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Nota di contenuto	Intro -- Editorial -- Contents -- Feature Articles -- Sustainable Manufacturing Processes in the Automotive Industry: Acoustic Emission Proposal to Reduce the Mechanical Testing Residues -- 1 Introduction -- 2 Experimental -- 2.1 Sample Size, Welding Alignment and Materials Properties -- 2.2 Machine Modification, Welding Lobe Curve and Welding Schedule -- 2.3 Signal Capture for the Welding Processes -- 2.4 Welding Process and Data Collection for Analysis -- 3 Results and Discussion -- 3.1 Welding Lobe Improvement -- 3.2 Sizing the Welds for Sound Welds Against Expulsion Welds -- 3.3 Dynamic Resistance -- 3.4 Tensile Shearing Force of Welded Joints -- 3.5 Metallurgical Study of a Sound Weld Over an Expulsion Weld -- 3.6 Hardness of the Good Welds Over Expulsion Welds -- 4 Conclusion -- References -- Research Papers -- Prediction of Cross-Sectional Shape, Microstructure and Mechanical Properties of Full Penetration Laser-GMAW Welded Butt Joints -- 1 Introduction -- 2 Methods -- 2.1 Assumptions and Exclusions -- 2.2 Thermal Conduction Model -- 2.3 Heat Source Model -- 2.4 Numerical Model -- 2.5 Thermal Dynamic Simulation -- 3 Simulation Results -- 3.1 Change of Cross Section Geometric Characteristics with Welding Parameters -- 3.2 Prediction of Microstructures and Mechanical Properties -- 4 Discussions -- 5 Conclusions -- Reference:s -- Comparative Study on Thermal Generation and Weld Performances of Two Types of Micro-Resistance Welding Between Thick Multi-Strand Cu Wire and Kovar Interconnector

with Different Electrode Systems -- 1 Introduction -- 2 Experimental Procedure and Numerical Simulation -- 2.1 Welding Processes -- 2.2 Assessments of Mechanical and Electrical Properties -- 2.3 Characterization of the Welding Joints -- 2.4 Simulation of Welding Processes -- 3 Results and Discussion -- 3.1 Thick Wires Welded by SDSW and SSSW Techniques. 3.2 Numerical Simulation of Welding Processes -- 4 Conclusions -- References -- Forming Characteristics of Additive Manufacturing Process by Rotating Arc -- 1 Introduction -- 2 Experimental System and Methods -- 3 Surface Forming Quality of Single Deposition Bead -- 3.1 Effect of Rotating Frequency on Surface Forming Quality -- 3.2 Effect of Wire Feed Speed on Surface Forming Quality -- 3.3 Effect of Voltage on Surface Forming Quality -- 3.4 Effect of Travel Speed on Surface Forming Quality -- 4 Forming Characteristics of Single-Layer Multi-Bead Deposition -- 4.1 Effect of Rotating Frequency on Inter-Bead Fusion -- 4.2 Effect of Rotating Frequency on Surface Flatness -- 4.3 Effect of Rotating Frequency on Penetration -- 5 Forming Quality of Multi-layer Multi-bead Components -- 6 Conclusions -- References -- A Fast Point Cloud Reconstruction Algorithm for Saddle-Shaped Weld Seams in Boiler Header Joints -- 1 Introduction -- 2 Experimental Set-Up -- 2.1 Vision System Set-Up -- 2.2 Image Acquiring -- 3 Point Cloud Reconstruction -- 3.1 Point Cloud Coarse Registration -- 3.2 Point Cloud Fine Registration -- 3.3 Point Cloud Fusing -- 4 Conclusions -- References -- Feature Extraction and Classification Recognition of Molten Pool in Multi-layer and Multi-pass Welding of Medium and Thick Plates -- 1 Introduction -- 2 Fusion Pool Image Segmentation and Edge Extraction Based on U-Net Network -- 3 Calculation of Characteristic Parameters of Molten Pool -- 4 Classification of Typical Weld Pool Characteristics for Different Layers and Passes in Multi-layer and Multi-pass Welding of Medium and Thick Plates -- 5 Conclusion -- References -- Adaptive Ant Colony Algorithm Based on Global Scanning -- 1 Introduction -- 2 Environment Modeling -- 3 Basic Ant Colony Algorithm -- 3.1 Principle of Ant Colony Algorithm -- 3.2 Basic Steps of Ant Colony Algorithm. 4 Improved Ant Colony Algorithm (IACO) -- 4.1 Improvement Strategies for Ant Colony Algorithm -- 4.2 Pseudocode and Flowchart of the IACO -- 5 Simulation Experiments and Result Analysis -- 6 Conclusions and Future Work -- References -- ACB-RRT\*: Adaptive Companion Points Bidirectional RRT\* Algorithm -- 1 Introduction -- 2 Problem Definition -- 3 ACB-RRT\* Algorithm -- 3.1 Target-Biased -- 3.2 Dynamic Step -- 3.3 Companion Point Generation -- 3.4 Node Optimization -- 3.5 Trajectory Smoothing -- 4 Algorithm Test and Analysis -- 4.1 Two-dimensional Space Simulation Experiments -- 4.2 3D Space Simulation Experiment -- 4.3 Complexity Analytics of ACB-RRT\* -- 5 Scenario Test -- 6 Conclusion -- References -- Information for Authors -- Aims and Scopes -- Submission -- Style of Manuscripts -- Format of Manuscripts -- Originality and Copyright -- Author Index.

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