

Journal of Testing and Evaluation

Subject Index to Volume 13

1985

A-B

- A-193 steel**
Effect of misalignment on the time to rupture (Schmieder), July, 292
- A-453 steel**
Effect of misalignment on the time to rupture (Schmieder), July, 292
- Accuracy**
Comparison of precision and accuracy estimates from state and local agency air monitoring stations with results of EPA's national performance audit program (Rhodes, Mitchell, Puzak, and Evans), Sept., 374
- Acoustic impedance**
Effect of acoustic impedance on the apparent impact fracture energy of a tungsten base sintered alloy (Roman), May, 199
- Algorithms**
Development program for radiation contrast baggage inspection system (Seher), May, 217
- Alloy A-286**
Creep and rupture tests of Alloy A-286 at elevated temperatures (Metal Properties Council, Inc.), July, 285
- Alpha brass**
Effect of dither on strain-controlled fatigue and tensile results obtained with a closed-loop servohydraulic testing machine (Bush and Quesnel), Nov., 405
- Aluminides**
Modulus measurements in ordered Co-Al, Fe-Al, and Ni-Al alloys (Harmouche and Wolfenden), Nov., 424
- Aluminum**
Effect of dither on strain-controlled fatigue and tensile results obtained with a closed-loop servohydraulic testing machine (Bush and Quesnel), Nov., 405
- Aluminum alloys**
Optimization of the gel electrode for repeatable imaging of fatigue cracks in aluminum alloys (Baxter), July, 245
Strain distribution patterns during plane strain compression (Beynon and Sellars), Jan., 28
- Asbestos**
Temperature of the unexposed surface of fire resistance test specimens (Harmathy), March, 127
- ASTM E 84**
Review of ASTM test for surface burning characteristics of building materials (E 84) (an ASTM white paper) (Abrams, D'Souza, Higginson, Metes, Quintiere, Parker, Robins, and White), March, 89
- Austenitic manganese steels**
Preparation of impact specimens from cast austenitic manganese steels (Ghoshes, Mackay, Smith), March, 176
- Austenitic stainless steels**
Austenitic iron-aluminum-manganese alloys as possible substitutes for austenitic stainless steel (Heger), Nov., 446

Beryllium

- Fracture toughness of hot-pressed beryllium (Lemon and Brown), March, 152
- Optical test method for measuring biaxial deformations (Polvani, Reeve, and Veale), Jan., 69
- Biaxial stresses**
Biaxial test method for characterization of fabric materials used in permanent fabric roof structures (Mott, Huber, and Lee-wood), Jan., 9
- Bimetallic strip**
Nondestructive evaluation of bond quality of bimetallic strips using acoustic emission (Murthy and Brahma), Sept., 371
- Bond quality**
Nondestructive evaluation of bond quality of bimetallic strips using acoustic emission (Murthy and Brahma), Sept., 371
- Book reviews**
Fracture Mechanics Technology Applied to Material Evaluation and Structure Design by Sih, Ryan, and Jones (Hudson), Sept., 390
From the American System to Mass Production. 1800-1932: The Development of Manufacturing Technology in the United States by Hounshell (Cropper), July, 323
- Building codes**
Review of ASTM test for surface burning characteristics of building materials (E 84) (an ASTM white paper) (Abrams, D'Souza, Higginson, Metes, Quintiere, Parker, Robins, and White), March, 89

C

- C 12200 (Cu-DHP)**
Creep behavior of copper and copper alloys as design criteria in pressure vessel manufacture (Drefahl, Kleinau, and Steinkamp), Sept., 329
- C 33500 (low leaded brass)**
Creep behavior of copper and copper alloys as design criteria in pressure vessel manufacture (Drefahl, Kleinau, and Steinkamp), Sept., 329
- C 44300 (Admiralty brass, arsenical)**
Creep behavior of copper and copper alloys as design criteria in pressure vessel manufacture (Drefahl, Kleinau, and Steinkamp), Sept., 329
- Ceramics**
Determination of crack growth parameter *N* in ceramics under creep conditions (Fett and Munz), March, 143
- Chromatography**
Recent advances in ion mobility spectrometry for explosives vapor detection (Spangler, Carrico, and Campbell), May, 234
- Chromium**
Austenitic iron-aluminum-manganese alloys as possible substitutes for austenitic stainless steel (Heger), Nov., 446

