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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 43501-2023

**Ships and marine technology - Guidelines for measurement,
evaluation and reporting of vibration with regard to habitability
on specific ships**

船舶和海上技术 特定特征船舶适居性的振动测量、评价和报告准则

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents" Drafting:

This document is equivalent to ISO 21984:2018 "Vibration measurement, evaluation and reporting of habitability of ships with specific characteristics of ships and offshore technology" Reporting Guidelines:

Please note that some content in this document may be subject to patents: The publisher of this document assumes no responsibility for identifying patents:

1 Scope

This document specifies the vibration measurement, evaluation and reporting criteria for the habitability of personnel on board ships that meet one of the following conditions:

- a) Equipped with a two-stroke, long-stroke, low-speed diesel engine and directly connected to a fixed-pitch propeller:
- b) The length of the deckhouse is limited by its height (for example, the height-to-length ratio of the deckhouse is greater than or equal to 1): Appendix A gives Examples of deckhouse height (H) and length (L) ratios are given:

This document gives the criteria for evaluating the habitability of different spaces on the ship: The common frequency weighted vibration mean square in the frequency range of 1Hz~80Hz is the root value is used as the evaluation value:

This document is applicable to ships with specific characteristics expected to sail for 24 hours or more:

This document specifies the requirements for measuring instruments and measuring procedures in commonly used functional areas: It also contains information for evaluating ship vibrations for habitability:

Code and guidance for the analysis of sexual effects:

This document does not apply to machinery spaces other than machinery spaces outside

the engine room control room because personnel will not stay in these spaces for long periods of time:

ISO 20283-5 is generally applicable to all types of ships: ISO 20283-5 stipulates that ships with specific characteristics including those to which this document is applicable Personnel habitability vibration measurement, assessment and reporting requirements for all passenger and commercial ships: For passenger ships and merchant ships to which this document may apply for ships, including ships with specific characteristics, ISO 20283-5 specifies requirements for vibration measurement, evaluation and reporting on the habitability of personnel on board their ships:

This document only serves as a supplement to ISO 20283-5: For any ship with specific characteristics, the shipbuilding enterprise may, after obtaining the consent of the shipowner, Based on the overall ship design conditions and (if any) the construction experience of ships of the same type or similar ships, choose to adopt this document or ISO 20283-5:

ISO 2631-1 specifies requirements for the evaluation of low-frequency ship movements that may cause seasickness: ISO 2631-2 stipulates that for the overall ship Evaluation requirements for structural vibration:

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, the dated quotations for undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to this document:

ring-Vocabulary)

Note: GB/T 2298-2010 Mechanical vibration, impact and condition monitoring vocabulary (ISO 2041:2009, IDT) ISO 2631-1 Mechanical vibration and shock Evaluation of human exposure to whole-body vibration Part 1: General requirements (Mechanicalvi-ments) Note: GB/T 13441.1-2007 Mechanical vibration and impact Evaluation of human exposure to whole-body vibration Part 1: General requirements (ISO 2631-1:

1997,IDT)

ISO 2631-2 Mechanical vibration and impact Human body whole body vibration evaluation Part 2: Vibration in buildings (1Hz~80Hz) Note: GB/T 13441.2-2008 Mechanical vibration and impact Evaluation of human exposure to whole-body vibration Part 2: Vibration in buildings (1Hz~