

1. Record Nr.	UNINA9910465460103321
Autore	Huda Zainul
Titolo	Design against fracture and failure // Zainal Huda, Robert Bulpett, Kang Yong Lee
Pubbl/distr/stampa	Stafa-Zuerich ; ; Enfield, New Hampshire : , : Trans Tech Publications Limited, , 2010
ISBN	3-03813-446-5
Descrizione fisica	1 online resource (220 p.)
Collana	Materials science foundations, , 1422-3597 ; ; volume 69
Disciplina	620.1/126
Soggetti	Fracture mechanics Composite materials - Fracture Metals - Fracture Electronic books.
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.
Nota di contenuto	1. Introduction -- 2. Strength and safety in design -- 3. Elements of fracture mechanics -- 4. The design against fracture: philosophy and practices -- 5. Fracture mechanisms in metals -- 6. Failure mechanisms in composite materials -- 7. Metallurgical failures -- 8. General practices in failure analysis -- 9. Role of electron fractography in failure analysis -- 10. Design against fatigue and ductile failures -- 11. Design against failures caused by temperature & environment.
Sommario/riassunto	The aim of this book is to develop, in the reader, the necessary skills required for designing materials, components and structures so as to resist fracture and failure in engineering applications. In order to achieve this objective, the authors have adopted a combined materials science-fracture mechanics-design approach. Although the material covered is designed for an advanced undergraduate course in metallurgy/materials engineering, students coming from mechanical, civil or aerospace engineering backgrounds will also be able to use this text as a course/reference book. In addition to studen