TECHNICAL PUBLICATION LIST

Mark Edward Zipf, Ph.D.

Published Books & Book Chapters:

1) "Innovations in Shape Measurement and Control for Cold Rolled Flat Strip Products", M.E. Zipf, *Flat-Rolled Steel Processes : Advanced Technologies*, Chapter 33, Ginzburg, V.B. (Ed.), ISBN-10: 1420072927, ISBN-13: 978-1420072921, CRC Press / Taylor & Francis, 2009.
2) "Radiation Transmission-based Thickness Measurement Systems – Theory and Application to Flat Rolled Strip Products", M.E. Zipf, Advances in Measurement Systems, Chapter 5, Sharma, M.K. (Ed.), ISBN: 978-953-307-061-2, INTECH, Vienna, Austria, 2010.
3) "Radiation Transmission-based Thickness Measurement Systems – Advancements, Innovations and New Technologies", M.E. Zipf, Advances in Measurement Systems, Chapter 7, Sharma, M.K. (Ed.), ISBN: 978-953-307-061-2, INTECH, Vienna, Austria, 2010.
4) "Characterizing Thickness Variations During Rolling", M.E. Zipf, The Making, Shaping and Treating of Steel, 11th Edition, Flat Products Volume 4, Chapter 1, pp. 55-64, Ginzburg, V.B. (Ed.), ISBN: 978-1-935117-36-0, Association of Iron and Steel Technology, Warrendale, PA, 2014.
5) "Gauge Control in Cold Mills", M.E. Zipf, The Making, Shaping and Treating of Steel, 11th Edition, Flat Products Volume 4, Chapter 15, pp. 753-840, Ginzburg, V.B. (Ed.), ISBN: 978-1-935117-36-0, Association of Iron and Steel Technology, Warrendale, PA, 2014.

6a) "Automatic Gauge Control in Cold Rolled Flat Products – Vol. I : Technical Details", M.E. Zipf

6b) "Automatic Gauge Control in Cold Rolled Flat Products – Vol. II : Practical Considerations", M.E. Zipf

7a) "Shape / Flatness Measurement & Control in Cold Rolled Flat Products – Vol. I : Technical Details", M.E. Zipf

7b) "Shape / Flatness Measurement & Control in Cold Rolled Flat Products – Vol. II : Practical Considerations", M.E. Zipf

8a) "Rolling Theory for Cold Rolled Flat Products – Vol. I : Technical Details", M.E. Zipf

8b) "Rolling Theory for Cold Rolled Flat Products – Vol. II : Operational Practices", M.E. Zipf

Published Journal Papers & Magazine Articles:

1) "Computer Simulation of Multiple Pilots Flying a Modern High Performance Helicopter", M.E. Zipf, W.G. Vogt, M.H. Mickle, R.G. Hoelzeman, Fei Kai, J.R. Mihaloew, NASA Technical Memorandum TM-100182, July 1988.
2) "Computer Simulation of a Single Pilot Flying a Modern High Performance Helicopter", M.E. Zipf, W.G. Vogt, M.H. Mickle, R.G. Hoelzeman, Fei Kai, J.R. Mihaloew, NASA Technical Memorandum TM-100183, July 1988.
3) "Automated Optical Observatory for Thermospheric Dynamics Studies", M.A. Biondi, M.E. Zipf, and R.A. Olmsted, Optical Engineering, Vol. 27(10), 909-916, 1988.
4) "Combined Optical and Radar Wind Measurements in the F-Region Over Millstone Hill", D.P. Sipler, M.E. Hagan, M.E. Zipf, and M.A. Biondi, Journal of Geophysical Research (Space Physics), Vol. 96, No. A12, Pg. 21255-21262, December 1, 1991.
5) "All-Sky Doppler Interferometer (ASDI) for Thermospheric Dynamic Studies", M.A. Biondi, D.P. Sipler, M.E. Zipf, and J.L. Baumgardner, Applied Optics, Vol. 34, No. 10, Pg. 1646-1654, 1995.

Published Journal Papers & Magazine Articles: (continued)

6) "Vertical Winds in the Midatlantic Thermosphere from Fabry-Perot Interferometer Measurements", D.P. Sipler, M.A. Biondi, and M.E. Zipf, Journal of Atmospheric and Terrestrial Physics, Vol. 57, No. 6, pp. 621-629, 1995.

