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

GB/T 6075.2-2012

Replacing GB/T 6075.2-2007

**Mechanical vibration -- Evaluation of machine vibration by measurements on
non-rotating parts -- Part 2: Land-based steam turbines and generators in excess of
50MW with normal operating speeds of 1500r/min, 1800r/min, 3000r/min and 3600r/min**

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Table of Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Measurement Methods

Foreword

GB/T 6075 "Mechanical vibration Evaluation of machine vibration measurements on non-rotating member" is divided into seven sections.

--- Part 1. General;

--- Part 2. more than 50MW of power, rated speed 1500r/min, 1800r/min, 3000r/min, 3600r/min Lu

Mounted turbine and generator;

--- Part 3. rated power above 15kW and nominal speeds range between 120r/min to 15000r/min in the Field Test

The amount of industrial machinery;

--- Part 4. Gas turbine sets with a sliding bearing;

--- Part 5. hydroelectric and pumping plants;

--- Part 6. power of more than 100kW reciprocating machine;

--- Part 7. The rotary power pumps for industrial applications, including measurements on rotating shafts.

This part of GB/T 26075 Part of.

This section drafted in accordance with the rules of GB/T 1.1-2009 and GB/T 20000.2-2009 given.

This Part replaces GB/T 6075.2-2007 "Measurement and Evaluation of the machine on the non-rotating member of the mechanical vibration - Part 2.

50MW or more, rated speed 1500r/min, 1800r/min, 3000r/min, 3600r/min land installed steam turbine, generator

machine". This section compared with the GB/T 6075.2-2007, the main modifications are as

follows.

--- Modify the standard name from the original "Measurement and evaluation of the machine on a non-rotating member of the mechanical vibration - Part 2. 50MW

Above the rated speed 1500r/min, 1800r/min, 3000r/min, 3600r/min land installed steam turbine, generator

Machine "to" mechanical vibration measurement and evaluation of the machine vibration on non-rotating parts - Part 2. Power 50MW or more, the amount of

Set speed 1500r/min, 1800r/min, 3000r/min, 3600r/min steam turbines and generators installed on land ";

--- Increase on a constant vibration velocity criteria at low speed warning (see Appendix C);

--- Modify the requirement to use a different zone boundary value example (see 4.2.2.4);

--- When the new machine does not have to establish an effective baseline data, recommended its alarm steady state operation under the rated operating speed should not exceed area

Boundary B/C (see 4.2.3.2);

--- Increasing the stop value is set in relation to a second alarm (see 4.2.3.3);

--- Increased vibration values \u200b\u200ba transient operating conditions (transient operation) during the "Shutdown amplification factor" concept, in steady conditions

Prior to the establishment, it will automatically enhance the "alarm" and "Stop value" (see 4.2.4). About "Stop amplification factor" is used,

4.2.4.4 to do a more detailed description;

--- Revising the acceleration, vibration speed and magnitude of a deceleration period. And to delete the previous version in Figure 2 (see 4.2.4.3).

--- Modify the previous edition of "vibration amplitude" translation many will read "vibration magnitude."

2009 "Mechanical vibration measurement and evaluation of the machine vibration on non-rotating parts. This section uses the translation method using equivalent ISO 10816-2

Part 2. Power 50MW or more, rated speed 1500r/min, 1800r/min, 3000r/min, 3600r/min land installation

Turbine and generator. "

Consistency correspondence between this part of international documents and normative references of our files are as follows.

--- GB/T 11348.2-2012 Mechanical vibration machine vibration measurement and evaluation of the rotating shaft Part 2. Power greater than

50MW, rated operating speed 1500r/min, 1800r/min, 3000r/min, 3600r/min land turbine installation

And generator (ISO 7919-2.1995, MOD).

This part of the National mechanical vibration, shock and condition monitoring Standardization Technical Committee (SAC/TC53) and focal points.

This section is drafted. Zhengzhou Machinery Research Institute, Xi'an Thermal Power Research Institute Co., Ltd., Shanghai Power Equipment Research Institute,

Harbin Institute of Electronics, Henan Electric Power Research Institute, Dongfang Electric Group, Dongfang Electrical Machinery Co., Ltd., Shanghai power plant equipment company Shanghai

Generator plant.

Introduction

GB/T 6075.1 is GB/T 6075 basic technical document, which sets out a non-rotating parts vibration measurement and evaluation of different types of machines

General requirements for moving. GB/T 6075 gives this part of the vibration in a large turbine and generator bearing housing or supporting base measurement

Specified intensity evaluation. Characterization of the vibrational state can be measured quite well in these positions. Evaluation on the basis of past experience on the proposed

Criteria, such as evaluation of machine vibration state guidelines.

In the steady state running conditions, the provisions of the two criteria evaluation of machine vibration. The first criterion to consider is the measured vibration magnitude; s

Changes in these two criteria are vibration magnitude. In addition, transient operating conditions provides different criteria. However, the vibration on non-rotating member

Move is not the sole basis for evaluation of machine vibration intensity. For large turbines and generators, it is usually based on the rotating shaft vibration measurement and evaluation

Moving; rotating shaft vibration measurement and evaluation requirements see GB/T 11348.1 and GB/T 11348.2.

Evaluation method proposed in this section is based on broadband measurements. However, due to the use of technological progress, or narrow-band spectrum analysis measurements increasingly

The more common, especially for vibration evaluation, condition monitoring and diagnostics. Guidelines for the evaluation of these measurements is beyond the scope of this section, it

They machine vibration condition monitoring in the ISO 13373 standard in detail (all parts) in.

Mechanical vibration measurement and evaluation unit in the non-rotating member

The vibration - Part 2. Power 50MW or more,

Rated speed 1500r/min, 1800r/min,

3000r/min, 3600r/min land installation

Turbine and generator

1 Scope

GB/T 6075 provisions of this part of the site evaluation machine vibration intensity for all main bearing housing or bearing shaft diameter

To (ie, transverse) and thrust bearing broadband axial vibration measurements. They include.

- Normal steady-state operating conditions of vibration;
- Transients (including the raising speed or deceleration, plus initial load and load changes) when the other (non-steady-state) conditions during vibration;
- Vibrations occur during normal steady state operation of the change.

This section applies to the rated speed 1500r/min, 1800r/min, 3000r/min or 3600r/min, the output power is greater than

50MW of turbines and generators installed on land, also applies to the direct coupling of the gas turbine and steam turbine (or) a generator (such as the United

Combined cycle applications). Under these circumstances, the guidelines in this section apply only to the steam turbine and generator (including synchronizing clutch). ISO 7919-4

Suitable for a gas turbine and ISO 10816-4 Evaluation of vibration.

These evaluation criteria in this section do not apply to the excitation of vibration in the generator stator core and the housing 2 octave electromagnetic.

Values \u200b\u200bspecified in this section is not intended as the sole basis for evaluation of vibration intensity. For large turbines and generators, often used

Vibration of rotating shaft evaluated. These vibration measurement requirements, see GB/T 11348.1 and GB/T 11348.2.