



## **30<sup>th</sup> "JOURNEES SIDERURGIQUES INTERNATIONALES" 18-19 December 2012**

### **FINAL PROGRAMME**

"JSI", the Journées Sidérurgiques Internationales, was introduced in 1980 at the initiative of ATS (Association Technique de la Sidérurgie française) to allow engineers of the steel industry and their equipment or service suppliers to exchange on the last and future processes and techniques.

The presentations will also give short-term and predictable solutions to provide some green steel, performing products and solutions for steel users, in particular for the construction, automotive, mechanics sectors.

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**30<sup>th</sup> “JOURNEES SIDERURGIQUES INTERNATIONALES”  
18 & 19 December 2012**

**FINAL PROGRAMME**

**Tuesday 18 December 2012**

08:45:

Session 1: Sinter and ironmaking	Petit Amphi - ground floor
Session 2: Oxygen steelmaking	Room 262 - 2 <sup>nd</sup> floor
Session 3: Electric arc furnace	Grand Amphi - 1 <sup>st</sup> floor
Session 4: Flat product hot rolling	Room 162 - 1 <sup>st</sup> floor

12:30: *Lunch*

14:20:

Session 5: Blast furnace	Room 162 - 1 <sup>st</sup> floor
Session 6: Continuous casting	Grand Amphi - 1 <sup>st</sup> floor
Session 7: Long product rolling	Room 262 - 2 <sup>nd</sup> floor
Session 8: Coating and finishing line	Petit Amphi - ground floor

17:45: *Plenary session followed by a cocktail*

Grand Amphi - 1<sup>st</sup> floor

**Wednesday 19 December 2012**

08:45:

Session 9: Energy	Grand Amphi - 1 <sup>st</sup> floor
Session 10: Secondary metallurgy and refractory	Petit Amphi - ground floor
Session 11: Product and quality management	Room 162 - 1 <sup>st</sup> floor
Session 12: Pickling and cold rolling	Room 262 - 2 <sup>nd</sup> floor

10:55:

Session 13: Cokemaking	Room 262 - 2 <sup>nd</sup> floor
Session 14: Slab continuous casting	Room 162 - 1 <sup>st</sup> floor
Session 15: Environment and by-products	Petit Amphi - ground floor
Session 16: Cold rolling	Grand Amphi - 1 <sup>st</sup> floor

13:20: *Closing lunch*

*Coffee breaks will take place in both exhibition halls*

For any further information please contact:

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**Tuesday 18 December 2012**

**08:45: Session 1 - Sinter and ironmaking - Petit Amphi - ground floor**

**Chairperson: J.M. STEILER (JMS Consult)**

- 8:50 From ore to steel - Ironmaking processes  
P. SCHMÖLE\* (ThyssenKrupp Steel Europe AG), H.B. LÜNGEN (Steel Institut VDEh), Germany
- 9:10 Hlsarna in the context of alternative ironmaking  
C. ZEILSTRA\*, K. MEIJER, C. TEERHUIS, M. OUWEHAND, J. VAN DER STEL (Tata Steel Europe), The Netherlands
- 9:30 Study of degradation of sinter and method of preventing fines generation  
D. MITRA\*, B. DWIVEDI, M. SINHA, U. CHAKRABORTI, P. PRASAD (Tata Steel), India
- 9:50 The clarification of the effect on sinter productivity with coke split addition method  
K. KATAYAMA\*, K. HIGUCHI (Nippon Steel Corporation), Japan
- 10:10 Break
- 10:50 Selective Granulation Facility Operation in Sinter Plant  
J.S. PARK\*, Y.C. KWON, M.S. CHOI, G.R. YOO (POSCO), Korea
- 11:10 Rogesa's new blast furnace No 5 with a modernised top charging system - 24 months of high performance ironmaking  
W. HARTIG\*, H. ZEWE (AG der Dillinger Hütte), Germany, E. LONARDI, G. THILLEN, J. HOLLMAN, L. HAUSEMER, B. MULLER (Paul Wurth SA), Luxembourg
- 11:30 The EFA™ Process - State-of-the-Art DeSO<sub>x</sub> Technology at ROGESA, Dillingen-Germany  
W. HARTIG, G. MAURER (AG der Dillinger Hütte), F. REUFER\*, T. WEISSERT (Paul Wurth Umwelttechnik GmbH), Germany
- 11:50 The effect of mixing nut coke in the ferrous burden in the ironmaking blast furnace  
Q. SONG\*, Y. YANG (Delft University of Technology), H. HAGE (Tata Steel), R. BOOM (Delft University of Technology), The Netherlands

