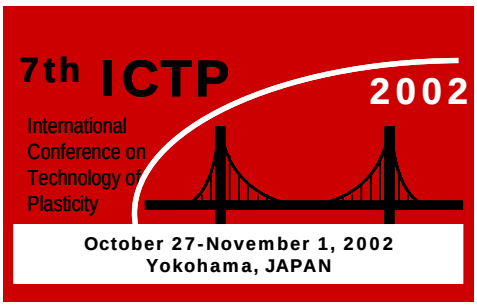
7th ICTP Final Program

Yokohama International Conference Center
(PACIFICO Yokohama)



The Japan Society for Technology of Plasticity

Opening session: October 28 (Mon) 9:00-10:00 *at Congress Hall, 5th Floor*

Opening Address

Manabu Kiuchi, KILAMETEC, JAPAN

Welcome Address

Hirokazu Tanabe, President of JSTP, JAPAN

Opening Lecture: "Formation of Ultrafine-Grained Structure by Heavy Deformation in Steels"
Takeshi Maki, Kyoto University, JAPAN

Awarding Ceremony for JSTP International Prize

Session Organization

Conference rooms 1 to 6 are located at 4th floor.

		Room 1	Room 2	Room 3	Room 4	Room 5	Room 6
October 27 (Sunday)	Evening, after 5pm	Registration and Casual Reception					
October 28 (Monday)	Opening Session						
	Morning Session	Cold Forging Memorial Lecture of JSTP International Prize	Super Plasticity	Simulation	Materials	Hydroforming of Tubes	
	Afternoon Session 1		Sheet Rolling				
	Afternoon Session 2					Roll Forming & Tube Forming	
October 29 (Thuesday)	Morning Session 1	Forging General Memorial Lecture of JSTP International Prize	Rod, Bar, Wire and Shape Rolling	Shearing, Blanking, Punching, Cutting	Powder Compaction, Sintering Forming	Theory of Plasticity	Poster Session
	Morning Session 2		Microstructure Evolution in Rolling	Incremental Forming		Crystal Plasticity	
	Afternoon Session 1	Forging Simulation	Bending and Straightening		Composites	Professor Sowerby's Memorial Session	
	Afternoon Session 2			Machines and Tools	Joining		
	Evening Session	Banquet at THE HOTEL YOKOHAMA					
October 30 (Wednesday)	Morning Session 1	Hot Forging	Tube Rolling	Hydroforming and Laserforming of Sheet	Continuous Casting	Professor Kudo's Memorial Session	Poster Session
	Morning Session 2		Ring Rolling		Semi-Solid Processing, Injection Molding		
	Afternoon Session 1	Drawing	Surface	Sheet Forming Simulation	CAE, Knowledge Base		
	Afternoon Session 2	Micro Forming	Strength, Failure and Fracture				
October 31 (Thursday)	Morning Session 1	Extrusion	Tribology	Deep Drawing	Automotive Parts, Components	ICEM Special Session	Poster Session
	Morning Session 2				Rotary Forming		
	Afternoon Session 1						
	Afternoon Session 2						
November 1 (Friday)	Plant Tours						

October 28 (Mon) Room 1

Morning Session 10:30-12:10

<COLD FORGING>

Memorial Lecture of JSTP International Prize

FE-based Fracture Analysis with the Integrated Damage Model of Effective Stresses for The Extension of the Forming Limits in Cold and Semi-Hot Forging Operations (60)
..... A. BEHRENS H. JUST (Germany)

Extension of Forming Limits in Forging of Less Ductile Light Weight Metals by Means of Superimposed Hydrostatic Pressure (131)
..... F. MEINERS S. ROEHR R. S. JUERGENSEN (Germany)

Low Pressure Precision Cold Die Forging of Machine Part Having Both Internal Gear and External Gear (3)
..... K. OHGA F. MURAKOSHI H. ANDO K. MIYOSHI K. KONDO (Japan)

Lunch 12:10-13:30

Afternoon Session 13:30-17:10

Net Shape Forging of an External Helical Gear with Boss and Internal Spline (46)
..... K. KONDO K. IKUSHIMA H. INOSHITA M. OGURA K. ONO (Japan)

Improving the Quality of Forming Gears with the Finite-Elements Method and Using a New Tool System the -Active Die- (33)
..... F. JUETTE (Germany)

Development of Product Design System for Cold Forged Gears Considering Addendum Profile Shift (267)
..... J. H. SONG Y. T. IM (Korea)

SVL-Concept - Experiences in Prediction of Tool Life and Tool Reliability in Cold Forging (168)
..... U. ENGEL R. VOELKL (Germany)

Coffee Break: 20 minutes

Improvement of Tool Life in Cold Forging (265)
..... T. MATSUDA (Japan)

Wear Test by Cross Cylinders Subjected to In-plane Stress in Cold Forming (250)
..... K. KITAMURA M. TAKEUCHI T. MIZUNO (Japan)

A Feasibility Study of Developing an Automated Computer-Aided Fuller Design Using the Finite-Element Method (304)
..... F. F. SANIEE I. PILLINGER P. HARTLEY F. R. HALL (Iran)

Experimental Comparison of Different Friction Tests in Bulk Metal Forming (305)
..... F. F. SANIEE H. BAYATEEFAR (Iran)

October 28 (Mon) Room 2

Morning Session 10:30-12:10

<SUPER PLASTICITY>

Superplasticity of Rolled AZ31 Mg Alloy (164)
M. MABUCHI Y. CHINO K. SHIMOJIMA H. HOSOKAWA Y. YAMADA C. E. WEN (Japan)
Research on the Superplastic Forming of Superalloy Inconel 718 (244)
..... K. F. ZHANG H. J. LU D. Z. WU G. Q. CHEN X. C. JIA (P.R. China)
A New Cold Working with Local Superplastic Deformation for a Metal Bar (254)
..... T. IURA N. OKABE X. ZHU K. MORI (Japan)
A New Method for Evaluation of Superplastic Characteristics of Tubular Materials (88)
..... A. W. EL-MORSY N. AKKUS K. MANABE (Japan)

Lunch 12:10-13:30

Afternoon Session 13:30-17:35

<SHEET ROLLING>

Strip Width Control for Cold Tandem Mill (228)
..... Y. KADOYA Y. WASHIKITA K. KIMURA R. HAMADA (Japan)
Dynamical Effects in Plate Rolling (5)
..... M. PHILIPP O. K. HARRER W. SCHWENZFEIER F. D. FISCHER (Austria)
Flatness Control of Rolled Strip in 12-High Cluster Mill by Tapered Work Rolls Shifting Method (70)
..... J. TATENO Y. KOHIRO S. KATSURA M. KITAHAMA Y. HANGAI (Japan)
Modelling of the Rolling of Rib-sectioned Strip with Friction Consideration (270)
..... Z. Y. JIANG A. K. TIEU X. H. LIU G. D. WANG (Australia)

