

IEEE Recommended Practice for Electrical Installations on Shipboard— Marine Sectors and Mission Systems

IEEE Industry Applications Society

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Petroleum and Chemical Industry Committee

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**Petroleum and Chemical Industry Committee
of the
IEEE Industry Applications Society**

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Abstract: Recommendations for the grouping of ships and their predominant mission systems to define and highlight unique features and requirements of a ship's electrical power system driven by the ship's mission for classification and use by the IEEE 45™ series of standards

Keywords: IEEE 45.4™, marine electrical engineering, marine vessels, naval vessels, shipboard electrical systems, ships

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Introduction

This introduction is not part of IEEE Std 45.4–2018, IEEE Recommended Practice for Electrical Installations on Shipboard—Marine Sectors and Mission Systems.

The IEEE 45™ series of standards comprises eight recommended practices addressing electrical installations on ships and marine platforms. IEEE Std 45.4 provides recommended practices for identifying unique electrical system requirements or attributes based on the vessels intended use or function (“Mission”). Once these attributes have been identified, the recommended practices outlined in the IEEE 45 series should be followed.

Previous editions of IEEE 45 standards were developed as single documents addressing all areas. On 9 June 2005, the Project Authorization Request (PAR) for the revision of IEEE Std 45-2002 was approved and the revision of IEEE Std 45 as a single document began. It soon became apparent that attempting to cover all issues in a single document would produce a document that was very large and therefore difficult to ballot due to the wide range of issues needed to be addressed. In September 2008, it was decided that the revision of IEEE Std 45 should be developed as a base document with separate documents addressing specific areas.

On 10 December 2008, separate PARs were approved for seven separate recommended practices. Additional PARs were approved on 11 September 2009 for switchboards and on 9 December 2009 for cable systems, bringing the total number of standards in the IEEE 45 series to eight:

- IEEE Std 45.1™-2017, IEEE Recommended Practice for Electrical Installations on Shipboard—Design
- IEEE Std 45.2™-2011, IEEE Recommended Practice for Electrical Installations on Shipboard—Controls and Automation
- IEEE Std 45.3™-2015, IEEE Recommended Practice for Shipboard Electrical Installations—Systems Engineering
- IEEE P45.4, Draft Recommended Practice for Electrical Installations on Shipboard—Marine Sectors and Mission Systems
- IEEE Std 45.5™-2014, IEEE Recommended Practice for Electrical Installations on Shipboard—Safety Considerations
- IEEE P45.6, IEEE Recommended Practice for Electrical Installations on Shipboard—Electrical Testing
- IEEE Std 45.7™-2012, IEEE Recommended Practice for Electrical Installations on Shipboard—AC Switchboards
- IEEE 45.8™-2016, IEEE Recommended Practice for Electrical Installations on Shipboard—Cable Systems

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