



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

GB/T 41095-2021

**Mechanical vibration - Methodology for selecting appropriate
machinery vibration standards**

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Table of Contents

foreword

1 Scope

2 Normative references

3 Terms and Definitions

foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules of Standardization Documents"

drafted:

This document is modified and adopted ISO /T R19201:2013 "Mechanical Vibration Method for Selecting Appropriate Machine Vibration Standards", the document type is by

The technical report of ISO is adjusted to the national standard of our country:

Compared with ISO /T R19201:2013, this document has made the following structural adjustments:

- Added the chapter "Normative References";
- Deleted Chapter 2 in ISO /T R19201:2013;
- Appendix A corresponds to Appendix E in ISO /T R19201:2013;
- Appendix B corresponds to Appendix A in ISO /T R19201:2013;
- Appendix C corresponds to Appendix B in ISO /T R19201:2013;
- Appendix D corresponds to Appendix C in ISO /T R19201:2013;
- Appendix E corresponds to Appendix D in ISO /T R19201:2013:

The technical differences between this document and ISO /T R19201:2013 and their reasons are as follows:

- Deleted the part of the contents referring to 2:2 and 2:3 in ISO /T R19201:2013 (see 4:1 of ISO /T R19201:2013), to

be consistent with structural adjustment;

- Added reference to Appendix A (see 4:5) to meet the requirements of GB/T 1:1-2020:

The following editorial changes have been made to this document:

--- Changed the relevant standards listed in Appendix A;

--- Deleted the training in the vibration application field of Appendix A:

Please note that some content of this document may be patented: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document provides guidance for the selection of appropriate vibration criteria for a specific machine type, thereby selecting appropriate vibration measurement and evaluation methods: probably

GB/T 6075, GB/T 11348 and other standards related to machine vibration are described:

This document gives an overview of the relevant standards and summarizes their scope of application: It also provides useful instructions for machines without previous experience:

A theoretical basis for determining whether to perform vibration measurements on non-rotating components, rotating shafts, or both: Since there may be

Characteristics exist that lead to the selection of different most appropriate measurement methods, and this document is not intended to supersede the manufacturer's or user's existing actual

Experience:

The purpose of this document is not to equip the reader with all the technical details of the criteria required to perform measurement and evaluation work on a particular machine, but

The reader is guided to select the appropriate criteria, which give the necessary details: Then, with proper training, the reader will be able to

Measure or evaluate work:

2 Normative references

The contents of the following documents constitute essential provisions of this document through normative references in the text: Among them, dated citations

documents, only the version corresponding to that date applies to this document; for undated references, the latest edition (including all amendments) applies to

this document:

GB/T 2298 Mechanical Vibration, Shock and Condition Monitoring Vocabulary (GB/T 2298-2010, ISO 2041:2009, IDT)

GB/T 6444 Mechanical Vibration Balance Vocabulary (GB/T 6444-2008, ISO 1925:2001, IDT)

3 Terms and Definitions

The terms and definitions defined in GB/T 6444 and GB/T 2298 and the following terms and definitions apply to this document:

3:1

Shaft absolute vibration shaftabsolutevibration

Shaft vibration measured in absolute coordinates:

3:2

shaft relative vibration

Shaft vibration measured on sensor support (eg bearing housing):

3:3

Pedestal vibration pedestalvibration

Vibration of the bearing support structure:

3:4

Bearing dynamic stiffness dynamicsstiffnessofbearing

The stiffness of the bearing component taking into account damping and mass effects: