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

GB/T 27613-2011

**Hydraulic fluid power -- Fluid contamination -- Determination of
particulate contamination by the gravimetric method**

液压传动 液体污染 采用称重法测定颗粒污染度

(English Translation)

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Foreword

This standard was drafted in accordance with GB/T 1.1-2009 given rules.

This standard uses redrafted law revision using ISO 4405:1991 "Hydraulic fluid contamination by gravimetric method for the determination stars Particle pollution "(in English).

This standard and ISO 4405:1991, compared with more adjustment in the structure, listed in Appendix A of this standard and ISO 4405:1991's Reg number control list.

This standard and ISO 4405:1991 technical differences exist compared to the terms of these differences has been involved through its outer margin bits Opposed to a single vertical line (|) were marked, Appendix B gives a list of corresponding technical differences and their causes.

This standard also made the following editorial changes.

--- In this standard 10.1, increasing the number of formula, and the formula symbols used and make a note unit;

--- In Chapter 9 of this standard, the provisions for repeated use, a direct reference to section numbers.

The standard proposed by China Machinery Industry Federation.

This standard by the National Standardization Technical Committee of hydraulic and pneumatic (SAC/TC3) centralized.

Introduction

In the hydraulic system, power is by means of a closed loop pressurized liquid to pass and control. This is both a liquid lubricant, but also work the rate of delivery media.

Reliable system performance requires cleanliness of the liquid medium can be controlled. Liquid medium particle contamination qualitative and quantitative determination Fluid requirements during sample collection and accuracy of the determination of having carried out the nature and extent of pollution.

Determination of contaminated liquid weighing method requires weighing the mass per unit volume of oil suspended solids. The method uses filters to collect samples Insoluble particles, liquid particles measuring system to achieve pollution.

Hydraulic fluid contamination Determination of particulate contamination using the gravimetric method

1 Scope

This standard specifies the determination of the hydraulic system of the working medium particulate contamination two weighing method (double and single membrane filter method). Double filter method to obtain a more accurate test results.

This standard applies to the detection of particulate contamination of the hydraulic system is greater than the working medium 0.2mg/L of.

2 Normative references

The following documents for the application of this document is essential. For dated references, only the dated version suitable for use herein Member. For undated references, the latest edition (including any amendments) applies to this document.

GB/T 17446 Fluid power systems and components terminology (ISO 5598) GB/T 17489 Hydraulic Particulate contamination analysis extracted from the working fluid-like system piping (ISO 4021) GB 50073-2001 clean plant design specifications ISO 3938 Hydraulic fluid contamination analysis report analyzing data method
(Hydraulicfluidpower-Contamination analysis-Methodforreportinganalysisdata)

3 Terms and Definitions

Terms and definitions GB/T 17446 apply as defined in this document.

Principle 4

Under vacuum, through a filter or membrane overlapping two same known volume of liquid filtration. When using a membrane filter After the filters have increased the quality of the content of the equivalent volume of liquid impurities; when using two filters, filter membranes, respectively, these two sheets increase quality an amount equivalent to the difference between the content of the volume of liquid impurities.

5 Test device

5.1

filter device, consisting of 1, comprising.

- a) clamping means, such as a metal spring clip;
- b) a funnel, under the section is divided into two parts on the funnel and the funnel member, the member is a funnel with a capacity of 250mL graduated glass funnel;
- c) membrane, 47mm diameter, white, non-square, 0.8 μ m pore size, and the liquid should be analyzed during the preparation of the chemical reagents used Compatible. When different diameter or different pore size microporous membrane, should be explained;
- d) support plate under vacuum suction means for state support membrane, made of sintered glass or stainless steel mesh;
- e) suction flask, volume of at least 1000mL;
- f) accessories, including rubber plug, connection tube (vacuum connection), means for preventing static electricity generated when vacuum filtration.