

George E. Totten, Ph.D., FASM

TEL: 206-784-0880 (Home)

206-788-0188 (Office)

FAX: 815-461-7344

Email: GETotten@aol.com

514 N. 86th Street

Seattle, WA 98103

TECHNICAL SKILLS:

- Internationally recognized expert on quenching of steel and aluminum
- Internationally recognized expert on fire resistant hydraulic fluids, including lubrication.
- Successfully conducted a broad range of research projects for a wide range of industrial applications.

PROFESSIONAL EXPERIENCE:

1970 – 2001 - **Union Carbide Corporation**

2001 – 2001 - **The Dow Chemical Company**

2001 – 2001- Adjunct Professor – **Polytechnic University of New York (New York, NY)**

2001 – Present – President of **G.E. Totten & Associates, LLC**

2004 – Present – Research Professor – **Portland State University (Portland, OR)**

2005 – 2006 - Visiting Scholar – **Texas A&M University (College Station, TX)**

2006 – Present – Visiting Professor - Department of Engineering, Materials, Aeronautics and Automobile Technology, School of Engineering at São Carlos, (**University of São Paulo, São Carlos, Brazil**)

2006 – Present – Associate - **Associação Instituto Internacional de Pesquisa**, (São Carlos, SP, Brazil)

2006 – Present – Adjunct Professor - **Texas A&M University (College Station, TX)**

My research has encompassed nearly all of the business areas of the former Union Carbide. A partial list of technical areas where I have conducted research includes:

- Designed and synthesized surfactants for polyurethane foams applications
- Synthesized silane coupling agents for filled rubber applications
- Developed new polymers for various applications including surfactants, flocculation agents, asphalt dispersants, and antifoams
- Studied end-group functionalization of poly (alkylene oxide) copolymers to enhance thermal/oxidative stability for use as heat transfer fluids
- Developed methods of anchoring mildewcides in water-based paints
- Developed permanent hydrophilic treatments for various textiles
- Developed new lubricant compositions for polyester fiber, fiberfill, and fabrics
- Conducted structure performance studies on polymers, both anhydrous and aqueous solutions for use as metal quenchants
- Conducted antioxidant structure-performance studies to model thermal / oxidative stability in heat transfer fluid formulations
- Developed new corrosion inhibitor systems for aqueous polymer solutions used as metal quenchants and water-glycol hydraulic fluids
- Studied additive structure performance effects on the lubrication properties of hydraulic fluids

In addition to my technical work, I have made numerous trips to South America and Asia where I performed various market development tasks including: distributor identification, training and assistance in sales promotion. Most of my work has been in: metal quenchants, heat treatment and surface engineering (25 years), hydraulic fluid technology (20 years) and basic research of lubrication (30 years).

From 1978-1989 I was a part-time Ph.D. candidate at **New York University**. From about 1980-1985, I had a half-time leave of absence from Union Carbide to complete my Ph.D. degree. The title of my research dissertation was: "Substituted Neopentyl Systems *via* Silyl Ketene Acetal Chemistry and Acetolysis of Alkyl-Substituted Neopentyl Derivatives". Degree was awarded in September, 1989.

EDUCATION:

- Ph.D., New York University, Physical Organic Chemistry (1989)
- M.S., Fairleigh Dickinson University, Organic Chemistry (1978)
- B.S., Fairleigh Dickinson University, Chemistry (1974)
- AAS, Broome Technical Community College, Chemical Technology (1970)

MEMBERSHIPS:

- ASM International (ASM),
- Brazilian Association of Metallurgy and Materials (ABM)
- American Chemical Society (ACS)
- Society of Automotive Engineers (SAE),
- Society of Tribologists and Lubrication Engineers (STLE),
- American Society for Testing and Materials (ASTM),
- American Society of Mechanical Engineers (ASME)

AWARDS AND RECOGNITION:

- ACS Outstanding Chemistry Student Award – 1970
- Union Carbide Corporate Fellow Outstanding Technologist Award – 1994
- Elected Fellow of ASM International (FASM) - 1997
- ASTM Excellence in Symposium and Publication Management – 1997
- ASTM Committee D-2 Award of Appreciation - 1998
- Elected as Honorary Member of the Russian Metallurgists Association – 1998
- ASTM Committee D-2 Award of Excellence – 2000
- SAE McFarland Award - 2000
- Elected Fellow of SAE International – 2002
- ASTM Committee D-2 Scroll of Achievement Award – 2004
- BCC (Broome Community College) Alumni Achievement Award – 2004
- Jiangsu University (Zhenjiang, China) Visiting Faculty Lecturer – 2004
- Elected Fellow of IFHTSE (International Federation for Heat Treatment and Surface Engineering) – 2005
- ASTM Award of Merit (and became a Fellow of ASTM) – 2006
- Honorary Member of the Shanghai Heat Treatment of Metals Society – 2006
- Founding Fellow AMME (World Academy of Materials Manufacturing Engineering) - 2006
- Bodeen Award – Heat Treating Society of ASM International – 2007
- George E. Totten Symposium on Quenching – Heat Treating Society of ASM International – 2007
- ASTM Dudley Award - 2008

PRESIDENT/CHAIRMAN:

- Chairman of ASM Quenching and Cooling Committee – 1988-2001
- Co-chairman of ASM/HTS Technical Programming Committee – 1994-2002
- Chairman of SAE FCIM Board – 2001- 2004
- President of International Federation for Heat Treating and Surface Engineering (IFHTSE) – (2002-2004)
- Chairman of ASTM International’s Committee on Publications (COP) – 2003-2006

EDITORIAL BOARD MEMBERSHIP

- Inżynieria Powierzchni (Surface Engineering – Inst. of Precision Mechanics - Poland)
- Jinshu Rechuli (Heat Treatment of Metals – CMES - China)
- Rechuli (Heat Treatment of Metals – Shanghai Society for Heat Treatment)
- Industrial Heat Engineering (Inst. of Eng. Thermophysics, National Academy of Sciences of Ukraine – Ukraine)
- **Associate Editor** – Journal of ASTM International (ASTM International)
- Int. Journal of Materials & Product Technology (Inderscience)
- Int. Journal of Microstructure and Materials Properties (Inderscience)
- WSEAS Transactions on Heat and Mass Transfer
- Research Letters in Materials Science
- **Deputy Editor-In-Chief** – Journal of Achievements in Materials and Manufacturing Engineering (JAMME)
- Strojni.ki vestnik – Journal of Mechanical Engineering (Slovenia) – International Advisory Board
- International Heat Treatment and Surface Engineering – International Advisory Board

PUBLICATIONS:

Coauthored or edited over 30 books and Conference Proceedings including: Conf. Proceed. Quenching and Distortion Control, 2. Handbook of Quenchants and Quenching Technology, 3. Heat Treating: Equipment and Processes - 1994 Conf. Proc. 4. Fire Resistance of Industrial Fluids, 5. Tribology of Hydraulic Pump Testing , 6. 2nd International Conference on Quenching and Control of Distortion, 7. Steel Heat Treatment Handbook, 8. Handbook of Hydraulic Fluid Technology, 9. Conf. Proceed .3rd International Conference on Quenching and Control of Distortion, 10. Handbook of Aluminum: Physical Metallurgy and Processes, 11. Handbook of Residual Stress, Distortion and Cracking of Steel, 12. ASTM Fuels and Lubes Manual.

In addition to a Ph.D. thesis and books, publications also include: 16 patents, over 500 journal and technical papers, magazine and trade journal articles, book chapters, and conference papers. These papers are mostly in the area of poly (ethylene glycol) as phase transfer catalysts, various aspects of heat treating, quenching and surface engineering technology, hydraulic fluids and lubrication technology. **A complete listing of all publications is attached.**

CONFERENCES ORGANIZED AND CHAIRED OR CO-CHAIED

1. "1st International Conference on Quenching and the Control of Distortion", ASM International, Lincolnshire, IL, 1992. (Co-chaired with Dr. C.E. Bates)
2. "Poly (Ethylene Glycols) As Phase Transfer Catalysts" - American Chemical Society Division of Polymeric Materials: Science and Engineering - ACS National Meeting, Boston, MA, 1993
3. "First International Conference on Equipment and Processes", ASM International, Schaumburg, IL, 1994 (Co-chaired with Dr. R.A. Wallis)
4. "International Conference on Fire Resistance Testing of Industrial Lubricants", ASTM, D-2 Meeting in Indianapolis, IN, June 1995 (Co-chaired with Ing. J. Reichel - DMT Germany)
5. "Tribology of Hydraulic Pump Testing", ASTM, D-2 Meeting in Houston, TX, December 1995 (Co-chaired with G.H. Kling (Caterpillar) and D.M. Smolenski (GM Research))
6. "Hydraulic Fluids Symposium", IFPE '96 (Hosted by NFPA, Chicago, IL, April 1996 (Co-chaired with G.H. Kling (Caterpillar) and H.M. Melief (Rexroth Corp.))
7. "Hydraulic Fluid Technology", SAE Toptec Conference, Pittsburgh, PA, September 1996 (Co-chaired with G.H. Kling (Caterpillar) and H.M. Melief (Rexroth Corp))
8. "2nd International Conference on Quenching and the Control of Distortion", ASM International, Cleveland, OH, 1996 (Co-chaired with Dr. M.A.H. Howes (IITRI) and Dr. S. Sjostrom (ABB Stal))
9. "Hydraulic Fluid Technology", SAE Toptec Conference", Schaumburg, IL, August 19-20, 1998 (Co-chaired with G.H. Kling (Caterpillar) and H.M. Melief (Rexroth Corp))
10. "3rd International Conference on Quenching and Control of Distortion", Prague, Czech Republic, March, 1999 (Co-Chaired with Prof. B. Liscic and Prof. H.M. Tensi)
11. "International Symposium on Hydraulic Failure Analysis: Fluids", Components, and System Effects, Reno, NV, December 5-6, 1999 (Co-Chaired with Prof. D. Feldmann and D. Wills)
12. "Symposium on Bench Testing of the Lubrication and Wear Properties of Industrial Fluids Used in Machinery Applications", Seattle, WA, June 24-27, 2000. (Co-chaired with L.D. Wedeven, J.R. Dickey and M. Anderson.).
13. "Hydraulic Fluids Symposium", IFPE 2000 (Hosted by NFPA, Chicago, IL, April 2000 (Co-chaired with G.H. Kling (Caterpillar) and H.M. Melief (Rexroth Corp.))
14. "20th Conference of the Heat Treating Society", St. Louis, MO, October 2000, (Co-Chaired with K. Funatani (Nihon Parkerizing Co. Ltd.)).
15. The 13th International Federation for Heat Treatment and Surface Engineering Congress", October 7-10, 2002, Columbus, OH. (Co-chaired with Dr. Robert Tucker (The Tucker Group, LLC))

16. "4th International Conference on Quenching & Control of Distortion", Beijing, China – November, 2003 (Co-chaired with Prof. Pan Jiansheng (Shanghai Jiaotong University))
17. "4th International Conference on Thermal Process Modeling and Computer Simulation", Shanghai, China – May 31-June 2, 2010 (Co-chairing with Prof. Weimin Zhang)

G.E. TOTTEN - PUBLICATIONS

1. Williams, T.C. and Totten, G.E., "Polysulfide Silicon Compounds", *USP* 4,113,696, Sept. 12, 1978.
2. Williams, T.C. and Totten, G.E., "Polymer Composite Articles Containing Episulfide Substituted Organosilicon Coupling Agents", *USP* 4,140,830, Feb. 20, 1979.
3. Williams, T.C. and Totten, G.E., "Amino Substituted Mercapto Organosilicon Compounds", *USP* 4,147,712, April 3, 1979.
4. Williams, T.C. and Totten, G.E., "Polymer Composite Articles Containing Polysulfide Silicon Coupling Agents", *USP* 4,151,157, Apr. 24, 1979.
5. Williams, T.C. and Totten, G.E., "Polymer Composite Articles Containing Amino Substituted Mercapto Organo Silicon Coupling Agents", *USP* 4,156,677, May 29, 1979.
6. Williams, T.C. and Totten, G.E., "Polymer Composite Articles Containing Polysulfide Silicon Coupling Agents", *USP* 4,210,459, Jul. 1, 1980.
7. Williams, T.C. and Totten, G.E., "Polymer Composite Articles Containing Amino Substituted Mercapto Organo Silicon Coupling Agents", *USP* 4,218,513, Aug. 19, 1980.
8. Goddard, E.D., Matteson, G.H. and Totten G.E., "Counterion Effects In A Cationic Monolayer", *J. Coll. Interface Sci.*, **1982**, 85, p 19-27.
9. Totten, G.E. and Williams, T.C., "Liquid Crystal Silanes", *USP* 4,316,041, Feb. 16, 1982.
10. Totten, G.E., Wesson, J.P., Williams, T.C. and Eager, R.G., "Mildewcidal Silane Compounds", *USP* 4,339,581, Jul. 13, 1982.
11. Wenke, G., Jacobsen, E.N., Totten, G.E., Karydas, A.C. and Rhodes, Y.E., "Silyl Ketene Acetal Chemistry: Steric Limitations In Lewis Acid-Promoted Addition Of Ketones", *Synth. Comm.*, **1983**, 13, p 449-458.
12. Totten, G.E. and Pines A.N., "Alkoxy Functional Silicones", *Eur. Pat.* 123,935, Jul. 11, 1984.
13. Totten, G.E. and Sabia, A.J., "Process For Imparting Hydrophilicity To Fabric", *USP* 4,463,036, July 31, 1984.
14. Totten, G.E. and Williams, T.C., "Liquid Crystal Silanes", *USP* 4,496,482, Jan. 29, 1985.
15. Totten, G.E., Wenke, G. and Rhodes, Y.E., "Dimerization Of Silyl Ketene Acetal: Effect Of Lewis Acid Selection On Product Yield And Structure", *Synth. Comm.*, **1985**, 15, p 291-300.
16. Jacobsen, E.N., Totten, G.E., Wenke, G., Karydas, A.C., and Rhodes, Y.E., "Steric Effects On The Titanium Tetrachloride Promoted Dimerization Of Silyl Ketene Acetals", *Synth. Comm.*, **1985**, 15, p

301-306.

17. Totten, G.E. and Pines, A.N., "Alkoxy Functional Silicones", *USP* 4,579,964, Apr.1, 1986.
18. Harding, R.H. and Totten, G.E., "Method of Indirect Liquid-Phase Heat Transfer", *USP* 4,617,984, Oct. 21, 1986.
19. Harding, R.H. and Totten, G.E., "Method of Indirect Liquid-Phase Heat Transfer", *USP* 4,624,299, Nov. 25, 1986.
20. Totten, G.E., Goddard, E.D., Matteson, G.H. and Wanchisen, M.L., "Counterion Effects On The Aqueous Solution Viscosity Of Cationic Surfactants", *J. Am. Oil Chem. Soc.*, **1986**, 63, p. 1586-1589.
21. Totten, G.E., Dakins, M.E., Ananthapadmanabhan, K.P. and Heins, R.W., "Cooling Rate Curve Area: A New Measure Of Quenchant Performance", *Heat Treat.*, **1987**, December, p 18-20.
22. Totten, G.E. and Clinton, N.A., "Poly(ethylene glycol) Derivatives as Phase Transfer Catalysts and Solvents for Organic Reactions", *Rev. Macromol. Chem. Phys.*, **1988**, C28(2), p 293-337.
23. Dakins, M.E., Totten, G.E. and Heins, R.W., "Cooling Curve Shape Analysis Can Help Evaluate Quenchants", *Heat Treat.*, **1988**, December, p 38-39.
24. Totten, G.E., Dakins, M.E. and Heins, R.W., "Cooling Curve Analysis Of Synthetic Quenchants - A Historical Perspective", *J. Heat. Treat.*, **1988**, 6, p 87-95.
25. Bates, C.E. and Totten, G.E., "Procedure for Quenching Media Selection to Maximize Tensile Properties and Minimize Distortion in Aluminum - Alloy Parts", *Heat Treat. of Metals*, **1988**, 4, p. 89-98.
26. Totten, G.E., Bates, C.E. and Jarvis, L.M., "Quench Factor Analysis: Polymers vs. Hot Water", *Heat Treat.*, **1989**, May, p. 38-40.
27. Totten, G.E. and Johnson, G.C., "Random Polyether Foam Control Agents", *USP* 4,836,951, June 6, 1989.
28. Jarvis, L.M., Blackwood, R.R., and Totten, G.E., "Thermal Separation of Polymer Quenchants for More Efficient Heat Treatments", *Ind. Heat.*, **1989**, November, p 23-24.
29. Totten, G.E., Dakins, M.E. and Jarvis, L.M., "How H-Factors Can Be Used To Characterize Polymers", *Heat Treat.*, **1989**, December, p 28-29.
30. Dakins, M.E., Bates, C.E., and Totten, G.E., "Calculation of Grossman Hardenability Factor from Quenchant Cooling Curves", *Metallurgia*, **1989**, 56, p S7-S9.
31. Totten, G.E., "Substituted Neopentyl Systems via Silyl Ketene Acetal Chemistry and Acetolysis of Alkyl-Substituted Neopentyl Derivatives", Ph.D. Dissertation, New York University, 1989.
32. Bates, C.E. and Totten, G.E., "Procedure for Quenching Media Selection to Maximize Tensile Properties and Minimize Distortion in Aluminum - Alloy Parts", *Nauchno-Prikladnoi Zhurnal (J. Appl. Science)*, **1989**, 11, p 86-100.
33. Totten, G.E., "Polymer Quenchants: The Basics", *Adv. Mat. & Proc.*, **1990**, Vol. 137, No. 3, p 51-53.
34. Alvardia, L.A., Totten, G.E. and Orszak, K.B., " Strategies for the Replacement of Oil Quenchants with Aqueous Polymers", *45 Congresso Anual - Associacao Brasileira de Metals*, **1990**, 3, p 389-406.

35. Totten, G.E., Wenke, G., Kawamura, H. and Rhodes, Y.E., "Synthesis of 2-Isopropylideneadamantane via a Novel Silylketene Acetal Fragmentation", Presented at the 199th National Meeting of the American Chemical Society, Boston, MA, April 1990; Paper ORGN 396.
36. Bates, C.E. and Totten, G.E., "Quantifying Quench-Oil Cooling Characteristics", *Adv. Mat. & Proc.*, **1991**, 3, p 25-28.
37. Totten, G.E., Blackwood, R.R. and Jarvis, L.M., "Analyzing Polymer Quenchants During Use", *Heat Treat.*, **1991**, March, p. 16-18.
38. Bates, C.E., Totten, G.E. and Orszak, K.B., "Quench Severity Effects on the Properties of Selected Steel Alloys", Quenching and Carburizing - 3RD International Seminar of IFHT, Melbourne, Australia, 1991; p 46-65.
39. Mues, E., Orszak, K.B., and Totten, G.E., "Selection and Use of Polymer Quenchants", Paper Presented at the Second Tribological Meeting", Organized by the Centro Argentino de Tribologia - Comite Tecnico de la Camara Argentina de Lubricantes, August 15,1991.
40. Bates, C.E., Totten, G.E., and Brennan, R.L., "Quenching of Steel", ASM Handbook - Volume 4: Heat Treating, ASM International 1991, p. 67-120.
41. Totten, G.E., Orszak, K.B., Jarvis, L.M., and Blackwood, R.R., "How to Effectively Use Polymer Quenchants", *Ind. Heat.*, **1991**, October, p 37-41.
42. Totten, G.E., C.E. Bates and L.M. Jarvis, "Type I Quenchants for Aluminum Heat Treating", *Heat Treat.*, **1991**, December, p 16-19.
43. Totten, G.E., "Novel Thickened Water-Glycol Hydraulic Fluids For Use At High Pressures", Proceedings of the International Fluid Power Applications Conference - Emperical Design and Applications, Chicago, IL, March 24-26, 1992; p. 419 - 428.
44. Dakins, M.E., Bates, C.E. and Totten, G.E., "Estimating Quench Severity with Cooling Curves", *Heat Treat.*, **1992**, April, p 24-26.
45. Bates, C.E. and Totten, G.E., "Quench Severity Effects on the As-Quenched Hardness of Selected Alloy Steels", *Heat Treatment of Metals*, **1992**, 2, p 45-48.
46. Bates, C.E. and Totten, G.E., "Method for Predicting Quench Severity Effects on the Properties of Aluminum and Steel Alloys: I", *Ind. Heat.*, **1992**, August, p 19-23.
47. Totten, G.E., Orszak, K.B., Jarvis, L.M., and Blackwood, R.R., "Selection and Use of Polymer Quenchants", *Heat Treatment of Metals (China)*, **1992**, 7, p 53-58.
48. Totten, G.E., "Thickened Water-Glycol Hydraulic Fluids for Use at High Pressures", *SAE Technical Paper Series*, Paper No. 921738, (1992).
49. Conf. Proceed. Quenching and Distortion Control, Totten, G.E., Ed.; ASM International, Materials Park, OH, 1992.
50. Bates, C.E. and Totten, G.E., "Application of Quench Factor Analysis to Predict Hardness Under Laboratory and Production Conditions", In Conf. Proceed. Quenching and Distortion Control, Totten, G.E., Ed.; ASM International, Materials Park, OH, 1992; p 33-39.
51. Lally, K.S., Kearny, M.W. and Totten, G.E., "Quench Tank Agitation", In Conf. Proceed. Quenching and Distortion Control, Totten, G.E., Ed.; ASM International, Materials Park, OH, 1992; p 95-105.

