

# Journal of Testing and Eval

## Author Index

### Volume 25, 1997

Number	Month of Issue	Pages
1	January	1-150
2	March	151-272
3	May	273-364
4	July	365-464
5	September	465-528
6	November	529-606

#### A

**Adams, DF and Lewis, EQ:** Experimental assessment of four composite material shear test methods, March, 174

**Aissi, C and Olaniyan, J:** Testing and design of CMOS D-latches, Jan., 52

**Ajayi, JO and Elder, HM:** Effects of surface geometry on fabric friction, March, 182

**Al-Ata, M:** *see* Astakhov, VP, Osman, MOM, and Al-Ata, M

**Anand, RS and Kumar, V:** PC-based near real-time ultrasonic imaging system for flaw characterization, Nov., 529

**Ann, TS, Fang, FT, and Tiong, CC:** New apparatus for measuring the drainage properties of porous asphalt mixes, July, 370

**Arbel, A:** Estimating creep rates during tensile cyclic loading, May, 358

**Astakhov, VP,**

**Osman, MOM, and Al-Ata, M:** Statistical design of experiments in metal cutting—Part One: Methodology, May, 322

**Osman, MOM, and Al-Ata, M:** Statistical design of experiments in metal cutting—Part Two: Applications, May, 328

#### B

**Bagchee, A:** *see* Wang, B, Bhattacharya, A, Bagchee, A, Wang, W, and Succop, PA

**Bailey, WH, Jr.:**

Experimental determination of the cooling curve for production of continuous-cast steel billets, Jan., 49

Review of *Theory and Practice of Force Measurement* by Bray et al., Jan., 149

**Ballim, Y:** *see* Gibbon, GJ, Ballim, Y, and Greive, GRH

**Bastian, FL:** *see* Fortes, CJFO and Bastian, FL

**Beres, W, Koul, AK, and Thamburaj, R:** Tapered double-cantilever-beam specimen designed for constant-*K* testing at elevated temperatures, Nov., 536

**Bhattachar, VS:** Instantaneous coefficient of linear thermal expansion—a new definition, Sept., 479

**Bhattacharya, A:** *see* Wang, B, Bhattacharya, A, Bagchee, A, Wang, W, and Succop, PA

**Blau, PJ:**

Introduction to symposium on needs and applications in precision measurement and monitoring of wear, March, 215

Needs and challenges in precision wear measurement, March, 216

*see* Yust, CS and Blau, PJ

**Bolingbroke, R:** *see* Shi, H, McLaren, AJ, Sellars, CM, Shahani, R, and Bolingbroke, R

**Bray, DE, Tang, W, and Grewal, DS:** Ultrasonic stress evaluation in a compressor rotor, Sept., 503

**Budinski, KG:** Needs and applications in precision measurement and monitoring of wear, March, 226

#### C

**Cai, Z, Hunt, MO, Fridley, KJ, and Rosowsky, DV:** New technique for evaluating damping of longitudinal free vibration in wood-based materials, July, 456

**Cassanelli, AN, de Vedia, LA, and Herrera, R:** Determination of  $\eta_{pl}$  factor: influence of side grooving, Nov., 543

**Cesar-Spall, K and Spall, JC:** Regression analysis as an aid in making oboe reeds, July, 439

**Chadbourn, BA:** *see* Newcomb, DE, Chadbourn, BA, and Van Deusen, DA

**Chang, DJ and Hanna, WD:** Shear lap-joint testing with rubber substrate, July, 406

**Charmchi, M:** *see* Gibson, PW, Elsaid, AE, Kendrick, CE, Rivin, D, and Charmchi, M

**Chen, X and Matsumura, M:** Effect of preloading on the strength of soda-lime glass, May, 354

**Choi, M-S:** *see* Kim, J-D and Choi, M-S

**Chu, YC:** *see* Huang, W, Chu, YC, Rokhlin, SI, and Wright, PK

**Chuai, C-T:** *see* Tan, S-A, Fwa, T-F, Chuai, C-T, and Low, B-H

#### D

**Danyluk, S:** *see* Zanoria, ES, Hamall, K, Danyluk, S, and Zharin, AL

**de Vedia, LA:** *see* Cassanelli, AN, de Vedia, LA, and Herrera, R

**Deopura, BL:** *see* Mahajan, SJ and Deopura, BL

**Di, S and Thomson, PF:** Neural network approach for prediction of wrinkling limit in square metal sheet under diagonal tension, Jan., 74

