

Metal Forming 2018, Program

Sept. 17 (Mon)	9:00-10:00, plenary	10:00- 10:20	10:20-12:20 5 rooms	12:20- 13:40	13:40-15:40 5 rooms	15:40- 16:00	16:00-18:00 5 rooms
	Welcome by TUT president, Keynote 3	coffee break	K34, K1-5 C1-6 E1-6 D8, F1-5 A1-6	lunch	K6-11 C7-12 E7-12 F6-11 A7-12	coffee break	K12-17 C13-18 E13-18 F12-17 A13-19(18:20)
Sept. 18 (Tue)	9:00-10:00, plenary	10:00- 10:20	10:20-12:20 5 rooms	12:20- 13:40	13:40-15:40 5 rooms	15:40- 16:00	16:00-18:00 3 rooms
	Keynote 1, 5	coffee break	K18-23 C19-24 E19-24 F18-23 D1-6	lunch	K24-29 C25-29, B1 E25,26, J1-4 H1-6 D7, D9-13	coffee break	K30-33 J5-9 L1-6
Sept. 19 (Wed)	9:00-10:00, plenary	10:00- 10:20	10:20-12:20 5 rooms	12:20- 13:40	13:40-15:40 5 rooms	15:40- 16:00	16:00-18:00 4 rooms
	Keynote 4, 2	coffee break	G1-6 B2-7 I1-6 H7-12 L7-12	lunch	G7-12 B8-13 I7-13(16:00) H13-18 L13-18	coffee break	G13-16 B14-19 H19-21 L19-22

A: rolling, 19
 B: extrusion and drawing, 19
 C: forging, 29
 D: shearing, 13
 E: bending, 26
 F: sheet metal forming, 23
 G: hot stamping, 16
 H: incremental forming, 21
 I: joining, 13
 J: micro forming, 9
 K: materials, 34
 L: modelling, 22

Keynote: 30 min, general: 20 min. including discussion

September 16 (Sun), 18:00-20:00: Welcome party in evening

September 18 (Tue), 19:00-21:30: Banquet in evening

September 19 (Wed), 18:30-20:30: Bowling in evening

Category number	Paper number	Authors	Title
Keynote 1		Pierre-Olivier Bouchard, Victor Trejo Navas, Modesar Shakoor, Thilo Morgeneyer, Ante Buljac, Lukas Helfen, François Hild, Marc Bernacki	Recent advances in finite element modelling of ductile fracture at mesoscale
Keynote 2		Hiroshi Utsunomiya, Tsubasa Nakagawa, Ryo Matsumoto	Mechanism of oxide scale to decrease friction in hot steel rolling
Keynote 3		Zhutao Shao, Jianguo Lin, Mani Ganapathy, Trevor Dean	Experimental and modelling techniques for hot stamping applications
Keynote 4		Jianjun Li, Liang Li, Min Wan, Haiping Yu, Lin Liu	Innovation applications of electromagnetic forming and its fundamental problems
Keynote 5		Kiichiro Kawamoto, Hiroyuki Ando, Ken Yamamichi	Application of servo presses to metal forming processes
A01	059	Fei Peng, Xingli Gu, Yuan Wang, Yunbo Xu, Yongmei Yu	Influence of coiling temperature on mechanical properties in hot rolling C-Mn-Si-Al steel
A02	387	Nobuki Yukawa, Eiji Abe, Shohei Fujiwara	Thermal properties of oxide scale on surface of work roll in hot rolling mill
A03	152	Joonas Ilmola, Aarne Pohjonen, Oskari Seppala, Olli Leinonen, Jari Larkiola, Juha Jokisaari, Eero Putaansuu, Pasi Lehtikangas	Coupled multiscale and multiphysical analysis of hot steel strip mill and microstructure formation during water cooling
A04	162	Lin Hua, Jiadong Deng, Dongsheng Qian, Zhe Chen, Jun Shao	Effects of rolling curve on recrystallization evolution during hot radial-axial ring rolling of super lager alloy steel ring
A05	240	Il Yeong Oh, Tae Woo Hwang, Young Yoon Woo, Hye Jeong Yun, Young Hoon Moon	Analysis of defects in L-section profile ring rolling
A06	250	Tomohiro Uchibori, Ryo Matsumoto, Hiroshi Utsunomiya	Peripheral speed of steel ring during hot ring rolling
A07	278	Xuechao Li, Lianggang Guo, Lei Liang, Wenrong Yang	Motion control of guide rolls in intelligent simulation for profiled ring rolling process
A08	279	Lei Liang, Lianggang Guo, Xuechao Li, Wenrong Yang	Intelligent simulation for real-time force-controlled radial-axial rolling process of supersized aluminium alloy rings
