

Table of Contents

Preface

Mathematical Modeling of High Velocity Oxygen Fuel Thermal Spraying: An Overview D. Cheng, G. Trapaga, J.W. McKelliget and E.J. Lavernia	1
Optimization and Process Control for High Performance Thermal Spray Coatings C. Moreau and L. Leblanc	27
Kinetic Spray: A New Coating Process T.H. Van Steenkiste	59
An Investigation of Fracture and Fatigue in a Metal/Polymer Composite E. Kung, C. Mercer, S. Allameh, O. Popoola and W.O. Soboyejo	87
Corrosion and Bonding Behaviors of Intrinsically Conductive Polymers on Aluminum (AI 2024-T3) K. Shah, Y. Zhu, G.S. Akundy, J.O. Iroh and O. Popoola	111
Laser Shock Processing as a Surface Enhancement Process A.H. Clauer and D.F. Lahrman	121
The Effects of High Temperature Exposure on the Durability of Thermal Barrier Coatings N.M. Yanar, M.J. Stiger, M. Maris-Sida, F.S. Pettit and G.H. Meier	145
Mechanisms for Interfacial Toughness Loss in Thermal Barrier Coating Systems R.A. Handoko, J.L. Beuth, G.H. Meier, F.S. Pettit and M.J. Stiger	165
An Investigation of the Effects of Isothermal Exposure on Microstructural Evolution and Oxidation in a Thermal Barrier Coating T. Chang, C. Mercer, M. Walter and W.O. Soboyejo	185
Mechanisms Controlling the Performance and Durability of Thermal Barrier Coatings D.R. Mumm and A.G. Evans	199