Journal of Testing and Evaluation
Subject Index to Volume 18
1990

A

Adhesives
A method for uniform shear stress-strain analysis of adhesives (Wycherley, Mestan and Grabovac), May, 203

Aluminum
Durability assessment based on initial material quality (Magnusen, Hinkle, Kaiser, Bucci, and Rolf), Nov., 439

Anisotropy
Effect of crystallographic texture on flexure fatigue properties of Ti-3Al-2.5V hydraulic tubing (Meredith and Schemel), March, 98

Arrest force
Measurement of maximum arrest force in performance tests of fall protection equipment (Salowski and Brinkley), March, 123

Asphalt
Elasto-plastic fracture characterization of paving materials at low temperatures (Mahboub), May, 210

ASTM C 273
Fracture of defect foam core sandwich beams (Groth and Zenker), Nov., 290

ASTM Method E 813-87
J_c data analysis methods with a “negative crack growth” correction procedure (Rosenthal, Tobler and Purschke), July, 301

B

Ball indentation test
The use of miniaturized tests to predict flow properties and estimate fracture toughness in deformed steel plates (Haggag, Server, Lucas, Odette and Sheekherd), Jan., 62

Bend
Dynamic strain-aging and neutron irradiation effects on mechanical and fracture properties of A533B class I PV steel and 2.25Cr-1Mo steel (Mahmood, Al-Oaibi, Jung, and Murty), Sept., 332

Bending strength
Bending strength of gray cast iron (Noguchi), Jan., 70

Book reviews
AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention Research (McGlone), Nov., 458
Handbook of Environmental Fate and Exposure Data for Organic Chemicals (Mones), Nov., 458
Nondestructive Testing (Metallurgy and Materials Science (Leon-Salamanca), July, 305

Brittle
An approach to predicting long-term toughness, strength, and ductility of a Cr-Mo-V steel alloy using short-term tests (Davis), July, 286

C

Carbon content
Relationships between the results of nail impact bend tests and selected nail material properties (White, McLain and Padda), May, 219

Clip gauge
The linearity of clip gages used in fracture mechanics tests (Smith and Gordon), Jan., 14

Cold rolling
Fatigue behavior of a cold-rolled SAE grade 945X HSLA steel (Yu, DuQuesnay and Topper), July, 274

Combined mode fracture
A suggested procedure for combined mode I-mode III fracture toughness testing (Manoharan, Hirih and Rosenfield), March, 106

Confidence level
Probability, confidence, and sample size in fatigue testing (Parida, Das, Gope, and Mohanty), Nov., 385

Constitutive equation
An approach to predicting long-term toughness, strength, and ductility of a Cr-Mo-V steel alloy using short-term tests (Davis), July, 286

Continuous annealing
Use of X-ray diffraction for measuring recrystallization of low carbon steels for plate application (Liao), Sept., 338

Contratricle strain ratio
Effect of crystallographic texture on flexure fatigue properties of Ti-3Al-2.5V hydraulic tubing (Meredith and Schemel), March, 98

Conventional
A rapid method for measurement of rolling contact fatigue life of case-hardened gear materials (Jiang and Shao), Sept., 328

Copper
Measurements of dynamic Young's modulus in short specimens with the PUCOT (Wickstrom and Wolftenden), Jan., 81

Crack
Fatigue behavior of a cold-rolled SAE grade 945X HSLA steel (Yu, DuQuesnay and Topper), July, 274

Crack arrest
A K_c calibration for a modified single edge notched tension specimen (Kirk and Sanford), Sept., 344

Crack arrest fracture toughness
A quality control test for selecting materials to arrest fast-running, full-thickness cracks (Crosley and Kipling), Nov., 396

Crack closure
Effect of compressive underloads and tensile overloads on fatigue damage accumulation in 2024-T351 aluminum (Pompetzki, Topper, DuQuesnay and Yu), Jan., 53

Crack propagation
A computer-aided image system for analyzing cracks created by nailing in wood (Lau and Tarditi), March, 131

Damage tolerance analysis of multiple-site cracks emanating from hole array (Nishimura, Noguchi, and Uchimoto), Nov., 401

Creep
Estimation of the C, parameter: experimental implications (Leung, McDowell and Saxena), Jan., 25

Creep crack growth
Estimation of the C, parameter: experimental implications (Leung, McDowell and Saxena), Jan., 25