A09	288	Filippo Avellino, Luigi Langellotto, Mauro Bogliani, Alberto G. Lainati, Francesco Toschi	Online control system for EVO 2+4roll bar reducing and sizing mill of Primetals Technologies
A10	386	Umut Hanoglu, Božidar Šarler	Rolling simulation system for non-symmetric groove types
A11	291	Denis Pustovoytov, Alexander Pesin, Olesya Biryukova	Finite element analysis of strain gradients in aluminium alloy sheets processed by asymmetric rolling
A12	324	Alexander Pesin, Denis Pustovoytov	Novel technique for physical simulation of asymmetric rolling
A13	362	Gaku Torikai, Yoshinori Yoshida, Mineo Asano, Akio Niikura	Visualization of metal flow and adhering of aluminum alloy in three-layer clad rolling
A14	048	Siri Marthe Arbo, Tina Bergh, Harald Solhaug, Ida Westermann, Bjørn Holmedal	Influence of thermomechanical processing sequence on properties of AA6082-IF steel cold roll bonded composite sheet
A15	330	Masakazu Kobayashi, Tomoya Aoba, Hiromi Miura	Development of internal inhomogeneous plastic strain during cold rolling of Al-Mg alloys
A16	380	Junling Li, Baoyu Wang, Jianguo Lin, Shuang Fang, Shuyun Wang, Chuanbao Zhu	Investigation on evolution of the alpha phase during cross wedge rolling of TC6 blade perform
A17	140	T. Komischke, P. Hora, G. Domani, M. Plamondon, R. Kaufmann	Prediction of crack induced failure phenomena in rolling operations
A18	087	Alexander Nam, Uwe Prüfert, Maciej Pietrzyk, Rudolf Kawalla	Coil model for magnesium alloy strips and its heat transfer analysis
A19	108	Claudia Kawalla, Wiebke Berkel, Rudolf Kawalla, Michael Höck, Mariusz Ligarski	Material flow cost accounting analysis of twin-roll casting magnesium strips
B01	039	Soeren Mueller, Vidal Sanabria	Influence of choked angle of bearing channel on profile grain structure during multi-hole extrusion of aluminum alloy
B02	147	Ryo Nagashima, Kazunari Yoshida	Development of shaped copper magnet wire for hybrid motor by drawing
B03	179	Sukunthakan Ngernbamrung, Yudai Suzuki, Norio Taketani, Kazuki Dohda	Investigation of surface cracking of hot-extruded AA7075 billet
B04	008	Xin Xue, Gabriela Vincze, António B. Pereira, Juan Liao, Jianyi Pan	Role of die structures on metal flow balance in multi-output porthole extrusion of thin-walled profile
B05	238	Michele Crosio, David Hora, Christoph Becker, Pavel Hora	Realistic representation and investigation of charge weld evolution during direct porthole die extrusion processes through FE-analysis
B06	114	Yohei Abe, Kai Sugiura, Takahiro Yamashita, Ken-ichiro Mori	Forward extrusion of aluminium alloy billet using oil containing fine ceramic particles
B07	381	Shumei Lou, Yongxiao Wang, Shuai Lu, Chunjian Su	Die structure optimization for hollow aluminum profile
B08	242	Monika Mitkaa, Maciej Gawlik, Mariusz Bigaj, Wojciech Szymanski, Wojciech Z. Misiolek	Continuous rotary extrusion of AZ81 magnesium alloy
B09	258	Nijenthan Rajendran, Monika Mitka, Marzena Lech-Grega, Wojciech Z. Misiolek	Effect of tool geometry on the velocity and strain rate fields in continuous rotary extrusion of magnesium AZ91 alloy
B10	013	Michael Zahner, Marion Merklein	Analysis of combined extrusion micro coining process to manufacture microstructured tappets
