



The Development of a Finite Element Program to Model High Cycle Fatigue in Isotropic Plates

By William C. Shipman

Biblioscholar Okt 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x7 mm. This item is printed on demand - Print on Demand Neuware - As part of a joint AFRL-DAGSI turbine blade research effort, a computer program has been developed that uses a von Karman large-deflection two-dimensional finite element approximation to determine stress levels and patterns in isotropic thin plates. The dynamic loading of various plates has been carried out in order to model a high cycle fatigue situation. The research considered the various effects of mode shapes, resident frequency, non-linear cyclic effect, endurance limits, and stress variations within a high cycle fatigue environment. Two main initiatives were taken. First, a transient analysis tool was developed that calculates stress and displacement patterns over a period of time. This analysis also included the effects of damping. The second initiative developed a tool to calculate the eigenvalues (natural frequencies) and eigenvectors of a plate with a given geometry. The results indicated that it is possible to model fatigue at high frequencies using FE analysis and compare these findings with experimentation incorporating a shaker table. In this research, different geometries of plates were investigated to represent turbine blade configurations. One square plate and three trapezoidal...



[DOWNLOAD PDF](#)



[READ ONLINE](#)
[5.86 MB]

Reviews

A superior quality pdf along with the font used was intriguing to read through. It can be rally exciting through reading through time period. You may like how the blogger create this book.

-- Dr. Rylee Berge

The best book i actually read through. I have got read and so i am sure that i am going to going to read through yet again yet again down the road. You can expect to like the way the author compose this pdf.

-- Ludie Willms

Related eBooks



[Psychologisches Testverfahren](#)

Reference Series Books LLC Nov 2011, 2011. Taschenbuch. Book Condition: Neu. 249x191x7 mm. This item is printed on demand - Print on Demand Neuware - Quelle: Wikipedia. Seiten: 100. Kapitel: Myers-Briggs-Typindikator, Keirsey Temperament Sorter, DISG, Eignungstest für das Medizinstudium, Adult Attachment Interview,...



[Programming in D](#)

Ali Cehreli Dez 2015, 2015. Buch. Book Condition: Neu. 264x182x53 mm. This item is printed on demand - Print on Demand Neuware - The main aim of this book is to teach D to readers who are new to computer programming. Although...



[California Version of Who Am I in the Lives of Children? an Introduction to Early Childhood Education, Enhanced Pearson Etext with Loose-Leaf Version -- Access Card Package](#)

Pearson, United States, 2015. Loose-leaf. Book Condition: New. 10th. 249 x 201 mm. Language: English . Brand New Book. NOTE: Used books, rentals, and purchases made outside of Pearson If purchasing or renting from companies other than Pearson, the access codes for...



[Who Am I in the Lives of Children? an Introduction to Early Childhood Education, Enhanced Pearson Etext with Loose-Leaf Version -- Access Card Package](#)

Pearson, United States, 2015. Book. Book Condition: New. 10th. 250 x 189 mm. Language: English . Brand New Book. NOTE: Used books, rentals, and purchases made outside of Pearson If purchasing or renting from companies other than Pearson, the access codes for...



[Who Am I in the Lives of Children? an Introduction to Early Childhood Education with Enhanced Pearson Etext -- Access Card Package \(Paperback\)](#)

Pearson, United States, 2015. Paperback. Book Condition: New. 10th. 251 x 203 mm. Language: English . Brand New Book. NOTE: Used books, rentals, and purchases made outside of Pearson If purchasing or renting from companies other than Pearson, the access codes for...



[Who am I in the Lives of Children? An Introduction to Early Childhood Education \(Paperback\)](#)

Pearson Education (US), United States, 2015. Paperback. Book Condition: New. 10th Revised edition. 254x201 mm. Language: English . Brand New Book. Note: This is the bound book only and does not include access to the Enhanced Pearson eText. To order...