

Advanced technical ceramics — Methods of test for ceramic coatings —

Part 11: Determination of internal stress by the Stoney formula

ICS 81.060.30

National foreword

This Draft for Development was published by BSI. It is the UK implementation of CEN/TS 1071-11:2005.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It should be applied on this provisional basis, so that information and experience of its practical application can be obtained.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion to a European standard. A review of this publication will be initiated not later than 3 years after its publication by the European organization so that a decision can be taken on its status. Notification of the start of the review period will be made in an announcement in the appropriate issue of *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the Technical Specification or to withdraw it. Comments should be sent to the Secretary of the responsible BSI Technical Committee at British Standards House, 389 Chiswick High Road, London W4 4AL.

The UK participation in its preparation was entrusted to Technical Committee RPI/13, Advanced technical ceramics.

A list of organizations represented on RPI/13 can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Amendments issued since publication

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English Version

Advanced technical ceramics - Methods of test for ceramic coatings - Part 11: Determination of internal stress by the Stoney formula

Céramiques techniques avancées - Méthodes d'essais pour revêtements céramiques - Partie 11 :Détermination de la contrainte interne par la formule de Stoney

Hochleistungskeramik - Verfahren zur Prüfung keramischer Schichten - Teil 11: Bestimmung der inneren Spannung nach der Stoney-Gleichung

This Technical Specification (CEN/TS) was approved by CEN on 8 August 2005 for provisional application.

The period of validity of this CEN/TS is limited initially to three years. After two years the members of CEN will be requested to submit their comments, particularly on the question whether the CEN/TS can be converted into a European Standard.

CEN members are required to announce the existence of this CEN/TS in the same way as for an EN and to make the CEN/TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the CEN/TS) until the final decision about the possible conversion of the CEN/TS into an EN is reached.

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Foreword

This CEN Technical Specification (CEN/TS 1071-11:2005) has been prepared by Technical Committee CEN/TC 184 "Advanced technical ceramics", the secretariat of which is held by BSI.

EN 1071 *Advanced technical ceramics — Methods of test for ceramic coatings* consists of 11 parts:

- Part 1: *Determination of coating thickness by contact probe filometer*
- Part 2: *Determination of coating thickness by the crater grinding method*
- Part 3: *Determination of adhesion and other mechanical failure modes by a scratch test*
- Part 4: *Determination of chemical composition by electron probe microanalysis (EPMA)*
- Part 5: *Determination of porosity*
- Part 6: *Determination of the abrasion resistance of coatings by a micro-abrasion wear test*
- Part 7: *Determination of hardness and Young's modulus by instrumented indentation testing*
- Part 8: *Rockwell indentation test for evaluation of adhesion*
- Part 9: *Determination of fracture strain*
- Part 10: *Determination of coating thickness by cross sectioning*
- Part 11: *Measurement of internal stress by the Stoney formula*

Parts 5 to 6 are European prestandards.

Parts 7 to 11 are Technical Specifications.

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