Coffee Break: 20 minutes

Plan View Pattern Model for Plate Mill with Dog Bone Rolling (188)
..... K. HIRATA M. HORIE Y. TAKASHIMA T. UDAGAWA (Japan)
Study on Asymmetrical Rolling of the Three-Layer Bounded Clad Sheet (119)
..... G. Y. TZOU (Australia)
Application of Surface Influence Coefficients in Roll Bending Method of Crown and Flatness Control (24)
..... M. SALIMI M. R. FOROUZAN (Iran)
Neural Network Predict for Five Mill Cold Continuous Rolling Force (42)
..... F. DU D. SUN G. ZHU (P.R. China)
FEM Simulation of Five Stands Continuous Cold Sheet Rolling Process (48)
..... G. ZHU F. DU D. SUN J. ZHOU Q. ZHU (P.R. China)

October 28 (Mon) Room 3

Morning Session 10:30-12:10

<SIMULATION>

How to Preserve Volume Constancy in Non-Steady State Metal Forming Analyses by Rigid-Plastic Finite Element (84)

..... S. TOYOSHIMA M. GOTOH J. SHANG (Japan)

Numerical Simulation of 3D Multi-Bodies Metal Forming Problems: Application to Forging of Multi-Materials and to Study of Press Deflection (110)

..... L. FOURMENT J. BARBOZA O. KARASSEVA C. BERAUDO E. WEY (France)

A Novel Mesh Refinement Method for ALE -Based FEM Numerical Simulation of the Industrial Metal Forming Processes (56)

..... J. CHEN Y. X. WANG W. P. DONG X. Y. RUAN (P.R. China)

New Approach to 3D Finite-Element Simulation of Material Flow and its Application to Bulk Metal Forming (174)

..... N. BIBA S. STEBOUNOV A. LISHNY A. VLASOV (Russia)

Lunch 12:10-13:30

Afternoon Session 13:30-17:10

A New All-Hexahedral Refinement Technique by Automatic Expansion of Zero-Thickness Element Layers (53)

..... C. H. PARK D. Y. YANG Y. K. LEE (Korea)

Method to Ensure Appropriate Use of Material Parameter Variations for Simulation (72)

..... J. GERLACH K. BLUEMEL U. PAUL (Germany)

Optimisation of Surinkring Interface for Metal Forming Dies under Consideration of Interfaces (260)

..... A. YOKOYAMA T. HIRAI J. B. HAWKYARD (Japan)

Modeling of Localized Plastic Deformation via the Adaptive Mesh Refinement (14)

..... A. R. KHOEI A. R. TABARRAIE S. A. GHAREHBAGHI (Iran)

Coffee Break: 20 minutes

Ring Rolling Process Modeling Using Explicit Finite Element Analysis (200)

..... K. SAWAMIPHAKDI P. M. PAUSKAR D. Q. JIN G. D. LAHOTI (USA)

Formation of Shock Lines in Multi-Stage Sheet Metal Forming (27)

..... Y. ABE K. MORI O. EBIHARA (Japan)

Model Analysis for a Clod Working of Collar-Forming in a Metal Bar with Local Superplastic Deformation by a New Conceptual Technology (253)

..... N. OKABE X. ZHU T. IURA K. MORI (Japan)

Superplastic Forming of Tailored Blank Sheet Made from Aluminum Alloy (154)

..... T. JINISHI N. SUZUKI (Japan)

October 28 (Mon) Room 4

Morning Session 10:30-12:10

<MATERIALS>

Determination of Forming Limits by Use of Process-Adapted Sample Geometries and Optimised High Speed Compression Tests (115)
..... R. KOPP M. WOLSKE T. REHRMANN H. SHIMAHARA (Germany)

Enlargement of Deep Drawability of Aluminium Blanks (107)
..... M. MERKLEIN M. KERAUSCH W. HUSSNAETTER M. GEIGER (Germany)

Nanogranulation in the Binary Copper Alloy System Via Bulk Mechanical Alloying (330)
..... T. AIZAWA R. TSUZUKI K. KONDOH (Japan)

Effects of Microstructures on the Mechanical Properties for Forged Mg Alloys (165)
..... Y. CHINO K. SHIMOJIMA H. HOSOKAWA Y. YAMADA C. E. WEN M. MABUCHI (Japan)

Lunch 12:10-13:30

Afternoon Session 13:30-17:35

Formability, Mechanical Properties and Texture of AZ31 Magnesium Sheets (256)
..... E. YUKUTAKE M. SUGAMATA J. KANEKO (Japan)

Effect of Thickness Reduction by Rolling on the Ductile - Brittle Transition Temperature of Sintered Molybdenum (10)
..... I. FUKUDA Y. TANAKA T. DANMOTO Y. HARADA (Japan)

Magnetic Scaling Rods Using Transformation-Induced Plasticity (263)
..... H. UEMURA M. ASAKAWA T. HAMADA J. YAMAGA K. SASAKI Y. KATOU T. TAMURA (Japan)

Study on Formability and Microstructure of Spray-Formed Eutectic Aluminum Silicon Alloys (35)
..... Y. K. FUH K. U. LIAW (Taiwan)

Coffee Break: 20 minutes

Creation of High Strength Carbon Steels by Repetitive Shear Deformation Process and Heat Treatment (297)
..... K. AOKI Y. KIMURA Y. ASADA A. AZUSHIMA (Japan)

Influence of Carbon Content and Carbide Morphology on the Stress-Strain Curve and Bauschinger Effect (289)
..... T. KUBOKI M. AKIYAMA K. MATSUI K. TERADA (Japan)

Properties and Application of Titanium Alloys in Sheet Metal Forming (111)
..... E. DOEGE S. KULP O. POESSE (Germany)

Microstructure Model for Hot Deformation and Creep Behavior on the Basis of Homogenization Theory (338)
..... T. AIZAWA F. TSUMORI Y. PRAWOTO (Japan)

Concepts of Technological Applications in Controlled Deformation of Materials (96)
..... F. GROSMAN J. PAWLICKI (Poland)

October 28 (Mon) Room 5

Morning Session 10:30-12:10

<HYDROFORMING OF TUBES>

Principle of Hydroforming Influenced by High Viscous Fluid Flows (114)
..... H. S. NIEHOFF F. VOLLERTSEN (Germany)

Deformation Property and its Estimation of Free Bulged ERW Tubes by Applying FEA and Statistical Method (29)
..... K. SUZUKI M. FUKUMURA T. MORI M. SHIRATORI (Japan)

Influence of Initial Thickness Deviation on Tube Deformation during Free Hydraulic Bulging (74)
..... A. SHIRAYORI S. FUCHIZAWA M. NARAZAKI (Japan)

Hexabend - A New Concept for 3D-Free-Form Bending of Tubes and Profiles to Preform Hydroforming Parts and Endform Space-Frame-Components (92)
..... R. NEUGEBAUER W. G. DROSSEL U. LORENZ N. LUETZ (Germany)

Lunch 12:10-13:30

Afternoon Session-1 13:30-15:35

Hydroforming of Tubular Parts with Rectangular Cross Section (123)
..... H. KUROKAWA M. KOJIMA (Japan)

Performance of Lubricants in Internal High Pressure Forming of Tubes (61)
..... P. GROCHE A. PETER (Germany)

Hydropiercing of Tube Wall in Hydroforming (193)
..... M. UCHIDA M. KOJIMA (Japan)

Tube Hydroforming: Experimental Tests for Formability Evaluation (196)
..... L. FILICE L. FRATINI F. MICARI (Italy)

