Abrasion 2011 - Final program

Sunday, 21st August 2011
Hotel Mercure (Liège)

18h00-22h00: Registration of participants + Walking Dinner (Welcome Reception)

Monday, 22nd August 2011
Salle Académique (Université de Liège)

08h30 – 08h45: Opening and Welcome Address

08h45 – 09h30: Keynote lecture
HSS rolls: from research investigations to the mill (K01)
Massimo PELLIZZARII and Alberto TREMEAA
1Department of Materials Engineering and Industrial Technologies, University of Trento – Italy
2INNSE Cilindri, Brescia – Italy

09h30 – 10h00:
Transformation characteristics of the hardfacing deposits by hard particles core sheathed electrode (T04)
Setsuo ASO1, Hiroyuki IKE2, Nobuo KONISHI3, Suken HOU1, Ken-ichi OHGUCI1 and Yoshinari KOMATSUI
1Department of Materials Science and Engineering, Graduate School of Engineering and Resource Science, Akita University – Japan
2Iwate Industrial Research Institute, Iwate – Japan
3Konishi Foundry Co., Ltd, Iwate – Japan

10h00 – 10h30:
Behavior of Hardness and Retained Austenite during Subcritical Heat Treatment of High Chromium Cast Irons with Molybdenum (T07)
Sudsakorn INTHIDECHI1, Prasomk SRICHAROENCHAI2 and Yasuhiro MATSUBARAA
1Department of Manufacturing Engineering, Faculty of Engineering, Mahasarakham University – Thailand
2Department of Metallurgical Engineering, Faculty of Engineering, Chulalongkron University – Thailand
3Department of Materials Science and Engineering, Kurume National College of Technology – Japan

10h30 – 11h00: Coffee break

11h00 – 11h30:
Wear Resistance Characteristics of High-Cr White Cast Irons of Various Alloying Compositions (T02)
Yung-Ning PAN1, Sheng-Hau WANG1, Kaoru YAMAOTO2, Nobuya SASAGURI2 and Yasuhiro MATSUBARAA
1Department of Mechanical Engineering, National Taiwan University – Taiwan
2Department of Materials Science and Engineering, Kurume National College of Technology, Kurume – Japan
11h30 – 12h00:
Influence of High Temperature Heat Treatment on in situ Transformation of Mo-rich Eutectic Carbides in HSS and Semi-HSS Grades (T16)
Jérôme Tchoufang TCHUINDJANG¹, Mario SINNAEVE², and Jacqueline LECOMTE-BECKERS¹
¹Metallurgy & Materials Science Unit, Aerospace & Mechanics Dpt., University of Liege – Belgium
²Marichal Kétin – Belgium

12h00 – 12h30:
Influence of Cobalt Content on Heat Treatment Behavior and Abrasive Wear Characteristics of Multi-Component White Cast Iron (T05)
Nobuya SASAGURI¹, Yuzo YOKOMIZO², Kaoru YAMAMOTO¹ and Yasuhiro MATSUBARA³
¹Department of Materials Science and Engineering, Kurume National College of Technology – Japan
²KARAWA Steel Works, Karawa – Japan
³Fukuoka Jo Gakuin, Fukuoka – Japan

12h30 – 14h00: Lunch

14h00 – 14h45: Keynote lecture
Tribology, a loss leader for the Choice of wear-resistant Roll Materials (K03)
Adrien MAGNEE¹ and Jean-Claude HERMAN²
¹Physical Metallurgy, University of Liege – Belgium
²C.R.M Group, Liege - Belgium

14h45 – 15h15:
Development of New Type Indefinite Chilled Double Poured Cast Iron (ICDP) Work Roll with Higher Wear Resistance (T10)
Hajime MORIKAWA and Yutaka TSUJIMOTO
Roll Section, Hirakata Plant, Kubota Corp., Ltd., Hirakatashi – Japan

15h15 – 15h45: Coffee break

15h45 – 16h15:
Erosion characteristics of high chromium cast iron at high temperature of 1173K (T12)
Kazumichi SHIMIZU¹, Xinba YAER¹, Hiroya HARA¹ and Masahito TANAKA²
¹Muroran Institute of Technology, Muroran city, Hokkaido – Japan
²Sankyo Alloy Casting Co., Ltd, Tsukuda, Osaka – Japan

16h15 – 16h45:
Effect of Ti, V and Nb carbide on the properties of ICDP cast iron finishing rolls (T17)
Fabienne DELAUNOIS¹, Mario SINNAEVE² and Véronique VITRY¹
¹Service de Métallurgie, Faculté Polytechnique, Université de Mons – Belgium
²Marichal Kétin – Belgium