**Divinsky, M, Nesichi, S, and Livneh, M:** Development of a road roughness profile delineation procedure, July, 445

**Dolan, JD:** *see* Stelmokas, JW, Zink, AG, Loferski, JL, and Dolan, JD

**Dravitzki, VK and Potter, SM:** Use of the Tortus and the Pendulum with the 4S rubber for the assessment of slip resistance in the laboratory and the field, Jan., 127

**Dumbleton, JH:** *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

#### E

**Elder, HM:** *see* Ajayi, JO and Elder, HM

**Elsaid, AE:** *see* Gibson, PW, Elsaid, AE, Kendrick, CE, Rivin, D, and Charmchi, M

**Epps, HH and Leonas, KK:** Relationship between porosity and air permeability of woven textile fabrics, Jan., 108

Essner, A: *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

## F

Fang, FT: *see* Ann, TS, Fang, FT, and Tiong, CC

Fleischer, DH: *see* Marpet, MI and Fleischer, DH

**Foderberg, DC:** Introduction to symposium on international advanced vehicle/transportation infrastructure technology, March, 189

**Fortes, CJFO and Bastian, FL:** Modified normalization method for developing *J-R* and CTOD-*R* curves with the LMN function, May, 302

Fridley, KJ: *see* Cai, Z, Hunt, MO, Fridley, KJ, and Rosowsky, DV

**Fwa, T-F**

*see* Tan, S-A, Fwa, T-F, Chuai, C-T, and Low, B-H

**Tan, SA, and Low, BH:** Relating triaxial test properties of asphalt mixtures to mix parameters determined by Marshall stability test, Sept., 471

## G

Gangloff, RP: *see* Haynes, MJ and Gangloff, RP

Geng, YP: *see* Leung, CKY and Geng, YP

**Gibbon, GJ, Ballim, Y, and Grieve, GRH:** Low-cost, computer-controlled adiabatic calorimeter for determining the heat of hydration of concrete, March, 261

**Gibson, PW, Elsaiid, AE, Kendrick, CE, Rivin, D, and Charmchi, M:** Test method to determine the relative humidity dependence of the air permeability of woven textile fabrics, July, 416

Goldsmith, E: *see* Leimer, S, Moore, MA, and Goldsmith, E

**Golinkin, IA, Ruff, DD, Kvam, EP, McCabe, GP, and Grandt, AF, Jr.:** Application of analysis of variance (ANOVA) statistical methods to breaking load corrosion test, Nov., 565

**Gong, Y and Norton, MP:** Strain-controlled cumulative fatigue with mean strains and high-cycle and low-cycle interaction, July, 429

**González, JJ, Gutiérrez-Solana, F, Sánchez, L, and Setién, J:** Low-temperature aging kinetics in cast duplex stainless

steels: experimental characterization, March, 154

**Gragg, CE:** Computerized chemical structural information (CSI) and associated data: a study of computerized CSI pathways used by synthesis chemists, and recommendations for guidelines, May, 337

Grandt, AF, Jr.: *see* Golinkin, IA, Ruff, DD, Kvam, EP, McCabe, GP, and Grandt, AF, Jr.