**08:45: Session 2 - Oxygen steelmaking - Room 262 - 2<sup>nd</sup> floor**

**Chairperson: R. FANDRICH (VDEh)**

- 8:50 Raw material flexibility secures bright future for integrated steelmaking  
J. KLUGE\*, J. SPIESS, A. FLEISCHANDERL, G. WIMMER, K. PASTUCHA (Siemens VAI Metals Technology), Austria

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\* speaker

- 9:10 A study on estimation of phosphorus capacities of molten slags using a neural network approach  
B. DERIN\*, E. ALAN, O. YÜCEL (Istanbul Technical University), Turkey, M. SUZUKI, T. TANAKA (Osaka University), Japan
- 9:30 Metal emulsion formation in low-melting-point metal/molten salt system  
N. MARUOKA\*, D.Y. SONG, H. SHIBATA, S.Y. KITAMURA (Tohoku University), N. SASAKI, Y. OGAWA (Nippon Steel Corporation), Japan
- 9:50 Break
- 10:50 A novel data-driven prediction model for BOF endpoint  
N. UEBBER\*, H.J. ODENTHAL, J. SCHLÜTER (SMS Siemag AG), H. BLOM, K. MORIK (Technical University of Dortmund), Germany
- 11:10 New approaches for efficient dedusting of basic oxygen furnaces  
K. MARX\*, S. RÖDL (VDEh-Betriebsforschungsinstitut), Germany

### **08:45: Session 3 - Electric arc furnace - Grand Amphi - 1<sup>st</sup> floor**

#### **Chairperson: B. CRETON (FFA)**

- 8:50 Plant measurement and numerical simulation of EAF operational data  
P.V. GRYGOROV\*, M. LÜTTENBERG, H.J. ODENTHAL, M. REIFFERSCHIED, F. THEOBALD, N. VOGL (SMS Siemag AG), Germany
- 9:10 Spectrometer-based real time measurement of the electric arc radiation in a DC-EAF  
T. JANSEN\*, V. HAVERKAMP, K. KRÜGER (Helmut Schmidt University), B. DETTMER, H. SCHLIEPHAKE (Georgsmarienhütte GmbH), Germany
- 9:30 The holistic approach for efficient scrap melting  
M. DORNDORF, M. ABEL, M. HEIN\* (Siemens VAI Metals Technologies GmbH), Germany, H. AFLENZER, M. TRATNIG (Siemens VAI Metals Technologies GmbH), Austria, D. VAILLANCOURT (Siemens Industry), USA
- 9:50 LINDARC™ Real time EAF off-gas analysis system  
M. MEDEOT\*, M. IACUZZI (MORE s.r.l.), Italy
- 10:10 Break
- 10:50 Industrial application of chemical energy for special steel grades and processes  
L. HACQUARD\*, A. GROSSE, K. LIBERA (Badische Stahl Engineering), A. OPFERMANN (Badische Stahlwerke), Germany, R. ERIKSSON (Ovako), Sweden
- 11:10 Efficient energy recovery from electric arc furnace offgas  
F. ZAUNER\*, G. ENICKL, A. FLEISCHANDERL (Siemens VAI Metals Technologies GmbH), T. STEINPARZER, M. HAIDER (Technical University of Vienna), Austria
- 11:30 Improvement of Cr yield in the EAF by use of briquetted Al containing filings  
G. STUBBE\*, G. HARP (VDEh-Betriebsforschungsinstitut), K. VAMVAKAS (BGH Edelstahl Siegen), Germany

11:50 Direct reduced iron production from EAF slags in fixed bed furnace  
I. BILEN\* (KTH Royal Institute of Technology), Sweden, A. TURAN, O. YUCEL (Istanbul Technical University), Turkey, P. JÖNSSON (KTH Royal Institute of Technology), Sweden

