1. Record Nr. UNINA9911004834603321

Titolo	Handbook of plastics joining : a practical guide
Pubbl/distr/stampa	Norwich, N.Y., : Plastics Design Library, c1997
ISBN	1-282-28698-6 9786612286988 0-08-095040-X 0-8155-1766-1
Descrizione fisica	1 online resource (601 p.)
Collana	PDL handbook series
Disciplina	620.1923 668.4 21
Soggetti	Plastics - Welding Plastics - Finishing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and indexes.
Nota di contenuto	Front Cover; Introduction; How To Use This Book; Handbook of Plastics Joining: A Practical Guide; Copyright Page; Table of Contents; Part 1: Plastics Joining Processes; Chapter 1. Heated Tool Welding; Process; Processing Parameters; Materials; Weld Microstructure; Effects of Ageing on Weld Strength; Variants of Hot Tool Welding; Equipment; Advantages and Disadvantages; Applications; Chapter 2. Hot Gas Welding; Process; Processing Parameters; Materials; Joint Design; Equipment; Advantages and Disadvantages; Applications; Chapter 3. Vibration Welding; Process; Processing Parameters; Materials Weld MicrostructureCross-Thickness Welding; Equipment; Orbital Vibration Welding; Advantages and Disadvantages; Joint Design; Applications; Chapter 4. Spin Welding; Process; Processing Parameters; Materials; Weld Microstructure; Variants of Spin Welding; Equipment; Advantages and Disadvantages; Joint Design; Applications; Chapter 5. Ultrasonic Welding; Process; Processing Parameters; Ultrasonic Weldability of Materials; Joint Design; Ultrasonic Equipment; Advantages and Disadvantages; Applications; Ultrasonic Welding Tips; Ultrasonic Inserting; Ultrasonic Spot Welding; Ultrasonic Staking Ultrasonic Stud WeldingUltrasonic Swaging; Ultrasonic Bonding;

Ultrasonic Slitting; Ultrasonic Scan Welding; Ultrasonic Degating; Chapter 6. Induction Welding; Process; Electromagnetic Materials; Materials To Be Joined; Equipment; Work Coil Design; Joint Design; Advantages and Disadvantages; Applications; Chapter 7. Radio Frequency Welding; Process; Heat Generation; Equipment; Materials; Advantages and Disadvantages; Applications; Chapter 8. Microwave Welding; Process; Processing Parameters; Materials; Equipment; Advantages and Disadvantages; Chapter 9. Resistance Welding; Process Processing ParametersMaterials; Joint Design; Equipment; Advantages and Disadvantages; Applications; Chapter 10. Extrusion Welding; Process; Processing Parameters; Weld Microstructure; Equipment; Advantages and Disadvantages; Applications; Chapter 11. Electrofusion Welding; Process; Processing Parameters; Materials; Equipment; Advantages and Disadvantages; Applications; Chapter 12. Infrared Welding; Process; Processing Parameters; Materials; Microstructure; Variants of Infrared Welding; Equipment; Advantages and Disadvantages; Applications; Chapter 13. Laser Welding; Process Processing ParametersMaterials; Weld Microstructure; Joint Design; Equipment; Advantages and Disadvantages; Applications; Chapter 14. Mechanical Fastening; Process; Machine Screws, Nuts, Bolts, & Washers; Self-Tapping Screws; Molded-In Threads; Inserts; Press or Interference Fits; Snap-Fits; Rivets; Staking; Chapter 15. Chemical Bonding - Adhesive and Solvent Bonding; Mechanism of Bonding; Types of Adhesives; Hot Melt Adhesives; Acrylic Adhesives; Epoxy Adhesives; Elastomer Adhesives; Types of Solvents; Surface Preparation Methods; Mechanical Treatments; Chemical Cleaning Treatments
Surface Modification

Sommario/riassunto

A hands-on guide to choosing and using old and new technologies for joining plastics and elastomers. Includes detailed discussions of over 25 techniques used to join plastics to themselves and to other materials. Advantages and disadvantages of each technique along with detailed discussions of applications are presented. A second section is organized by material and provides details of using different processes with over 50 generic families of plastics and how different techniques and operating parameters affect weld strength and other criteria. This book is an excellent reference and an inval