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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 16769–2008

Replace GB/T 16769–1997

**Metal-cutting machine tools—Measurement method of
sound pressure level**

金属切削机床 噪声声压级测量方法

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China**

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Foreword

This Standard takes the place of GB/T 16769-1997 *Metal Cutting Machine Tool Noise Sound Pressure Level Measuring Method*.

This Standard, in comparison with GB/T 16769-1997, have the major changes as follows:

——Delete "Operating Conditions" and add "Assessment Principles" in Chapter 1. "Scope" (The Chapter 1 of 1997 version is the Chapter 1 of this version);

——Chapter 2 Modify "Normative References" into "Criteria for Quotations and References" (The Chapter 2 of 1997 version is the Chapter 2 of this version);

——Chapter 3. Modify "Definition" into "Terms and Definitions". Add the terms and definitions of "noise source", "noise", "noise emission", "emission sound pressure", "emission sound pressure level", "working position, the operator's position", "operator", "assigned position", delete the term "sound pressure", modify the definition of "sound pressure level" and "background noise" (The Chapter 3 of 1997 version is the Chapter 3 of this version);

——Delete 5.3 in Chapter 5, which is incorporated into Chapter 7 as "7.1 Machine Tool Noise Value," add the treatment when the noise measuring result is invalid, modify "measured value" to "observed value", and add "Note 1" and "Note 2". Modify the title of Table 1 "Modification Value Affected by Background Noise" into "The Modification of Machine Tool Noise Measured value". Modify and supplement the content of Table 1
(The Chapter 5 of 1997 version is the Chapter 7 of this version);

——Take the content of Chapter 5 as "5.1 Basic Conditions", and make appropriate modification and supplement (The Chapter 5 of 1997 version is the Chapter 5 of this version);

——Delete the title of Chapter 6 "Operating Conditions", and take 6.4 as 5.1.6, and the rest content as "5.2 No-load Noise Measuring" and "5.3 Work Noise Measuring", and make appropriate modification and supplement. Add "Note" after 5.2.1 (The Chapter 6 of 1997 version is the Chapter 5 of this version);

——Modify Chapter 7 into Chapter 6, and re-arrange it. Combine 7.2 and 7.3 as "6.1.3 Measuring Point Distance" and modify the content, add "The operator's position is specified by the manufacturer", "Note 3" and "Note 4." Change 7.4 into "6.1.1 Standard Measuring Point Position" and "6.1.2 Auxiliary Measuring Point Position". Modify the "Instructions" in the brackets of 7.4 into "Note 1" and "Note 2" of 6.1.1. Combine "6.2 Microphone Direction" into 7.1, add new requirements for the measurement direction of microphone when there are multiple noise source on the parts enfilade machine tool (The Chapter 7 of 1997 version is the Chapter 6 of this version);

——Delete 7.5, take its content as the content of Chapter 9 "Assessment Principles" (The 7.5 of 1997 version is the Chapter 9 of this version);

——Modify "8 The Operating Requirement of Measuring Apparatus and the Reading Method of Indicated Value" into "7 Data Processing", and make appropriate modification to its content. Modify and combine the content of 8.1 and 8.2 as "6.3 Measurement Requirements" and modify 8.3.1 into 7.2.1, and modify the "upper limit value (Ls)" into "maximum value (Ld)", and modify "lower limiting value (Lx)" into "minimum value (Lx)" and modify 8.3.2 into 7.2.2, and modify its content. Modify 8.3.3 into 7.2.3, where "Reading varies more than 3dB, but less than 10dB" to "Indicated value varies between 3dB (A) and 10 dB (A)". Modify the title of Table 2 "The Modification Value at Mean-square Sound Pressure" into "The Modification of Noise Measured value at Mean-square Sound Pressure", delete the corresponding columns that Ls-Lx is equal to 1, 2, 3, 12 and 15 in Table 2 and supplement the content of Table 2. Delete 8.3.4 (The Chapter 8 of 1997 version, the Chapter 6 and 7 of this version);

——Modify "9 Record of the Measurement Results" into "8 Data Record", and modify the content (The Chapter 9 of 1997 version, the Chapter 8 of this version);

——Add "9 Assessment Principles" (Chapter 9 of this version);

——Delete A.3 in Annex A, modify the title "Machine tool Noise Sound Pressure Level Measurement Record Instance" into "Common Lathe Noise Measured value Recorded Content Instance", and modify the content. Modify "Machine tool Noise Sound Pressure

Level Measurement Record Sheet" into " Common Lathe Noise Sound Pressure Level Measurement Record Sheet", and supplement the content (The Annex A.- of 1997 edition is the Annex B of this edition)

——Modify the content of A.3 in Annex A into Annex B "Common Lathe and Double Housing Planer Noise Measuring Point Position Instance" (The A.3 in Annex A of 1997 edition is the Annex B of this edition)

In this Standard Annex A and Annex B are informative Annexes.

This Standard was proposed by China Machinery Industry Federation.

The Standard is under the jurisdiction of National metal-cutting machine tool Technical Committee of Standardization Administration of China.

This Standard is drafted by: Guangzhou Machine Tool Plant Co., Ltd., Beijing Machine Tool Research Institute, Ningxia Xinrui Changcheng Machine Tool Co., Ltd. Guangzhou CNC Equipment Co., Ltd..

Main drafters of this Standard: Tan Jingzhou, Zhang Wei, Li Xiangwen, Ling Zerun, Zhang Yujie.

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

GB/T 16769—1997

Metal-cutting machine tools—Measurement method of sound pressure level

1 Scope

This Standard specifies the terms and definitions of metal cutting machine tool noise sound pressure level measurement, measuring apparatus, measuring conditions, measuring methods, data processing, data recording and assessment principles, etc.

This Standard applies to the noise sound pressure level measurement (hereinafter referred to as noise) of metal cutting machine tools (hereinafter referred to as the machine tool).

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 3785-1983 Electric, sonic properties and measuring methods for sound level meters

3 Terms and definitions

For the purpose of this standard, following terms and definitions apply.

3.1

Noise source

Objects that actively or passively emit sound waves.

3.2 Noise

Sound generated by noise source. Use sound pressure level to measure the sound pressure that changed in the medium caused by sound waves emitted by the noise



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