INTERNATIONAL STANDARD

ISO 21713

First edition
2020-03

Fine ceramics (advanced ceramics, advanced technical ceramics) — Determination of elastic modulus of ceramics at high temperature by thin wall C-ring method

Céramiques techniques (céramiques avancées, céramiques techniques avancées) – Détermination du module élastique des céramiques à haute température par la méthode de l'anneau en C à parois minces

iTeh Standards
(https://standards.iteh.ai)
Document Preview

ISO 21713:2020
https://standards.iteh.ai/catalog/standards/iso/301bffb8-ba98-4689-9ca1-ab2eecdb63f7/iso-21713-2020

Reference number
ISO 21713:2020(E)

© ISO 2020

iTeh Standards
(https://standards.iteh.ai)
Document Preview

ISO 21713:2020
https://standards.iteh.ai/catalog/standards/iso/301bffb8-ba98-4689-9ca1-ab2eecdb63f7/iso-21713-2020



COPYRIGHT PROTECTED DOCUMENT

© ISO 2020

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

© ISO 2020 – All rights reserved

Contents

Page

Foreword ..... **iv**

1 Scope **1**

2 Normative references **1**

3 Terms and definitions **1**

4 Principle **2**

5 Apparatus **3**
5.1 Testing machine 3
5.2 Heating system 4
5.2.1 General 4
5.2.2 Test piece temperature stability 4
5.2.3 Test temperature uniformity 4
5.2.4 Furnace heating rate 4
5.2.5 Furnace stability 4
5.3 Temperature-measuring and indicating instruments 4
5.3.1 General 4
5.3.2 Thermocouples 4
5.3.3 Verification of the thermocouple temperature-measuring system 4
5.4 Vacuuming machine 4
5.5 Data acquisition 4
5.6 Dimension-measuring device 5

6 Test pieces **5**
6.1 Test piece size and preparation 5
6.1.1 General 5
6.1.2 Test piece storage 5
6.1.3 Number of test pieces 5
6.2 Rigid disk preparation 5

7 Test procedures **6**
7.1 Check of vacuuming system 6
7.2 Check of heating system 6
7.3 Testing machine and loading speed 6
7.4 Elastic modulus measurement steps 6
7.5 Test validity requirement 7

8 Calculation of results **8**
8.1 Calculation of the elastic modulus 8
8.2 Mean value and standard deviation for elastic modulus 8

9 Test report **8**

Bibliography **10**

iTeh Standards
(https://standards.iteh.ai)
Document Preview
ISO 21713:2020
https://standards.iteh.ai/catalog/standards/sist/301bffb8-ba98-4689-9ca1-ab2eecdb63f7/iso-21713-2020

© ISO 2020 – All rights reserved