Record Nr. UNINA9910767539403321 Autore González-Velázquez Jorge Luis Titolo Fractography and Failure Analysis / / by Jorge Luis González-Velázquez Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2018 3-319-76651-1 **ISBN** Edizione [1st ed. 2018.] Descrizione fisica 1 online resource (172 pages) Collana Structural Integrity, , 2522-560X;; 3 Disciplina 620.1126 Soggetti Mechanics Mechanics, Applied **Building materials** Mechanical engineering Solid Mechanics Structural Materials Mechanical Engineering Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Nota di contenuto The fractographic examination -- Elements of Fractography -- Brittle and ductile fracture -- Fatigue fracture -- Encironmentally assisted fracture -- failure analysis of fractured components. Sommario/riassunto This book presents fractography and failure analysis at a level that is accessible for non-expert readers, without losing scientific rigor. It offers a comprehensive description of fracture surfaces in engineering materials, with an emphasis on metals, and of the methodology for the observation of fracture surfaces. It also discusses in detail the main fracture mechanisms and their corresponding fracture surfaces, including brittle, ductile, fatigue, and environmental fractures. The last chapter is dedicated to the use of fractography in determining of the causes component failure. In modern engineering, the analysis of fractured components is a common practice in many fields, such as integrity management systems, materials science research, and failure

investigations. As such this book is useful for engineers, scientists, engineering students, loss adjuster surveyors and any professional

dealing with fractured components.