7) "A Cost Effective Automatic Shape / Flatness Control System", M.E. Zipf, T.G. Elwell, C.K. Godwin, D.R. Wisti, C.F., Hummel, AISE Steel Technology Magazine, pp. 48-55, November / December Issue, 2003.

8) "A New FPGA and Multi-Core Processor Architecture for High Performance Signal Processing and Control Systems", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Millennium Steel International : Finishing Processes, pp. 135-140, 2010.

9) "Programmable Hardware and Multi-Core Processor for Signal Processing and Control", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Steel Times International, pp. 40-42, October Issue, 2010.

10) "Contemporary Hardware Eases Concerns Over Spares and Modernizations of Obsolete Control Systems", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Metallurgical Plant and Technology (MPT International), Verlag Stahleisen GmbH, January Issue, 2011.

11) "ИНДИВИДУЛЬНЫЕ РЕШЕНИЯ НА СЕРИЙНОЙ БАЗЕ", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Metallo Evraz, pp. 2-6, February Issue, 2011.

12) "Программируемые микроплаты FPGA и мультиядерный процессор для обработки сигналов и управления", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Steel Times International – Russian Edition, pp. 16-19, May Issue, 2011.

13) "New FPGA and Multi-Core Processor Hardware Ease Concerns Over Spares and Modernizations of Obsolete Control Systems", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzewki and C.K. Godwin, Steel & Metallurgy (India), Vol. 14, No. 5, pp. 40-58, April Issue, 2012.

14) "Method for the Determination of Shape Actuator Capabilities Envelopes in 20-High Cluster Mills", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. 77-89, December 2012.

15) "Multivariable Directions in the Improvement of Shape Actuator Performance in 20-High Cluster Mills", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. 106-123, February 2013.

16) "Multi-Variable Shape Actuation Capabilities Envelopes of 6-High Mills with Applications to Mill Set-Up and Scheduling Optimization", M.E. Zipf, South East Asia Iron and Steel Institute (SEAISI), Quarterly Journal, Vol. 42, No. 2, pp. 9-17, April 2013.

17) "Multivariable Shape Actuation Capabilities Envelopes of Vertical-Stack Mills", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. 46-61, February 2014.

18) "Probabilistic Force Prediction in Cold Sheet Rolling by Bayesian Inference", A. Nelson, A.S. Malik, J. Wendel and M.E. Zipf, ASME Journal of Manufacturing Science and Engineering, 2014, Vol. 136, No. 4, pp. 041006-1 to 051009-11.

19) "A Unifying Spatial Curvature Framework for Coordinated Pass Scheduling, Shape Targeting and Mill Setup", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. 86-97, December 2014.

20) "New Insights into Strip Profile Characteristics for Continuously Variable Crown Cold Rolling on 4-High and 6-High Mill Stands", Zhang, F., Malik, A.S. and Zipf, M.E., ASME Journal of Manufacturing Science and Engineering (submitted Apr. 2015).

21) "Resolving Complex Shape Distortions on Narrow, Thin-Gauge Strip Having an Asymmetric Transverse Thickness Profile - Case Study: Part 1 – Defining the Problem", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. 86-96, May 2016.

Published Journal Papers & Magazine Articles: (continued)

22) "Resolving Complex Shape Distortions on Narrow, Thin-Gauge Strip Having an Asymmetric Transverse Thickness Profile - Case Study: Part 2 – Resolving the Problem", M.E. Zipf, AIST Iron & Steel Technology Magazine, pp. xx-xx, June 2016.

23) "Resolving Complex Shape Distortions on 20-High Mills Rolling Narrow, Thin Gauge Strip Having an Asymmetric Transverse Thickness Profile", M.E. Zipf, Steel & Metallurgy (India), Vol. 14, No. 5, pp. 4-23, May Issue, 2016.

Invited Papers & Presentations:

1) "Advances in Rolling Mill Technologies and Automation Systems", M.E. Zipf, AIST Philadelphia Chapter Meeting, Yalesville, CT, April 26, 2007

2) "Strip Thickness Measurement – Concepts, Components & Applications", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, February 3, 2009, Jacksonville, FL.

3) "Rolling Mill Automation Technologies – Concepts, Techniques & Advancements", M.E. Zipf, CEFSA : Faculdade de Tecnologia : Termomecanica, Sao Paulo, Brazil, February 10, 2009.

