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Test methods for static bending fatigue of fine ceramics

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry, through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Fine Ceramics Association (JFCA)/ Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS R 1632**: 1998 is replaced with this Standard.

Attention is drawn to the possibility that some parts of this Standard may conflict with a patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying the patent right, application for a patent after opening to the public, utility model right or application for registration of utility model after opening to the public.

Test methods for static bending fatigue of fine ceramics

1 Scope

This Japanese Industrial Standard specifies the test methods for static bending fatigue of fine ceramics, by the 3-point bending or 4-point bending, to be carried out in the atmosphere.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0601 *Geometrical Product Specifications (GPS)—Surface texture: Profile method—Terms, definitions and surface texture parameters*

JIS B 0621 *Definitions and designations of geometrical deviations*

JIS B 7502 *Micrometer callipers*

JIS B 7503 *Mechanical dial gauges*

JIS B 7507 *Vernier, dial and digital callipers*

JIS C 1602 *Thermocouples*

JIS R 1600 *Glossary of terms relating to fine ceramics*

JIS Z 8401 *Guide to the rounding of numbers*

JIS Z 8704 *Temperature measurement—Electrical methods*

3 Terms and definitions

For the purpose of this Standard, the terms and definitions in **JIS R 1600** and the following apply.

3.1 static bending fatigue test

a test for estimating the life of a test piece, by applying a certain static bending load to the test piece and measuring the time to the point of breakage

3.2 3-point bending stress

the maximum value of stress generated in a test piece when the test piece is placed on two support points that are at a certain distance from each other and a load is applied to the midpoint between the support points

3.3 4-point bending stress

the maximum value of stress generated in a test piece when the test piece is placed on two support points that are at a certain distance from each other and a uniformly distributed load is applied on two points that are equally distanced, to the right and to the left, from the midpoint between the support points