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PEOPLE'S REPUBLIC OF CHINA**

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**Safety of pressure swing adsorption systems for hydrogen
purification**

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is drafted with reference to ISO / T S19883.2017 "Safety of Pressure Swing Adsorption Separation and Purification Hydrogen System". The degree of consistency is non-equal.

Effectively, the file type is adjusted from ISO technical specifications to my country's national standards.

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

1 Scope

This document specifies the basic requirements, technical requirements, operation and maintenance, operating personnel, and emergency situations of the pressure swing adsorption hydrogen purification system.

processing requirements.

This document applies to commercial and industrial stationary and mobile pressure swing adsorption hydrogen purification systems.

Note. Please refer to Appendix A for the flow diagram of the pressure swing adsorption hydrogen purification system included in this document.

2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to

this document.

GB/T 150 (all parts) Pressure vessels

GB/T 3836.1 Explosive atmosphere Part 1.General requirements for equipment

GB/T 3836.2 Explosive atmospheres Part 2.Equipment protected by flameproof enclosure "d"

GB/T 3836.5 Explosive atmospheres Part 5.Equipment protected by positive pressure enclosure "p"

GB/T 3836.14 Explosive atmosphere Part 14.Location classification Explosive gas environment

GB/T 3836.15 Explosive atmospheres Part 15.Design, selection and installation of electrical installations

GB/T 4208 Shell protection level (IP code)

GB 4962 Safety technical regulations for hydrogen use

GB 12014 Protective Clothing Anti-static Clothing

GB/T 19773 Technical requirements for pressure swing adsorption hydrogen purification system

GB 21148 Foot protection safety shoes

GB/T 26480 Inspection and testing of valves

GB/T 29412 Adsorber for hydrogen purification by pressure swing adsorption

GB/T 29729 Basic requirements for hydrogen system safety

GB/T 34542.1 Hydrogen storage and delivery system Part 1.General requirements

GB 50016 Fire Protection Code for Building Design

GB 50057 Design Code for Lightning Protection of Buildings

GB 50058 Design Code for Electrical Equipment in Explosive Hazardous Environments

GB 50160 Design fire protection standards for petrochemical enterprises

GB 50177 Hydrogen station design specifications

GB 50316 Design specifications for industrial metal pipes

GB 50489 Chemical enterprise general plan transportation design specifications

GB/T 50493 Petrochemical combustible gas and toxic gas detection and alarm design standards

GB 50650 Lightning protection design specifications for petrochemical equipment

JB4732 Steel Pressure Vessels---Analysis and Design Standards

SH/T 3004 Design specifications for heating, ventilation and air conditioning in petrochemical industry