Grewal, DS: *see* Bray, DE, Tang, W, and Grewal, DS

Grieve, GRH: *see* Gibbon, GJ, Ballim, Y, and Grieve, GRH

Gutiérrez-Solana, F: *see* González, JJ, Gutiérrez-Solana, F, Sánchez, L, and Setién, J

## H

Hamall, K: *see* Zanoria, ES, Hamall, K, Danyluk, S, and Zharin, AL

Hanna, WD: *see* Chang, DJ and Hanna, WD

Hartwig, KT: *see* Hua, CY, McDonald, LC, and Hartwig, KT

Hassan, MA: *see* Seif, MA, Kishawy, HA, and Hassan, MA

Havens, R: *see* McNaney, JM, Havens, R, and Ritchie, RO

**Hawley, L:** Hoechst Celanese improves consistency of cellulose acetate through automated viscosity measurement, Sept., 525

**Haynes, MJ and Gangloff, RP:** High resolution *R*-curve characterization of the fracture toughness of thin sheet aluminum alloys, Jan., 82

Herrera, R: *see* Cassanelli, AN, de Vedia, LA, and Herrera, R

**Hua, CY, McDonald, LC, and Hartwig, KT:** Eddy current decay resistivity measurements using a digital voltmeter, Jan., 41

**Huang, W, Chu, YC, Rokhlin, SI, and Wright, PK:** Ultrasonic characterization of interphasal properties in sapphire/Haynes 214 composites, Jan., 1

Hunt, MO: *see* Cai, Z, Hunt, MO, Fridley, KJ, and Rosowsky, DV

Hutchings, IM: *see* Rutherford, KL and Hutchings, IM

## I-J

Isacsson, U: *see* Lu, X and Isacsson, U

**Johnston, RG:** Effective vulnerability assessment of tamper-indicating seals, July, 451

## K

**Kayser, B:** Experiments increase understanding of chronic obstructive lung disease, Nov., 584

Kelley, MR: *see* Klein, LA, Kelley, MR, and Mills, MK

Kendrick, CE: *see* Gibson, PW, Elsaiid, AE, Kendrick, CE, Rivin, D, and Charmchi, M

**Kim, J-D and Choi, M-S:** Study on the prediction of roundness variation by hone dynamics in honing, Nov., 556

Kishawy, HA: *see* Seif, MA, Kishawy, HA, and Hassan, MA

Kjøller, J: *see* Schrøder-Pedersen, A, Kjøller, J, and Larsen, B

**Kleemans, CP, Zuidema, J, Krans, RL, Molenaar, JMM, and Tolman, F:** Fatigue and creep crack growth in fine sand asphalt materials, July, 424

**Klein, LA, Kelley, MR, and Mills, MK:** Evaluation of overhead and in-ground vehicle detector technologies for traffic flow measurement, March, 205

Koul, AK: *see* Beres, W, Koul, AK, and Thamburaj, R

Krans, RL: *see* Kleemans, CP, Zuidema, J, Krans, RL, Molenaar, JMM, and Tolman, F

Kumar, V: *see* Anand, RS and Kumar, V

Kvam, EP: *see* Golinkin, IA, Ruff, DD, Kvam, EP, McCabe, GP, and Grandt, AF, Jr.

## L

Lapeyre, JA: *see* Perkins, SW, Schulz, JL, and Lapeyre, JA

Larsen, B: *see* Schrøder-Pedersen, A, Kjøller, J, and Larsen, B

**Leimer, S, Moore, MA, and Goldsmith, E:** Effects of laundering and exposure to light on environmentally-improved fabrics, Sept., 497

Leonas, KK: *see* Epps, HH and Leonas, KK

**Leung, CKY and Geng, YP:** Mixed mode fiber pull-out equipment: applications and results, May, 283

Lewis, EQ: *see* Adams, DF and Lewis, EQ

**Little, RE:** Effect of specimen thickness on the long-life fatigue performance of a randomly-oriented continuous-strand glass-mat-reinforced polypropylene composite, Sept., 491