52. Han, S-W, Yun, S.G. and Totten, G.E., "Continuously Variable Agitation in Quench System Design", In Conf. Proceed. Quenching and Distortion Control, Totten, G.E., Ed.; ASM International, Materials OH, 1992; p 119-126.
53. Totten, G.E. and Lally, K.S., "Proper Agitation Dictates Quench Success - Part I", *Heat Treat.*, **1992**, September, p 12-17.
54. Bates, C.E. and Totten, G.E., "Method for Predicting Quench Severity Effects on the Properties of Aluminum and Steel Alloys: II", *Ind. Heat.*, **1992**, October, p 29-31.
55. Lally, K.S. and Totten, G.E., "Proper Agitation Dictates Quench Success - Part 2", *Heat. Treat.*, **1992**, October, p 28-31.
56. Totten, G.E., "Hydraulic Fluids Take The Heat", *Machine Design*, **1992**, October 22, p 153-156.
57. C.E. Bates and G.E. Totten, "Kwantificering van Koelkarakteristieken van Afschrikolien", *Roestvast Staal*, **1992**, 8, p21-27.
58. K.S. Lally, M.W. Kearney and G.E. Totten, "Quench Tank Agitation for Optimizing Heat Treatments", *Ind. Heat.*, **1993**, March, p 49-54.
59. G.E. Totten, N.A. Clinton and P.L. Matlock, "Polyethylene Glycols as Phase-Transfer Catalysts - A Review", Proceedings of The American Chemical Society Division of Polymeric Materials: Science and Engineering, **1993**, 69, p 480-481.
60. G.E. Totten, "Thickened Water-Glycol Hydraulic Fluids For Use At High Pressures", New Achievements in Fluid Power Engineering: Proceedings of the Third International Conference on Fluid Power Transmission and Control (*'93 ICFP*), L. Yongxiang, G. Yiyuan and W. Rongliang, Ed; Int. Academic Publishers, 1993; p 3-9.
61. G.E. Totten, T. Narumi, and L.M. Jarvis, "Chemistry of Quenching", Environmental and Energy Efficient Heat Treatment Technologies: Proceedings of the 4th International Seminar of International Federation for Heat Treatment and Surface Engineering, S. Zhoujun and W. Yingsi, Ed., Int. Academic Publishers, Sept. 15-17, 1993, Beijing China; p 259-268.
62. K.S. Lally, D. Wan and G.E. Totten, "Quench Tank Agitation", Environmental and Energy Efficient Heat Treatment Technologies: Proceedings of the 4th International Seminar of International Federation for Heat Treatment and Surface Engineering, S. Zhoujun and W. Yingsi, Ed., Int. Academic Publishers, Sept. 15-17, 1993, Beijing China; p 282-292.
63. S.G. Yun, S-W. Han and G.E. Totten, "Continuously Variable Agitation in Quench System Design", Environmental and Energy Efficient Heat Treatment Technologies: Proceedings of the 4th International Seminar of International Federation for Heat Treatment and Surface Engineering, S. Zhoujun and W. Yingsi, Ed., Int. Academic Publishers, Sept. 15-17, 1993, Beijing China; p 282-292.
64. R.D. Howard and G.E. Totten, "Expansion of Application Potential of Polymer Quenchants Using Membrane Separation", Environmental and Energy Efficient Heat Treatment Technologies: Proceedings of the 4th International Seminar of International Federation for Heat Treatment and Surface Engineering, S. Zhoujun and W. Yingsi, Ed., Int. Academic Publishers, Sept. 15-17, 1993, Beijing China; p 298-306.
65. L.D. Wedeven and G.E. Totten, "Performance Map Characterization of Lubricating Oils - Characterization of Gear Lubricants Formulated from Different Base Oils", *SAE Technical Paper Series*, Paper Number 932437, (1993).

66. G.E. Totten and G.M. Webster, "Review of Testing Methods for Hydraulic Fluid Flammability", *SAE Technical Paper Series*, Paper Number, 932436, (1993).
67. K.S. Lally and G.E. Totten, "Quench Tank Agitator", *Jinshu Rechuli (Heat Treatment of Metals -Beijing)*, **1993**, 11, p 24-29.
68. G.E. Totten, T. Narumi and L.M. Jarvis, "Quenchant Chemistry Holds the Key to Improved Shop Operations", *Heat. Treat.*, **1993**, December, p 16-19.
69. S.G. Yun, S-W. Han, and G.E. Totten, "Continuously Variable Agitation in Quench System Design", *Ind. Heat.*, **1994**, January, p 35-38.
70. G.E. Totten, C.E. Bates and N.A. Clinton, Handbook of Quenchants and Quenching Technology, ASM International, Materials Park, OH, 1993.
71. G.E. Totten and G.M. Webster, "High Performance Thickened Water-Glycol Hydraulic Fluids", *Proceedings of the 46th National Conference on Fluid Power*, March 23-24, 1994, p 185-194.
72. Heat Treating: Equipment and Processes - 1994 Conference Proceedings, G.E. Totten and R.A. Wallis, Ed., ASM International, Materials Park, OH, Schaumburg, IL; April 1994.
73. H.M. Tensi, A. Stich and G.E. Totten, "Fundamentals About Quenching By Submerging", In Heat Treating: Equipment and Processes - 1994 Conference Proceedings, G.E. Totten and R.A. Wallis Ed., ASM International, Materials Park, OH, 1994, p 243-251.
74. B. Liscic and G.E. Totten, "Controllable Delayed Quenching", In Heat Treating: Equipment and Processes - 1994 Conference Proceedings, G.E. Totten and R.A. Wallis, Ed., ASM International, Materials Park, OH, 1994, p 251-262.
75. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Principles and Applications of the Immersion Time Quenching System in Batch and Continuous Processes", In Heat Treating: Equipment and Processes - 1994 Conference Proceedings, G.E. Totten and R.A. Wallis, Ed., ASM International, Materials Park, OH, 1994, p 337-345.
76. G.E. Totten and G.M. Webster, "Hydraulic Fluid Flammability Testing", *Off-Highway Engineering*, **1994**, April, p 11-15.
77. G.E. Totten, L.M. Jarvis and J. Guadarrama, "Poly(Alkylene Glycol) Quenchants for Aluminum Heat Treating", In Conf. Proceed. Vol. 1 - 3rd International Conference on Aluminum Processing, May 26 -29, 1994, Cancun, Mexico, p 271-285.
78. G.E. Totten and E. Mues, "Thickened Water-Glycol Fluids for Use at High Pressures", Paper Presented at the Third Tribological Meeting", Organized by the Centro Argentino de Tribologia - Comite Tecnico de la Camara Argentina de Lubricantes, August 8-12, 1994.
79. L.D. Wedeven and G.E. Totten, "Performance Map Characterization of Lubricating Oils: Characterization of Gear Lubricants Formulated from Different Base Oils", Paper Presented at the Third Tribological Meeting", Organized by the Centro Argentino de Tribologia - Comite Tecnico de la Camara Argentina de Lubricantes, August 8-12, 1994.
80. G.E. Totten and G.M. Webster, "Review of Testing Methods for Hydraulic Fluid Flammability", Paper Presented at the Third Tribological Meeting", Organized by the Centro Argentino de Tribologia - Comite Tecnico de la Camara Argentina de Lubricantes, August 8-12, 1994.
81. G.E. Totten, R.J. Bishop, R.L. McDaniels, D.P. Braniff and D.J. Irvine, "Effect of Low Molecular Weight Carboxylic Acids on Hydraulic Pump Wear", *SAE Technical Paper Series*, Paper Number 941751,(1994).

82. L.D. Wedeven, G.E. Totten and R.J. Bishop, "Performance Map Characterization of Hydraulic Fluids", *SAE Technical Paper Series*, Paper Number 941752,(1994).
83. G.E. Totten, G.M. Webster and C. Ulisses, "Chemistry of Quenching", 49 Congresso Anual - Novos Tipos de Aço e suas Aplicações; Tratamento Térmico, Associação Brasileira de Metais, **1994**, 8, p 241- 254.
84. R.D. Howard and G.E. Totten, "Membrane Separation of Polymer Quenchants", 49 Congresso Anual Novos Tipos de Aço e suas Aplicações; Tratamento Térmico, Associação Brasileira de Metais, **1994**, 8, p. 255-266.
85. G.E. Totten, R.J. Bishop and G.M. Webster, "Novel Thickened Water-Glycol Hydraulic Fluids For Use At High Pressures", Paper No. CL-99, 1994 AISE Annual Conception, Cleveland, OH, Sept. 1994.
86. G.E. Totten and G.M. Webster, "Rail Steel Production With New Aqueous Polymer Quenching Technology", *Proceedings Of The International Symposium On: Rail Steels for the 21st Century*, B.L. Bramfitt, R.K. Steel and J.H. Martens Ed. (Iron and Steel Society) Baltimore, MD, Oct. 16-19, 1994.
87. S.W. Han, G.E. Totten and G.M. Webster, "Principles and Applications of the Immersion Time Quenching System in Batch and Continuous Processes", 9th International Congress on Heat Treatment and Surface Engineering and 5th French Open International Conference on Heat Treatment, Nice, France, Sept. 26-28,1994, p.325-333.
88. R.D. Howard and G.E. Totten, "Membrane Separation of Polymer Quenchants", *Metal Heat Treating*, **1994**, Vol.1 No.5, p 22-24.
89. G.E. Totten, S.W. Han, B. Liscic, S. Sanghi, and R.D. Howard, "Recent Technology Developments Expanding the Utility of Polymer Quenchants", *Progress in Thermal Treatment of Materials*, p. Ramakrishnan Ed., New Age International Publishers, Bombay, 1995, p. 195-205.
90. N. Gopinath and G.E. Totten, "Importance of Agitation on Quenching", *Progress in Thermal Treatment of Materials*, P. Ramakrishnan Ed., New Age International Publishers, Bombay, 1995, p. 207-217.
91. G.E. Totten, R.J. Bishop Jr., R.L. McDaniels, D.P. Braniff and D.J. Irvine, "Acidic Breakdown of Hydraulic Fluid", *Off-Highway Engineering*, **1995**, April, p. 19-22.
92. D.A. Wachter, R.J. Bishop Jr., R.L. McDaniels and G.E. Totten, "Water-Glycol Hydraulic Fluid Performance Monitoring: Fluid Performance and Analytical Strategy", *SAE Technical Paper Series*, Paper Number 952155, (1995).
93. G.E. Totten, R.J. Bishop Jr., R.L. McDaniels, and G.H. Kling, "Evaluation of Hydraulic Fluid Performance: Correlation of Water-Glycol Fluid Performance by ASTM D-2882 Vane Pump and Various Bench Tests" , *SAE Technical Paper Series*, Paper Number 952156,(1995).
94. H.M. Tensi, A. Stich, and G.E. Totten, "Fundamentals of Quenching", *Metal Heat Treating*, **1995**, Mar./Apr., p. 20-28.
95. G.E. Totten and R.J. Bishop Jr., "Hydraulic Pump Testing Procedures to Evaluate Lubrication Performance of Hydraulic Fluids", *SAE Technical Paper Series*, Paper Number 952092, (1995).
96. G.E. Totten and R.J. Bishop Jr., "Historical Overview of the Development of Water-Glycol Hydraulic Fluids", *SAE Technical Paper Series*, Paper Number 952077, (1995).

97. L.D. Wedeven, G.E. Totten and R.J. Bishop Jr., "Performance Map and Film Thickness Characterization of Hydraulic Fluids", *SAE Technical Paper Series*, Paper Number 952091, (1995).
98. G.E. Totten and G.M. Webster, "Fire Resistance Testing Procedures: A Review and Analysis", in Fire Resistance of Industrial Fluids, Ed. by G.E. Totten and J. Reichel, ASTM STP 1284, June 1995.
99. G.E. Totten and J. Reichel, Ed., Fire Resistance of Industrial Fluids, ASTM STP 1284, June 1995.
100. G.E. Totten, R.J. Bishop Jr., and G.H. Kling, "Correlation of Water-Glycol Hydraulic Fluid Performance by ASTM D-2882 Versus Various Bench Tests", Proceedings of the International Tribology Conference - Vol. II, Japanese Society of Tribologists, Yokohama, 1996, p. 921-926.
101. G.E. Totten, R.J. Bishop Jr., T. Narumi, and D.A. Wachter, "Water-Glycol Hydraulic Fluid Performance Monitoring: Fluid Performance and Analytical Strategy", Proceedings of the International Tribology Conference - Vol. II, Japanese Society of Tribologists, Yokohama, 1996, p. 903-908.
102. L.D. Wedeven, G.E. Totten and R.J. Bishop Jr., "Performance Map and Film Thickness Characterization of Hydraulic Fluids", Proceedings of the International Tribology Conference - Vol. II, Japanese Society of Tribologists, Yokohama, 1996, p. 1095-1100.
103. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Immersion Time Quenching", *Adv. Mat. and Proc.*, **1995**, Sept., p. 42AA-42DD.
104. G.E. Totten, R.J. Bishop Jr. and G.M. Webster, "Novel Thickened Water-Glycol Hydraulic Fluids For Use At High Pressures", *Iron and Steel Engineer*, **1995**, Sept., p. 41-45.
105. G.E. Totten, R.J. Bishop Jr., R.L. McDaniels and D.A. Wachter, "Water-Glycol Hydraulic Fluid Maintenance - Pump Wear Implications and Recommendations", Paper No. , 1995, AISE Annual Convention, Pittsburgh, PA, Sept. 1995.
106. G.E. Totten, G.M. Webster, R.R. Blackwood, L.M. Jarvis and T. Narumi, "Designing Chute Quench for Continuous Furnace Heat Treating Effectively", *Ind. Heat.*, **1995**, Nov., p. 49-52.
107. G.E. Totten, "Fire Resistance of Hydraulic Fluids", *Fuels & Lubes Int.*, **1995**, 1(8), p. 10-11.
108. G.E. Totten, G.M. Webster and E. Mues, "Quenching Fundamentals: Effect of Agitation", First Argentina - USA, Bilateral Symposium on Material Science and Engineering - (FAUSASMAT '95), Nov.12-16, 1995, Buenos Aires, Argentina.
109. G.E. Totten and R.J. Bishop Jr., "Evaluation of Vickers V-104 and 20VQ5 Vane Pumps for ASTM D- 2882 Wear Tests Using Water-Glycol Hydraulic Fluids"; TRIBOLOGY OF HYDRAULIC PUMP TESTING , George E. Totten, Gary H. Kling and Donald M. Smolenski, Ed., American Society for Testing and Materials, Philadelphia, 1995, p. 118-128.
110. R.J. Bishop Jr. and G.E. Totten, "Tribological Testing With Hydraulic Pumps: A Review and Critique", TRIBOLOGY OF HYDRAULIC PUMP TESTING , George E. Totten, Gary H. Kling and Donald M. Smolenski, Ed., American Society for Testing and Materials, Philadelphia, 1995, p.65-84.
111. L.D. Wedeven, G.E. Totten and R.J. Bishop Jr., "Testing Within the Continuum of Multiple Lubrication and Failure Mechanisms", TRIBOLOGY OF HYDRAULIC PUMP TESTING , George E. Totten, Gary H. Kling and Donald M. Smolenski, Ed., American Society for Testing and Materials, Philadelphia, 1995, p.3-20.

112. TRIBOLOGY OF HYDRAULIC PUMP TESTING STP 1310 , George E. Totten, Gary H. Kling and and Donald M. Smolenski, Ed., American Society for Testing and Materials, Philadelphia, 1995.
113. S-W. Han, Zhao Haiou and G.E. Totten, "Principles and Applications of the Immersion Time Quenching System in Batch and Continuous Processes", *Jinshu Rechuli (Heat Treatment of Metals)*, **1995**, 11, p. 19-23.
114. N.I. Kobasko, A.A. Moskalenko, G.E. Totten and G.M. Webster, "Determination of the Second Critical Density of Heat Flux on the Basis of Tests on Standard Samples "Promyshlennaya Teplotekhnika,**1995**, 17 (5), p. 83-87.
115. N.I. Kobasko, A.A. Moskalenko, G.E. Totten and G.M. Webster, "Study of the Effect of Various Technological Factors on the Second Critical Heat Flux", *Promyshlennaya Teplotekhnika*, **1995**, 17(6), p. 57-64.
116. G.E. Totten, G.M. Webster and N. Gopinath, "Quenching Fundamentals: Effect of Agitation", *Adv. Mat. & Proc.*, **1996**, 2, p.73-76.
117. H.M. Tensi, K. Lainer, G.E. Totten and G.M. Webster, "Quenching Uniformity and Surface Cooling Mechanisms", in Heat Treating: Proceedings of the 16 th Conference, Ed. J.L. Dossett and R.E. Luetje, ASM International, Materials Park, OH, 1996, p. 3-8.
118. H.M. Tensi, K. Lainer, G.E. Totten and G.M. Webster, "Industrial Polymer Quenchants - Determination of Cooling Characteristics Labatory Test Method", p.in Heat Treating:Proceedings of the 16 th Conference, Ed. J.L. Dossett and R.E. Luetje, ASM International, Materials Park, OH, 1996, p. 443-449.
119. G.E. Totten, G.M. Webster, L.M. Jarvis and C.E. Bates, "Cooling Curve and Quench Factor Characterization of 2024 and 7075 Aluminum Bar Stock Quenched in Type I Polymer Quenchants",in Heat Treating: Proceedings of the 16 th Conference, Ed. J.L. Dossett and R.E. Luetje, ASM International, Materials Park, OH, 1996, p. 221-229.
120. G.M. Webster and G.E. Totten, "Cooling Curve Analysis - Data Acquisition", in Heat Treating: Proceedings of the 16 th Conference, Ed. J.L. Dossett and R.E. Luetje, ASM International, Materials Park, OH, 1996, p. 427-434.
121. G. Sanchez Sarmiento, G.E. Totten, G.M. Webster and E. Mues, "Computational Determination of Heat Transfer Coefficients of Aqueous Polyalkylene Glycol Bath Solutions in Quenching Operations", in Heat Treating: Proceedings of the 16th Conference, Ed. J.L. Dossett and R.E. Luetje, ASM International, Materials Park, OH, 1996, p. 383-390.
122. C.H. Faulkner, G.E. Totten and G.M. Webster, "Fire Resistance Testing: A Technology Overview and Update", Proceedings of the 47th National Conference on Fluid Power, Volume 1, Chicago, IL, April 23-25, 1996; pp. 75-81.
123. R.J. Bishop Jr., G.E. Totten, G.M. Webster and D.A. Wachter , "Maintenance of Water-Glycol Hydraulic Fluids", Proceedings of the 47th National Conference on Fluid Power - Volume 1, Chicago, IL, April 23-25, 1996; pp. 107-116.
124. L.D. Wedeven, G.E. Totten and R.J. Bishop, Jr., "Hydraulic Fluid Lubrication: Performance Map and Effective Film Thickness Characterization", Proceedings of the 47th National Conference on Fluid Power - Volume 1, Chicago, IL, April 23-25, 1996; pp. 21-29.
125. G.E. Totten, R.J. Bishop Jr., and G.H. Kling, "Prediction of Hydraulic Pump Lubrication

Performance: Bench Test Modeling", Proceedings of the 47th National Conference on Fluid Power - Volume 1, Chicago, IL, April 23-25, 1996; pp. 31-41.

