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

GB/T 21283.4-2008

**Rotary shaft lip-type seals incorporating thermoplastic sealing
elements -- Part 4: Performance test procedures**

密封件为热塑性材料的旋转轴唇形密封圈 第4部分：性能试验程序

(English Translation)

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Foreword

GB/T 21283 "sealing elements for the thermoplastic material rotary shaft lip seals" is divided into six sections.

- Part 1. Basic dimensions and tolerances;
- Part 2. Vocabulary;
- Part 3. Storage, handling and installation;
- Part 4. Performance test procedures;
- Part 5. Identification of visual defects;
- Part 6. thermoplastic and elastomeric properties of the coating material requirements.

This is Part 4 GB/T 21283 of.

The partial modification of the use of ISO 16589-4:2001 "sealing elements for the thermoplastic material rotary shaft lip seals - Part 4. Performance Test Procedures "(in English).

This section according to ISO 16589-4:2001 redrafted.

Because of the special needs of our industry, this section at the time of adoption of international standards has been modified. The technical differences between a single vertical line labeled in terms of knowledge involved in their page margin. And ISO 16589-4:2001 is a technical difference.

--- 5.7 the words "unless otherwise agreed by manufacturers and users, six seals should not visible leakage", ISO 16589-4:2001 5.7 as "unless otherwise agreed by manufacturers and users, the total amount of all six seal leakage should not exceed 12mL, each Single seal leakage should not exceed 3mL ". Because China's manufacturers and users of the rotary shaft lip seals Quality Requirements are high, there are not allowed to leak, modified

to improve the standard of technical requirements.

For ease of use, this section also made the following editorial changes.

--- Delete international standards foreword.

This part of the Annex A, Annex B, Annex C and Annex D are informative appendices.

This part is proposed by the China Petroleum and Chemical Industry Association.

This part of the National Rubber and rubber products sealing products Standardization Technical Committee Technical Committee (SAC/TC35/SC3) Centralized.

This section drafted by. Euphorion seal Ltd. Zhejiang, Changzhou rambo Auto Parts Co., Ltd. Qingdao Kai Shi sealing industry has Limited, Qingdao Beihai Sealing Technology Co., Ltd. Northwest Rubber Plastic Research and Design Institute, Shanghai fly on seals Limited.

Introduction

Rotary shaft lip seals are used to seal liquid on the relatively low pressure device. The most typical is the axis of rotation of the stationary chamber, However, in some cases, the shaft is stationary and rotating cavity.

Typically, there is a dynamic seal designed interference fit between the shaft and the flexible seal member.

Similarly, between the outer and inner hole seal cavity interference fit can seal liquid and prevents static leakage.

To avoid damage, before installation and during installation, it is necessary to be careful of all seal storage, handling and safety Equipment, improper storage, handling and installation can affect the seal life.

The sealing element is a thermoplastic material rotary shaft lip Rings - Part 4. Performance test procedures Warning --- Use this section a person should be familiar with common laboratory procedures. The intent of this section is not related to the safety of all Wide issues, if any, associated with its use in the operation of the hot and cold fluids and equipment, should pay attention to the use of reasonable precautions. Make with those who have the responsibility to establish appropriate safety and health practices and to ensure compliance with national regulations.

1 Scope

This section GB/T 21283 describes a sealing element is a thermoplastic material rotary shaft lip seal, the sealing element is a thermoplastic Materials such as polytetrafluoroethylene (PTFE) as the base, with a suitably formed.

This section provides general performance test can be used for sealing elements for rotary shaft lip seal thermoplastic material conformity identified Experience. Also it provides for dynamic tests and auxiliary materials and low-temperature test requirements.

This section applies to the sealing element is a thermoplastic material rotary shaft lip seals (hereinafter referred to as the ring).

Note: GB/T 21283 and GB/T 13871 complementary, GB/T 13871 stipulated elastomer seal.

2 Normative references

The following documents contain provisions which, through reference GB/T 21283 in this section constitute provisions of this section. For dated reference documents Member, all subsequent amendments (not including errata content) or revisions do not apply to this section, however, encouraged to reach under this section Parties to research agreement to use the latest versions of these documents. For undated reference documents, the latest versions apply to this section.

GB/T 17446 Fluid power systems and components Terminology (GB/T 17446-1998, idt ISO 5598. 1985) GB/T 21283.1-2007 sealing element is a thermoplastic material rotary shaft lip seals - Part 1. Basic dimensions and tolerances (ISO 16589-1:2001, MOD) GB/T 21283.2 sealing element is a thermoplastic material rotary shaft lip seals Part 2. Vocabulary (GB/T 21283.2-2007, ISO 16589-2:2001, IDT)

3 Terms and Definitions

Terms and definitions GB/T 17446 and GB/T 21283.2 established applicable to this section.

4 Before the test program

4.1

Check whether all submitted test seals related drawings and detailed specifications consistent with the seals provided by the manufacturer.

4.2

ensure that seals specified by the manufacturer of the material is consistent with batch manufacturing seal material batches. For an elastomer seal portion Ring seals to ensure that specified by the manufacturer of the material is consistent with batch manufacturing elastomeric seal portion material batches.

4.3

In order to accurately analyze the test results before performing the test, the first measurement and seals physical characteristics and test instruments relating to the following data.

- a) prior to assembly of the seal lip diameter;
- b) the thickness of the sealing element prior to assembly;
- c) ring outside diameter and roundness;
- d) the diameter, material hardness and surface roughness of the shaft;
- e) the cavity diameter, material and surface roughness;
- f) Vice-lip diameter (if any).

Note 1: For a), b) and f), should not be using the measuring instrument with a sharp edge.