4) "Strip Thickness Measurement – Concepts, Components & Applications", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, February 22, 2011, Orlando, FL.

5) "AGC Sensing Systems – Single Stand, Reversing, Cold Mills", M.E. Zipf, AIST Panel Discussion on AGC Sensing Systems, Association for Iron & Steel Technology, May 2, 2011, Indianapolis, IN.

6) "STG Design Concepts for Wide, Thin Gauge / Foil Class Applications", M.E. Zipf, Proceedings of the Asia Steel 2012 Conference, September 23-27, 2012, Beijing, China.

7) "Shape & Flatness Measurement – Concepts, Methods & Systems", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 26, 2013, Detroit, MI.

8) "Process Modeling & Simulation – Concepts, Methods & Strategies", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 27, 2013, Detroit, MI.

9) "Shape / Flatness Measurement & Control – Concepts, Methods & Strategies", M.E. Zipf, Cold Rolling Fundamentals – A Practical Training Seminar, Association for Iron & Steel Technology, March 26, 2013, Detroit, MI.

10) "Shape Rolls & Flatness Measurement – Concepts, Methods & Systems", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 3, 2015, Mobile, AL.

11) "Rolling Theory – Theoretical Analysis of the Cold Rolling Process", M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technology, March 3, 2015, Mobile, AL.

12) "Process Modeling & Simulation – Concepts, Methods & Strategies", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 4, 2015, Mobile, AL.

Invited Papers & Presentations: (continued)

13) “Automatic Gauge Control (AGC) – Concepts, Methods & Systems”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technologies, March 4, 2015, Mobile, AL.

14) “Shape / Flatness Measurement & Control – Concepts, Methods & Strategies”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technologies, March 4, 2015, Mobile, AL.

15) "Shape Rolls & Flatness Measurement – Concepts, Methods & Systems", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 7, 2017, Indianapolis, IN.

16) “Rolling Theory – Theoretical Analysis of the Cold Rolling Process”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technology, March 8, 2017, Indianapolis, IN.

17) "Process Modeling & Simulation – Concepts, Methods & Strategies", M.E. Zipf, Process Systems – Specialty Training Conference, Association for Iron & Steel Technology, March 8, 2017, Indianapolis, IN.

18) “Automatic Gauge Control (AGC) – Concepts, Methods & Systems”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technologies, March 8, 2017, Indianapolis, IN.

19) “Shape / Flatness Measurement & Control – Concepts, Methods & Strategies”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technologies, March 8, 2017, Indianapolis, IN.

20) “Intermediate Concepts & Special Topics”, M.E. Zipf, Cold Rolling Fundamentals – Specialty Training Conference, Association for Iron & Steel Technologies, March 8, 2017, Indianapolis, IN.

Published Conference Papers:

1) "Fabre-Perot Interferometer Studies of Midlatitude Thermospheric Dynamics at Millstone Hill, Massachusetts", M.A. Biondi, M.E. Zipf, EOS 67, 1120 (1986).

2) "Computer Simulation of Multiple Pilots Flying a Modern High Performance Helicopter", M.E Zipf, W.G. Vogt, M.H. Mickle, R.G. Hoelzeman, Fei Kai, J.R. Mihaloew, Proceedings of the Eighteenth Modeling and Simulation Conference, Pittsburgh, Pa., April 23-24, 1987, Instrument Society of America, Durham, NC., Vol. 18, pp 1295-1314.

3) "Computer Simulation of a Single Pilot Flying a Modern High Performance Helicopter", M.E. Zipf, W.G. Vogt, M.H. Mickle, R.G. Hoelzeman, Fei Kai, J.R. Mihaloew, Proceedings of the Eighteenth Modeling and Simulation Conference, Pittsburgh, Pa., April 23-24, 1987, Instrument Society of America, Durham,NC., Vol. 18, pp 1279-1294.

4) "The Primary Control System for the University of Pittsburgh Automated Airglow Observatory", M.E. Zipf, M.A. Biondi, Proceedings of the Nineteenth Modeling and Simulation Conference, Pittsburgh, Pa., May 5-6, 1988, Instrument Society of America, Durham, NC., Vol. 19, pp 1349-1362.

