

**Metal Forming 2010, Hotel Nikko Toyohashi**  
**September 19-22, 2010, Toyohashi, Japan**

**Conference Schedule**

|             | Sept. 19 (Sun)   | Sept. 20 (Mon)   | Sept. 21 (Tue)  | Sept. 22(Wed)  |
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| 08:30-10:00 | 12:00- Registration<br>13:30-17:40 Pre-conference seminar<br>18:00-20:00 Welcome party | 08:30- Registration<br>09:00-09:15 Opening Ceremony<br>09:15-10:00 Plenary 1 | 08:30-10:00 Plenary 2,3                                       | 09:15-10:00 Plenary 4  |
| 10:00-10:20 |  | Break  | Break   | Break  |
| 10:20-12:20 |  | A0-5<br>B1-6<br>D0-5<br>E1-6<br>G0-5<br>J0-5<br>M0-5                         | A18-23<br>B19-24<br>C1-6<br>E19-24<br>G18-23<br>L0-5<br>I0-5  | A36-41<br>B31-35<br>C13-18<br>E37-42<br>F13-18<br>L12-16<br>I18-21 |
| 12:20-13:40 |  | Lunch  | Lunch   | Lunch  |
| 13:40-15:40 |  | A6-11<br>B7-12<br>D6-11<br>E7-12<br>G6-11<br>J6-11<br>M6-11                  | A24-29<br>B25-30<br>C7-12<br>E25-30<br>F1-6<br>L6-11<br>I6-11 | A42-47<br>K0-5<br>C19-24<br>E43-48<br>F19-24<br>H1-6<br>N6-11      |
| 15:40-16:00 |  | Break  | Break   | Break  |
| 16:00-18:00 |  | A12-17<br>B13-18<br>D12-18<br>E13-18<br>G12-17<br>J12-17<br>M12-16           | A30-35<br>E31-36<br>F7-12<br>N0-5<br>G24-27<br>I12-17         | A48-53<br>K6-11<br>C25-30<br>E49-54<br>F25-27<br>H7-12<br>N12-16   |
|             |  | -  | 19:30-21:30 Banquet   | 18:30-20:30 Bowling  |

A: Rolling, B: Forging, C: Extrusion and drawing, D: Tube forming, E: Sheet metal forming, F: High strength steel sheet forming, G: Incremental forming, H: Shearing, I: Joining, J: Micro forming, K: Magnesium forming, L: Powder forming, M: Constitutive equations, N: Modelling