B11	304	Dario Baffari, Gianluca Buffa, Davide Campanella, Livan Fratini	Design of continuous Friction Stir Extrusion machines for metal chip recycling: issues and difficulties
B12	053	Farzad Foadian, Adele Carradó, Heinz Günther Brokmeier, Heinz Palkowski	Integrated computational material engineering model development for tube drawing process
B13	001	Yeong-Maw Hwang, Guan-Wei Kuo, Han-Hsuan Liu	High temperature oxidation behavior in dieless drawing of titanium alloy wires

B14	089	Andrij Milenin, Piotr Kustra, Peihua Du, Shusaku Furusawa, Tsuyoshi Furushima	Computer aided design of the laser dieless drawing process of tubes from magnesium alloy with take into account ductility of the material
B15	161	Matěj Lepš, Eliška Janouchová, Aleš Jäger, Jiří Němeček, Andrij Milenin	Optimization of production process of Mg tubes produced with laser dieless drawing method and related microstructural analysis
B16	233	Peter Bella, Roman Durcik, Martin Ridzon, Ludovit Parilak	Numerical simulation of cold drawing of steel tubes with straight internal rifling
B17	234	Pavol Beraxa, Ľudovít Parilák	Coating of tools used for production of steel seamless reducers
B18	143	Jeong Hun Kim, Byung Min Kim	Numerical analysis of twisted profile drawing process using rotating die
B19	309	Vladimir Stefanov Hristov, Kazunari Yoshida	Effects of chemical composition on drawability and mechanical properties of magnesium alloy wires
C01	011	Ryo Matsumoto, Yosuke Akiyama, Hiroaki Deguchi, Hiroshi Utsunomiya	Influence of uneven interface between steel and oxide scale on deformation behavior of oxide scale in hot ring compression
C02	328	Takayuki Yamada, Eiji Abe, Chihiro Osawa, Nobuki Yukawa*	Prediction on microstructure and mechanical properties of hot forged Ni-based super alloy by optimization using genetic algorithms
C03	166	Bing Chuen Hu, Yao Jen Chang, An Chou Yeh, Yen Ju Chen	Evolution of high temperature yield strength of AlCoCrFeNiTi high entropy alloys
C04	017	Zhanli Guo, Patrice Lasne, Nigel Saunders, Jean-Philippe Schillé	Introduction of materials modelling into metal forming simulation
C05	065	Baohui Tian, Siegfried Kleber, Silvia Schneller, Peter Markiewicz	Influencing factors of global and local deformation in hot compression
C06	149	Wei Feng, Ling Mao, Mengjuan Zhou	Effect of relief-hole diameter on microstructure evolution of 20CrMnTiH steel during hot upsetting
C07	158	Zbigniew Gronostajski, Marek Hawryluk, Paweł Widomski, Sławomir Polak, Jacek Ziemba, Maciej Zwierzchowski	Influence of application of GN+Cr/CrN hybrid layer on durability improvement of die inserts used in hot forging process of wheel forging
C08	326	Youngseon Lee, Eunwoo Yoon, Taedoo Nho, Younghoon Moon	Microstructure control of ferrous driven part fabricated by warm precision forging
C09	317	Anna Dziubińska, Krzysztof Majerski, Ewa Siemionek	Effect of forging temperature on the microstructure and properties of REX 734 implantable stainless steel
C10	318	Anna Dziubińska, Monika Ostapiuk, Ewa Siemionek	Corrosion resistance of Mg4AlZn alloy aircraft brackets produced by new forging methods
C11	012	Shiva Shankar Mangalore Babu, Stuart Berry, Michael Ward, Michal Krzyzanowski	Numerical investigation of key stamping process parameters influencing tool life and wear
C12	016	Christoph Seyboldt, Mathias Liewald	Hybrid thixoforming – A new process to produce hybrid components
