

This is a preview of "ISO 20283-3:2006". [Click here to purchase the full version from the ANSI store.](#)

First edition  
2006-04-01

---

---

## **Mechanical vibration — Measurement of vibration on ships —**

Part 3:

### **Pre-installation vibration measurement of shipboard equipment**

*Vibrations mécaniques — Mesurage des vibrations à bord des navires —*

*Partie 3: Mesurage des vibrations des équipements de bord avant leur installation*



Reference number  
ISO 20283-3:2006(E)

© ISO 2006

This is a preview of "ISO 20283-3:2006". [Click here to purchase the full version from the ANSI store.](#)

**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.

© ISO 2006

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

This is a preview of "ISO 20283-3:2006". Click here to purchase the full version from the ANSI store.

## Contents

Page

Foreword.....	iv
Introduction .....	v
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions.....</b>	<b>1</b>
<b>4 Measurement requirements and procedures.....</b>	<b>4</b>
<b>4.1 General.....</b>	<b>4</b>
<b>4.2 Measurement point locations .....</b>	<b>5</b>
<b>4.3 Transducer orientation and mounting.....</b>	<b>5</b>
<b>4.4 Measurement frequency resolution .....</b>	<b>5</b>
<b>4.5 Calibration .....</b>	<b>6</b>
<b>4.6 Ambient vibration and its influence.....</b>	<b>6</b>
<b>4.7 Test system .....</b>	<b>6</b>
<b>4.8 Equipment operating conditions.....</b>	<b>9</b>
<b>5 Data evaluation .....</b>	<b>10</b>
<b>6 Test report .....</b>	<b>10</b>
<b>Annex A (informative) Typical configurations of generating sets .....</b>	<b>11</b>
<b>Annex B (informative) Typical configurations of test systems .....</b>	<b>13</b>
<b>Bibliography .....</b>	<b>23</b>

## 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 20283-3 was prepared by Technical Committee ISO/TC 108, *Mechanical vibration and shock*, Subcommittee SC 2, *Measurement and evaluation of mechanical vibration and shock as applied to machines, vehicles and structures*.

ISO 20283 consists of the following parts, under the general title *Mechanical vibration — Measurement of vibration on ships*:

— *Part 3: Pre-installation vibration measurement of shipboard equipment*

The following parts are under preparation:

— *Part 2: Measurement of structural vibration on ships*

General guidelines and measurement and evaluation of ship propulsion machinery vibration are to form the subjects of future parts 1 and 4.

This is a preview of "ISO 20283-3:2006". [Click here to purchase the full version from the ANSI store.](#)

## Introduction

Operating machinery and equipment aboard ships can create vibration and excessive structure-borne sound. As a result, the limits for sound pressure levels specified by contracting partners for spaces occupied by crew and passengers may be exceeded. Where it is anticipated that structure-borne sound from machinery can adversely affect occupied spaces, this part of ISO 20283 can be applied with the aim of selecting low-vibration machinery.

Measurement of the vibration of individual equipment units, conducted according to standardized procedures and compared with contractually agreed-on acceptance criteria, will provide the requisite information to the shipbuilder for the proper selection and installation of the equipment.