| presentation | no  | Authors  | Title  | Country   |
|--------------|-----|--|--|-----------|
| 01P          | k03 | Masayuki Miyanishi   | Manufacturing of light weight cars   | Japan     |
| 02P          | k01 | Kozo Osakada   | Application of servo presses to metal forming processes  | Japan     |
| 03P          | k02 | Gerhard Hirt, Stephan Heppner  | Selected trends for metal forming innovations  | Germany   |
| 04P          | k04 | Zbigniew Pater   | Development of cross-wedge rolling theory and technology   | Poland    |
| A00          | k05 | Peter D. Hodgson, Ilana B. Timokhina, Hossein Beladi   | Nanostructural engineering of steel  | Australia |
| A01          | 17  | Sung-Hoon Cha, Jong-Bong Kim, Sa Sung Park, Jong-Ho Kim, Nak-Kyu Lee   | Design of micro pattern forming process on thin sheet metal for electronic device panels   | Korea     |
| A02          | 153 | Joerg Brecht, Peter Finge, Andreas Hauger  | Tailor rolled products – Innovative lightweight design technology for body structures and chassis applications                         | Japan     |
| A03          | 172 | Shigeru Ogawa, Kenji Yamada, Toshiyuki Shiraishi, Takayuki Otsuka, Yutaka Sadano, Hisataka Uto, Kazuto Yamamura, Yoshiaki Shia, Kenji Sorao, Takeo Hoshino, Kunihiro Wakatsuki, Kouichiro Takeshita, Keishiro Ikeda, Kanji Hayashi, Akira Sako, Yutaka Matsuda, Yuji Ikemoto, Hideaki Furumoto | Development of intelligent mill and realization of Oita plate leveler  | Japan     |
| A04          | 188 | Zongan Luo, Guangming Xie, Guodong Wang, Guanglei Wang, Hongguang Wang, Lijun Wang   | Interface of heavy gauge plate by vacuum cladding rolling  | China     |
| A05          | 310 | Falko Vogler, Alexander Duschka, Peter Groche  | Part accuracy of hollow profiles manufactured through flexible roll forming  | Germany   |
| A06          | 20  | Bogdan Garbarz, Jarosław Marcisz   | Thermomechanical processing of Al-alloyed structural steel with reduced susceptibility to copper hot brittleness                       | Poland    |
| A07          | 248 | Dian-yao Gong, Zheng-yi Jiang, Jian-zhong Xu, Xiang-hua Liu, Di Wu   | Setup models of finishing temperature and rolling speed for hot strip mill   | China     |
| A08          | 205 | Li Yan-mei, Zheng Dong-sheng, Zhu Fu-xian  | Effect of finish rolling temperature ranges on microstructure and mechanical properties of hot rolled multiphase steel                 | China     |
| A09          | 312 | Krzysztof Muszka, Bradley P. Wynne, Eric J. Palmiere, W. Mark Rainforth  | Effect of deformation mode on microstructure evolution in Nb-microalloyed steel  | UK        |
| A10          | 260 | Yun Bo Xu, Yong Mei Yu, Bao Liang Xiao, Guo Dong Wang  | Microstructural modeling and processing optimization during hot strip rolling of high-Nb steels  | China     |
| A11          | 272 | Fumio Fujita, Takero Watanabe, Hiromasa Shimoyama, Lili Guo  | Effects of rolling and heat treatment conditions on texture structure and formability of magnesium alloy sheets                        | Japan     |
| A12          | 100 | Alexander Pesin, Victor Salganik, Denis Pustovoytov  | Modeling of surface crack form change of continuously cast slabs in roughing rolling at wide strip mill 2000                           | Russia    |
| A13          | 280 | Matthias Dünckelmeyer, Christian Krempaszky, Ewald Werner , Gerald Hein , Karl Schörkhuber   | Analytical modeling of thermo-mechanically induced residual stresses of work rolls during hot rolling                                  | Germany   |
| A14          | 285 | Mahan Qwamizadeh, Mahmoud Kadkhodaei, Mahmoud Salimi   | Analysis of curvature development in asymmetrical plate rolling in free and forced horizontal entry conditions                         | Iran      |
| A15          | 477 | Shinya Kanemori, Hideaki Furumoto, Kanji Hayashi, Takao Owada  | Reduction of impact force in threading of strip front end and stabilization of mill vibration by mill stabilizer device in hot rolling | Japan     |
| A16          | 92  | Yasumitsu Kondo  | Suppression of surface hot shortness caused by copper in hot-rolling   | Japan     |
| A17          | 204 | Dongbin Wei, Junxia Huang, Aiwen Zhang, Zhengyi Jiang, Kiet Tieu, Xu Shi, Sihai Jiao, Libin  | Deformation of oxide scale and roll-strip interface characteristics in hot rolling of stainless steel 304                              | Australia |
| A18          | 323 | Victor Mendoza   | FEM analysis of defects and microstructure evolution during hot working of specialty alloys  | USA       |

