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

GB/T 20438.5-2017

**Functional safety of electrical/electronic/programmable
electronic safety-related systems -- Part 5: Examples of
methods for the determination of safety integrity levels**

(English Translation)

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1 Scope

One of the responsibilities of a technical committee is, wherever applicable, to make use of basic safety publications in the preparation of its publications.

In this context, the requirements, test methods or test conditions of this basic safety publication will not apply unless specifically referred to or included in the publications prepared by those technical committees.

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 20438.1-2017, Functional safety of electrical/electronic/programmable electronic safety-related systems - Part 1.General requirements (IEC 61508-

1.2010, IDT)

3 Definitions and abbreviations

For the purposes of this document, the definitions and abbreviations given in GB/T 20438.4-2017 apply.

Annex A (informative)

Risk and safety integrity - General concepts

This annex provides information on the underlying concepts of risk and the relationship of risk to safety integrity.

Annex B (informative)

Selection of methods for determining safety integrity level requirements

This annex lists a number of techniques that can be used for determination of safety integrity levels. None of the methods are suitable for all applications and users will need to select the most suitable. In selecting the most appropriate method consideration should be given to the following factors.

Annex C (informative)

ALARP and tolerable risk concepts

This annex considers one particular approach to the achievement of a tolerable risk. The intention is not to provide a definitive account of the method but rather an illustration of the general principles.

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