



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

GB 50738-2011

Code for construction of ventilation and air conditioning

通风与空调工程施工规范

(English Translation)

Issued on: September 16, 2011

Implemented on: May 1, 2012

**Issued by: Ministry of Housing and Urban-Rural Construction of the
People's Republic**

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1 General Provisions

1.0.1

This code is formulated with view to strengthening the technology management for the construction and installation of ventilation and air conditioning, standardizing the construction technology, intensifying the control over construction and installation processes as well as guaranteeing the engineering quality.

1.0.2

This code is applicable to the construction and installation of ventilation and air conditioning involved in the building engineering.

1.0.3

During the construction and installation of ventilation and air conditioning, the requirements for engineering quality in technical engineering documents and contracting documents shall

not be lower than those specified in this code.

1.0.4

The construction of ventilation and air conditioning shall not only meet the requirements stipulated in this code, but also comply with those in the current relevant ones of the nation.

2.0.1 Air duct

A duct, made from metal, nonmetallic sheet or other material, for ventilation.

2.0.2 Nonmetallic duct

Air duct made from such nonmetallic materials as rigid PVC and glass reinforced plastic (GRP).

2.0.3 Composite duct

Air duct made from the compositing of incombustible surface course and thermal-insulating inner plate.

2.0.4 Air channel

A channel, made from such building materials as concrete and brick, for ventilation.

2.0.5 Duct fittings

Elbow, tee, cross, reducer, special tube, guide vane and flange used in the air duct system.

2.0.6 Duct component

Air opening, valve, hood, cowl, muffler and filter involved in the air duct system.

2.0.12 Strength test

Test on the pressure resistance of pipeline, pressure vessel, valve and accessory within specified pressure and pressure holding time.

2.0.13 Leakage test

Test on the leakage of pipeline, pressure vessel, valve and accessory within specified pressure and pressure holding time.

3.1 Construction Technology Management

3.1.1

The enterprise which undertake the construction of ventilation and air conditioning shall have appropriate construction qualification. And appropriate technical standards shall be

available for the construction site.

3.1.5

The change of construction drawings need be approved by the original design organization.

Where the change of construction drawings involves in the using and energy-saving effects of ventilation and air conditioning, such change shall be subject to review by the censorship of the original construction drawing design documents. Before any change is made, relevant procedures shall be handled and confirmation by the supervision and development organizations is required.

3.1.6 Before system check and test as well as operation and commissioning, the construction

organization shall prepare appropriate technical schemes and subject them to review and approval.

3.2 Construction Quality Management

3.2.1

Appropriate quality management system shall be established for the construction site of ventilation and air conditioning and shall cover the following content.

3.2.3

Where the pipeline crosses wall and floor slab, sleeve shall be arranged according to the design requirements, and flame retardant material shall be used between sleeve and pipeline for compact filling;

where the pipeline crosses fire compartment, incombustible material shall be used for fireproof plugging.

3.2.4

Before connecting pipeline and equipment, the system pipeline shall pass the hydrostatic test and flushing (purging) test.

4.1.1 Mature technology and process as well as high-efficient, low-consumption and low-labor-

intensity should be selected for metal duct and fittings making.

4.1.4 Before the air duct making for clean air conditioning system, soft fabrics shall be used to wipe the plates so as to clean up the contaminants and fats on their surfaces. After completion of such making, neutral detergent shall be timely used to clean up them, mercerized cloth shall be used to wipe the inside of air duct, and plastic film shall be used to seal the port of air duct.

4.1.6 The minimum thickness of steel plates for rectangular duct and fittings shall be selected according to the long side dimension of air duct segment and the design operating pressure of air duct system, and shall be in accordance with those specified in Table 4.1.6-1; the minimum thickness of steel plates for circular duct and fittings shall be selected according to the diameter of section, the design operating pressure of air duct system and the form of bite, and shall be in accordance with those specified in Table 4.1.6-2.

4.1.8 Before bulk processing of air duct, the processing technique shall be verified, and strength and leakage test shall be carried out.

4.2 Metal Duct Making

4.2.1

The metal duct shall be made according to the following procedures (Figure 4.2.1).

Figure 4.2.1 Metal Duct Making Procedures

4.2.2

The plates or profiles shall be selected according to the construction drawings and relevant technical documents; moreover, the selected materials shall be re-inspected and shall meet the requirements of Article 4.1.6 in this code.

5.1 General Requirements

5.1.1

The fire-proof performance of nonmetallic or composite duct material shall comply with the design requirements and the current relevant national standards.

5.1.4

The making method of nonmetallic or composite duct shall be determined according to the connection type of air duct. The connection type and application scope of nonmetallic or composite duct shall be in accordance with those specified in Table 5.1.4.

5.2.3 The air duct bonding and forming shall meet the following requirements.

5.2.5 The strengthening and guide vane installation shall meet the following requirements.

5.3 Glass Fiber Composite Duct and Fittings Making

5.3.1

The glass fiber composite duct and fittings shall be made according to the following procedures (Figure 5.3.1).