126. G.E. Totten, J. Guadarrama, G.M. Webster, R.R. Blackwood and L.M. Jarvis, "Aluminum Distortion Reduction With Type I Quenchants: Principles and Applications", 5th International Conference on Aluminum Processing, June 20-23, Instituto Mexicano Del Alumino, A.C., **1996**, Ixtapa, Mexico.
127. H.M. Tensi, A. Stich, G.E. Totten, G.M. Webster and J. Guadarrama, "Importance of Surface Cooling Mechanism on Quenching Uniformity, Distortion and Cracking", 5th International Conference on Aluminum Processing, June 20-23, Instituto Mexicano Del Alumino, A.C., **1996**, Ixtapa, Mexico.
128. G.E. Totten, G.M. Webster, R.R. Blackwood, L.M. Jarvis and T. Narumi, "Chute Quench Recommendations for Continuous Furnace Applications with Aqueous Polymer Quenchants", *Heat Treat. Metals*, **1996**, No. 2, pp. 36-39.
129. R.R. Blackwood, L.M. Jarvis, G.E. Totten, G.M. Webster and T. Narumi, "Reducing Aluminum Distortion With Type 1 Quenchants", *Metal Heat Treating*, **1996**, May/June, pp. 28-31.
130. G.E. Totten and G.M. Webster, "Quenching Fundamentals: Maintaining Polymer Quenchants", *Adv. Mat. & Proc.*, **1996**, June, pp. 64AA-64DD.
131. A.V. Sverdlin, G.E. Totten and G.M. Webster, "Analysis of Polymer-Based Quenching Media", *Metallovedeniye i Termicheskaya Obrabotka Metallov*, **1996**, No. 2, pp. 9-12.
132. S.W. Han, A.V. Sverdlin, G.E. Totten and G.M. Webster, "Systems for Regulating the Submersion Time of Pieces in the Quenching Medium During Intermittent and Continuous Processes", *Metallovedeniye I Termicheskaya Obrabotka Metallov*, **1996**, No. 2, pp. 12-16.
133. G.E. Totten, R.J. Bishop Jr. and G.M. Webster, "Water-Glycol Hydraulic Fluid Evaluation by ASTM D-2882: Significant Contributors to Erroneous and Non-Reproducible Results", SAE Technical Paper Series, Paper No. 961740, (1996).
134. G.E. Totten and R.J. Bishop Jr., "Attempted Bench Test Correlation of Hydraulic Fluids with the ASTM D-2882 Vickers Vane Pump Test", Proceedings AISE 1996 Annual Convention Vol.1, September 30, 1996, Chicago, IL, pp. 735-747.
135. G.E. Totten, R.J. Bishop Jr., R.L. McDaniels and D.A. Wachter, "Water-Glycol Hydraulic Fluid Maintenance", *Iron and Steel Engineer*, **1996**, Oct., p. 34-38.
136. K. Funatani and G.E. Totten, "Overview of Prof. Tamura's Work in Cooling Process Research", In Conf. Proceed. Quenching and Control Of Distortion II, Totten, G.E., Ed.; ASM International, Materials OH, 1996; p. 3-15.
137. H.M. Tensi and G.E. Totten, "Development of the Understanding of the Influence of Wetting Behavior on Quenching: An Historical Perspective", Conf. Proceed. 2nd International Conference on Quenching and Control Of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjostrom, ASM International, Materials OH, 1996, p. 17-27.
138. B. Liscic, V. Grubiscic and G.E. Totten, "Inverse Hardness Distribution and Its Influence on Mechanical Properties", Conf. Proceed. 2nd International Conference on Quenching and Control Of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjostrom, ASM International, Materials OH, 1996, p.47-54.

139. H.M. Tensi and G.E. Totten, "Calibration and Agitation in Quenching Tanks and Correlation of Success of Hardening with Agitation Rates: A Proposal", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials OH, 1996, p.85-91.
140. A.A. Moskalenko, N.I. Kobasko, O.V. Tolmachova, G.E. Totten and G.M. Webster, "Quenchants Characterization by Acoustical Noise Analysis Cooling Properties of Aqueous Poly(Alkylene Glycol) Polymer Quenchants", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials OH, 1996, p. 117-122.
141. D. McCleod Jr., G.E. Totten and G.M. Webster, "Characterization of Thermally Separated Poly (Alkylene Glycol) Polymer Quenchants by ESR Spectroscopy", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials Park , OH, 1996, p. 525-534.
142. G.E. Totten, H.M. Tensi, G.M. Webster and L.M. Jarvis, "Cooling Curve Analysis - International and National Standard Development: A Status Report", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials OH, 1996, p. 585-593.
143. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Successful Use of Polymer Quenchants with Crack-Sensitive Steels", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström ASM International, Materials OH, 1996, p.509-515.
144. D.S. MacKenzie, G.E. Totten, and G.M. Webster, "Quenching Fundamentals: Heat Transfer", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials OH, 1996, p. 329-340.
145. Z.H. Ou, G.E. Totten, G.M. Webster and Y. Sun, "PAG Polymer Quenchants: Increasingly Viable Quench Oil Replacements", Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström, ASM International, Materials OH, 1996, p. 517-524.
146. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjoström Eds., Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, ASM International, Materials OH, 1996.
147. A. Sverdlin, G.E. Totten, C. Bates and L.M. Jarvis, "Use of a Quenching Factor to Predict the Properties of a Polymer Quenching Media", *Metallovedeniye i Termicheskaya Obrabotka Metallov*, **1996**, No. 6, p. 14-17.
148. A. Sverdlin, G.E. Totten, and G.M. Webster, "Polyalkylene Glycol-Based Quenching Media for the Heat Treatment of Aluminum Alloys", *Metallovedeniye i Termicheskaya Obrabotka Metallov*, **1996**, No. 6, p. 17-19.
149. A. Sverdlin, R. Blackwood and G.E. Totten, "Thermal Method of Purifying Polymer Quenching Media", *Metallovedeniye i Termicheskaya Obrabotka Metallov*, **1996**, No. 2, pp. 19-20.
150. Hans M. Tensi und George E. Totten, "Quantifizierung der Konvektion in Abschrecktanks bezüglich ihrer Auswirkung auf die Abschreckleistung", AWT Härtereikolloquium Wiesbaden; 1996.
151. N.I. Kobasko, A.A. Moskalenko, G.E. Totten and G.M. Webster, "Experimental Determination of the First and Second Critical Heat Flux Densities and Quench Process Characterization", *J. Mat. Eng. Perf.*, **1997**, Vol. 6(1), p. 93-101.

152. G.E. Totten and M.A.H. Howes Ed., Steel Heat Treatment Handbook, 1997, Marcel Dekker, Inc., New York.
153. H.M. Tensi, A. Stich, and G.E. Totten, "Quenching and Quenching Technology", Chapter 4 in Steel Heat Treatment Handbook, Ed. By G.E. Totten and M.A.H. Howes, 1997, Marcel Dekker, Inc., New York, p.157-249.
154. G.E. Totten and M.A.H. Howes, "Distortion of Heat Treated Components", Chapter 5 in Steel Heat Treating Handbook, Ed. By G.E. Totten and M.A.H. Howes, 1997, Marcel Dekker, Inc., New York, p.251-292.
155. G.E. Totten, G.R. Garsombke, D. Pye and R.W. Reynoldson, "Heat Treating Equipment", Chapter 6 in Steel Heat Treatment Handbook, Ed By G.E. Totten and M.A.H. Howes, 1997, Marcel Dekker, Inc., New York, p. 293-481.
156. G.E. Totten, G.M. Webster, L.M. Jarvis and C.E. Bates, "Effect of Section Size, Quenchant Concentration and Agitation on the Physical Properties of Type I Polymer Quenched Aluminum Alloys", in Proceedings of the 1st International Non-Ferrous Processing and Technology Conference, Eds. T. Bains and D.S. MacKenzie, ASM International, Materials Park, OH, March 10 12, 1997, p. 7-16.
157. G.E. Totten, G.M. Webster and C.E. Bates, "Quench Factor Analysis: Step-By-Step Procedures for Experimental Determination", in Proceedings of the 1st International Non-Ferrous Processing and Technology Conference, Eds. T. Bains and D.S. MacKenzie, ASM International, Materials Park, OH, March 10-12, 1997, p. 305-312.
158. G.E. Totten and G.M. Webster, " Alternatives to Water Quenching of Aluminum Alloys: A Review", in Proceedings of the 1st International Non-Ferrous Processing and Technology Conference, Eds. T. Bains and D.S. MacKenzie, ASM International, Materials Park, OH, March 10-12, 1997, p.163-173.
159. D.A. Wachter, G.E. Totten and G.M. Webster, "Quenching Fundamentals: Maintaining Quench Oils", *Adv. Mat. & Proc.*, **1997**, No. 2, p. 48AA-48CC.
160. G.E. Totten and G.M. Webster, "Fire Resistant Fluid Testing", *Fluid Power Journal*, **1997**, March/April, p.3,32.
161. G.E. Totten, G.M. Webster, C.E. Bates, S.W. Han and S.H. Kang, "Limitations of the Use of Grossman Quench Severity Factors", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 411-422.
162. G.E. Totten, G.M. Webster, R.R. Blackwood, and L.M. Jarvis, "Bath Maintenance and Troubleshooting of Polymer Quenchant Related Problems in Induction Heat Treating", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 951-956.
163. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Applications of Polymer Quenchants for High Hardenability, Crack-Sensitive Steels", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 373-379.

164. H.M. Tensi, G.E. Totten and G.M. Webster, "Proposal to Monitor Agitation of Production Quench Tanks", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 423-431.
165. G.E. Totten, G.M. Webster, L.M. Jarvis, S.W. Han and S.H. Kang, "Thermal/Oxidative Stability and Polymer Drag-Out Behavior of Polymer Quenchants", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 443-448.
166. D. McCleod, G.E. Totten and G.M. Webster, "Investigation of the Mechanism of Polymer Quenchant Mediation of Heat Transfer During Quenching by ESR Spectroscopy", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 433-441.
167. G.E. Totten, G.M. Webster, H.M. Tensi and B. Liscic, "Quenching Fundamentals: Standards for Cooling Curve Analysis", *Adv. Mat. & Proc.*, **1997**, Vol. 151, No. 6, p. 68LL-68OO.
168. X.L. Chen, L. Meekisho, M. Becker and G.E. Totten, "A Numerical Approach Examination of Obtaining Heat Transfer Coefficients by Quenching Probe Through Lumped Analysis", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p.355-361.
169. G.E. Totten, G.M. Webster, and C.E. Bates, "Aluminum Quenching with Polymer Quenchants: An Overview", in 17th Heat Treating Society Conference Proceedings Including the 1st International Induction Heat Treating Symposium, Eds., D. Milam, D. Poteet, G. Pfaffmann, W. Albert, A. Muhlbauer and V. Rudnev, ASM International, Materials Park, OH, 1997, p. 247-257
170. C. Sdregas, G.E. Totten and G.M. Webster, "Water-Glycol Hydraulic Fluids: Technological Advancements and Limitations", Transactions: 19th International Die Casting Congress & Exposition, North American Die Casting Association, Minneapolis, MN, Nov. 3-6, 1997, p. 97-101.
171. G.E. Totten and R.J. Bishop Jr., "ASTM D-2882 - Vicker's Vane Pump Test: Replacement of Vicker's V-104 Vane Pump with the 20VQ Vane Pump", AISE 1997 Annual Convention Proceedings - Vol.2, Oct. 1-2, 1997, Cleveland, OH, p. 1439-1452.
172. G.E. Totten, Y.H. Sun, and R.J. Bishop, "Hydraulic Fluids: Foaming, Air Entrainment and Air Release - A Review", *SAE Technical Paper Series*, Paper Number 972789, (1997).
173. G.E. Totten, J. Cerf, R.J. Bishop and G.M. Webster, "Recent Results of Biodegradability and Toxicology of Water-Glycol Hydraulic Fluids", *SAE Technical Paper Series*, Paper Number 972744, (1997).
174. S.W. Han, S.H. Kang, G.E. Totten, and G.M. Webster, "Polymer Quenchant Technology: Thermal Separation and Polymer Drag-Out Phenomenon", Proceedings of the 6th International Seminar of IFHT, Oct. 15-18, 1997, Kyongju, Korea, p. 458-464.
175. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Advances in Polymer Quenchant Technology", Proceedings of the 6th International Seminar of IFHT, Oct. 15-18, 1997, Kyongju, Korea, p. 465-472.
176. G.E. Totten, G.M. Webster, S.W. Han and S.H. Kang, "Limitations of the Use of Grossman Quench

- Severity Factor", Proceedings of the 6th International Seminar of IFHT, Oct. 15-18, 1997, Kyongju, Korea, p. 450-457.
177. Zhao Haiou, G.E. Totten, G.M. Webster and F. Yim, "Poly(Alkylene Glycol) Quenchants for Aluminum Heat Treating", *J. of Materials Eng. (China)*, **1997**, 1, p. 14-16.
 178. L.D. Wedeven, G.E. Totten, R.J. Bishop Jr. and Y.H. Sun, "Hydraulic Fluid Lubrication: Performance Map and Film Thickness Characterization", in Wear of Engineering Materials, Ed. J.A. Hawk, ASM International, Materials Park, OH, 15-18 September, 1997, p. 91-98.
 179. G.E. Totten and K. Funatani, "Present Accomplishments and Future Challenges of Quenching Technology", Proceedings of the 6th International Seminar of IFHT, Oct. 15-18, 1997, Kyongju, Korea, p. 20-27.
 180. G.E. Totten, G.M. Webster, S.H. Kang and S.W. Han, "Direct Forge Quench Quenching with Poly (Alkylene Glycol) Polymer Quenchants", in Accelerated Cooling/Direct Quenching of Steels, Ed. R. Asfahani, ASM International, Materials Park, OH, Sept. 15-18, 1997, p. 207-216..
 181. N.I. Kobasko, G.E. Totten, and G.M. Webster, "Interrupted Two-Step Cooling Using Poly(Alkylene Glycol) Quenchants", in Accelerated Cooling/Direct Quenching of Steels, Ed. R. Asfahani, ASM International, Materials Park, OH, Sept. 15-18, 1997, p.223-230.
 182. B. Liscic and G.E. Totten, "Benefits of Delayed Quenching", *Adv. Mat. & Proc.*, **1997**, No. 9, p. 180-184.
 183. G.E. Totten, R.J. Bishop, and G.M. Webster, "Hydraulic Fluid Evaluation by ASTM D-2882: Wear Rate Error Minimization", in *New Achievements and Ideals in Fluid Power Engineering*, Eds. L. Yongxiang and G. Yiyuan, 1997, International Academic Publishers, Beijing, PRC, p. 36-41.
 184. G.E. Totten, J. Cerf and G.M. Webster, "Performance, Biodegradability and Toxicology of High-Performance Hydrolubes", in *New Achievements and Ideals in Fluid Power Engineering*, Eds. L. Yongxiang and G. Yiyuan, 1997, International Academic Publishers, Beijing, PRC, p. 36-41.
 185. L.D. Wedeven, G.E. Totten and R.J. Bishop, "Tribological Modeling of Hydraulic Fluid Lubricity by Performance Map Film Thickness Evaluation", in *New Achievements and Ideals in Fluid Power Engineering*, Eds. L. Yongxiang and G. Yiyuan, 1997, International Academic Publishers, Beijing, PRC, p. 36-41.
 186. G.E. Totten, G.M. Webster and C.E. Bates, "Cooling Curve and Quench Factor Characterization of 2024 and 7075 Aluminum Bar Stocked Quenched in Type I Polymer Quenchant", *Promysh. Teplotek.*, **1997**, 19 (3), p. 59-65.
 187. G.E. Totten, G.M. Webster, and C. Ulisses, "Polymer Quenchant Technology: Thermal Separation and Polymer Drag-Out Phenomenon", Second International Congress on Metallurgy and Materials Technology, Associacao Brasileira de Metalurgia E Materiais, October 12-17, 1997, Sao Paulo, Brazil.
 188. S.W. Han, S.H. Kang, G.E. Totten and G.M. Webster, "Advances in Polymer Quenchant Technology", Second International Congress on Metallurgy and Materials Technology, Associacao Brasileira de Metalurgia E Materiais, October 12-17, 1997, Sao Paulo, Brazil.
 189. G.E. Totten, G.M. Webster and C. Ulisses, "Maintenance of Aqueous Polymer Quenchants", Second International Congress on Metallurgy and Materials Technology, Associacao Brasileira de Metalurgia E Materiais, October 12-17, 1997, Sao Paulo, Brazil.
 190. G.E. Totten, G.M. Webster, H.M. Tensi and B. Liscic, "Standards for Cooling Curve Analysis of

Quenchants”, *Heat Treatment of Metals*, **1997**, 4, p.92-94.

191. G.E. Totten, G.M. Webster and R.R. Blackwood, “Chute Quench design Recommendations”, *Industrial Heat Engineering (Ukraine)*, **1997**, Vol. 19, No. 6, p.57-60.
192. G.E. Totten, N.A. Clinton and P.L. Matlock, “Poly(Ethylene Glycol) and Derivatives as Phase Transfer Catalysts”, *J.M.S. - Rev. Macromol. Chem. Phys.*, **1998**, C38 (1), p. 77-142.
193. G.E. Totten, R.J. Bishop and G.M. Webster, “Water-Glycol Hydraulic Fluids: Technological Advancements and Limitations”, 11th International Colloquium, Industrial and Automotive Lubrication Vol. III, Ed. W.J. Bartz, Technische Akademie Esslingen, 13-15 January, 1998, p. 1803-1809.
194. L.D. Wedeven, K. Ludema and G.E. Totten, “Bench Test Modeling of Antiwear Properties of Hydraulic Fluids: A Proposal”, 11th International Colloquium, Industrial and Automotive Lubrication Vol. III, Ed. W.J. Bartz, Technische Akademie Esslingen, 13-15 January, 1998, p. 1817-1824..
195. G.E. Totten, G.M. Webster, R.R. Blackwood, L.M. Jarvis and T. Narumi, “Chute Quench Designs”, *Jinshu Rechuli - Heat Treatment of Metals*, **1998**, 1, p. 31-34.
196. D. Hanna, G.E. Totten and G.M. Webster, “Water-Glycol Hydraulic Fluids: A New Look”, *Proceed of the 4th Annual Fuels & Lubes Asia Conference*, January 14-16, 1998, Singapore, p. 14 - 14-21.
197. G.E. Totten, Y.H. Sun, G.M. Webster, C.E. Bates and L.M. Jarvis, “Computerized Steel Hardness Predictions Based on Cooling Curve Analysis”, *SME Technical Paper*, Paper Number CM98-203, 1998.
198. G.E. Totten, Y.H. Sun, B. Liscic, N.I. Kobasko and S.W. Han, “Polymer Quenching Technology: An Overview”, 11th Congress of the International Federation of Heat Treatment and Surface Engineering – 4th ASM Heat Treatment and Surface Engineering Conference in Europe *Proceedings Vol. 1*, 19-21 October, 1998, Florence Italy, p. 141-150.
199. G.E. Totten, Y.H. Sun, H.M. Tensi and B. Liscic, “Development of Cooling Curve Analysis Standards With Agitation: A Status Report”, 11th Congress of the International Federation of Heat Treatment and Surface Engineering – 4th ASM Heat Treatment and Surface Engineering Conference in Europe *Proceedings Vol. 1*, 19-21 October, 1998, Florence Italy, p. 171-180.
200. G.E. Totten, R.J. Bishop Jr. Y.H. Sun and L. Xie, “Hydraulic System Wear By Cavitation: A Review”, *SAE Technical Paper Series*, Paper Number 982036, 1998.
201. G.M. Gent, R.J. Bishop Jr. and G.E. Totten, “Review of ASTM D-2882 Hardware Problems and Suggested Solutions”, *SAE Technical Paper Series*, Paper Number 982021, 1998.
202. H.M. Melief, G.E. Totten and R.J. Bishop, “Overview of the Proposed Rexroth High-Pressure Piston Pump Testing Procedure for Hydraulic Fluid Qualification”, *SAE Technical Paper Series*, Paper Number 982022, 1998.
203. B. Liscic and G.E. Totten, “From GM Quenchometer via Cooling Curve Analysis to Temperature Gradient Method”, in 18th Heat Treating Society Conference *Proceedings*, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 601-609.
204. G.E. Totten, Y. Sun, G.M. Webster, L.M. Jarvis and C.E. Bates, “Quenchant Selection”, in 18th Heat Treating Society Conference *Proceedings*, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 183-191.

