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

GB/T 7441-2008

Replacing GB/T 7441-1987

**Measurement of airborne noise emitted by steam turbines and
driven machinery**

汽轮机及被驱动机械发出的空间噪声的测量

(English Translation)

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Foreword

This standard is identical with IEC 61063:1991 "Measurement of noise acoustic space steam turbines and driven machinery of" (in English).

This standard is equivalent translation IEC 61063:1991.

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

- a) the name of the standard was changed to. "spatial noise measurement turbines and driven machinery issued";
- b) Remove IEC 61063:1991 original "Preface" and "Introduction";
- c) "reference standard" Reorder by GB/T 1.1-2000;
- d) to IEC 61063:1991 in the original part of the contents, according to China described the habits appropriate compiler;
- e) of IEC 61063:1991 Part of the original figure to be recompiled;

This standard replaces GB/T 7441-1987 "power plant turbine noise measurement method."

This standard and GB/T 7441-1987 Compared to the major differences are as follows.

- a) the name of the standard was changed to. "spatial noise turbine driven machinery and measurement."
- b) This standard is identical with IEC 61063:1991, and GB/T 7441-1987 vary greatly, can not be compared.
- c) The increase in the standard normative references and other documents, the content of terms and definitions;
- d) The standard set of measurement points, the reflecting surface and put forward specific requirements.

Appendix A of this standard is a normative appendix.

The standard proposed by China Electrical Equipment Industrial Association.

This standard by the National Standardization Technical Committee turbine (SAC/TC172)

centralized.

This standard was drafted. Shanghai Power Equipment Research Institute, Xi'an Thermal Power Research Institute Co., Dongfang Steam Turbine Co., Ltd.

1.1 General

1.1.1

This standard applies to be driven by a steam turbine and assembly machine (hereinafter referred to as steam turbine) issued by the spatial noise measurements.

Equipped with provisions for auxiliary equipment unit does not limit the size of its output power. This standard applies only located above the level of turbine operation to the level and within the boundary of the continuous measurement of the envelope surface of the steam turbine (turbines, generators and connecting parts).

Above the ground on the basis of the turbine, the turbine has run level reflection characteristics continuously extending out, it will be considered the reflection plane.

1.1.2

Large Turbine Steam Turbine operational levels often located below the horizontal centerline and close thereto (see Figure 1). in case the level is continuous and does not make the turbine operating noise level emitted less noise measurement microphone at the opening, you can use this Standard effective measure steam turbine noise.

1 Steam Turbine (including their accessories and auxiliary) schematic position

1.1.3

When the turbine is running near the level of the lower side of the steam turbine centerline and having any of the following structure when.

- a) pass through a grid-shaped floor structure;
- b) a solid floor but in the vicinity of the turbine group with an opening;
- c) 1m ~ 2m wide solid or grid-shaped structure of the channel.

The turbine can not be considered operational level reflecting plane, then the basis of the ground plane is a reflection of the steam turbine.

In continuous measurement envelope surface in order to run the turbine or steam turbine foundation ground level for the sector, the level is located below the turbine operation Additional equipment and auxiliary noise, is expected to have a significant impact on the measurement microphone position. In this case, the use of this standard Determination of sound power level invalid.

If the sound level of the standard used for comparison of similar turbine at 1m, the turbine

should run as a continuous level measurement envelope surface boundary surface. This will depend on the effectiveness of comparing the measured noise by the auxiliary and additional equipment at the measuring point is generated, so that these regulations require precise Number of auxiliary motors, type and location.

Identify the accessories and auxiliary noise radiation impact on the sound level measured at the microphone position, preferably by GB/T 3768 Determination of these auxiliaries Noise, noise to the microphone and to determine the propagation characteristics of the measurement location. However, this approach is beyond the scope of this standard.

NOTE: When opening the local part of the board during the trial closed with an appropriate corresponding panel (panel side should have the same level of turbine operation reflection characteristics Sex), was regarded as an effective measure.

GB/T 7441-2008/IEC 61063:1991