

P1662

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Type of Project: Revision to IEEE Standard 1662-2008

PAR Request Date: 20-Mar-2014

PAR Approval Date: 12-Jun-2014

PAR Expiration Date: 31-Dec-2018

Status: PAR for a Revision to an existing IEEE Standard

Root Project: 1662-2008

1.1 Project Number: P1662

1.2 Type of Document: Recommended Practice

1.3 Life Cycle: Full Use

2.1 Title: Recommended Practice for Design and Application of Power Electronics in Electrical Power Systems **Changes in title:** ~~IEEE Recommended Guide Practice for the Design and Application of Power Electronics in Electrical Power Systems on Ships~~

3.1 Working Group: Power Electronics Working Group (IAS/PCI/1662_WG)

Contact Information for Working Group Chair

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Contact Information for Working Group Vice-Chair

None

3.2 Sponsoring Society and Committee: IEEE Industry Applications Society/Petroleum & Chemical Industry (IAS/PCI)

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3.3 Joint Sponsor: IEEE Power Electronics Society/Standards Committee (PEL/SC)

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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: 08/2018

4.3 Projected Completion Date for Submittal to RevCom: 02/2019

5.1 Approximate number of people expected to be actively involved in the development of this project: 28

5.2 Scope: This document summarizes current electrical engineering methods and design practices for applying power electronics in electrical power distribution and conversion systems from a common frame of reference for reliable integrated electrical power systems. It recommends power electronics equipment requirements, necessary power system analytical studies, power electronics design analysis and testing, certification and inspection procedures.

Changes in scope: This document summarizes current electrical engineering methods and **design** practices for applying power electronics in electrical power ~~systems~~**distribution on ships.** ~~It describes analytical methods, preferred parameters, and performance characteristics systems~~ from a common frame of reference for reliable integrated ~~marine~~ electrical power systems. ~~This document~~ **It summarizes recommends current power**

electrical electronics engineering equipment methods requirements, and necessary practices for applying power electronics system in analytical electrical studies, power systems electronics on design ships. analysis It and describes analytical methods testing, preferred certification parameters, and performance inspection characteristics from a common frame of reference for reliable integrated marine electrical power systems procedures.

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

5.4 Purpose: The purpose of this document is to recommend a methodology for analysis and specifications parameters of power electronics equipment for electrical power systems. It analyzes the impact of such concepts as power electronics building blocks or integrated power systems on size, life cycle cost, weight, fuel efficiency, and risk reduction of implementation.

Changes in purpose: The purpose of this document is to recommend a methodology for analysis and specifications parameters of power electronics equipment for ~~marine~~ electrical power systems. It analyzes the impact of such concepts as power electronics building blocks or integrated power systems on size, life cycle cost, weight, fuel efficiency, and risk reduction of implementation.

5.5 Need for the Project: In all applications cost, weight, losses and size, in varying priority for different applications stand in the way of acceptable application of power electronics. Application of this recommended practice would optimize design and applications of power electronics in virtually every electrical power distribution and conversions system. Target users for this standard are evaluators and designers of power electronics systems for industrial and commercial applications as well as end users and regulatory agencies.

5.6 Stakeholders for the Standard: Stakeholders for this standard are evaluators and designers of power electronics systems for industrial and commercial applications, classification societies, machinery and equipment manufacturers, research institutes, and universities.

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 (Item Number and Explanation): Current standard is 6 years old and it should include latest developments in power electronics. It also would be changed from the guide to recommended practice and would be corrected to officially acknowledge co-sponsorship by Power Electronics Society.