
**Ships and marine technology —
Specification for software-based
planned maintenance systems**

*Navires et technologie maritime — Spécification pour la gestion de
maintenance assistée par ordinateur*



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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electro-technical Commission (IEC) on all matters of electro-technical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents shall be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 11, *Intermodal and Short Sea Shipping*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

In its International Safety Management Code, the International Maritime Organization (IMO) defines a mandatory regulation on planned maintenance systems (PMS) for ships, for the purposes of promoting efficiency of maintenance and safe operation. Although PMS are regulated to be operated on paper or software, software-based PMS are preferred due to systematization and computerization of the shipping industry. Hence, software-based PMS have already been used to help implement ISM Code 2018 Part A/10. However, a standardized software-based PMS is needed to meet further demand in the era of e-navigation or maritime autonomous surface ships (MASS). In addition, even though shipping companies have been developing their own PMS software and equipping ships, this has been proving difficult for medium to small size shipping companies. This document will prove useful to shipping companies when developing the software program of PMS, by providing the method of inputting, planning, reporting and managing the data of maintenance of items and spare parts.

Ships and marine technology — Specification for software-based planned maintenance systems

1 Scope

This document specifies the minimum functions for software-based planned maintenance systems (SPMS) and related aspects, that shipping companies are intended to provide to ships. It includes requirements for planning and implementing a maintenance schedule, as well as for recording, reporting, analysing and optimizing the maintenance of onboard equipment and systems, in support of ISM Code 2018 Part A/10, which addresses maintenance, spare parts, procurement, personnel, and voyage planning; these aspects can be covered in one or more applications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IACS E22, *On Board Use and Application of Computer based systems*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

planned maintenance system

PMS

system that supports efficient maintenance, such as planning, scheduling, implementing, recording and reporting of actions taken for onboard equipment and systems

3.2

software-based planned maintenance system

SPMS

planned maintenance system (3.1) that fulfils functionalities via software

4 SPMS functions

4.1 General

4.1.1 Language

The SPMS should be implemented in English, other languages may also be used.