C13	137	Ryosuke Tasaki, Hideto Seno, Kazuhiko Terashima	Process design and control of greensand mold press casting using estimation of metal filling behavior
C14	218	Jun Ni, Chun Ping Cao, Yu Li	Effect of tool temperature deviations on the stress distribution of hot die forging tool for gear blanks
C15	033	Chunping Cao, Meng Li, Yu Li; Yu Sun	Intelligent fault diagnosis of hot die forging press based on binary decision diagram and fault tree analysis
C16	041	Dennis Freiburg, Dirk Biermann	Simulation-based tool development for structuring of surfaces for sheet bulk metal forming tools
C17	367	Zhigang Wang, Tatsuhiro Suzuki	Friction law in dry metal forming of materials with work hardening
C18	020	Chanchin Wang, Hengkeong Kam, Xin Wang	Determination of shrink fitting ratio to improve fatigue life of 2-layer compound forging die by considering elasto-plastic deformation of outer ring
C19	186	Nuwan Karunathilaka, Naoya Tada, Takeshi Uemori, Ryota Hanamitsu, Masahiro Kawano	Effect of contact pressure applied on tool surface during cold forging on fatigue life of tool steel
C20	170	Hideaki Aoki, Kunio Hayakawa, Naoyuki Suda	Numerical analysis on effect of surface asperity of piston skirt on lubrication performance
C21	025	Wuhao Zhuang, Lin Hua, Xinghui Han	Influences of key forging parameters on gear-tooth deviation of cold forged spur bevel gear
C22	056	André Weiß, Mathias Liewald, Alexander Weiß, Nadja Missal	Manufacture of face gearing – a new production method by means of determined material pre-distribution
C23	021	Sergey Stebunov, Andrey Vlasov, Nikolai Biba	Prediction of fracture in cold forging with modified Cockcroft-Latham criterion
C24	212	Gregory Gerstein, Arkadii Briukhanov, Florian Gutknecht, Natalia Volchok, Till Clausmeyer, Florian	Evaluation of micro-damage by acoustic methods
C25	273	Xian Zheng Lu, Luen Chow Chan	X-ray CT assisted damage identification in warm forging
C26	355	Soo-Young Kim, Akifumi Ebina, Aska Sano, Satoshi Kubota	Monitoring of process and tool status in forging process by using bolt type piezo-sensor
C27	203	Tomoyoshi Maeno, Katsuya Hirayama, Ken-ichiro Mori, Hiroki Homma	Prevention of seizure in ejection of compact by control of internal diameter of container
C28	228	Tomoyoshi Maeno, Toshiya Taniguchi, Ken-ichiro Mori	Improvement of product strength of bonded magnets by extrusion with counter pressure
C29	239	Taewoo Hwang, Sangwook Han, Youngyun Woo, Ilyeong Oh, Younghoon Moon	Fabrication of fine wires using direct laser melting process
D01	046	Joachim Stanke, Andreas Feuerhack, Daniel Trauth, Patrick Mattfeld, Fritz Klocke	A predictive model for die roll height in fine blanking using machine learning methods

D02	126	Daniel Trauth, Joachim Stanke, Andreas Feuerhack, Thomas Bergs, Patrick Mattfeld, Fritz Klocke	A characterization of quality of sheared edge in fine blanking using edge-computing approach
D03	002	Kohzoh Katoh, Kazuyoshi Kondo	Control of rollover of sheared edge in punching of high strength steel sheets
D04	107	Ömer Necati Cora, Muammer Koç	Wear resistance evaluation of hard-coatings for sheet blanking die
D05	115	Yohei Abe, Ryuji Yonekawa, Kyouhei Sedoguchi, Ken-ichiro Mori	Shearing of ultra-high strength steel sheets with step punch
D06	116	Yohei Abe, Yuya Fujisawa, Yuusuke Murai, Ken-ichiro Mori,	Thickening process of concave edge for increasing stiffness and fatigue strength of ultra-high strength steel sheets