Research on Hydroforming of Tubular Components with Changeable Cross-Sections (173)
..... S. J. YUAN X. S. WANG G. LIU L. H. LANG H. Y. LI Z. R. WANG (P.R. China)

Coffee Break: 20 minutes

Afternoon Session-2 15:55-17:35

<ROLL-FORMING, TUBE FORMING>

Experimental and Theoretical Examinations for Reshaping Process of Pipe with Pentagonal Cross Section (51)
..... H. MOSLEMI-NAEINI M. KIUCHI T. KITAWAKI R. KUROMATSU (Iran)

Forming Method of Thin Spring Steel Sheet Pipe (186)
..... H. ONA (Japan)

FE-Simulations on Crushing and Preforming a Circular Tube into a Rectangular Cross-Section (21)
..... Y. M. HWANG T. ALTAN (Taiwan)

Crush Behavior of Strengthening Structures with Various Hat-Shaped Cross-Sections of Materials with Various Strengths (81)
..... M. YAMASHITA M. GOTOH T. TAKAHASHI Y. SAWAIRI (Japan)

October 29 (Tue) Room 1

Morning Session 8:30-12:10

<FORGING GENERAL>

Memorial Lecture of JSTP International Prize

Forging of Pipes with a Lost Core of Low-Temperature Melting Material (191)
..... *T. OHASHI T. KOSUGI S. YANG K. SHINOZAKI (Japan)*

Increase of Wall Thickness of Drawn Cup by Die Forging Process Utilizing Inclined Die (89)
..... *K. KATOH K. KONDO K. SATOH (Japan)*

Research on Isothermal Fully-Enclosed Die Forging of a Rotor with Radial Twist Blade (215)
..... *D. SHAN Y. LU F. LIU (P.R. China)*

Coffee Break: 20 minutes

A Three-Dimensional Upper Bound Analysis for Precision Forging of Spur Gear (138)
..... *H. H. HSU (Taiwan)*

Near Net Shape Forging of Metal Matrix Composites with Non-Circle Core (220)
..... *C. G. KANG P. K. SEO D. G. LEE (Korea)*

Development of a Remote Collaborative Forging Engineering System for Artificial Hip Stem (121)
..... *R. S. LEE Y. C. KAO J. P. TSAI (Taiwan)*

A New Forging Press with Hydraulic Sinusoidal Drive (240)
..... *B. MASEK V. BERNASEK J. HUSEK M. PAHNKE (Czech Republic)*

Lunch 12:10-13:30

Afternoon Session 13:30-17:10

<FORGING SIMULATION>

Numerical Simulation of the Thermomechanical Coupling between Tool and Workpiece in Forging Processes (269)
..... *K. MOCELLIN L. TERZOLO J. L. CHENOT (France)*

State of the Art and Future Developments in 3-D Finite Element Simulation of the Forging Process (217)
..... *J. L. CHENOT L. FOURMENT R. DUCLOUX (France)*

The Development of Shape Simulation Software(SSS) for Metalforming Process Optimisation (209)
..... *P. HOLLAND P. M. STANDRING H. LONG D. J. MYNORS (UK)*

One-Step Rigid Plastic Analysis for Automated Sequence Design of Slab Stretching with Arbitrary Height Distribution (287)
..... *R. AIVAZI A. YANAGIDA S. SUGIYAMA J. YANAGIMOTO (Japan)*

Coffee Break: 20 minutes

Inclusion of Press Elasticity in Forging Simulation for Aerofoil Blades (146)
..... *H. OU C. G. ARMSTRONG (UK)*

Prediction of Grain Size in a Longitudinal Section of a Cog Forged Super Alloy 718 by FE Analysis (198)
..... *M. KAWANO S. ISOGAWA (Japan)*

A Commercial Route to Net-Shape Gear Forms (207)
..... *T. A. DEAN Z. M. HU (UK)*

A Computerised Approach for On-line Forming of Metals (30)
..... *J. FERREIRA F. H. OSMAN (UK)*

Banquet at THE HOTEL YOKOHAMA 18:30-20:30

October 29 (Tue) Room 2

Morning Session 8:30-12:35

<ROD, BAR, WIRE, SHAPE ROLLING>

Trends in Development of Wire Rod Rolling Technology (90)
..... D. WOZNIAK F. GROSMAN (Poland)

An Upper Bound Method for Analysis of Three-Dimensional Deformation in the Flat Rolling of Bars (182)
..... K. KOMORI (Japan)

3D FEM Simulations of the Rolling of Stator Vanes, Including Tool Defomation (101)
..... H. H. WISSELINK J. HUETINK (The Netherlands)

3-D Coupled Thermo-Mechanical Computer Simulation of Cross Wedge Rolling (134)
..... X. LI F. DU M. WANG (P.R. China)

Coffee Break: 20 minutes

Experimental Investigation into Characteristics of Camber Control in Sheet Bar Rolling (276)
..... M. ETO T. SHIBAHARA T. SASAKI (Japan)

Modern Method for Investigating into Normalising Rolled and Thermomechanically Rolled Steel Wide Strips (232)
..... Z. CSEPERI Z. GACSI J. LORINCZI (Hungary)

<MICROSTRUCTURE EVOLUTION IN ROLLING>

Microstructure Evolution in Hot H-Shape Rolling Simulated by Finite Element Method (187)
..... Y. TAKASHIMA R. KOPP (Japan)

3-D Finite Element Analysis of Austenite Grain Size Prediction for Process Design in Round-Oval-Round Bar Rolling (266)
..... H. C. KWON Y. LEE S. Y. KIM J. S. WOO Y. T. IM (Korea)

Theoretical and Exerimental Study on Grain Size Changes during the Controlled Rolling (133)
..... M. WANG F. DU Y. ZHENG (P.R. China)

Lunch 12:35-13:30

Afternoon Session 13:30-16:20

<BENDING, STRAIGHTENING>

High Accuracy V-Bending by Press-Brake (64)
..... J. ENDOU T. ANZAI (Japan)

Analysis of Influential Factors on Accuracy of Bending Process (213)
..... J. KOYAMA M. YANG K. MANABE (Japan)

FEM Simulation of Two-Roll Straightening for Bars and Wires (262)
..... Y. ONODA T. YANAGIHASHI T. HAMA M. ASAKAWA (Japan)

Straightening and Bending Process Characterization Using Vickers Micro Hardness Technique (176)
..... A. MKADDEM A. POTIRON J-L. LEBRUN (France)

Coffee Break: 20 minutes

Optimization of a Roller Levelling Process for Al7001T9 Pipes with Finite Element Analysis and Taguchi Method (327)
..... H. HUH J. H. HEO H. W. LEE (Korea)

Flexible Kinematic 3D-Bending of Tubes and Profiles (105)
..... M. NOCK M. GEIGER (Germany)

Banquet at THE HOTEL YOKOHAMA 18:30-20:30

October 29 (Tue) Room 3

Morning Session-1 8:30-11:00

<SHEARING, BLANKING, PUNCHING, CUTTING>

Deformation Analysis of Axisymmetric Blanking Process Considering Fracture (99)
..... Y. YOSHIDA S. SUMIKAWA N. YUKAWA T. ISHIKAWA (Japan)

Relationship between Blanking Conditions and Products in Counterblanking Processes (169)
..... S. THIPPRAKMAS M. JIN M. MURAKAWA (Japan)

