

Special Publication S472.1-1992 Commentary to CSA Standard CAN/CSA-S472-92, Foundations

Offshore Structures



ISSN 0383-2082
Published in June 1992
by
Canadian Standards Association
(Incorporated 1919)
178 Rexdale Boulevard
Rexdale (Toronto), Ontario
Canada
M9W 1R3

# General Instruction No. 1 Special Publication S472.1-1992 June 1992

CSA Special Publication S472.1-1992, Commentary to CSA Standard CAN/CSA-S472-92, Foundations, consists of **45 pages**, each dated **June 1992**.

This Special Publication, like all CSA Standards, is subject to periodic review, and amendments in the form of replacement pages may be issued from time to time; such pages will be mailed automatically to those purchasers who complete and return the attached card.\* Some Publications require frequent revision between editions, whereas others require none at all. It is planned to issue new editions of the Publication, regardless of the amount of revision, at intervals not greater than 5 years. Except in unusual circumstances, replacement pages will not be issued during the last year of that edition.

\*This card will appear with General Instruction No. 1 only.

Although any replacement pages that have been issued will be sold with the Publication, it is for the purchaser to insert them where they apply. The responsibility for ensuring that his or her copy is complete rests with the holder of the Publication, who should, for the sake of reference, retain those pages which have been replaced.

**Note:** A General Instruction sheet will accompany replacement pages each time they are issued and will list the latest date of each page of the Publication.

Cut along dotted line

Name		
Organization		
Address		
City	Province/State	
Country	Postal/Zip Code	

# Special Publication S472.1-1992

This is a preview. Click here to purchase the full publication.

Affranchir suffisamment Place Stamp Here

### **CSA INTERNATIONAL**

BUREAU CENTRAL DE L'INFORMATION 178 BOUL REXDALE TORONTO ON M9W 1R3 CANADA

### **CSA INTERNATIONAL**

CONSOLIDATED MAILING LIST 178 REXDALE BLVD TORONTO ON M9W 1R3 CANADA

This is a preview. Click here to purchase the full publication.

**Technical Editor:** Solomon Ko **Managing Editor:** Bernard Kelly

© Canadian Standards Association — 1992

All rights reserved. No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without the prior permission of the publisher.

This is a preview. Click here to purchase the full publication.

## **Contents**

Preface 5
<b>0.</b> Introduction 7
<b>1. Scope</b> <i>7</i> 1.1 General <i>7</i>
2. Definitions 8
3. Reference Publications 8
4. Site Investigation 9
<ul><li>4.1 General 9</li><li>4.2 Scope of Investigations 9</li></ul>
4.2.1 General 9
4.2.2 Far Field Considerations 9
4.2.3 Near Field Considerations 12
4.3 Positioning for Site Investigations 13
4.3.1 Referencing <i>13</i>
4.3.2 Control 13 4.4 Investigative Methods 14
4.4.1 General 14
4.4.2 Bathymetry Surveys 14
4.4.3 Geophysical Surveys 15
4.4.4 Geotechnical Investigations 16
5. General Engineering Principles 17
5.1 General <i>17</i>
5.2 Design Process 18
5.2.1 Loads and Load Effects 18
<ul><li>5.2.2 Acceptability of Design 18</li><li>5.2.3 Stability Analysis (Ultimate Limit States) 22</li></ul>
5.2.4 Deformations (Serviceability Limit States) 23
5.2.5 Geotechnical Parameters 25
5.2.6 Innovative Procedures 25
5.3 Other Design Considerations 26
5.3.1 Adjacent Features 26
5.3.2 Changes in Freeboard 26
5.3.3 Geological Constraints 26
6. Foundations for Gravity-Base Structures 27
6.1 Design <i>27</i> 6.1.1 General <i>27</i>
6.1.2 Stability 27
6.1.3 Deformations 28
6.2 Other Design Considerations 28
6.2.1 Skirt and Dowel Penetration 28
6.2.2 Contact Stresses 29
6.2.3 Scour 29
6.3 Construction and Installation 30