#### **08:45: Session 4 - Flat product hot rolling - Room 162 - 1st floor**

##### **Chairperson: L. FROMM (ArcelorMittal)**

- 8:50 New Hot strip mill of Colakoglu Metalurji - Design, project execution and operational results  
O. ÖZSOY\*, H. BULUT (Çolakoglu Metalurji), Turkey, H. HÖFER, H. HARTMANN, K. HOEN (SMS Siemag AG), Germany
- 9:10 Standardization concept for the main drives of the hot rolling mills of ArcelorMittal in Europe  
C. DELCOURT\*, H. JUNGFER, F. KIEFER, M. SARRAZYN (Siemens Belgium), Belgium
- 9:30 Development and application of a new virtual mill-stand analysis software tool  
K. MAYRHOFER\* (Siemens VAI Metals Technologies GmbH), S. HUBINGER, K. SHERIF (Austrian Center of Competence in Mechatronics, Linz), R. GRUBER, L. PICHLER (Siemens VAI Metals Technologies GmbH), Austria
- 9:50 A transducer for normal pressure, friction stress and contact length measurements in hot and cold flat rolling of metals  
A. NILSSON\* (Mefos), N.G. JONSSON (Jernkontoret), J. LAGERGREN (Åkers), Sweden, T. LUKS (Brno University of Technology), Czech Republic
- 10:10 Break
- 10:50 Oil free lubrication in steel hot and cold strip rolling  
T. REICHARDT\*, H. DELI (VDEh-Betriebsforschungsinstitut), S. MYSLOWICKI, C. MÜLLER, M. RAULF (ThyssenKrupp Steel Europe AG), M. HERRMANN (Chemische Werke Kluthe GmbH), P. DAHMS (Bilstein GmbH & Co KG), C. MÖMMING (Hydro Aluminium Deutschland GmbH), Germany
- 11:10 Study of tribological oxide layer behaviour during the hot rolling of ferritic stainless steels  
É. LUC\* (Aperam), M. DUBAR, A. DUBOIS (Laboratoire TEMPO, Université de Valenciennes et du Hainaut Cambrésis), A. HERMANT, A. DESSIS, J.M. DAMASSE (Aperam), L. DUBAR (Laboratoire TEMPO, Université de Valenciennes et du Hainaut Cambrésis), France
- 11:30 Development of the prediction model for hot strip flatness after coil cooling  
M. MIYAKE\*, Y. KIMURA, T. KAWAI, T. HIRUTA (JFE Steel Corporation), Japan
- 11:50 Hot rolled coil cooling and availability system  
G. PAULUSSEN\*, A. KOORN, P. SEIJTS, H. HOOGLAND, L. STORTELDER (Tata Steel), The Netherlands

- 12:10 Striving for ultra high-strength and direct-quenched hot band. Modernization of SSAB's hot strip mill  
M. THURGREN\*, R. HÖGBERG, E. JOHANSSON, P. SIXTENSSON (SSAB), Sweden, K. ECKELSBACH, H. METZ, M. WAGENER (SMS Siemag AG), Germany

#### **14:15: Session 5 - Blast furnace - Room 162 - 1st floor**

##### **Chairperson: H.B. LÜNGEN (VDEh)**

- 14:20 Dry Slag Granulation - The Environmentally friendly way to making cement  
I. McDONALD\*, A. WERNER (Siemens VAI Metals Technologies Ltd), United Kingdom
- 14:40 Results of the co-injection of PCI and synthetic titanium dioxide products for protection of the hearth of Rogesa blast furnace Nr. 5 after stop for relining  
W. HARTIG\* (AG der Dillinger Hütte), D. AMIRZADEH-ASL (Sachtleben Chemie), D. FÜNDERS (Gesellschaft für Synthetische Rohstoffe), Germany
- 15:00 Reduction kinetics of fine hematite ore particles in a high temperature drop tube furnace  
Y. QU\*, Y. YANG, R. BOOM (Delft University of Technology), The Netherlands
- 15:20 Control technique of material discharge behavior on center feed type top bunker  
Y. KASHIHARA\*, A. MURAO, Y. SAWA, M. SATO, K. YAMAMOTO (JFE Steel Corporation), Japan
- 15:40 Break
- 16:10 Logistic model of hot metal distribution by torpedo ladles at Rogesa in Germany  
H. RAUSCH\*, R. LIN (AG der Dillinger Hütte), Germany
- 16:30 World's first laser profile-measurement-system for the refractory lining of hot torpedo-ladles  
R. LAMM\* (MINTEQ International GmbH), Germany

