



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

GB/T 50185-2019

Replacing GB 50185-2010

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

工业设备及管道绝热工程施工质量验收标准

(English Translation)

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Explanation of wording in this code

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1.0.1

This code is formulated in order to unify the construction quality acceptance requirements for industrial equipment and pipeline insulation engineering, strengthen quality control and ensure the engineering quality.

1.0.2

This code is applicable to the construction quality acceptance of insulation engineering for industrial equipment and pipeline with an external surface temperature of -196°C to +850°C for construction, renovation and extension.

1.0.3

This code shall be used in conjunction with the current national standards GB 50252 Unified standard for constructional quality acceptance of industrial installation engineering and GB 50126 Code for construction of industrial equipment and pipeline insulation engineering.

1.0.4

In addition to this code, the construction quality acceptance of industrial equipment and pipeline insulation engineering shall also meet the requirements of the current relevant national standards.

2.0.1 acupuncture inspection

inspection of thickness by vertically inserting a straight needle with a length greater than the thickness of the heat insulating layer into the heat insulating layer

2.0.2 vapour stop

structural layer that prevents water vapour from entering

2.0.3 peel inspection

inspection for judging whether the inspected objects are acceptable or not by observing the inspected objects after removing the heat insulating structure from the base surface

3.1.1

The construction quality acceptance of insulation engineering may be divided into acceptances for inspection lots, subitem works and subsection works.

3.1.2

Inspection lots shall be divided based on the units (sets) of equipment, medium of pipelines, pressure grade and work quantities according to the requirements of engineering characteristics, construction, quality control and professional acceptance. Equipment may be divided into an inspection lot based on a single unit, and pipelines may be divided into one or several inspection lot(s) according to medium, pressure grade and work quantities.

3.1.3

Subitem works may consist of one or several inspection lot(s). For division of subitem works, equipment shall be divided based on units (sets) with the same working medium, and pipelines shall be divided according to the same working medium.

3.1.4

Subsection works may consist of one or several subitem work(s). Insulation engineering in the same unit work shall be regarded as one subsection work.

3.2.1

The quality acceptance of inspection lot shall meet the following requirements:

- 1 the dominant items shall meet the requirements of this code;
- 2 place (point) for spot check of general items shall meet the requirements of this code; in the points spot checked for each item of permissible deviation, there shall be at least 80% of measured values within the permissible deviation specified in this code;
- 3 the quality control data shall be complete.

3.2.2

The quality acceptance of subitem work shall meet the following requirements:

- 1 each inspection lot of the subitem work shall meet the requirements of acceptable quality;
- 2 the quality control data for each inspection lot of the subitem work shall be complete.

3.2.3

The quality acceptance of subsection work shall meet the following requirements:

- 1 the quality for subitem works of subsection works shall be acceptable;
- 2 the quality control data for subitem works of subsection works shall be complete.

3.2.4

The quality acceptance records of insulation engineering shall meet the following requirements:

- 1 the quality acceptance records of inspection lots shall meet the requirements of Annex A;
- 2 the quality acceptance records of subitem works shall meet the requirements of Annex B;
- 3 the quality acceptance records of subsection works shall meet the requirements of Annex C;

4 the verification records of quality control data shall meet the requirements of Annex D.

3.2.5

When the quality of insulation engineering does not confirm to this code, it shall be treated according to the following requirements:

- 1 the reworked or repaired inspection lots shall be subjected to re-acceptance;
- 2 the inspection lot that is regarded as meeting the design requirements upon identification by the qualified testing organization shall be accepted;
- 3 the inspection lot that is not regarded as meeting the design requirements upon identification by the qualified testing organization but meets the structural safety and use function when checked and approved by the original design organization shall be accepted;
- 4 subitem works and subsection works with changed dimensions due to repair or reinforcement but meeting the requirements of safety use may be accepted according to technical treatment schemes and consultation documents;
- 5 subsection works subjected to repair or reinforcement but incapable of meeting the requirements of safety use must not be accepted.

3.2.6

The performance inspection and re-inspection report for on-site sampling shall be issued by a qualified quality testing department.

3.3.1

The construction quality of insulation engineering shall be accepted in sequence according to inspection lot, subitem work and subsection work.

3.3.2

Based on the qualified self-inspection of the construction organization, the quality of the inspection lot shall be accepted by project professional quality inspector and professional technical director of construction organization organized by the supervision engineer (project professional technical director of development organization) after the construction organization filling in the inspection lot quality acceptance record and submitting an application for inspection to the supervising (development) organization.

3.3.3

Based on the acceptable quality of inspection lot, the quality of subitem work shall be accepted by project professional quality inspector and professional technical director of construction organization organized by the supervision engineer (project professional