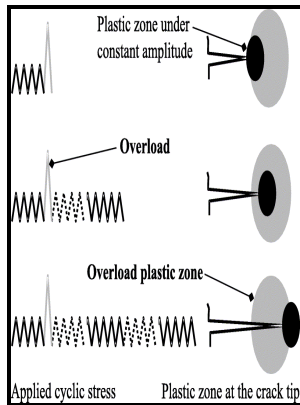


# Methods and models for predicting fatigue crack growth under random loading

## ASTM - [PDF] Fatigue crack growth due to random loading



Description: -

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Fracture mechanics.  
Materials -- Fatigue. Methods and models for predicting fatigue crack growth under random loading  
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748  
ASTM special technical publication ; Methods and models for predicting fatigue crack growth under random loading  
Notes: Includes bibliographical references and index.  
This edition was published in 1981



Filesize: 40.79 MB

Tags: #Predicting #fatigue #crack #growth #under #irregular #loading

### Structural monitoring and remaining fatigue life estimation of typical welded crack details in the Manhattan Bridge

Kawamura Y, Mu Y, Sumi Y 1999 Development of an automatic quadrilateral mesh generator for the simulation of curved crack growth. The assumptions mentioned above were used to derive a fatigue crack growth model based, called later as the UniGrow model, on the analysis of cyclic elastic—plastic stresses—strains near the crack tip. This effect is often explained using the concept which describes the observation that the crack faces can remain in contact with each other at loads above zero.

### On fatigue crack growth under random loading

The proposed methodology is equally suitable for fatigue analysis of smooth, notched, and cracked components. Figure 1: Typical plot of crack growth rate versus the stress intensity range.

### A computational approach for fatigue crack propagation in ship structures under random sequence of clustered loading

Wei, in Small Fatigue Cracks eds. Nilsson, Journal of ASTM International, Vol. Because the fracture toughness depends on the boundary conditions, the fracture toughness may change from conditions for a semi-circular surface crack to conditions for a through crack.

### Fatigue

Mikheevskiy, PhD Thesis, University of Waterloo, 2009. The present chapter is dealing with the growth of macrocracks under VA loading.

### Fatigue crack growth under random loading

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### Fatigue

Duquette, in Chemistry and Physics of Fracture eds.

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