Livneh, M: *see* Divinsky, M, Nesichi, S, and Livneh, M

Loferski, JL: *see* Stelmokas, JW, Zink, AG, Loferski, JL, and Dolan, JD

**Lopes, R, Mazzeranghi, A, Ronchiato, G, and Vangi, D:** Ultrasonic technique for monitoring automotive components, Sept., 516

Low, B-H:  
*see* Fwa, TF, Tan, SA, and Low, BH  
*see* Tan, S-A, Fwa, T-F, Chuai, C-T, and Low, B-H

**Lu, X and Isacson, U:** Characterization of styrene-butadiene-styrene polymer modified bitumens—comparison of conventional methods and dynamic mechanical analyses, July, 383

## M

**Mahajan, SJ and Deopura, BL:** Evaluation of the fibrillation behavior of oriented polymer tapes using a tensile test method, May, 315

**Mandel, J:** Repeatability and reproducibility for pass/fail data, March, 151

**Marpet, MI and Fleischer, DH:** Comparison of walkway safety tribometers: Part Two, Jan., 115

Matsumura, M: *see* Chen, X and Matsumura, M

Mazzeranghi, A: *see* Lopes, R, Mazzeranghi, A, Ronchiato, G, and Vangi, D

McCabe, GP: *see* Golinkin, IA, Ruff, DD, Kvam, EP, McCabe, GP, and Grandt, AF, Jr.

McClaran, J: *see* Waked, E, Robbins, S, and McClaran, J

**McDonald, BJ and Trautner, JJ:** Calibrating instrument readings using a bivariate confidence interval, Jan., 36

McDonald, LC: *see* Hua, CY, McDonald, LC, and Hartwig, KT

McLaren, AJ: *see* Shi, H, McLaren, AJ, Sellars, CM, Shahani, R, and Bolingbroke, R

**McNaney, JM, Havens, R, and Ritchie, RO:** Elastic compliance of the compact tension specimen comprising two linear-

elastic materials bonded with a thin layer, Jan., 28

**McNitt, AS, Middour, RO, and Waddington, DV:** Development and evaluation of a method to measure traction on turf-grass surfaces, Jan., 99

Meeker, WQ: *see* Pascual, FG and Meeker, WQ

Middour, RO: *see* McNitt, AS, Middour, RO, and Waddington, DV

Mills, MK: *see* Klein, LA, Kelley, MR, and Mills, MK

**Miyagi, Z, Yamada, N, Urahama, N, and Yamamoto, K:** Analysis of plowing and adhesive effects in the rolling ball tack method for pressure sensitive adhesives, Jan., 23

Molenaar, JMM: *see* Kleemans, CP, Zuidema, J, Krans, RL, Molenaar, JMM, and Tolman, F

Moore, MA: *see* Leimer, S, Moore, MA, and Goldsmith, E

Morris, B: *see* O'Connor, DJ, Morris, B, and Silcock, GWH

**Munro, RG:** Material specifications of advanced ceramics and other issues in the use of property databases with corrosion analysis models, May, 349

**Murphy, JF:** Transverse vibration of a simply supported beam with symmetric overhang of arbitrary length, Sept., 522

## N

Nesichi, S: *see* Divinsky, M, Nesichi, S, and Livneh, M

**Newcomb, DE, Chadbourn, BA, and Van Deusen, DA:** Relationship between statistical distributions of traffic loads and pavement responses, March, 190

Norton, MP: *see* Gong, Y and Norton, MP

## O

**O'Connor, DJ, Morris, B, and Silcock, GWH:** Methodology for the fire resistance testing of structural components at reduced scale, May, 273

Olaniyan, J: *see* Aissi, C and Olaniyan, J

Osman, MOM: *see* Astakhov, VP, Osman, MOM, and Al-Ata, M

Owens, JM: *see* Sacher, A and Owens, JM

## P

**Papagiannakis, AT:** Calibration of weigh-in-motion systems through dynamic vehicle simulation, March, 197

**Pascual, FG and Meeker, WQ:** Analysis of fatigue data with runouts based on a model with nonconstant standard deviation and a fatigue limit parameter, May, 292

