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

GB 16710-2025

Replacing GB 16710-2010

Earth-moving machinery - Noise limits

土方机械 噪声限值

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part

1. Structure and Drafting Rules of Standardization Documents". Drafting. This document replaces GB 16710-2010 "Noise Limits for Earthmoving Machinery". Compared with GB 16710-2010, the only changes are structural adjustments and editing. Aside from the sexual alterations, the main technical changes are as follows:

a) The scope of application of the standard has been changed (see Chapter 1, Chapter 1 of the.2010 edition);

b) The limits for external noise emissions from earthmoving machinery and the regulations for the implementation phase have been revised (see Table 1, Table 1 in the.2010 edition);

c) The noise limits at the driver's position of earthmoving machinery and the regulations for the implementation phase have been revised (see Table 2, Table 2 of the.2010 edition);

d) The test method for external emission noise from earthmoving machinery has been modified (see 5.1,

4.1 in the.2010 version);

e) The test method for emission noise of earthmoving machinery at the driver's position has been changed (see 5.2,

4.2 in the.2010 edition). Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Industry and Information Technology of the People's Republic of China. This document was first published in.1996, revised for the first time in.2010, and this is the second revision.

With technological advancements and growing concern for the environment and human health, countries worldwide are imposing increasingly stringent requirements on machine noise control. To ensure... Protecting the environment and human health requires controlling

the noise emitted by earthmoving machinery. The noise limit control level must meet both environmental protection requirements and... The document considers the need for hearing protection for drivers and other users, while also taking into account the current technological state of domestic products. The limits specified in this document represent the current standards for earthmoving machinery in my country. Minimum noise requirements for mechanical products. Considering technological advancements, especially the effectiveness of noise reduction measures at the source, machines must be designed and manufactured to minimize noise as much as possible. The impact of acoustic emission on the environment and human health is considered, along with the feasibility and technical measures for noise control at the source. Recommended low-noise machines are also provided. The design methodology is described in GB/T 25078 (all parts). Noise limits for earthmoving machinery

1 Scope

China's mandatory national standard for the noise limits of earth-moving machinery. An excavator, loader or dozer is a large diesel engine in an open frame working close to people, and its noise reaches two different groups: the operator in the cab, exposed for a whole working day, and everyone else within a few hundred metres, which on an urban site means residents. The standard sets limits for both, and the distinction matters because they are reduced by different means - the operator's exposure by the cab's sealing and isolation, the bystander's by the engine enclosure, the fan and the exhaust. The measurement method is as important as the limit: machines are measured under defined operating conditions on a defined surface, because a machine measured idling on grass and one measured working on concrete are not comparable. The standard specifies the limits and the test method.

This document specifies the limits for external noise emissions from earthmoving machinery and the limits for noise from the driver's position, and describes the corresponding test methods. This document applies to earthmoving machinery, horizontal directional drilling rigs, and wheeled forklifts powered by internal combustion engines. This document does not apply to electric earthmoving machinery as defined in GB/T 44254. This document does not apply to machines manufactured before the implementation of the noise limits specified in this document (see Tables 1 and 2).

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 8498 Basic Type Identification and Terminology of Earthmoving Machinery

GB/T 21405 Determination and Measurement Methods for Power of Reciprocating Internal Combustion Engines - Additional Requirements for Exhaust Pollutant Emission Tests

GB/T 25603-2010 Terminology for Horizontal Directional Drilling Rigs in Earthmoving Machinery

GB/T 25612 Determination of Sound Power Level of Earthmoving Machinery - Fixed-position Test Conditions

GB/T 25613 Determination of Emitted Sound Pressure Level from Driver's Position on Earthmoving Machinery - Fixed-position Test Conditions

GB/T 25614 Determination of Sound Power Level of Earthmoving Machinery - Dynamic Test Conditions

GB/T 25615 Determination of Emitted Sound Pressure Level from Driver's Position on Earthmoving Machinery - Dynamic Test Conditions

GB/T 25684.13-2021 Safety of earthmoving machinery - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 8498 and GB/T 25612, as well as the following terms and definitions, apply to this document.

3.1 Forklift Wheelloader The front end is equipped with a working device mainly used for forklift operations of block materials (referred to as "block materials"), which lifts, transports, and loads the materials through machine movement. Self-propelled tire machinery used for unloading and stacking operations.

Note. The working device includes a block fork, but it does not have a telescopic function. [Source: GB/T 36974-2018, 3.1, with modifications]

3.2 A machine for drilling horizontal holes underground, which uses an adjustable drill bit attached to the end of a drill rod assembly. Note

1. During drilling, liquid is sprayed onto the drill bit through the drill rod assembly. The hole is tracked using a sensor or pulse signal transmitter mounted near the drill bit, and then backreamed. Enlarge the hole. Note

2. Horizontal directional drilling rigs generally use a drill frame that is parallel to the working ground or inclined to 30° to apply force to the drill rod assembly. [Source: GB/T 25603-2010, 3.1.1, with modifications]

13 Requirements for road rollers

GB/T 44254 Terminology for Electric Earthmoving Machinery

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