Record Nr. UNINA9910403765703321 Autore de Brito Jorge Titolo Expert Knowledge-based Inspection Systems: Inspection, Diagnosis, and Repair of the Building Envelope / / by Jorge de Brito, Clara Pereira, José D. Silvestre, Inês Flores-Colen Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2020 3-030-42446-4 **ISBN** Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (493 pages) Disciplina 690.21 Soggetti Building repair **Building inspection Building materials** Building **Building Repair and Maintenance Building Materials Building Construction and Design** Solid Construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Part 1: Buildings management -- Part 2: Technology -- Part 3: Nota di contenuto Pathology -- Part 4: Diagnosis methods -- Part 5: Repair techniques --Part 6: Elements to support the inspection procedure -- Part 7: Case studies -- Part 8: The way forward. This book provides a novel approach to building pathology in current Sommario/riassunto buildings. Drawing on the available literature, hands-on experience and fieldwork inspections, it presents a systematic perspective on the

buildings. Drawing on the available literature, hands-on experience and fieldwork inspections, it presents a systematic perspective on the pathology of the building envelope. The book addresses natural stone claddings, adhesive ceramic tiling, renders, painted surfaces, External Thermal Insulation Composite Systems (ETICS), architectural concrete surfaces, windows and doors framing, and claddings for pitched and flat roofs. In addition to highlighting selected materials and construction elements, the book proposes a global classification system for defects and their probable causes, together with in situ

diagnosis methods and repair techniques. It also identifies the relationships between defects and causes, diagnosis methods and repair techniques, and the interdependence between different defects, presenting these relations in the form of correlation matrices. Support files with detailed information and an inspection form are also provided. Selected case studies are presented to illustrate the value of a guidance system in fieldwork. Given its scope, the book offers a valuable guide, particularly for researchers, building inspectors, civil engineers, architects and maintenance planners.