**Pellicane, PJ and Robinson, G:** Effect of construction adhesive and joist variability on the deflection behavior of light-frame wood floors, March, 163

**Perkins, SW, Schulz, JL, and Lapeyre, JA:** Local versus global strain measurement of a polymeric geogrid, Nov., 576

**Petersen, DR:** Review of *Theory and Design for Mechanical Measurements* by Figliola and Beasley, July, 461

Polineni, VK: *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

Potter, SM: *see* Dravitzki, VK and Potter, SM

**Prine, D:** First continuous remote bridge monitoring system ensures safe operation of 65-year-old rolling bascule bridge, Jan., 267

## R

Ritchie, RO: *see* McNaney, JM, Havens, R, and Ritchie, RO

Rivin, D: *see* Gibson, PW, Elsaid, AE, Kendrick, CE, Rivin, D, and Charmchi, M

Robbins, S: *see* Waked, E, Robbins, S, and McClaran, J

Robinson, G: *see* Pellicane, PJ and Robinson, G

Rokhlin, SI: *see* Huang, W, Chu, YC, Rokhlin, SI, and Wright, PK

Ronchiato, G: *see* Lopes, R, Mazzeranghi, A, Ronchiato, G, and Vangi, D

Rosowsky, DV: *see* Cai, Z, Hunt, MO, Fridley, KJ, and Rosowsky, DV

Ruff, DD: *see* Golinkin, IA, Ruff, DD, Kvam, EP, McCabe, GP, and Grandt, AF, Jr.

**Rutherford, KL and Hutchings, IM:** Theory and application of a micro-scale abrasive wear test, March, 250

## S

**Sacher, A and Owens, JM:** Introduction to international symposium on slip resis-

tance: the interface of man, footwear, and walking surfaces, Jan., 114

Sánchez, L: *see* González, JJ, Gutiérrez-Solana, F, Sánchez, L, and Setién, J

Schabron, JF: *see* Sorini, SS and Schabron, JF

Schindler, HJ and Veidt, M: Determination of tensile properties at increased strain rates and various temperatures, Nov., 571

Schröder-Pedersen, A, Kjølner, J, and Larsen, B: Comparison of calculated geometric surface area and measured BET surface area for a metal powder, July, 365

Schulz, JL: *see* Perkins, SW, Schulz, JL, and Lapeyre, JA

Seif, MA, Kishawy, HA, and Hassan, MA: Residual stresses in plastic pipes by laser speckle technique, Sept., 465

Sellars, CM: *see* Shi, H, McLaren, AJ, Sellars, CM, Shahani, R, and Bolingbroke, R

Setién, J: *see* González, JJ, Gutiérrez-Solana, F, Sánchez, L, and Setién, J

Shahani, R: *see* Shi, H, McLaren, AJ, Sellars, CM, Shahani, R, and Bolingbroke, R

Sharpe, WN, Jr.: *see* Yuan, B and Sharpe, WN, Jr.

Shaw, LL: Measurement of the fracture energy of interfaces in composites through sandwich-type chevron-notched specimens, July, 391

Shi, H, McLaren, AJ, Sellars, CM, Shahani, R, and Bolingbroke, R: Hot plane strain compression testing of aluminum alloys, Jan., 61

Silcock, GWH: *see* O'Connor, DJ, Morris, B, and Silcock, GWH

Sokol, M: *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

Sorini, SS and Schabron, JF: Development and precision testing of a standard test method for screening fuels in soils, July, 400

Spall, JC: *see* Ceasar-Spall, K and Spall, JC

Splett, JD: *see* Wang, JC-M and Splett, JD

Stark, C: *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

Stelmokas, JW, Zink, AG, Loferski, JL, and Dolan, JD: Measurement of load distribution in multiple-bolted wood connections, Sept., 510

