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Nota di contenuto	Introduction to Joining: A Process and a Technology; Mechanical Joining; Mechanical Fasteners, Integral Attachments, & Other Mechanical Joining Methods; Adhesive Bonding & Cementing; Adhesives, Cements, Mortars, and the Bonding Process; Welding as a Joining Process; The Basics of Welding Metallurgy; Brazing: A Subclassification of Welding; Soldering: A Subset of Brazing; Other Joining Processes: Variants & Hybrids; Joining Metals, Alloys, and Internetallics; Joining of Ceramics and Glasses; Joining of Polmeric Materials; Joining Composite Materials and Structures; Joining Dissimilar Material Combinations; Joining Structures and Living Tissue
Sommario/riassunto	Joining of Materials and Structures is the first and only complete and highly readable treatment of the options for joining conventional materials and the structures they comprise in conventional and unconventional ways, and for joining emerging materials and structures in novel ways. Joining by mechanical fasteners, integral designed-or formed-in features, adhesives, welding, brazing, soldering, thermal spraying, and hybrid processes are addressed as processes and technologies, as are issues associated with the joining of metals, ceramics (including cement and concrete) glass, plastics, and composites (including wood), as well as, for the first time anywhere,

living tissue. While focused on materials issues, issues related to joint design, production processing, quality assurance, process economics, and joint performance in service are not ignored. The book is written for engineers, from an in-training student to a seasoned practitioner by an engineer who chose to teach after years of practice. By reading and referring to this book, the solutions to joining problems will be within ones grasp. Key Features: Unprecedented coverage of all joining options (from lashings to lasers) in 10 chapters Uniquely complete coverage of all materials, including living tissues, in 6 chapters Richly illustrated with 76 photographs and 233 illustrations or plots Practice Questions and Problems for use as a text of for reviewing to aid for comprehension * Coverage all of major joining technologies, including welding, soldering, brazing, adhesive and cement bonding, pressure fusion, riveting, bolting, snap-fits, and more * Organized by both joining techniques and materials types, including metals, non-metals, ceramics and glasses, composites, biomaterials, and living tissue * An ideal reference for design engineers, students, package and product designers, manufacturers, machinists, materials scientists