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

GB/T 9978.2-2019

**Fire Resistance Tests -- Elements of building construction --
Part 2: Guidance on measuring uniformity of furnace exposure
on test samples**

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Foreword

GB/T 9978 Fire Test Method for Building Elements has been and plans to release the following sections.

- Part 1. General requirements;
- Part 2. Guidelines for measuring the uniformity of fire test specimens subjected to fire;
- Part 3. Test methods and test data application notes;
- Part 4. special requirements for load-bearing vertical partition members;
- Part 5. special requirements for load-bearing horizontal partition members;
- Part 6. special requirements for beams;
- Part 7. special requirements for columns;
- Part 8. Special requirements for non-load-bearing vertical partition members;
- Part 9. special requirements for non-load-bearing suspended ceiling members;

This part is the second part of GB/T 9978.

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

This part uses the redrafting method to modify and adopt ISO /T R834-2..2009 "Fire test building components-Part 2. Fire test

Guidelines for Measuring the Uniformity of Specimen Fires.

Compared with ISO /T R834-2..2009, this section has some structural adjustments. Appendix A lists ISO /T R834-2..2009.

List of chapter number comparisons.

Compared with ISO /T R834-2..2009, there are technical differences in this section. The terms related to these differences have been passed outside the corresponding clauses.

The vertical single line (|) at the margin of the page is marked, and the corresponding technical differences and their causes are listed in Appendix B.

This section is proposed by the Ministry of Emergency Management of the People's Republic of China.

This section is under the jurisdiction of the National Fire Standardization Technical Committee (SAC/TC113).

This section was drafted. Tianjin Fire Research Institute of Emergency Management Department.

Introduction

In accordance with the provisions of GB/T 9978.1, the test method recommended in this standard is used when the test specimen is subjected to a fire test in a fire test furnace.

By measuring parameters such as temperature, air velocity and oxygen content in multiple locations in the test furnace, the uniformity of the specimens under fire can be judged. Push

The recommended test method uses low-cost, easily-available lightweight materials to make sample samples, which can minimize the moisture content between different samples.

The effect of the difference on the test results.

Fire test method for building components

Part 2. Fire test specimens exposed to fire

Guide to measuring uniformity of action

1 Scope

This part of GB/T 9978 specifies a test method for measuring test specimens in a fire test furnace in accordance with GB/T 9978.1.

The uniformity of the fire resistance during the fire test is determined. This section gives parameters such as temperature, air velocity, and oxygen content near the surface of the simulated specimen.

The type and arrangement position of the measuring instrument are simulated. The inside of the simulated specimen is a cold-formed steel skeleton, and the surface of the fire-receiving surface of the specimen is a plasterboard.

This section does not include performance requirements for fire test furnaces.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For undated references, the latest version (including all amendments) applies to this document.

GB/T 9775 Paper Gypsum Board (GB/T 9775-2008, ISO 6308. 1980, MOD)

GB/T 9978.1 Fire resistance test for building components-Part 1. General requirements (GB/T 9978.1-2008, ISO 834-1..1999, MOD)

3 terms and definitions

The terms and definitions defined in GB/T 9978.1 and the following apply to this document.

3.1

Effective area of furnace opening

Refractory test furnace opening area within the boundary of the instrument monitoring range.

4.1 Support structure (simulation test piece)

4.1.1 The support structure is made of cold-formed steel to support the keel. The fire-resistant surface of the support keel is installed with two layers of resistance that meet the requirements of GB/T 9775.

Fire paper surface gypsum board (type H), the thickness of each layer of gypsum board is not less than 16mm; the back fire surface supporting the keel is installed with a thickness of not less than

18mm structural panel.

Note. Use plywood or particle board as a typical structural panel.

4.1.2 In the supporting structure, the detailed assembly structure of cold-formed steel supporting keel, refractory paper-faced gypsum board and structural panel is shown in Figures 1 ~ 6. its

Among them, Figures 1 to 3 are horizontal support structures, and Figures 4 to 6 are vertical support structures. In the support structure shown in the figure, the horizontal support structure is suitable

For horizontal refractory test furnace with opening size of 3m x 4m; vertical support

structure is suitable for vertical refractory with opening size of 3m x 3m

Test furnace. For supporting structures used in other open-size fire-resistant test furnaces, the relevant dimensions need to be corrected.

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