FE Simulation of Metal Blanking for Thin Sheet (236)
..... V. LEMIALE P. PICART S. MEUNIER (France)

FEM Simulation of Metal Forming and Cutting Operations (291)
..... F. KLOCKE G. MESSNER S. HOPPE H. W. RAEDT R. SCHMITZ (Germany)

Numerical Simulation of the Punching /Blanking Process Using In-Process Identification of Mild Steel Material (199)
..... W. KLINGENBERG U. P. SINGH W. URQUHART (The Netherlands)

Material Deformation in Combination with Material Separation (116)
..... A. BEHRENS B. WESTHOFF K. KALISCH J. WULFSBERG (Germany)

Coffee Break: 20 minutes

Morning Session-2 11:20-12:10

<INCREMENTAL FORMING>

Investigation into Three-Dimensional Net Shaping Using a New Rapid Prototyping Process and its Applied Technology (54)
..... D. G. AHN D. Y. YANG S. H. LEE H. S. CHOI K. D. KIM (Korea)

Incremental Sheet Forming :Quality Evaluation and Process Simulation (343)
..... G. HIRT S. JUNK N. WITULSKI (Germany)

Lunch 12:10-13:30

Afternoon Session-1 13:30-15:10

FMM-Simulation - A New Approach for Modeling Incremental Forming Processes of the Flow Turning Type (117)
..... B. AWISZUS G. HEROLD A. TRAVNICKOVA (Germany)

Recent Advances in Incremental Forming Processes for Component Manufacturing (210)
..... P. M. PAUSKAR R. M. WOLFE A. L. GROW G. D. LAHOTI (USA)

A New Hybrid Processing Integrating Incremental Forming and Friction Stir Welding (197)
..... K. YOSHIKAWA (Japan)

Research on the Incremental Bend Forming Technology of the Integral Wing-Skin Panel with Grid-Type Ribs (347)
..... Y. ZENG X. ZHANG Z. LI (P.R. China)

Coffee Break: 20 minutes

Afternoon Session-2 15:30-17:35

<MACHINES, TOOLS>

Analysis of the Dynamic Behaviour of a Flywheel Screw Press (335)
..... P. BARIANI G. BERTI T. D. NEGRO A. GHIOTTI (Italy)

Metal Forming Machines with the Fluwheel Inertia Variable Moment (63)
..... D. TEMELJKOVSKI V. MIJAILOVIC' S. NUSEV (Yugoslavia)

Numerical Approach to Minimize Tool Wear in the Sheet Metal Forming (272)
..... C. HWANG R. GOLLE H. HOFFMANN (Germany)

Reverse Process Simulation for Forging Using the Medial Axis Transformation (75)
..... M. WIENSTROEER H. MATHIEU (Germany)

2000KN Multi-Point Forming Press and its Application to the Manufacture of High-Speed Trains (139)
..... M. LI W. FU Y. PEI Z. SUI (P.R. China)

Banquet at THE HOTEL YOKOHAMA 18:30-20:30

October 29 (Tue) Room 4

Morning Session 8:30-11:45

<POWDER COMPACTION, SINTERING FORMING>

In-Situ Observation of Behaviour of Powders in Die Compaction (295)
..... T. WATANABE F. TSUMORI H. KOTERA S. SHIMA (Japan)

Investigation of Metal Foam Fabrication by Powder Compaction and Induction Heating Process (218)
..... S. W. YOUN S. H. LEE C. G. KANG (Korea)

Development of Semi-Solid Isostatic Pressing Method for Powder Compaction (296)
..... F. TSUMORI S. SHIMA H. KUME A. KAKITSUJI H. MIYAMOTO (Japan)

Engineering Calculation of Deformation Force for Hot Repressing of Powder Sintered Preform (58)
..... S. Z. HONG Z. P. ZENG J. H. WANG (P.R. China)

Coffee Break: 20 minutes

Development of Semi-Continuous 4-Stage ECAE Method (346)
..... M. ONO H. MIZUFUNE M. NARITA (Japan)

Experiments and Numerical Simulations for Monitoring the Solid State Sintering after Powder Injection Molding (317)
..... Th. BARRIERE D. RENAULT J. C. GELIN (France)

A Computational Plasticity Model Based on Endochronic Theory for Powder Forming Processes (13)
..... A. R. KHOEI M. MOFID A. BAKHSHIANI (Iran)

Lunch 11:45-13:30

Afternoon Session-1 13:30-15:10

<COMPOSITES>

On Method of Measuring Visco-Elastic Property of Ceramic-Binder Compound for Estimating De-Waxing Stage Distortion in Injecion Molding (120)
..... K. KATO S. KANAYAMA T. YASUHARA N. OHTAKE (Japan)

On the Evaluation of Formability of Metal Composites under Conditions of Extrusion Process and Adequate Material Test (354)
..... R. E. SLIWA G. MISHURIS (Poland)

Effect of Stress State on High Temperature Deformation and Rupture Prediction of Particulate Reinforrced MMCs (126)
..... A. EL-NASR (Egypt)

Solid-State Synthesis of Mg2Si by Heat Treatment after Repeated Plastic Working and its Application to Form Magnesium Composite Materials (125)
..... K. KONDOH H. OGINUMA H. MURAMATSU T. AIZAWA E. YUASA (Japan)

Coffee Break: 20 minutes

Afternoon Session-2 15:30-16:45

<JOINING>

Spot-Joining - New Technologies in the Field of Joining by Forming (94)
..... R. NEUGEBAUER R. MAUERMANN S. DIETRICH (Germany)

Pressure Welding Characteristics of Various Metals by DC Pulse Resistance Sintering Apparatus (12)
..... T. NAKAMURA S. TANAKA K. HAYAKAWA H. IMAIZUMI Y. NAKAGAWA (Japan)

Sinter-Bonding of Ceramics Using Superplastic Ceramic Powders as an Insert (86)
..... K. WASEDA Y. MOTOHASHI (Japan)

Banquet at THE HOTEL YOKOHAMA 18:30-20:30

October 29 (Tue) Room 5

Morning Session-1 8:30-10:10

<THEORY OF PLASTICITY>

Non-Linearity of Plastic Deformation Problems and Methods for Solving These Problems (246)
..... T. SHIMIZU (Japan)

Description of the Plastic Behaviour of Sheet Metals Using a New Orthotropic Yield Criterion (190)
..... D. BANABIC D.S. COMSA T.KUWABARA E.IIZUKA T.HIRA S. WAGNER K. SIEGERT (Germany)

Identification of Material Parameters in Constitutive Model of Large-Strain Cyclic Plasticity for Sheet Metals by Mixed Experimental and Numerical Approarch (342)
..... T. UEMORI F. YOSHIDA (Japan)

Fundamental Investigations Concernig Forming Limit Diagrams (106)
..... M. MERKLEIN (Germany)

Coffee Break: 20 minutes

Morning Session-2 10:30-12:10

<CRYSTAL PLASTICITY>

Classification of Deformation Modes in Plastic Compression of Lumber-Like Structure (224)
..... K. YAMAGUCHI H. SAIKI Y. MARUMO H. SHIOZAKI (Japan)

Grain-by-Grain Deformation Behavior of Pure Aluminum during Simple Compression (277)
..... K. H. KIM H. K. KIM S. I. OH (Korea)

