

The 3rd International Conference
on New Forming Technology

ICNFT 2012

Aug. 26-28, 2012

Harbin, China

PRIMARY PROGRAM

(to be confirmed)

<http://dme.hit.edu.cn/3rdicnft>

<http://www.hydro-forming.com/3rdicnft.htm>

PROGRAM SCHEDULE

(to be confirmed)

Aug.26, 2012 (Sunday)	09:00~22:00	REGISTRATION (in Victories Hotel)
	18:30~20:00	RECEPTION in Victories Hotel
Aug.27, 2012 (Monday)	a.m.	OPENING CEREMONY KEYNOTE SPEECH
	p.m.	PRESENTATION in two concurrent sessions Session A: NEW forming technologies Session B: Forming of NEW materials
	evening	BANQUET
Aug.28, 2012 (Tuesday)	a.m.	TECHNICAL TOUR Visiting laboratories of HIT Visiting Harbin Electric Machinery Company Visiting Harbin Boiler Company
	p.m.	CULTURAL TOUR Songhua River Cruise Visiting Tiger Park
	evening	FAREWELL PARTY

CONFERENCE PROGRAM

(to be confirmed)

Monday, August 27		
Opening ceremony (Chairman: S.J.Yuan)		
08:30~08:45	<i>Welcome speech</i>	
08:45~09:00	<i>Take a group photo</i>	
Plenary session (Chairmen: T.A.Dean, Z.R.Wang)		
09:00~09:30	<i>F.Vollertsen(Germany)</i>	to be confirmed
09:30~10:00	<i>R.V Grandhi (USA)</i>	Laser Peening Optimization for Reliable Fatigue Life of Structural Components
10:00~10:20	Coffee break	
10:20~10:50	<i>K. Mori (Japan)</i>	Smart Hot Stamping of Ultra-High Strength Steel Parts
10:50~11:20	<i>A. Staliou & Y. Qin (UK)</i>	EU-FP7/Horizon 2020 and EU Project Case Studies
11:30~13:30	Lunch	
Concurrent session		
13:30~17:30	Session A: NEW forming technologies	
13:30~17:30	Session B: Forming of NEW materials	
17:00~18:00	Poster session	

Monday, August 27

Session A: NEW Forming Technologies

Session Chairman: W. Homberg (to be confirmed)

13:30~13:45 **J.Lin, T.A.Dean (UK)**

Micro-forming Simulation Techniques-Crystal Plasticity FE Modelling

13:45~14:00 **Ken-ichi Manabe, H. SATO, K. ITO, D.B. Wei, Z.Y Jiang (Japan)**

Development of Micro-Hydronechanical Deep Drawing Apparatus

14:00~14:15 **H.Wielage, F. Vollertsen (Germany)**

Shape accuracy aspects in mechanical and non-mechanical micro drawing with high work piece

14:15~14:30 **G.Behrens, J.Kovac, B. Kohler, F.Vollertsen, H.R. Stock (Germany)**

Drawability of thin magnetron sputtered aluminum-zirconium foils in micro deep drawing

14:30~14:45 **M.Zhan, H.D. Zhai, H. Yang (China)**

Springback Mechanism and Compensation of a Cryogenic Ti Alloy Tube after NC Bending

14:45~15:00 **Lihui LANG, Yongming WANG, Yasu XIE, Xiying YANG (China)**

Investigation into the Pre-bulging Effect during Sheet Hydroforming Process of Aluminum Alloy Box with unequal Height and flat Bottom

15:00~15:15 **J. Q.Wang (China)**

The AP&T press hardening seminar tour

15:15~15:30

Coffee break

Session Chairman: J.Lin (to be confirmed)

15:30~15:45 **H. C. Schmidt, U.Damerow, W. Homberg (Germany)**

Manufacturing of Hybrid Reinforced Structures: Combined Forming of Double Blanks with Carbon Fibre Prepregs

15:45~16:00 **Qiang GAO, Qi ZHANG, Jin CAI (China)**

Thermal stamping experimental research on carbon fiber composite sheet

16:00~16:15 **H. Bruening, E. Mouri, F.Vollertsen, B. Kuhfuss (Germany)**

The influence of pre-forming by rotary swaging of rods on formability of material accumulations generated by laser melting

