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Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for spherical indentation of porous ceramics

Céramiques techniques — Méthode d'essai d'indentation des céramiques poreuses avec un indenteur sphérique

Reference number
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Foreword

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The committee responsible for this document is ISO/TC 206, *Fine ceramics*.

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Fine ceramics (advanced ceramics, advanced technical ceramics) — Test method for spherical indentation of porous ceramics

1 Scope

This International Standard describes the test methods for determining spherical indentation strength of porous ceramics, such as those employed for filters and catalyst carriers, that are carried out in air at room temperature.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 463, *Geometrical Product Specifications (GPS) — Dimensional measuring equipment — Design and metrological characteristics of mechanical dial gauges*

ISO 683-1, *Heat-treatable steels, alloy steels and free-cutting steels — Part 1: Non-alloy steels for quenching and tempering·*

ISO 683-3, *Heat-treatable steels, alloy steels and free-cutting steels — Part 3: Case-hardening steels*

ISO 1101, *Geometrical product specifications (GPS) — Geometrical tolerancing — Tolerances of form, orientation, location and run-out*

ISO 3290-1, *Rolling bearings — Balls — Part 1: Steel balls*

ISO 3611, *Geometrical product specifications (GPS) — Dimensional measuring equipment: Micrometers for external measurements — Design and metrological characteristics*

ISO 4287, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters*

ISO 7500-1, *Metallic materials — Verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Verification and calibration of the force-measuring system*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
porous ceramics
ceramics with porosity of 30 % to 60 %, and pore diameter of 1 μm to 100 μm, for applications such as filters, catalyst carriers, humidity sensors, or molecular sieves, excluding structured honeycomb cellular channels

3.2
spherical indenter
sphere through which a compressive load is applied to the specimen

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