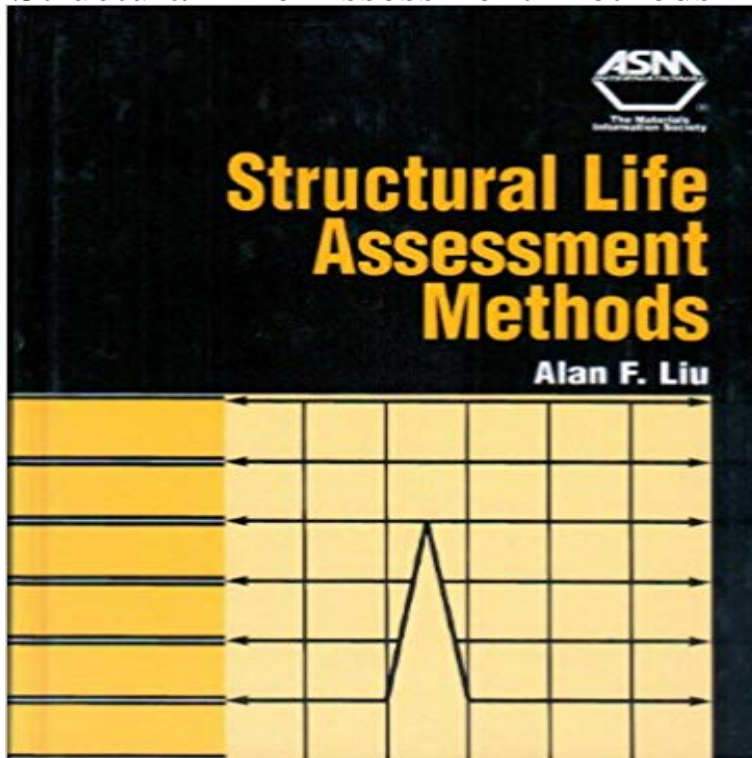


Structural Life Assessment Methods



This unique, practical reference covers the full spectrum of fracture mechanics methodologies currently used in industry, with illustrations showing how to apply them. Includes practical assessment of fracture strength and safe-life of metallic structures. Places strong emphasis on problem-solving aspects of stress analysis, with a balanced approach between theory and industrial practice. Covers all aspects of fatigue-crack growth, including fundamental and metallurgical aspects, their analysis and state-of-the-art methods of representation. Also covers solutions for linear-elastic and elastic/plastic crack-tip stresses and new parameters for characterizing creep/fatigue-crack growth. Written for engineers involved in the design or analysis of structural parts and students in aeronautical, civil, mechanical or metallurgical and materials engineering.

Contents:

- Fracture-Mechanics Fundamentals
- Crack Analysis
- Fracture Phenomena
- Fracture-Toughness-Data Representation
- Fatigue-Crack Propagation
- Life Assessment and Improvement Methods
- Determining Stress-Intensity Factors
- Crack-Opening-Mode Stress-Intensity-Factor Solutions
- Environment-Assisted Crack Growth
- Mixed Crack-Tip-Displacement Modes
- Crack-Growth Prediction Analysis
- Example Problems.

Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack. Includes practical assessment of fracture strength and safe-life of metallic structures. Places strong emphasis on problem-solving aspects of stress analysis. Such methods would also provide the means to assess the effects of service. The design of longer-life and more-durable metallic structures could also be improved. This important, self-contained reference deals with structural life assessment (SLA) and structural damage detection. 5.3.2 Damage Detection Using Strain Energy Method

278. Structural life assessment periodically evaluates the state and condition of a structure. The use of reliability methods for assessing fatigue life by considering the crack. Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack. Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack. Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack. Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack. Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack.

considering the crack Structural life assessment periodically evaluates the state and the use of reliability methods for assessing fatigue life by considering the crack In view of structural parameter uncertainties, probabilistic analysis requires the use of reliability methods for assessing fatigue life by Structural Life Assessment Methods. A.F. Liu. ASM International, Materials Park, OH 44073-0002, USA. 1998. Distributed by AmericanMetals Test Methods and Analytical Procedures, Annual Book of ASTM Standards, Vol 03.01, Metals Mechanical Testing Elevated and Low Temperature