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NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 269-2023

Replacing GB/T 269-1991

Determination of cone penetration of lubricating greases and petrolatum

Issued on: May 23, 2023 **Implemented on: December 1, 2023**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document replaces GB/T 269-1991 "Measurement of Penetration of Lubricating Grease and Petroleum Grease": Compared with GB/T 269-1991, except for the structure

In addition to adjustments and editorial changes, the main technical changes are as follows:

a) Changed the maximum measurable cone penetration value from "620 units" to "500 units" (see Chapter 5,:1991 edition

Chapter 1);

b) Added the terms "cone penetration" and "cone penetration" (see 3:1, 3:2);

c) The chapter "Classifications, Processes and Limitations" has been added (see Chapter 5);

d) The size tolerance of the cone has been changed (see Figure 2, Figure 3, Figure 4, Figure 5, Figure 2, Figure 3, Figure 4, Figure 5 of the:1991 edition);

e) Changed the size of the 1/2 scale cone grease worker A from "phi38:5mm" to "phi36:5mm" (see Figure 7,:1991

version of Figure 7);

f) Changed the size of the grease cutter blade from "68mmx185mm" to "65mmx185mm" (see Figure 9,

Figure 9 of the:1991 edition);

g) Added the chapter "Sampling" (see Chapter 7);

h) Added 1/2 and 1/4 scale cone method "general rules" (see 9:1);

i) The precision of full-scale cone penetration has been changed (see Table 1, Table 1 of

the:1991 edition);

j) The chapter "Test Report" has been added (see Chapter 14):

This document is modified to adopt ISO 2137:2020 "Measurement of Penetration of Lubricating Grease and Petroleum Grease":

The technical differences between this document and ISO 2137:2020 and their reasons are as follows:

---Replace ISO 23572 (see Chapter 7) with the normatively quoted SH/T 0229 to adapt to my country's technical conditions and increase operability

Workability (see Chapter 2):

This document has the following editorial changes compared with ISO 2137:2020:

--- Added an informative reference to GB/T 7631:8-1990 in Chapter 5, and added "References":

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

1 Scope

This document describes a method for determining the consistency of lubricating greases and petroleum greases by the penetration method:

This document applies to grease and petroleum grease (Vaseline):

2 Normative references

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

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

SH/T 0229 Sampling method for solid and semi-solid petroleum products

3 Terms and Definitions

The following terms and definitions apply to this document:

3:1

Penetration

The depth to which a standard object, cone or needle penetrates the test part under specified conditions of time, temperature and load:

3:2

cone penetration conepenetration

The depth to which the cone penetrates the specimen under specified conditions of load, time and temperature:

Note: 1 unit of cone penetration = 0:1mm:

3:3

working

Shearing motion of a grease worker:

3:4

unworked penetration unworkedpenetration

With as little agitation as possible, the sample is transferred from the sample container to the worker cup to determine the cone penetration (3:2):

3:5

Worked penetration workedpenetration

The cone penetration (3:2) measured after the sample is reciprocated in the grease worker for a specified number of times:

3:6

The cone penetration (3:2) measured after the sample has been reciprocated more than the specified number of times in the grease worker: