

# 2011 Autumn National Meeting of Japan Thermal Spray Society

14-15 November, 2011 (AICHI INDUSTRY & LABOR CENTER, Nagoya, JAPAN)

## Technical Program

Monday 14 November		
9:30-9:50	Opening Remarks	
9:50-10:50	Organization • Structure/Coating property and Evaluation method( I )	
101	Effect of oxidation of Cr <sub>3</sub> C <sub>2</sub> -WC-Ni sprayed cermet on its friction properties	Kazuo Hamashima, Yasunari Ishikawa(ASAHI GLASS Co., Ltd.)
102	Standardization on test method of adhesive strength for sprayed coatings by indentation	Yasuhiro Yamazaki, Shin-ichiro Kuga(Niigata Institute of Technology), Satoshi Sodeoka, Kazuhiro Fujita(Advanced Industrial Science and Technology), Makoto Watanabe, Seiji Kuroda(National Institute for Materials Science)
103	Photocatalytic activity of sol-gel sprayed TiO <sub>2</sub> coatings	Yasunori Tanaka, Ryoichi Kawase(Ariake National College of Technology)
---Break (10:50-11:00)---		
11:00-12:00	Reactive Spray and New Process ( I )	
104	Fabrication of optical alumina coating by suspension plasma spraying	Toshio Takahashi, Motohiro Yamada, Masahiro Fukumoto(Toyohashi University of Technology), Shinobu Ito(OPTCOM CO.,LTD.), Hiroshi Shitomi(Advanced Industrial Science and Technology)
105	Synthesis of the metal oxide film by the frame spraying method from organic organometallic complex powders	Hiroki Akasaka, Yasuhiro Hasebe, Tetsuo Sekiya, Ayumu Toyama (Nagaoka University of Technology), Atsushi Nakamura (Chubu Chelest Co.,LTD), Masahiro Noguchi, Li Yu Li Yu(NIPPON STEEL HARDFACING Co.LTD), Shigeo Ohshiro, Hidetoshi Saito(Nagaoka University of Technology)
106	Fine Alumina Coating by Using Thermal Nanoparticles Spraying	Yusuke Itakura(Osaka Univ.), Satoko Tasaki, Soshu Kirihara(JWRI, Osaka Univ.), Shikou Abukawa, Kazumi Tani(TOCALO Co., Ltd.)
---Lunch (12:00-13:00)---		
13:00-14:00	Special Lecture	
S1	The view of the industry evolution by development of MRJ - Flying into the fu	So Fujie (Mitsubishi Aircraft Corporation)
---Break (14:00-14:10)---		
14:10-15:30	Cold Spray • Warm Spray( I )	
107	Bonding behavior of cold sprayed Cu coating on SUS304 substrate	Huang guo ping, Jon Affi, Ganesan Amirthan, Motohiro Yamada, Masahiro Fukumoto(Toyohashi University of Technology)
108	Properties report of sprayed coating of Copper formed by Cold Spray	Mitsuru Yoshida, Tadashi Osako, Motoyuki Kondo(Shinco Metalicon Co.,Ltd)
109	Observation of particle boundary of solid particle deposition coating	Yusuke Honda, Masahiro Fukumoto, Motohiro Yamada(Toyohashi University of Technology)
110	Effect of Heat Treatment on Mechanical Properties of Cold-Sprayed Copper Deposit	Yusuke Watanabe, Yuji Ichikawa, Isamu Nonaka, Hideo Miura(Tohoku University)
---Break (15:30-15:40)---		
15:40-17:20	Organized Session "The present situation and future prospects of	
	Introduction	Kazuhiro Ogawa(Tohoku University)
O1	Current Status and Future Outlook of the Surface Activated Bonding (SAB)	Tadatomo Suga(Tokyo University)
O2	Solid-state joining of similar- and dissimilar metals by ultra-high-speed oblique collision	Shinji Kumai(Tokyo Institute of Technology)
	Panel discussion	
Tuesday 15 November		
9:30-10:30	Theory and Fundamentals of Spray process /Pre-treatment and Post-	
201	Influence of initial solidification on flattening and solidification behavior	Daichi Mano, Masahiro Fukumoto, Toshiaki Yasui, Motohiro Yamada(Toyohashi University of Technology)
202	Improvement of Surface Hardness of Sprayed Stainless Steel Coating by Plasma Carburizing at Low Temperature	Shinichiro Adachi, Nobuhiro Ueda(Technology Research Institute of Osaka Prefecture)
203	Effect of the Blasting Angle on Blast Processing of a Cylindrical Substrate	Shigetaka Takahashi, Nur Zalikha Binti Khalil, Yuichi Tojo, Toshifumi Kubohori(Kinki University)