205. X. Chen, L. Meekisho and G.E. Totten, "Computer-Aided Analysis of the Quenching Probe Test", in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 545-551.
206. N.I. Kobasko, G.E. Totten, G.M. Webster and C.E. Bates, "Comparison of Cooling Capacity of Poly(Alkylene Glycol) Quenchants with Water and Oil", in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 559-567.
207. K. Lainer, H.M. Tensi and G.E. Totten, "Comparative Cooling Curve Performance of Two Vegetable Oils and a Mineral Oil", in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 568-574.
207. R.R. Blackwood, L.M. Jarvis, D.G. Hoffman and G.E. Totten, and "Conditions Leading to Quench Cracking Other than Severity of Quench", in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 575-585.
208. M. Tiryakioglu and G.E. Totten, "Quenching Aluminum Components in Water: Problems and Alternatives", in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 156-165.
209. N.I. Kobasko, M.A. Aronov, G.E. Totten and A. Sverdlin, "Methods and Equipment for Implementation of Intensive Quenching" in 18th Heat Treating Society Conference Proceedings, Eds., H. Walton and R. Wallis, ASM International, Materials Park, OH, 1998, p. 616-621.
210. G.E. Totten, G.M. Webster and R.J. Bishop Jr., "Biodegradability and Toxicity of a High-Performance Water-Glycol Hydraulic Fluid", AISE 1998 Annual Convention Proceedings, September 21-23, 1998, Pittsburgh, PA.
211. G.E. Totten, "Present Accomplishments and Future Challenges of Quenching Technology", Seminario Internacional de Tratamiento Termico, Associacao Brasileira de Metalurgia e Materiais (ABM), 21 September 1998, Sao Paulo, Brazil, p. 1-16.
212. L.M. Jarvis, G.E. Totten and G.M. Webster, "Use and Maintenance of Poly(Alkylene Glycol) Quenchants for Optimal Distortion Reduction in Induction Heat Treat Practices", in 8th International Induction Heat Treating Seminar, Kissimmee, FL, November 3-6, 1998.
213. G.E. Totten, G.M. Webster and C.E. Bates, "An Overview of Aluminum Quenching with Polymer Quenchants", Industrial Heating, **1998**, November, p. 61-64.
214. G.E. Totten, N.I. Kobasko, B. Liscic and S.W. Han, "Advances in Polymer Quenching Technology", The 1st International Automotive Heat Treating Conference, Eds. R. Colas, K. Funatani and C.A. Stickels, ASM International, Materials Park, OH, 1998, p. 37-44.
215. G.E. Totten, N.I. Kobasko and M.A. Aronov, "Intensive Quenching Practices for Automotive Part Production – An Overview", The 1st International Automotive Heat Treating Conference, Eds. R. Colas, K. Funatani and C.A. Stickels, ASM International, Materials Park, OH, 1998, p. 99-105.
216. G.E. Totten, R.R. Blackwood and L.M. Jarvis, "Importance of Quench Bath Maintenance", The 1st International Automotive Heat Treating Conference, Eds. R. Colas, K. Funatani and C.A. Stickels, ASM International, Materials Park, OH, 1998, p. 116-122.
217. G.E. Totten, G.M. Webster, S.W. Han and S.H. Kang, "Immersion Time Quenching Technology to Facilitate Replacement of Quench Oils with Polymer Quenchants for Production of Automotive Parts", The 1st International Automotive Heat Treating Conference, Eds. R. Colas, K. Funatani and C.A. Stickels, ASM International, Materials Park, OH, 1998, p. 449-455.

218. G.E. Totten and Y.H. Sun, "The Using and Maintenance of Water-Glycol Hydraulic Fluid", Chinese Hydraulics & Pneumatics, 1998, No. 4, p. 16-20.
219. G.E. Totten, G.M. Webster and C.E. Bates, "Cooling Curve and Quench Factor Characterization of 2024 and 7075 Aluminum Bar Stock Quenched in Type I Polymer Quenchants", Heat Transfer Research, 1998, Vol. 29, No. 1, p. 163-175.
220. H.M. Tensi, G.E. Totten and K. Lainer, "Water Spray and Water Film Cooling", Conf. Proceed.3rd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, B. Liscic and H.M. Tensi, , ASM International, Materials Park, OH, 1999, p. 50-61.
221. N.I. Kobasco and G.E. Totten, "Optimization of Intensive Quenching Methods (Part I)", Conf. Proceed.rnd International Conference on Quenching and Control of Distortion, Eds. G.E. Totten, B. Liscic and H.M. Tensi, , ASM International, Materials OH, 1999, p. 105-111.
222. G.E. Totten, C.E. Bates and Y.H. Sun, "Simplified Property Predictions Based on Quench Factor Analysis for AISI 4140", Conf. Proceed.3rd International Conference on Quenching and Control Of Distortion, Eds. G.E. Totten, B. Liscic and H.M. Tensi, , ASM International, Materials OH, 1999, p.219-225 .
223. Pan Jiansheng, Gu Jianfeng, Tian Dong, G.E. Totten, and Xiao Chen, "Computer Aided Design of Complicated Quenching Process by Means of Numerical Simulation Method", Conf. Proceed.3rd International Conference on Quenching and Control Of Distortion, Eds. G.E. Totten, B. Liscic and H.M. Tensi, , ASM International, Materials Park, OH, 1999, p.251-259.
224. G.E. Totten, N.I. Kobasko, V.S. Morganyuk, and V.V. Dobrivecher, " Method of Quenching of Stamps Made out of Alloy and High-Alloy Steels in Aqueous High-Concentration UCON Solutions", Int. Conf. Industrial Heat Engrg., May 24-30, 1999, Kiev, Ukraine.
225. G.E. Totten and R.J. Bishop Jr., "The Hydraulic Pump Inlet Condition: Impact on Hydraulic Pump Cavitation Potential", SAE Technical Paper Series, Paper Number 1999-01-1877.
226. G.E. Totten, G.H. Kling and J. Reichel, "Biodegradable Hydraulic Fluids: A Review", in The 6th Scandanavian Int. Conf. On Fluid Power, SICFP'99 Vol. 1, Eds. K.T. Koskinen and M. Vilenius, Tampere Univ. of Tech., Tampere, Finland, May 25-28, 1999, Tampere, Finland, p. 93-112.
227. G.E. Totten, G.H. Kling and J. Reichel, "Development of Hydraulic Pump Performance Standards: An Overview of Current Activities", in The 6th Scandanavian Int. Conf. On Fluid Power, SICFP'99 Vol.2, Eds. K.T. Koskinen and M. Vilenius, Tampere Univ. of Tech., Tampere, Finland, May 25-28, 1999, Tampere, Finland, p. 1111-1121.
228. G.E. Totten Ed., Handbook of Hydraulic Fluid Technology, 1999, Marcel Dekker, Inc., New York.
229. G.E. Totten, G.M. Webster and F.D. Yeaple, "Physical Properties and Their Determination", Chapter 4 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 195-304.
230. G.M. Webster and G.E. Totten, "Fire-Resistance Testing Procedures of Hydraulic Fluids", Chapter 7 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 393-426

231. G.H. Kling, D.E. Tharp, G.E. Totten and G.M. Webster, "Ecological Compatibility", Chapter 8 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 427-468.
232. L. Xie, R.J. Bishop Jr., and G.E. Totten, "Bench and Pump Testing of Hydraulic Fluids", Chapter 10 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 523-575.
233. S. Lemberger and G.E. Totten, "Failure Analysis", Chapter 12 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 601-673.
234. P. McHugh, W.D. Stofey, and G.E. Totten, "Mineral-Oil Hydraulic Fluids", Chapter 14 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 711-794.
235. Y.H. Sun, "Emulsions", Chapter 17 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 847-916.
236. G.E. Totten and Y.H. Sun, "Water-Glycol Hydraulic Fluids", Chapter 18 in Handbook of Hydraulic Fluid Technology, Ed. By G.E. Totten, 1999, Marcel Dekker, Inc., New York, p. 917-982.
237. G.E. Totten, G. Svedberg, and R.J. Bishop, "Hydraulic System Cavitation: Part II – A Review of Hardware Design-Related Effects", SAE Technical Paper Series, Paper Number 1999-01-2857, September 13-15, 1999.
238. G.E. Totten, G.H. Kling, J. Reichel and R.J. Bishop, "Biodegradable Hydraulic Fluid Review", SAE Technical Paper Series, Paper Number 1999-01-2865, September 13-15, 1999.
239. G.E. Totten and G.M. Webster, "Quenching Fundamentals: Stability & Drag-Out of Polymers" *Adv. Mat. & Proc.*, **1999**, Vol. 155, No. 6, p. H63-H66.
240. G.E. Totten, H.M. Tensi and K. Lainer, "Performance of Vegetable Oils as a Cooling Medium in Comparison to a Standard Mineral Oil", *J. Mat. Eng. And Perf.*, **1999**, Vol. 8, No. 4, p. 409-416.
241. G.E. Totten, C.E. Bates and Y.H. Sun, "Quench Factor Analysis for Aluminum Property Prediction", in Heat Treatment and Surface Engineering of Light Alloys, Proceedings of the 7th Seminar of IFHT, 15-17 September 1999, Budapest, Hungary, p. 187-196.
242. N.I. Kobasko and G.E. Totten, "Generalization of Experimental and Theoretical Data Needed for Determining Appropriate Boundary Conditions Required for Heat Treating Process Modeling and Property Prediction – Part I", in Heat Treatment and Surface Engineering of Light Alloys, Proceedings of the 7th Seminar of IFHT, 15-17 September 1999, Budapest, Hungary, p. 315-325.
243. D. Scott MacKenzie, G.E. Totten and N. Gopinath, "CFD Modelling of Quench Tank Agitation", in Proceed. Of the 10th Congress of the IFHT, Eds. T. Bell and E.J. Mittemeijer, IOM Communications Ltd., London, England, 1999, p. 655-669.
244. Zhao Hai Ou, G.E. Totten, G.M. Webster and Yinghua Sun, "PAG Polymer Quenchants: Increasingly Viable Quench Oil Replacements", in Proceed. Of the 10th Congress of the IFHT, Eds. T. Bell and E.J. Mittemeijer, IOM Communications Ltd., London, England, 1999, p. 885-896.
245. G.E. Totten, G.H. Kling and J. Reichel, "Development of Hydraulic Pump Performance Standards: An Overview of Current Activities", in Proceed. Of the Second International Conference on Surface Engineering-Vol. 1, Eds. Li Zhengsheng and Gao Wanzhen, Journal of Materials Protection Publishing House, Wuhan, China, 1999, p. 356-360.

246. G.E. Totten, Y.H. Sun and R.J. Bishop and Xie Lin, "Hydraulic System Cavitation: A Review", in Proceed. Of the Second International Conference on Surface Engineering-Vol. 1, Eds. Li Zhengsheng and Gao Wanzhen, Journal of Materials Protection Publishing House, Wuhan, China, 1999, p. 414-429.
247. L.M. Jarvis, G.E. Totten, and G.M. Webster, "Cooling Curve Analysis of Polymer Quenchants", in 19th Heat Treating Society Conference Proceedings, Eds. S. Midea and G. Pfaffmann, ASM International, Materials Park, OH, 1999, p.277-283.
248. G.E. Totten, C.E. Bates and Y.H. Sun, "Simplified Property Predictions for AISI 1045 Steel Based on Quench Factor Analysis", in 19th Heat Treating Society Conference Proceedings, Eds. S. Midea and G. Pfaffmann, ASM International, Materials Park, OH, 1999, p.292-298.
249. G.E. Totten, G.M. Webster, M. Meindl, H.M. Tensi, and K. Lainer, "Development of a Device for Measuring the Heat-Based Flow Profile of Fluids", in 19th Heat Treating Society Conference Proceedings, Eds. S. Midea and G. Pfaffmann, ASM International, Materials Park, OH, 1999, p. 343-354.
250. X. Chen, L. Meekisho and G.E. Totten, "Cooling Curve Analysis Using 1x2" Stainless Steel Probe", in 19th Heat Treating Society Conference Proceedings, Eds. S. Midea and G. Pfaffmann, ASM International, Materials Park, OH, 1999, p.453-460.
251. T. Reti, I. Felde and G.E. Totten, "Concept of a Fractographic Database for Characterization and Evaluation of Cooling Curve Performance of Quenching Media", in 19th Heat Treating Society Conference Proceedings, Eds. S. Midea and G. Pfaffmann, ASM International, Materials Park, OH, 1999, p. 584-589.
252. G.E. Totten, G.M. Webster and R.J. Bishop, "Biodegradability and Toxicity of a High-Performance Water-Glycol Hydraulic Fluid", *AISE Steel Technology*, **1999**, Vol. 76, No. 12, p. 27-30.
253. H.M. Tensi, P. Stitzelberger-Jacob, and G.E. Totten, "Quenching Fundamentals: Surface Rewetting of Aluminum", *Adv. Mat. and Proc.*, **1999**, Vol. 156, No. 5, p. H15-H20.
254. G.E. Totten, G.H. Kling and J. Reichel, "Development of Hydraulic Pump Performance Standards: An Overview of Current Activities", in Proceed. Of the Fourth JHPS Int. Symp. On Fluid Power, Tokyo'99, Ed. S. Yokota, The Japan Hydraulics and Pneumatics Society, Tokyo, Japan, 1999, p. 63-68.
255. G.E. Totten, J. Reichel, and G.H. Kling. "Biodegradable Hydraulic Fluids: A Review", in Proceed. Of the Fourth JHPS Int. Symp. On Fluid Power, Tokyo'99, Ed. S. Yokota, The Japan Hydraulics and Pneumatics Society, Tokyo, Japan, 1999, p. 285-290.
256. G.E. Totten, G.M. Webster and R.R. Blackwood, "Chute Quench Design Principles", *Heat Transfer Research*, 1999, Vol. 30, No. 4, p. 303-310.
257. G.E. Totten, G.M. Webster and R.J. Bishop, "Comparison of Vickers V-104 and 20VQ5 Vane Pump Wear Rates for Various Water-Glycol Hydraulic Fluids", 12th International Colloquium, Tribology 2000 – Plus, Vol. III, Ed. W.J. Bartz, Technische Akademie Esslingen, 11-13 January, 2000, p. 2201-2206.
258. T. Inoue, K. Funatani, and G.E. Totten, "Process Modeling for Heat Treatment: Current Status and Future Developments", J. Shanghai Jiaotong University, 2000, Vol. E-5, No. 1, p. 14-25.
259. G.E. Totten, R.J. Bishop and J. Cerf, "Biodegradable, Fire-Resistant, High-Performance Water-Glycol Hydraulic Fluids", Proceedings of the 48th National Conference on Fluid Power, Chicago, IL, April 4-6, 2000; National Fluid Power Association, Milwaukee, WI, pp.57-63.

- 260.H.M. Melief, G.E. Totten and R.J. Bishop, "Hydraulic Fluid Qualification Using the Rexroth High-Pressure Piston Pump Test", Proceedings of the 48th National Conference on Fluid Power, Chicago, IL, April4-6, 2000; National Fluid Power Association, Milwaukee, WI, pp. 241-249.
- 261.G.E. Totten and G.H. Kling, "Development of Hydraulic Pump Performance Standards: An Overview of Current Activities", Proceedings of the 48th National Conference on Fluid Power, Chicago, IL, April4-6, 2000; National Fluid Power Association, Milwaukee, WI, pp.273-279.
- 262.G.E. Totten, R.J. Bishop and G.M. Gent, "Evaluation of Hydraulic Fluid Lubrication by Vickers Vane Pump Testing: Effect of Testing Conditions", Proceedings of the 48th National Conference on Fluid Power, Chicago, IL, April4-6, 2000; National Fluid Power Association, Milwaukee, WI, pp. 281-286.
- 263.G.E. Totten, R.J. Bishop and G.M. Gent, "Hydraulic Fluid Evaluation by ASTM D 2882: Procedures to Significantly Improve Precision of Experimental Results", Proceedings of the 48th National Conference on Fluid Power, Chicago, IL, April4-6, 2000; National Fluid Power Association, Milwaukee, WI, pp. 287-292
- 264.G.E. Totten, Y.H. Sun and L.M. Jarvis, "Polymer Quench Bath Maintenance: The Role of Cooling Curve Analysis" SME Technical Paper, Paper Number MF00-118, Nashville, TN, February 23-24, 2000.
- 265.G.E. Totten and D.S. MacKenzie, "Aluminum Quenching Technology: A Review", Material Science Forum, 2000, Vols 331-337, p. 589-594.
- 266.G.E. Totten, "Polymer Quenchants for Induction Heat Treating Applications: The Basics", 9th International Induction Heat Treating Seminar, Clearwater, FL, May, 2000.
- 267.G.E. Totten, G.M. Webster and L.M. Jarvis, "Quenching Fundamentals: Cooling Curve Analysis", Heat Treat Prog., 2000, June, p. H44-H47.
- 268.C.G. Fey, G.E. Totten, R.J. Bishop and A. Ashraf, "Analysis of Common Failure Modes of Axial Piston Pumps", SAE Technical Paper Series, Paper Number 2000-01-2581, 2000..
- 269.C.G. Fey, R. Goebel, G.E. Totten and R.J. Bishop, "Root Cause Analysis of a Piston Pump Failure: A Case History", SAE Technical Paper Series, Paper Number 2000-01-2590, 2000.
- 270.J. Nätscher, R.J. Bishop, G.E. Totten and A. Ashraf, "Hydraulic Fluid Qualification: An Overview of Critical Considerations", SAE Technical Paper Series, Paper Number 2000-01-2541, 2000.
- 271.G.H. Kling, G.E. Totten and A. Ashraf, "Strategies for Developing Performance Standards for Alternative Hydraulic Fluids", SAE Technical Paper Series, Paper Number 2000-01-2540, 2000.
- 272.G.E. Totten, R.J. Bishop, G.M. Webster and W.E. Sloan, "Anhydrous Polyalkylene Glycol Hydraulic Fluids: A Review", SAE Technical Paper Series, Paper Number 2000-01-2557, 2000.
- 273.G.E. Totten and R.J. Bishop, "Water Glycol Hydraulic Fluids: Conversion and Troubleshooting of Mineral Oil Hydraulic Systems", SAE Technical Paper Series, Paper Number 2000-01-2589, 2000.
- 274.H.M. Tensi, G.E. Totten and T. Künzel, "Physics and Technology of Quenching in Fluids - Part I" Physics of Quenching", ", in the 12th International Federation of Heat Treatment and Surface Engineering Congress – Congress Proceedings: Volume 1, Institute of Materials Engineering Australasia Ltd., Melbourne, Australia, October 30, 2000. p. 1-4.
- 275.H.M. Tensi, G.E. Totten and T. Kunzel, "Physics and Technology of Quenching in Fluids - Part II"

Technology of Quenching”, ”, in the 12th International Federation of Heat Treatment and Surface Engineering Congress – Congress Proceedings: Volume 1, Institute of Materials Engineering Australasia Ltd., Melbourne, Australia, October 30, 2000. p. 5-11.

276. N.I. Kobasko, W.S. Morhuniuk, V.V. Dobrivecher and G.E. Totten, “Investigation of Regimes of Die Quenching in High Concentration Aqueous Polymer Solutions”, in the 12th International Federation of Heat Treatment and Surface Engineering Congress – Congress Proceedings: Volume 1, Institute of Materials Engineering Australasia Ltd., Melbourne, Australia, October 30, 2000. p. 75-82.
277. A.F. Farah, O.R. Crnkovic, L.C.F. Canale and G.E. Totten, “Castor Oil: Studies For Heat Treatment Applications”, in the 12th International Federation of Heat Treatment and Surface Engineering Congress – Congress Proceedings: Volume 1, Institute of Materials Engineering Australasia Ltd., Melbourne, Australia, October 30, 2000. p. 83-88.
278. G. Sanchez Sarmiento, D.M. Coslia, C. Jouglard, G.E. Totten, G.M. Webster and J. Vega, “Residual Stresses, Distortion and Heat Transfer Coefficients of 7075 Aluminum Alloy Probes Quenched in Water and Polyalkylene Glycol Solutions”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 1118-1124.
279. N.I. Kobasko, V.S. Morganyuk, V.V. Dobrivecher, and G.E. Totten, “Investigation of Regimes of Die Quenching in High Concentrations of Aqueous Polymer Solutions”, ” in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 652-658..
280. G.S. Sarmiento, X. Chen, J. Vega, G.E. Totten, R. Reynoldson, L. Huynh, and L. Meekisho “A Comparison of Cooling Curve Analysis Using Inc-Phatran and WinProbe”, ” in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 659-665.
281. M. Narazaki, M. Kogawara, A. Shirayori, S. Fuchizawa and G.E. Totten, “Experimental and Numerical Analysis of Cooling Curves During Quenching of Small Probes”, ” in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 666-674..
282. H.M. Tensi and G.E. Totten, “Standard for Testing FE-Simulations of Quenching (STA-FE-SIM)”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 696-700.
283. H.M. Tensi, G.E. Totten and T. Kunzel, “Physics and Technology of Quenching in Fluids – Part I: Physics of Quenching”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 727-730.
284. H.M. Tensi, G.E. Totten and T. Kunzel, “Physics and Technology of Quenching in Fluids – Part II: Technology of Quenching”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 731-736.
285. L.M. Jarvis and G.E. Totten, “Aqueous Polymer Quenchants: How They Work and What Are the Differences?”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 807-815.
286. L.M. Jarvis, G.E. Totten, G.M. Webster, and D.G. Hoffman, “Cooling Curve Analysis of Polymer Quenchants: An Integrated Approach to Quenchant Selection and Bath Maintenance”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 839-846.

