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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 14211-2019

Replacing GB/T 14211-2010

Test method of mechanical seal

机械密封试验方法

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009. This standard replaces GB/T 14211-2010 "Mechanical Seal Test Method". This standard is compared with GB/T 14211-2010, except for editing The main technical changes outside the sexual modification are as follows:

--- Added normative references (see Chapter 2);

--- The factory test has increased the air tightness test (see 4.1.2, 4.2);

--- Increased the type of test media (see Table 1, Table 2,

4.1 of.2010 edition);

--- The test method is subdivided according to the sealing arrangement and the transport medium (see Chapter 4, Chapter 5, Chapter 3 of the.2010 edition);

--- Removed the contents of the appendix mechanical seal test report (see Appendix A of the.2010 edition). This standard was proposed by the China Machinery Industry Federation. This standard is under the jurisdiction of the National Mechanical Sealing Standardization Technical Committee (SAC/TC491). This standard was drafted. Hefei General Machinery Research Institute Co., Ltd., Beijing University of Chemical Technology, Sichuan University, Sichuan Nikken Seals Co., Ltd. Company, Dandong Clone Group Co., Ltd., Ningbo Volken Technology Co., Ltd., Zhejiang Lantian Machinery Seal Co., Ltd. Fertilizer General Environmental Control Technology Co., Ltd. The main drafters of this standard. Li Wei, Wu Zhaoshan, Cai Jining, Zhang Youhua, Chen Zhi, Zhou Fuxing, Yan Guoping, Ni Min, Li Xiang, Yao Liming, Zheng Guoyun, Yang Bofeng, Ding Siyun, Shen Zongyu, Ban Yuhong. The previous versions of the standards replaced by this standard are.

---GB/T 14211-1993, GB/T 14211-2010. Mechanical seal test method

1 Scope

GB/T 14211-2019 is the Chinese national standard on test method of mechanical seal, in the field of mechanical systems and components. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 18 October 2019 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 September 2020. Classification: ICS 21.140, CCS J22. 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 test classification, factory test, type test, test report, test device and instrument for mechanical seal product performance test. Meters, etc. This standard applies to mechanical seals of centrifugal pumps and similar rotating machinery.

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 33509 General Specification for Mechanical Seals

JB/T 11289 dry gas sealing technical conditions

3 Test classification

3.1 Type test. Test to determine whether the mechanical seal meets all the performance requirements of the technical specification.

3.2 Factory test. Tests that should be carried out at the factory for mechanical seals that have passed the type test.

4.1 Overview

4.1.1 The type and arrangement of the seals shall comply with the provisions of GB/T 33509.

4.1.2 For the arrangement 1, the arrangement 2 and the arrangement 3 (3CW-FB, 3CW-FF, 3CW-BB) using the spacer solution, The factory test is divided into air tightness test, static pressure test and dynamic test. The air tightness test is a mandatory test item, and the

static pressure test and dynamic test are available. Select the inspection item.

4.1.3 For the arrangement of the isolation gas 3 (3NC-FB, 3NC-FF, 3NC-BB), according to JB/T 11289.

4.2.1 Test conditions

4.2.1.1 The test medium is normal temperature nitrogen or air.

4.2.1.2 The volume of gas in the sealed chamber is up to 28L.

4.2.1.3 The seal end face of the test seal shall not be coated with any lubricating oil or grease.

4.2.1.4 Separate tests shall be carried out for each sealing end face of the double-face seal in arrangement 2 and arrangement 3 .

4.2.2 Test procedure

4.2.2.1 separately fill the test sealed cavity, isolation seal cavity, buffer seal cavity or suppression seal cavity with clean gas, plus Pressed to

0.17 MPa.