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

GB/T 25915.9-2018

**Cleanrooms and associated controlled environments -- Part 9:
Classification of surface cleanliness by particle concentration**

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Foreword

GB/T 25915 "Clean Room and Related Controlled Environment" contains 10 parts.

--- Part 1. Classification of air cleanliness by particle concentration;

--- Part 2. Confirmation of continuous monitoring and periodic testing technical conditions in accordance with GB/T 25915.1;

--- Part 3. Detection methods;

--- Part 4. Design, construction and start-up;

- Part 5. Operation;
- Part 6. Vocabulary;
- Part 7. Isolation devices (clean hoods, glove boxes, isolators, micro-environments);
- Part 8. Classification of air cleanliness by chemical concentration;
- Part 9. Classification of surface cleanliness by particle concentration;
- Part 10. Classification of surface cleanliness by chemical concentration.

This part is the ninth part of GB/T 25915.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This section uses the translation method equivalent to ISO 14644-9:2012 "Clean rooms and related controlled environments Part 9. by particle concentration

Sub-surface cleanliness level.

This part is proposed and managed by the National Cleanroom and Related Controlled Environment Standardization Technical Committee (SAC/TC319).

This section was drafted by. Zhongtian Daocheng (Suzhou) Clean Technology Co., Ltd., Shenzhen Jilong Clean Technology Co., Ltd., Suzhou Antaikong

Gas Technology Co., Ltd., Suzhou Industrial Park Jiahe Environmental Technology Engineering Co., Ltd., Suzhou Purification Engineering Installation Co., Ltd., China Electronics

Cheng Design Institute, China Power Investment Engineering Research and Testing Center, China Electronics Society Clean Technology Branch, Shenzhen Yitian Purification Technology Co., Ltd.

Beijing Shiyuan Xida Engineering Technology Co., Ltd., China Engineering Physics Research Institute, Shenzhen Xinke Special Decoration Engineering Company.

Introduction

The clean room and associated controlled environment provide pollution control at the level applicable to contamination-sensitive operations. Benefit from pollution control

Products and processes include aerospace, microelectronics, optics, nuclear energy and life sciences (pharmaceutical, medical devices, food, medical) and other industries.

GB/T 25915.1-2010~ GB/T 25915.8-2010 is specifically for suspended particles and chemical pollution,

GB/T 25916.1-2010 and GB/T 25916.2-2010 are for biological contamination. Designed in clean rooms and other controlled environments,

In addition to surface cleanliness grading, many factors should be considered in technical conditions, operation and control. These factors are in GB/T 25915 and

A detailed description is provided in other parts of GB/T 25916.

This section refers to the classification of surface cleanliness by measuring the particle concentration. This section also lists the steps for determining the surface particle concentration and

Some test methods.

If the regulatory body has relevant regulations or guidelines, the test procedures can be modified as appropriate.

Clean room and related controlled environment

Part 9. Classification of surface cleanliness by particle concentration

1 Scope

This part of GB/T 25915 clarifies the solid surface cleanliness by particle concentration in clean rooms and related controlled environments.

level. Information on surface characteristics and recommended methods of detection and measurement are given in Appendix A~Appendix D.

This section applies to all solid surfaces in clean rooms and related controlled environments, such as walls, ceilings, floors, production environments, tools, equipment.

And products. The surface cleanliness level (SCP) classified by particle concentration is limited to particles having a particle diameter of 0.05 μm to 500 μm .

This section does not consider the following.

- Specific process cleanliness and suitability requirements;
- Surface cleaning steps;
- Material characteristics;
- Matters involving mutual bonding or usually related to time and process;
- Selection and use of grading and testing statistical methods;
- Other characteristics of particles, such as electrostatic charge, ionic charge, microorganisms and so on.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 25915.6-2010 Clean rooms and related controlled environments - Part 6. Vocabulary (ISO 14644-6:2007, IDT)

3 Terms and definitions

The following terms and definitions as defined in GB/T 25915.6-2010 apply to this document.

3.1

Specific particle size range descriptor descriptor for specific particle size ranges

A descriptor that distinguishes SCP levels for a specific particle size range.

Note. This descriptor can be used for particle sizes that are of particular interest or outside the classification system and can be stated separately or as a supplement to the SCP level.

3.2

Direct measurement method direct measurement method

There is no intermediate step to measure the contamination method.

3.3

Indirect measurement method indirect measurement method

A method of measuring pollution with an intermediate step.

3.4

Solid surface solid surface

The interface between the solid and the other phase.

3.5

Surface particle surface particle

A solid or liquid substance that is discretely distributed and adheres to a surface of interest, excluding film-like materials that cover the entire surface.

Note. Surface particles are particles that adhere by chemical and/or physical interactions.

3.6

Surface cleanliness surface cleanliness by particle concentration; SCP

The condition of the surface particle concentration.

Note. Surface cleanliness is determined by the material and type characteristics, various