5) "A Fault Tolerant Multicomputer for High Speed Critical Environments", M.E. Zipf, J.T. Cain, Proceedings of the Nineteenth Modeling and Simulation Conference, Pittsburgh, Pa., May 5-6, 1988, Instrument Society of America, Durham, NC., Vol. 19, pp 1377-1391.

Published Conference Papers: (continued)

6) "Measurements of the Couplings Between the Neutral Thermosphere and the F-Region Ionosphere at Midlatitudes", M.A. Biondi, M.E. Zipf, D.P. Sipler, M.E. Hagan, J. Salah, EOS 69, (1988).

7) "A Computer Simulation of Low Order Pilot Models Flying a Thrust Vectored V/STOL Research Aircraft", M.E. Zipf, W.G. Vogt, M.H. Mickle, S. Kucuk, J.R. Mihaloew, Proceedings of the Nineteenth Modeling and Simulation Conference, Pittsburgh, Pa., May 5-6, 1988, Instrument Society of America, Durham, NC., Vol. 19, pp 733-763.

8) "A New Generation of Control Systems for Automated Airglow Observatories", M.E. Zipf, M.A. Biondi, D.P. Sipler, Proceedings of the Twentieth Modeling and Simulation Conference, Pittsburgh, Pa., May 4-5, 1989, Instrument Society of America, Durham, NC., Vol. 20, pp 1909-1919.

9) "A Computer Based Simulation of a Pilot Performing Multi-axis Precision Hovering Tasks in a V/STOL Research Aircraft", M.E. Zipf, W.G. Vogt, M.H.Mickle, J.R. Mihaloew, Proceedings of the Twentieth Modeling and Simulation Conference, Pittsburgh, Pa., May 4-5, 1989, Instrument Society of America, Durham, NC., Vol. 20, pp 1975-1986.

10) "Automated Optical Observatories Based on the IBM-PC/AT System", M.E. Zipf, M.A. Biondi, D.P. Sipler, Fourth CEDAR Workshop, Boulder, CO., June 22-27, 1989.

11) "Bistatic Thermospheric Wind Measurements from Millstone Hill and Laurel Ridge Airglow Observatories", M.E. Zipf, M.A. Biondi, D.P. Sipler, EOS 72, (1991).

12) "Atomic Oxygen Ion-Neutral Collision Frequency From Optical and Radar Wind Measurements", D.P. Sipler, M.E. Hagan, M.E. Zipf, M.A. Biondi, EOS 72, (1991).

13) "An All-Sky Dopler Interferometer (ASDI) for Thermospheric Dynamics Studies", M.A. Biondi, M.E. Zipf, D.P. Sipler, J.L. Baumgardner, EOS 74, 475, (1993).

14) "ASDI (All-Sky Doppler Interferometer) - Determinations of Thermospheric Wind and Temperature Fields over Large Regions of the Upper Atmosphere", M.A. Biondi, M.E. Zipf, D.P. Sipler, J.L. Baumgardner, SPIE - Optical Spectroscopic Techniques and Instrumentation for Atmospheric and Space Research, San Diego, CA., July 25-27, 1994, SPIE Vol. 2266, pp. 101-108.

15) “A Cost Effective Automatic Shape / Flatness Control System”, M.E. Zipf, T.G. Elwell, C.K. Godwin, D.R. Wisti, C.F., Hummel, Proceedings of the 2003 AISE Annual Conference, Pittsburgh, PA., September 28-October 1, 2003, Association of Iron and Steel Engineers, Pittsburgh, PA. and Omnipress, Madison, WI., 2003 Compact Disk (CD).

16) “Modeling and Simulation of Sendzimir Mill Shape Control Actuation Sensitivities and Capabilities Envelope with Applications to Multivariable Shape Control”, M.E. Zipf, C.K. Godwin and D.R. Wisti, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 43rd Rolling Seminar – Processes, Rolled and Coated Products, October 17-20, 2006, Curitiba, PR, Brazil, Compact Disk (CD) pp 856-866.

17) “Compensation of Irregular Back-Up Roll Eccentricities in 4-High and 6-High Applications”, M.E. Zipf, T.G. Elwell and C.K. Godwin, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 43rd Rolling Seminar – Processes, Rolled and Coated Products, October 17-20, 2006, Curitiba, PR, Brazil, Compact Disk (CD), pp 867-879.