- 287.L. Canale, J.E. Ruggieri, O.R. Crnkovic and G.E. Totten, “Brazilian Quenching Oils: Classification of Quench Severity”, in Heat Treating – Proceedings of the 20th Conference Vol. 2, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 847-853.
- 288.M. Przylecka, W. Gestwa, and G.E. Totten, “The Influence of Hardening Parameters on Retained Austenite Fraction in the Structure of Case Hardened Layers on Constructional Steels” in Heat Treating – Proceedings of the 20th Conference Vol. 1, Eds. K. Funatani and G.E. Totten, 9-12 October, 2000, ASM International, Materials Park, OH, p. 624-634.
- 289.H. Liang and G.E. Totten, “Corrosive Wear in Hydraulic Systems: An Overview”, in Hydraulic Failure Analysis: Fluids, Components and System Effects, ASTM STP 1339, Eds. G.E. Totten, D.K. Wills, and D. Feldman, 2000, American Society for Testing and Materials, West Conshohocken, PA, p. 119 - 133.
- 290.R.J. Bishop and G.E. Totten, “Design of Proper Inlet Condition to Minimize Hydraulic Pump Wear”, in Hydraulic Failure Analysis: Fluids, Components and System Effects, ASTM STP 1339, Eds. G.E. Totten, D.K. Wills, and D. Feldman, 2001, American Society for Testing and Materials, West Conshohocken, PA, p 318 - 332.
- 291.H.Liang, G.E. Totten, K. Mizuno, R.J. Bishop and S. Lemberger, “Fundamental Hydraulic Wear Processes”, in Hydraulic Failure Analysis: Fluids, Components and System Effects, ASTM STP 1339, Eds. G.E. Totten, D.K. Wills, and D. Feldman, 2001, American Society for Testing and Materials, West Conshohocken, PA, p. 278 - 298.
- 292.C.G. Fey, G.E. Totten and Y.H. Sun, “Analysis of Common Failure Modes of Axial Piston Pumps”, in Hydraulic Failure Analysis: Fluids, Components and System Effects, ASTM STP 1339, Eds. G.E. Totten, D.K. Wills, and D. Feldman, 2001, American Society for Testing and Materials, West Conshohocken, PA, p. p. 299 – 317.
- 293.G.E. Totten, D.K. Wills, and D. Feldman, Eds., Hydraulic Failure Analysis: Fluids, Components and System Effects, ASTM STP 1339, 2001, American Society for Testing and Materials, West Conshohocken, PA.
- 294.G.E. Totten, R.J. Bishop and L. Xie, “Bench Tests to Evaluate Hydraulic Fluid Lubrication: A Review”, Bench Testing of the Lubrication and Wear Properties of Industrial Fluids Used in Machinery Applications, STP 1404, G.E. Totten, L.D. Wedeven, J.R. Dickey and M. Anderson, 2001, American Society for Testing and Materials, West Conshohocken, PA, , p. 33-50.
- 295.G.E. Totten, L.D. Wedeven, J.R. Dickey and M. Anderson, Bench Testing of the Lubrication and Wear Properties of Industrial Fluids Used in Machinery Applications, STP 1404, 2001, American Society for Testing and Materials, West Conshohocken, PA..
296. K.V. Krishnamurthy, G.E. Totten and G.M. Webster, “Computerized Steel Hardness Predictions Based on Cooling Curve Analysis”, Proc. The 6th ASM Heat Treatment Conference, 2-4 Sept 2000, Chennai, India.
- 297.N. Gopinath, G.E. Totten and G.M. Webster, “Polymer Quench Bath Maintenance: The Role of Cooling Curve Analysis”, Proc. The 6th ASM Heat Treatment Conference, 2-4 Sept 2000, Chennai, India.
- 298.G.E. Totten, R.J. Bishop, R. Suzuki and Y. Tanaka, “Air Entrainment – How it Happens, How to Avoid It”, Hydraulics & Pneumatics, 2001, July, p. 39-40, 52-53.
- 299.G.E. Totten, H.M. Tensi and G.M. Webster, “Fluid Flow Sensors for Industrial Quench Baths: A Literature Review”, 8th Seminar of the International Federation for Heat Treatment and Surface

Engineering, 12-14 September 2001, Dubrovnic - Cavtat, Croatia, (Croatian Society for Heat Treatment and Surface Engineering, Ivana Lucica 1, Zagreb, Croatia), p. 13-24.

300. H.M. Tensi, G.E. Totten, G.M. Webster, M. Meindl, and K. Lainer, "Development and Technology Overview of a Fluid Flow Sensor (Sonde) for Commercial Quench Tanks", 8th Seminar of the International Federation for Heat Treatment and Surface Engineering, 12-14 September 2001, Dubrovnic - Cavtat, Croatia, (Croatian Society for Heat Treatment and Surface Engineering, Ivana Lucica 1, Zagreb, Croatia), p. 35-43
301. I. Felde, T. Reti, S. Segerberg, J. Bodin and G.E. Totten, "Characterization of Quenching Performance by Using Computerized Procedures and Data Base of Heat Treatment Processes", 8th Seminar of the International Federation for Heat Treatment and Surface Engineering, 12-14 September 2001, Dubrovnic - Cavtat, Croatia, (Croatian Society for Heat Treatment and Surface Engineering, Ivana Lucica 1, Zagreb, Croatia), p. 309-316.
302. G. Sánchez Sarmiento, D.M. Coscia, C. Jouglard, G.E. Totten y G.M. Webster: "Distorsión y tensiones residuales en probetas de aluminio sometidas a tratamiento térmico". Proceedings of the Second Argentinian Conference of Abaqus Users, Buenos Aires, September 10-11, 2001. pp. 1-11.
303. G. Sánchez Sarmiento, M. Castro, G.E. Totten y G.W. Webster: "Modelización de tensiones residuales en el tratamiento térmico de aceros de resortes". Proceedings of the Second Argentinian Conference of Abaqus Users, Buenos Aires, September 10-11, 2001. pp. 119-129.
304. I. Felde, T. Reti, G.S. Sarmiento, G.E. Totten, and X.L. Chen, "Effect of Smoothing Methods on the Results of Different Inverse Modeling Techniques", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 76-83.
305. I. Felde, T. Reti, S. Segerberg, J. Bodin and G.E. Totten, "Characterization of Quenching Performance by Using Computerized Procedures and Data Base of Heat Treatment Processes", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 93-96.
306. H.M. Tensi, A. Haas, K. Lainer, G.E. Totten, and G.M. Webster, "Sensor Tip Optimization for a Thermal Anemometer for Determining Convection Intensity in Quench Baths", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 1-7
307. G.E. Totten, G.M. Webster, and H.M. Tensi, "Fluid Flow Sensors for Industrial Quench Baths: A Literature Review", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 122-128.
308. A.C. Canale, L. Canale, J.E. Ruggieri, G.E. Totten, and G.M. Webster, "Quenchant Testing Using Different Laboratory Agitation Systems", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 135-143.
309. G. Sanchez-Sarmiento, M. Castro, G.E. Totten, G.M. Webster, L. Jarvis, and M.F. Cabré "Modeling Residual Stresses in Spring Steel Quenching", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 191-200.
310. M. Przylecka, M. Gestwa, G.E. Totten, and G.M. Webster, "Polymer Quenching Media Selection", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 201-206.

311. M. Przylecka, M. Gestwa, G.E. Totten, and G.M. Webster, "Polymer Quenchants and Diffusion Layer Properties", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 207-213.
312. G.E. Totten and G.M. Webster, "Prof. Dr. Hans M. Tensi: Importance of the Influence of Wetting Behavior on the Quenching Process", in Heat Treating – Proceedings of the 21st Conference, Eds. S. Shrivastava and F. Specht, 5-8 November, 2001, ASM International, Materials Park, OH, p. 14-24.
313. G.E. Totten, M. Narazaki and G.M. Webster, "Quench Process Related Distortion Control Problems: An Overview", 10th International Induction Heating Seminar, Inductoheat Corp., 32251 North Avis Drive, Madison Heights, MI 48071, 17-19 October 2001, Clearwater Beach, Florida.
314. G.E. Totten, C.E. Bates, G.M. Webster and D.S. MacKenzie, "Industrial Use of Quench Factor Analysis: Application as a Specification Procedure for Quenchant Qualification", in Advances in the Metallurgy of Aluminum Alloys – Proceedings of the James T. Staley Honorary Symposium on Aluminum Alloys, ed. M. Tiryakoglu, ASM International, Materials Solutions 2001, November 5-8, Indianapolis Convention Center, Indianapolis, IN, p.204-212.
315. R.J. Bishop, C.G. Fey, R. Michael, H.M. Melief and G.E. Totten, "Development of the Rexroth High Pressure Piston Pump Test for Hydraulic Fluid Qualification", 13th International Colloquium Tribology, Lubricants, Materials and Lubrication Engineering, Vol. III, Ed. W.J. Bartz, Technische Akademie Esslingen, January 15-17, 2002, p. 2091-2100.
316. M. Przylecka, W. Gestwa, and G.E. Totten, "Surface Modification Design: Carburizing With Atmospheres", SAE Technical Paper Series, Paper Number 2002-01-1505, 2002.
317. M. Przylecka, W. Gestwa, and G.E. Totten, "Structure of Carburized Layers With High Wear Resistance", SAE Technical Paper Series, Paper Number 2002-01-1392, 2002.
318. M. Przylecka, W. Gestwa, and G.E. Totten, "The Influence of Different Cooling Media On Properties of Carburized Layers", SAE Technical Paper Series, Paper Number 2002-01-1481, 2002.
319. J.V. Sherman and G.E. Totten, "Food-Grade Fire-Resistant Water Glycol Hydraulic Fluids:", SAE Technical Paper Series, Paper Number 2002-01-1504, 2002. Also co-published in Proceed. of the 49th National Conf. on Fluid Power, March 19-21, 2002, Paper Number NCFP 102.20.12, p. 511-520.
320. R.J. Bishop, B. Ashraf and G.E. Totten, "Assessment of the Eaton V-104 Vane Pump as an Antiwear Lubrication Tester", SAE Technical Paper Series, Paper Number 2002-01-1429, 2002. Also co-published in Proceed. of the 49th National Conf. on Fluid Power, March 19-21, 2002, Paper Number NCFP 102-10.6, p. 293-302.
321. G.E. Totten, G.M. Webster and H.M. Tensi, "Fluid Flow Sensors for Industrial Quench Baths: A: Literature Review", Heat Treatment of Metals, 2002, No. 1, p. 6-10.
322. L. Canale, J. Ruggieri, O.R. Crnkovic and G.E. Totten, "Quenching Oils: Classification of Quench Severity", Heat Treatment of Metals (China), 2002, Vol. 27. No. 2, p. 48-52.
323. G. Totten, M. Howes and T. Inoue, Eds., Handbook of Residual Stress and Deformation of Steel, 2002, ASM International, Materials Park, OH.
324. M. Narazaki, G.E. Totten and G.M. Webster, "Hardening by Reheating and Quenching", in Handbook of Residual Stress and Deformation of Steel, Eds. G.E. Totten, T. Inoue, and M.A.H. Howes 2002, ASM International, Materials Park, OH, p. 248-295.
325. G.E. Totten, S.R. Westbrook, R.J. Shah Eds., Fuels and Lubricants Handbook: Technology,

Properties, Performance and Testing, 2003, ASTM International, West Conshocken, PA, 1087 pgs.

326. D.R. Garg, G.E. Totten and G.M. Webster, “Compressor Lubricants”, in, Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing G.E. Totten, S.R. Westbrook, R.J. Shah Eds, 2003, ASTM International, West Conshocken, PA, p. 383-412.
327. B. Liscic, H.M. Tensi, G.E. Totten and G.M. Webster, “Non-Lubricating Process Fluids: Steel Quenching Technology”, in Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing, G.E. Totten, S.R. Westbrook, R.J. Shah Eds, 2003, ASTM International, West Conshocken, PA., p. 587-634.
328. R. Michael, H. Melief, C.G. Fey, G.E. Totten and R.J. Bishop, “Development of the Rexroth High-Pressure Piston Pump Test for Hydraulic Fluid Qualification”, SAE Technical Paper Series, Paper Number 2002—01-1425, 2002, Also co-published in Proceed. of the 49th National Conf. on Fluid Power, March 19-21, 2002, Paper Number NCFP 102-10.4, p. 281-291.
329. John Fuhr, Jim Oettinger, G.E. Totten, and G.M. Webster, “Non-Lubricating Process Fluids: Heat Transfer Fluids”, in Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing G.E. Totten, S.R. Westbrook, R.J. Shah Eds, 2003, ASTM International, West Conshocken, PA., p. 573—586.
330. S. Brunett, G.E. Totten and P.L. Matlock, “Hydrocarbons for Chemical and Specialty Uses”, in Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing, G.E. Totten, S.R. Westbrook, R.J. Shah Eds, 2003, ASTM International, West Conshocken, PA., p. 185-197.
331. H. Liang, G.E. Totten and G.M. Webster, “Lubrication Fundamentals”, in Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing, G.E. Totten, S.R. Westbrook, R.J. Shah Eds, 2003, ASTM International, West Conshocken, PA, p. 909-961..
332. G.E. Totten, N.I. Kobasko, M.A. Aronov and J. Powell, “Overview of Intensive-Quenching Processes”, *Industrial Heating*, 2002, Vol. 69, No. 4 (April), p. 31-33.
333. G.E. Totten, H.M. Tensi and G.M. Webster, “Fluid Flow Sensors for Industrial Quench Baths: A Literature Review”, *Heat Treatment of Metals (China)*, 2002, Vol. 27, No. 5, p. 27-32.
334. G.E. Totten and R.J. Bishop Jr., “Natural Gas Compressors and Their Lubrication”, *Machinery Lubrication*, 2002, May-June, p. 58-63.
335. G.E. Totten, H.M. Tensi and A. Stich, “Temperature Measurement Accuracy in Cooling Curve Analysis“, *Heat Treat Progress*, 2002, Vol. 2, No.4, p. 45-49.
336. G.E. Totten and H.M. Tensi, “Using Conductance Data to Characterize Quenchants”, *Heat Treat Progress*, 2002, Vo. 2. No. 5, p. 39-42.
337. H.M. Tensi, A. Haas, K. Lainer, G.E. Totten, “Sensor Tip Optimization for Determining Convection Intensity in Quench Baths”, *Heat Treatment of Metals (China)*, 2002, Vol. 27, No. 7, p. 39-43.
338. R. Michael, H.M. Melief, C.G. Fey, G.E. Totten and R.J. Bishop, “Development of a New High-Pressure Piston Pump Test for Hydraulic Fluid Qualification”, *Proceedings of 5th JHPS Fluid Power Symposium – Vol. 1*, Nara Japan, Ed. S. Yokota, Japanese Fluid Power Society, Tokyo, Japan, November 12-15, 2002, p. 245-250.
339. G.E. Totten, G.H. Kling, P.W. Offutt, R.J. Bishop and J.V. Sherman, “Development of a Standard High-Pressure Hydraulic Piston Pump Test: Status of ASTM D.02.N.07 Piston Pump Task Force

Activities”, Proceedings of 5th JHPS Fluid Power Symposium – Vol. 1, Nara Japan, Ed. S. Yokota, Japanese Fluid Power Society, Tokyo, Japan, November 12-15, 2002, p. 277-282.

340. G.E. Totten, J.V. Sherman, “Current Needs and Developments in Hydraulic Fluid Technologies”, Proceedings of 5th JHPS Fluid Power Symposium – Vol. 2, Nara Japan, Ed. S. Yokota, Japanese Fluid Power Society, Tokyo, Japan, November 12-15, 2002, p. 395-400.
341. G.E. Totten, L.de C.F. Canale, N.I. Kobasko, J.A. Powell and M.A. Aronov, “Têmpera Intensiva: Levantamento Histórico de um Processo Usualmente Desconhecido”, SAE Technical Paper, Paper Number 2002-01-3398, Sao Paulo, Brazil, 2002.
342. N.I. Kobasko, G.E. Totten, L. de C.F. Canale, J.A. Powell and M.A. Aronov, “Fundamentos Metalúrgicose Levantamento dos Processos de Têmpera Intensiva”, SAE Technical Paper, Paper Number 2002-01-3399, Sao Paulo, Brazil, 2002.
343. Y. Tanaka, R. Suzuki, G.E. Totten, R.J. Bishop and L.C.F. Canale, “Projeto e Uso de um Inédito Sistema de Eliminação de Bolhas (Bubble Eliminator) para Resolver os Problemas de Fluidos Aerados em Sistemas Hidráulicos”, SAE Technical Paper, Paper Number 2002-01-3400, Sao Paulo, Brazil, 2002.
344. G.E. Totten, G.M. Webster and R.J. Bishop, “Comparison of Vickers V-104C and 20VQ5 Vane Pump Wear Rates for Various Water-Glycol Hydraulic Fluids”, Tribotest Journal, 2002, No. 8, p. 339-350.
345. R. Suzuki, Y. Tanaka, G.E. Totten and R.J. Bishop, “Removing Entrained Air In Hydraulic Fluids and Lubrication Oils”, Machinery Lubrication, 2002, July-August, p. 56-62.
346. G.E. Totten and R.J. Bishop, “Lubricant Requirements, Properties and Maintenance for Natural Gas Compressors”, Machinery Lubrication, 2002, September-October, p. 24-29.
347. G.E. Totten and D.S. MacKenzie, Eds., Handbook of Aluminum: Vol. 1 - Physical Metallurgy and Processes, 2003, Marcel Dekker Inc., New York, NY.
348. G.E. Totten, C.E. Bates and G.N. Webster, “Quenching”, in Handbook of Aluminum: Vol. 1- Physical Metallurgy and Processes, G.E. Totten and D.S. MacKenzie Eds. 2003, Marcel Dekker Inc., New York, NY, p. 971-1062.
349. G.E. Totten and D.S. MacKenzie Eds., Handbook of Aluminum: Vol. 2 – Alloy Production and Materials Manufacturing, 2003, Marcel Dekker, New York, NY.
350. Małgorzata Przyłęcka; Wojciech Gęstwa, and George E.Totten, “Structure and Properties of the Hardened Carburized Layer of Low-Carbon Chromium-Nickel Steel After Quenching in Different Media – Part I”, IFHTSE 2002 Congress, Columbus, Ohio, 2003, ASM International, Materials Park, OH, 98-106.
351. Małgorzata Przyłęcka; Wojciech Gęstwa, and George E.Totten, “ Influence of Chemical Composition and Quenching Media on Structure and Properties of Hardened Carburized Layer of Low-Carbon Chromium-Manganese Steel – Part II”, ”, IFHTSE 2002 Congress, Columbus, Ohio, 2003, ASM International, Materials Park, OH, 308-314..
352. Małgorzata Przyłęcka; Wojciech Gęstwa, and George E.Totten, “Influence of Heat Treatment on Structure and Properties of Carburized Low-Carbon Chromium Steel”, IFHTSE 2002 Congress, Columbus, Ohio, 2003, ASM International, Materials Park, OH, 315-323..
353. G.E. Totten, M. Narazaki, and R.R. Blackwood, “Failures Related to Heat Treating Operations”, in ASM Handbook, Vol. 11 – Failure Analysis and Prevention, 2002, ASM International, Materials

Park, OH, p. 192-223.

