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PEOPLE'S REPUBLIC OF CHINA**

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**Standard for operation and management of central air
conditioning system
(English Translation)**

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1 General

1.0.1

In order to implement the country's technical and economic policies, follow the principles of health, safety, energy saving, environmental protection, and economical and practical, standardize the operation and management of the air conditioning and ventilation system, meet reasonable use requirements, prolong the service life of the system, and respond to emergencies quickly and effectively event, formulate this standard.

1.0.2

This standard applies to the routine operation management of the air-conditioning and ventilation system under centralized management in civil buildings, as well as the emergency operation management in the event of emergencies related to the air-conditioning and ventilation system.

1.0.3

The operation and management of the air-conditioning ventilation system should make full use of the professional technology, professional equipment and professional human resources of social service organizations to improve the operation and management level.

1.0.4

The operation management of the air-conditioning and ventilation system shall not only comply with this standard, but also comply with the current relevant national standards.

2.0.1 Air conditioning air conditioning

By processing and distributing air, controlling parameters such as air temperature, humidity, cleanliness, and airflow velocity in a space to meet given requirements. It is the abbreviation of air conditioning.

2.0.2 Ventilation

In order to improve production and living conditions, natural or mechanical methods are used to ventilate a certain space so that the air environment meets the appropriate requirements for hygiene and safety.

2.0.3 Air conditioning ventilation system central air conditioning system

For the purpose of air conditioning and ventilation, the sum of all equipment, pipelines and accessories, instruments and meters for centralized processing, transportation, distribution, and control of the working medium.

2.0.4 Coefficient of energy consumption (CEC) for air conditioning

The ratio of the total annual primary energy consumption of the air-conditioning and ventilation system to the annual cumulative value of the reference air-conditioning load.

2.0.5 Rate of hydraulic disorder

The deviation between the actual flow of each pipeline in the air-conditioning water system and the design flow, and the ratio of the design flow.

2.0.6 Rate of airflow disorder

The deviation between the actual air volume of each branch pipe in the air system and the design air volume, and the ratio of the design air volume.

2.0.7 Debugging testing adjusting and balancing

During the whole process of installation, stand-alone trial operation, performance test, and system joint trial operation of each system, the prescribed methods are used to complete the testing, adjustment and balancing work.

2.0.8 Adjustment commissioning

Through the whole process management of the commissioning, performance verification, acceptance and seasonal working condition verification of the air conditioning and ventilation system, the working procedures and methods to ensure the realization of the design intent and meet the actual use requirements of the user.

2.0.9 Energy management contracting

By providing users with services such as energy-saving diagnosis, financing, and renovation, it is a market-oriented service method that reduces energy costs in building operation and shares energy-saving benefits to achieve investment recovery and reasonable profits.

3.1 Technical information

3.1.1

The design, construction, commissioning, testing, and evaluation of the air-conditioning and ventilation system should be complete and properly preserved, and should be checked against the actual situation of the system. The necessary documents file shall include the following documents.

- 1 Air conditioning and ventilation system equipment list and procurement information;
- 2 Ex-factory qualification certificate and entry inspection (test) report of main materials and equipment;
3. The factory qualification certificate, instruction manual and latest calibration record of the instrument;
- 4 Drawing joint review record, design change notice and as-built drawing;
- 5 Update, repair and renovation technical disclosure materials and completed drawings of the renovation part;
- 6 Inspection and acceptance records of concealed works;
- 7 Equipment, air duct and water pipe system installation and inspection records;
- 8 pipe flushing and test records;
- 9 Equipment stand-alone test run records;
- 10 No-load joint trial operation and debugging records of the air conditioning and ventilation system;
- 11 The comprehensive energy efficiency test report of the air conditioning and ventilation system under load;

12 The electronic version of the as-built drawing of the air conditioning and ventilation system that is consistent with the actual situation.

3.1.2

The operation management files shall be established. The operation management records of each system shall be true and complete, the information filled in shall be detailed and accurate, and the person who fills in shall sign. The operation management records shall include the following contents.

- 1 Air conditioning and ventilation system operation management plan and operation management records;
- 2 List of performance parameters of each system equipment and model parameters of vulnerable and consumable accessories;
- 3 Records of operating parameters of each major equipment;
- 4 Daily accident analysis and handling records;
- 5 daily patrol inspection records;
- 6 annual operation duty records and shift records;
- 7 maintenance and daily repair records of major equipment;
- 8 Overhaul and replacement of spare parts and wearing parts records for equipment and system components;
- 9 Annual operation summary and analysis data, etc.

3.1.3

The operation management strategy, control and use methods, operation instructions, and settings of different working conditions of the air-conditioning and ventilation system should be managed as technical data. It is advisable to entrust a professional organization to study and formulate, and should be perfected in practice according to the implementation situation.

3.1.4

The air-conditioning and ventilation systems of large complex and ultra-high buildings should be managed through building information model (BIM), intelligent equipment emergency management model, asset management database and equipment maintenance and repair database.

3.2 Personnel