Cleavage

- Effect of crack-tip morphology on cleavage-crack extension (Rosenfield), May, 202
- Coatings**
Comparison of the Kesternich sulfur dioxide test with industrial atmospheric corrosion tests of zinc-, aluminum-, and Al-Zn-coated steel sheet (Berke and Townsend), Jan., 74
- Colonization**
Provisional multispecies toxicity test using indigenous organisms (Cairns, Pratt, and Niederlehner), July, 316
- Compliance**
New method for *in situ* compliance measurements for fatigue crack growth testing in autoclaves (James and Ceschini), Nov., 409
- Composite materials**
Test method for evaluation of shear modulus and modulus of elasticity of laminated anisotropic composite materials (Cheng), Sept., 387
- Composites**
Algebraic approximations of stress-strain curves for Kevlar-reinforced composites (Papirno), March, 115
- Computerized tomography**
Principles, history, and status of dual-energy computerized tomographic explosives detection (Roder), May, 211
- Computers**
Algebraic approximations of stress-strain curves for Kevlar-reinforced composites (Papirno), March, 115
- Correction formula**
Correction of the results of standard fire resistance tests (Harmathy), July, 303
- Corrosion**
Comparison of the Kesternich sulfur dioxide test with industrial atmospheric corrosion tests of zinc-, aluminum-, and Al-Zn-coated steel sheet (Burke and Townsend), Jan., 74
- Crack growth**
Thermal control system for thermal cycling (Hartman), Sept., 363
- Cracking**
Fracture toughness of hot-pressed beryllium (Lemon and Brown), March, 152
Simple determination of the effective Young's modulus of rock by the compliance method (Hashida and Takahashi), Jan., 77
- Cracking (fracturing)**
Method for the defined fatigue precracking of round notched bars (Eisele, Roos, Silcher, and Zimmermann), Jan., 46
- Crack initiation**
Plastic strain arising from fatigue crack initiation (Coulon, Knosp, and Saisse), July, 265
- Crack propagation**
Determination of crack growth parameter *N* in ceramics under creep conditions (Fett and Munz), March, 143

Determination of threshold stress corrosion cracking characteristics using rising load K_{Isc} testing based on ultrasonic method (Hirano, Ishizaki, Kobayashi, and Nakazawa), March, 162

Cracks

Method for the defined fatigue precracking of round notched bars (Eisele, Roos, Silcher, and Zimmermann), Jan., 46

Creep and rupture tests

Creep and rupture tests of Alloy A-286 at elevated temperatures (Metal Properties Council, Inc.), July, 285

Creep properties

Comprehensive viscoelasto-plastic characterization of sand-asphalt compressive and tensile cyclic loading (Sides, Uzan, and Perl), Jan., 49

Determination of crack growth parameter N in ceramics under creep conditions (Fett and Munz), March, 143

Cryogenic instruments

Design and performance of a ring-shaped clip gage for fracture mechanics testing (Tobler and Shepic), July, 299

Culture media

Poor selectivity of certain lots of commercially available KF-streptococcus agar (Havelaar, van Breemen, Vaessen, During, van der List, and van Erne), May, 206

Cyanides

Discussion of the method for the determination of free cyanide in water and wastewater by microdiffusion (Owerbach), March, 123

Cyclic stress-strain curve

Methodology for correlating fatigue data obtained under different test conditions (Leax, Dowling, Brose, and Peck), Nov., 393

D-E

Deflection

Evaluation of *in situ* pavement moduli from deflection measurements (Mamlouk), Jan., 60

Detection

User requirements and performance specifications for explosive vapor detection systems (Lucero), May, 222

Displacement gages

Design and performance of a ring-shaped clip gage for fracture mechanics testing (Tobler and Shepic), July, 299

Ductile brittle transition

Instrumented impact testing of steel plate (Shimizu and Gibbon), March, 169

Ductility

Effect of size on elastic-plastic fracture toughness parameters (Putatunda, Riggsbee, and Corten), May, 181