Continuous Ultra Grain Refinement of Aluminium Strip by Conshearing (248)
..... H. UTSUNOMIYA K. HATSUDA T. SAKAI Y.SAITO (UK)

The Analysis of the Shear Band Instability in 3D FCC Ductile Single Crystals Based on Perturbation Method (227)
..... J. NITTA K. ITO S. KANNO T. SAGAWA (Japan)

Lunch 12:10-13:30

Afternoon Session 13:30-17:35

<PROF. SOWERBY'S MEMORIAL SESSION>

Micromechanical Analysis of Inhomogeneity and Damage in Multiphase Materials (361)
..... M. JAIN J. D. EMBURY J. GAMMAGE (Canada)

Crystal Plasticity Finite Element and Experimental Analyses of Plastic Deformation Induced Crystal Rotations of FCC and BCC Single Crystal Sheets (306)
..... E. NAKAMACHI Y. P. CHEN M. HIROSE H. MORIMOTO (Japan)

Development of Dual Phase Sheet Metal Design System by Using Elastic/Crystalline Viscoplastic Finite Element Simulation (307)
..... E. NAKAMACHI Y. P. CHEN N. YOKOYAMA H. MORIMOTO (Japan)

Characterization of Micro to Macroscopic Response of Amorphous Polymers under Macroscopically Uniform Deformation (309)
..... Y. TOMITA W. LU M. UCHIDA (Japan)

Coffee Break: 20 minutes

Constitutive Equation of TRIP Steels and Enhancement of Formability of TRIP Phenomena through Introduction of Microstructure (310)
..... Y. TOMITA A. ICHIHARA (Japan)

Models for Void Growth and Ductile Fracture (324)
..... N. L. DUNG (Vietnam)

Thermomechanical Modeling of Shear Localization and Neck Propagation for Thermo-Viscoplastic Polymer (328)
..... D. MURAKAMI S. KOBAYASHI T. TORIGAI K. SHIZAWA (Japan)

A Theoretical and Experimental Study of an Incremental Sheet Metal Bulging Using a Few Spherical Rollers (329)
..... H. ISEKI (Japan)

A Theory of Finite Deformation Micropolatrelastoplasticity and its Application to Cavitation Instability Phenomena (340)
..... X. YUAN Y. TOMITA T. ANDOU A. MAKINOUCHI (Japan)

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<HOT FORGING>

Analysis of Varying Strain Rate Conditions on the Material Flow Stress in Hot Forging Operations (333)
..... P. F. BARIANI S. BRUSCHI T. D. NEGRO (Italy)
Evaluation of Forging Defects of Underfill and Burr Using a Laser Beam in Hot Forging Processes (222)
..... H. SAIKI Y. MARUMO K. KOGA Y. ICHIMURA M. IWAMATU (Japan)
Effect of the Thermal Loads Including Frictional Heat on the Resistance of Plastic Deformation of Hot Forging Tools with Hard Coating Films (223)
..... H. SAIKI Y. MARUMO A. MINAMI Y. TAKAHAMA Y. TABARU (Japan)
Development of a CAE System on Prediction of Hot Forging Die Life (171)
..... Y. TSUCHIYA K. NAKANISHI T. TANAKA M. MATSUI T. SUZUKI Y. NOGAMI T. AKASHI (Japan)

Coffee Break: 20 minutes

Investigation into the Process Basics of Warm Forming (91)
..... R. NEUGEBAUER M. PUTZ H. HARTWIG M. GEIGER S. BITTER (Germany)
Optimisation of the Hot Forging Process of ST70AH Turbine Blades (334)
..... P. F. BARIANI S. BRUSCHI S. MASIERO A. MAURIZIO F. ZUTTION (Italy)
Development of Forging Process Optimization System Using Wear Model (87)
..... H. KOJIMA S. FUJIKAWA (Japan)
Computer Simulation of Adaptive CNC for Hot-Die Forging Complex (325)
..... Y. BOCHAROV Y. GLADKOV (Russia)

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Reduction in Residual Stress after Cold Bar Drawing (288)
..... M. AKIYAMA T. KUBOKI (Japan)
Multiple Drawing of Rails for Linear Motion Guide (150)
..... K. YOSHIDA S. TUIHIJI (Japan)
Study on Drawing Using Bisected Dies Vibrated Ultrasonically and Transversally (170)
..... M. HAYASHI M. JIN H. NOGUCHI M. MURAKAWA (Japan)

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..... N. TIESLER U. ENGEL M. GEIGER (Germany)
Micro-/Nanoscopic Replication of Designed Surface Asperities by Metal Forming Process (157)
..... H. IKE S. KURIYAMA A. KOHNO (Japan)
Improvement of Ultra-fine Piercing by Means of Vacuum System (160)
..... S. KURIMOTO K. HIROTA Y. NAKANO T. MORI (Japan)
Influence of Increased Strain Rate on Flow Strength and Friction during Microforming (93)
..... R. NEUGEBAUER A. SCHUBERT (Germany)
Miniature Incremental Forming of Millimeter-Sized Thin Shell Structures (145)
..... S. TANAKA T. NAKAMURA K. HAYAKAWA (Japan)

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<TUBE ROLLING>

Endless Rolling for Stretch Reducing Process of Pipe (194)
..... H. YOSHIMURA Y. MIHARA (Japan)

Consideration of Simultaneous Finishing of Inner and Outer Surfaces of Tube by PBR Process (161)
..... T. MORI K. HIROTA S. SENDA (Japan)

An Investigations of Displacements and Deformation during Cold Rolling of Tubes in Pilgering Process. (103)
..... J. OSIKA K. SWIATKOWSKI (Poland)

New Non-Metallic Model Material and its Application to Simulation of Tubes Production Using Cold Pilgering Process. (102)
..... K. SWIATKOWSKI J. OSIKA (Poland)

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<RING ROLLING>

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..... H. TAKIZAWA T. MATSUI H. KIKUCHI (Japan)

Effect of Guide Rolls on Ring Rolling Process Parameters (230)
..... M. R. FOROUZAN M. SALIMI M. S. GADALA (Iran)

Ring Rolling Theory and Technology Design Method (15)
..... H. LIN M. HUAJIE Q. XUNPENG (P.R. China)

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..... T. TANAKA (Japan)

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..... M. ATAKA T. AONO T. OKAMOTO (Japan)

Control of Process Parameters in Electric Upsetting for Enginge Valves (148)
..... Y. SUN T. LIU Z. ZHANG T. ZHANG T. LUO (P.R. China)

Shot Peening Process of Inner Surface of Machine Parts Using Rebound of Shots (183)
..... Y. HARADA K. MORI T. FUJIOKA S. MAKI T. ITOH E. NAGASHIMA H. TAKEDA (Japan)

Coffee Break: 20 minutes

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<STRENGTH, FAILURE, FRACTURE>

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..... Y. NEISHI S. WATANABE Y. HARUHATA T. KUBOKI K. KURODA (Japan)

Prediction of Ductile Fracture in Cold Forming Processes (293)
..... F. KLOCKE D. BREUER H. W. RAEDT (Germany)