D07	119	Zamzuri Hamedon, Yohei Abe, Ken-Ichiro Mori, Naoya Nakagawa	Thickened holes edge including compressed rollover for improving tensile fatigue strength of thick sheet
D08	104	Zhongwen Xing, Lixia Chen, Chengxi Lei, Tingjun Cai, Haiping Yu	Simulated analysis and experimental investigation on edge qualities of high strength steels hot blanking parts
D09	262	Ken Mita, Jun Hu, Tetsuhide Shimizu, Ming Yang	Shearing characteristics in ultrasonic vibration-assisted piercing of fine-grained stainless steel foils
D10	214	Kenji Hirota, Yudai Watanabe, Keisuke Kuriya, Yorifumi Mori	Improvement of geometric accuracy in progressive slot piercing with small pitch
D11	343	Chikako Hiromi, Shigeru Tsuchida, Futoshi Kozato, Hiroko Mikado, Shingo Kawamura, Kazuhiko Kita, Takeshi Yoneyama	Shearing process of copper alloy wire for metal zipper
D12	163	Yudai Watanabe, Kenji Hirota	Investigation of shear droop formation around convex portions of blanked components
D13	195	Masahiro Sasada, Syuu Katou	Effect of use of protrusion punch on length of burnished surface in piercing after half punching
E01	072	Stefan Konzack, Ranko Radonjic, Mathias Liewald, Taylan Altan	Prediction and reduction of springback in 3D hat shape forming of AHSS
E02	253	Weerapong Julsri, Surasak Suranuntchai, Vitoon Uthaisangsuk	Finite element based analysis of two-stage forming for advanced high strength steel part
E03	311	Antti Kaijalainen, Vili Kesti, Lars Troive, Anna-Maija Arola, Tommi Liimatainen, Mikko Hemmilä, Jukka Kömi, David Porter	Superior bendability of direct-quenched 960 MPa strip steels
E04	078	Baowei Ma, Dean Meng, Xi Gu, Xu Ma, Dawei Zhang, Qi Zhang	Integration process of stamping and welding for DP600 advanced high strength steel sheets
E05	014	Stefan Köhler, Christoph Rohnert, Peter Groche	Extension of geometric limits in drawing of stringer sheets
E06	331	Yong Liu, Liang Wang, Bin Zhu, YilinWang, Yisheng Zhang	Identification of two aluminum alloys and springback behaviors in cold bending
E07	342	Takayuki Muranaka, Yusuke Fujita, Masaaki Otsu, Osamu Haraguchi	Development of rubber-assisted stretch bending method for improving shape accuracy
E08	269	Zhenming Yue, Xingrong Chu, Jun Gao	Influence of ductile damage on springback prediction of aluminum alloy sheet under changing loading paths
E09	173	Xuexi Cui, Min Wan, Xiangdong Wu, Wenping Wang, Anlin Long	Electromagnetic superposed forming of pre-stressed aluminum alloy sheet
E10	063	Yong Sun, Feijun Qu, Ziliu Xiong, Shichao Ding	Numerical study on springback prediction of aged steel based on quasi-static strain-hardening material model
E11	064	Naotaka Nakamura, Ken-ichiro Mori, Fumie Abe, Yohei Abe	Bending of sheet metals using plastic tools made with 3D printer
E12	040	Matthias Moneke, Peter Groche	End flare of profiles with multiple bending zones
E13	169	Sang-kyo Lee, Jong-sup. Lee, Jung-han Song, Ji-young Park, Seogou Choi, Wooram Noh, Geun-ho. Kim	Fracture simulation of cold roll forming process for aluminum 7075-T6 automotive bumper beam using GISSMO damage model
E14	172	Zhaoxuan Hou, Min Wan, Xiangdong Wu, Xiaomeng Xu	Roll forming of aluminum alloy profile with hat-shaped section
E15	241	Albert Sedlmaier, Thomas Dietl	3D roll forming center for automotive applications
E16	244	Youngyun Woo, Pilgyu Kang, Ilyeong Oh, Younghoon Moon	Flexible roll forming of double layered blank
