



**NATIONAL STANDARD OF THE
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Safety of machinery - Prevention of unexpected start-up

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020

"Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents".

This document replaces GB/T 19670-2005 "Safety of machinery - Prevention of

unexpected start-up". Compared with GB/T 19670-2005, in addition to structural adjustments and editorial changes, the main technical changes are as follows:

- MODIFY the scope of the standard (see Clause 1 of this document, Clause 1 of the

2005 edition);

- ADD the general requirements for general measures to prevent unexpected start-up (see 4.1 of this document);
- MODIFY other means to prevent unexpected start-up (see 4.3 of this document,

4.2 of the 2005 edition);

- ADD the requirements for preventing unexpected start-up by signalling and warning (delayed start) (see 4.4 of this document);
- ADD the general requirements for prevention of unexpected start-up upon restoration of any power supplies (see 5.1 of this document);
- MODIFY the requirements for locking (securing) devices (see 5.3 of this document,

5.2 of the 2005 edition);

- MODIFY the requirements for maintained stop command of level A, level B, and level C (see 6.3.2 and 6.3.3 of this document, 6.3.2 and 6.3.3 of the 2005 edition).

This document is identical to ISO 14118:2017 "Safety of machinery - Prevention of unexpected startup".

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The issuing authority of this document shall not be held responsible for identifying any or all such patent rights.

This document was proposed by and shall be under the jurisdiction of National Technical Committee on Safety of Machinery of Standardization Administration of China (SAC/TC 208).

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1 Scope

This document specifies requirements for designed-in means aimed at preventing unexpected machine start-up (see 3.2) to allow safe human interventions in danger zones (see Annex A).

This document applies to unexpected start-up from all types of energy source, i.e.:

- power supply, e.g. electrical, hydraulic, pneumatic;
- stored energy due to, e.g. gravity, compressed springs;
- external influences, e.g. from wind.

This document does not specify performance levels or safety integrity levels for safety-related parts of control systems. While available means to prevent unexpected start-up are identified, this document does not specify the means for the prevention of unexpected machine start-up for specific machines.

NOTE: A type-C standard can define the required means for the prevention of harm arising from

unexpected start-up. Otherwise, the requirements for a specific machine need to be determined by

risk assessment outside the scope of this document.

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 15706-2012 Safety of machinery - General principles for design - Risk assessment and risk reduction (ISO 12100:2010, IDT)

ISO 12100 Safety of machinery - General principles for design - Risk assessment and risk reduction

ISO 13849-1 Safety of machinery - Safety-related parts of control systems - Part 1:

General principles for design

NOTE: GB/T 16855.1-2018 Safety of machinery - Safety-related parts of control systems - Part

1: General principles for design (ISO 13849-1:2015, IDT)

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