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Interfacial Reactions in Metal-Si<sub>3</sub>N<sub>4</sub> Bonding; Interface Mixing Between Metals and Ceramics: Classification, Thermochemistry, and Processing; Morphological Development of Zirconia-Metal Interface; Interfacial Reaction Between Zirconia and Carbon Steel; Wetting of Silicon Carbide Surfaces by MgO-Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> Glasses  
Joining Methods  
Joining Between Zirconias Using Platinum Metal; Joining Silicon Carbide Using Nickel- Active Metal (or Hydride) Powder Mixtures; Silicon Nitride Joining with Glasses in the System CaO-SiO<sub>2</sub>; Strength and Fracture; The Strength of Ceramics Bonded With Metals; Modeling of Ceramic to Metal Brazed Joints; Boundary Effects on the Interfacial Transient Thermal Fracture of Ceramic-To-Metal Bonds; Mechanical Behavior of Brazed Silicon Nitride; Comparison of Strengths of Active Metal Brazements in Alumina and SiC Whisker- Reinforced Alumina  
Mechanical Behavior of Ceramic-Metal Braze Joints  
Ultrasonic Characterization of Ceramic Joints; Strength of Silicon Nitride-Silicon Nitride Joints Bonded With Oxynitride Glass; Effect of Testing Atmosphere on Mechanical Properties of Ceramic/Metal Joints; Effect of Surface Grinding Conditions on Strength of Alumina/Niobium Joint; Author Index; Subject Index

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Sommario/riassunto

This volume is part of the Ceramic Engineering and Science Proceeding (CESP) series. This series contains a collection of papers dealing with issues in both traditional ceramics (i.e., glass, whitewares, refractories, and porcelain enamel) and advanced ceramics. Topics covered in the area of advanced ceramic include bioceramics, nanomaterials, composites, solid oxide fuel cells, mechanical properties and structural design, advanced ceramic coatings, ceramic armor, porous ceramics, and more.

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