E17	274	Jinn-Jong Sheu, Chan-Fu Liang, Cheng-Hsien Yu, Wei-Chung Hsu, Pin-Kun Lee	Flexible roll forming of U-section product with curved bending profile using advanced high strength steel
E18	301	Kwun Sing Tsang, William Ion, Paul Blackwell, Martin English	Industrial validation of strain in cold roll forming of UHSS
E19	175	Jong-sup Lee, Sun-Yong Choi, Sang-kyo Lee, Jung-han Song, Seogou Choi, Wooram Noh, Geun-ho Kim	Roll forming process of automotive seat rail with 980 DP steel using Yoshida-Uemori kinematic hardening model
E20	092	Christopher Heftrich, Rainer Steinheimer, Bernd Engel	Rotary-draw-bending using tools with reduced geometries
E21	270	Xiaohong Sun, Chunmei Liu, Yuli Liu, Heng Li	Influence of mandrel parameters on cross-sectional deformation of H96 double-ridged rectangular tube with ridge groove fillers in H-typed rotary draw bending
E22	285	Chunmei Liu, Xiaohong Sun, Yuli Liu	Effect of inner ridge groove filler on deformation of double-ridged rectangular tube in E-typed rotary draw bending
E23	211	Shohei Kajikawa, Guanghui Wang, Takashi Kuboki, Masato Watanabe, Akinori Tsuchiya	Prevention of defects by optimizing mandrel position and shape in rotary draw bending of copper tube with thin wall

E24	167	Xunzhong Guo, Hao Xiong	Numerical simulation and experimental study on mechanism and characteristics of tube free-bending forming process
E25	031	Markus Grüber, Gerhard Hirt	Investigation of correlation between material properties, process parameters and residual stresses in roller levelling
E26	268	Ye Lin, Hong Bai, Jianping Lin, Manxiang Wang, Hongzhou Lu, Junying Min	A lightweight method of thin-walled beams based on cross-sectional characteristic
F01	219	Minsu Wi, Jae Hyun Choi, Frédéric Barlat	Prediction of plastic flow localization with shell element in thick AHSS sheets
F02	135	Takashi Matsuno, Hiroto Shoji, Mitsuru Ohata	Fracture-strain measurement of steel sheets under high hydrostatic pressure
F03	144	Minoru Yamashita, Makoto Nikawa, Takayoshi Kuroda	Effect of strain-rate on forming limit in biaxial stretching of aluminum sheet
F04	300	Ludovic Vitu, Nicolas Laforge, Pierrick Malécot, Nathalie Boudeau, Marc Milesi, Stephan Manov	Flange bulging test of zinc alloy: comparison of analyses with analytical models and with stereo-correlation technique
F05	188	Xiangwei Kong, Jiancong Zhang, Xuqing Li, Zhibo Jin, Hai Zhong, Yu Zhan, Fengjuan Han	Experimental and finite element optimization analysis on hydroforming process of rupture disc
F06	204	Tatsunori Ozawa, Takashi Kuboki, Shohei Kajikawa, Akira Yamauchi, Akira Gunji, Katsuyuki Onishi	Fabrication of ring groove on inner surface of cylindrical blank by ironing from outer surface
F07	323	Xin Lu, Hong Jin	Combined process of hydroforming and electro hydraulic precision reshaping for aluminium alloy
F08	125	Ankit Kumar Pandey, Bhushan Shivaji Walunj, Prashant P. Date	Simulation based approach for light weighting of transmission components using tube hydroforming
F09	084	Bernd-Arno Behrens, Deniz Yilkiran, Simon Schöler, Fahrettin Özkaya, Sven Hübner, Kai Möhwald	Wear investigation of selective α -Fe ₂ O ₃ oxide layers generated on surfaces for dry sheet metal forming
F10	141	Yusuke Okude, Yasuyosh Saito, Taku Iwaoka	Forming limit diagram with anisotropy considering of Ti-6Al-4V sheets and prediction of ductile fracture by experiment and FEA