Dynamic tests

Task group report: results of the interlaboratory test program to determine percent shear of dynamic tear test specimens (Lazaridis, Heberling, Harris, Lange, and Wilson), Jan., 17

Dynamic toughness testing

Determination of the critical value of the J -integral at high loading rates using the wedge-loaded specimen (Klepaczko), Nov., 441

Elastic-plastic fracture toughness

Single-specimen determination of J_{Ic} by the ultrasonic method and analysis of its statistical distribution characteristics (Hirano, Kobayashi, and Nakazawa), Sept., 356

Elevated temperatures

Creep and rupture tests of Alloy A-286 at elevated temperatures (Metal Properties Council, Inc.), July, 285

Elongation

Influence of gage dimensions on elongation values for Type 316 stainless steel (Mathew, Mannan, and Rodriguez), May, 191

Explosives

Development program for radiation contrast baggage inspection system (Seher), May, 217

Introduction to symposium on explosives detection for security applications (Hobbs), May, 210

Principles, history, and status of dual-energy computerized tomographic explosives detection (Roder), May, 211

User requirements and performance specifications for explosive vapor detection systems (Lucero), May, 222

Extensometers

Optical test method for measuring biaxial deformations (Polvani, Reeve, and Veale), Jan., 69

F-G

Fatigue

Interlaboratory study of strain-cycle fatigue of 1.2-mm-thick sheet specimens (Miller), Sept., 344

Methodology for correlating fatigue data obtained under different test conditions (Leax, Dowling, Brose, and Peck), Nov., 393

Plastic strain arising from fatigue crack initiation (Coulon, Knosp, and Saisse), July, 265

Fatigue crack growth testing

New method for *in situ* compliance measurements for fatigue crack growth testing in autoclaves (James and Ceschini), Nov., 409

Fatigue cracks

Optimization of the gel electrode for repeatable imaging of fatigue cracks in aluminum alloys (Baxter), July, 245

Fire resistance

Temperature of the unexposed surface of fire resistance test specimens (Harmathy), March, 127

Fire resistance test

Correction of the results of standard fire resistance tests (Harmathy), July, 303

Fires

Effect of fire fighting media on the mechanical properties of steel bars (Naga), March, 132

Fire tests

Review of ASTM test for surface burning characteristics of building materials (E 84) (an ASTM white paper) (Abrams, D'Souza, Higginson, Metes, Quintiere, Parker, Robins, and White), March, 89

Fluid filters

Fluid filter media: measuring the average pore size and the pore-size distribution,

and correlation with results of filtration tests (Johnston), July, 308

403 stainless steel

Methodology for correlating fatigue data obtained under different test conditions (Leax, Dowling, Brose, and Peck), Nov., 393

Fracture dynamics

Determination of the critical value of the J -integral at high loading rates using the wedge-loaded specimen (Klepaczko), Nov., 441

Fracture mechanics

Method for the defined fatigue precracking of round notched bars (Eisele, Roos, Silcher, and Zimmermann), Jan., 46

New method for *in situ* compliance measurements for fatigue crack growth testing in autoclaves (James and Ceschini), Nov., 409

Stress intensity factors for notched configurations (Baratta), July, 275

Fracture mechanics testing

Design and performance of a ring-shaped clip gage for fracture mechanics testing (Tobler and Shepic), July, 299

Fracture properties

J_{Ic} measurements on single subsized specimens of ferritic alloys (Huang), July, 257

Fractures (materials)

Determination of threshold stress corrosion cracking characteristics using rising load K_{Isc} testing based on ultrasonic method (Hirano, Ishizaki, Kobayashi, and Nakazawa), March, 162

Fracture tests

Effect of crack-tip morphology on cleavage-crack extension (Rosenfield), May, 202

Effect of size on elastic-plastic fracture toughness parameters (Putatunda, Riggsbee, and Corten), May, 181

Furnace-temperature-time curve

Correction of the results of standard fire resistance tests (Harmathy), July, 303

Gel electrode imaging

Optimization of the gel electrode for repeatable imaging of fatigue cracks in aluminum alloys (Baxter), July, 245

