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

GB/T 18664-2002

**Selection, use and maintenance of respiratory protective
equipment**

呼吸防护用品的选择、使用与维护

(English Translation)

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1 Scope

This standard specifies the principles, methods and requirements for the selection, use and maintenance of respiratory protective equipment.

This standard applies to respiratory protective equipment used to prevent harm to the human body from oxygen deficiency and airborne contaminants in the workplace.

This standard does not apply to breathing equipment for underwater operations, aviation and medical rescue.

2 Normative references

The provisions in following documents become the provisions of this Standard through reference in this Standard. For the dated references, the subsequent amendments (excluding corrections) or revisions do not apply to this Standard;

however, parties who reach an agreement based on this Standard are encouraged to study if the latest versions of these documents are applicable.

For undated references, the latest edition of the referenced document applies.

GB/T 2891-1995 Performance test methods for facepiece of filter type respirator

GB 3836.1 Electrical apparatus for explosive gas atmospheres - Part 1:

General requirements

GB 3836.2 Electrical apparatus for explosive gas atmospheres - Part 2:

Flameproof enclosure "d"

GB 3836.4 Electrical apparatus for explosive atmospheres - Intrinsically safe circuits and electrical apparatus

GB 8958 Safety regulation for working under hazardous condition of the oxygen deficiency Atmosphere-supplying respiratory protective equipment

Respiratory protective equipment capable of isolating the wearer's respiratory organs from the working environment, relying on the air source carried by the wearer or relying on an air pipe to introduce a clean air source other than the working environment.

[GB/T 12903-1991, definition 4.1.21]

3.1.7

Supplied air respiratory protective equipment

An atmosphere-supplying respiratory protective equipment that introduces in clean air via an airway tube through the breathing of the wearer or by mechanical force.

[GB/T 12903-1991, definition 4.2.1.1]

3.1.8

Self-contained breathing apparatus

An atmosphere-supplying respiratory protective equipment which uses the air source from the air bottle or oxygen bottle or an oxygen generator as carried by the wearer.

[GB/T 12903-1991, definition 4.1.2.2]

3.1.9

Negative-pressure respiratory protective equipment

A respiratory protective equipment, the pressure in the facepiece of which in a breathing cycle is less than the atmospheric pressure in the inhalation stage of the user.

[GB 16556-1996, definition 3.2]

3.1.10

Positive-pressure respiratory protective equipment

A respiratory protective equipment, the pressure in the facepiece of which in a breathing cycle is more than the atmospheric pressure.

[GB 16556-1996, definition 3.3]

3.1.11

The tiny solid particles suspended in the air, which are generally produced by the condensation of gas or vapor, whose particle size is usually smaller than that of dust.

3.1.18

Mist

Tiny droplets suspended in the air.

3.1.19

Low boiling point organic compound

Organic compounds which have a boiling point below 65 °C.

3.1.20

Hazardous atmosphere

Anoxic or atmospheric environment in which airborne contaminant concentrations exceed the value as specified by national occupational health standards.

3.1.21

Immediately dangerous to life and health concentration

The concentration of airborne contaminants in the hazardous atmosphere reaches a certain dangerous level, which can be fatal, or can permanently damage health, or can make people immediately lose their ability to escape.

3.1.22

Filter element

Filter material or filter component which is used by the respiratory protective equipment to filter out harmful substances in the air.

Examples: canisters (filter cartridge), dust canisters, filter media, etc.

3.1.23

End-of-service-life indicator

A system that warns the user that respiratory protection is approaching a failure.

3.1.24

The ratio of the concentration of airborne contaminants to the concentration limit as specified by the national occupational health standard, which takes an integer.

3.2 Abbreviations

The following abbreviations apply to this standard.

APF: Assigned protection factor

IDLH: Immediately dangerous to life and health

SCBA: Self-contained breathing apparatus

4.1 General principles

4.1.1

Without protection, no one shall be exposed to an air environment that can or may endanger health.

4.1.2

It shall, according to the relevant national occupational health standards, evaluate the air environment in which the operation is conducted (see Appendix

A for various factors to be considered in the evaluation), to identify the nature of the hazardous atmosphere and determine the degree of harm.