F11	028	Kanhu Charan Nayak, Prashant P. Date	Manufacturing of light automobile engine piston head using sheet metal
F12	220	Pascal Fischer, Jörg Heingärtner, Yasar Renkci, Pavel Hora	Experiences with inline feedback control and data acquisition in deep drawing
F13	237	Zhi Gang Wang, Wen Zheng Dong, Hiroyasu Yato	A new forming method of flange on a drawn cup by plate forging
F14	261	Wenzheng Dong, Yantao Li, Qiquan Lin, Zhigang Wang, Zhen Huang	Theoretical and experimental investigation on deformation modes in cylindrical cup drawing with central pre-hole
F15	353	Tengzi Ma, Yuji Segawa, Yuta Miyazaki, Yasuo Marumo, Yasuhiro Imamura, Tomohiro Nonaka, Yutaka Sakata	Effects of periodic waveform wrinkles on ultrasonic reflection characteristics in press forming
F16	023	Jürgen Herrmann, Marion Merklein	Improvement of deep drawability of ultra-fine grained 6000 series aluminum alloy by tailored heat treatment
F17	359	Amir Atrian, Hamed Panahi	Experimental and finite element investigation on wrinkling behaviour in deep drawing process of Al3105/Polypropylene/Steel304 sandwich sheets
F18	049	Song Yang, Michael Mcphillimy, Taufik Bin Mohamed Supri, Yi Qin	Influences of process and material parameters on quality of small-sized thin sheet-metal parts drawn with multipoint tooling
F19	009	Youliang Yang, Lihua Zhan	Forming characteristics of AA2219 integrally-stiffened plate subjected to creep age forming
F20	106	Frieder Zimmermann, Alexander Brosius, Ralf-Eckhard Beyer, Jens Standfuß, Axel Jahn, David Banke	Creep forming of very thin AlMgSc sheets for aeronautical applications
F21	256	Yong Li, Zhusheng Shi, Yo-Lun Yang, Jianguo Lin, Rajab Said	Experimental and numerical study of creep age forming of AA2050 plates with sparse multi-point flexible forming tool
F22	229	Camille Durand, Régis Bigot, Cyrille Baudouin	Contribution to characterization of metal forming machines: application to screw presses
F23	120	Chikara Murata, Yuichi Hashimoto, Hiroki Sunagawa, Kazuhiro Ichikawa	Visualized press working and new feedback control for servo press
G01	180	Akira Yanagida, Tomonori Mukai, Kenji Matsumoto	Adhesion behavior of aluminum-coated 22MnB5 steel in hot flat drawing test under dry condition with coated tools
G02	095	Mohsen Loh-Mousavi, Mehdi AhmdaiRad, Tomoyoshi Maeno, Denis J. Politis, LiLiang Wang	Coupled thermal-electrical finite element analysis of electrical resistance heating in hot stamping of ultra-high strength steel tubes
G03	334	Bin Zhu, Jia Zhu, Zhoujie Zhu, Yilin Wang, Yisheng Zhang	Effect of rapid heating process in hot stamping on compact strip production hot rolled plate
G04	132	Illia Hordych, Konrad Bild, Viacheslav Boiarkin, Dmytro Rodman, Florian Nürnberger	Phase transformations in a boron-alloyed steel at high heating rates
G05	030	Yuki Nakagawa, Ken-ichiro Mori, Satoru Yashima, Tomoya Kaido	Springback behaviour and quenchability in hot stamping of thick sheets
G06	332	Zijian Wang, Fei Xue, Bin Zhu, Yilin Wang, Yisheng Zhang	Constitutive and fracture models of hot stamped parts with multiphase using digital image correlate technology
G07	333	Kai Wang, Bin Zhu, Liang Wang, Yilin Wang, Yisheng Zhang	Tailored properties of hot stamping steel by resistance heating with local temperature control

G08	153	Bernd-Arno Behrens, Sven Hübner, Alexander Chugreev, Florian Bohne, Andreas Seel, Masood Jalanesh, Kai Wölki	Investigation of masking concepts for influencing the austenitization process during press hardening