Ductile Fracture of FCC Crystals by the Formation and the Propagation of Shear Bands (229)
..... S. KANNO J. NITTA K. ITO Y. KAMADA A. SATO T. SAGAWA (Japan)

Molecular Dynamics Analysis of Fracture Mechanism in Cutting of a Single Crystal Sheet Metal by Indentation of Wedge-shape Tools (242)
..... T. IIZUKA N. HATANAKA K. YAMAGUCHI N. TAKAKURA (Japan)

Damage Modeling in Cold Bulk Metal Forming Using Adaptive Theory (175)
..... N. BIBA S. SMIRNOV S. STEBOUNOV (Russia)

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Morning Session 8:30-12:35

<HYDROFORMING AND LAZERFORMING OF SHEET>

Integrated Large Volume Production for Hydroformed Large Body Components-Sytems Specification and Practical Experiences (38)
..... M. TREUDE (Germany)

Double Sheet Hydroforming of Complex Hollow Parts (108)
..... M. CELEGHINI M. GEIGER (Germany)

Effect of Thickness on the Restoration Behavior of Sheet Metals Subjected to Bulge Deformation (241)
..... K. YAMAGUCHI R. SAGRADO N. TAKAKURA T. IIZUKA (Japan)

Parameter Design for Sheet Metal Hydroforming Processes (204)
..... U. GATHER W. HOMBERG M. KLEINER Ch. KLIMMEK S. KUHNT (Germany)

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Numerical-Experimental Analysis of the Blank Holder Force during a Pressure Assisted Forming Process (201)
..... G. PALUMBO L. TORICARICO (Italy)

Dieless NC Forming of Automotive Service Panels (279)
..... H. AMINO Y. LU S. OZAWA K. FUKUDA T. MAKI (Japan)

Laser Forming of Three-Dimensional Shaped Sheet Metal Using Triangular Patches (282)
..... M. OTSU M. MATSUSHIMA K. OSAKADA H. MIURA (Japan)

3-D Measurement of Shape and Strain of Sheet Metal in Press Forming in High Resolution by Fourier Phase Correlation Method (221)
..... M. SAKAMOTO T. SAWADA (Japan)

Study on Occurring and Preventing Wrinkle during Integral Hydro-Bulge Forming (142)
..... Z. WANG X. WANG Z. R. WANG (P.R. China)

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<SHEET FORMING SIMULATION>

Analysis of Sheet Metal Forming Processes Using a New One-Point Quadrature Shell Element (349)
..... S. P. WANG J. W. YOON (USA)

Modeling and FE Simulation for Thin Sheet Metal Forming Using Strain Plasticity Gradient (237)
..... J. F. MICHEL P. PICART (France)

An Inverse FE Approach to Concurrent Design of Sheet Metal Forming (189)
..... S. YANG T. OHASHI K. NEZU K. SHINOZAKI (Japan)

Material Modeling for Spring-Back Behavior and Numerical Prediction of Hat-shaped Metal Sheet Introduced its Model (100)
..... N. IWATA H. TSUTAMORI K. KANEKO N. SUZIKI M. MATSUI M. GOTOH (Japan)

Coffee Break: 20 minutes

Current Possibilities in Process Simulation of Sheet Production (132)
..... R. KOPP H. ARETZ C. HORST (Germany)

Modelling and Simulation of the Plastic Forming Force of Thin Walled Profiles from a Strip (357)
..... M. JURKOVIC I. KARABEGOVIC Z. JURKOVIC (Croatia)

Anisotropy of Sheet Metal in Numerical Simulation (273)
..... H. HOFFMANN C. VOGL (Germany)

Prediction of Instability in Planar Anisotropic Sheet Metal Forming Processes (34)
..... M. FOROUTAN H. HASHEMOLHOSSEINI M. FARZIN (Iran)

October 30 (Wed) Room 4

Morning Session-1 8:30-10:10

<CONTINUOUS CASTING>

Clad Strip Casting Using a Downward Melt Drag Twin Roll Caster (62)
..... *T. HAGA (Japan)*

Computational Technique for 3-Dimensional Deformation Analysis of Continuously Cast Steel Strand in Multi-Roll-Spans (79)
..... *S. TOYOSHIMA M. GOTOH K. NAKAYAMA (Japan)*

Finite Element Thermomechanical Model of Continuous Steel Casting (147)
..... *F. PASCON A. M. HABRAKEN (Belgium)*

Three Dimensional, Coupled Analysis of Flow, Heat Transfer, and Solidification in Continuous Casting by the Finite Element Method (239)
..... *S. M. HWANG C H. MOON (Korea)*

Coffee Break: 20 minutes

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<MUSHY/SEMI-SOLID PROCESSING, INJECTION MOLDING>

Forming of Aluminium Alloy at Around Solidus Temperature (281)
..... *M. SHIOMI D. TAKANO M. OTSU K. OSAKADA (Japan)*

Numerical Simulation, Experimental Validation of Warpage of Injection-Molded Plastic (49)
..... *Z. GUO X. RUAN D. LI (P.R. China)*

Study on CAD/CAE Model and Mesh Generation Technology for Gas-Assisted Injection Molding (234)
..... *X. YONG X. RUAN (P.R. China)*

Recent Advances in Modelling and Simulation of Metal Injection Molding (319)
..... *Th. BARRIERE B. LIU J. C. GELIN (France)*

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Afternoon Session 13:30-15:10

<CAE, KNOWLEDGE BASE>

The Route to Automatic Metal Forming Process Selection (208)
..... *H. LONG D. J. MYNORS P. HOLLAND P. M. STANDRING (UK)*

Development of Knowledge-Based Process Planning System for Stamping Die Design (143)
..... *Z. ZHAO S. LUE Y. PENG X. RUAN (P.R. China)*

Key Technologies of Knowledge Based Metal Forming System (216)
..... *Y. H. PENG Z. ZHAO D. Y. LI G. H. YUAN F. ZHOU X. Y. RUAN (P.R. China)*

Mold Base KBE System and its Key Technology (130)
..... *Z. LOU L. LIU X. RUAN (P.R. China)*

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<PROF. KUDO'S MEMORIAL SESSION>

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..... *A. AZUSHIMA* *(Japan)*

Research Work of Professor Hideaki Kudo (452)
..... *K. OSAKADA* *(Japan)*

Personal Reflections on the Impact of Prof. Kudo's Contributions (465)
..... *B. AVITZUR* *(USA)*

Defects Occurring Practically in Cold Forging Compared with Professor Hideaki Kudo's Theoretical Work (454)
..... *B. DODD H. SEKIGUCHI* *(UK, Japan)*

Coffee Break: 20 minutes

Morning Session-2 10:30-12:10

Rigid-Plastic Finite Element Simulation of Metal Forming Processes (456)
..... *K. MORI* *(Japan)*

Simulation of Manufacturing Processes:Past, Present and Future (457)
..... *G. NGAILE T. ALTAN* *(USA)*

Plane-Strain Problems to 3-D Problems (458)
..... *D. Y. YANG* *(Korea)*

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Afternoon Session-1 13:30-15:10

Insights into Machining Chip Formation from Kudo to the Present Day (459)
..... *T. H. C. CHILDS* *(UK)*

Tribology in Metal Forming (460)
..... *N. BAY T. WANHEIM* *(Denmark)*

Friction Measurement Using the Ring Compression Test (461)
..... *A. T. MALE* *(USA)*