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| A20 | 368 | Akio Segawa, Takao Kawanami  | Visualization of deformation characteristics of oxide scale in hot rolling process by scale transfer method                           | Japan     |
| A21 | 375 | Ui Gu Kang, Shin Woong Jeong, Won Jong Nam   | Evolution of microstructure and mechanical properties in Al 5052 alloy during warm rolling  | Korea     |
| A22 | 377 | Marcel Graf, Rudolf Kawalla  | Simulation system for fast analysis of multistage hot rolling processes strip and rod/wire  | Germany   |
| A23 | 384 | Masanori Kobayashi, Tomoya Tsuchihashi, Yoshio Morimoto, Takashi Ishikawa                              | Prevention of sheet perforation in universal gap rolling  | Japan     |
| A24 | 484 | Somrerk Chandra-ambhorn, Thanasak Nilsonthi, Yves Wouters, Alain Galerie                               | Oxidation kinetics, mechanical adhesion and pickling behaviour of thermal oxide scales on hot-rolled conventional and recycled steels | Thailand  |
| A25 | 504 | Qiang Zhu, Hongtao Zhu, Kiet Tieu, Cheng Lu  | High temperature oxidation behaviour of a high-speed steel material   | Australia |
| A26 | 508 | Xiaoming Zhang, Zhengyi Jiang, Dongbin Wei, Xianghua Liu, Guodong Wang                                 | Analysis of casting roll during twin-roll thin strip casting  | Australia |
| A27 | 120 | D. Mirahmadi Khaki, A. Akbarzadeh, A. Eftekhari, K. Koroshfar  | Coiling temperature effect on formability of Nb-microalloyed steel sheet  | Iran      |
| A28 | 67  | Yongfeng Shen, Wenying Xue, Yanhui Guo   | Effect of cold rolling and annealing on texture evolution and mechanical properties of if steel sheet                                 | China     |
| A29 | 154 | Haibo Xie, Zhengyi Jiang, Daniel Yuen  | Analysis of edge cracks initiation and propagation during cold rolling of thin strip  | Australia |
| A30 | 288 | Mahmoud Salimi, Mohammad Mehdi Sahebifard  | Optimization of strip profile and flatness using hybrid neural-GA algorithm   | Iran      |
| A31 | 174 | Hiroshi Utsunomiya, Tsuyoshi Yukimoto, Tetsuo Sakai, Shinsuke Suzuki, Hideo Nakajima                   | Pore closure in multi-pass cold rolling of lotus-type porous copper   | Japan     |
| A32 | 390 | Mohammad Reza Niroomand, Mohammad Reza Forouzan, Mohammad Fasihfar, Mahmoud Salimi                     | Chattering control based algorithm for nonlinear optimization of 5-stands cold strip rolling process parameters                       | Iran      |
| A33 | 357 | Sang Min Byon, Jae Hyeon Lee, Youngseog Lee  | Experimental and numerical studies of edge cracks of a silicon steel strip in cold rolling  | Korea     |
| A34 | 439 | Jari Larkiola, Jari Nylander, Martti Verho, Mika Judin   | Virtual rolling quality system for cold rolling   | Finland   |
| A35 | 289 | Amir Hosein Sakhaei, Mahmoud Salimi, Mahmoud Kadkhodaei  | Caliber design in shape rolling by finite element method  | Iran      |
| A36 | 309 | Fritz Klocke, Björn Feldhaus, Hagen Wegner, Vladimir Bäcker  | Rolling of defined riblet structures on compressor blades of Ti6Al4V  | Germany   |
| A37 | 200 | Hiroshi Ona, Ryuhou Sho, Takuo Nagamachi, Kiyomasa Hoshi   | Development of flexible cold roll forming machine controlled by PLC   | Japan     |
| A38 | 145 | Keinosuke Iguchi, Kazuki Nishida, Takayuki Hama, Hideyuki Nakamura, Yukihisa Kuriyama, Hirohiko Takuda | Finite element analysis of strip deformation in roll forming of electric resistance welded pipe with vertical rolls                   | Japan     |
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| A40 | 332 | Toshifusa Nakamizo, Ichiro Takasu, Morihiko Nakasaki, Hiroshi Utsunomiya                               | Three-rolls-type hot ring rolling process of large seamless rings   | Japan     |
| A41 | 31  | Lianggang Guo, He Yang   | Numerical simulation of inhomogeneous deformation in cold ring rolling  | China     |
| A42 | 503 | Hendrik Schafstall, Christian Barth  | An innovative approach to automated simulation of full 3D ring rolling process and other incremental forming processes                | Germany   |
| A43 | 395 | Jarosław Bartnicki, Jarosław Magryta, Zbigniew Pater, Grzegorz Samołyk                                 | Rotary compression processes of hollowed parts  | Poland    |
| A44 | 53  | Abdullatif Al-Salmi, Peter Hartley   | The influence of roll inclination angle in three-roll rotary rolling of bi-metallic rod   | UK        |
| A45 | 74  | MinCheol Lee, SooJin Jang, SeungSang Han, DukJae Yoon, ManSoo Joun                                     | New finite-element model of thread rolling  | Korea     |
| A46 | 318 | Agnieszka Kulakowska   | Problems of surface preparation under burnishing rolling in aspect of product quality   | Poland    |