#### **14:15: Session 6 - Continuous casting - Grand Amphi - 1<sup>st</sup> floor**

##### **Chairperson: J. GREMILLET (Ascométal)**

- 14:20 World first wide thick amorphous alloy coils production by using a newly ultra rapid cooling transit controlled large-scale thermal spraying gun  
J. TAKEHARA\*, T. MIMURA, Y. FUKUDOME, H. MATSUMOTO, R. KURAHASHI (Nakayama Steel Works), M. KIUCHI (University of Tokyo), Japan

- 14:40 Electromagnetic mold level measurement on bloom continuous casting machines equipped with electromagnetic mold stirrer  
J. ROHÁČ, A. PAWLIK\* (VÚHŽ a.s.), Czech Republic, J.E. ERIKSSON (ABB AB Process Automation), Sweden, D.A. DOMANSKI (ABB Inc.), Canada, K. VÄLIMAA (Ovako Imatra Oy), Finland, D. BOCEK, J. CUPEK (Třinecké železářny), Czech Republic
- 15:00 Why oxides intensify spray cooling?  
M. RAUDENSKY\*, M. HNIZDIL, P. KOTRBACEK (Brno University of Technology), Czech Republic
- 15:20 Increasing the productivity of the vertical continuous casting machine at Hagondange Plant  
J. DEMURGER\*, J. GREMILLET, M. MATTEI, M. STILGENBAUER, V. SEEMANN, G. BOI, P. GIBONDI (Ascométal), France
- 15:40 Break
- 16:10 The new generation of Danieli thin slab casting and rolling plants: lay out concepts breaking all actual parameters in CAPEX and OPEX for advanced markets and product mix  
C. PIEMONTE, A. PIGANI, A. SCORDI\* (Danieli & C Spa), Italy
- 16:30 Arvedi ESP - Three years of successful operation  
A. JUNGBAUER\*, G. WERSHING, G. WINDNER, A. BUMBERGER (Siemens VAI Metals Technologies GmbH), Austria
- 16:50 CSP® flex - New CSP® concepts for future market requirements  
C. KLEIN, C. BILGEN, C. KLINKENBERG\*, J. MÜLLER (SMS Siemag AG), Germany

### **14:15: Session 7 - Long product rolling - Room 262 - 2<sup>nd</sup> floor**

**Chairperson: G. MATHIEU (Ascométal)**

- 14:20 WinLink® innovative concept for direct rolling of long products  
E. COLOMBO\*, U. ZANELLI (Siemens VAI Metals Technologies Srl), Italy
- 14:40 Installation of Direct Rolling Mill  
K. OHUCHI\*, S. HIGO, M. MINAMI (Godo Steel), Japan
- 15:00 Outline and operating results of the first Heavy Duty Reducing & Sizing Block (RSB) in France  
J.Y. VERNEDAL\*, G. MATHIEU (Ascométal), France, S. SCHWARZ\*, B. ZUTER (Friedrich Kocks GmbH), Germany
- 15:20 The closed loop size control system in combination with the advanced 3-roll PSM® at DEW Siegen-Geisweid  
T. HELSPER, J. EISBACH (Deutsche Edelstahlwerke), G. SCHNELL\* (SMS Meer), Germany
- 15:40 Break



- 16:10 Revamping of Ascométal Fos-sur-Mer Wire Rod Mill  
F. LECOUTURIER\*, J.Y. VERNEDAL, B. ONDE (Ascométal), A. BORYSOWICZ (Fives Stein), France, L. CVALETTI (SMS Meer S.p.A.), Italy, A. OLSSON (Sund Birsta), Sweden
- 16:30 Improving reliability of mill drive gear boxes at New Bar Mill, Tata Steel  
R. MALHOTRA\*, G.R.P. SINGH, M.N. SHUKLA, P.K. BANERJEE, B.K. DAS (Tata Steel), India
- 16:50 Latest developments in drawing and peeling technology  
K. VAN TEUTEM\* (Danieli & C Officine Meccaniche S.p.A.), Italy, P. MARESCH\* (Danieli & C Officine Meccaniche S.p.A.), Germany
- 17:10 Major improvements of the piercing mill at Vallourec & Mannesmann Tubes  
J.P. BRANCART (Vallourec & Mannesmann), P. ROBLIN\*, G. MUZARD (GE Energy Power Conversion), France

