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**Marine technology — Product water  
quality of seawater reverse osmosis  
(RO) desalination — Guidelines for  
municipal water supply**

*Technologie maritime — Qualité de l'eau produite par le dessalement  
de l'eau de mer par osmose inverse (OI) — Lignes directrices pour les  
réseaux municipaux d'eau potable*

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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. [www.iso.org/directives](http://www.iso.org/directives)

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This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 13, *Marine technology*.

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](http://www.iso.org/members.html).

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## Introduction

With population growth, urbanization, climate change impacts and increases in household and industrial uses, fresh water scarcity will definitely affect the sustainable development of society. Seawater desalination is an effective way to meet the water needs. In some regions, it is almost the primary source of municipal water supply.

Because of technology and cost advantages, the reverse osmosis (RO) process has been used increasingly for seawater desalination. However, desalted water of seawater RO desalination is low in minerals and poorly buffered. It is usually aggressive to metallic materials used in equipment and distribution pipelines. To solve this problem, the post-treatment of desalted water, such as the addition of minerals and/or blending of waters, is necessary to achieve a balanced mineral content. Therefore, it is necessary to monitor product water quality after post-treatment to confirm the safety for municipal water supply.

Consequently, standardization of the product water quality is important and useful for the protection of corrosive pipelines and related equipment. The key parameters are monitored to meet the related limits and range. The product water will be compatible with municipal pipelines and related equipment.

These guidelines provide key parameters to manage the product water quality of seawater RO desalination for municipal water supply. They are intended to assist water engineers, authorities, decision makers and stakeholders in evaluating the compatibility of product water with pipelines and devices.

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