

ICS 13.220.01
CCS C 80



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

GB/T 31593.3-2015

**Fire safety engineering -- Part 3: Guidance on fire risk
assessment**

消防安全工程 第3部分：火灾风险评估指南

(English Translation)

Issued on: June 2, 2015

Implemented on: August 1, 2015

Issued by: Standardization Administration of China

Table of Contents

Introduction

Introduction

1 Scope

2 Normative references

3 Terms and definitions

Fire risk assessment of the applicability of 4

Fire Risk Management 5

6 6 fire risk assessment

7 Uncertainty, sensitivity, accuracy and bias

8 Fire Risk Assessment

Appendix A (informative) This section reg number and ISO/T S16732.2005 Number of control clauses

Annex B (informative) of this section and the ISO/T S16732.2005 technical differences and their causes

References

Foreword

GB/T 31593 "Fire Safety Engineering" is divided into nine sections.

--- Part 1. Calculation of the assessment, verification and validation;

--- Part 2. Type the required data and information;

--- Part 3. Fire Risk Assessment Guidelines;

--- Part 4. Setting fire scene and setting selection fire;

--- Part 5. Calculation of fire plume requirements;

--- Part 6. Calculation of the smoke layer requirements;

--- Part 7. Calculation ceiling jet requirements;

--- Part 8. Calculation of the opening airflow requirements;

--- Part 9. Evacuation Evaluation Guide.

This section GB/T Part of 331,593.

This section drafted in accordance with GB/T 1.1-2009 given rules.

This part redrafted law revision using ISO/T S16732.2005 "Fire Safety Engineering Fire Risk Assessment Guide" (English Version).

This part of ISO/T S16732.2005 compared to more adjustments in the structure. Listed in Appendix A of this part of ISO/T S16732.

Article 2005 of chapter numbering control list.

This part of ISO/T S16732.2005 compared to the existence of technical differences in terms of these differences have been involved through the air in the outside margin Singlet white vertical position (|) have been marked, in Appendix B gives the corresponding list of technical differences and their causes.

For ease of use and compliance with the requirements of the relevant standards prepared, this section of the ISO/T S16732.2005 made the following editorial modify.

- Deleted international standards foreword, preface redrafted;
- Modify the introduction of international standards, as a part of this introduction;
- International standard "this International Standard" be replaced by "this section";
- The International Standard some punctuation modified to comply with the Chinese habit of punctuation;
- Increase the informative Appendix A and Appendix B, is given in this section reg number and the number of international standard clauses and control technology Differences and reasons.

This section presents the People's Republic of China Ministry of Public Security.

This part of the National Standardization Technical Committee on Fire Building Fire Safety Engineering at the Technical Committee (SAC/TC113/SC13) Centralized.

This section is drafted. Tianjin Fire Research Institute of Ministry of Public Security, Ministry of Public Security of Sichuan Fire Research Institute, University of Science and Technology of China, China Construction Division Graduate School.

Introduction

Fire risk assessment is important to reduce casualties and property losses caused by the fire. By conducting a fire risk assessment, A more objective and accurate understanding of the risk of fire, so as to prevent fire, fire control and extinguish the fire and provide the basis for support.

Object fire risk assessment can be both inside the building and its facilities can also be a new building and its interior facilities design.

Fire risk assessment can be used to determine new or existing buildings fire safety

measures, it can also be used to establish an equivalent level of safety and standardization to comment Assess the balance between investment cost of fire safety and fire risk. In addition, the fire risk assessment for the selection also applies to deterministic analysis Fire scene to provide guidance and support.

Fire Safety Engineering Part 3. Fire Risk Assessment Guidelines

1 Scope

This section GB/T 31593 introduces the basic concepts and principles of fire risk assessment, fire risk assessment defines the steps to be followed Sudden and procedures for the determination and quantification acceptable level of fire risk to provide guidance.

This section applies to all types of fire risk assessment fire scenario.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 5907 (all parts) Fire Vocabulary GB/T 31592 Fire Safety Engineering General GB/T 31593.1 Fire safety engineering - Part 1. assessment of the calculation method, verification and validation (GB/T 31593.1-2015, ISO 16730:2008, MOD) GB/T 31593.2 Fire safety engineering - Part 2. Type the required data and information GB/T 31593.4-2015 Fire safety engineering - Part 4. Setting fire scene and setting selection fire (ISO/T S16733.

2006, MOD)

GB/T 31593.9 Fire safety engineering - Part 9. Evacuation Evaluation Guide (GB/T 31593.9-2015, ISO/T R16738.

2009, MOD)

3 Terms and Definitions

GB/T 5907 and GB/T 31592 and defined by the following terms and definitions apply to this document.

Acceptable criterion acceptance criteria in the risk assessment phase of the risk assessment process used to measure a particular fire risk is acceptable threshold.

Note 1: Refer to acceptable fire risk (3.6).

Note 2: "acceptable criterion" can also be a result of risk assessment of non-quantitative characteristic parameters.

Behavior scene behaviour and scenario A description of the fire personnel behavior and

order.

Set fire scenario design fire scenario Specific fire scenario Fire Safety Engineering deterministic analysis used.

Note: Because of possible fire scenarios is very large, so it is necessary to select the most important scenes (setting fire scene) for analysis. Set fire scene selection and fire safety design objectives are compatible, and can explain the possibility and consequences of a potential fire scene.

Failure

On the whole and some did not show the expected effect. Passive fire protection systems, "failure" means the loss of fire separation capacity, structural collapse or collapse, loss of carrying capacity; for active fire protection systems, "failure" means a fire protection system is not an action or an unacceptable result or not in accordance with Design requirements for action.

Fire Risk fire risk

Combined probability of fire and its consequences.

Note 1: The risk of fire or an event scenario is a combination of the probability of the event or scenario and its consequences, usually the product of probability and consequences.

Note 2: The design of a fire risk refers to the probability of any event or combination of scenarios with the design of its consequences, usually all events or scenes Wind and insurance.

Acceptable fire risk acceptable fire risk in the risk assessment stage fire risk assessment to meet predetermined acceptable criterion (3.1) risk.

Fire risk assessment fire risk assessment Acceptable fire risk procedure to evaluate fire risk estimated by regulations.

Fire risk curve fire risk curve A method for express the risk of fire, usually in logarithmic form, use the drawing represents cumulative probability and results.

Fire risk assessment fireriskevaluation the estimated risk of fire risk analysis based on comparison with an acceptable risk based on a predetermined acceptance criteria.

3.10

Fire risk matrix fire risk matrix in matrix form, set the fire scene by scene probability arrangement (usually defined rows or columns) arrangement and design load (that is, the size of the fire and strength) (usually defined rows or columns) to describe; matrix elements for each fire scenario group acceptable results.

NOTE: This method assumes that the design of the building itself suffered no effect on fire, and fire scenario depending on the setting of the external load is applied.