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| A48 | 404 | Carolin Binotsch, Andreas Feuerhack, Birgit Awiszus, Heinrich Potthoff                                    | FEM simulation of planetary cross rolling process for production of seamless tubes of steel and copper                                  | Germany |
| A49 | 392 | Matthias Schmidtchen, Rudolf Kawalla  | Multiscale modeling of rolling processes and bond strength development for layered materials  | Germany |
| A50 | 212 | Masahiro Saito, Motoo Asakawa, Yoshifuru Sunaga, Masaru Kobayashi, Masahito Kato, Kunio Matsuzaki         | Manufacturing of Mg/Al clad sheet with pure titanium foil as inserts by hot pressing and rolling  | Japan   |
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| A52 | 52  | Motoo Asakawa, Motohiko Urabe, Kotaro Nishimura, Ryota Hamada, Shigeyuki Aizawa, Masahiko Amari           | Theoretical and experimental analysis of roller leveller straightening for coiled bar   | Japan   |
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| B01 | 77  | SeungSang Han, JaeGun Eom, SoonTae Ahn, SeongMin Jang, YoHun Son, Hyuk Kim, DukJae Yoon, ManSoo Joun      | Plastic deformation behavior of pre-heat-treated high-strength steel for application in forging   | Korea   |
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| B07 | 398 | Jabłońska Magdalena, Bednarczyk Iwona, Bernstock-Kopaczyńska Ewelina                                      | Microstructural analysis of alloys from Fe-Al system by means of electron back scatter diffraction                                      | Poland  |
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| B13 | 175 | Jong-Taek Yeom, Jee-Hoon Kim, Jeoung-Han Kim, Jae-Keun Hong, Jae-Sik Lee                                  | Hot forging design of cam for vessel engine using finite element analysis and ductile fracture criteria                                 | Korea   |
| B14 | 396 | Grzegorz Samołyk, Jarosław Bartnicki, Andrzej Gontarz   | Fracture model for FEM modelling of cold metal forging  | Poland  |
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| B16 | 78  | Jung Min Seo, Jeong Hoon Noh, Beong Bok Hwang   | Sensitivity of dimensional changes to ring geometry using FE simulation   | Korea   |
| B17 | 91  | Seong-Hoon Kang, Sang-Woo Kim, Young-Seon Lee   | Application of modified hydrostatic stress model to internal void crushing in forging of large-scale ingot                              | Korea   |
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| B19 | 206 | Takashi Ishikawa, Yoshinori Yoshida, Nobuki Yukawa, Michiaki Kamiyama, Hirotaka Ogitani, Tomoaki Suganuma | Cold forge bonding of steel and aluminum alloy  | Japan   |

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| B23 | 284 | Satoru Kuwaharada, Kenji Nakanishi, Takehiko Matsuda, Yasumichi Matsumoto             | Net shape forging of light weight LED light housing developed by physical forming simulation                                   | Japan       |
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| B25 | 42  | Hanns Kache, Rouven Nickel, Bernd-Arno Behrens  | Development of variable warm forging process chain   | Germany     |
| B26 | 386 | Bernd-Arno Behrens, Dirk Odening  | Material influence on shrinkage behaviour of precision-forged parts  | Germany     |
| B27 | 51  | Tomoyoshi Maeno, Hiroyuki Fujii, Ken-ichiro Mori, Masahiro Sato                       | Control of slide motion in hot impression die forging of aluminium alloy billets using servo press                             | Japan       |
| B28 | 423 | Gontarz Andrzej, Pater Zbigniew, Samołyk Grzegorz, Tofil Arkadiusz                    | Forging of connecting rod without flash  | Poland      |
| B29 | 374 | Emi Onodera, Yunping Li, Tadayoshi Odahara, Hiroaki Matsumoto, Akihiko Chiba          | Intelligent hot forging process of artificial hip joint made of Ni-free Co-29Cr-6Mo-0.12N alloy                                | Japan       |
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| C09 | 244 | Farhad Parvizian, Tobias Kayser, Bob Svendsen   | Modelling and simulation of dynamic microstructure evolution of aluminium alloys during hot forming processes                  | Germany     |
| C10 | 275 | Isaac Flitta, Terry Sheppard  | Prediction of substructure influencing static recrystallisation using FEM analysis   | New Zealand |
| C11 | 281 | Marita Karimi, Faramarz Fereshteh-Sanee, Naeemeh Fakhar                               | Experimental and numerical parameter studies on plane-strain backward extrusion  | Iran        |
| C12 | 302 | Jung Min Lee, Jung Hwan Lee, Dae Cheol Ko, Dong Hwan Kim, Byung Min Kim               | Application of powder pad and die design with ribbon-shaped chamber for direct extrusion of multi-cell tube using porthole die | Korea       |
| C13 | 304 | Jianmin Yu, Zhimin Zhang, Lihui Lang, Baohong Zhang                                   | Influence of plastic deformation on mechanical properties and microstructure of annealed ZL102                                 | China       |

