



Conference Program

Tuesday April 24th, 2012

6:00 p.m.	Registration	Institute of Forming Technology and Lightweight Construction, TU Dortmund University
7:00 p.m. – 10:00 p.m.	Welcome Reception	Institute of Forming Technology and Lightweight Construction, TU Dortmund University

Wednesday April 25th, 2012

8:00 a.m.	Registration	Winkelmann Foyer, Dortmunder U
9:00 a.m. – 9:10 a.m.	Welcome	RWE Forum, Dortmunder U
9:10 a.m. – 10:30 a.m.	Innovative Processes – Part A	RWE Forum, Dortmunder U
	Investigation of Magnetic Pulse Deformation of Powder Parts V. MIRONOV, M. KOLBE, V. ZEMCHENKOV, A. SHISHKIN	
	Online Measurement of the Radial Workpiece Displacement in Electromagnetic Forming Subsequent to Hot Aluminum Extrusion A. JÄGER, A. E. TEKKAYA	
	Some Aspects Regarding the Use of a Pneumomechanical High Speed Forming Process W. HOMBERG, E. DJAKOW, O. AKST	
	Pressure Fields Repeatability at Electrohydraulic Pulse Loading in Discharge Chamber with Single Electrode Pair J. SAN JOSE, I. PEREZ, M. K. KNYAZYEV, Y. S. ZHOVNOVATUK	
10:30 a.m. – 11:00 a.m.	Coffee break and exhibition	Winkelmann Foyer, Dortmunder U
11:00 a.m. – 12:00 a.m.	Innovative Processes – Part B	RWE Forum, Dortmunder U
	Coining of Micro Structures with an Electromagnetically Driven Tool E. UHLMANN, C. KÖNIG, A. ZIEFLE, L. PRASOL	
	Space-Time-Controlled Multi-Stage Pulsed Magnetic Field Forming and Manufacturing Technology LIANG LI, XIAOTAO HAN, TAO PENG, HONGFA DING, TONGHAI DING, LI QIU, ZHONGYU ZHOU, QI XIONG	
	Produce a large aluminium alloy sheet metal using electromagnetic-incremental (EM-IF) forming method: Experiment and Numerical simulation XIAOHUI CUI, JIANHUA MO, JIANJUN LI, JIAN ZHAO, SHIJIE XIAO	



12:00 a.m. – 1:30 p.m.	Lunch break and exhibition	Café Ruby, Dortmunder U
1:30 p.m. – 2:50 p.m.	Process Analysis	RWE Forum, Dortmunder U
<p>Experimental Investigation and Analysis on Electromagnetic Compression Forming Processed Aluminum Alloy Tubes S. RAJIV, K. S. SUNDARAM, PABLO PASQUALE</p> <p>Experimental Study and Numerical Simulation of Electromagnetic Tube Expansion J. SHANG, S. HATKEVICH, L. WILKERSON</p> <p>Analysis of Contact Stresses in High Speed Sheet Metal Forming Processes R. IBRAHIM, S. GOLOVASHCHENKO, A. MAMUTOV, J. BONNEN, A. GILLARD, L. SMITH</p> <p>Effect of Workpiece Motion on Forming Velocity in Electromagnetic Forming LI QIU, XIAOTAO HAN, QI XIONG, ZHONGYU ZHOU, LIANG LI</p>		
2:50 p.m. – 3:10 p.m.	Coffee break and technical exhibition	Winkelmann Foyer, Dortmunder U
3:10 p.m. – 4:10 p.m.	Tools and Machines	RWE Forum, Dortmunder U
<p>Rapidly Vaporizing Conductors Used for Impulse Metalworking A. VIVEK, G. TABER, J.R. JOHNSON, G.S. DAEHN</p> <p>An Electromagnetically Driven Metalworking Press G. A. TABER, B. A. KABERT, A. T. WASHBURN, T. N. WINDHOLTZ, C. E. SLONE, K. N. BOOS, G. S. DAEHN</p> <p>A Study on Contour on Workpiece According to the Shape of Forming Coil in EMF Process J. Y. SHIM, B. Y. KANG, D. H. PARK, Y. CHOI, I. S. KIM</p>		
4:10 p.m. – 4:30 p.m.	Coffee break and exhibition	Winkelmann Foyer, Dortmunder U
4:30 p.m. – 5:30 p.m.	Material testing	RWE Forum, Dortmunder U
<p>Compression Testing using a Cam-Driven Electromagnetic Machine C.M.A SILVA, P.A.R. ROSA, P.A.F. MARTINS</p> <p>Development of a Pneumatic High-Speed Nakajima Testing Device M. ENGELHARDT, H. VON SENDEN GENANNT HAVERKAMP, C. KLOSE, FR.-W. BACH</p> <p>Comparison of Dynamic Hardening Equations for Metallic Materials with the Variation of Crystalline Structures K. AHN, H. HUH, L. PARK</p>		
7:00 p.m.	Conference Dinner	Restaurant View, Dortmunder U



