

1. Record Nr.	UNISALENTO991003233009707536
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Titolo	High cycle fatigue [e-book] : a mechanics of materials perspective / Theodore Nicholas
Pubbl/distr/stampa	Oxford : Elsevier, 2006
ISBN	9780080446912 0080446914
Descrizione fisica	xiv, 641 p. : ill. ; 25 cm
Disciplina	620.1126
Soggetti	Materials - Fatigue Electronic books.
Lingua di pubblicazione	Inglese
Formato	Risorsa elettronica
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index
Nota di contenuto	Part I: Introduction and Background -- -- 1. Introduction -- 2. Characterizing Fatigue Limits -- 3. Accelerated Test Techniques -- -- Part II: Effects of Damage on HCF Properties -- -- 4. LCF-HCF Interactions -- 5. Notch Fatigue -- 6. Fretting Fatigue -- 7. Foreign Object Damage -- -- Part III: Applications -- -- 8. HCF Design Considerations -- Appendices -- Index
Sommario/riassunto	Dr Theodore Nicholas ran the High Cycle Fatigue Program for the US Air Force between 1995 and 2003 at Wright-Patterson Air Force Base, and is one of the worlds leading authorities on the subject, having authored over 250 papers in leading archival journals and books. Bringing his plethora of expertise to this book, Dr Nicholas discusses the subject of high cycle fatigue (HCF) from an engineering viewpoint in response to a series of HCF failures in the USAF and the concurrent realization that HCF failures in general were taking place universally in both civilian and military engines. Topic covered include: - Constant life diagrams - Fatigue limits under combined LCF and HCF - Notch fatigue under HCF conditions - Foreign object damage (FOD) * Brings years of the Author's US Air Force experience in high cycle fatigue together in one text * Discusses HCF in the context of recent international military and civilian engine failures