354. M. Przylecka, W. Gestwa, and G.E. Totten, "The Modelling of Retained Austenite in the Carburized Layer", Proceedings of the 2nd International Conference of Thermal Process Modelling and Computer Simulation, Société Française de Métallurgie et de Matériaux (SF2M), Les Fontenelles – 1 rue de Craïova, F-92024 Nanterre Cedex, France, 2003, J. Phys. IV France, 2004, Vol. 120, p. 121-128.
355. M. Przylecka, W. Gestwa and G.E. Totten, "Modelling of Phase Transformation and Hardening of Carbonitrided Steels", Proceedings of the 2nd International Conference of Thermal Process Modelling and Computer Simulation, Société Française de Métallurgie et de Matériaux (SF2M), Les Fontenelles – 1 rue de Craïova, F-92024 Nanterre Cedex, France, 2003, J. Phys. IV France, 2004, Vol. 120, p. 129-136.
356. R.J. Bishop, G.E. Totten and C.E. Fey, "Analysis of a Piston Pump Failure", Proceedings of the 57th Meeting of the MFPT (Machinery Failure Prevention Technology) Society, Impact of Prognostics on Organizational Success; Compiled by H.C. Pusey, S.C. Pusey and W.R. Hobbs), April 14-18, 2003, Virginia Beach, VA., p. 189-198.
357. R.J. Bishop, G.E. Totten and C.E. Fey, "Common Failure Modes in Axial Piston Pumps", Proceedings of the 57th Meeting of the MFPT (Machinery Failure Prevention Technology) Society, Impact of Prognostics on Organizational Success; Compiled by H.C. Pusey, S.C. Pusey and W.R. Hobbs), April 14-18, 2003, Virginia Beach, VA, p. 357-366.
358. G.E. Totten, G.M. Webster and D.A. Wachter, "Quenching Fundamentals: Condition Monitoring of Quench Oils", Practicing Oil Analysis, 2003, January-February, p. 26-31.
359. R.J. Bishop and G.E. Totten, "Maintenance and Analysis of Water Glycol Hydraulic Fluids", Machinery Lubrication, 2003, January-February, p. 24-31.
360. N.I. Kobasko, V.S. Morhunyuk, V.V. Dobrivecher, and G.E. Totten, "Intensive Quenching Creates Compressive Stresses at the Surface in Through Hardened Steel Parts", Proceedings of Heat Treatment and Surface Engineering in the Production of Automotive Components, Bangkok, Thailand, January 27-30, 2003, Published by National Metals and Materials Technology Center (MTEC), Bangkok, Thailand.
361. N.I. Kobasko, V.S. Morhunyuk, V.V. Dobrivecher, and G.E. Totten, "Optimization of Different Kinds of Intensive Quenching Processes by Computer Simulation", Proceedings of Heat Treatment and Surface Engineering in the Production of Automotive Components, Bangkok, Thailand, January 27-30, 2003, Published by National Metals and Materials Technology Center (MTEC), Bangkok, Thailand.
362. M.C. Cunha, L.C.F. Canale, W.W. Bose F., and G.E. Totten, "The Influence of Process Parameters on the Short Crack Growth Behavior in the Carburized Case of a DIN 20MnCr5 Steel", Proceedings of Heat Treatment and Surface Engineering in the Production of Automotive Components, Bangkok, Thailand, January 27-30, 2003, Published by National Metals and Materials Technology Center (MTEC), Bangkok, Thailand.
363. Y. Tanaka, R. Suzuki, G.E. Totten and R.J. Bishop, "Use of a Bubble Eliminator for Air Removal in Hydraulic Systems", Lubrication & Fluid Power, 2003, Vol. 4., No. 1, p. 13-19.
364. K. Funatani, L.C.F. Canale, and G.E. Totten, "Surface Modification by Coat Forming", Paper Presented at the Lubrication and Fluid Power Conference and EXPO held in Indianapolis, May 4-8, 2003, Proceedings Published by Lubrication & Fluid Power, Pensacola, FL (www.lubrication-

fluidpower.com), p. 109-117.

365. Y. Tanaka, R. Suzuki, G.E. Totten and R.J. Bishop, "Operation and Typical Application Overview of the Use of Bubble Eliminators for Deaeration of Hydraulic and Turbine Oils", Paper Presented at the Lubrication and Fluid Power Conference and EXPO held in Indianapolis, May 4-8, 2003, Proceedings Published by Lubrication & Fluid Power, Pensacola, FL (www.lubrication-fluidpower.com), p. 146-156.
366. M. Grenier, L.C.F. Canale, O. Crnkovic, and G.E. Totten, "Rapid Tempering and Stress Relief Via High-Speed Convection Heating", *Industrial Heating*, 2003, Vol. 70, No. 5, p. 40-45.
367. L.C.F. Canale, G.E. Totten, N.I. Kobasco, M.A. Aronov, and J. Powell "Intensive Quenching with Intensi quench®. What is it?", I Conferência Brasileira sobre TEMAS DE TRATAMENTO TÉRMICO, 25-27 de junho 2003, Indaiatuba – SP, Brazil.
368. L.C.F. Canale, G.E. Totten and O.R. Crnkovic, "Immersion Time Quenching System (ITQS) Technology to Facilitate Aqueous-Polymer Quenchant Replacement of Quench Oils", I Conferência Brasileira sobre TEMAS DE TRATAMENTO TÉRMICO, 25-27 de junho 2003, Indaiatuba – SP, Brazil.
369. M. Grenier, L.C.F. Canale, O.R. Crnkovic, and G.E. Totten "Immersion Time Quenching System (ITQS) Technology to Facilitate Aqueous-Polymer Quenchant Replacement of Quench Oils", I Conferência Brasileira sobre TEMAS DE TRATAMENTO TÉRMICO, 25-27 de junho 2003, Indaiatuba – SP, Brazil.
370. R. Suzuki, L.C.F. Canale, G.E. Totten and O.R. Crnkovic, "Operation and Typical Applications of Bubble Eliminators for Fluid Deaeration", I Conferência Brasileira sobre TEMAS DE TRATAMENTO TÉRMICO, 25-27 de junho 2003, Indaiatuba – SP, Brazil.
371. J. Smith, O.R. Crnkovic, L.C.F. Canale, and G.E. Totten, "Use of SBS Corporation* Smart Filter with Aquasense to Monitor and Control Water Content in Petroleum-Based Quench Oils", I Conferência Brasileira sobre TEMAS DE TRATAMENTO TÉRMICO, 25-27 de junho 2003, Indaiatuba – SP, Brazil.
372. H.M. Tensi, G.E. Totten, and L.C.F. Canale, "The Quenching Process: An Overview of the Fundamental Physical Properties of Liquid Quenching", 58th Congresso Annual Da ABM, 21-24 julho de 2003, Rio De Janeiro, Brazil, p. 3337-3347.
373. L. Grenier, L.C.F. Canale, O.R. Crnkovic and G.E. Totten, "Rapid Tempering and Stress Relief: Application of High-Speed Convection Heating", 58th Congresso Annual Da ABM, 21-24 julho de 2003, Rio De Janeiro, Brazil, p. 3348-3361.
374. N.I. Kobasko, M.A. Aronov, L.C.F. Canale, and G.E. Totten, "Metallurgy of Intensive Quenching Process and Implications with Respect to Steel Properties", 58th Congresso Annual Da ABM, 21-24 julho de 2003, Rio De Janeiro, Brazil, p. 3362-3380.
375. G.E. Totten, M. Przylecka and W. Gestwa, "Polymer Quenchants: A Flexible Cooling Medium for Carburized Steels", 58th Congresso Annual Da ABM, 21-24 julho de 2003, Rio De Janeiro, Brazil, p. 3501-3510.
376. G.E. Totten, "The Future of Heat Treating: What Are the Most Critical Issues and What Will the Future Look Like?", 58th Congresso Annual Da ABM, 21-24 julho de 2003, Rio De Janeiro, Brazil, p.

3451-3457.

377. G.E. Totten, R.J. Bishop, H.M. Melief, and R. Michael, "Piston Pump Testing for Hydraulic Fluid Qualification", *Lubrication & Fluid Power*, 2003, Vol. 4, No. 3, p. 7-19.
378. G.E. Totten, M. Przylecka and W. Gestwa, "Use of Aqueous Polymer Quenchants for Hardening of Carbonitrided Parts", in *Nitriding Technology Theory and Practice*", Ed. A. Nakonieczny, *Proceed. of 9th International Seminar International Federation for Heat Treatment and Surface Engineering*, Publisher: Institute of Precision Mechanics, Warsaw Poland, 2003, p. 405-414.
379. G.E. Totten, H.M. Tensi and L.C.F. Canale, "Chemistry of Quenching: Part I – Fundamental Interfacial Chemical Processes Involved in Quenching", *Proc. of 22nd Heat Treating Society Conference and the 2nd Surface Engineering Congress*, 15-17 September 2003, Indianapolis, IN, ASM International, Materials Park, OH, p. 141-147.
380. G.E. Totten, H.M. Tensi and L.C.F. Canale, "Chemistry of Quenching: Part 2 – Fundamental Thermophysical Processes Involved in Quenching", *Proc. of 22nd Heat Treating Society Conference and the 2nd Surface Engineering Congress*, 15-17 September 2003, Indianapolis, IN, ASM International, Materials Park, OH, p. 148-155.
381. K. Funatani, L.C.F. Canale, and G.E. Totten, "Chemistry of Quenching: Part 3 – Energy Conservation by Utilization of the Thermal Content in Steel for Surface Modification", *Proc. of 22nd Heat Treating Society Conference and the 2nd Surface Engineering Congress*, 15-17 September 2003, Indianapolis, IN, ASM International, Materials Park, OH, p. 148-155.
382. G. Sanchez Sarmiento, M. Castro, G.E. Totten, L. Jarvis, G.M. Webster and M.M. Cabre, "Modeling Residual Stresses in Spring Steel Quenching", *Jinshu Rechuli (Heat Treatment of Metals – China)*, 2003, Vol. 28, No. 11, p. 47- 51.
383. M. Przylecka, W. Gestwa, G.E. Totten, and J. Olejnik, "Influence of Carbon Content on Structure and Properties of Carburized Steel Using Different Quenchants – Part I", in *Proceed. of 4th International Conference on quenching and the Control of Distortion*, 23-24 November 2003, Beijing, China, Chinese Heat Treatment Society, Beijing, China, p. 1-7.
384. M. Przylecka, W. Gestwa, G.E. Totten, and J. Olejnik, "Influence of Carbon Content on Structure and Properties of Carburized Steel Using Different Quenchants – Part II", in *Proceed. of 4th International Conference on quenching and the Control of Distortion*, 23-24 November 2003, Beijing, China, Chinese Heat Treatment Society, Beijing, China, p. 8-12.
385. V. Li and G.E. Totten, "Computational Modeling of Quenching and Distortion", in *Proceed. of 4th International Conference on quenching and the Control of Distortion*, 23-24 November 2003, Beijing, China, Chinese Heat Treatment Society, Beijing, China, p. 81-86.
386. G.E. Totten, M. Gergely and S. Szilvia, "Software Tool for Heat Treaters and Material Engineers: Equist 2001 for Windows, the Database of Standard Steels", in *Proceed. of 4th International Conference on quenching and the Control of Distortion*, 23-24 November 2003, Beijing, China, Chinese Heat Treatment Society, Beijing, China, p. 193-200.
387. N.I. Kobasko, G.E. Totten, L.C.F. Canale, J.A. Powell and M.A. Aronov, "Intensive Quenching Process Classification and Case Histories", in *Proceed. of 4th International Conference on Quenching and the Control of Distortion*, 23-24 November 2003, Beijing, China, Chinese Heat Treatment Society, Beijing, China, p. 201-208.
388. A.F. Farah, L.C.F. Canale, O.R. Crnkovic, M.R. Fernandes, and G.E. Totten, "Oxidation Studies in Vegetable Oils During Utilization as Cooling Media in Heat Treatment Processes", in *Proceed. of 4th International Conference on quenching and the Control of Distortion*, 23-24 November 2003, Beijing,

China, Chinese Heat Treatment Society, Beijing, China, p. 237-242.

389. G.E. Totten, L. Xie and K. Funatani, Eds., Handbook of Mechanical Alloy Design, 2003, Marcel Dekker Inc., New York, NY.
390. M.Przy³êcka, W.Gestwa, N.I.Kobasko, G.E.Totten, M.A.Aronov, J.Powell; "Intensive Quenching – Carburizing Processes", 12 th International Conference Achievements in Mechanical & Materials Engineering AMME'2003; 7 -10 December 2003; Gliwice - Zakopane; Poland, p. 749-754.
391. G.E. Totten, L. Xie and K. Funatani, Eds., Modeling and Simulation for Material Selection and Mechanical Design, 2004, Marcel Dekker Inc., New York, NY.
392. G.E. Totten, "Heat Treating in 2020: What are the Most Critical Issues and What Will the Future Look Like?", Heat Treatment of Metals, 2004, Vol. 31, No. 1, p. 1-3.
393. G.E. Totten, M. Przylecka, W. Gestwa, and D. Pye, "Chapter 29 – Heat Treatment", in Smithells Metals Reference Book Eighth Edition ,Eds. W.F. Gale and T.C. Totemeier, 2004, Elsevier, New York, NY, p. 29-1 – 29-66.
394. K. Funatani, L.C.F. Canale and G.E. Totten, "Coat Forming Oils Do More Than Cool", Heat Treating Progress, 2004, Vol. 4, No. 2, p. 33-35.
395. G.E. Totten, "In Context: A Timeline of Highlights from the Histories of ASTM Committee D02 and the Petroleum Industry", ASTM Standardization News, 2004, June, p. 18-27.
396. V. Raghunathan, N. Gopinath, G.E. Totten and L.C.F. Canale, "Modern Mesh Belt Sintering Furnaces Meet Emerging Demands", Industrial Heating, 2004, June, p. 41-44.
397. G.E. Totten and H. Liang, Eds., Surface Modifications and Mechanisms: Friction, Stress and Reaction Engineering, 2004, Marcel Dekker, New York, NY.
398. G.E. Totten and H. Liang, Eds., Mechanical Tribology: Materials, Characterization and Applications, 2004, Marcel Dekker, New York, NY.
399. G.E. Totten, K. Funatani and L. Xie, Eds., Handbook of Metallurgical Process Design, 2004, Marcel Dekker, New York, NY.
400. L.C.F. Canale, G.E. Totten and D. Pye, "Heat-Treating Process Design", in Handbook of Metallurgical Process Design, Eds. G.E. Totten, K. Funatani and L. Xie, 2004, Marcel Dekker, New York, NY, p. 453-505.
401. M. Przylecka, W. Gestwa, K. Funatani, G.E. Totten and D. Pye, "Design of Carburizing and Carbonitriding Processes", in Handbook of Metallurgical Process Design, Eds. G.E. Totten, K. Funatani and L. Xie, 2004, Marcel Dekker, New York, NY, p. 507-543.
402. H. Liang, G. Xu, and G. Totten, "Mechanical and Corrosive Wear of Heat Treated Materials and Protection with Coating - An Overview", Inżynieria Powierzchni (Surface Engineering), 2004, No. 3, p. 3-13.
403. Guizhen Xu, Hong Liang, George Totten, and Jiajun Liu, "Engine Tribology and Surface Modification Technology", Inżynieria Powierzchni, 2004, 4, p. 8-18.
404. L.C.F. Canale and G.E. Totten, "Quenching Technology: A Selected Overview of the Current State-of-the-Art", 59^o Congresso Annual Da ABM/59th Annual Congress International, 17-21 julho de 2004, Sao Paulo, Brazil, p. 3705-3716. .

405. L.C.F. Canale, G.E. Totten, R.R. Blackwood, L.M. Jarvis and D.G. Hoffman, “An Overview of Non-Quench -Related Problems Often Attributed to the Quenchant and Quenching Process”, 59^o Congresso Annual Da ABM/59th Annual Congress – International, 17-21 julho de 2004, Sao Paulo, Brazil, p. 3692-3704 .
406. G.E. Totten, “Heat Treating: Current Stat us and Projected Future Technology Developments”, 2003, ASTRA-2003 - International Conference on Surface Modification Technologies (SMT-XVII)/Current Status Seminar of the International Federation of Heat Treatment and Surface Engineering (IFHTSE), Hyderabad, India, November 3-6, 2003, p. 20-23.
407. G.E. Totten, N.I. Kobasko, N. Gopinath, L.C.F. Canale, “Intensive Quenching as a Viable, Energy Efficient, Environmentally Friendly Replacement for Carburizing and Induction Heat Treatment”, 2003, ASTRA-2003 - International Conference on Surface Modification Technologies (SMT-XVII)/Current Status Seminar of the International Federation of Heat Treatment and Surface Engineering (IFHTSE), Hyderabad, India, November 3-6, 2003, p 71-75.
408. L.C.F. Canale and G.E. Totten, “Eliminate Quench Cracking with Uniform Agitation”, Heat Treating Progress, 2004, July/August, p. 27-30.
409. N.I. Kobasko and G.E. Totten, :Quench System Design”, in New Processes of Heat Treating, Eds. Mecludov and V.M. Shuleyev, from Conference in Karkov, 2004, Published by Ukrainian Academy of Sciences, Kiev, Ukrain, p. 94-111.
410. N.I. Kobasko, M.A. Aronov, J.A. Powell, L.C.F. Canale and G.E. Totten, “Intensive Quenching Process Classification and Applications”, Heat Treatment of Metals, 2004, Vol. 31, No. 3, p. 51-58.
411. N.I. Kobasko and G.E. Totten, “Design of Industrial Quenching Processes”, WSEAS (World Scientific and Engineering Academy and Society) and IASME Conferences, Corfu, Greece, August 17-19, 2004, Paper Number 488-512. see: <http://www.wseas.com/>
412. L.C.F. Canale and G.E. Totten, “Elimination of Quench Cracking by Controlling Agitation Uniformity”, Transactions of Materials and Heat Treatment (China), Proceed. of the 14th IFHTSE Congress, Shanghai, China, October 2004, Vol. 25, No. 5, p. 457-461.
413. I. Felde, T. Reti, S. Segerberg, J. Bodin, G.S. Sarmiento and G.E. Totten, “Numerical Methods for Safeguarding the Performance of the Quenching Process”, Transactions of Materials and Heat Treatment (China), Proceed. of the 14th IFHTSE Congress, Shanghai, China, October 2004, Vol. 25, No. 5, p. 519-521.
414. N.I. Kobasko and G.E. Totten, “Design of Industrial Quenching Processes”, Transactions of Materials and Heat Treatment (China), Proceed. of the 14th IFHTSE Congress, Shanghai, China, October 2004, Vol. 25, No. 5, p. 527-530.
415. L.C.F. Canale, G.S. Sarmiento, G.E. Totten, I. Felde and R.N. Penha, “Characterization of the Surface Temperatures and Heat Transfer Properties of Fresh and Used Vegetable Oils Relative to Mineral Oil using HT-Mod and Abaqus”, Abaqus – Cuarta Reunion Argentina de Usuarios de Abaqus, Buenos Aires, Argentina, November 11-12, 2004.
416. G.E. Totten, N. Gopinath, and L.C.F. Canale, “Heat Treating 2005 – Quenching Technology: Current Technology Advancements”, Proceedings of ASM International Pune Chapter Heat Treat Show and Technical Conference, 21-23 February, 2005, Pune, India, pp. 4-15.
417. G.E. Totten and N. Gopinath, “Fluid Sensors for Quench Baths”, Proceedings of ASM International Pune Chapter Heat Treat Show and Technical Conference, 21-23 February, 2005, Pune, India, pp. 16-25.

