

---

---

**Ships and marine technology — Marine  
environment protection: performance  
testing of oil skimmers —**

**Part 2:  
Static water conditions**

*Navires et technologie maritime — Protection de l'environnement marin:  
essais de performance des écumeurs du pétrole —*

*Partie 2: Conditions en eau calme*



**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

This document is a preview generated by EVS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.org](mailto:copyright@iso.org)  
Web [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

Foreword.....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions.....	1
4 Test facility requirements .....	3
5 Clearance requirements .....	3
6 Test parameters .....	3
6.1 General.....	3
6.2 Test oil properties.....	4
6.3 Oil slick thickness.....	4
6.4 Skimmer operating parameters.....	4
6.5 Debris interference .....	5
7 Test procedures .....	5
7.1 Preparations prior to testing .....	5
7.2 Actions during testing period.....	5
7.3 Actions after testing .....	6
8 Performance parameters .....	7
8.1 Fluid recovery rate.....	7
8.2 Emulsification factor .....	7
8.3 Oil recovery rate.....	7
8.4 Recovery efficiency .....	8
9 Measurements and reporting .....	8
9.1 General.....	8
9.2 Oil properties.....	8
9.3 Environmental parameters .....	8
9.4 Skimmer operating parameters.....	8
9.5 Other test parameters.....	9
9.6 Recovery parameters .....	9
9.7 Performance parameters (calculated parameters).....	9
9.8 Equipment specification and test documentation .....	9
10 Quality control.....	9
10.1 Test duration and fluid volume .....	9
10.2 Repetitions .....	10
Bibliography .....	11

## 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 Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 21072-2 was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 2, *Marine environment protection*.

ISO 21072 consists of the following parts, under the general title *Ships and marine technology — Marine environment protection: performance testing of oil skimmers*:

- *Part 1: Moving water conditions*
- *Part 2: Static water conditions*
- *Part 3: High viscosity oil*

## Introduction

ISO 21072 (all parts) standardizes the performance testing of oil skimmers used in marine pollution control.

Some oil skimmers have previously been performance tested under non-standard conditions and procedures, with declared performance parameters being of limited value to the end user, especially under field conditions.

ISO 21072 (all parts) provides for carrying out, and recording results of, full-scale tests for a skimmer under a variety of test conditions, where there is limited or no access to specialist test facilities.

This document is a preview generated by EVS

# Ships and marine technology — Marine environment protection: performance testing of oil skimmers —

## Part 2: Static water conditions

### 1 Scope

This part of ISO 21072 specifies a methodology for establishing quantitative performance data for oil skimmers under static water conditions, so the end user can objectively judge, compare, and evaluate the design and performance of different skimmers. The methodology applies to testing in a basin and requires control of oil properties and oil slick characteristics.

The method is applicable to all types of skimmers provided that the equipment dimensions are within the physical limitations of the test basin. The test procedure provides full-scale test results for the unit tested, under controlled conditions, and for one or more classes of oil. Attention is drawn to the care required when applying the test results to predict skimmer performance under field conditions.

For dedicated/inbuilt systems, the test procedures outlined in this part of ISO 21072 can only be used for the skimming device as such, not the entire skimming system.

### 2 Normative references

The following referenced documents are indispensable for the application 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 16165, *Ships and marine technology — Marine environment protection — Terminology relating to oil spill response*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 16165 and the following apply.

#### 3.1

##### **data collection period**

the period of time within the **steady-state period** (3.9) when recovered fluid is collected for establishing performance data

[ISO 21072-1:2009]

#### 3.2

##### **debris**

solid or semi-solid substance that could interfere with the operation of a spill control system

[ISO 21072-1:2009]