16:15~16:30 **X.Y.Wang, Q.Zheng, J.S.Jin, L.Deng, J.C.Xia (China)**

FEM Simulation on Stamping-forging Hybrid Forming Process of Car Clutch Hub with Gear Shape

16:30~16:45 **B.Y. Wang, J. Yu, Z.H. Hu (China)**

Methodology on Precision Cross Wedge Rolling of Shafts with Gear Teeth

16:45~17:00 **J.Liu, R. Kawalla (Germany)**

	Asymmetric hot rolling o austenitic steel
17:00~17:15	<i>D.S. Qian, L.Hua, J.D. Deng (China)</i> FE analysis for radial spread behaviour of inner surface in three-roll cross rolling with small-hole and deep-groove ring
17:15~17:30	<i>A. K.Behera, B.Lauwers, J.R.Duflou (Belgium)</i> Advanced Feature Detection Algorithms for Incrementally Formed Sheet Metal Parts
17:00~18:00	<i>Poster session</i>
18:30~20:30	<i>Banquet</i>

Monday, August 27

Session B: Forming of NEW materials

Session Chairman: Y.Q.Guo (to be confirmed)

13:30~13:45	Z. Shi, Y. Wang, J. Lin, T. Dean, D. Balint, M. Stanton, D. Watson (UK) An Investigation, Using Standard Experimental Techniques, to Determine FLCs at Elevated Temperature for Aluminium Alloys
13:45~14:00	G.Fang, Q.J. Liu, L.P.Lei, P.Zeng (China) A Comparison between Stress- and Strain-based Forming Limit Analysis for Aluminum Alloy Sheet 1060
14:00~14:15	J.Noneder, M.Merklein (Germany) Manufacturing of complex high strength components out of high nitrogen steels at an industrial level
14:15~14:30	H.W.Li, H. Yang (China) Prediction of Texture Evolution under Varying Deformation States through Crystal Plasticity Finite Element Method
14:30~14:45	H.Li, K.P. Shi, H. Yang, Y.L. Tian (China) Study on springback of 6061-T4 thin-walled Al-alloy tube upon bending
14:45~15:00	D. Banabic (Romania) The hydraulic bulge test—an instrument for characterization of plastic behaviour and formability of sheet metals
15:00~15:15	H.B.Wang, M. Wan, Y. Yan, B. Qian (China) The mechanical behavior of sheet metal under combined loading
15:15~15:30	Coffee break
	<i>Session Chairman: Lihui Lang (to be confirmed)</i>
15:30~15:45	A. Halouani, Y.M.Li, B.Abbes, Y. Q.Guo (France) Optimization of axisymmetric forging preforms tools using a Pseudo Inverse Approach
15:45~16:00	C. Zhang, X.Q. Li, D.S. Li, C.H.Jin, J.J. Xiao (China) Modelisation and comparison of Norton-Hoff and Arrhenius constitutive laws to predict hot tensile behavior of Ti-6Al-4V alloy
16:00~16:15	J.L.Wang, M.W.Fu (Hong Kong) Flow-induced Defect Formation and Avoidance in Meso-scaled Plastic Deformation
16:15~16:30	J. Zhao, P.P. Zhan, R.Ma, R.X. Zhai (China) Control strategy of over-bending setting round for pipe-end of large pipes by mould press type method
16:30~16:45	Q.L.Zhao, Bjørn HOLMEDAL (Norway)

	The influence of dispersoids on mechanical properties of Al-Mn alloys
16:45~17:00	G.F.Wang, C.G. Wang, H.W.Jiang, S.S.Jiang, K.F.Zhang (China) High Temperature Deformation of Nanocrystalline Ni-Co Alloy with Resistance Heating
17:00~17:15	Y.Z.Zhang, L.J. Huang, L.Geng (China) Hot deformation behavior of in-situ TiBw/Ti6Al4V composite with a novel network reinforcement distribution
17:15~17:30	C.M. Zou, X. Yang, H.W. Wang, Z.J. Wei (China) Effect of Sintering Neck on Compressive Mechanical Properties of Porous Titanium
17:00~18:00	Poster session
18:30~20:30	Banquet