Granite

Optical measurement of granite surface polish (Gascón and Balbás), Sept., 367

H-M

Hardness

Fracture toughness of hot-pressed beryllium (Lemon and Brown), March, 152

Impact tests

Effect of acoustic impedance on the apparent impact fracture energy of a tungsten base sintered alloy (Roman), May, 199

Instrumented impact testing of steel plate (Shimizu and Gibbon), March, 169

Preparation of impact specimens from cast austenitic manganese steels (Ghoreshy, Mackay, Smith), March, 176

Inconel 718

Effect of R_e on cyclic stress-strain behavior of Inconel 718 (Cook), Nov., 434

Interferometers

Optical test method for measuring biaxial deformations (Polvani, Reeve, and Veale), Jan., 69

Interlaboratory

Interlaboratory study of strain-cycle fatigue of 1.2-mm-thick sheet specimens (Miller), Sept., 344

Investment castings

Preparation of impact specimens from cast austenitic manganese steels (Ghoreshy, Mackay, Smith), March, 176

Ionic mobility

Recent advances in ion mobility spectrometry for explosives vapor detection (Spangler, Carrico, and Campbell), May, 234

Iron-aluminum-manganese alloys

Austenitic iron-aluminum-manganese alloys as possible substitutes for austenitic stainless steel (Heger), Nov., 446

Isoperibolic calorimetry

Methodology for the evaluation of the thermal performance of phase-change storage materials (Grimes, Brown, and Kaetzel), Nov., 429

J-integral

Determination of the critical value of the J -integral at high loading rates using the wedge-loaded specimen (Klepaczko), Nov., 441

J_{IC} measurements on single subsized specimens of ferritic alloys (Huang), July, 257

Laboratory tests

Determination of modulus of rigidity by ASTM D 198 flexural methods (Gromala), Sept., 352

Lead (metal)

Strain distribution patterns during plane strain compression (Beynon and Sellars), Jan., 28

Load cells

Design and use of load monitoring environmental test chamber for stress corrosion testing (Shaw), Nov., 416

Mechanical properties

Effect of fire fighting media on the mechanical properties of steel bars (Naga), March, 132

Effect of R_e on cyclic stress-strain behavior of Inconel 718 (Cook), Nov., 434

Mechanical properties of metallic strip

Improving bend and tensile yield strengths of metallic strip by reducing the effects of residual stresses (Hart), July, 320

Mechanical tests

Effect of misalignment on the time to rupture (Schmieder), July, 292

Microdiffusion

Discussion of the method for the determination of free cyanide in water and wastewater by microdiffusion (Owerbach), March, 123

Modulus of elasticity

Test method for evaluation of shear modulus and modulus of elasticity of laminated anisotropic composite materials (Cheng), Sept., 387

Multispecies

Provisional multispecies toxicity test using indigenous organisms (Cairns, Pratt, and Niederlehner), July, 316

N-R

Nickel-base superalloys

Effect of R_e on cyclic stress-strain behavior of Inconel 718 (Cook), Nov., 434

Nondestructive evaluation

Nondestructive evaluation of bond quality of bimetallic strips using acoustic emission (Murthy and Brahma), Sept., 371

Nondestructive tests

Evaluation of *in situ* pavement moduli from deflection measurements (Mamlouk), Jan., 60

Optical measurement

Optical measurement of granite surface polish (Gascón and Balbás), Sept., 367

Pallets

Deckboard bending theory for three-stringer wood pallets in drive-in racks (Urbanik), Jan., 3

Method for determining the effect of fasteners on the stiffness and strength of wood drive-in-rack pallets (Urbanik), Sept., 379

Pavements

Evaluation of *in situ* pavement moduli from deflection measurements (Mamlouk), Jan., 60

Phase-change storage materials

Methodology for the evaluation of the thermal performance of phase-change storage materials (Grimes, Brown, and Kaetzel), Nov., 429

Pipes

Evaluation of the mechanical behavior of plain and spirally stiffened polyvinyl chloride pipes (Ragab and El-Zoghby), March, 137

Plasma

Recent advances in ion mobility spectrometry for explosives vapor detection (Spangler, Carrico, and Campbell), May, 234

Plastic pipes

Evaluation of the mechanical behavior of plain and spirally stiffened polyvinyl chloride pipes (Ragab and El-Zoghby), March, 137

