



Canadian Standards Association
Mississauga, Ontario
To the Part I Committee

Subject No. 3188

Chair: V.G. Rowe

Date: March 21, 2005

Title: De-energized Receptacles and Plugs, Rules 18-178 and J18-174

Submitted by: Vince Rowe of Marex Canada Limited on July 16, 2004.

Proposal: Change Rule 18-178 to read as follows:

18-178 Receptacles and Attachment Plugs, Class I, Zone 2

(1) Receptacles and attachment plugs shall conform to Rule 18-124.

(2) Notwithstanding Subrule (1), receptacles and attachment plugs, WHEN designed for connection or disconnection only WHILE de-energized and requiring the use of a tool for disconnection, shall conform to Rule 18-150.

Reasons for Request: This Rule appears to have been added to the code when the only connectors available were the explosion-proof type. (I checked back as far as the 1978 edition and it had been added previous to that) In more recent years equipment has been certified that contains plugs intended for connection and disconnection only while energized and that also incorporate provision to prevent accidental disconnection. Industrial plants are now incorporating similar plugs into Class I, Zone 2 wiring systems in their new designs.

Supporting Information: Use of these types of plugs fits the principles used for Class I, Zone 2 wiring systems. CSA certification staff are currently preparing a TIL for testing of plugs for Class I, Zone 2 service. This is basically a "keeping up with developing technology" item.

This will also apply to Rule J18-174.

Chair's Comments (First Round):

The first round balloting resulted in six members of the Subcommittee agreeing with comments and a 7th disagreeing. There was also one member whose ballot didn't register but who registered his comments later. The negative ballot was later resolved. There were two main themes to the comments, the first was changing the term "be permitted" to "shall". Other comments supported this suggestion. The second theme was that the proposed Rule change was getting into Part II work, so it would be more sensible to simply change the whole Rule to require plugs in Zone 2 to comply with Rule 18-150. There was additional discussion by e mail around eliminating Rule 18-178 altogether, however it was pointed out that the current wording of Rule 18-150 which states that "Where required by other Rules of this Code, electrical equipment installed in a

Class I, Zone 2 location shall be” would not require the plugs to meet the requirements of Rule 18-150. While there is merit in deleting 18-178 and modifying the wording of Rule 18-150, it was clear that this would also lead to modifying 18-100 and possibly modifying or removing other Rules such as 18-104, 18-110, 18-112, 18-114, 18-116, 18-118(5), 18-120, 18-122(c) , 18-124, 18-12818-160(1), 18-170 and 18-174(1). As this would be well outside the original scope of this subject I sampled the Subcommittee by E mail on the suitability of requiring plugs and receptacles in Zone 2 locations to comply with Rule 18-150. There seems to be consensus with this approach. I intend to deal with the changes to Rules 18-100 and 18-150 and the other associated Rules in the next Code cycle.

Therefore, for the second round ballot the proposed wording of Rule 18-178 will change to read:

18-178 Receptacles and Attachment Plugs, Class I, Zone 2

Receptacles and attachment plugs shall comply with the requirements of Rule 18-150.

Also note that the change to appendix J will apply to Rule J18-178 not J18-174 as subject 3182 changed the numbering of the Receptacles and Attachment Plugs Rule in appendix J. The appendix J Rule will now read:

J18-178 Receptacles and Attachment Plugs, Class I, Division 2

Receptacles and attachment plugs shall comply with the requirements of Rule J18-150.

Subcommittee Deliberation: There were 11 replies to the second round ballot. All eleven replies agreed with the second round proposal without comment.

Subcommittee Recommendation: Change Rules 18-178 and Rule J18-178 to read as follows:

18-178 Receptacles and Attachment Plugs, Class I, Zone 2

Receptacles and attachment plugs shall comply with the requirements of Rule 18-150.

J18-178 Receptacles and Attachment Plugs, Class I, Division 2

Receptacles and attachment plugs shall comply with the requirements of Rule J18-150.