16h45 – 17h15:
Executive Committee Meeting
Tuesday, 23\textsuperscript{th} August 2011
Salle Académique (Université de Liège)

08h45 – 09h30: Keynote lecture
**Overview: High speed steels for hot rolling mill rolls** (K02)
Mario BOCCALINI Jr.
Institute for Technological Research (IPT) – Brasil

09h30 – 10h00:
**Abrasive Wear Resistance of Hypoeutectic 26 wt% Cr Cast Irons with Molybdenum** (T06)
Attasit CHOOPRAJONG\textsuperscript{1}, Sudsakorn INTHIDECH\textsuperscript{2}, Prasonk SRICTHAROENCHA\textsuperscript{1}, Kaoru YAMAMOTO\textsuperscript{3}, Nobuya SASAGURI\textsuperscript{3} and Yasuhiro MATSUBARA\textsuperscript{3}
\textsuperscript{1}Department of Metallurgical Engineering, Faculty of Engineering, Chulalongkorn University, Bangkok – Thailand
\textsuperscript{2}Corresponding author, Department of Manufacturing Engineering, Faculty of Engineering, Mahasarakham University, Mahasarakham – Thailand
\textsuperscript{3}Board of Trustees, Fukuoka Jo Gakuin, Fukuoka – Japan

10h00 – 10h30:
**Work Roll Surface Degradation in Hot Rolling: on site and laboratory evaluation methods** (T18)
S. FLAMENT\textsuperscript{1}, G. WALMAG\textsuperscript{1}, J. MALBRANCKE\textsuperscript{1}, G. MOREAS\textsuperscript{1} and Mario SINNAEVE\textsuperscript{2}
\textsuperscript{1}CRM, Liège – Belgium
\textsuperscript{2}Marichal Kétin – Belgium

10h30 – 11h00: Coffee break

11h00 – 11h30:
**New wear resistant cast alloys for use at elevated temperatures** (T01)
Gerhard GEVELMANN and Werner THEISEN
Chair of Materials Technology Ruhr, University of Bochum – Germany

11h30 – 12h00:
**Effects of Alloying Element on Compressive and Wear Properties of Multi-component White Cast irons for Steel Rolling Mill Rolls** (T11)
Mitsuo HASHIMOTO
Roll Research and Technology Co., Ltd. Kitakyushu-city – Japan

12h00 – 12h30:
**Damage Mechanics on a Working Roll used on a Roughing Stand of Hot Strip Mill: Tribological Approach** (T15)
C. VERGNE\textsuperscript{1}, O. JOOS\textsuperscript{2}, C. GASPARD\textsuperscript{3}, J. TINOCO\textsuperscript{4}, M. MOUJIB\textsuperscript{1}, C. BOHER\textsuperscript{2} and F. REZAI-ARIA\textsuperscript{2}
\textsuperscript{1}ÅKERS Belgium
\textsuperscript{2}Université de Toulouse – France
\textsuperscript{3}ÅKERS AB – Belgium
\textsuperscript{4}ÅKERS Sweden AB
\textsuperscript{5}ÅKERS France Sedan
12h30 – 14h00: Lunch

14h00 – 14h30:
Influence of Alloying Elements on High Temperature Hardness of $M_7C_3$ Carbide in High Chromium White Iron (T08)
Kaoru YAMAMOTO¹, Nobuya SASAGURI¹ and Yasuhiro MATSUBARA²
¹Department of Materials Science and Engineering, Kurume National College of Technology – Japan
²Fukuoka Jo Gakuin, Fukuoka – Japan

14h30 – 15h00:
Indefinite Chill Roll Material – History and Development (T19)
Tommy NYLEN
EISENWERK SULZAU-WERFEN, R. & E. Weinberger AG - Austria

15h00 – 15h30: Coffee break

15h30 – 16h00:
Microstructure Characterization Trial of High Vanadium Castings for Crushing Machine Parts of Rice Husk (T09)
Takateru UMEDA and Hirunlabh CHATCHAI
Sahaviriya Steel Industries PCL, Bangsaphan, Prachupkirikhan – Thailand

16h00 – 16h30:
Effect of erodent properties on erosive wear behaviour of high chromium cast irons (T14)
Kenta KUSUMOTO¹, Kazumichi SHIMIZU¹, Xinba YAER¹, Hiroya HARA¹ and Masahito TANAKA²
¹Muroran Institute of Technology, Muroran city, Hokkaido – Japan
²Sankyo Alloy Casting Co., Ltd. Tsukuda, Osaka – Japan

16h30 – 16h45: Closing Address

19h00 – 23h00: Conference Dinner

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Wednesday, 24th August 2011

09h00 – 11h00: Post Conference Plant tour
Technical visit of the CRM Group including Lunch