Creep rupture
An approach to predicting long-term toughness, strength, and ductility of a Cr-Mo-V steel alloy using short-term tests (Davis), July, 286

Crevice corrosion
Crevice corrosion testing in natural seawater: significance and use of multiple crevice assemblies (Kain), Sept., 309

Critical review
Crevice corrosion testing in natural seawater: significance and use of multiple crevice assemblies (Kain), Sept., 309

Crystallographic texture
Effect of crystallographic texture on flexure fatigue properties of Ti-3Al-2.5V hydraulic tubing (Meredith and Schemel), March, 98

C parameter
Estimation of the C parameter: experimental implications (Leung, McDowell and Saxena), Jan., 25

CTOD
Dynamic K measurements in three-point bend specimens (Sharpe and Shapiro), Jan., 38

Estimation of characteristic values of fracture toughness (Slatcher), May, 141

Cyclic J
Characterization of the effects of large unloading cycles on the ductile tearing toughness of HSLA steel (Joyce), Nov., 373

Cyclic stress-strain
Cyclic stress-strain behavior and low cycle fatigue of Ti6242 (Bui-Quoc, Gomuc, Biron, Nguyen and Tadros), May, 160
Cyclohexylamine
Development of analytical methodology and a report on collaborative study on the determination of morpholine, cyclohexylamine, and diethylaminoethanol in aqueous samples by direct aqueous injection gas chromatography (Malaiyandi and Goddard), March, 87

D
Damage
Effect of compressive underloads and tensile overloads on fatigue damage accumulation in 2024-T351 aluminum (Pompetzki, Topper, DuQuesnay and Yu), Jan., 53

Dead burnt dolomite
An appraisal of hydration characteristics of dead burnt dolomite grains (Das, Ghosh, Das and Banerjee), Jan., 76

Degradation
Nondestructive evaluation of in-service toughness degradation for Cr-Mo-V steam turbine rotor steel (Kimura, Imaeki, Saito and Kashiwaya), May, 172

Degradation of PVC
Weathering effects on some mechanical properties of polyvinyl chloride pipes (Ragab, Alawi and Addassi), Jan., 45

Densification
An appraisal of hydration characteristics of dead burnt dolomite grains (Das, Ghosh, Das and Banerjee), Jan., 76

Diethylaminoethanol
Development of analytical methodology and a report on collaborative study on the determination of morpholine, cyclohexylamine, and diethylaminoethanol in aqueous samples by direct aqueous injection gas chromatography (Malaiyandi and Goddard), March, 87

Displacement transducer
The linearity of clip gages used in fracture mechanics tests (Smith and Gordon), Jan., 14

Durability
Durability assessment based on initial material quality (Magnusen, Hinkle, Kaiser, Bucci, and Rolf), Nov., 439

Duration of exposure
Behavior of rubber-based elastomeric construction adhesive in wood joints (Pellicane), July, 256

Dynamic contact angle
Influence of contact angles on the leakage of latex condoms (Davis and Schroeder), Sept., 352

Dynamic fracture
Measuring the stress intensity factor for propagating cracks with strain gages (Dally and Sanford), July, 240

Dynamic microhardness testing
Dynamic loading - a new microhardness test method (Weiler), July, 229

Dynamic modulus
Measurements of dynamic Young's modulus in short specimens with the PUCOT (Wickstead and Wolfenden), Jan., 81

Dynamic testing
Dynamic K measurements in three-point bend specimens (Sharpe and Shapiro), Jan., 38

E
Eddy-current decay method
A simplified method for determining relaxation time and electrical resistivity from eddy-current decay measurements (Richards and Hartwig), Nov., 454

Elastic fracture specimens
Stress intensity factors for side-grooved fracture specimens (Macdonald and Pajoit), July, 281

Elastic-plastic fracture
Characterization of the effects of large unloading cycles on the ductile tearing toughness of HSLA steel (Joyce), Nov., 373

Elastomeric adhesives
Behavior of rubber-based elastomeric construction adhesive in wood joints (Pellicane), July, 256

Electrical resistivity
A simplified method for determining relaxation time and electrical resistivity from eddy-current decay measurements (Richards and Hartwig), Nov., 454

F
Fall protection
Measurement of maximum arrest force in performance tests of fall protection equipment (Sukowski and Brinkley), March, 121

