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

GB/T 17300-2017

Earth-moving machinery -- Access systems

土方机械 通道装置

(English Translation)

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1 Scope

This Standard specifies criteria for systems that provide access to the operator station and to routine maintenance points on earth-moving machinery as defined in ISO 6165.

It is applicable to the access systems (e.g., enclosure openings, platforms, guardrails, handrails and handholds, stairways and steps, ladders) on such machines parked in accordance with the manufacturer's instructions. Its criteria are based on the 5th to 95th percentile operator dimensions as defined in ISO 3411. It deals with the following significant hazards, hazardous situations and events: slip, trip and fall of persons, unhealthy postures and excessive effort.

The general principles set out in this Standard can be used for the selection of fixed and/or portable access systems for repairs, assembly, disassembly and longer interval maintenance.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 17888.1-2008, Safety of machinery - Permanent means of access to machinery - Part 1: Choice of a fixed means of access between two levels (ISO

14122-1:2001, IDT)

ISO 3411, Earth-moving machinery - Physical dimensions of operators and minimum operator space envelope

ISO 6165, Earth-moving machinery - Basic type - Identification and terms and definitions

ISO 12508, Earth-moving machinery - Operator station and maintenance areas -

Bluntness of edges

ISO 14122-4, Safety of machinery - Permanent means of access to machinery -

Part 4: Fixed ladders

ISO 14567, Personal protective equipment for protection against falls from a height - Single-point anchor devices

GB/T 17300-2017/ISO 2867:2011

5.2 For primary openings that are modified rectangles, the minimum opening area may be reduced to the minimum opening dimensions indicated by dashed lines in the drawing in Table 1. Alternatively, the vertical distance from the floor of the lower (narrower) area of the minimum opening may be increased from 460 mm to 770 mm maximum, in conjunction with an increase in the minimum width from 250 mm to 300 mm. The shape of openings does not need to be symmetrical.

5.3 For compact excavators, minimal swing radius excavators and compact machines

that by design require front entrance or step-down into the operator enclosure (e.g., skid steer loaders), the dimensions given in 5.3.1 and 5.3.2 may be used instead of those given in Table 1.

5.3.1

The width, A, of the primary opening shall be greater than 550 mm and the height, B, of the opening above the sill shall be greater than 875 mm.

5.3.2

The dimensions of an alternative opening shall permit the passage of a rectangle 380 mm x 550 mm with a radius in accordance with Table 1.

5.4 The primary opening door(s) of the enclosure, if so equipped, shall permit opening and closing without interfering with the user, while maintaining three-point support.

Contact with the door, or parts attached to the door, shall not be considered one of the points of support while opening or closing the door.

5.5 The force needed to open or close a hinged primary enclosure door shall not exceed 135 N. The force needed to open or close all other hinged access doors or covers shall not exceed 245 N. This applies to the opening and closing of the door, not to the activation of the latch.

5.6 An enclosure door shall be designed with a means to secure it in the closed position.

An enclosure door that is designed to be left open during machine operation shall be provided with a means to secure it in the open position and shall be able to withstand a closing force of 300 N without failure of the securing device.

5.7 Doors shall be designed to prevent hazardous door movements due to inertial force caused by machine operations.

5.8 Hinged doors shall normally open outward.

5.9 A minimum of 40 mm hand clearance shall be provided a) between the outer edge of a hinged door and any fixed object other than its door frame, and b) from any fixed part that might come into contact with the hand when removing or opening other types of enclosures, doors or covers that are within the scope of this

Standard.