Thursday April 26th, 2012

9:00 a.m. – 10:20 a.m.	Joining and Welding – Part A	RWE Forum, Dortmund U
	Dissimilar Metal Joining: Macro- and Microscopic Effects of MPW G. GÖBEL, E. BEYER, J. KASPAR, B. BRENNER	
	Robot Automated EMPT Sheet Welding R. SCHÄFER, P. PASQUALE	
	Process Model and Design for Magnetic Pulse Welding by Tube Expansion V. PSYK, G. GERSTEIN, B. BARLAGE, B. ALBUJA, S. GIES, A. E. TEKKAYA, F.-W. BACH	
	Assessment of Gap and Charging Voltage Influence on Mechanical Behaviour of Joints Obtained by Magnetic Pulse Welding R. RAELISON, M. RACHIK, N. BUIRON, D. HAYE, M. MOREL, B. DOS SANSTOS, D. JOUAFFRE, G. FRANTZ	
10:20 a.m. – 10:40 a.m.	Coffee break and exhibition	Winkelmann Foyer, Dortmund U
10:40 a.m. – 12:00 a.m.	Joining and Welding – Part B	RWE Forum, Dortmund U
	Simulation of Electromagnetically Formed Joints R. NEUGEBAUER, V. PSYK, C. SCHEFFLER	
	Electromagnetic Pulse Crimping of Axial Form Fit Joints K. FAES, O. ZAITOV, W. DE WAELE	
	Influencing Factors on the Strength of Electromagnetically Produced Form-Fit Joints Using Knurled Surfaces C. WEDDELING, S. GIES, J. NELLESEN, L. KWIATKOWSKI, W. TILLMANN, A. E. TEKKAYA	
	Laser Impact Welding – Process Introduction and Key Variables H. WANG, D. LIU, G. TABER, J. C. LIPPOLD, G. S. DAEHN	
12:00 a.m. – 1:30 p.m.	Lunch break and exhibition	Café Ruby, Dortmund U
1:30 p.m. – 2:50 p.m.	Formability	RWE Forum, Dortmund U
	Coil Development for Electromagnetic Corner Fill of AA 5754 Sheet J. IMBERT, M. WORSWICK	
	Exceeding the Forming Limit Curve with Deep Drawing Followed by Electromagnetic Calibration O. K. DEMIR, L. KWIATKOWSKI, A. BROSIUS, A. E. TEKKAYA	
	Study on the Formability & Shape Conformity of Mg & Al-alloy sheets in Warm condition by Electromagnetic Forming M. SINGHAL, P.P. DATE	
	Pulsed magnetic forming of the magnesium alloy AZ31 – Comparison to quasistatic forming E. UHLMANN, L. PRASOL, C. KÖNIG, A. ZIEFLE	
2:50 p.m. – 3:20 p.m.	Coffee break and exhibition	Winkelmann Foyer, Dortmund U



3:20 p.m. – 4:40 p.m. **Simulation and Optimization** RWE Forum, Dortmund U

Coupled FEM-Simulation of Magnetic Pulse Welding for Nonsymmetric Applications

E. UHLMANN, A. ZIEFLE, C. KÖNIG, L. PRASOL

Numerical Simulation of Magnetic Pulse Welding: Insights and Useful Simplifications

J. KÖRNER, G. GÖBEL, B. BRENNER, E. BEYER

Combined Simulation of Quasi-Static Deep Drawing and Electromagnetic Forming by Means of a Coupled Damage–Viscoplasticity Model at Finite Strains

Y. KILICLAR, O. K. DEMIR, I. N. VLADIMIROV, L. KWIATKOWSKI, A. BROSIUS, S. REESE, A. E. TEKKAYA

Numerical Identification of Optimum Process Parameters for Combined Deep Drawing and Electromagnetic Forming

M. STIEMER, F. TAEBI, M. ROZGIC, R. APPEL

4:40 p.m. – 5:00 p.m. **Conclusion and Closing Discussion** RWE Forum, Dortmund U
