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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 30174-2025

Replacing GB/T 30174-2013

Safety of machinery - Terms

机械安全 术语

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Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 30174-2013 "Terms for Safety of Machinery". Compared with GB/T 30174-2013, In addition to the logical changes, the main technical changes are as follows.

- Deleted the terms "main safety function", "auxiliary safety function" and "dangerous machine function" (see 2013 edition 2.29~2.31);

- Deleted the terms "Class A standards", "Class B standards", "Class B1 standards", "Class B2 standards" and "Class C standards" (see 2013 edition) 2.49~2.51);

- Change the terms "simultaneous operation" and "synchronous operation" to "simultaneous operation" and "synchronous operation" (see 3.42, 3.43, 2013 edition 2.45, 2.46);

- Deleted the term "maintenance rate" (see 4.11 of the 2013 edition);

- Changed the definition of the term "response time" (see 5.7, 4.16 of the 2013 edition);

- Change the term "mean time to dangerous failure" to "mean time between dangerous failures" and modify its abbreviation to "MTTFD" (See 6.11, 2013 edition 4.10);

- Added the term "mean time between failures" (see 6.12);

- Added the term "average number of cycles to dangerous failure" (see 6.13);

- Change the term "system failure" to "systemic failure" (see 6.18, 6.5 of the 2013 edition);

- Added Chapter 7 "Intelligent Safety Terminology" (see Chapter 7);

- Added Chapter 8 "Terms for Control of Hazardous Energy (see Chapter 8)";

- Change the term "hazardous substance" to "hazardous substance" (see 9.2, 5.2 of the 2013 edition);

- Added the term "local exhaust ventilation (LEV) system" and its definition (see 10.11).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document is proposed and coordinated by the National Technical Committee for Machinery Safety Standardization (SAC/TC208).

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Introduction

The safety standard system in the machinery field consists of the following categories of standards.

- Category A standards (basic safety standards) give basic concepts, design principles and general characteristics applicable to all machinery.

- Category B standards (general safety standards) involve a safety feature of machinery or a type of safety device with a wide range of applications.

- Category B1, safety features (such as safety distance, surface temperature, noise)

standards;

- Category B2, safety device (such as emergency stop device, interlock device, pressure sensitive device, protective device) standard.

- Category C standards (machinery product safety standards) specify detailed safety requirements for a specific machine or group of machines.

According to GB/T 15706, this document belongs to Class A standard.

The purpose of this document is to standardize the basic and common terminology in the field of machinery safety and to make the terminology of Class A, Class B and Class C standards consistent. Be consistent. Machinery Safety Terminology

1 Scope

This document defines fundamental, common terms and definitions within the field of machinery safety.

This document is applicable to safety terms used in production, scientific research, teaching, and the formulation and revision of relevant standards in the machinery industry.

2 Normative references

This document has no normative references.

3.1 machinery

machine A combination of several parts and components connected together and having a specific application purpose, wherein at least one part or component is movable, and Equipped with or scheduled to be equipped with a power system.

NOTE The term "machine" also includes several machines arranged and controlled so as to perform their functions as a complete machine for the same application. combination.

3.2 reliability

A machine (3.1), a part of a machine, or an apparatus that performs its specified function under specified conditions and within a specified period without malfunctioning ability.

3.3 Maintainability

If the prescribed practices are followed and necessary measures (maintenance) are taken using the prescribed methods, the machine can be kept in the intended use condition.

a state in which it can perform its functions or the ability to recover to such a state.