Record Nr. UNINA9911004783403321 Handbook of ceramics grinding and polishing: properties, processes, **Titolo** technology, tools and typology / / edited by Ioan D. Marinescu, Hans Kurt Tonshoff, and Ichiro Inasaki Park Ridge, N.J., : Noves Publications Pubbl/distr/stampa Norwich, N.Y., : William Andrew Pub., c2000 **ISBN** 1-282-00258-9 9786612002588 0-8155-1741-6 Descrizione fisica 1 online resource (501 p.) Collana Materials science and process technology series Altri autori (Persone) Marinesculoan D TonshoffH. K (Hans Kurt) Inasakilchiro Disciplina 666 Soggetti Grinding and polishing Ceramic materials Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Front Cover; Handbook of Ceramic Grinding and Polishing; Copyright Page; Contents; Chapter 1. Properties of Ceramics; 1.0 INTRODUCTION; 2.0 WEAR MECHANISMS OF CERAMICS MATERIALS; 3.0 FUNDAMENTAL PROPERTIES AND SELECTION CRITERIA; 4.0 MICROSTRUCTURAL REINFORCEMENT OF CERAMICS; 5.0 CONCLUSION AND OUTLOOK; REFERENCES; Chapter 2. Deformation and Fracture of Ceramics Materials; 1.0 DEFORMATION; 2.0 DISLOCATION; 3.0 SLIP MECHANISM; 4.0 TWINNING MECHANISM; 5.0 FRACTURE OF CERAMIC MATERIALS; 6.0 INDENTATION IN CERAMIC MATERIALS; REFERENCES; Chapter 3. Abrasive Processes 1.0 TYPOLOGY OF ABRASIVE PROCESSES2.0 TRIBOLOGY OF ABRASIVE PROCESSES; 3.0 SINGLE POINT SCRATCH TESTS; 4.0 MULTI POINT SCRATCH TESTS; 5.0 GENERAL MODEL OF ABRASIVE PROCESSES; 6.0 SURFACE TOPOGRAPHY AND SURFACE INTEGRITY: REFERENCES: Chapter 4. Grinding; 1.0 FUNDAMENTALS OF GRINDING; 2.0 GRINDING TOOLS;

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Sommario/riassunto

Focusing on the machining of ceramic materials such as silicon nitride, silicon carbide, and zirconia, this handbook meets the growing need in industry for a clear understanding of modern improvements in ceramic processing. The presentation is international in scope, with techniques and information represented from the USA, Japan, Germany, and the United Kingdomucountries that have made important contributions to the field. The 20 expert chapter authors explore the challenge of reducing the costs of machining operations, a continuing problem in an industry where ceramic parts must be machined