

American Gear Manufacturers Association Fall Technical Meeting 2009

**Indianapolis, Indiana, USA
13-15 September 2009**

ISBN: 978-1-61567-565-4

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571



Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2009) by the American Gear Manufacturers Association
All rights reserved.

Printed by Curran Associates, Inc. (2009)

For permission requests, please contact the American Gear Manufacturers Association
at the address below.

American Gear Manufacturers Association
500 Montgomery Street, Suite 350
Alexandria, Virginia 22314-1581

Phone: (703) 684-0211
Fax: (703) 684-0242

webmaster@agma.org

Additional copies of this publication are available from:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: 845-758-0400
Fax: 845-758-2634
Email: curran@proceedings.com
Web: www.proceedings.com

TABLE OF CONTENTS

Infuence of the Residual Stresses Induced by Hard Finishing Processes on the Running Behavior of Gears.....	1
<i>V. Vasiliou, C. Gorgels, F. Klocke</i>	
Implementing ISO 18653, Gears - Evaluation of Instruments for the Measurement of Individual Gears.....	12
<i>R. Frazer, S. Wilson</i>	
Producing Profile and Lead Modifications in Threaded Wheel and Profile and Profile Grinding	27
<i>A. Turich</i>	
New Developments in Gear Hobbing	43
<i>O. Winkel</i>	
Hypoloid™ Gears with Small Shaft Angles and Zero to Large Offsets.....	61
<i>H.J. Stadtfeld</i>	
Dependency of the Peak-to-Peak-Transmission-Error on the Type of Profile Correction and the Transverse Contact Ratio of the Gear Pair	76
<i>U. Kissling</i>	
Optimizing Gear Geometry for Minimum Transmission Error, Mesh Friction Losses and Scuffing Risk Through Computer Aided Engineering	95
<i>R. Frazer, B. Shaw, D. Palmer, M. Fish</i>	
Load Sharing Analysis of High Contact Ratio Spur Gears in Military Tracked Vehicle Application	115
<i>M. Rameshkumar, P. Sivakumar, S. Sundaresh, K. Gopinath</i>	
Designing for Static and Dynamic Loading of a Gear Reducer Housing with FEA.....	127
<i>M. Davis, Y. Mohammed, A. Elmustafa, P. Martin, C. Ritinski</i>	
The Effect of Flexible Components on the Durability, Whine, Rattle, and Efficiency of and Automotive Transaxle Geartrain System	136
<i>A. Korde, B. Wilson</i>	
Unique Design Constraints for Molded Plastic Transmissions	149
<i>R. Kleiss, E. Wiita</i>	
The Anatomy of a Micropitting Induced Tooth Fracture Failure - Causation, Initiation, Progression and Prevention	156
<i>R. Drago, R. Cunningham, S. Cymbala</i>	
Bending Fatigue, Impact and Pitting Resistance of Ausform Finished P/M Gears.....	168
<i>N. Sonti, S. Rao, G. Anderson</i>	
Design, Development and Application of New High-Performance Gear Steels.....	182
<i>J. Wright, J. Sebastian, C. Kern, R. Kooy</i>	
High Performance Industrial Gear Lubricants for Optimal Reliability	195
<i>K. McKenna, J. Carey, A. Galiano-Roth</i>	
Allowable Contact Stresses in Jacking Gear Units Used in the Offshore Industry	211
<i>A. Montestruc</i>	
Variation Analysis of Tooth Engagement and Load-Sharing in Involute Splines.....	219
<i>K. Chase, C. Sorensen, B. DeCaires</i>	
Does the Type of Gear Action Affect the Appearance of Micropitting and Gear Life?.....	233
<i>A. Williston</i>	
The Effect of Gearbox Architecture on Wind Turbine Envlosure Size.....	263
<i>C. Schultz</i>	
Author Index	