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GENERAL CHARACTERISTICS OF INTERSTITIAL CARBIDES; 2.0 ELECTRONIC STRUCTURE OF CARBON; 3.0 THE EARLY TRANSITION METALS; 4.0 CRYSTAL STRUCTURES; 5.0 ATOMIC STRUCTURE OF INTERSTITIAL CARBIDES; 6.0 CRYSTALLINE STRUCTURE AND COMPOSITION OF INTERSTITIAL CARBIDES; 7.0 ATOMIC BONDING OF INTERSTITIAL CARBIDES; 8.0 INTERSTITIAL CARBIDES AS DEFECT STRUCTURES; 9.0 GENERAL REVIEW OF THE PROPERTIES OF INTERSTITIAL CARBIDES; REFERENCES

Chapter 4. Carbides of Group IV: Titanium, Zirconium, and Hafnium Carbides

1.0 GENERAL CHARACTERISTICS OF GROUP IV CARBIDES; 2.0 PHYSICAL AND THERMAL PROPERTIES OF GROUP IV CARBIDES; 3.0 ELECTRICAL PROPERTIES OF GROUP IV CARBIDES; 4.0 MECHANICAL PROPERTIES OF GROUP IV CARBIDES; 5.0 CHEMICAL PROPERTIES OF GROUP IV CARBIDES; 6.0 CHARACTERISTICS AND PROPERTIES OF TITANIUM CARBIDE; 7.0 CHARACTERISTICS AND PROPERTIES OF ZIRCONIUM CARBIDE; 8.0 CHARACTERISTICS AND PROPERTIES OF HAFNIUM CARBIDE; Chapter 5. Carbides of Group V: Vanadium, Niobium and Tantalum Carbides

1.0 GENERAL CHARACTERISTICS OF GROUP V CARBIDES; 2.0 PHYSICAL AND THERMAL PROPERTIES OF GROUP V CARBIDES; 3.0 ELECTRICAL PROPERTIES OF GROUP V CARBIDES; 4.0 MECHANICAL PROPERTIES OF GROUP V CARBIDES; 5.0 CHEMICAL PROPERTIES OF GROUP V CARBIDES; 6.0 CHARACTERISTICS AND PROPERTIES OF VANADIUM CARBIDE; 7.0 CHARACTERISTICS AND PROPERTIES OF NIOBIUM CARBIDE; 8.0 CHARACTERISTICS AND PROPERTIES OF TANTALUM CARBIDE;

REFERENCES; Chapter 6. Carbides of Group VI: Chromium, Molybdenum, and Tungsten Carbides; 1.0 GENERAL CHARACTERISTICS OF GROUP VI CARBIDES

2.0 PHYSICAL AND THERMAL PROPERTIES OF GROUP VI CARBIDES; 3.0 ELECTRICAL PROPERTIES OF GROUP VI CARBIDES; 4.0 MECHANICAL PROPERTIES OF GROUP VI CARBIDES; 5.0 CHEMICAL PROPERTIES OF GROUP VI CARBIDES; 6.0 CHARACTERISTICS AND PROPERTIES OF CHROMIUM CARBIDE; 7.0 CHARACTERISTICS AND PROPERTIES OF MOLYBDENUM CARBIDE; 8.0 CHARACTERISTICS AND PROPERTIES OF TUNGSTEN CARBIDE; REFERENCES; Chapter 7. Covalent Carbides:

Structure and Composition; 1.0 GENERAL CHARACTERISTICS OF COVALENT CARBIDES; 2.0 ATOMIC STRUCTURE OF CARBON, BORON, AND SILICON; 3.0 STRUCTURE AND COMPOSITION SILICON CARBIDE 4.0 STRUCTURE AND COMPOSITION BORON CARBIDE

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## Sommario/riassunto

Refractory carbides and nitrides are useful materials with numerous industrial applications and a promising future, in addition to being materials of great interest to the scientific community. Although most of their applications are recent, the refractory carbides and nitrides have been known for over one hundred years. The industrial importance of the refractory carbides and nitrides is growing rapidly, not only in the traditional and well-established applications based on the strength and refractory nature of these materials such as cutting tools and abrasives, but also in new and promising

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