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

GB/T 23714-2009

**Mechanical vibration and shock -- Performance parameters for
condition monitoring of structures**

机械振动与冲击 结构状态监测的性能参数

(English Translation)

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Foreword

This standard is identical with ISO 16587:2004 "Mechanical vibration and shock structure condition monitoring of performance parameters" (in English).

This standard is equivalent to translate ISO 16587:2004.

For ease of use, this standard made the following editorial changes.

--- Use the "standard" instead of "this International Standard";

--- Remove the foreword to international standards, rewrite the foreword of this standard;

--- Of ISO 16587:2004 and other international standards cited, there was equated adopted as our standard, instead of using our standard correspondence International standards, is not identical with direct reference to international standards for our standards.

Appendix A of this standard is an informative annex.

This standard by the national mechanical vibration, shock and condition monitoring Standardization Technical Committee (SAC/TC53) and focal points.

Introduction

This standard provides application parameters structural state monitoring guidelines, these parameters are typically used to measure or monitor the performance of the structure, such as bit Shift, strain, vibration, settlement, rotation, temperature and foundation pore water pressure.

This standard is prepared with GB/T 20471 and GB/T 22393 (ISO 17359) coherence.

The information provided in this standard will complement ISO 18431, ISO 18431 will be divided into several parts published.

GB/T 23714-2009/ISO 16587:2004 Mechanical vibration and shock structural state
Monitoring the performance parameters

1 Scope

This standard gives a structure to assess the state of the performance parameters, including the type of measure, the factors set performance limits allow for the construction of a unified Parameter data acquisition and internationally accepted measurement guidelines (such as the terms, sensor calibration, sensor installation and a database of identity the transfer function technique).

This method of monitoring structures in service, but also to include all the structural components and sub-assemblies as a whole operation required. Supervisor Measurement can be continued over the entire life cycle of the structure.

Note 1: Figure 1 is a flow chart showing how to make this a standard user from the initial demand for structural condition monitoring, until the appropriate fix performance parameters over Away. Follow standard will involve measurement and processing of these parameters.

This standard assumes that the presence of structural condition monitoring "Advanced" requirements.

Note 2: For the use of assets and the reliability of identification/auditing to identify the critical needs of this guide is included in the GB/T 22393 (ISO 17359) in.

This standard applies to industry sectors, including.

- Construction works;
- Underground structures;
- transport;
- Power;
- Petroleum and natural gas;
- Leisure and entertainment industry.

This standard applies to fixed structures, such as.

- building;
- Bridges and tunnels;
- Towers, masts and antennas;

- Tanks and silos;
- Berm wall and dam;
- Trestle and other shore structures;
- Offshore drilling platform;
- Pressure vessel;
- pipeline.

This standard does not apply to non-fixed structure (such as self-propelled vessels) and mobile structures (such as jack-up offshore drilling platform).

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

ISO 2041:1990 Vibration and shock - Vocabulary GB/T 23714-2009/ISO 16587:2004