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| C15 | 352 | Ping-Hsun Tsai, Wan-Chi Chang, Guogi Li, Jaebong Yang, Jin Yong Oh, Michael Foster, Wei-                             | 3-D FEM simulation of aluminum extrusion  | Taiwan  |
| C16 | 354 | Jeong-Hoon Noh, Beong Bok Hwang  | Surface stress profiles and forming limit in radial extrusion   | Korea   |
| C17 | 407 | Kai Kittner, Carolin Binotsch, Birgit Awiszus  | Models for determination of interface strength and quality of aluminum-magnesium compounds                                    | Germany |
| C18 | 442 | Pawel Kazanowski   | Evaluation of fracture surface features in support of extrusion tools design optimization                                     | USA     |
| C19 | 182 | Akira Yanagida, Keisuke Ishikawa, Kensaku Okazaki, Akira Azushima  | Effect of Ti addition on tensile properties of C-Mn steels subjected to ECAE and heat treatment                               | Japan   |
| C20 | 114 | Yan Zhao, Hongzhen Guo, Yongqiang Zhang, Zekun Yao, Zhifeng Shi  | Influence of ECAP processing parameters on microstructure of TA15 titanium alloy  | China   |
| C21 | 479 | Andrzej Rosochowski, Małgorzata Rosochowska, Lech Olejnik, Bert Verlinden  | Incremental equal channel angular pressing of sheets  | UK      |
| C22 | 330 | Zbigniew Gronostajski, Maciej Zwierzchowski, Marek Hawryluk, Tomasz Skubiszewski                                     | Aluminum bronze BA1032 deformed by ECAP   | Poland  |
| C23 | 376 | Mehmet Okan Görtan, Enrico Bruder, Peter Groche, Clemens Müller  | New severe plastic deformation process to produce ultrafine grained materials   | Germany |
| C24 | 437 | Shinsuke Suzuki, Juan Lobos Martin, Hiroshi Utsunomiya, Hideo Nakajima   | Effect of pass route and pass number of equal-channel angular extrusion on structure and strength of lotus-type porous copper | Japan   |
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| C28 | 213 | Dae Woon Kim, Sang Kon Lee, Byung Min Kim, Jin Young Jung, Deok Young Ban  | Prediction model of axial residual stress in multi-pass high carbon steel wire drawing  | Korea   |
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| C30 | 320 | Janusz Luksza, Katarzyna Szajding, Maciej Rumiński   | Drawing process with ultrasonic activation of sectional drawing die perpendicularly to axis of wire subject to deformation    | Poland  |
| D00 | K06 | Jean-Loup Chenot, Elisabeth Massoni, Patrice Lasne   | Finite element simulation and optimization of the hydroforming process  | France  |
| D01 | 7   | Majid Elyasi, Pouya Zoghipour, Mohammad Bakhshi-Jooybari, Abdolhamid Gorji, Seyed Jamal Hosseinpour, Salman Nourouzi | A new hydroforming die design for improvement of die corner filling of conical stepped tubes                                  | Iran    |
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| J04 | 412 | Chunju Wang, Bin Guo, Debin Shan, Ying Yao, Feng Gong  | Size effect of tribology behaviour in micro U-deep drawing with T2 copper foil   | China   |
| J05 | 130 | Xiangji Kong, Thierry Barrière, Jean-Claude Gelin  | Manufacturing of stainless steel and Cu bi-material micro-components with micro-powder injection molding process                     | France  |
| J06 | 119 | Jie. Zhao, Andrew. Brockett, Akhtar. Razali, Yi. Qin, Colin. Harrison and Yanling. Ma  | Micro-sheet-forming and case studies   | UK      |
| J07 | 166 | Jung-Kuei Tseng, Tsung-Tien Wu, Cheng-Tang Pan, Zong-Hsin Liu, Yi-Chian Chen, Chia-Jung Wu, Jia-Lin Chen, Jacob Chih-Ching Huang | Multi-functional hot-embossing of bulk metal glasses at low temperature  | Taiwan  |
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| J09 | 113 | Piotr Macioł, Maciej Pietrzyk  | Numerical modeling of thixotropic flow with internal variable convection method  | Poland  |
| J10 | 14  | Ji Zhong, Shi Huigang, Liu Ren   | Atomistic simulation for nanopressing process of copper block  | China   |
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| J13 | 198 | Mahmoud Farzin, Hamid Montazerolghaem, Alireza Fadaei Tehrani  | Manufacture of miniature bulge test apparatus suitable for micro-sheet metal forming   | Iran    |
| J14 | 299 | Chao Zheng, Sheng Sun, Zhong Ji, Wei Wang, Jing Liu  | Microscale laser peen forming of titanium foil   | China   |
| J15 | 328 | Mohammad Ali Mirzai, Ken-ichi Manabe   | Conical expanding process of metallic microtube by axial compression   | Japan   |
| J16 | 389 | Tetsuhide Shimizu, Masahiro Ogawa, Kuniyoshi Ito, Ken-ichi Manabe  | Effect of plastic anisotropy on micro-deep-drawability of ultra-thin metal foils   | Japan   |
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