18) “Optimal Cluster Mill Pass Scheduling With an Accurate and Rapid New Strip Crown Model”, A.S. Malik, R.V. Grandhi, and M.E. Zipf, Proceedings of the NUMIFORM ‘07, the 9th International Conference on Materials Processing and Design: Modeling, Simulation and Applications, June 17-21, 2007, Proto, Portugal, American Institute of Physics, pp 1041-1046..

Published Conference Papers: (continued)

19) "A Compact X-Ray System for Direct Replacement of Existing Isotope Radiation Thickness Measurement Systems", M.E. Zipf, C.F. Hummel and R.J. Regan, Proceedings of the 2007 AISTech Annual Conference, Indianapolis, IN., May 7-10, 2007, Association of Iron and Steel Technologies, Pittsburgh, PA. and Omnipress, Madison, WI., 2007 Compact Disc (CD).

20) "A New Automation Architecture for Strip Thickness Gauging Systems", M.E. Zipf, C.F. Hummel and R.E. Burgess, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 44th Rolling Seminar – Processes, Rolled and Coated Products, October 16-19, 2007, Campos do Jordao, SP, Brazil, Compact Disk (CD).

21) "Comparative Studies of Sendzimir Mill Shape Control Responses", M.E. Zipf, C.K. Godwin and D.R. Wisti, Proceedings of the 2008 AISTech Annual Conference, Pittsburgh, PA, May 5-8, 2008, Association of Iron and Steel Technologies, Pittsburgh, PA. and Omnipress, Madison, WI., 2008 Compact Disc (CD).

22) "A New Architecture for Automatic Gauge Control Systems", D.R. Wisti, A.F. Krzweki, C.K. Godwin and M.E. Zipf, Proceedings of the 2008 AISTech Annual Conference, Pittsburgh, PA, May 5-8, 2008, Association of Iron and Steel Technologies, Pittsburgh, PA. and Omnipress, Madison, WI., 2008 Compact Disc (CD).

23) "A New FPGA and Multi-Core System Architecture for Automatic Gauge Control", M.E. Zipf, D.R. Wisti, C.K. Godwin and A.F. Krzewki, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 45th Rolling Seminar – Processes, Rolled and Coated Products, October 21-24, 2008, Ipojuca – Porto de Galinhas, Brazil.

24) "A New FPGA and Multi-Core Processor System Architecture for Strip Thickness Gauging Systems", M.E. Zipf, D.R. Wisti, A.F. Krzweki, S.R. Carlson and C.K. Godwin, Proceedings of the 2009 AISTech Annual Conference, St. Louis, MO, May 4-7, 2008, Association of Iron and Steel Technologies, Pittsburgh, PA. and Omnipress, Madison, WI., 2009 Compact Disc (CD).

25) "A New FPGA and Multi-Core Processor Architecture for High Performance Signal Processing and Control Systems", M.E. Zipf, D.R. Wisti, S.R. Carlson, A.F. Krzweki and C.K. Godwin, Proceedings of the 6th China International Steel Congress, May 9-14, 2010, Beijing, China, pp. 639-653 (English), pp. 654-666 (Chinese).

26) "20-High Cluster Mill Shape Actuator Characterization through Parameter Identification Methods", M.E. Zipf, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 47th Rolling Seminar – Processes, Rolled and Coated Products, October 26-29, 2010, Belo Horizonte, Brazil.

27) "Reachability Conditions of Shape Targets in 20-High Cluster Mills", M.E. Zipf and C.K. Godwin, Proceedings of the 2011 AISTech Annual Conference, Indianapolis, IN, May 2-5, 2011, Association of Iron and Steel Technologies, Pittsburgh, PA. and Omnipress, Madison, WI., 2011 Compact Disc (CD).

28) "Skinpass and Tension Leveller for Galvanizing Lines : Recent Evolutions and Experiences", M.E. Zipf, A. Sobkiewicz, A. Casella and P. Curletto, Proceedings of the 8th International Conference on Zinc and Zinc Alloy Coated Steel Sheet, Genova, Italy, June 21-24, 2011, Galvatech 2011.

29) "Shape Correction Capabilities Envelopes of 20-High Cluster Mills", M.E. Zipf and C.K. Godwin, Proceedings of the 2011 SteelSim – 4th International Conference on Modeling and Simulation of Metallurgical Processes in Steelmaking, Dusseldorf, Germany, June 27 – July 1, 2011, METEC InSteelCon 2011.

