

ICS 77.160
CCS H 16



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

GB/T 5250-2014

Replacing GB/T 5250-1993

**Permeable sintered metal materials -- Determination of fluid
permeability**

可渗透性烧结金属材料 流体渗透性的测定

(English Translation)

Issued on: December 5, 2014

Implemented on: May 1, 2015

Issued by: Standardization Administration of China

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Foreword

Accordance with the standards GB/T 1.1-2009 given rules drafted.

This standard replaces GB/T 5250-1993 "permeable sintered metal materials - Determination of fluid permeability." This standard compared with GB/T 5250-1993, the main changes are as follows.

- Order the standard sections have been adjusted.
- The "symbol and the definition of" section by the pressure units Pa to N/m².
- Sample requirements changed.
- Change the original standard in Appendix A portion of editorial errors.

Translation method used in this standard, ISO 4022 equivalent use. 1987 "permeable sintered metal materials - Determination of fluid permeability." Correspondence between the consistency of the standards of international documents and normative references of the following documents.

GB/T 5163-2006 Sintered metal materials (excluding carbide) Permeable sintered metal materials density, oil content, and open Determination of rate (ISO 2738:1999, IDT).

1 Scope

This standard specifies the permeable sintered metal material (which is continuous through pores or interconnected) Determination of fluid permeability party law. Test is available in the case of fluid viscosity and inertia permeability permeability coefficient expressed performed (see Appendix A).

This standard does not apply to an elongated tubular sample, because the sample fluid through the tubular bore of the pressure drop and the direction of the fluid sample through the tubular wall Drop compared to the thickness direction can not be ignored (see Appendix A.5).

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.

Test ISO 2738 Sintered metal materials (excluding carbide) Permeable sintered metal material density, oil content and open porosity Set (Sintered metal materials, excluding hardmetals-Permeable sintered metal materials- Determination of density, oil content, and open porosity)

3 Principle

Let the test fluid of known viscosity and density through the sample and measuring the pressure drop and volume flow.

Viscosity and inertia permeability coefficient and pressure drop, volume flow, density and viscosity of the fluid and the fluid passing through a specimen size of the porous metal, etc. Related parameters.

4 Symbols and Definitions

The criteria used symbols and terms are defined in Table 1.

a) a sample plate for the specimen thickness; b) a tubular sample, see 6.1.2 The length L of the tubular specimen (see Figure 2) η Viscosity coefficient of permeability ψ_{iv} When a viscous fluid resistance is only loss, at unit pressure gradient effect, the unit of dynamic viscosity flow Body through the porous metal material per unit area of $\frac{1}{L}$ the volume flow, regardless of the size of the sample Inertia permeability coefficients ψ_{ii} When the fluid resistance is only inertial losses at unit pressure gradient effect, unit density fluid through Porous metal material volume flow per unit area, regardless of the size of the sample