Coffee Break: 20 minutes

Afternoon Session-2 15:30-17:10

Microforming (462)
..... *M. GEIGER R. ECKSTEIN* *(Germany)*

Advanced Material and Prestress Design of Cold Forging Dies (463)
..... *J. GROENBAEK C. HINSEL* *(Denmark)*

Overview of Cold Forging Technology (464)
..... *G. D. LAHOTI* *(USA)*

October 31 (Thu) Room 1

Morning Session 8:30-12:10

<EXTRUSION>

Material Flow Characteristics in Hot Extrusion of Aluminum Alloy Controlled by the Flow Guide and Die Bearing (113)
..... *K. NAKANISHI S. KAMITANI T. YANG H. TAKIO M. NAGAYOSHI (Japan)*

Extrusion of Magnesium Alloys (184)
..... *S. MATSUOKA T. MURAI S. MIYAMOTO Y. OKI S. NAGAO H. SANO (Japan)*

Physical Modeling of Direct Extrusion through Weld Plates to Increase Yield (211)
..... *A. R. BANDAR W. Z. MISIOLEK (USA)*

Indirect Extrusion with Active Friction (ISA) (40)
..... *K. MUELLER (Germany)*

Coffee Break: 20 minutes

Changes in Flow Velocity at the Die Cavities in Direct Extrusion of Aluminum Alloys (153)
..... *N. HARIYAMA S. MATSUOKA (Japan)*

Three-Dimensional Numerical Modeling of Continuous Extrusion (363)
..... *T. MANNINEN P. RAMSAY A. S. KORHONEN (Finland)*

Development of Isothermal and Iso-Strain Rate Extrusion Technology (275)
..... *S. MAENO H. RONG (Japan)*

Development of a Web-Based Remote CAE on Metal Extrusion Die Design (118)
..... *Y. C. KAO (Taiwan)*

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Cold Formability of AZ31 Subjected the Repetitive Side Extrusion (298)
..... *Y. YASUDA K. AOKI A. AZUSHIMA (Japan)*

Investigation into Deformation-Induced Anisotropy in Extrusion of Rectangular Al-Alloy Tubes by Finite Element Method with Experimental Verification (55)
..... *C. H. LEE K.. J. KIM D. Y. YANG Y. S. LEE F. BARLAT (Korea)*

Hollow Shafts in Lightweight Construction Realised by Cross Rolling and Spin Extrusion (95)
..... *B. LORENZ R. GLASS M. PUTZ (Germany)*

Research on Punch Force and Microstructure Performance for Magnesium Alloy during Tube Extrusion (68)
..... *S. H. ZHANG Z. T. WANG Y. XU B. QIAO W. L. ZHOU K. ZHANG (P.R. China)*

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Morning Session 8:30-12:10

<TRIBOLOGY>

Tribological Behavior at the Interface in Tension-Bending Type Test for Sheet Metal Forming (299)
..... *A. AZUSHIMA M. J. ZHU (Japan)*

Development of a CAPP System for Lubricant Selection in Sheet Metal Forming (339)
..... *M. TISZA M. TISZA Jr. (Hungary)*

Lubricant Test for Punching and Blanking (57)
..... *D. D. OLSSON N. BAY J. L. ANDREASEN (Denmark)*

Friction in Cold Forging with Coated Tools under Dry and Semi-Dry Conditions (112)
..... *R. MATSUMOTO K. OSAKADA (Japan)*

Coffee Break: 20 minutes

The Study of Non-graphite Dispersion Type Forging Oil and Re-used Effect of Actual Machine (301)
..... *K. GOTO (Japan)*

Determination of the Heat Transfer Coefficient at the Die Interface in Forging (71)
..... *C. C. CHANG A. N. BRAMLEY (UK)*

Influence of Coolant Spraying Conditions on Heat Transfer at Die Surface in Hot Forging (344)
..... *P. F. BARIANI T. D. NEGRO S. MASIERO (Italy)*

Effects of Tool Material and Tool Surface Texture on Improvement of Lubrication with Micro Pits in Metal Forming (159)
..... *Z. WANG K. DOHDA Y. H. JEONG Y. HARUYAMA (Japan)*

Lunch 12:10-13:30

Afternoon Session 14:30-15:45

Analysis of LCF Behavior of TiN Coated Tool Steel for Cold Forging (283)
..... *A. KOCANDA (Poland)*

A Testing Method for Estimation of Adhesion Strength of Interface between Forging Tool and Coated Hard Film (59)
..... *K. HAYAKAWA T. NAKAMURA S. TANAKA K. HARADA (Japan)*

Experimental Friction Test by Sheet Metal Deep Drawing Process (356)
..... *Z. JURKOVIC M. JURKOVIC K. KUZMAN (Croatia)*

October 31 (Thu) Room 3

Morning Session 8:30-11:45

<DEEP DRAWING>

Study of the Fluid Pressure Influence on the Hydro-Mechanical Deep Drawing Process (202)
..... G. PALUMBO L. TORICARICO (Italy)

An Experimental Study of New Redrawing Method Utilizing Axial Compressive Force and Frictional force (151)
..... T. SUZUMURA K. MINE I. HIRAYAMA S. ISHIHARA (Japan)

Optimum Die Profile for Deep Drawing of Thick Plate (249)
..... K. HIRASAWA K. DOHDA Z. WANG N. YOKOYAMA (Japan)

Study on Equipment, Experiment and Numerical Simulation of Hydrodynamic Deep Drawing of Some Typical Parts (36)
..... L. LANG D. KANG S. ZHANG J. DANCKERT K. B. NIELSON (P.R. China)

Coffee Break: 20 minutes

Square Shell Deep Drawability of Titanium Sheet and 3-D FEM Simulation (352)
..... T. OHWUE M. KIKUCHI T. HAYASHI T. SENUMA T. KIKUMA (Japan)

Deep Drawing of Pierced Blank (43)
..... H. OGAWA (Japan)

Flexible Blankholder Design Using Finite Element Analysis (271)
..... W. NEHER K. J. WEINMANN (USA)

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Afternoon Session 14:30-15:45

Forming Limit Diagrams of Type 5083 Aluminum Sheet under Warm Stretch-Forming (336)
..... T. NAKA G. TORIKAI R. HINO F. YOSHIDA (Japan)

Experiments and Simulation of Hot Stamping of Quenchable Steels (302)
..... L. G. ARANDA Y. CHASTEL J. F. PASCUAL T. D. NEGRO (France)

Studies of Double Stretch-Drawing Process of Thin Sheet and Single Stretch-Drawing Process of Thick Sheet (78)
..... M. GOTOH M. YAMASHITA H. EGOSHI Y. S. KIM (Japan)

October 31 (Thu) Room 4

Morning Session-1 8:30-10:35

<AUTOMOTIVE PARTS, COMPONENTS>

Innovation in the Use of Aluminum Alloy for Forming Industrial Automotive Components (76)
..... E. CERETTI C. GIARDINI G. MACCARINI (Italy)

Forming and Further Processing of Tailor Rolled Blanks for Lightweight Structures (206)
..... S. CHATTI B. HELLER M. KLEINER N. RIDANE (Germany)

