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

GB 50126-2008

Replacing GBJ 126-1989

**Code for construction of industrial equipment and pipeline
insulation engineering**

工业设备及管道绝热工程施工规范

(English Translation)

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Explanation of wording in this code

Addition: Explanation of provisions

Foreword

This code was revised from the Code for construction and acceptance of industrial equipment and pipeline insulation engineering GBJ 126-89 by the National Chemical Construction Standardization Management Center Station together with the relevant organizations of the chemical, electric power, petrochemical, building materials and other industries, in accordance with the requirements of the Notice on Issuing the Plan for the Formulation and Revision of National Engineering Construction Standards in 2004 (Jianbiao [2004] No. 67) of the Ministry of Construction.

During the revision, the revision group carried out extensive investigation and research, conscientiously summarized the experience gained in China over the last ten years in the design, construction, engineering application and scientific research of insulation works, referred to a large number of domestic and foreign standards and documents on insulation works, and widely solicited comments on the draft revision from organizations engaged in engineering design, construction, insulation material production, quality inspection, etc. in the chemical, petrochemical, electric power, metallurgical, machinery and other industries. After repeated discussion and modification by the revision group, the code was finally finalized after review.

This code comprises 9 chapters and 4 annexes. The main contents include: general provisions, terms, materials, preparation and requirements for construction, construction of the insulation layer, construction of the vapor barrier, construction of the cladding, safety techniques, handover of the works, etc.

The main revisions are as follows:

1. A chapter on terms has been added;
2. A section on transport, storage and custody has been added;
3. The technical parameters of insulation materials, such as thermal conductivity values, density, compressive strength, and the shot particle size and shot content of fibrous insulation materials, have been modified;
4. Construction methods such as the embedded-layer laying method, the trowelling method

and metal reflective insulation structures have been added;

5. Construction requirements for the pipe-in-pipe structure, which has the advantages of good insulation effect, reliable corrosion resistance and low maintenance cost, have been added;

6. The provision on leaving expansion joints in the middle of elbows of large-diameter high-temperature pipelines has been deleted, and content permitting expansion joints to be left under flanges has been added;

7. The content on vapor barriers of asphalt mastic and waterproof cold mastic with glass cloth has been deleted, and construction provisions for vapor barriers using rolled sheet materials have been added;

8. Construction provisions for composite cladding materials have been added;

9. The commencement report, the record of concealed works, the handover report of insulation works, etc. have been added to the handover documents.

The provisions printed in bold type in this code are mandatory provisions and shall be strictly implemented.

The Ministry of Construction is responsible for the administration of this code and the interpretation of the mandatory provisions, and the National Chemical Construction Standardization Management Center Station is responsible for the interpretation of the specific technical contents. During implementation, all organizations are requested to conscientiously sum up experience and accumulate data in combination with engineering practice. Where any part of this code is found to need modification or supplementation, please send comments and suggestions to the National Chemical Construction Standardization Management Center Station (address: No. 253 Huaizhong Road, Shijiazhuang; postcode: 050021).

Chief development organization: National Chemical Construction Standardization Management Center Station

Participating development organizations: Northwest Electric Power Construction No. 1 Engineering Company; Shanghai Huajian Heat Insulation and Anti-corrosion Engineering Co., Ltd.; Beijing New Building Material (Group) Co., Ltd.; Thermal Insulation Engineering Application Committee of the Shanghai Energy Research Society; China Chemical Engineering Third Construction Company; Hangzhou Yanshan Magnesium Steel Cladding Co., Ltd.; Hebei Guomei New Building Materials Co., Ltd.; Jiangsu Mingjiang Engineering Co., Ltd.; Wuxi Mingjiang Insulation Materials Co., Ltd.; Zhejiang Zhenshen Insulation Technology Co., Ltd.; SINOPEC Shanghai Engineering Co., Ltd.

1 General provisions

1.0.1

This code is formulated with a view to raising the construction level of insulation works, strengthening quality control during the construction of insulation works and ensuring the construction quality of insulation works for industrial equipment and pipelines.

1.0.2

This code is applicable to the construction of insulation works for new, expanded and reconstructed industrial equipment and pipelines with an outer surface temperature of -196 to +850 °C.

This code is not applicable to the construction of insulation works for internal insulating linings of equipment and pipelines, for equipment and pipelines with special requirements (nuclear radiation installations, aviation industry, aerospace industry, etc.), or for buried long-distance pipelines and temporary facilities.

1.0.3

The construction of insulation works for industrial equipment and pipelines shall be carried out in accordance with the design documents and the provisions of this code.

1.0.4

Where it is necessary to modify the design, substitute materials or use new materials, the consent of the original design organization must be obtained.

1.0.5

In addition to the provisions of this code, the construction of insulation works shall also comply with the provisions of the relevant current national standards and codes.

2.0.1 insulation

A general term for hot insulation and cold insulation.

2.0.2 thermal insulation layer

The insulation materials and their products that play the main role in maintaining a stable temperature of the medium.

2.0.3 vapor barrier

A structural layer intended to prevent the migration of water vapor.