ISO 19603:2016-11 (E)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Test method for determining elastic modulus and bending strength of thick ceramic coatings

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Symbols 2

5 Principle 2

6 Apparatus 3

7 Test pieces 3
7.1 Test piece size 3
7.2 Test piece preparation 4
7.2.1 Test piece machining 4
7.2.2 Test piece handling and storage 4
7.2.3 Number of test pieces 4

8 Test procedure 4
8.1 Testing machine and loading speed 4
8.2 Elastic modulus measurement 4
8.3 Bending strength measurement 5
8.4 Coating thickness measurement 6
8.5 Temperature and relative humidity 6

9 Calculation of results 6
9.1 Calculation of elastic modulus 6
9.1.1 Calculation of elastic modulus in bending test 6
9.1.2 Mean value and standard deviation for elastic modulus 7
9.2 Calculation of bending strength 8
9.2.1 Calculation for bending strength of the ceramic coating 8
9.2.2 Mean value and standard deviation for bending strength 9

10 Analysis of precision and uncertainty 9

11 Test report 10

Bibliography 11