

ISSN 8756-758X



# Fatigue & Fracture of Engineering Materials & Structures



Volume 32



Submit your paper online at  
[www.ffemsjournal.org](http://www.ffemsjournal.org)

The International Journal  
for Structural Integrity

## Contents

### Invited Contribution

161 *A. J. McEvily*

Reflections on 'The effect of elevated temperature and environment on the fatigue crack growth characteristics of Ti-6Al-2Sn-4Zr-2Mo-0.1Si' by J. A. Ruppen and A. J. McEvily, *FFEMS*, Vol 2, Issue 1, 1979, pp. 63-72

### Original Articles

163 *N. E. Dowling, C. A. Calhoun and A. Arcari*

Mean stress effects in stress-life fatigue and the Walker equation

180 *K. Kida, H. Tanabe and H. Okano*

Changes in magnetic flux density around fatigue crack tips

189 *Y. H. Nie, W. T. Fu, W. J. Hui, H. Dong and Y. Q. Weng*

Very high cycle fatigue behaviour of 2000-MPa ultra-high-strength spring steel with bainite-martensite duplex microstructure

197 *F. Yin and A. Fatemi*

Fatigue behaviour and life predictions of case-hardened steels

214 *M. Kabatova, E. Dudrova and A. S. Wronski*

Microcrack nucleation, growth, coalescence and propagation in the fatigue failure of a powder metallurgy steel

223 *A. Carpinteri and S. Vantadori*

Sickle-shaped surface crack in a notched round bar under cyclic tension and bending

233 *H. M. Plokker, S. U. Khan, R. C. Alderliesten and R. Benedictus*

Fatigue crack growth in fibre metal laminates under selective variable-amplitude loading

249 *A. Gonzalez-Herrera and J. Zapatero*

Numerical study of the effect of plastic wake on plasticity-induced fatigue crack closure

261 *D. Hoey and D. Taylor*

Comparison of the fatigue behaviour of two different forms of PMMA

270 *G. A. Berti and M. Monti*

Improvement of life prediction in AISI H11 tool steel by integration of thermo-mechanical fatigue and creep damage models

### Technical Note

284 *A. J. McEvily*

On the cyclic crack-tip opening displacement

286 Conference diary and calendar

# Fatigue & Fracture of Engineering Materials & Structures

Volume 32  
Number 3  
March 2009

*Fatigue Fract. Engng Mater. Struct.* is indexed/abstracted in Current Contents/Engineering Mechanical, Materials Science, Multidisciplinary; Engineering Index; ISI Alerting Services; Materials Science Citation Index; Science Citation Index Expanded; PASCAL-CNRS Data; Referativnyi Zhurnal Moscow; International Civil Engineering Abstracts; Compendex

Typeset by Aptara Inc., New Delhi, India.  
Printed and bound in Malaysia by Vivar Printing Sdn Bhd



WILEY

[www.interscience.wiley.com/journal/ffe](http://www.interscience.wiley.com/journal/ffe)  
This journal is available at Wiley InterScience. Visit [www.interscience.wiley.com/journal/ffe](http://www.interscience.wiley.com/journal/ffe) to search the articles and register for table of contents e-mail alerts.