Plastic properties

Comprehensive viscoelasto-plastic characterization of sand-asphalt compressive and tensile cyclic loading (Sides, Uzan, and Perl), Jan., 49

Plastic strain

Plastic strain arising from fatigue crack initiation (Coulon, Knosp, and Saisse), July, 265

Polish

Optical measurement of granite surface polish (Gascón and Balbás), Sept., 367

Polyvinyl chloride

Evaluation of the mechanical behavior of plain and spirally stiffened polyvinyl chloride pipes (Ragab and El-Zoghby), March, 137

Pore size

Fluid filter media: measuring the average pore size and the pore-size distribution, and correlation with results of filtration tests (Johnston), July, 308

Porosity

Fluid filter media: measuring the average pore size and the pore-size distribution, and correlation with results of filtration tests (Johnston), July, 308

Positrons

Positron study of the quench and tempering process in AISI 4340 steel (Moore and Jones), May, 196

Precision

Comparison of precision and accuracy estimates from state and local agency air

monitoring stations with results of EPA's national performance audit program (Rhodes, Mitchell, Puzak, and Evans), Sept., 374

Quality assurance

Comparison of precision and accuracy estimates from state and local agency air monitoring stations with results of EPA's national performance audit program (Rhodes, Mitchell, Puzak, and Evans), Sept., 374

Racks

Deckboard bending theory for three-stringer wood pallets in drive-in racks (Urbanik), Jan., 3

Method for determining the effect of fasteners on the stiffness and strength of wood drive-in-rack pallets (Urbanik), Sept., 379

Rock fracture

Simple determination of the effective Young's modulus of rock by the compliance method (Hashida and Takahashi), Jan., 77

Rocks

Simple determination of the effective Young's modulus of rock by the compliance method (Hashida and Takahashi), Jan., 77

S

Shear modulus

Determination of modulus of rigidity by ASTM D 198 flexural methods (Gromala), Sept., 352

Test method for evaluation of shear modulus and modulus of elasticity of laminated anisotropic composite materials (Cheng), Sept., 387

Shear properties

Task group report: results of the interlaboratory test program to determine percent shear of dynamic tear test specimens (Lazaridis, Heberling, Harris, Lange, and Wilson), Jan., 17

Simulated service testing

Methodology for the evaluation of the thermal performance of phase-change storage materials (Grimes, Brown, and Kaetzel), Nov., 429

Single-specimen determination

Single-specimen determination of J_{IC} by the ultrasonic method and analysis of its statistical distribution characteristics (Hirano, Kobayashi, and Nakazawa), Sept., 356

Slenderness ratio

Influence of gage dimensions on elongation values for Type 316 stainless steel (Mathew, Mannan, and Rodriguez), May, 191

Stainless steel strip

Improving bend and tensile yield strengths of metallic strip by reducing the effects of residual stresses (Hart), July, 320

Standards

Determination of modulus of rigidity by ASTM D 198 flexural methods (Gromala), Sept., 352

Steels

Analysis of hot tension test data to obtain stress-strain curves to high strains (Plaut and Sellars), Jan., 39

Comparison of the Kesternich sulfur dioxide test with industrial atmospheric corrosion tests of zinc-, aluminum-, and Al-Zn-coated steel sheet (Berke and Townsend), Jan., 74

Effect of crack-tip morphology on cleavage-crack extension (Rosenfield), May, 202

Positron study of the quench and tempering process in AISI 4340 steel (Moore and Jones), May, 196

Strain-controlled fatigue

Effect of dither on strain-controlled fatigue and tensile results obtained with a closed-loop servohydraulic testing machine (Bush and Quesnel), Nov., 405

Strains

Biaxial test method for characterization of fabric materials used in permanent fabric roof structures (Mott, Huber, and Lee-wood), Jan., 9

Streptococcus

Poor selectivity of certain lots of commercially available KF-streptococcus agar (Havelaar, van Breemen, Vaessen, During, van der List, and van Erne), May, 206

Stress corrosion

Determination of threshold stress corrosion cracking characteristics using rising load K_{Isc} testing based on ultrasonic method (Hirano, Ishizaki, Kobayashi, and Nakazawa), March, 162

