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

中华人民共和国国家标准

GB/T 4272-2008

Replace GB/T 4272-1992, GB/T 11790-1996

**General principles for thermal insulation
technique of equipment and pipes**

设备及管道绝热技术通则

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Foreword

This Standard is formulated according to GB/T 4272-1992 *General principles thermal insulation technique of equipments and pipes* and GB/T 11790-1996 *General principles for low-temperature insulation technique of equipments and pipes*, and corresponding to other standards of relevant equipments and pipe insulation, mating each other and ease of use.

Meanwhile, this Standard will replace GB/T 4272-1992 and GB/T 11790-1996.

Comparison with GB/T 4272-1992 and GB/T 11790-1996, main changes of this Standard are as follows:

- Description of this standard is applicable to thermal insulation engineering of equipments, pipe and their accessories whose external surface temperature is at a range of $-196^{\circ}\text{C}\sim 650^{\circ}\text{C}$ in scope, for other insulation engineering of temperature range, can be implemented refer to this standard;
- Modified the terms and definitions, deleted the definition of warm insulation and cold insulation, added the definition of heat insulation;
- Modified the maximum permissible heat loss in table 1 and table 2;
- Added the requirements for rubber-plastics foam in cold insulation materials;
- Added the requirements for waterproof in insulation structural;
- Added the test requirements for insulation engineering's effect.

This Standard is proposed by National Technical Committee on Energy Fundamentals and Management of Standardization Administration of China.

This Standard is under the jurisdiction of Energy-saving Material Application Technique Sub-committee of National Technical Committee on Energy Fundamentals and Management of Standardization Administration of China.

Chief draft units of this Standard are Building Material Industry Technical Supervision Research Centre, Environment and Health Product Safety Institute of CDC and Beijing Zhongguancun International Environmental Protection Industry Promotion Center

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The publication history of the previous standards replaced by this standard is as follows:

- GB 4272-1984, GB/T 4272-1992;
- GB/T 11790-1996.

General Principles for Thermal Insulation Technique of Equipment and Pipes

1 Scope

This standard specifies terms and definitions, general provisions, performance requirements of thermal insulation materials, thermal insulation design, thermal insulation structure, construction and acceptance of thermal insulation engineering, effects test of thermal insulation engineering, maintenance and safety requirements of thermal insulation engineering of thermal insulation materials and their products.

This standard is applicable to thermal insulation engineering of equipments, pipe and their accessories whose external surface temperature is at a range of $-196^{\circ}\text{C}\sim 650^{\circ}\text{C}$; And thermal insulation engineering in other temperature range may also refer to this standard;

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 4132 Definitions of terms relating to thermal insulating materials

GB/T 8174 Method of measuring and evaluation thermal insulation effects for equipments and pipes

GB/T 8175 Guide for design of thermal insulation of equipments and pipes

GB 50126 Code for construction of industrial equipment and pipeline insulation engineering

3 Terms and definitions

For the purpose of this Standard, the following terms and definitions in GB/T 4132 apply.

3.1

Thermal insulation

In order to reduce the heat abstraction around the equipment, pipes and its accessories, it is

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