1. Record Nr. UNINA9911006813503321 Autore Mosallam Ayman S Titolo Design guide for FRP composite connections / / by Ayman S. Mosallam Reston, VA,: American Society of Civil Engineers, c2011 Pubbl/distr/stampa **ISBN** 0-7844-7670-5 Descrizione fisica 1 online resource (616 p.) ASCE manuals and reports on engineering practice;; no. 102 Collana Disciplina 690/.1 Soggetti Buildings - Joints - Design and construction **Buildings - Joints - Materials** Fiber-reinforced plastics - Joints Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Chapter 1 Design Philosophy and Design Considerations for Structural Composite Members and Connections; Chapter 2 Characterization and Behavior of Bolted Composite Joints; Chapter 3 Analysis and Design of Bolted Composite Joints; Chapter 4 Structural Adhesives; Chapter 5 Analysis and Design of Adhesively Bonded Composite Joints: Chapter 6 Combined Joints; Chapter 7 Behavior of Pultruded Composite Frame Connections: Chapter 8 Analysis and Design of Semi-Rigid Pultruded Fiber-Reinforced Polymer Frame Connections; Chapter 9 Finite Element Modeling of Pultruded Fiber-Reinforced Polymer Frame Connections Sponsored by the Construction Institute of ASCE. This Manual of Sommario/riassunto Practice covers major issues related to the analysis and design of composite joints and frame connections manufactured from fiberreinforced polymer (FRP) composites in general and pultruded (PFRP) composites in particular. Topics include: design philosophy and design considerations for structural composite members and connections; basic information and research and development work on the mechanics of fasteners and bolted composite joints; analysis and design methods for bolted composite joints; basic physical and mechanical information on structural adhesives and bonded composite joints; analysis and design methods for bonded composite joints;

structural performance combined (bolted/bonded) joints; basic information and research and development related to PFRP framing

connections; analysis and design methods for PFRP framing connections; and numerical analysis review of available finite element codes suitable for modeling and designing composite frame structures. MOP 102 addresses issues that are lacking in other national and international standards, design manuals, and technical publications. It will be valuable to structural engineers designing with FRP or PFRP composites.