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3.2.3 Plasma Generation by Radiation3.2.4 Plasma Generation by Electric Currents (Gas Discharges); 3.2.4.1 Glow Discharges; 3.2.4.2 Arc Discharges; 3.2.4.3 Modeling of the Arc Column; 3.2.4.4 Structure of the Arc Column; 3.3 Design of Plasmatrons; 3.3.1 Arc Discharge Generators and their Applications; 3.3.1.1 Electrode-supported Plasmas; 3.3.1.2 Electrodeless Plasmas; 3.3.1.3 Hybrid Devices; 3.3.2 Stabilization of Plasma Arcs; 3.3.2.1 Wall-stabilized Arcs; 3.3.2.2 Convection-stabilized Arcs; 3.3.2.3 Electrode-stabilized Arcs; 3.3.2.4 Other Stabilization Methods
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4.4.3 Heat Transfer under Dense Loading Conditions

Sommario/riassunto

Over the past two decades, thermal spraying of metallic, ceramic and composite coatings has emerged as a powerful tool for surface engineering, with many new applications and markets continually being developed. This book will help materials scientists and engineers to choose the most appropriate combination of materials, equipment, and operation parameters for the design of high-performance coatings with new functional properties and improved service life.Includes:* a thorough treatment of the fundamental physical processes governing plasma spray technology;* a critica