### **14:15: Session 8 - Coating and finishing line - Petit Amphi - ground floor**

#### **Chairperson: B. de LAMBERTERIE (ESTEP)**

- 14:20 New developments for hot- and cold-strip processing lines  
H.G. HARTUNG, L. KÜMMEL, C. SASSE\* (SMS Siemag), Germany
- 14:40 Side trimmer with Dynamic Width Adjustment system (DWA)  
T. VALLÉE\* (Siemens VAI Metals Technologies), France
- 15:00 Electromagnetic strip stabilization: eMASS<sup>®</sup> - results, experiences, and future objectives out of more than 30 industrial applications  
M. IRLE\*, S. DOMBROWSKI (EMG Automation GmbH), Germany, T. KLING (Nova sarl), France
- 15:20 Industrial benefits of dynamic air knives implementation on continuous galvanizing lines  
J.J. HARDY\*, B. GRENIER (Siemens VAI Metals Technologies), France, S. ÖZER, M. BARAS (Borcelik Celik Sanyii Ticaret S.A), Turkey
- 15:40 Break
- 16:00 Processing approaches for continuous hot-dip galvanizing of high manganese alloyed steel  
G. PARMA\*, M. BLUMENAU, M. NORDEN, T. WUTTKE (ThyssenKrupp Steel Europe AG), Germany
- 16:20 Control of bake-hardening level and aging properties in a hot-dip-galvanizing-line  
K. MACHALITZA, R. GERLACH\*, C. ESCHER, M. NORDEN (ThyssenKrupp Steel Europe AG), Germany

- 16:40 Innovative flameless regenerative burners for direct fired furnaces on hot dip galvanizing line - up to 15 % lines productivity increase  
C. VILLERMAUX, N. RICHARD\*, T. BELLIN-CROYAT, G. DAILL, P. BUCHET (GDF SUEZ), K. BEAUJARD, A. DANDA, B. LOUIS, H. SAINT-RAYMOND (ArcelorMittal Global R&D), France
- 17:00 Continuous performance evaluation of control systems for reducing energy consumption in annealing lines  
A. WOLFF\* (VDEh Betriebsforschungsinstitut), M. JELALI (Cologne University of Applied Sciences), Germany
- 17:20 Simultaneous measurement of strip surface emissivity and temperature (SMOTE)  
G. KUIPER\*, F. MUILWIJK, R. VAN BUREN, J. WESSELINK (Tata Steel R-D & T), The Netherlands

**17:45: Plenary session with the speeches of:**

- Mr Philippe DARMAYAN, President, Fédération Française de l'Acier,
- Mr Henri-Pierre ORSONI, CEO ArcelorMittal Atlantique & Lorraine
- Mr Anthony de CARVALHO, Chief Steel Unit, OECD.

**Wednesday 19 December 2012**

**08:45: Session 9 - Energy - Grand Amphi - 1<sup>st</sup> floor**

**Chairperson: J. DUCLOS (GDF SUEZ)**

- 8:50 Temperature is money: How to make the plants of today comply with the requirements of tomorrow  
C. FRÖHLING\*, B. BÜTTENBENDER, P. HEMMLING (SMS Siemag AG), Germany
- 9:10 Utilization of siderurgical gases in gas engines for power generation  
E. AMPLATZ, T. ELSENBURCH\*, M. SCHNEIDER, S. WOJCIK (GE Power & Water), Austria
- 9:30 Reduction of Natural gas consumption after application of Nalco Fire-8252 Prep in Boosters enables Companhia Siderurgica Nacional (CSN) to reduce CO<sub>2</sub> emissions  
S.A. BARROS (CSN), P. SANTIAGO\*, S. RIBEIRO, F. SUBTIL (Nalco), Brazil
- 9:50 Process improvements and energy efficiency projects on auxiliary equipment in Tata Steel Aldwarke Cast Products  
A. PATSOS\*, P.A. BROOKS, A. PRESTON, A. BURGAR (Tata Steel), United Kingdom
- 10:10 From the energy audit to the final performance tests: success story of a furnace revamping  
L. FERRAND\* (CMI Greenline Europe), J.L. LAMBERT (Vallourec & Mannesmann), C. BOURGE (CMI Greenline Europe), E. CARRÉ, M. VARLEZ (Vallourec & Mannesmann), C. CONSTANT (CMI Greenline Europe), France
- 10:30 Towards low energy consumption and low CO<sub>2</sub> production: Steelmaking plants, a roadmap  
R. NICOLLE\* (Consultant), France

