

**International Workshop on Tube Hydroforming
Proceedings of the TUBEHYDRO 2003**

Held in Kariyashi Sangyo Shinko Center,

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Chairman :

K. Manabe

Organizer

**The Tubefforming Committee
(The Japan Society for Technology of Plasticity)
The Sheet Forming Committee
(The Korean Society for Technology of Plasticity)**

Program of "TUBEHYDRO 2003"

Date: September 16 (Tue) , 2003

			Chairman	Grouping	Title	Author(s)	
0	9:20	9:30	Yong-Hwan Kim (KOREA, Chungnam National University)		Opening Address	Ken-ichi Manabe	
1	9:30	9:50		Condition of forming	Improvement of Formability in Hydroforming Process of Sheet Metal Pairs by Multi-stage Forming	Dong-Yol Yang Tac-Jeong Kim Soo-Sik Han	P1
2	9:50	10:10		Development of Tube Hydroforming with Intelligent Process Control System	Masamitsu Suetake Ken-ichi Manabe Shunsuke Miyamoto Hiroshi Koyama Tetsuya Yagami Ming Yang	P7	
3	10:10	10:30		Hydroforming of Rectangular-section Structural Components with Relatively Lower Pressure	Shijian Yuan Liu Gang Z. R. Wang	P13	
4	10:30	10:50		A Trial Design Method of Loading Paths by FEM Simulator for Free Hydraulic Bulging	Atsushi Shirayori Sadakatsu Fuchizawa Michiharu Narazaki	P18	
	10:50	11:00	Coffee Break				
5	11:00	11:20	Sadakatsu Fuchizawa (JAPAN, Utsunomiya University)	Forming limit	Analysis of forming limit in tube hydroforming process	Young-Suk Kim Seungyeun Won Junwon Park Seogou Choi	P22
6	11:20	11:40		Tube Bending, an Important Part of the Hydroforming Process Chain-Requirements, Limits and Possibilities	Thomas Flehmig Martin Kibben	P27	
7	11:40	12:00		Numerical Prediction of Bursting Failure in Bulge Forming of a Seamed Tube Using FEM	J. Kim B.S. Kang	P36	
	12:00	13:00	Lunch				
8	13:00	13:30	Makoto Murata (JAPAN, Electro-Communication University)	Keynote(30min)	The State of the Art in Tube Hydroforming Technology in Japan	Hideo Abe	P42
9	13:30	13:50		Deformation behavior	A Study on the Deformation Behaviour of the Brake Tube-End for Automobiles	Kyu-Taek Han Jung-Sik Park	P54
10	13:50	14:10		Plastic Deformation Behavior of Metal Tubes Subjected to Axial Force and Internal Pressure	Toshihiko Kuwabara Susumu Takahashi	P59	
11	14:10	14:30		Analysis and Design of Hydromechanical Forming Processes for an Automobile Fuel Tank Using FEM	B.S.Kang J.Kim B.M.Son	P65	
	14:30	14:40	Coffee Break				
12	14:40	15:10	Young-Suk Kim (KOREA, Kyungpook National University)	Keynote(30min)	The State of the Art in Tube Hydroforming Technology in Korea: Numerical Analysis and Design of Hydroforming Processes using FEM	Beom-Soo Kang	P71
13	15:10	15:30		Hammering hydroforming	Finite Element Simulation of Hammering Hydroforming of an Automotive Component	Takayuki Hama Motoo Asakawa Hiroshi Fukiharu Akitake Makinouchi	P80
14	15:30	15:50		Finite Element Simulation of Hammering Hydroforming of Tubes	Ken-ichiro Mori A.U.Patwari Seiji Maki	P84	
15	15:50	16:10		Material	The HISTORY Tube with Excellent Tube Hydroformability	Yoshikazu Kawabata Takaaki Toyooka Masanori Nishimori Masatoshi Aratani Yuji Hashimoto Yasue Koyama	P92
16	16:10	16:30		Longitudinal Welding Pressure of Hollow Extruded Thin Tube for the Material of Hydroforming Process	I.T. Jin M. G. Kim K. K. Lee	P97	
	16:30	16:40	Coffee Break				
17	16:40	17:00	Hideo Abe (JAPAN, Kawasaki Steel Techno-Research Corp.)	Forming technique	Process Fusion: Tube Hydroforming and Crushing	Yeong-Maw Hwang	P105
18	17:00	17:20		Bulge Process for Tubes by Forging with a Lost Core	Takahiro Ohashi	P111	
19	17:20	17:40		Numerical Modeling of Tube Hydroforming Process considering Prebending and Preforming Effect	H.Y. Kim H.T. Lim C.H. Seo W.S. Lee	P115	
20	17:40	18:00		Evaluation	Evaluation of the Impact Characteristics of Hydroformed Bumper Rail	Mun-Yong Lee Sung-Man Sohn Chang-Yong Kang Dong-Woo Suh Sang-Yong Lee	P122
	18:30	20:00	Social Party				