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**Architectural technical code for hospital clean operating
department**

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1 General

1.0.1 In order to standardize the design, construction and acceptance of the clean operation department of the hospital, improve the medical environment control ability of the clean operation department of the hospital, meet the requirements of safety, hygiene, economy, applicability, energy saving, environmental protection, etc., and meet the functional needs of medical services, this document is formulated specification.

1.0.2 This specification is applicable to the design, construction and acceptance of clean operation department projects for new construction, reconstruction and expansion of hospitals.

1.0.3 The construction of the hospital's clean operating department should focus on air purification technical measures, strengthen the protection of the operating area, and reduce the risk of infection. In terms of building facilities, the principles of practicality and economy should be adhered to.

1.0.4 The design of the clean operating room should leave room for development, focusing on the flexibility and versatility of the design, so as to meet the needs of future reconstruction or expansion.

1.0.5 The construction of the hospital's clean operation department should not only meet the requirements of this specification, but also meet the relevant current national standards and regulations.

2.0.1 clean operating department

An independent functional area composed of part or all of clean operating room, clean auxiliary room and non-clean auxiliary room.

2.0.2 clean operating room

An operating room that uses air purification technology to reduce the total amount of microbial particles and particulates in the air of the operating environment to the allowable level. The operating room can also be called the operating room.

2.0.3 clean supporting space

Non-operating rooms that require air cleanliness.

2.0.4 non-clean supporting space

Non-operating rooms that do not require air cleanliness.

2.0.5 operating zone

Areas that require special protection include the operating table and its four sides that are pushed out by a certain distance.

2.0.6 Surrounding zone

Clean the operating room to remove other areas other than the operating area.

2.0.7 cleanliness class 5

The number of particles greater than or equal to 0.5 μm in the ambient air is greater than 350 particles/ m^3 (0.35 particles/L) to less than or equal to 3500 particles/ m^3 (3.5 particles/L); the number of particles greater than or equal to 5 μm is 0 particles/L air cleanliness. Equivalent to the original level 100.

2.0.8 cleanliness class 6

The number of particles greater than or equal to 0.5 μm in the ambient air is greater than 3500 particles/ m^3 (3.5 particles/L) to less than or equal to 35200 particles/ m^3 (35.2 particles/L); the number of particles greater than or equal to 5 μm is less than or equal to 293 particles / m^3 (0.3 grains/L) air cleanliness. Equivalent to the original level 1000.

2.0.9 cleanliness class 7

The number of particles greater than or equal to 0.5 μm in the ambient air is greater than 35200 particles/ m^3 (35.2 particles/L) to less than or equal to 352000 particles/ m^3 (352 particles/L); the number of particles greater than or equal to 5 μm is greater than 293 particles/ m^3 (0.3 grains/L) to less than or equal to 2930 grains/ m^3 (3 grains/L) air

cleanliness. Equivalent to the original 10,000 level.

2.0.10 cleanliness class 8

The number of particles greater than or equal to 0.5 μm in the ambient air is greater than 352,000 particles/ m^3 (352 particles/L) to less than or equal to 3,520,000 particles/ m^3 (3520 particles/L); the number of particles greater than or equal to 5 μm is greater than 2930 particles/ m^3 (3 particles /L) to less than or equal to 29300 grains/ m^3 (29 grains/L) of air cleanliness. Equivalent to the original level 100,000.

2.0.11 cleanliness class 8.5 cleanliness class 8.5

The number of particles greater than or equal to 0.5 μm in the ambient air is greater than 3520000 particles/ m^3 (3520 particles/L) to less than or equal to 11120000 particles/ m^3 (11120 particles/L); the number of particles greater than or equal to 5 μm is greater than 29300 particles/ m^3 (29 particles /L) to less than or equal to 92500 grains/ m^3 (93 grains/L) of air cleanliness. Equivalent to the original 300,000 level.

2.0.12 Empty as-built

The indoor purification and air conditioning facilities and functions are complete but not in operation, but there is no medical equipment and personnel in the room.

2.0.13 Static at-rest

Indoor purification and air-conditioning facilities and functions are complete and operating. If there is medical equipment, the medical equipment has been installed and is operational, but there is no staff status.

2.0.14 airborne bacterial concentration by planktonic method

Referred to as the concentration of planktonic bacteria. The air is randomly sampled with a planktonic sampler, and the number of colony-forming units per unit air volume obtained through culture represents the number of planktonic bacteria in the air (cfu/ m^3).

2.0.15 Depositing bacterial concentration

Referred to as sedimentation bacteria concentration. The sedimentation method is also called the plate exposure method. Use a Petri dish to expose the sample in the air, and the number of colony-forming units obtained after the culture of the Petri dish is covered, which represents the number of bacteria that can settle down in the air (cfu/dish).

2.0.16 Recovery time between operations

Under the condition of the number of air changes in normal operation, the time required to

reduce the air dust concentration in the operating room after the postoperative waste has been removed by about 90% or within the upper limit concentration of the design cleanliness level.

2.0.17 clean zone

All areas with cleanliness requirements of Class IV and above are clean areas.

2.0.18 air cleaning and conditioning system

The air conditioning system is adopted to control the concentration of suspended dust and microorganisms in the controlled area to the required level by taking filter sterilization and dust removal as the main measures.

2.0.19 exogenous infection

An infection in a patient caused by microorganisms outside the body, such as other people or the environment.

2.0.20 Endogenous infection

An infection caused by a patient's own flora.

2.0.21 Multifunctional hybrid operating room hybrid operating room

It is a special operating room that can perform imaging diagnosis, interventional therapy and surgical operation at the same time.

2.0.22 Non-aspirating supply diffusers

Specifically refers to the airflow distribution device installed in the clean operating room to guide the air supply airflow to flow downward from the air outlets arranged on the ceiling (ceiling) and rarely induce indoor air. Usually, the outlet wind speed is low and the cross-sectional wind speed is uniform. Commonly known as air supply ceiling or air supply ceiling.

3 Classification of clean operating room

3.0.1 The clean rooms of the clean operation department should be graded according to the bacterial concentration under empty or static conditions.

3.0.2 The grading standards for clean operating rooms shall comply with the provisions in Table 3.0.2-1, and the grading standards for clean auxiliary rooms shall comply with the provisions in Table 3.0.2-2.

Table 3.0.2-1 Classification Standards for Clean Operating Room