Published Conference Proceedings: (continued)

30) "New Design Concepts in 20-High Cluster Mills for Wide, Thin Gauge / Foil Class Applications", M.E. Zipf, Proceedings of the 7th China International Stainless Steel Congress, September 6-8, 2011, Shanghai, China, pp. 448-469 (English), pp. 470-486 (Chinese).

31) "Characterization of the Restrictions in Shape Adjustment Capabilities Associated with Actuator Constraints", M.E. Zipf, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 48th Rolling Seminar – Processes, Rolled and Coated Products, October 24-27, 2011, Santos, Brazil.

32) "Reliability-based Optimal Cluster Mill Pass Scheduling", A. Malik, J. Sanders, R. Grandhi and M. Zipf, Proceedings of the ASME 2011 International Mechanical Engineering Congress (IMECE2011-62565), November 11-17, 2011, Denver, CO.

33) "A Method for the Determination of Shape Actuator Capabilities Envelopes in 20-High Cluster Mills", M.E. Zipf, Proceedings of the 2012 AISTech Annual Conference, Atlanta, GA, May 7-10, 2012, Association of Iron and Steel Technologies, Pittsburgh, PA.

34) "Multivariable Directions in the Improvement of Shape Actuator Performance in 20-High Cluster Mills", M.E. Zipf, Proceedings of the 2012 AISTech Annual Conference, Atlanta, GA, May 7-10, 2012, Association of Iron and Steel Technologies, Pittsburgh, PA.

35) "New Roll Grinding Technologies for 20-High Cluster Mills", P. Gaboardi, G. Boselli, M.E. Zipf, M. Brewster, C. Trevisan and T. Anderson, Proceedings of the 2012 AISTech Annual Conference, Atlanta, GA, May 7-10, 2012, Association of Iron and Steel Technologies, Pittsburgh, PA.

36) "Advancements in X-Ray Strip Thickness Measurement Systems", M.E. Zipf, R.S. Stevens and Y.H. Wang, Proceedings of the 7th China International Steel Congress, Vol. 1, May 9-12, 2012, Beijing, China, pp. 633-647 (English), pp. 648-660 (Chinese).

37) "Innovative Roll Grinding Technologies Specifically Tailored for 20-High Cluster Mill Applications", P. Gaboardi, G. Boselli, M.E. Zipf, M. Brewster, C. Trevisan and T. Anderson, Proceedings of the 7th China International Steel Congress, Vol. 2, May 9-12, 2012, Beijing, China, pp. 831-842 (English), pp. 843-853 (Chinese).

38) "Multi-Variable Shape Actuation Capabilities Envelopes of 6-High Mills with Applications to Mill Set-Up and Scheduling Optimization", M.E. Zipf, Proceedings of the SEAISI 2012 Conference, Nusa Dua, Bali, Indonesia, May 28-31, 2012.

39) "A Reliability-Based Approach to Flatness Actuator Effectiveness in 20-High Rolling Mills", A. Malik, J. Wendel, M.E. Zipf and A. Nelson, Proceedings of the 2012 ASME International Manufacturing Science and Engineering Conference (ASME), Vol.9, pp 335-344, June 4-8, 2012, Notre Dame, IN.

40) "GOALI : Reliability-Based Design and Operation of Metal Rolling Mills using Bayesian Theory and a New Rolling Model", A. Malik and M.E. Zipf, Proceedings of the NSF CMMI Engineering Research and Innovation Conference, July 9-12, 2012, Boston, MA.

41) "An Analysis of Temper Mills in Heavy Gauge Leveling / Cut-To-Length Lines", M.E. Zipf, Proceedings of the Associação Brasileira de Metalurgia e Materiais, 49th Rolling Seminar – Processes, Rolled and Coated Products, October 22-25, 2012, Vila Velha, Brazil.

42) "Multivariable Shape Actuation Capabilities Envelopes of Vertical-Stack Mills", M.E. Zipf, Proceedings of the 2013 AISTech Annual Conference, Pittsburgh, PA, May 6-9, 2013, Association of Iron and Steel Technologies, Pittsburgh, PA.

43) "Bayesian-Based Probabilistic Force Modeling in Cold Rolling", J. Wendel, A. Nelson, A. Malik and M.E. Zipf, Proceedings of the 2013 ASME Manufacturing Science and Engineering Conference (MSEC2013-1226), June 10-14, 2013, Madison, WI.

