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

GB/T 34905-2017

**Sintered metal materials -- Determination of the level of
cleanliness of powder-metallurgy parts**

烧结金属材料 粉末冶金零部件清洁度的测定

(English Translation)

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Foreword

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

This standard uses the redrafted law to amend the use of ISO 28279:2010 "sintered metal powder metallurgy parts cleanliness Determination. " this standard compared with the ISO 28279:2010 in the structure made the following adjustments.

--- National standards 5.1.1,5.1.2,5.1.3,5.1.4 corresponding to the international standards 5.1,5.2,5.3,5.4;

--- National standards 5.2.1,5.2.2,5.2.3,5.2.4,5.2.5 corresponding to the international standards 5.5,5.6,5.7,5.8,5.9;

--- National standards 5.3.1,5.3.2 corresponding to the international standards 5.10,5.11;

--- The last paragraph of the international standard content, as Chapter 8, in line with China's standards for writing habits.

This standard and ISO 28279:2010 compared to the existence of technical differences.

The clauses covered by these differences have been marked by the vertical single line (|) at the margin of the outer margin.

The specific differences are as follows.

--- International Standard Chapter 2 (symbols and units) N test sample number, the original unit was "-", changed to "pieces", the actual use of mining the unit is "piece";

--- The International Standard Chapter 3 (Principle) in the magnifying glass, stereo microscope replaced by microscope, the use of multiple amplification in international standards Mirror, stereo microscope,, before and after the presentation confusion, the actual operation of the microscope to meet the test requirements, to protect Standard content consistent before and after the uniform use of microscope;

--- Remove the international standard 4.12 in "stereomicroscope (at least 10 times)",

uniform use of the microscope;

--- Removed the international standard 5.11 and Figure 3 "stereo microscope", unified use of the microscope;

--- Removed the international standard 5.6 in the "operation, to ensure that the solvent fully wet powder metallurgy parts," the corresponding national standard 5.2.2 has covered this content;

--- In the International Standard Chapter 7 (test report) added. "F) filter the solvent information; g) pollutant extraction method; h) filter material Information "to make the report more complete and objective;

--- The last paragraph of international standards, "In the case of supply and demand can be agreed to replace other pore filters, solvents and extraction of pollution Material method ", an increase of the amount of solvent can be replaced to ensure that the surface of large parts for the cleanliness of the required solution dose.

This standard is proposed and managed by China Machinery Industry Federation.

1 Scope

This standard specifies the quality of the powder metallurgy parts surface contaminants and the determination of the nature of the method (ie, PM parts cleanliness).

This standard applies to the measurement of cleanliness of parts manufactured by powder metallurgy process.

2 Symbols and units

For the purpose of this standard, the following symbols and units are used.

Symbol Interpretation Unit C The quality of the pollutant mg / piece m1 before cleaning clean, dry 5μm filter quality (4.4) g m2 After filtration with contaminants, dried 5μm filter quality (4.4) g N Test sample quantity

3 Principle

The powder metallurgy parts with a filtered solvent pressure washing, and then washed the solvent again filtered to obtain parts Surface contaminants. The filtered residue was weighed and examined with a microscope to determine its nature.

4 Instruments

4.1

filter funnel.

4.2

filter bottle, the minimum volume of 2L.

4.3

vacuum pump.

4.4

filter, pore size of 5 μ m, made of polyester (this material is preferred) or polyamide (depending on the type of solvent selection filter), diameter 20mm ~ 50mm.

4.5

filter, the maximum pore size of 1 μ m, made of polyester material (preferred use of this material), polyamide or cellulose (according to the choice of solvent filter class Type), diameter 20mm ~ 50mm.

4.6

analytical balance, the minimum range of 20g, accuracy 0.0001g.

4.7

Petri dish without cover.

4.8

oven, the temperature of at least 100 °C, accuracy of 10 °C.

4.9

dryer.

4.10

liquid pressure gun.

4.11

Solvent (petroleum spirit).

4.12

microscope.

4.13

Microscope slides.

4.14

flat stainless steel clamp.