Stresses

Analysis of hot tension test data to obtain stress-strain curves to high strains (Plaut and Sellars), Jan., 39

Biaxial test method for characterization of fabric materials used in permanent fabric roof structures (Mott, Huber, and Lee-wood), Jan., 9

Stress intensity factors

Stress intensity factors for notched configurations (Baratta), July, 275

Stress strain diagrams

Algebraic approximations of stress-strain curves for Kevlar-reinforced composites (Papirno), March, 115

Strain distribution patterns during plane strain compression (Beynon and Sellars), Jan., 28

Structural steels

Effect of fire fighting media on the mechanical properties of steel bars (Naga), March, 132

Surface temperature

Temperature of the unexposed surface of fire resistance test specimens (Harmathy), March, 127

T-Z

Tear strength

Effect of size on elastic-plastic fracture toughness parameters (Putatunda, Riggsbee, and Corten), May, 181

Tear tests

Instrumented impact testing of steel plate (Shimizu and Gibbon), March, 169

Task group report: results of the interlaboratory test program to determine percent shear of dynamic tear test specimens (Lazaridis, Heberling, Harris, Lange, and Wilson), Jan., 17

Temperature control

Design and use of load monitoring environmental test chamber for stress corrosion testing (Shaw), Nov., 416

Tempering

Positron study of the quench and tempering process in AISI 4340 steel (Moore and Jones), May, 196

Tensile yield strength

Improving bend and tensile yield strengths of metallic strip by reducing the effects of residual stresses (Hart), July, 320

Tension tests

Analysis of hot tension test data to obtain stress-strain curves to high strains (Plaut and Sellars), Jan., 39

Influence of gage dimensions on elongation values for Type 316 stainless steel (Mathew, Mannan, and Rodriguez), May, 191

Test chambers

Design and use of load monitoring environmental test chamber for stress corrosion testing (Shaw), Nov., 416

Thermal cycling

Thermal control system for thermal cycling (Hartman), Sept., 363

Thermal fatigue

Thermal control system for thermal cycling (Hartman), Sept., 363

Toughness

J_{Ic} measurements on single subsidized specimens of ferritic alloys (Huang), July, 257

Toxicity

Provisional multispecies toxicity test using indigenous organisms (Cairns, Pratt, and Niederlehner), July, 316

Tungsten alloys

Effect of acoustic impedance on the apparent impact fracture energy of a tungsten base sintered alloy (Roman), May, 199

Ultrasonic method

Single-specimen determination of J_{Ic} by the

ultrasonic method and analysis of its statistical distribution characteristics (Hirano, Kobayashi, and Nakazawa), Sept., 356

Ultrasonics

Modulus measurements in ordered Co-Al, Fe-Al, and Ni-Al alloys (Harmouche and Wolfenden), Nov., 424

Vapor

User requirements and performance specifications for explosive vapor detection systems (Lucero), May, 222

Variability

Interlaboratory study of strain-cycle fatigue of 1.2-mm-thick sheet specimens (Miller), Sept., 344

Viscoelasticity

Comprehensive viscoelasto-plastic characterization of sand-asphalt compressive and tensile cyclic loading (Sides, Uzan, and Perl), Jan., 49

V-notches

Stress intensity factors for notched configurations (Baratta), July, 275

Warehouses

Deckboard bending theory for three-stringer wood pallets in drive-in racks (Urbanik), Jan., 3

Method for determining the effect of fasteners on the stiffness and strength of wood drive-in-rack pallets (Urbanik), Sept., 379

Water

Discussion of the method for the determination of free cyanide in water and wastewater by microdiffusion (Owerbach), March, 123

Water analysis

Poor selectivity of certain lots of commercially available KF-streptococcus agar (Havelaar, van Breemen, Vaessen, During, van der List, and van Erne), May, 206

X-ray detection

Principles, history, and status of dual-energy computerized tomographic explosives detection (Roder), May, 211

X-ray inspection

Development program for radiation contrast baggage inspection system (Seher), May, 217

Young's modulus

Modulus measurements in ordered Co-Al, Fe-Al, and Ni-Al alloys (Harmouche and Wolfenden), Nov., 424