Fatigue
Durability assessment based on initial material quality (Magnusen, Hinkle, Kaiser, Bucci, and Rolf), Nov., 439
Effct of compressive underloads and tensile overloads on fatigue damage accumulation in 2024-T351 aluminum (Pompetzki, Topper, DuQuesnay and Yu), Jan., 53
Fatigue behavior of a cold-rolled SAE grade 945X HSLA steel (Yu, DuQuesnay and Yu), Jan., 53
Fatigue crack propagation in engineering plastics (Clark, Hertzberg, and Manson), Sept., 319
Fatigue crack
Imaging short fatigue cracks with the gel electrode (Baxter), JOTE, Nov., 430

Fatigue life
Probability, confidence, and sample size in fatigue testing (Parida, Das, Gope, and Mohanty), Nov., 385

Femoral
Historical overview of femoral intramedullary nailing (Seligson), March, 138
Flexure test
Bending strength of gray cast iron (Noguchi), Jan., 70

Floors
Instrumented impactor for testing wood-base floor panels (McNatt and Soltis), July, 265

Fracture
A computer-aided image system for analyzing cracks created by nailing in wood (Lau and Tardif), March, 131

Fracture mechanics
A computer-aided image system for analyzing cracks created by nailing in wood (Lau and Tardif), March, 131
A quality control test for selecting materials to arrest fast-running, full-thickness cracks (Crosley and Ripling), Nov., 396
Applicability of modified J as a fracture parameter for polycarbonate (Wert, Saxena and Ernst), Jan., 1

Fusion testing
The linearity of clip gages used in fracture mechanics tests (Smith and Gordon), Jan., 14

Fracture toughness
Elasto-plastic fracture characterization of paving materials at low temperatures (Mahboub), May, 210

Fracture toughness
A quality control test for selecting materials to arrest fast-running, full-thickness cracks (Crosley and Ripling), Nov., 396
A suggested procedure for combined mode I-mode III fracture toughness testing (Manoharan, Hirth and Rosenfield), March, 106
Estimation of characteristic values of fracture toughness (Slichter), May, 141

G
Gel electrode imaging
Imaging short fatigue cracks with the gel electrode (Baxter), JOTE, Nov., 430

Generator rotors
Bore inspection and life evaluation of vintage steam turbine/generator rotors (Jhansale and McCann), Nov., 446

Gradients
Hardness gradients within roll-threaded steel nails (White, McLain, Padla and Kasal), March, 128

Gray cast iron
Bending strength of gray cast iron (Noguchi), Jan., 70

H
Hardness
Hardness gradients within roll-threaded steel nails (White, McLain, Padla and Kasal), March, 128

Impact tests
Measurement of maximum arrest force in performance tests of fall protection
Incubation period

Interferometry

Intermedullary nailing

Ioannis method

Court Blake testing

J integral

Low carbon steels

Low cycle fatigue

Low cycle fatigue crack growth

Mean stress

Median fatigue limits

Mean stress

Microcreep testing

Microhardness testing under load

Microstress relaxation (MSR)

Miniaturized tests

Morpholine

Multiple crevice

Multiple-site cracks

Multistep cycling

Nails

Natural weathering of PVC

Natural weathering of PVC

Nondestructive test

Optimum allocation of specimens

Percentage difference

Percentage loss in weight

Photoelasticity

Plywood

Polycarbonate

Preshipment container

Pressure vessel steels

Probability

r-value

Rapid

Rapid
Relaxation time
A simplified method for determining relaxation time and electrical resistivity from eddy-current decay measurements (Richards and Hartwig), Nov., 454

Sandwich beams
Fracture of defect foam core sandwich beams (Groth and Zenkert), Nov., 390

Sandwich structures
Fracture of defect foam core sandwich beams (Groth and Zenkert), Nov., 390

Shear punch test
The use of miniaturized tests to predict flow properties and estimate fracture toughness in deformed steel plates (Haggag, Server, Lucas, Odette and Scheckherd), Jun., 62

Shear test
A method for uniform shear stress-strain analysis of adhesives (Wycherley, Mestan and Grabovac), May, 203

Shipping environment
Force plate for corrugated container vibration tests (Urbanik), Sept., 359

Shirley cyclic bending tester
Changes in cotton fabric bending properties as a result of laboratory wear (Ukpouomwan), Nov., 408