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44) "A Spatial Curvature Based Method for Coordinated Pass Scheduling, Shape Target Progression and Mill Set-Up", M.E. Zipf, Proceedings of the 9th International Rolling Conference, June 10-12, 2013, Venice, Italy.

45) "A Method to Characterize Multi-Pass Frequency Content and Improve AGC Performance", M.E. Zipf, Proceedings of the 2014 AISTech Annual Conference, Indianapolis, IN, May 5-8, 2014, Association of Iron and Steel Technologies, Pittsburgh, PA.

46) "A Method for Accommodating Incoming Thickness and Shape Distortions in Multi-Stage Campaign Rolling", M.E. Zipf, Proceedings of the 2014 AISTech Annual Conference, Indianapolis, IN, May 5-8, 2014, Association of Iron and Steel Technologies, Pittsburgh, PA.

47) "A Unified Spatial Curvature Framework for Coordinated Pass Scheduling, Shape Targeting and Mill Set-Up", M.E. Zipf, Proceedings of the 2014 AISTech Annual Conference, Indianapolis, IN, May 5-8, 2014, Association of Iron and Steel Technologies, Pittsburgh, PA.

48) "Sizing Design for 4-High Cold Rolling Mills", A.W. Nelson, F. Zhang, A.S. Malik and M.E. Zipf, Proceedings of the ASME 2014 Manufacturing Science and Engineering Conference (MSEC2014-4137), June 9-13, 2014, Detroit, MI.

49) "Resolving Complex Shape Distortions on Narrow, Thin Gauge Strip Having an Asymmetric Transverse Thickness Profile", M.E. Zipf, Proceedings of the 2015 AISTech Annual Conference, Cleveland, OH, May 4-7, 2015, Association of Iron and Steel Technologies, Pittsburgh, PA.

50) "Transverse Roll Gap Model Validation Based On Empirical Studies of Mill Deformation, Shape Actuation Behavior and Incoming Strip Profile", M.E. Zipf, Proceedings of the 2015 AISTech Annual Conference, Cleveland, OH, May 4-7, 2015, Association of Iron and Steel Technologies, Pittsburgh, PA.

51) "Resolving Complex Shape Distortions on 20-High Mills Rolling Narrow, Thin Gauge Strip Having an Asymmetric Transverse Thickness Profile", M.E. Zipf, Proceedings of the 2015 METEC & 2nd ESTAD Conference on Modeling and Simulation of Metallurgical Processes in Steelmaking, Dusseldorf, Germany, June 15-19, 2015, METEC ESTAD 2015.

52) "Micro-Dynamic Interactions within the Roll Clusters of 20-High Sendzimir Mills and Their Impact on Precision Gauge Control", M.E. Zipf, Proceedings of the 2016 AISTech Annual Conference, Pittsburgh, PA, May 16-19, 2016, Association of Iron and Steel Technologies, Pittsburgh, PA.

53) "Depth of Through-Thickness Yielding and Strain Hardening in Temper / Roller-Leveling Cut-To-Length Lines", M.E. Zipf, Proceedings of the 2016 AISTech Annual Conference, Pittsburgh, PA, May 16-19, 2016, Association of Iron and Steel Technologies, Pittsburgh, PA.

54) "Parameter Identification of Shape Actuation Influence Functions Using Phase Sensitive Detection", M.E. Zipf, Proceedings of the 2017 AISTech Annual Conference, Nashville, TN, May 8-11, 2017, Association of Iron and Steel Technologies, Pittsburgh, PA.

55) "A Study of Residual Stress Patterns in Temper / Roller Leveled, Cut-To-Length Plates", M.E. Zipf, Proceedings of the 2017 AISTech Annual Conference, Nashville, TN, May 8-11, 2017, Association of Iron and Steel Technologies, Pittsburgh, PA.

Contract / Research Reports:

1) "Computer Simulation of a Pilot in V/STOL Aircraft Control Loops", W.G. Vogt, M.H. Mickle, M.E. Zipf, S. Kucuk, Final Report: NASA Grant NAG 3-729, March 1989.
2) "Eigenstructure Assignment in Multivariable Disturbance Rejection and Compensation", M.E. Zipf, Interim Report #1 : Center For Motion Control, December 1989.
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