

ICS 81.060.30

CCS Q 32



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

GB/T 14390-2008

Replacing GB/T 14390-1993

**Fine ceramics (advanced ceramics, advanced technical
ceramics) -- Test method for flexural strength of monolithic
ceramics at elevated temperature**

精细陶瓷高温弯曲强度试验方法

(English Translation)

Issued on: September 18, 2008

Implemented on: May 1, 2009

Issued by: Standardization Administration of China

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Foreword

This standard is identical with ISO 17565:2003 "Fine ceramics (advanced ceramics, advanced technical ceramics) --- monolithic ceramics at high temperatures bend Bending strength test method." this standard and ISO 17565:2003 compared to do the following editorial changes.

--- "ISO 7500-1", "IEC 60584-1" to "GB/T 16825.1", "GB/T 16839.1";

"," --- Decimal point instead of a comma as the decimal point, "";

--- Deleted international standards Appendix E.

This standard replaces GB/T 14390-1993 "high temperature engineering ceramics bending strength test method." this standard and GB/T 14390-1993 compared to the main changes are as follows.

The term --- heading "Engineering Ceramics" to "fine ceramics";

--- Increasing the terminology (see 3);

--- Increased by principle (see 4);

--- Sample size was changed to "for 30mm span test jig, sample length $\geq 35\text{mm}$; for span test clip 40mm Tools, sample length $\geq 45\text{mm}$ " (1993 version 5.1; this version 6.1.1);

--- Remove 2 (1993 edition Figure 2);

--- Remove Figure 3 increased by 1 (1993 Version 2.2; 3.2 edition) Figure;

--- Increasing the roll bar and the three-point bending and described four-point bending device (see 5.4.2 - 5.4.8);

--- Increased sample processing (see 6.2);

--- Increase test procedures detailed information and instructions (see 7);

--- Increasing the accuracy and precision and intensity scale factor calculation results (see 9,11);

--- Choice cancel the abnormal data method, an increase of Annex A (informative) described in Appendix B (normative) Correction chamfer Coefficient, Appendix C (normative) thermal expansion of the amendments to Appendix D (Informative Appendix) weibul scale factor.

The Standard Appendix B and Appendix C are normative appendices, Appendices A and D are informative appendices.

The standard proposed by China Building Materials Federation.

This standard by the National Ceramic Industry Standardization Technical Committee.

This standard was drafted. China Building Materials Academy.

He participated in the drafting of this standard. Wuhan University, Shanghai Institute of Ceramics, Chinese Academy of Sciences.

1 Scope

This standard specifies the fine ceramics and high temperature ceramic whiskers or particulate reinforced composite material bending strength test method.

This standard applies to material development, quality control, characterization and design data collection purposes.

2 Normative references

The following documents contain provisions which, through reference in this section constitute provisions of this section. Where dated references, subsequent Amendments (not including errata content) or revisions do not apply to this section, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. Who does not note date reference documents, the latest versions apply to this section.

Testing - Part 1 GB/T 16825.1-2002 static uniaxial testing machine. Rally and (or) pressure testing machine force measuring system Verification and calibration (idt ISO 7500-1:1999) GB/T 16839.1 thermocouple, Part 1. indexing table (GB/T 16839.1-1997, idt IEC 60584-1:1995) ISO 3611 outside micrometer Strength test method ISO 14704 Fine ceramics at room temperature bending

3 Terms and Definitions

The following terms and definitions apply to this standard.

Sample maximum stress under bending load at break by.

A method of measuring the bending strength of the loading, the specimen is positioned

between two lower and two upper rollers roll bar, roll bar up and down in the vertical direction the relative movement of the sample bending [see Figure 1 (a) and (b)].

(A) four-point bending 1/4

Figure 1 bending load

GB/T 14390-2008/ISO 17565:2003