G09	382	Yanhong Mu, Baoyu Wang, Jing Zhou, Enrico Simonetto, Andrea Ghiotti, Stefania Bruschi	Laboratory trials and design of industrial application of hot stamping of 22MnB5 tailored components by partition heating
G10	029	Yuki Nakagawa, Ken-ichiro Mori, Tomoyoshi Maeno, Yoshitaka Nakao	Reduction in holding time at bottom dead centre in hot stamping by water and die quenching
G11	037	Yasutaka Suzuki, Ken-ichiro Mori, Tomoyoshi Maeno, Kazuki Sakakibara, Yohei Abe	Improvement of formability using partial cooling during transfer in hot stamping of ultra-high strength steel parts
G12	047	Xiaochuan Liu, Omer El Fakir, Mohammad M. Gharbi, LiLiang Wang	Effect of tool coating on interfacial heat transfer coefficient in hot stamping of AA7075 aluminium alloys
G13	100	Yankang Tian, Yihui Zhao, Daniel Melville, Yi Qin	Numerical study on nozzle-field cooling of heated aluminium blanks for hot-stamping
G14	128	Cunsheng Zhang, Fangjie Xie, Ying Yang, Yubao Wang	Identification of modified Swift constitutive model and its application in predicting FLDs of AA5083 at elevated temperatures
G15	178	Tomoyoshi Maeno, Masayuki Tomobe, Ken-ichiro Mori, Yuto Ikeda	Hot stamping of titanium alloy sheets using partial contact heating
G16	232	Zhiqiang Liu, Xiaosong Wang, Xueyan Jiao, Yong Wu, Gang Liu	Prediction of microstructure evolution during hot gas forming of Ti2AlNb-based alloy tubular component with square cross-section
H01	378	Denis Daniel Störkle, Dennis Möllensiep, Lars Thyssen, Bernd Kuhlenkötter	Geometry-dependent parameterization of local support in robot-based incremental sheet forming
H02	160	Shigekazu Tanaka	Incremental sheet metal formed square-cup obtained through multisteped process
H03	183	Masaaki Otsu, Shun-ya Nagai, Takuya Miura, Masato Okada, Hidenori Yoshimura, Ryo Matsumoto, Takayuki Muranaka	Forming accuracy improvement by double-side incremental forming
H04	185	Hiroki Ichihara, Akio Sekiguchi	Development of elastomer-based incremental sheet forming method for curved products
H05	088	André Leonhardt, Gerrit Kurz, José Victoria-Hernández, Verena Kräusel, Dirk Landgrebe, Dietmar Letzig	Experimental study on incremental sheet forming of magnesium alloy AZ31 with hot air heating
H06	026	Yoichi Takahashi, Shigefumi Kihara, Takuo Nagamachi, Kozi Higaki	Effects of neck length on occurrence of cracking in tube spinning
H07	127	Yoshihide Imamura, Ken Ikawa, Kojiro Motoyama, Hayato Iwasaki, Takeo Hirakawa, Hiroshi Utsunomiya	Deformation characteristics of Ti-6Al-4V plate in mandrel-free hot spinning
H08	007	Jill Miscandlon, Martin Tuffs, Steven T. Halliday, Alastair Conway	Effects of flow forming parameters on dimensional accuracy in Cr-Mo-V steel tubes
H09	034	Manfred Vogel, Michael Lechner	Manufacturing of process adapted tailored blanks by flexible rolling process using aluminum alloy AA6016
H10	043	Satoshi Tokuhiko, Nobuyuki Suzuki, Osamu Takeuchi	Cylinder forming by die-less shear spinning with sheet thickness controlling of its wall
H11	118	Xiang Zeng, Xiaoguang Fan, Hongwei Li, Shuhui Li	Flow forming process of thin-walled tubular parts with cross inner ribs
H12	142	Steve Wilson, Hui Long, Georgy Garter	Non-axisymmetric tube spinning by offset rotation
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