---Break (10:30-10:40)---		
10:40-11:40	Spray Materials and Related Materials	
204	Studies of HVOF coatings by (Ti,Mo)(C,N)-Ni	Junya Kitamura, Fumihiro Kasahara, Junya Yamada, Kazuto Sato(Fujimi Incorporated), Lutz-Michael Berger(Fraunhofer Institute Material and Beam Technology)
205	Study on phenomenon of WC-CrC-Ni in HVOF spraying	Junya Yamada, Fumihiro Kasahara, Fumi Yuasa, Kazuto Sato(Fujimi Incorporated)
206	Effect of porosity and particle size of WC-10mass%Co-4Cr powders on mechanical properties of coatings by High Velocity Air Fuel spraying.	Hidenori Miyajima(Graduate School, Shinshu University), Kazuhiko Sakaki, Masami Kato(Shinshu University), Kasuto Satou, Junya Kitamura(Fujimi Incorporated)
---Lunch (11:40-13:00)---		
13:00-14:20	Organization • Structure/Coating Property and Evaluation Method( II )	
207	Assessment of microstructure of self-fluxing alloy remelted with high frequency induction heating.	Ryotaro Kagawa, Atsushi Kataoka, Keiji Sonoya, Masanobu Nakamura, Kazumasa Ishida(University of Yamanashi), Tomoji Osada(Nippon Thermonics)
208	Electrochemical Impedance Behavior of Thermally Sprayed Aluminium-Zinc Alloys in NaCl	Yasuyuki Takatani, Kenichiro togoe, Kazumi tani(TOCALO Co., Ltd.)
209	Fatigue Strength of WC Cermet Sprayed Materials in Na <sub>2</sub> SO <sub>4</sub> solution	Yuzo Kono, Yoshiko Shinhara, Kozo Ohtani, Romgguang Wang(Hiroshima Institute of Technology), Ryouta Ueki(YAMABIKO Co.,Ltd), Mitsuo Kido(Hiroshima Institute of Technology)
210	Copper Deposition Behavior in Al <sub>2</sub> O <sub>3</sub> Sprayed Coating using Electro-Plating	Takeru Shinohara, Kazumi Tani, Yoshio Harada, Yasuyuki Takatani(TOCALO Co., Ltd.)
---Break (14:20-14:30)---		
14:30-15:50	Reactive Spray and New Process ( II )	
211	Reactive Plasma Spraying of Aluminum Nitride Coating and its Properties	Mohammed Shahien, Motohiro Yamada, Toshiaki Yasui, Masahiro Fukumoto(Toyohashi University of Technology)
212	Magnetic Properties and Structure of Nd-Fe Base Magnetic Films fabricated with Supersonic Free-Jet PVD	Hidehito Kobayashi, Atsushi Yumoto, Katsuhisa Nagayama(Shibaura Institute of Technology), Isao Nakamura, Tsutomu Takezawa(Tokyo Metropolitan Industrial Technology Research Institute), Naotake Niwa(Kogakuin University)
213	Formation of magnetic films on Magnesium Alloy Substrate deposited with Supersonic Free-Jet PVD	Atsushi Yumoto, Katsuhisa Nagayama(Shibaura Institute of Technology), Isao Nakamura, Tsutomu Takezawa(Tokyo Metropolitan Industrial Technology Research Institute), Naotake Niwa(Kogakuin University)
214	Mo coating deposition by low power APS equipment using suction type powder feeder	Yasutaka Ando, Masaya Sato(Ashikaga Institute of Technology)
---Break (15:50-16:00)---		
16:00-17:20	Cold Spray • Warm Spray( II )	
215	Study of particle-related parameters of warm spray	Hiroshi Katanoda(Kagoshima Univ.)
216	Particle velocity evaluation of cold sprayed particles using Particle Image Velocimetry (PIV)	Norihiro Mikami, Kazuhiro Ogawa, Gai Xiaohui, Hidemasa Takana, Hideya Nishiyama(Tohoku University), Seiichi Ishii, Satoshi Matsumura(Nac Image Technology Inc.), Masashi Yasuki(Seika Corporation)
217	Numerical estimation of the particle velocity range for deposition and the optimum velocity of cold sprayed particles using smoothed particle	Abreeza Manap, Tomonaga Okabe, Kazuhiro Ogawa(Tohoku Univ.)
218	Effect of feedstock powder on NiAl intermetallic compounds coating by cold spray	Tetsuya Sonoda, Takayuki Kuwashima, Takashi Saito(IwateIndustrial Research Institute), Junichi Yasuoka (Powlex Co.,LTD), Mitsuru Nakamura(Iwate University)
17:20-17:30	Closing Remarks	