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

GB 30864-2014

Respiratory protection-Powered air-purifying respirator

呼吸防护 动力送风过滤式呼吸器

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1 Scope

GB 30864-2014 is the Chinese national standard on respiratory protection-powered air-purifying respirator, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 24 July 2014 by the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China; Standardization Administration of China, and has been in force since 1 June 2015. Classification: ICS 13.340.30, CCS C73. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This standard specifies the classification, labelling, technical requirements, test methods and identification of powered air-purifying respirators. This standard is applicable to powered air-purifying respirators preventing particles, toxic and harmful gas or vapor. This standard is not applicable to respirators used in combustible, explosive and

oxygen-deficient environment and for escaping.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including amendments) applies.

GB/T 2428 Head-face Dimensions of Adults

GB 2626-2006 Respiratory Protective Equipment - Non-powered Air-purifying Particle Respirator

GB 2811-2007 Safety Helmet

GB 2890-2009 Respiratory Protection - Non-powered Air-purifying Respirators

GB/T 3609.1-2008 Occupational Eye and Face Protection - Welding Protection - Part 1: Welding Protector

GB/T 3609.2-2009 Occupational Eye and Face Protection - Welding Protection - Part 2: Automatic Welding Filter

GB/T 3785.1-2010 Electroacoustics - Sound Level Meters - Part 1: Specifications

GB 3836.1-2010 Explosive Atmospheres - Part 1: Equipment - General Requirements

GB 3836.4-2010 Explosive Atmospheres - Part 4: Equipment Protection by Intrinsic Safety "i"

GB/T 5703 Basic Human Body Measurements for Technological Design

GB 12476.4-2010 Electrical Apparatus for Use in the Presence of Combustible Dust - Part 4: Protection by Intrinsic Safety "iD"

GB/T 12903-2008 Personal Protective Equipment - Terminology half facepiece the tight-fitting facepiece capable of covering mouth and nose, or covering mouth, nose and lower jaw. [

GB 2626-2006, as defined in 3.8]

5 Technical Requirements

5.1 General Requirements The material and structural design used for PAPR shall meet the following requirements, checked according to the method in

6.2 and assessed according to 6.19.

a) The material shall meet the following requirements: 1) Suitable for use under the expected exposure temperature and humidity conditions and corrosive environment; after

the pretreatment under the conditions specified in 6.3.1, PAPR components (except filter element) shall be free from obvious deformation and inside separation and shall meet the requirements of 5.2~

5.9 and 5.11~5.18;

Note: generally, the pretreatment doesn't cover charger unless the respirator design makes the battery charger inseparable from the respirator. 2) Materials known to be able to cause skin irritation or other adverse reactions shall not be adopted for components which may directly contact the wearer's skin; 3) The product is able to withstand the detergent and disinfectant and their treatment methods as suggested by the manufacturer; 4) The inside of filter element shall be able to withstand the corrosivity of filter medium; 5) The air flow filtered by filter element shall be free from substance or peculiar smell harmful to human.

b) The structural design of product shall meet the following requirements: 1) It shall not cause structural damage easily; the component design, composition and installation shall not endanger the wearer; 2) The head harness and PAPR fixing device shall be adjustable and convenient for wearing and removal; the PAPR shall be firmly fixed on the wearer, and no obvious pressing or pain due to pressing shall appear during wearing. 3) During the wearing and removal process, the part directly contacting the wearer shall be free from any sharp edge and burr; 2890-2009.

5.2.2 Head harness The head harness strength shall meet the requirements of 5.1.11, GB 2890-2009.

5.2.3 Negative pressure PAPR Tight-fitting facepiece used for negative pressure PAPR shall meet the following requirements:

a) It shall meet the requirements of 5.5, 5.7,

5.11 and 5.12, GB 2626-2006;

b) Where checked according to the method in 6.2, the tight-fitting facepiece used for negative pressure PAPR shall only be used in conjunction with particle filter element; gas and/or vapor filter element and combination filter element shall not be used.

5.3 Loose-fitting Facepiece and Loose-Fitting Hood

5.3.1 General Requirements Product design shall meet the following requirements:

a) Where facepiece or hood doesn't contain fan component, the filter element cannot be directly connected with facepiece or hood. It is checked according to the method in 6.2;

b) The facepiece or hood shall be equipped with facepiece or hood as required so as to be fixed on body; its design and composition shall provide proper fastening strength and shall be adjustable or have certain flexibility so as to be suitable for head-form and body type within certain range. It is assessed in 6.19;