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Ceramic filtration membrane devices

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard is proposed and managed by the National Separation Membrane Standardization Technical Committee (SAC/TC382). This standard was drafted. Jiangsu Jiuwu High-Tech Co., Ltd., Nanjing University of Technology, Nanjing Membrane Material Industry Technology Research Institute Company, Yangtze University, Delan Water Technology Co., Ltd., Sanda Membrane Technology (Xiamen) Co., Ltd., Tianjin Binhai Desalination Co., Ltd., Tianjin Polytechnic University, Tianjin Membrane Engineering Technology Co., Ltd., Zhejiang Zhongcheng Environmental Research Institute Co., Ltd. The main drafters of this standard. Xing Weihong, Peng Wenbo, Yang Jiheng, Cai Yuanyuan, Kong Wei, Zeng Fanfu, Fang Fulin, Ma Jinghuan, Jing Wenyi, Zhao Shiming, Fan Yunshuang, Zhao Ying, Wang Wei, Zhong Yingmin. Ceramic filter device

1 Scope

China's national standard for ceramic filtration membrane devices. It specifies the terms and definitions, the classification and marking, the requirements, the test methods and the inspection rules. A ceramic membrane is a rigid porous element - typically an alumina, titania or zirconia layer on a sintered support extruded with many parallel channels - and it does what a polymer membrane cannot. It tolerates temperatures a polymer would soften at, the full range of pH, oxidising cleaning chemicals, and steam sterilisation, and it can be backwashed hard because it does not deform. That makes it the choice where the stream is hot, aggressive or fouling: petrochemical process water, dairy and juice clarification, pharmaceutical separation, and the treatment of industrial effluent that would destroy an organic membrane. Against that, it costs several times as much per square metre and packs less area into a vessel, so it is specified where the duty demands it rather than as a general alternative.

This standard specifies the terms and definitions, classification and marking, requirements, test methods and inspection rules of ceramic membrane membrane devices (hereinafter referred to as "devices"). Then, sign, package, transport and store. This standard is applicable to tubular ceramic membrane membrane devices for liquid filtration. The flat

ceramic membrane membrane devices can be referred to for implementation.

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 150.1-2011 Pressure vessels - Part 1. General requirements

GB/T 7251.1 Low-voltage switchgear and control equipment - Part 1. General

GB/T 9174 General technical conditions for general cargo transportation and packaging

GB/T 9969 General guidelines for the use of industrial products

GB/T 14436 General Rules for Industrial Product Assurance Documents

GB/T 16907 centrifugal pump technical conditions (Class I)

GB 19517 National Electrical Equipment Safety Technical Specification

GB/T 20103-2006 Membrane separation technology terminology

GB/T 20801.2 Specification for pressure piping - Part 2. Materials

HG/T 2181 acid and alkali resistant rubber seal material

HG/T 20507 Automatic Instrument Selection Design Specification HY/T 063-2002 tubular ceramic microporous membrane element HY/T 104 ceramic microporous membrane module

JB/T 5300 Industrial Valve Material Selection Guide

3 Terms and definitions

The following terms and definitions defined in GB/T 20103-2006 apply to this document. For ease of use, the following is repeated Certain terms and definitions in GB/T 20103-2006.

3.1 Ceramic filter membrane A separation membrane having a porous structure formed by sintering a material such as alumina, titania or zirconia at a high temperature.

3.2 Tubular ceramic membrane element tubularceramicfiltrationmembrane A tubular ceramic filter element having a single or multi-channel structure.

3.3 Ceramic membrane module ceramicfiltrationmembranemodule A membrane element composed of a tubular ceramic membrane element mounted in a casing and equipped with an inner coupling member, an end plate, a seal ring, and the like.