6th JSTP International Seminar on Precision Forging

Organized by the Japan Society for Technology of Plasticity

6th JSTP ISPF International Seminar on Precision Forging

Program of Lectures and Oral Presentations

March 11, 2013:

Lecture by 2011 JSTP International Prize Winner

Session chair: *S. Isogawa (Daido University, Japan)*

10:15-11:00 *Mechanism, Tests and Applications of Tribology in Cold Forging*
T. Nakamura (Shizuoka University, Japan)

Keynote Lectures

Session chair: *S. Isogawa (Daido University, Japan)*

11:00-11:30 *Developments in the Analysis of Side Forces in Forging Dies*
A. Kocanda (Warsaw University of Technology, Poland)

11:30-12:00 *Steel Material for Cold Forging*
O. Kada (Nippon Steel & Sumitomo Metal Corp., Japan)

Keynote Lectures

Session chair: *Y. Yoshida (Gifu University, Japan)*

13:00-13:30 *Geometric Gradation of Profiles for Lightweight Applications*
A.E. Tekkaya (Technische Universität Dortmund, Germany)

13:30-14:00 *Experimental Case Studies on Combined Sheet and Bulk Metal Forming Processes*
A. Danno (SIMTech, Singapore)

14:00-14:30 *Plate Forging for Controlling Wall Thickness Distribution of Products*
K. Mori (Toyohashi University of Technology, Japan)

14:30-15:00 *Recent Developments in Incremental Bulk Forming*
P. Groche (Technische Universität Darmstadt, Germany)

15:00-15:30 *Cold Joining of Rotor Shaft and Flange by Plastic Deformation*
K. Kitamura (Nagoya Institute of Technology, Japan)

Oral Presentations

Session chair: *J.-L. Chenot (Ecole des Mines de Paris, France)*

16:00-16:15 *Process Optimization Possibilities for Gear Rolling Technologies*
M. Milbrandt (Frounhofer, Germany)

16:15-16:30 *Die Modification of Spur Gear Based on the Coupled Thermo-Mechanical Numerical Simulation and Experimental Study*
T. Wang (Zhengzhou Research Institute of Mechanical Engineering, P.R. China)

16:30-16:45 *Numerical and Experimental Examinations of Full Forward Extrusion of Forged and Heat-Treated AFP Steel below 500 °C*
E. Hajyheydari (Universitat Stuttgart, Germany)

16:45-17:00 *Numerical Simulation on Cogging Process of Large Size TC11 Titanium Alloy Billet*
H. Song (Institute of Metal Research, Chinese Academy of Sciences, P.R. China)

17:00-17:15 *Numerical Investigation on the Force Reduction in Axial Forming by Oscillating Ram Movement*
B. Heß (Technische Universitaet Darmstadt, Germany)

17:15-17:30 *A New Physically Based Grain Aggregate Model for Predicting Dynamic Recrystallization during Hot Forging*

H.-W. Lee (Korea Institute of Materials Science, Korea)

March 12, 2013:

Lecture by 2011 JSTP International Prize Winner

Session chair: *K. Kitamura (Nagoya Institute of Technology, Japan)*

9:30-10:15 *Numerical Simulation of the Forging Process: Present Achievements and Future Developments*

J.-L. Chenot (Ecole des Mines de Paris, France)

Keynote Lectures

Session chair: *K. Kitamura (Nagoya Institute of Technology, Japan)*

10:15-10:45 *Controlled Forging for Net Shape and Net Property*

T. Ishikawa (Nagoya University, Japan)

10:45-11:15 *Recent Applications of Process Simulation in Forging and Forming*

T. Altan (The Ohio State University, USA)

11:15-11:45 *Evolution and Future View of Forging Technology*

S. Fujikawa (Nissan Motor Co.,Ltd., Japan)

Oral Presentations

Session chair: *T. Nakamura (Shizuoka University, Japan)*

15:15-15:30 *T-Shape Upsetting-Extrusion Test for Evaluating Friction Condition*

L. Deng (Huazhong University of Science and Technology, P.R. China)

15:30-15:45 *Evaluation of Performance of Surface-Treated Tool and Lubricants for Hot Forging*

K. Asai (Nagoya Institute of Technology, Japan)

15:45-16:00 *Manufacturing Involving Forging of Multiple Objects in Contact*

C.V. Nielsen (SWANTEC Software and Engineering ApS, Denmark)

16:00-16:15 *Cold Forging of Closely-Tolerated Functional Components Out of Blanks - Possibilities of the New Process Class Sheet-Bulk Metal Forming*

J. Koch (University of Erlangen-Nuremberg, Germany)

16:15-16:30 *Hollow Boss Forming Technology by Sheet Metal Forging*

Y. Yoshikawa (Gifu University, Japan)

16:30-16:45 *Identification of Material Property Using Compression-Dependent Inverse Analysis*

X. Zhuang (Shanghai Jiao Tong University, P.R. China)

16:45-17:00 *Co-Extrusion of Discontinuously Steel reinforced Aluminum*

A. Foydl (Technische Universität Dortmund, Germany)

17:00-17:15 *Material Flow in Combined Forward-Backward Extrusion with Pule Ram Motion on Servo Press*

M. Ikeno (Nichidai Corporation, Japan)