

Table of Contents

Fatigue Test of Al-3%Ti Using Axial Loading Testing Machine for RF MEMS Switch J.H. Park, C.S. Lee and Y.J. Kim	3
Corrosion Fatigue Characteristics of Artificially Sensitized Austenitic STS304 B.B. Choi and D.H. Bae	9
A Study on the Evaluation of Pipe Fracture Characteristics C.S. Seok, J.S. Park and Y.J. Kim	15
Excavation-Induced Buried Pipeline Failure – A Case Study C.S. Yoo, B.S. Choi and H.Y. Jung	23
The Oxidation and High Temperature Fatigue of P23 Alloy B.S. Lim, M.J. Jin, S.Y. Bae and D.B. Lee	31
Structural Stress Based Fatigue Life Evaluation for Heat Exchanger Motor Operated Valve Y.S. Chang, H.K. Kim, J.B. Choi and Y.J. Kim	39
Detection and Evaluation of Localized Damage under Creep-Fatigue Loading at 1000°F Using Acoustic Emission Technique K.H. Oh, J.H. Jang, C.K. Jung and K.S. Han	45
Analysis of Three-Dimensional Cracks with Independent Crack Mesh T.S. Kim, J.H. Park, J.S. Park, J.S. Kim and T.E. Jin	55
A Method of J Testing Based on Crack Opening Displacement for Circumferential Through-Wall Cracked Pipes under Combined Tension and Bending N.S. Huh, L. Stumpfrock, E. Roos, Y.J. Kim and Y.J. Kim	63
Interrelationship between Stress Intensity Factor and Acoustic Emission Parameter in the Opening Mode Fatigue Crack Propagation K.H. Oh and K.S. Han	71
A Study on Characteristics of Leak Signals of Pipeline Using Acoustic Emission Technique M.R. Lee and J.H. Lee	79
Quantification of Crack-Tip Constraint Effect on Master Curve Reference Temperature Based on Two-Parameter Approach N.S. Huh, L. Stumpfrock, X. Schuler and E. Roos	89
Application of Ultrasonic Phased Array Techniques for Inspection of Stud Bolts in Nuclear Power Plants S.W. Choi and J.H. Lee	97
A Nondestructive Life Evaluation Using Creep-Fatigue Damage by SDA B.J. Kim, B.S. Lim and S.J. Song	105
Ultrasonic NDE System Modeling and Reliability – An Overview L.W. Schmerr	111
Evaluation of CVD Diamond Coating Using Back-Reflected Rayleigh Surface Wave Y.H. Kim, S.J. Song, S.D. Kwon, T. Takagi, T. Uchimoto and T. Abe	117
On-Line Monitoring to Detect Third-Party Damage on Underground Natural Gas Pipelines Using Accelerometer J.Y. Nam, S.H. Choi, J.B. Choi and Y.J. Kim	123
Virtual Demonstration Tests of Large-Scale and Complex Artifacts Using an Open Source Parallel CAE System, ADVENTURE S. Yoshimura	133
Numerical Modeling for the Characterization of Flow Excitation for the HDD Disk Vibration Control J.C. Koo, S.W. Kang, Y.S. Han and Y.S. Choi	143
Dynamic Analysis of Contacting Spur Gear Pair for Fast System Simulation D. Suzuki, S. Horiuchi, J.H. Choi and H.S. Ryu	151
Calculation of Radiation Beam Field from Phased Array Ultrasonic Transducers Using Expanded Multi-Gaussian Beam Model J.S. Park, S.J. Song and H.J. Kim	163
Study on Large Scale Analysis for Infra-Structure Y.J. Park, Y.S. Chang, J.B. Choi and Y.J. Kim	169

Numerical Analysis of Compound ECT Signals due to Various Tube Defects near Support Plate in Steam Generator Y.K. Shin, Y.T. Lee and M.H. Song	177
Effects of Varying Boundary Conditions on the Buried Pipelines O.S. Lee and D.H. Kim	183
Cleavage Fracture Evaluation Using Local Approach for SA508 Carbon Steel at -60°C Y.S. Chang, T.R. Lee, J.B. Choi, Y.J. Kim and B.S. Lee	193
Development of a Neural Network-Based Real-Time Fatigue Monitoring System for the Heavy Load Carrying Facility J.C. Kim, S.W. Jung, J.B. Choi, Y.S. Chang, Y.J. Kim and I. Hwang	201
The Effect of Surface Roughness on Wear-Life of DLC Coated Silicon Disk in Dry Sliding K.S. Shin, C.W. Cho and Y.Z. Lee	213
Reliability of Buried Pipeline Using a Theory of Probability of Failure O.S. Lee, D.H. Kim and S.S. Choi	221
Risk Assessments of Columns Using RBI Program in Petrochemical Plant S.M. Lee, Y.S. Chang, J.B. Choi, Y.J. Kim, S.I. Han, S.C. Choi and J.Y. Kim	231
Estimation of the Number of Physical Flaws from Periodic ISI Data of SG Tubes Using Effective POD J.B. Lee, J.H. Park, S.H. Lee, H.D. Kim and H.S. Chung	239
Evaluation of Degree of Sensitization and Corrosion Characteristics for Artificially Sensitized Austenitic STS304 D.H. Bae and B.B. Choi	249
Evaluation of the Burst Properties of a Steam Generator Tube C.S. Seok, B.K. Bae, S.K. Cho and J.M. Koo	255
Simplified Static Analysis for Shock Behavior Evaluation of Thin Glass Plates S.I. Moon, C.H. Kim, J.C. Koo, J.B. Choi, Y.J. Kim and Y.J. Kim	263
The Effect of Various Surface Coatings on Tribological Characteristics of Rotary Compressor Vane in Carbon Dioxide Environment S.D. Oh and Y.Z. Lee	271