Succop, PA: *see* Wang, B, Bhattacharya, A, Bagchee, A, Wang, W, and Succop, PA

Sun, DC: *see* Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH

## T

Tan, S-A

Fwa, T-F, Chuai, C-T, and Low, B-H: Determination of thermal properties of pavement materials and unbound aggregates by transient heat conduction, Jan., 15 *see* Fwa, TF, Tan, SA, and Low, BH

Tang, W: *see* Bray, DE, Tang, W, and Grewal, DS

Thamburaj, R: *see* Beres, W, Koul, AK, and Thamburaj, R

Thomson, PF: *see* Di, S and Thomson, PF

Tiong, CC: *see* Ann, TS, Fang, FT, and Tiong, CC

Tolman, F: *see* Kleemans, CP, Zuidema, J, Krans, RL, Molenaar, JMM, and Tolman, F

Toomer, B: *see* U, AS and Toomer, B

Trautner, JJ: *see* McDonald, BJ and Trautner, JJ

## U

U, AS and Toomer, B: Expert infobase system for tracing hazardous materials in engineering documents and system requirements for materials information standardization, May, 341

Urahama, N: *see* Miyagi, Z, Yamada, N, Urahama, N, and Yamamoto, K

## V

Van Deusen, DA: *see* Newcomb, DE, Chadbourn, BA, and Van Deusen, DA

Vangi, D: *see* Lopes, R, Mazzeranghi, A, Ronchiato, G, and Vangi, D

Veidt, M: *see* Schindler, HJ and Veidt, M

## W

Waddington, DV: *see* McNitt, AS, Mid-dour, RO, and Waddington, DV

Waked, E, Robbins, S, and McClaran, J: Effect of footwear midsole hardness and thickness on proprioception and stability in older men, Jan., 143

Wang, A, Polineni, VK, Essner, A, Sokol, M, Sun, DC, Stark, C, and Dumbleton, JH: Significance of nonlinear motion in the wear screening of orthopaedic implant materials, March, 239

Wang, B, Bhattacharya, A, Bagchee, A, Wang, W, and Succop, PA: Kinematic methods for quantifying loss of balance while negotiating a curved path on a slippery surface, Jan., 135

Wang, C, Zhou, Y, and Xia, Y: Constitutive model for metals at high strain rates accurately determined by the tensile impact recovery experimental technique, July, 378

Wang, JC-M and Splett, JD: Consensus values and reference values illustrated by the Charpy machine certification program, May, 308

Wang, W: *see* Wang, B, Bhattacharya, A, Bagchee, A, Wang, W, and Succop, PA

Wright, PK: *see* Huang, W, Chu, YC, Rokhlin, SI, and Wright, PK

## X-Y

Xia, Y: *see* Wang, C, Zhou, Y, and Xia, Y

Yamada, N: *see* Miyagi, Z, Yamada, N, Urahama, N, and Yamamoto, K

Yamamoto, K: *see* Miyagi, Z, Yamada, N, Urahama, N, and Yamamoto, K

Yuan, B and Sharpe, WN, Jr.: Fatigue testing of microspecimens from a weldment, Sept., 485

Yust, CS and Blau, PJ: Precision profilometry of wear scars on curved surfaces, March, 246

## Z

Zanoria, ES, Hamall, K, Danyluk, S, and Zharin, AL: Nonvibrating Kelvin probe and its application for monitoring surface wear, March, 233

Zharin, AL: *see* Zanoria, ES, Hamall, K, Danyluk, S, and Zharin, AL

Zhou, Y: *see* Wang, C, Zhou, Y, and Xia, Y

Zink, AG: *see* Stelmokas, JW, Zink, AG, Loferski, JL, and Dolan, JD

Zuidema, J: *see* Kleemans, CP, Zuidema, J, Krans, RL, Molenaar, JMM, and Tolman, F