Shock and vibration
Force plate for corrugated container vibration tests (Urbanik), Sept., 359

Short crack growth
Imaging short fatigue cracks with the gel electrode (Baxter), Nov., 430

Side-grooving
Stress intensity factors for side-grooved fracture specimens (Macdonald and Pajot), July, 281

Single crystals
Measurements of dynamic Young’s modulus in short specimens with the PUCOT (Wickstrom and Wolfenden), Jan., 81

Spindles
Bore inspection and life evaluation of vintage steam turbine/generator rotors (Jhansale and McCann), Nov., 446

Splints
Historical overview of femoral intramedullary nailing (Seiglon), March, 138

Stable members
Use of cantilever specimens to determine microcreep properties (Santer), May, 191

Static contact angle
Influence of contact angles on the leakage of latex condoms (Davis and Schroeder), Sept., 352

Statistics
Estimation of characteristic values of fracture toughness (Slatcher), May, 141

Steady-state
Experimental and analytical evaluation of the mechanical performance of a gas-fired ceramic radiant tube at steady-state (Segall, Hellmann and Stryzpe), July, 250

Steam turbine
Bore inspection and life evaluation of vintage steam turbine/generator rotors (Jhansale and McCann), Nov., 446

Strain gage
Measuring the stress intensity factor for propagating cracks with strain gages (Dally and Sanford), July, 240

Stress corrosion cracking
Influence of overload plastic zone size on stress corrosion crack growth behavior of a low alloy steel in 3.0% NaCl solution (Pututanda and Venugopal), May, 182

Stress intensity factor
A K calibration for a modified single edge notched tension specimen (Kirk and Sanford), Sept., 344

Damage tolerance analysis of multiple-site cracks emanating from hole array (Nishimura, Noguchi, and Uchimoto), Nov., 401

Measuring the stress intensity factor for propagating cracks with strain gages (Dally and Sanford), July, 240

Stress intensity factors
Stress intensity factors for side-grooved fracture specimens (Macdonald and Pajot), July, 281

Sub-size specimens
Impact energy/specimen thickness relationship for two turbine steels (Bashu), Sept., 363

Temperature effects
Behavior of rubber-based elastomeric construction adhesive in wood joints (Pellicane), July, 250

Tensile
Dynamic strain-aging and neutron irradiation effects on mechanical and fracture properties of A533B class 1 PV steel and 2.25 Cr-1Mo steel (Mahmood, Al-Otobi, Jung, and Myers), Sept., 332

Thermal profiles
Experimental and analytical evaluation of the mechanical performance of a gas-fired ceramic radiant tube at steady-state (Segall, Hellmann and Strzepa), July, 250

Thermodynamic stress
Experimental and analytical evaluation of the mechanical performance of a gas-fired ceramic radiant tube at steady-state (Segall, Hellman and Strzepa), July, 250

Threshold
Influence of test methodology on fatigue crack propagation in engineering plastics (Clark, Hertzberg, and Manson), Sept., 319

Tin mill products
Use of X-ray diffraction for measuring recrystalization of low carbon steels for tin plate application (Liao), Sept., 338

Toughness
Nondestructive evaluation of in-service toughness degradation for Cr-Mo-V steel turbine rotor steel (Kimura, Inukai, Saito and Kashiwaya), May, 172

Turbine steels
Impact energy/specimen thickness relationship for two turbine steels (Bashu), Sept., 363

Two-stage calculation
An appraisal of hydration characteristics of dead burnt dolomite grains (Das, Ghosh, Das and Banerjee), Jan., 76

Type A alternative specimens
Plastic strain ratio (r) for sheet metal: effect of gauge length and width measurement locations using reduced section specimens (Taylor and Scherrer), July, 292

Type A standard specimens
Plastic strain ratio (r) for sheet metal: effect of gauge length and width measurement locations using reduced section specimens (Taylor and Scherrer), July, 292

U
Ultra-low load microhardness testing
Dynamic loading: a new microhardness test method (Weiler), July, 229

Ultrasonic
Fatigue crack characterization by ultrasonic inspection (Rehbein, Thompson, and Buck), Nov., 421

V
V-notch Charpy impact test
Impact energy/specimen thickness relationship for two turbine steels (Bashu), Sept., 363

Y
Yield strength
Relationships between the results of nail impact bend tests and selected nail material properties (White, McLain and Padia), May, 219