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Ships and marine technology — Marine environment protection — Tanks and piping systems for facilitating 5 ppm oil-water separation

Navires et technologie maritime — Protection de l'environnement marin — Réservoirs et systèmes de systèmes de tuyauterie utilisés pour faciliter la séparation entre le pétrole et l'eau à 5 ppm

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Foreword

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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 should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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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 2, *Marine environment protection*.

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

Marine environment protection is required by national, regional and international regulations.

The *International Convention for the Prevention of Pollution by Ships* (MARPOL) was adopted in 1973 and it has been regularly updated by amendments made by the Marine Environment Protection Committee (MEPC) of the International Maritime Organization (IMO). MARPOL is the legal basis for the prevention of marine pollution. MARPOL requires the installation of oil-water separation systems to treat fluids consisting of mixtures of oil and water generated on board ships.

On fixed offshore marine structures (e.g. converter stations and transformer substations of offshore wind turbines), oil-in-water emulsions, oily mixtures of surface water, fuel and lubrication oil, and many other substances covered by regulations might spill or otherwise cause hazards. Hence there is a need to separate these mixtures to an oil concentration of less than what is currently required by MARPOL.

Ships and marine technology — Marine environment protection — Tanks and piping systems for facilitating 5 ppm oil-water separation

1 Scope

This document provides requirements and test methods for tanks, piping and separation systems facilitating the separation of contaminated fluids of oil and water on fixed offshore marine structures and ships, where treatment is performed by separation systems that optimize oil-water separation to a concentration equal to or less than 5 ppm.

It is applicable to fixed offshore marine structures and to ships operating in designated sea areas determined by the relevant authorities.

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.

ISO 8217, *Petroleum products — Fuels (class F) — Specifications of marine fuels*

ISO 9377-2, *Water quality — Determination of hydrocarbon oil index — Part 2: Method using solvent extraction and gas chromatography*

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 http://www.electropedia.org/

3.1
parts per million
ppm
number of parts of oil per one million parts of water, expressed by volume

Note 1 to entry: 1 ppm equals to 1 µl of oil per 1 l of water.

3.2
ppm display
numerical scale display of the *parts per million* (3.1)

4 Technical specifications

4.1 Oil-water separation equipment (OWSE)

Oil-water separation equipment (OWSE) installed on fixed offshore marine structures shall be constructed suitable for offshore use.