**08:45: Session 10 - Secondary metallurgy and refractory - Petit Amphi - ground floor**

**Chairperson: R. FANDRICH (VDEh)**

- 8:50 Optimised steel ladle upper ring technology  
P. TASSOT\* (Calderys Deutschland), Germany
- 9:10 Wear mechanisms of Al<sub>2</sub>O<sub>3</sub>-MgO spinel forming refractories used in steel ladle impact pads  
J. POIRIER\* (CEMHTI CNRS), T. CORDONNIER (ArcelorMittal Global R&D), P. PRIGENT (TRB), M.L. BOUCHETOU (CEMHTI CNRS), E. ARFAN, N. SCHMITT (LMT Ecole Normale Supérieure, Cachan), France

- 9:30 Technical improvements using air cooled staged oxy-air-gas burners for ladle heating  
M. BENTIVEGNI\*, T. BÉNARD (Vallourec Research Aulnoye), O. DESURMONT, R. BRIEND (Vallourec & Mannesmann), N. DOCQUIER (Air Liquide), P. BOUSSARD (PB Consulting), France
- 9:50 How to improve sustainability, safety, health and doing quality and cost-savings (up to 20%) with new injection technologies and cored wire in steelmaking?  
M. SCHATZ\*, C. LENOIR, S. GERARDIN (AFFIVAL), A. BINNINGER (Vallourec & Mannesmann), France
- 10:10 Inclusion thermodynamics in high Al and high Mn alloyed steels  
J.J. PAK\*, M.K. PAEK, K.H. DO, J.M. JANG (Hanyang University), Korea

**08:45: Session 11 - Product and quality management - Room 162 - 1st floor**

**Chairperson: J.L. JACQUOT (FFA)**

- 8:50 K44X: a new ferritic stainless steel grade with improved durability for high temperature automotive applications  
L. FAIVRE\*, P.O. SANTACREU, A. ACHER (Aperam Europe), France
- 9:10 Industrial data mining in steel industry  
H. PETERS\*, A. EBEL (VDEh-Betriebsforschungsinstitut), J. HACKMANN (PSI Metals), T. HECKENTHALER (ThyssenKrupp Nirosta GmbH), N. HOLZKNECHT, N. LINK (VDEh-Betriebsforschungsinstitut), F. LÜCKING (QuinLogic), M. PANDER (SMS Siemag AG), Germany
- 9:30 Finite element modeling of non destructive system for assessment of steel strip properties  
A. LÉBOUC\*, Y. GABI, G. MEUNIER (G2Elab - Grenoble Electrical Engineering Laboratory), P. MEILLAND (ArcelorMittal Global R&D), C. GUERIN (Cedrat SA), P. LABIE (G2Elab - Grenoble Electrical Engineering Laboratory), France, B. WOLTER (Fraunhofer Institute for non-destructive testing), Germany
- 9:50 Image processing applied to inclusion detection: results for tinplate application  
O. DESCHAMPS\*, L. DOREL (Siemens VAI Metals Technologies GmbH), France, Z. CANALEJO CATALAN (ArcelorMittal Asturias), Spain, L. SATYANARAYAN, P. PIQUEMAL (ArcelorMittal Global R&D), France
- 10:10 Three-dimensional investigation of inclusion and cluster characteristics on different stages of steel production of various steel grades  
A. KARASEV\*, A. TILLIANDER, P. JÖNSSON (KTH Royal Institute of Technology), Sweden

