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

中华人民共和国国家标准

GB/T 2888-2008

Replace GB/T 2888-1991

**Methods of noise measurement for fans blowers
compressors and Roots blowers
风机和罗茨鼓风机噪声测量方法**

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Quarantine of the People's Republic of China
Standardization Administration of China**

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Foreword

This Standard is the amendment to GB/T 2888-1991 *Methods of noise measurement for fans blowers compressors and Roots blowers*.

Compared with GB / T 2888-1991, the changes of the main technical contents of this Standard are as follows:

- Revise the title “Main Content and Scope of Application” to “Scope”.
- Reconfirm the validity of the reference standard and add corresponding standards.
- Revise the title “Code” to “Unit” in Chapter 3
- Increase the fans sound source of free inlet and outlet in 3.2 and combine the icons with figure for instructions.
- The statement “When carrying air out aerodynamic performance test of fans” specified in Chapter 9.2.1.1 is revised as “When carrying out performance test of free inlet and pipeline outlet of fans” and icons for description are added.
- The statement “When carrying air in aerodynamic performance test of fans” specified in Chapter 9.2.1.2 is revised as “When carrying out performance test of pipeline inlet and free outlet of fans” and icons for description are added.
- The statement “When carrying air in or out aerodynamic performance test of fans” specified in Chapter 9.2.1.3 is revised as “When carrying out performance test of pipeline inlet and outlet of fans” and icons for description are added. The statement “Measure the air outlet radiation noise from the vent duct; the measuring point D is located in the place 45° deviating from the air outlet axis, with a distance of a standard length away from the outlet center; it shall be in an area without airflow vortex” and icons for description are added in Chapter 9.2.1.4, 9.2.1.5 and 9.2.2.
- In Chapter 10.2.1, when the test speed n is different from rated speed n_0 , the sound pressure level reduction formula is modified.
- In Chapter 10.2.2, when the atmospheric pressure and the temperature have large difference with that in the standard state, the sound pressure level reduction formula is modified.
- Add A sound level computational formula of fans noise in Chapter 10.2.3.

——Units and icon labels of some parameters in the original standard are modified.

This Standard's Annex A and Annex B are informative annex.

This Standard was proposed by China Machinery Industry Federation.

This Standard is under the jurisdiction of National Technical Committee on Fans of Standardization Administration of China

This Standard is drafted by: Shenyang Blower (Group) Co., Ltd., Beijing Shiji Jingye Noise Vibration Control Technology Co., Ltd., Changsha Blower Co., Ltd.

Main drafters of this Standard: Chen Zhongcai, Shao Bin, Zhu Guixiu, Jiang Yunzhu, Xiao Binshi, Wang Dongguo.

The issuances of previous versions of the standard replaced by this Standard are as follows:

——GB 2888—1982, GB/T 2888—1991.

Methods of noise measurement for fans blowers compressors and Roots blowers

1 Scope

This Standard specifies the noise measuring methods of the A sound level and sound pressure level as well as the sound power level.

This Standard applies to noise measurement for fans, turbo-blowers, turbo-compressors (hereinafter referred to as fans) and Roots blowers.

2 Normative references

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 1236 Industrial fans-Performance testing using standardized airways

GB/T 3947 Acoustical terminology

GB/T 10178 Industrial fans-performance testing in situ (GB/T 10178-2006, ISO 5802: 1997, IDT)

JB/T 3165 Thermodynamic performance test for centrifugal & axial blower and compressor

JB/T 8690 Industrial fans noise limited value

JB/T 8941.2 Roots type blower for general purpose - Part 2: Performance test methods

3 Terms, symbols and units

3.1 A sound level

With a sound level meter and other measuring instruments that are equivalent with sound level meter, the noise level measured by A weighting network is called A sound level, which is represented as L_A . The unit is Decibel, with unit symbol of dB, but in order to make it clear that this unit is weighted in accordance with A characteristic, it is also shown as dB (A) in this Standard.

3.2 Sound source

Fans and Roots blower enclosure, inlet, outlet and other sources noise and the specific



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