

Jemná keramika (špeciálna keramika, špeciálna technická keramika). Keramické kompozity. Stanovenie neusporiadanosti jednoosovou mechanickou skúškou (ISO 17161: 2014).

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Fine ceramics (advanced ceramics, advanced technical ceramics) - Ceramic composites - Determination of the degree of misalignment in uniaxial mechanical tests (ISO 17161:2014)

Táto norma obsahuje anglickú verziu európskej normy. This standard includes the English version of the European Standard.

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# **EN ISO 17161**

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#### **English Version**

Fine ceramics (advanced ceramics, advanced technical ceramics) - Ceramic composites - Determination of the degree of misalignment in uniaxial mechanical tests (ISO 17161:2014)

Céramiques techniques - Céramiques composites - Détermination du degré de non-alignement lors des essais mécaniques uniaxiaux (ISO 17161:2014)

Hochleistungskeramik - Keramische Verbundwerkstoffe - Bestimmung der Fluchtungsfehler bei mechanischen Prüfungen mit einachsiger Beanspruchung (ISO 17161:2014)

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### **European foreword**

The text of ISO 17161:2014 has been prepared by Technical Committee ISO/TC 206 "Fine ceramics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 17161:2016 by Technical Committee CEN/TC 184 "Advanced technical ceramics" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2016, and conflicting national standards shall be withdrawn at the latest by October 2016

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#### **Endorsement notice**

The text of ISO 17161:2014 has been approved by CEN as EN ISO 17161:2016 without any modification.

INTERNATIONAL STANDARD

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Fine ceramics (advanced ceramics, advanced technical ceramics) — Ceramic composites — Determination of the degree of misalignment in uniaxial mechanical tests

Céramiques techniques — Céramiques composites — Détermination du degré de non-alignement lors des essais mécaniques uniaxiaux



ISO 17161:2014(E)



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#### **Foreword**

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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

# Fine ceramics (advanced ceramics, advanced technical ceramics) — Ceramic composites — Determination of the degree of misalignment in uniaxial mechanical tests

#### 1 Scope

This International Standard describes a procedure

- to verify the degree of misalignment of the load train of the test machines using a reference test specimen uniformly loaded in tension or in compression, and
- to give indications in order to correct defects such as torsion and bending.

This International Standard is not intended to provide a quantitative and acceptable limit before the testing of ceramic matrix composites with a fibre reinforcement: unidirectional (1D), bidirectional (2D), and tridirectional (xD, with x0 < x0 loaded along one principal axis of reinforcement. This limit depends on the sensitivity of each type of composite to the misalignment defect.

NOTE 1 This limit is to be defined between the testing establishment and the customer.

NOTE 2 Monolithic ceramics are very sensitive to misalignment defects while CMCs (ceramic matrix composite) in general are moderately sensitive to them.

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

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

ISO/IEC 17025, General requirements for the competence of testing and calibration laboratories

CEN/TR 13233:2007, *Advanced technical ceramics — Notations and symbols* (to be replaced by future ISO NP 19634)

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