## **08:45: Session 12 - Pickling and cold rolling - Room 262 - 2<sup>nd</sup> floor**

### **Chairperson: J. SCHELINGS (ArcelorMittal)**

- 8:50 Eco Pickled Surface (EPS) - An Environmentally Preferred Alternative to Acid Pickling of Flat Rolled Steel: Production Experience and Economic Performance  
R. THOMAS\*, K. VOGES (The Material Works, Ltd), W. PERRY (Mercury Business Development Services Corporation), USA
- 9:10 Steel pickling, acid regeneration and plastic corrosion in steel rolling mills  
F. RÖGENER\* (VDEh-Betriebsforschungsinstitut), Germany, K. JACOBSON, P. BERGSJÖ (Swerea KIMAB), Sweden, G. HARTMANN (ThyssenKrupp Nirosta GmbH), M. SARTOR, T. REICHARDT (VDEh-Betriebsforschungsinstitut), Germany
- 9:30 New Siemens VAI pickling model helps to improve surface purity - FAPLAC<sup>®</sup> APM  
S. MAILLARD\*, B. JALLARD (Siemens VAI Metals Technologies), France, H. DAGN (Siemens VAI Metals Technologies), Germany
- 9:50 Pickling line / tandem cold mill with electrical and automation systems from SMS Siemag successfully commissioned at MMK  
D. EHLERT\*, M. BÜHREN (SMS Siemag AG), Germany, S.N. USHAKOV (Magnitogorsk Iron & Steel Works), Russia
- 10:10 Asolid laser welder  
H. THOMASSON\* (Siemens VAI Metals Technologies), France
- 10:30 Benefits of chrome plating and long-term viability of use in the rolling industry  
G. PENZES\* (Nord Chrome), France

## **10:55: Session 13 - Cokemaking - Room 262 - 2<sup>nd</sup> floor**

### **Chairperson: J.P. GAILLET (CPM)**

- 11:00 The new stamp charged coke oven batteries at Zentralkokerei Saar of Dillinger Hütte - Technical characteristics and operational experience  
Y. HERRMANN\* (Zentralkokerei Saar GmbH), B. DELLMANN (HBD Engineers), Germany, T. HANSMANN (Paul Wurth Italia SpA), Italy, W. FAUST (Paul Wurth SA), Luxembourg
- 11:20 Production of metallurgical coke with hypercoal (ash free coal) - The use of non / slightly coking coals as a coke feedstock  
T. TANAKA\*, T. SHISHIDO, N. OKUYAMA, M. HAMAGUCHI, N. KIKUCHI (Kobe Steel) A. KOTANI, Y. NISHIBATA (Kansai Coke and Chemicals Co Ltd), Japan
- 11:40 Recent operation of new coke plant in Gwanyang works, POSCO  
M.W. OAK\*, J.S. EUN, D.H. KIM, D.C. YIM (POSCO), Korea
- 12:00 Industrial Measurement of pushing force using torque sensors  
M. LANDREAU\*, Y. HERGALANT, D. ISLER (Centre de Pyrolyse de Marienau), F. ENTRINGER, D. DUMAY (ArcelorMittal Florange), France

## **10:55: Session 14 - Slab continuous casting - Room 162 - 1st floor**

### **Chairperson: F. MIGNARD (Siemens VAI)**

- 11:00 Investigation of the influence of mould oscillation on the continuous slab casting  
G. XIA\*, C. FÜRST, K. BURGSTALLER (voestalpine Stahl), Austria
- 11:20 Development and application of a non-steady state strand solidification model  
G. STEPHENS\*, A. STRAKER, B. BARBER, B. HOOPER (Tata Steel Europe Research Development and Technology), United Kingdom
- 11:40 Innovative New 250 / 350 mm continuous caster in Salzgitter  
P. MULLER, M. SCHÄPERKÖTTER, S. ROSSIUS (Salzgitter Flachstahl GmbH), M. REIFFERSCHIED, C. GEERKENS, L. FISCHER, U. KERP\* (SMS Siemag AG), Germany
- 12:00 Operational results of the world's most modern Siemens VAI bow type caster with vertical mold for the production of 355 mm thick slabs for demanding quality requirements  
M. HADLER\*, E. REISENBERGER, A. EICHINGER (Siemens VAI Metals Technologies GmbH), C. FÜRST, H. UNTER, P. HODNIK (voestalpine Stahl), Austria