418. G.E. Totten, R.J. Bishop Jr., R. Suzuki, and Y. Tanaka, "Applications and Operation of the Novel Bubble Eliminator Device for Deaeration of Hydraulic and Turbine Oils", Proceedings of the 50th National Conference on Fluid Power, March 16-18, 2005, Las Vegas, NV, National Fluid Power Association, Milwaukee, WI, Paper Number NCFP 105-13.2
419. R.J. Bishop Jr. and G.E. Totten, "Hydraulic Fluid Cavitation and the Micro-Diesel Effect: An Overview of Mechanisms and Associated Fluid and System Damage", Proceedings of the 50th National Conference on Fluid Power, March 16-18, 2005, Las Vegas, NV, National Fluid Power Association, Milwaukee, WI, Paper Number NCFP 105-17.3
420. L.C.F. Canale, G. Xu, H. Liang, J. Liu, and G.E. Totten, "Surface Engineered Coatings and Surface Additive Interactions for Boundary Film Formation to Reduce Frictional Losses in the Automotive Industry: A Review". SAE Technical Paper Series, Paper Number 2005 – 01 - 2180, Rio de Janeiro ,Brazil, May, 2005.
421. L.C.F. Canale, K. Funatani and G.E. Totten, "Lubrication Applications of Coat Forming Additives", SAE Technical Paper Series, Paper Number 2005 – 01-2181, Rio de Janeiro ,Brazil, May, 2005.
422. L. de C.F. Canale, M.R. Fernandes, S.C.M. Augustinho, G.E. Totten and A.F. Farah, "Oxidation of Vegetable Oils and its Impact on Quenching Performance", Int. J. Materials and Product Technology, 2005, Vol. 24, No. 1-4, p. 101-125.
423. L. de C.F. Canale and G.E. Totten, "Overview of Distortion and Residual Stress, due to Quench Processing – Part I: Factors Affecting Quench Processing", Int. J. Materials and Product Technology, 2005, Vol. 24, No. 1-4, p. 4-52.
424. W. Gestwa, M. Przylecka and G.E. Totten, "Use of Aqueous Polymer Quenchants for Hardening of Carbonitrided Parts", Int. J. Materials and Product Technology, 2005, Vol. 24, No. 1-4, p. 126 -141.
425. M. Grenier. R. Gingras and G.E. Totten, "Rapid Stress Relief and Tempering", Gear Solutions, 2005, May, p. 26-33.
426. L.C. F. Canale and G.E. Totten, "Vegetable Oil Based Quenchant Compositions: A Review of Fluid Chemistry and Quenching Results", in Proceedings of 2nd International Heat Treatment and Surface Engineering in Automotive Applications, Eds. S. Gallo, B. Liscic and P.L. Antona, 2005, Riva Del Garda, Italy, Associazione Italiana di Metallurgia, Milano, Italy, Paper No. 009.
427. L.C.F. Canale, A.C. Canale, M.R. Fernandes, S.C.M. Augustinho, G. S. Sarmiento and G.E. Totten, "Evaluation and Impact of Oxidative Stability on The Quenching Performance of Castor Oil and Soybean Oil", in Proceed. of 2nd International Conference on Heat Treatment and Surface Engineering in Automotive Applications, Eds. S. Gallo, B. Liscic and P.L. Antona, 2005, Riva Del Garda, Italy, Associazione Italiana di Metallurgia, Milano, Italy, Paper No. 010.
428. N.I. Kobasko, M. A. Aronov, J. A. Powell, L.C.F. Canale, and G.E. Totten, "Improved Production of Automotive Parts by Intensive Quench Processing", in Proceed. of 2nd International Conference on Heat Treatment and Surface Engineering in Automotive Applications, Eds. S. Gallo, B. Liscic and P.L. Antona, 2005, Riva Del Garda, Italy, Associazione Italiana di Metallurgia, Milano, Italy, Paper No. 012.
429. N.I Kobasko, L.C.F. Canale, and G.E. Totten, "Improved Production of Steel Parts by Intensive Quenching", in 1st International Conference on Heat Treatment and Surface Engineering of Tools and Dies, Eds. B. Smoljan, H. Jäger, and V. Leskovšek, 2005, Croatian Society for Heat Treatment and

Surface Engineering, Zagreb, Croatia, p. 69-76.

430. L.C.F. Canale, An Junqi, G.E. Totten, X. Yao and V. Li, "Energy Saving by an Accelerated Carburizing Process: A Review", 60o Congresso Annual Da ABM/60th Annual Congress, July 25 to July 28, 2005 - Belo Horizonte, Brazil, pp. 3199-3208.
431. L.C.F. Canale, G.S. Sarmiento, G.E. Totten, I. Felde, and R.N. Penha, "Effect of Vegetable Oil Oxidation on The Ability to Harden AISI 1045 and 4140 Steel", 60o Congresso Annual Da ABM/60th Annual Congress, July 25 to July 28, 2005 - Belo Horizonte, Brazil, pp. 3209-3217.
432. L.C.F. Canale, J.C. Vendramim, G.E. Totten, and E.W. Merheb, "Redução Ou Substituição Dos Ciclos De Cementação Usando O Processo De Têmpera Intensiva", 60o Congresso Annual Da ABM/60th Annual Congress, July 25 to July 28, 2005 - Belo Horizonte, Brazil, pp. 3238-3245.
433. G.E. Totten and L.C.F. Canale, "Polymer Quenchants", in Encyclopedia for Materials; Science and Technology, Eds. K.H.J. Buschow, R.W. Cahn, M.C. Flemings, B. Ilschner, E.J. Kramer, and S. Mahajan, 2005, Elsevier, Oxford (MS 2036).
434. G.E. Totten, L.C.F. Canale and H. Liang, "Hydraulic Cavitation from a Sonomaterials Perspective: A Review", SAE Technical Paper Series, Paper Number 2005-01-4173 E, Sao Paulo, Brazil, November, 2005.
435. L.C.F. Canale, G.E. Totten and An Junqi, "An Accelerated Carburizing Process", SAE Technical Paper Series, Paper Number 2005-01-4174 E, Sao Paulo, Brazil, November, 2005.
436. R.N. Penha, L.C.F. Canale, G.E. Totten and G.S. Sarmiento, "Simulation of Heat Transfer Properties and Residual Stress Analysis of Cooling Curves Obtained From Quenching Studies", SAE Technical Paper Series, Paper Number 2005-01-4178 E, Sao Paulo, Brazil, 2005.
437. L.de.C.F. Canale, M.R. Fernandes, S.C.M. Agostinho, G.E. Totten and A.F. Farrah, "Oxidation of Vegetable Oils and its Impact on Quenching Performance", Jinshu Rechuli, 2005, Vol. 30, No. 8, p. 66-80.
438. M. Grenier. R. Gingras and G.E. Totten, "Rapid Tempering Process", Furnaces International, 2005, September/October, p. 16 and 18.
439. D. Poteet; G.E. Totten and L.C.F. Canale, "Basic Principles of Quench System Design For Induction Hardening", Conf. Proceedings ASM Heat Treating Society Conference & Exhibition, September 25-28, 2005, Pittsburgh, PA.
440. B. Smoljan, D. Iljkic, N. Tomasic, I. Felde, G.E. Totten, and T. Reti, "Evaluation of Steel Hardenability By JM[®]-Test", 5th Hungarian Conference and Exhibition on Materials Science Testing and Informatics in Balatonfured (9-11th October 2005.), p.
441. D.S. MacKenzie and G.E. Totten Eds., Analytical Characterization of Aluminum, Steel, and Superalloys, 2005, CRC Press, Boca Raton, FL.
442. N. Gopinath and G.E. Totten, "Rapid Gas Cooling In Continuous Normalizing Furnaces", Industrial Heating, 2005, October, p. 39-40.
443. G.E. Totten, N.I. Kobasko and L.C.F. Canale, "Mechanism of Surface Compressive Stress Formation by Intensive Quenching", Mecanica Computacional Vol. XXIV, Ed. A. Larreteguy, Buenos Aires, Argentina November 2005, (Paper also on Internet : http://www.fain.uade.edu.ar/mecom2005/SESSION5/Gtotten_Conferencia.pdf)

444. D. Poteet, G.E. Totten, and L.C.F. Canale, "Designing Quench Systems for Induction Hardening: Part I", *Industrial Heating*, 2005, Vol. LXXII, No. 11, November, p. 43- 46.
445. D. Poteet, G.E. Totten, and L.C.F. Canale, "Designing Quench Systems for Induction Hardening: Part II", *Industrial Heating*, 2005, Vol. LXXII, No. 12, December, p. 35- 40.
446. Lauralice de Campos Franceschini Canale and George E. Totten, "Quenching Technology: A Selected Overview of the Current State-of-the-Art", *Materials Research*, 2005, Vol.8, No.4, p.461- 467.
447. R.N. Penha, G.S. Sarmiento and G.E. Totten, "Simulation of Heat Transfer Properties and Thermal Residual Stress from Quenching Studies", *Pequisa e Tecnologia Revista Minerva*, 2005, Vol. 2, No. 2, p. 165-172. (ISSN: 1808-6292).
448. G.E. Totten, P. Asthana, S. Ingole, C. P. Leonida, O.M. Patricio, and H. Liang, "Surface Modification using Sonochemistry for Tribological Applications", 15th International Colloquium, Tribology 2006, Ed. W.J. Bartz, Technische Akademie Esslingen (Germany), 17-19 January, 2006.
449. G.E. Totten, L.C.F. Canale, K. Funatani, and M. Fukuhara, "Coat Forming Processes: Utilization of Thermal Energy Released During Heat Treating for Preparation of Coatings with Enhanced Lubricity and Wear Properties", 15th International Colloquium, Tribology 2006, Ed. W.J. Bartz, Technische Akademie Esslingen (Germany), 17-19 January, 2006.
450. N.I. Kobasko, M.A. Aronov, J.A. Powell, L.C.F. Canale, and G.E. Totten, "Improved Production of Automotive Parts by Intensive Quench Processing", *La Metallurgia Italiana*, 2006, February, p. 1-10.
451. Guizhen Helen Xu, Hong Liang, Jiajun Liu, and G. Totten, "Engine Tribology and Surface Modification Technology", *Jinshu Rechuli*, (Heat Treatment of Metals (China)), 2006, Vol. 31, No. 2, p. 1-11.
452. R.N. Penha, L.C.F. Canale, G.E. Totten, G.S. Sarmiento, "Simulation of Heat Transfer Properties and Residual Stress Analyses of Cooling Curves Obtained from Quenching Studies" *J. ASTM International*, 2006, Vol. 3, No. 5, Paper ID No. 13614.
453. G.E. Totten (Ed.), Handbook of Lubrication and Tribology: Volume 1 – Application and Maintenance, Second Edition, 2006, CRC Press - Taylor and Francis Group, Boca Raton, FL.
454. T. Kazama and G.E. Totten, "Chapter 9 – Compressors and Vacuum Pumps", in Handbook of Lubrication and Tribology: Volume 1 – Application and Maintenance, Second Edition, 2006, CRC Press - Taylor and Francis Group, Boca Raton, FL, p. 9-1 – 9-61.
455. L.C.F. Canale, X. Yao, G.E. Totten, and J.E. Botelho, "Springs: An Overview in Steel Chemistry, Heat Treatment, Residual Stress and Failures", L.C.F. Canale, X. Yao, G.E. Totten, and J.H. Botelho, "Springs: An Overview in Steel Chemistry, Heat Treatment, Residual Stress and Failures", 4th *Colloquium Internacional de Suspensões e Implementos Rodoviários & Mostra de Engenharia* (4th International Suspension and Trailer Colloquium & Engineering Display), SAE International, Warrendale, PA, 2006, p. 101-112.
456. L.C.F. Canale, F.H. Bellan, and G.E. Totten, "Wear Resistance Evaluation of TiC Hardfacing to Sugar Cane Industry Applications", in *Proceedings of the 7th International Tooling Conference; Tooling Materials and Their Applications From Research to Market: Volume 1*, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 677-684..
457. C.K.N. Oliveira, G.E. Totten, A. Lombardi, and L.C. Casteletti, "Microabrasive Wear of Boride Layers on AISI D2 Tool Steel", in *Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 1*, Politecnico Di Torino, Torino,

Italy, May 2-5, 2006, p. 385-392.

458. A. Lombardi, C.K.N. Oliveira, G.E. Totten and L.C. Casteletti, "Wear Testing of Ion Nitrided Maraged Steel Blades", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 2, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 181-187.
459. C.K.N. Oliveira, G.E. Totten, A. Lombardi, and L.C. Casteletti, "Wear of Thermoreactive Layers Produced on AISI H13 and D2 Tool Steels", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 1, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 393-400.
460. B. Smoljan, D. Iljic, G.E. Totten and I. Felde, "An Application of the JM® - Test in Computer Simulation of Quenching of Cold Work Tool Steels", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 1, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 565-572.
461. J. Vatavuk, D. Domingues, and G.E. Totten, "Mechanical Properties of Powder Metallurgy and Conventional AISI M3 Class 2 High Speed Steels", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 1, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 821-828.
462. G.E. Totten, N.I. Kobasko and L.C.F. Canale, "Intensive Quenching for Improved Hardness, Strength and Residual Stress Properties", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 1, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p.225-239.
463. A. Lombardi, C.K.N. Oliveira, G.E. Totten and L.C. Casteletti, "Wear Evaluation of Ion Nitrided Steels Used for Wood Machining Tools", in Proceedings of the 7th International Tooling Conference, Tooling Materials and Their Applications From Research to Market: Volume 2, Politecnico Di Torino, Torino, Italy, May 2-5, 2006, p. 359-366.
464. M. Przylecka, W. Gestwa, and G.E. Totten, "Use of Aqueous Polymer Quenchants for Hardening Carbonitrided Parts", Jinshu Rechuli, (Heat Treatment of Metals (China)), 2006, Vol. 31, No. 5, p. 85-88.
465. L.C.F. Canale, J. Gu and G.E. Totten, "Development and Use of the Larson-Miller Equation and Holloman-Jaffe Parameters for Stress Relieving Operations: A Review", 61o Congresso Annual Da ABM/61st Annual Congress, July 24 to July 27, 2006 – Rio De Janeiro, Brazil, pp. 3513-3523.
466. L.C.F. Canale and G.E. Totten, "A Critical Overview of Quench Severity Quantification", 61o Congresso Annual Da ABM/61st Annual Congress, July 24 to July 27, 2006 – Rio De Janeiro, Brazil, pp. 3550-3559.
467. N.I. Kobasko, L.C.F. Canale and G.E. Totten, "Intensive and Drastic Quenching: Equipment and Equipment Design", 61o Congresso Annual Da ABM/61st Annual Congress, July 24 to July 27, 2006 – Rio De Janeiro, Brazil, pp. 3560-3570.
468. L.C.F. Canale, N.I. Kobasko and G.E. Totten, "Intensive Quenching: Heat Transfer and Residual Stress", 61o Congresso Annual Da ABM/61st Annual Congress, July 24 to July 27, 2006 – Rio De Janeiro, Brazil, pp. 4297-4309.
469. G.S. Sarmiento, R.M.M. Riofano, L.C.F. Canale, R.A. Mesquita, and G.E. Totten, "Modeling Heat Transfer During Quenching Performance in Commercial Quench Tanks", SAE Technical Paper Series, Paper Number 2006-01-2810, Sao Paulo, Brazil, November, 2006.

470. L.C.F. Canale, A.C. Canale, C.E. Bates, and G.E. Totten, "Quench Factor Analysis To Quantify Steel Quench Severity And Its Successful Use In Steel Hardness Prediction", SAE Technical Paper Series, Paper Number 2006-01-2814, Sao Paulo, Brazil, November, 2006.
471. L.C.F. Canale, Jianfeng Gu, Xin Yao, G.E. Totten, "History And Advances In Tempering Parameter Development", SAE Technical Paper Series, Paper Number 2006-01-2807, Sao Paulo, Brazil, November, 2006.
472. C. A. Soufen, L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Production And Heat Treatment of Cast Graphitic Steels with Additions of Niobium", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 127-130.
473. E. A. B. Arnoni, Rafael Nucci, L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Production and Evaluation of AISI 420 Steel Coatings Obtained By Thermal-Spray Processes", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, Publ. 2007 by ASM International, Materials Park, OH, p. 124-128.
474. L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Niobium Precipitation Hardened Stainless Steels", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 468-471.
475. E. A. B. Arnoni, R. Nucci, A. Lombardi Neto, L. C. Casteletti. and G.E. Totten, "Micro Abrasive Wear Evaluation on WC Coatings With Different Binders Applied by HVOF Process", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, Publ. 2007 by ASM International, Materials Park, OH, p. 73-77.
476. A. M. de Oliveira, L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Ion Nitriding and Nitrocarburizing of Stainless Steels and Its Influence on Corrosion Resistance", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, Publ. 2007 by ASM International, Materials Park, OH, p. 118-123.
477. M. Martins, S. M. Rossitti, L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Effect of Stress Relief on the Impact Properties of Grade 1A (CD4MCu) and 1B (CD4MCuN) ASTM A 890/A890M Duplex Stainless Steels", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 451-456.
478. L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Development of Ultra-High Strength Steel Precipitation Hardened by Niobium", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 468-471.
479. M. L. Casotti, L. C. Casteletti, A. Lombardi Neto, and G. E. Totten, "Aluminizing Treatments in Steels and Cast Iron", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p.
480. G.E. Totten, L.C.F. Canale, A.C. Canale, C.E. Bates, "Quench Factor Analysis to Quantify Steel Quench Severity and Its Successful Use in Steel Hardness Prediction", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 384-389.
481. J. Vatauvuk, L.C.F. Canale, G.E. Totten, S.G. Cardoso, "Effect of Nitriding on Toughness and Bending Resistance of Tool Steel", Proceed. of the 15th IFHTSE Congress, Vienna, Austria, September 25-29, 2006, p. 545-550.
482. B. Smoljan, D. Iljkic, N. Tomasic, I. Felde, G.E. Totten and T. Reti, "Evaluation of Steel Hardenability by JIM[®] Test", Materials Science Forum, 2007, Vols. 537-538, p. 607-614.
483. G. S. Fox-Rabinovich and G.E. Totten, Eds., Self-Organization During Friction: Advanced Surface Engineered Materials and Systems Design, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL

484. D. Poteet, G.E. Totten and L.C.F. Canale, “Basic Principles of Quench System Design for Induction Hardening”, *Jinshu Rechuli*, 2006, No. 11, p. 88-93.
485. G.E. Totten, N. Gopinath and D. Pye, “Chapter 1 - Heat Treatment Equipment”, in Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Equipment and Process Design, Ed. By G.E. Totten, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL, p. 3-192.
486. H.M. Tensi, A. Stich and G.E. Totten, “Chapter 9 – Quenching and Quenching Technology”, in Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Metallurgy and Technologies, Ed. By G.E. Totten, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL, p. 539-606.
487. M. Narazaki and G.E. Totten, “Chapter 10 – Distortion of Heat Treated Components”, in Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Metallurgy and Technologies, Ed. By G.E. Totten, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL, p. 607-650.
488. Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Metallurgy and Technologies, Ed. By G.E. Totten, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL
489. Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Equipment and Process Design, Ed. By G.E. Totten, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL
490. L.C.F. Canale, R.N. Penha, G.E. Totten, A.C. Canale, and M.R. Gasparini, “Overview of Factors Contributing to Steel Spring Performance and Failure”, *Int. J. Microstructure and Materials Properties*, 2007, Vol. 2, Nos. 3/4, p. 262-309.
491. L.C.F. Canale, N.I. Kobasko and G.E. Totten, “Intensive Quenching: Part 1 – What Is It?”, *International Heat Treatment and Surface Engineering*, 2007, Vol. 1, No. 1, p. 30-33.
492. Gustavo Sánchez Sarmiento, Joaquín Fernández Bugna, Lauralice C.F. Canale, Rosamel M. Muñoz Riofano, Rafael Agnelli Mesquita, and George E. Totten, “Modeling Quenching Performance by the Kuyucak Method”, *Materials Science & Engineering A*, 2007, Vol. 459, p. 383-389.
493. J. Vatauvuk, L.C.F. Canale, G. E. Totten, S. G. Cardoso, “Effect of Nitriding on Toughness and Bending Resistance of Tool Steels”, (Accepted for publication in *Int. J. Materials and Product Technology* in 2007)
494. L.C.F. Canale, N.I. Kobasko and G.E. Totten, “Intensive Quenching: Part 2 – Formation of Optimal Surface Compressive Stresses”, *International Heat Treatment and Surface Engineering*, 2007, Vol. 1, No. 2, p. 60-63.
495. M. Martins, S. M. Rossitti, L. C. Casteletti, A. Lombardi Neto and G. E. Totten, “Stress Relief Heat Treatment in Duplex Stainless Steels”, *Int. J. Materials and Product Technology*, 2008, Vol. No. p.
496. A. M. de Oliveira, L. C. Casteletti, A. Lombardi Neto and G. E. Totten, “Ion Nitriding and Nitrocarburizing of Stainless Steels and its Influence in the Corrosion Resistance”, (Accepted for publication in *Int. J. Materials and Product Technology* in 2007)
497. R. Nucci, E.A.B. Armoni, A. Lombardi Neto, L.C. Casteletti and G.E. Totten, “Influence of HVOF Deposition Process Using Cr_2C_3 – NiCr and WC-CoCr Powders”, 2007 MPIF/APMI International Conference on Powder Metallurgy & Particulate Materials, May 13-16, Denver, CO, Paper No. 2007-01-0174, p. 8-74 – 8-81.
498. L.C. Casteletti, A. Lombardi Neto, D.T. de Macedo, L. de B. Cruvinel, and G.E. Totten, “Deposition of Stellite Superalloy Powder on 7475 Aluminum Alloy to Enhance its Wear and Corrosion Resistance”, 2007 MPIF/APMI International Conference on Powder Metallurgy & Particulate

Materials, May 13-16, Denver, CO, Paper No. 2007-01-0176, p. 8-129 – 8-139.