Monday, August 27

Poster Session

(17:00~18:00)

(1)	Shude JI, Jianguang LIU, Zan LV, Yumei YUE, Li FU 3D numerical analysis of material flow behavior and flashes formation of 45 steel in continuous drive friction welding (CDFW)
(2)	Junfeng LIN, Feng LI, Wei LIU, Gang LIU A new approach to investigating the real flow stress in micro-forming
(3)	Lan HU, Shijian YUAN, Gang LIU, Bugang TENG An innovative hydraulic bending method of double-layered tubes
(4)	Siji QIN, Baiqing XIONG, Hong LU, Tingting ZHANG Analysis of Critical Blank-holder Force in Axisymmetric Deep Drawing
(5)	Hong-fei SUN, Xuewen LI, Wenbin Fang, Jie FENG Characterization of powder metallurgy high Nb-containing TiAl-based alloy
(6)	Gaozhan ZHAO, Lin YANG, Fuming LIANG, Hui LI, Jun ZHAO, Qiang ZHAO, Zurong LI, Yun FU Comparison of microstructure evolution and mechanical properties of AZ80 reheated from the as-cast and deformed states
(7)	Q. Pang, Z.Y. Xiu, G.H. Wu, L.T. Jiang, D.L. Sun, Z.L. Hu Compressive property and energy absorption characteristic of 3D open-cell Ni-Cr-Fe alloy foams under quasi-static conditions
(8)	Xiaobo FAN, Zhubin HE, Shijian YUAN Deformation behavior of aluminum alloy 5A06 sheet for rapid gas forming at elevated temperature
(9)	Xiaosong WANG, Shijian YUAN, Peng SONG Deformation on hydroforming of aluminum alloy tube with rectangular sections
(10)	Bao MENG, Min WAN, Yingke ZHOU Development of thermal deep drawing system with vacuum environment for difficult-to-deformation materials
(11)	Lianggang GUO, Keke DONG, Baojun ZHANG, He YANG, Wenda ZHENG Dynamic recrystallization rules in needle piercing extrusion for AISI304 stainless steel pipe
(12)	Ping LI, Xiang ZHANG, Kemin XUE, Xiao LI Effect of equal channel angular pressing and torsion on SiC-particle distribution of SiCp-Al composites
(13)	Huajun WANG, Jianfei LU, Yuzhu SUN, Dexin XU Forming mechanism and deformation characteristics of twin-roll rolling process for cylindrical helical gear
(14)	Haiping YU, Zhidan XU, Hongwei JIANG, Zhixue ZHAO, Chunfeng LI Magnetic pulse joining aluminum alloy-carbon steel tubes

