

P572

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Type of Project: Revision to IEEE Standard 572-2006

PAR Request Date: 06-Dec-2016

PAR Approval Date: 17-Feb-2017

PAR Expiration Date: 31-Dec-2021

Status: PAR for a Revision to an existing IEEE Standard

Root Project: 572-2006

1.1 Project Number: P572

1.2 Type of Document: Standard

1.3 Life Cycle: Full Use

2.1 Title: Standard for Qualification of Class 1E Connection Assemblies for Nuclear Power Generating Stations and Other Nuclear Facilities

Changes in title: ~~IEEE~~ Standard for Qualification of Class 1E Connection Assemblies for Nuclear Power Generating Stations **and Other Nuclear Facilities**

3.1 Working Group: Working Group on Connectors (PE/NPE/WG_2.11)

Contact Information for Working Group Chair

Name: Gary Elam

Email Address: gelam@curtisswright.com

Phone: 256-722-8500

Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Power and Energy Society/Nuclear Power Engineering (PE/NPE)

Contact Information for Sponsor Chair

Name: Stephen Fleger

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4.1 Type of Ballot: Individual

4.2 Expected Date of submission of draft to the IEEE-SA for Initial Sponsor Ballot: 10/2019

4.3 Projected Completion Date for Submittal to RevCom

Note: Usual minimum time between initial sponsor ballot and submission to Revcom is 6 months.: 10/2020

5.1 Approximate number of people expected to be actively involved in the development of this project: 10

5.2 Scope: This standard provides basic requirements, direction, and methods for qualifying Class 1E Connection Assemblies for service in nuclear power generating stations and other nuclear facilities. These include connectors, terminations, and environmental seals in combination with related cables or wires as assemblies. Qualification of cable with connectors to this standard does not replace qualification to IEEE Std 383TM -2015. This standard does not apply to containment electric penetrations, fire stops, in-line splices, or components for service within the reactor vessel. The qualification requirements in this standard, when met, demonstrate and document the ability of the equipment to perform safety function(s) under applicable service conditions (including design basis events) reducing the risks of common cause-equipment failures. This standard does not provide environmental stress levels and performance requirements.

NOTE--Other IEEE standards that present qualification methods for

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5.3 Is the completion of this standard dependent upon the completion of another standard: No

5.4 Purpose: The purpose of this standard is to provide specific direction for the implementation of IEEE Std 60780-323-2016 on qualification as it pertains to qualification of connectors, terminations, and environmental seals (related to cables as assemblies).

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5.5 Need for the Project: See Section 8.1

5.6 Stakeholders for the Standard: Nuclear Steam Supply System suppliers, Architect/Engineering suppliers, Nuclear facility operators, Connector Manufacturers, and others.

Intellectual Property

6.1.a. Is the Sponsor aware of any copyright permissions needed for this project?: No

6.1.b. Is the Sponsor aware of possible registration activity related to this project?: No

7.1 Are there other standards or projects with a similar scope?: No

7.2 Joint Development

Is it the intent to develop this document jointly with another organization?: No

8.1 Additional Explanatory Notes: 2.1 and 5.2: The term "Other Nuclear Facilities" is added because there are facilities other than nuclear power generating stations which may benefit from this standard. The other nuclear facilities may include fuel reprocessing facilities, waste processing facilities, government labs, military prototype reactors, research reactors, and similar.

The goal of this revision is to make this standard more useful to the industry, especially for the new generation plants being designed and built, including consideration of the following possible topics:

1. Delineation of connection assembly and assembly which is part of a system such as a gland which requires replacement following disconnection/connection
2. Definitions of connector assembly and cable assembly and their interface.
3. Condition monitoring
4. Maintaining the simplicity and clarity of the flow chart
5. Clarifying abnormal and normal environment and operational cycles within the flow chart
6. Contact resistance during thermal cycling and accident exposures
7. Accelerated vibration testing
8. Severe accident and beyond design basis event guidance
9. Incorporating the latest version of IEEE Std 60780-323-2016
10. Submergence considerations
11. Qualification of Fiber Optic connectors

Other standards that may be referenced are IEEE Std 60780-323-2016 , "Nuclear Facilities - Electrical Equipment Important to Safety - Qualification.", IEEE Std 383-2015, "IEEE Standard for Qualifying Electric Cables and Field Splices for Nuclear Facilities", and IEEE Std 344-2013, "IEEE Standard for Seismic Qualification of Equipment for Nuclear Power Generating Stations".