499. E.A.B. Arnoni, A. Lombardi Neto, L.C. Casteletti, and G.E. Totten, “Effect of HVOF Deposition Process in Powders of Tungsten Carbide with Different Binders”, 2007 MPIF/APMI International Conference on Powder Metallurgy & Particulate Materials, May 13-16, Denver, CO, Paper No. 2007-01-0172, p. 8-56 – 8-68.
500. L. C. F. Canale, E. Merheb, J. C. Vendramim, and G.E. Totten, “Energy Savings Using a Combination of Carburizing Cycle Reduction and Intensive Quenching”, *Rechuli (Heat Treatment)*, 2007, Vol. 22, No. 2, p. 55-59.
501. Lauralice de Campos Franceschini Canale, George Edward Totten, and Antonio Canale, “Polimeros de Tempera a Base de PAG”, *Pequisa e Tecnologia Revista Minerva*, 2006, Vol. 3, No. 2, July-December, p. 209-214. (ISSN: 1808-6292).
502. D. T. De Macedo, L. De Brito Cruvinel, A. Lombardi Neto, G.E. Totten, L.C. Casteletti, “Thermal Spray Coatings On An Aged 7475 Aluminum Alloy Substrate”, in *Proc. of 24th Heat Treating Society Conference*, Eds. D.H. Herring, D.S. MacKenzie and D.J. Williams, 17-19 September, 2007, Detroit, MI, ASM International, Materials Park, OH, p.346-350.
503. L.C. Casteletti, R.M.M. Riofano, C.K.N. De Oliveira, A. Lombardi Neto, and G.E. Totten, “Plasma Nitriding of AISI H13 Tool Steel with Different Microstructures”, in *Proc. of 24th Heat Treating Society Conference*, Eds. D.H. Herring, D.S. MacKenzie and D.J. Williams, 17-19 September, 2007, Detroit, MI, ASM International, Materials Park, OH, p.338-342.
504. A. Itiman Filho, C.A.R. De Gouvea, A. Lombardi Neto, G.E. Totten, and L.C. Casteletti, “Three Point Bending Behavior of Orthodontic Thermo-Active Nitinol Wires”, in *Proc. of 24th Heat Treating Society Conference*, Eds. D.H. Herring, D.S. MacKenzie and D.J. Williams, 17-19 September, 2007, Detroit, MI, ASM International, Materials Park, OH, p. 343-345.
505. L. C. F. Canale, E. Merheb, J. C. Vendramim, G.E. Totten, N. Kobasko, M. A. Aronov, J. A. Powell, “Use of Intensive Quenching to Reduce the Carburizing Cycle of the Manufacture of Crosses for the Automotive Industry”, in *Proc. of 24th Heat Treating Society Conference*, Eds. D.H. Herring, D.S. MacKenzie and D.J. Williams, 17-19 September, 2007, Detroit, MI, ASM International, Materials Park, OH, p. 141-146.
506. L.C. Casteletti, A. Lombardi Neto, and G.E. Totten, “Electric Resistivity Evaluation of the Fe-31Mn-7.5Al-1-5Si-1.0C Alloy”, in *Proc. of 24th Heat Treating Society Conference*, Eds. D.H. Herring, D.S. MacKenzie and D.J. Williams, 17-19 September, 2007, Detroit, MI, ASM International, Materials Park, OH, p. 351-354.
507. M. Grenier, R. Gingras, and G.E. Totten, “Rapid Stress Relief and Tempering”, *Heat Treating Progress*, 2007, Vol. 7, No. 4, July, p. 36-40.
508. R. M. Muñoz Riofano, L. C. Casteletti, L. C.F. Canale and G. E. Totten, “Improved Wear Resistance of P/M Tool Steel Alloy With Different Vanadium Contents After Ion Nitriding”, *Wear*, 2007, Vol. 265, p. 57-64.
509. N.I. Kobasko, G.E. Totten, and L.C.F. Canale, “Intensive Quenching: Improved Hardness and Residual Stress”, *Jinshu Rechuli (Heat Treatment of Metals - China)*, 2007, Vol. 32, No. 5, May, p. 84-89.
510. J. Vatauvuk, L.C.F. Canale, S.G. Cardoso and G.E. Totten, “Toughness and Bending Resistance of Nitrided Tool Steels”, *Rechuli (Heat Treatment)*, 2007, Vol. 22, No. 3, p. 10-16.

511. G.E. Totten, A.I. Filho, C.A.R. Gouvêa, A. Neto, L.C. Casteletti, "Development of Rolling Mill for Rectangular Orthodontic Wires Production", *Journal of Achievements in Materials and Manufacturing Engineering (JAMME) Extended Issue*, 2007, Vol. 24, No. 1, September, p. 450-455.
512. Rafael Nucci, A. Lombardi Neto, E.A.B. Arnoni, G.E. Totten, L.C. Casteletti, "Influence of HVOF Process Using Cr_3C_2 -NiCr and WC-CoCr Powders", *Rechuli (Heat Treatment)*, 2007, Vol. 22, No. 4, p. 10-15.
513. Luiz C. Casteletti, A.L. Neto, G.E. Totten, D.T. de Macedo and L.B. Cruvinel, "Deposition of Stellite Superalloy Powder onto 7475 Aluminum Alloy to Enhance Wear Resistance", *Aluminum International Today*, 2007, Vol. 19, No. 6, November/December, p. 29-31.
514. L.C. Casteletti, A. Lombardi Neto, and G.E. Totten, "HVOF Production of Hard Chromium Coatings for Improved Wear.", *Industrial Heating*, 2008, Vol. LXXV, No. 1, January, p. 53-58.
515. C.K.N. de Oliveira, G.E. Totten, A. Lombardi Neto and L.C. Casteletti, "Micro-Abrasive Wear of Boride Layers on AISI D2 Tool Steel Produced by a Thermoreactive Process", *Int. J. Microstructure and Materials Properties*, 2008, Vol. 3, Nos. 2/3, p. 241-253.
516. G.E. Totten and R.J. Bishop Jr. "Quantitative Assessment of Air Content and Its Removal from Hydraulic Fluids: A Review " in *Proceed. of the 51st National Conference on Fluid Power*, March 12-14, 2008, Las Vegas Convention Center, Las Vegas, NV, National Fluid Power Association, Milwaukee, WI, NCFP I08-2.3, p. 47-60.
517. L.C. Casteletti, A. Lombardi Neto, and G.E. Totten, "Plasma Nitriding of Stainless Steels", *Industrial Heating*, 2008, Vol. LXXV, No. 3, March, p. 61-66.
518. L. C. Casteletti, Rafael Nucci, A. Lombardi Neto, E. A. B. Arnoni and G. E. Totten, "Hard chromium substitution using HVOF coatings", *International Heat Treatment and Surface Engineering*, 2008 , Vol. 2, No. 2, p. 27-31.
519. C.E. Canavides, J.E. Fernández Bugna, G. Sánchez Sarmiento, G.E. Totten, I. Felde and T. Reti, "Thermo-Mechanical Analysis of Railway Wheels During Braking", in *Proceedings of 2nd International Conference on Distortion Engineering*, Eds. H-W. Zoch and Th. Lübben, Bremen, Germany, 17-19 September 2008, Published by: Stiftung Institut für Werkstofftechnik, Bremen, Germany, p. 451-460.
520. F.A.P. Fernandes, A. Lombardi Neto, L.C. Casteletti, A.M. de Oliveira, G.E. Totten, "Stainless Steel Property Improvement by Ion Nitriding and Nitrocarburizing". *Heat Treating Progress*, 2008, Vol. 8, No. 4, July/August, p. 41-43.
521. L.C.F. Canale and G.E. Totten, "Steel Heat Treatment Failures due to Quenching", in *Failure Analysis of Heat Treated Steel Components*, Eds. L.C.F. Canale, R.A. Mesquita, and G.E. Totten, 2008, ASM International, Materials Park, OH, p. 255-284.
522. Małgorzata Przyłęcka, Wojciech Gestwa, Lauralice C.F. Canale, Xin Yao, G.E. Totten, "Sources of Failures in Carburized and Carbonitrided Components", in *Failure Analysis of Heat Treated Steel Components*, Eds. L.C.F. Canale, R.A. Mesquita, and G.E. Totten, 2008, ASM International, Materials Park, OH, p. 177-240.
523. L.C.F. Canale, Xin Yao, Jianfeng Gu and George E. Totten, "A Historical Overview of Steel Tempering Parameters", *Int. J. Microstructure and Materials Properties*, 2008, Vol. 3, Nos 4/5, p. 474-525.
524. B. Hernández Morales, A. López Valdéz, H.J. Vergara Hernández, G. Sánchez Sarmiento, A. Gastón,

- G.E. Totten, "Experimental Determination of the Temperature Evolution within the Quenchant during Immersion Quenching", Conf. Proceed. New Challenges in Heat Treating and Surface Engineering – Conference in Honor of Božidar Liščić, June 9-12, 2009, Cavtat Croatia, Publ. by Croatian Society for Heat Treatment and Surface Engineering, Zagreb, Croatia, p. 31-36.
525. Ester Carvalho de Souza, Lauralice de C.F. Canale, George E. Totten, "Vegetable Oil Structure and Antioxidants", Conf. Proceed. New Challenges in Heat Treating and Surface Engineering – Conference in Honor of Božidar Liščić, June 9-12, 2009, Cavtat Croatia, Publ. by Croatian Society for Heat Treatment and Surface Engineering, Zagreb, Croatia, p. 45-52.
526. Daniel Komatsu, Elki C. Souza, Lauralice F.C. Canale, George E. Totten, "Effect of Corrosion Inhibitors on Cooling Curve Behavior of Soybean Oil-Based Quenchants", Conf. Proceed. New Challenges in Heat Treating and Surface Engineering – Conference in Honor of Božidar Liščić, June 9-12, 2009, Cavtat Croatia, Publ. by Croatian Society for Heat Treatment and Surface Engineering, Zagreb, Croatia, p. 37-44.
527. Ester Carvalho de Souza, Mauro R. Fernandes, Sylvana C.M. Augustinho, Lauralice de Campos Franceschini Canale, George E. Totten, "Comparison of Structure and Quenching Performance of Vegetable Oils", J. ASTM International, 2009, Vol. 6, No. 9, Paper Number JAI 102188.
528. Patricia Mariane Kovalco, Lauralice C. F. Canale, George E. Totten, "Quenching Fundamentals – Quenching of Aluminum Alloys: Property Prediction by Quench Factor Analysis", Heat Treating Progress, 2009, Vol. 9, No. 3, May/June, p. 23-28.
529. Satyam S. Sahay, Goutam Mohapatra, George E. Totten, "Overview of Pearlitic Rail Steel: Accelerated Cooling, Quenching, Microstructure, and Mechanical Properties", J. ASTM International, 2009, Vol. 6, No. 7, Paper Number JAI 102021.
530. N. Kobasko, M. Aronov, J. Powell, G. Totten, "One More Discussion: What Is The Intensive Quenching Process?" J. ASTM International, 2009, Vol. 6, No. 1, Paper Number JAI 101792.
531. G. Sarmiento, C. Bronzini, A. Canale, L. Canale, G. Totten, "Water and Polymer Quenching of Aluminum Alloys: A Review of the Effect of Surface Condition, Water Temperature, and Polymer Quenchant Concentration on the Yield Strength of 7075-T6 Aluminum Plate", J. ASTM International, 2009, Vol. 6, No. 1, Paper Number JAI 102098.
532. L. Canale, X. Luo, X. Yao, G. Totten, "Quenchant Characterization by Cooling Curve Analysis", J. ASTM International, 2009, Vol. 6, No. 2, Paper Number JAI 101981.
533. L.C. Casteletti, F.A.P. Fernandes, A. Lombardi-Neto, C.A. Picon, G. Tremiliosi, G.E. Totten, "Characterization of 20f Plasma Nitrocarburized Layers Produced on AISI 316L Stainless Steel", Rechuli, 2009, Vol. 24, No. 3, p. 17-20.
534. F.A.P. Fernandes, G.T.M. Alencar, G.T.M., C.A. Picon, G.E. Totten, A. Lombardi-Neto, L.C. Casteletti, "Wear and Corrosion Resistance of Self-Fluxing Coatings with the Addition of Hard Particles", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
535. L.C. Casteletti, F.A.P. Fernandes, A. Lombardi-Neto, C.A. Picon, G.E. Totten, "Wear and Corrosion Resistance of Precipitation Hardening Stainless Steels with Niobium", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
536. F.A.P. Fernandes, S.C. Heck, C.A. Picon, G.E. Totten, L.C. Casteletti, "Wear and Corrosion Evaluation of Pack Chromized AISI 1060 Steel", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society,

Beijing China, p.

537. F.A.P. Fernandes, S.C. Heck, C.A. Picon, G.E. Totten, L.C. Casteletti, "Wear and Corrosion Evaluation of Pack Boronized AISI 1060 Steel", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
538. L.C. Casteletti, S.C. Heck, F.A.P. Fernandes, G.E. Totten G.E., A. Lombardi-Neto³, C.A. Picon, "Salt Bath Boronizing of a Fe-Mn-Al System Alloy: Wear and Corrosion Evaluation", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
539. S.C. Heck, F.A.P. Fernandes, G.E. Totten, S.G. Schneider, R.G. Pereira, L.C. Casteletti, "Wear Behavior of Borided Ti-13Nb-13Zr Alloy", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
540. S.C. Heck, F.A.P. Fernandes, G.E. Totten, A.Lombardi- Neto, L.C. Casteletti, "Boronizing of Maraging Steel (C-250 grade): Evaluation of Wear Behavior", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
541. George E. Totten, Ester Carvalho de Souza, William Capelupi, Lauralice de Campos Franceschini Canale, "Chemistry of Quenching: Vegetable Oil Based Quenchants – A Closer Look", Conf. Proceed. The 4th Asian Conference on Heat Treatment and Surface Engineering, October 27-30, 2009, Beijing, China, Chinese Heat Treatment Society, Beijing China, p.
542. L.C. Casteletti, F.A.P. Fernandes, S.C. Heck, C.K.N. de Oliveira, A. Lombardi-Neto, G.E. Totten, "Pack and Salt Bath Diffusion Treatments on Steels", Heat Treating Progress, 2009, Vol. 9, No. 5, September, p. 49-52.
543. L.C. Casteletti, A. Lombardi Neto, A.M. de Oliveira, G.E. Totten, "Ion nitriding and nitrocarburising of stainless steels and its influence in the corrosion resistance", Int. J. Microstructure and Materials Properties, 2009, Vol. , No. , p.

NATIONAL AND INTERNATIONAL STANDARDS AND GUIDES

1. International Standard, ISO 9950 - "Industrial Quenching Oils - Determination of Cooling Characteristics - Nickel-Alloy Probe Test Method", 1995-05-01.
2. NFPA Information Report NFPA/T2.13.8-1995, "Information Report - Hydraulic fluid power - Fire resistant fluids - Definitions, classifications, and testing", December 6, 1995.
3. NFPA Recommended Standard NFPA/T2.13.1 R3-1997, "Recommended practice - Hydraulic Fluid Power - Use of fire resistant fluids in industrial systems, 4th Ed., August 14, 1997.
4. ASTM D 6200-97, "Standard Test Method for Determination of Cooling Characteristics of Quench oils by Cooling Curve Analysis", December 10, 1997.

5. ASTM D 6482-99, "Standard Method for Cooling Curve Analysis of Aqueous Polymer Quenchants by Cooling Curve Analysis with Agitation (Tensi Method)", November 10, 1999.
6. ASTM D 6666-01, "Standard Guide for Standard Guide for Evaluation of Aqueous Polymer Quenchants"
7. ASTM D 6710-01, "Standard Guide for Evaluation of Hydrocarbon-Based Quench Oils"
8. ASTM D 6813 – 02, "New Standard Guide for the Performance Of Hydraulic Fluids For Piston Pumps"

BOOKS COEDITED AND COAUTHORED

1. Totten, G.E., Ed., Conf. Proceed. Quenching and Distortion Control, ASM International, Materials Park, OH, 1992.
2. G.E. Totten, C.E. Bates and N.A. Clinton, Handbook of Quenchants and Quenching Technology, ASM International, Materials Park, OH, 1993.
3. G.E. Totten and R.A. Wallis, Ed., Heat Treating: Equipment and Processes - 1994 Conference Proceedings, ASM International, Materials Park, OH, Schaumburg, IL; April 1994.
4. G.E. Totten and J. Reichel, Ed., Fire Resistance of Industrial Fluids, ASTM STP 1284, June 1995.
5. George E. Totten, Gary H. Kling and Donald M. Smolenski, Ed., Tribology of Hydraulic Pump Testing ASTM STP 1310, American Society for Testing and Materials, Philadelphia, 1995.
6. G.E. Totten, K. Funatani, M.A.H. Howes and S. Sjostrom Eds., Conf. Proceed. 2nd International Conference on Quenching and Control of Distortion, ASM International, Materials OH, 1996.

7. G.E. Totten and M.A.H. Howes Ed., Steel Heat Treatment Handbook, 1997, Marcel Dekker, Inc., New York.
8. G.E. Totten, Handbook of Hydraulic Fluid Technology, 1999, Marcel Dekker, Inc. New York.
9. G.E. Totten, H.M. Tensi and B. Liscic, Conf. Proceed.3rd International Conference on Quenching and Control of Distortion, ASM International, Materials OH, Prague, Czrch Republic, March 24-26,1999
10. G.E. Totten, L.D. Wedeven, J.R. Dickey and M. Anderson, Bench Testing of the Lubrication and Wear Properties of Industrial Fluids Used in Machinery Applications ASTM STP 1404, American Society for Testing and Materials, Philadelphia, 2001
11. G.E. Totten, D.K. Wills, and D. Feldmann, Hydraulic Failure Analysis: Fluids, Components and System Effects ASTM STP 1339, American Society for Testing and Materials, Philadelphia, 2001.
12. G.E. Totten, M.A.H. Howes and T. Inoue, Handbook of Residual Stress and Deformation of Steel, 2002, ASM International, Materials Park, OH.
13. G.E. Totten, S. Westbrook, and R. Shah, Fuels and Lubricants Handbook: Technology, Properties, Performance and Testing, 2003, ASTM International, Conshohocken, PA.
14. G.E. Totten and D.S. MacKenzie, , Handbook of Aluminum: Vol. 1 - Physical Metallurgy and Processes 2003, Marcel Dekker, New York.
15. G.E. Totten and D.S. MacKenzie, , Handbook of Aluminum: Vol. 2 – Alloy Production and materials Manufacturing, 2003, Marcel Dekker, New York.
16. G.E. Totten, L. Xie and K. Funatani, Eds., Handbook of Mechanical Alloy Design, 2003, Marcel Dekker Inc., New York, NY.
17. G.E. Totten, L. Xie and K. Funatani, Eds., Modeling and Simulation for Material Selection and Mechanical Design, 2004, Marcel Dekker Inc., New York, NY.
18. G.E. Totten and H. Liang, Eds., Surface Modifications and Mechanisms: Friction, Stress and Reaction Engineering, 2004, Marcel Dekker, New York, NY.
19. G.E. Totten and H. Liang, Eds., Mechanical Tribology: Materials, Characterization and Applications, 2004, Marcel Dekker, New York, NY.
20. G.E. Totten, K. Funatani and L. Xie, Eds., Handbook of Metallurgical Process Design, 2004, Marcel Dekker, New York, NY.
21. D.S. MacKenzie and G.E. Totten, Eds., , Analytical Characterization of Aluminum, Steel, and Superalloys, 2005, CRC Press, Boca Raton, FL.
22. G.E. Totten (Ed.), Handbook of Lubrication and Tribology: Volume 1 – Application and Maintenance, Second Edition, 2007, CRC Press - Taylor and Francis Group, Boca Raton, FL.
23. G. S. Fox-Rabinovich and G.E. Totten, Eds., Self-Organization During Friction: Advanced Surface Engineered Materials and Systems Design, 2007, CRC Press, Boca Raton, FL
24. G.E. Totten (Ed), Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Metallurgy and Technologies, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL
25. G.E. Totten (Ed), Steel Heat Treatment Handbook, Second Edition – Steel Heat Treatment: Equipment and Process Design, 2007, CRC Press Taylor & Francis Group, Boca Raton, FL

26. L.C.F. Canale, R.A. Mesquita, and G.E. Totten, Eds., Failure Analysis of Heat Treated Steel Components, 2008, ASM International, Materials Park, OH.
27. G.E. Totten and V. De Negri, Handbook of Hydraulic Fluid Technology, 2nd Edition, CRC Press, Boca Raton, FL (in Production)
28. B. Liščić, H.M. Tensi, L.C.F. Canale and G.E. Totten, Theory and Technology of Quenching: A Handbook, 2nd Edition, CRC Press, Boca Raton, FL (in Production)
29. S. Tung and G.E. Totten, Handbook of Automotive Lubrication and Testing, ASTM International, West Conshohocken, PA (in Production)
30. R.W. Gresham and G.E. Totten, Lubrication and Maintenance of Industrial Machinery: Best Practices and Reliability, 2008, CRC Press, Boca Raton, FL.