(15)	GuanNan CHU, Shuai YANG, JianXun WANG Mechanics condition of thin-walled tubular component with rib hydroforming
(16)	Jianquan TAO, Yuansheng CHEN, Shaodong HUANG, Feifei PENG, Wenxuan YANG, Meiqi NU, Zhiming ZHANG, Xin JIN Microstructural evolution and mechanical properties of ZK60 magnesium alloy prepared by multi-axial forging during partial remelting
(17)	Jufu JIANG, Ying WANG, Zhiming DU, Shoujing LUO Microstructure and properties of AZ80 alloy semisolid billets fabricated by new SIMA
(18)	Zhenling WANG, Tao ZHANG, Yuebo ZHOU, Zunjie WEI Microstructure of the hypoeutectic Al-Mg alloy solidified at 4GPa high pressure
(19)	Hongfei SUN, Chengjie LI, Wenbin FANG, Yang XIE Microstructures and mechanical properties of pure magnesium bars by high ratio extrusion and annealing treatment
(20)	Kai ZHANG, Xiaoting XIAO, Zhen CHEN, Huadian WEN, Ying CHEN Optimization for hydroforming loading paths of parallel multi-branch tubes based on grey system theory
(21)	Ho Yong Um, Eun Yoo Yoon, Dong Jun Lee, Hyoung Seop Kim Plastic deformation analysis for closed cone torsion of copper
(22)	Feng LI, Junfeng LIN, Xinlong ZHANG, Xiaochong SUI, Wei SHI Research on cold-pressing deformation characteristics of steel-aluminum sheets joining
(23)	Xiangfei SHENG, Qinxiang XIA, Xiuquan CHENG, Lieshu LIN Research on the distribution of residual stress field by shot peening based on random-shot model
(24)	Yu YAN, Qiang LI, Haibo WANG Simulation of flexible roll forming based on different material models
(25)	Yongxiang HU, Kangmei LI, Chenjie QI, Zhenqiang YAO, Ramana V. GRANDHI Size effect on the indentation depth of OFHC copper induced by laser shock processing
(26)	Liping WANG, Wenyong JIANG, Tian CHEN, Yicheng FENG, Sicong ZHAO, Wenxue DONG, Hongyu ZHOU, Yan ZHU Spheroidal microstructure formation and thixoforming of AM60B magnesium alloy prepared by the SIMA process
(27)	Haiyan YU, Zhe SUN Springback behavior of transformation-induced plasticity steel sheet during cyclic bending-unbending process
(28)	Xiufeng WANG, Qing PENG, Xiaoli GUO, Guangnan CHEN Springback correction of V-part by laser bending
(29)	Han XIAO, Shihong, ZHANG, Rong ZHOU, Dehong LU Springback of AZ31 magnesium alloy profile in warm bending process
(30)	Xinbing YUN, Wei YOU, Ying ZHAO, Bing LI, Baoyun SONG, Zhixin FAN Study on continuous extrusion and rolling forming velocity of copper strip
(31)	Huadian WEN, Xiaoting XIAO, Kai ZHANG, Qiaoyu CHEN Study on the prediction model of branches height for parallel multi-branch tube hydro-forming
(32)	Sen CONG, Tie GANG Study on ultrasonic thickness measurement for aluminum alloy curved surface parts based on

	spectral analysis
(33)	Shaosong JIANG, Zhen LU, Guofeng WANG, Kaifeng ZHANG Superplastic forming Ti-6Al-4V titanium alloy cylinder with the near uniform thickness distribution
(34)	Xiaoqiang LI, Nan SONG, Guiqiang GUO The experimental measurement and theoretical prediction of Forming Limit Curve (FLC) for aluminum alloy 2B06
(35)	Jie ZHAO, Arthur L K YIP, Yi QIN, Akhtar RAZALI, Zicong FEI The machine and tool development for the forming of polymeric tubular micro-components
(36)	Dayu SHU, Qiang CHEN, Gaozhan ZHAO, Zude ZHAO, Changjian SUN, Chuankai HU, Feng KANG Vacuum pressurizing casting technology for large-scale complicated and thin-wall al-alloy components

Please Note:

- (1) *All the posters will be prepared by the conference according to the papers submitted.*
- (2) *The posters are listed by the paper titles.*

GUIDELINES FOR PRESENTATION

Time Allowance

Keynote presentations **30** minutes (no discussion)

Other oral presentations **15** minutes (including 2~3 minutes for discussion)

Projection Facilities

Large screen data projection facilities are available in the conference room.

Overhead transparency projectors will also be prepared if special requests arise.

Supported Hardware

Only CD/DVD discs and USB memory sticks are supported by the conference.

Supported Software

Each conference room will be equipped with a PC running Windows XP with Power Point version 2003 (Microsoft Office XP) installed. This is compatible with earlier versions of Power Point.

Please do not bring any other presentation formats.

Guidelines for Using Computer Generated Presentations

One computer will be available in each conference room. Speakers will not be allowed to use their own notebook PC, in order to make the presentations going smoothly.

Speakers are also required to store and preview their Power Point Presentation when registering or after the reception on **Aug.26, 2012**, to ensure compatibility of your presentation with the provided hardware. We will prepare a notebook PC at the Reception Desk. Please make sure all the files, including any animations have been stored in the computer. All the files will be deleted after the presentation, and will not be delivered to others.

Speaker's aids

One workgroup will be available for assistance in each session during conference time. Please ask them for help if you have any questions or requests.