## **10:55: Session 15 - Environment and by-products - Petit Amphi - ground floor**

### **Chairperson: A. PONS (ArcelorMittal)**

- 11:00 Metal recovery from liquid and solid waste streams generated in stainless steel cold rolling mills  
F. RÖGENER\* (VDEh-Betriebsforschungsinstitut), D. BUCHLOC (ThyssenKrupp Nirosta GmbH), A. BAN, T. REICHARDT (VDEh-Betriebsforschungsinstitut), Germany
- 11:20 Granulated metal product from direct tapped furnace - Experience from operation at BEFESA Sweden  
P. VESTERBERG\*, K. BESKOW, C.J. RICK (UHT Uvån Hagfors Tek), Sweden, A. RUH (Befesa), Germany
- 11:40 A case study in utilising rainwater harvesting to reduce abstracted water in a steel production facility  
T. BALHATCHET\*, V. STOVIN (University of Sheffield), A. GHOSH, S. WOOLASS (Tata Steel Europe), United Kingdom
- 12:00 Emissions inventory of Priority Hazardous Substances and Priority Substances from the Water Framework Directive in effluents from integrated steelworks in the UK  
J. CHEN\*, E. ARIES, P. COLLINS, J.S. HODGES (Tata Steel Europe), United Kingdom
- 12:20 Site-wide models to evaluate CO<sub>2</sub> emission reduction options  
B. GOLDS\*, C. TREADGOLD (Tata Steel R-D & T), The Netherlands, B. ADDERLEY (Tata Steel Group Environment), United Kingdom

- 12:40 The role of steel in environmentally friendly construction  
A.L. HETTINGER\*, J.S. THOMAS, D.P. BRIDOUX (ArcelorMittal Global R&D), France, O. VASSART (ArcelorMittal Global R&D), Luxembourg, V. HUET, L. GERON (CRM), Belgium, P. LE PENSE (ArcelorMittal Construction), Luxembourg  
A. LAVAUD (ArcelorMittal Flat Carbon Europe), France

**10:55: Session 16 - Cold rolling - Grand Amphi - 1<sup>st</sup> floor**

**Chairperson: J. JOUET (CMI)**

- 11:00 Modernization of the four-stand tandem cold mill BILSTEIN GmbH & Co KG. High performance rolling of special steel grades in medium wide format  
K. HOEN\*, C. SCHWARZ, A. WELLER (SMS Siemag AG), G. ZWICKEL (BILSTEIN GmbH & Co KG), Germany
- 11:20 First results of a recently installed minimum quantity lubrication system on a tandem cold mill  
K. KRIMPELSTÄTTER\* (Siemens VAI Metals Technologies GmbH), Austria, A. FLAXA (Quaker Chemical Europe), The Netherlands
- 11:40 Evaluation of tool material Vancron 40 with regard to wear, surface quality and galling  
M. TAHIR\* (University of Dalarna), N.G. JONSSON (Jernkontoret), J. LAGERGREN (Åkers), J.O. WIKSTRÖM (AB Sandvik Materials Technology), H. HEDENLUND (Outokumpu AB), Sweden
- 12:00 Novel method for setting the mechanical and topographic properties of strips within one process step  
V. DIEGELMANN\* (VDEh-Betriebsforschungsinstitut), G. ZWICKEL, M. ULLRICH (Bilstein GmbH), Germany, H. GOUVEIA (Instituto de Soldadura e Qualidade), Portugal, U. WEIRAUCH (Andritz-Sundwig GmbH), Germany, A.V. PERNIA ESPINOZA (Universidad de la Rioja), Spain
- 12:20 TopPlanHybrid: A new hybrid online measurement system for measurement of surface shape of rolled strips with arbitrary reflection characteristics  
H. KRAMBEER\*, M. FELDGES, U. MÜLLER (VDEh-Betriebsforschungsinstitut), R. FACKERT (IMS Messsysteme GmbH), W. GERLACH (ThyssenKrupp Nirosta GmbH), Germany
- 12:40 Integrated thickness and flatness control for Sendzimir mills  
J. POLZER\*, A. WOLFF (VDEh-Betriebsforschungsinstitut), M. JELALI (Köln University of Applied Sciences), M. TRUSKOWSKI (ThyssenKrupp Nirosta GmbH), R. FACKERT, T. HERMEY (IMS MessSysteme GmbH), Germany
- 13:00 Major improvements of the Skin-Pass 48" at ArcelorMittal Florange  
X. BREUVAL, J. JOSSET (ArcelorMittal Florange), P. ROBLIN\*, F. BAUDEL\*, G. MUZARD (GE Energy Power Conversion), France