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JAPANESE INDUSTRIAL STANDARD

**Clean room — Test methods
for dust generation from
moving mechanisms**

JIS B 9926—1991

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Clean room - Test methods for
dust generation from moving mechanisms

B 9926-1991

1. Scope

This Japanese Industrial Standard specifies the methods of measuring the size and number of particulates generated during the operation of moving mechanisms of machines and instruments ⁽¹⁾ used in clean rooms and in other clean environments.

Note ⁽¹⁾ Production machines, measuring instruments, robots
transportation machines, etc.

Remarks 1. Moving mechanisms (hereafter referred to as the "specimens") mean those mechanisms which perform horizontal reciprocal motions, vertical reciprocal motions (up and down motions), rotational motions, and swinging motions, including combinations of these motions.

2. The following standards are cited in this Standard:

JIS B 9920 Measuring Methods for Airborne Particles
in Clean Room and Evaluating Methods for
Air Cleanliness of Clean Room

JIS B 9921 Light Scattering Automatic Particle Counter

JIS K 0554 Testing Methods for Concentration of Fine
Particles in Highly Purified Water

JIS K 8839 2-Propanol

JIS Z 8122 Glossary of Terms for Contamination
Control

JIS Z 8762 Measurement of Fluid Flow by Means of
Orifice Plates, Nozzles and Venturi Tubes

Reference Standards:

JIS B 9908-Air Filter Units for Ventilation

JIS B 9922-Clean Work Station

2. Definition

For the purpose of this Standard, in addition to those specified in JIS B 9920, JIS B 9921, and JIS Z 8122 the following principal definitions shall apply:

- (1) wiper An implement used for cleaning objects by wiping them. It is made of cloth, polyurethane, etc. satisfying such conditions as low dust-productivity, adsorptivity, and electricity suppressing capability.

3. Measuring apparatus

The measuring apparatus shall be as follows:

3.1 Constitution The measuring apparatus shall be composed of a blowing unit, air filter unit, specimen installation unit, flow contraction and mixing unit, and measuring unit.

3.2 Classification The measuring apparatus shall be classified by the directions of conveyed air into the horizontal type and vertical type (refer to Fig. 1 (a) and Fig. 1 (b)).

3.3 Construction The construction of the measuring apparatus shall be as follows:

- (1) Construction in general The inner surfaces of the measuring apparatus shall be smooth, resistant to adhesion of particulates, and resistant to rusting. Further, the apparatus shall have a construction which does not allow inflow or outflow of particulates likely to influence the measured values of particulates.
- (2) Air filter unit The air filter unit is a part which supplies clean air to the specimen installation unit, and the filters installed therein shall consist of ULPA filters.
- (3) Specimen installation unit The size of the specimen installation unit shall be such that specimen can be operated in the same condition as in its actual use.

Further, this unit shall be equipped with an airtight door for installing the specimen in the apparatus.

- (4) Contraction and mixing unit The contraction and mixing unit shall be so constructed that the dust generated from the specimen thoroughly mixes with the flowing air and the dust concentration of the flowing air in the measuring unit becomes as uniform as possible.