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Autore	Upadhyaya G. S
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WC-Co HARDMETALS; 7.0 OTHER CONSOLIDATION METHODS; REFERENCES; Chapter 5 Sintering Behavior of Cemented Carbides; 1.0 SOLID STATE SINTERING OF CEMENTED CARBIDES; 2.0 LIQUID PHASE SINTERING OF CEMENTED CARBIDES; 3.0 WC BASED CEMENTED CARBIDES CONTAINING ALTERNATE BINDERS; 4.0 CUBIC REFRACTORY CARBIDES CONTAINING CEMENTED CARBIDES; 5.0 TiN CONTAINING CEMENTED CARBIDES
6.0 Ti(C,N) CONTAINING CEMENTED CARBIDES REFERENCES; Chapter 6 Microstructural Aspects of Cemented Carbides; 1.0 REFRACTORY CARBIDE PHASES; 2.0 BINDER PHASE; 3.0 ETA PHASE; 4.0 PRECIPITATES; 5.0 PORES; 6.0 MICROSTRUCTURAL PARAMETERS; REFERENCES; Chapter 7 Mechanical Behavior of Cemented Carbides; 1.0 HARDNESS; 2.0 TRANSVERSE RUPTURE STRENGTH (TRS); 3.0 FRACTURE TOUGHNESS; 4.0 CREEP; 5.0 FATIGUE; 6.0 DEFORMATION AND FRACTURE; REFERENCES; Chapter 8 Magnetic Properties; 1.0 COERCIVE FORCE; 2.0 MAGNETIC SATURATION; REFERENCES; Chapter 9 Wear and Erosion of Cemented Carbides; 1.0 WEAR IN MACHINING
2.0 WEAR IN ROCK DRILLING 3.0 ROLE OF BINDER METAL ON WEAR RESISTANCE; 4.0 EROSION; REFERENCES; Chapter 10 Thermal Shock Resistance; REFERENCES; Chapter 11 Corrosion and Oxidation of Cemented Carbides; 1.0 CORROSION; 2.0 OXIDATION; REFERENCES; Chapter 12 Joining of Cemented Carbides; REFERENCES; Chapter 13 Testing and Quality Control; 1.0 RAW MATERIALS TESTING; 2.0 SINTERED PROPERTIES EVALUATION; 3.0 MICROSTRUCTURAL EXAMINATION; REFERENCES; Chapter 14 Classification and Applications of Cemented Carbides; 1.0 CLASSIFICATION OF HARD METALS; 2.0 MACHINING APPLICATIONS
3.0 NON-MACHINING APPLICATIONS REFERENCES; Chapter 15 Coatings; 1.0 CHEMICAL VAPOUR DEPOSITION (CVD); 2.0 PHYSICAL VAPOUR DEPOSITION (PVD); 3.0 THERMAL DIFFUSION; 4.0 PROPERTIES OF COATED CEMENTED CARBIDES; 5.0 ULTRAHARD COATINGS; REFERENCES; Chapter 16 Fine Grained and Functionally Graded Cemented Carbides; 1.0 SUBMICRON GRADE CEMENTED CARBIDES; 2.0 ULTRAFINE GRAIN CEMENTED CARBIDES; 3.0 NANOSIZE HARDMETALS; 4.0 APPLICATIONS OF FINE GRAINED WC BASED HARDMETALS; 5.0 FUNCTIONALLY GRADED CEMENTED CARBIDES; REFERENCES; Chapter 17 Reclamation of Cemented Carbides; 1.0 SORTING
2.0 COLD STREAM PROCESS

Sommario/riassunto

Written by an international expert, this book covers the processing, microstructure, and properties of cemented tungsten carbides. It is divided into 18 chapters covering wide areas from crystal structure to phase equilibria, production of metal and carbide powders, and much more. This book is ideal for researchers, plant engineers, and senior level students in metallurgical/mechanical/materials engineering who are interested in cemented carbides. There is no parallel book in print.