New Rotary Forming Process in Axis Intersection Type for Clutch Hubs in Automatic Transmissions (66)
..... R. MATSUNAGA T. TAKEMATU H. MIYAHARA (Japan)

One-Piece Forming of Rim and Disk of Automobile Wheel (226)
..... S. MAKI D. NAKAGAWARA Y. HARADA K. MORI (Japan)

Numerical Control Finish Rolling Process of Automotive Transmission Gears Using Screw-Shaped Tools (65)
..... T. TAKEMASU T. OZAKI H. MIYAHARA (Japan)

Coffee Break: 20 minutes

Morning Session-2 10:55-12:10

<ROTARY FORMING>

Finite Element Analysis of Sheet Metal Forming by Spinning (205)
..... Ch. KLIMMEK R. GOEBEL W. HOMBERG H. KANTZ M. KLEINER (Germany)

Tube Spinning of Magnesium Alloys (52)
..... A SHIRIZLY M. FELZENSTEIN (Israel)

Future Trends of Rotary Swaging (109)
..... P. GROCHE T. RATHMANN (Germany)

Lunch 12:10-13:30

Afternoon Session 14:30-15:45

Rotary Drawing of Cylindrical Cup (225)
..... K. KAWAI H. KUSHIDA H. KUDO (Japan)

Simplified Three-Dimensional Finite Element Simulation of Roll Forming of Wheel Rims (26)
..... K. MORI O. EBIHARA N. HIRAMATSU (Japan)

Serrated Flow and Surface Markings in an Al-Mg Alloy (158)
..... M. ITOH (Japan)

October 31 (Thu) Room 5

Morning Session 8:30-12:10

<ICEM SPECIAL SESSION>

Knowledge Management and Environmental Aspects in Integrated Forming Process (326)
..... L. CSER M. GEIGER M. CELEGHINI (Hungary)

Excimer Laser Texturing of Hard Coated Cold Forging Tools - Investigations on Tool Life - (167)
..... U. POPP Th. NEUDECKER U. ENGEL M. GEIGER (Germany)

Fin Formability, Rolling Characteristics and Roll Durability in Grooved Rolling of Copper Sheet for Heat-transfer Welding Tubes (303)
..... I. NAKADA K. ITOH T. SUZUKI K. NAKAJIMA (Japan)

Characteristic and Benefit of New Deep Drawing Using High-Pressured Water (320)
..... M. MURATA H. MIYAMOTO (Japan)

Coffee Break: 20 minutes

Water Soluble Binder for Environment Frendry MIM Process (359)
..... T. SHIMIZU A. KITAJIMA T. SANO (Japan)

Extension of Blanking Die Life by Surface Coatings (152)
..... K. TAKAISHI T. IWAKI T. KONDO K. SASAKI Y. ABE (Japan)

Process Chain Development Driven by Ecological Aspects (322)
..... B. DENKENA H. K. TOENSHOFF T. FRIEMUTH J. C. BECKER A. BRANDES (Germany)

Development of Waste Free Water-System Lubricant for Cold Forging (360)
..... A. UNO S. SHIDA M. TOMONO T. SHIMIZU T. SANO (Japan)

Lunch 12:10-13:30

Afternoon Session 14:30-15:20

Life Cycle Assessment Model for Process Design with Pro II and Simapro : Case Study on Nitric Acid Production Process (308)
..... T. MUNGCHAROEN V. VARABUNTOONVIT P. BHANDHUBANYONG (Thailand)

Recycling of Production Waste and Waste Management in PM-Processes (321)
..... E. WANNE S. KIVIVUORI H. LEHTO (Finland)

Poster Session October 29(Tue)–31(Thu) Room 6

Every poster will be displayed in October 29, October 30 and October 31.
Core time for poster session will be opened in the following period. During the core time of poster session, every poster will be explained by one of the authors.

Core time: October 29(Tue) 12:30 – 13:30
October 30(Wed) 12:30 – 13:30
October 31(Thu)* 13:30 – 14:30
*Oral presentations will be suspended in core time of October 31(Thu).

Impulse Magnetic Pressure Seam Welding of Aluminum, Copper and Steel Sheets (402)
..... *T. AIZAWA K. OKAGAWA N. HENMI (Japan)*

A Study of Forming Flange with Grooves and so on in the Outer Surface by Using Thick Metal Plate (404)
..... *T. MAEGAWA Y. UCHIDA (Japan)*

The Forming of a Spur Gear Made from the Drawn Cup (405)
..... *Y. UKEI Y. UCHIDA M. HOSHINO (Japan)*

The Effect of Lankford's r-Value Anisotropy on Deep Drawing and Stretch Formabilities of Aluminum Alloy Sheets (406)
..... *K. YAMADA H. MIZUKOSHI K. OKADA (Japan)*

Micro-Scale Ti Honeycombs Fabricated by Focused Ion Beam (407)
..... *H. HOSOKAWA K. SHIMOJIMA Y. CHINO Y. YAMADA C. E. WEN M. MABUCHI (Japan)*

Surface Property of Micro-Scale Amorphous Fe78B13SI9 Component Fabricated by Focused Ion Beam (408)
..... *H. HOSOKAWA K. SHIMOJIMA Y. CHINO Y. YAMADA C. E. WEN M. MABUCHI (Japan)*

Three Dimensional Metal Flow in Rotary Forging (409)
..... *S. KATAYAMA M. KAKIUCHI T. KAWABE T. WADA (Japan)*

New Extrusion Machine for Controlling Inside Diameter of Circular Tube (410)
..... *T. MAKIYAMA M. MURATA (Japan)*

Paraxial Spinning on One End of Circular Aluminum Tube (411)
..... *J. YAO M. MURATA (Japan)*

Workabillity in Rolling and Upsetting of Unidirectionally Solidified Chromium (412)
..... *Y. HARADA M. OHMORI K. MORI S. MAKI (Japan)*

A New Extrusion Process with Controlling Twist for Forming of Profile (413)
..... *M. NIKAWA M. SHIRAISHI Y. GOTO (Japan)*

Computer Simulation on the Influence of Punch Shape in Warm Extrusion of Cup (414)
..... *B. H. ZHANG Z. M. ZHANG (P.R. China)*

Increasing of the Plastic Parts Quality by Means of the Temperature Fields Measuring and Simulation (415)
..... *P. LENFELD (Czech Republic)*

Deformation Property and Working Limit of Extruded Square Sections in Rotary-Bending Process (417)
..... *S. SAKAKI N. UTSUMI (Japan)*

Poster Session (Continued)

Production of Deep Cups with Wide Flange by Combined Process of Punch Stretching with Ironing (419)
..... N. TAKAKURA H. NAKASONE K. YAMAGUCHI T. IIZUKA (Japan)

Deep Drawing of Magnesium Alloy Sheets Using Hard-Thin-Film-Coated Tools (421)
..... R. PAISARN V. PREMANOND, P. KAEWTATIP N. KOGA (Thailand)

Superplastic Forming of Nano/Micro 3D-Structures with Pt-based Metallic Glass (422)
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6. Czech Republic 2
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8. Egypt 1
9. Finland 2
10. France 9
11. Germany 38
12. Hungary 3
13. Iran 8
14. Israel 1
15. Italy 8
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21. Taiwan 5
22. Thailand 2
23. The Netherlands 2
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