the subject as submitted.