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Nota di contenuto	Part 1: High Temperature Applications I -- Effect of Thermal Aging on the Corrosion and Mechanical Properties of Friction Stir Welded 250 Grade Maraging Steel -- Friction Stir Processing of 304L Stainless Steel for Crack Repair -- Influence of underwater operation on friction stir welding of medium carbon steel -- Feasibility of iridium containing nickel base superalloy tool to friction stir Spot welding of High Strength Steel -- Part 2: High Temperature Applications II -- Development of Friction Stir Processing for Repair of Nuclear Dry Cask Storage System Canisters -- Performance of tungsten-based alloy tool developed for friction stir welding of austenitic stainless steel -- Investigation of Process Parameters for Friction Stir Processing (FSP) of Ti-6Al-4V Alloy -- Part 3: Derivative Technologies -- Solid-State Joining of Thick-Section Dissimilar Materials using a New Friction Stir Dovetailing (FSD) Process -- Joining aerospace aluminum 2024-T4 to titanium by Friction Stir Extrusion -- Dissimilar Metal T-Joint Formed by Friction Stir Extrusion -- Part 4: Lightweight Applications -- Friction Stir Welding of Thick Section Aluminium Alloys - New Techniques --

Friction Stir Weld lap joint properties in aeronautic aluminum alloys -- Friction stir welding of thick aluminium welds – challenges and perspectives -- High-speed FSW aluminum alloy 7075 microstructure and corrosion properties -- Flow Features in Shoulder Zone during Scroll Tool Friction Stir Welding Thick 6061 Aluminum Plates -- Part 5: Dissimilar Applications -- Joining dissimilar material using Friction Stir scribe technique -- Influence of stir flow on joint quality during friction stir lap Al-to-Cu welding -- A Numerical Simulation for Dissimilar Aluminum Alloys Joined by Friction Stir Welding -- Realization of Ultrasound Enhanced Friction Stir Welded (USE-FSW) Al/Mg- and Al/Steel-Joints: Process and Robustness, Mechanical and Corrosive Properties -- Part 6: Industrial Applications -- Friction Stir Welding Parameter Development of AA7075 for Hot Stamping Applications -- A novel approach for joining EN AW 1050 stranded wire and EN CW 004A contact elements by Friction Stir Spot Bonding -- Joining Al 6061 to ZE41A Mg Alloy by Friction Stir Welding Using a Cold Spray Transition Joint -- Refill Friction Stir Spot Welding Aerospace Aluminum Alloys -- Part 7: Control and Simulation -- Depth and temperature control during friction stir welding of 5 cm thick copper canisters -- Predicting Lap Shear Strength for Friction Stir Scribe Joining of Dissimilar Materials -- Simultaneous Independent Control of Tool Axial Force and Temperature in Friction Stir Processing -- Process force reduction during robotic Friction Stir Welding of aluminium alloys with reduced tool aspect ratios -- Part 8: Poster Session -- Friction stir processing of 2507 super duplex stainless steel: microstructure and corrosion behavior -- Effect of Heat Treatment on Friction-stir-processed Nanodispersed AA7075 and 2024 Al Alloys -- Numerical Analysis of FSW Employing Discrete Element Method.

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#### Sommario/riassunto

This book presents a current look at friction stir welding technology from application to characterization and from modeling to R&D. It is a compilation of the recent progress relating to friction stir technologies including derivative technologies, high-temperature applications, industrial applications, dissimilar alloy/materials, lightweight alloys, simulation, and characterization. With contributions from leaders and experts in industry and academia, this will be a comprehensive source for the field of Friction Stir Welding and Processing.

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