Riccione, Italy
3-6 June 2008

6th European Conference on Continuous Casting 2008

Advanced Programme

Organised by:
Steelmaking & Plastic Deformation Study Groups of Associazione Italiana di Metallurgia

Patronized by
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Previous Conferences
1st ECCC 1991: Firenze (Italy)
2nd ECCC 1994: Düsseldorf (Germany)
3rd ECCC 1998: Madrid (Spain)
4th ECCC 2002: Birmingham (United Kingdom)
5th ECCC 2005: Nice (France)
The 6th European Conference on Continuous Casting continues the tradition of the successful series of events which were organised in Firenze, Düsseldorf, Madrid, Birmingham and Nice. The use of modern technologies and the improvement of working practices based on new measurement techniques, automatic control system and computer simulations enabled a rapid development of continuous casting processes and an increase in the quality level of ingot production during the last decade. As a result of this historical evolution, ingot casting processes have been confined to the production of semis to be forged in large components, whereas continuous casting processes encountered a consistent increase in production volumes and a widening of the range of steel grades which can be utilised by using this process. Nearly all steel mills operating today produce continuously cast pieces.

On the other hand, the growing demand for higher quality standards and the safety of the final products imply great efforts in order to reduce and manage the defects contained in the solidified semis. Better measurement techniques, the improvement of plant structures, the application of new automated controls and the development of computer simulations contributed to achieve these goals.

The application of these methods not only produced an enhancement in quality in the past two decades, but it implied an increase in productivity and in some cases a significant reduction in cost per product. The range of developments in process technology shifted toward the continuous casting of near net shape products in order to spare intermediate processing stages such as roughing and hot rolling.

The 6th European Conference on Continuous Casting (ECCC 2008) welcomes steel producers, plant designers and researchers to review the progress and innovations introduced into the continuous casting process over the last three years.

Following the prestigious tradition of the previous European Conferences on Continuous Casting, for the ECCC 2008, AIM intends to build on the past success and to confirm the event as the premier forum for anyone connected with the world of continuous casting of steel.

This conference aims at fostering the transfer of information and experiences among delegates with academic and industrial backgrounds and at yielding information on the latest technologies as well as setting orientations to guide future developments.
Thursday, 3 June 2008

14.00 - 17.30 Registration

OPENING CEREMONY

17.30 Welcome addresses by

Walter Nicodemi - AIM President
Dieter Ameling - Chairman of the Steel Institute VDEh
President of the German Steel Federation
Gabriele Rampinini - President of the AIM Steelmaking Study Group

PRESENTATION OF THE “LUIGI LOSANA” GOLD MEDAL TO PROF. WILFRIED KURZ

The “Luigi Losana” award was founded in 1950 to honour the memory of the great scientist, educator and technician Luigi Losana. It is a tribute to an outstanding person who contributed with research and study to the progress of metals science and technology.

Opening lecture

About initial solidification of steel in continuous casting
W. Kurz - EPFL the Swiss Federal Institute of Technology, Lausanne, Switzerland

19.00 Opening of the exhibition followed by the welcome cocktail
MOULD LUBRICATION - I
chairperson: R. Carli

9.00 Characterisation of the melting behaviour of mould powders
I. Marschall, N. Kölbl, H. Harmuth - University of Leoben, Austria

9.20 Mould powder investigations for high-speed casting
J.A. Kromhout, R. Boom - Corus Research, IJmuiden and Delft University of Technology, The Netherlands
C. Liebske, S. Melzer - Corus Research, IJmuiden, The Netherlands
A.A. Kamperman - Corus Strip Products IJmuiden, The Netherlands

9.40 Mechanism of sticker breakouts in continuous casting of silicon killed steel
Y. Kato, K. Harada, T. Kajitani, K. Saito - Nippon Steel Corporation, Kimitusu, Japan

10.00 A study on mould friction
A. De Vito, M.R. Ridolfi - Centro Sviluppo Materiali, Roma, Italy
P. Ravanelli - TenarisDalmine, Dalmine, Italy

10.20 Development of molten mold flux feeding technology in the continuous casting process

10.40 coffee break

MOULD LUBRICATION - II
chairperson: C.-A. Däcker

11.10 Understanding the role of mould slag and slag film in surface quality of continuously cast semis
B. Stewart, M. McDonald, M. Hopkins, R. Burniston - Corus R,D&T, Grangemouth, United Kingdom

11.30 Mold powder development for improving steel strands and steel sheet quality
J. Ito, T. Omoto, Y. Iwamoto - Shinagawa Refractories Co. Ltd., Bizen City, Japan
H. Bo - Shenyang Shinagawa Metallurgy Materials Co. Ltd.
T. Suzuki, J. Gilmore - Shinagawa Advanced Materials Americas

11.50 Dynamic simulation of the flux square interaction in the meniscus region for the optimization of the quality control
R. Carli - Prosimet, Filago, Italy
C. Corna, C. Mapelli - Politecnico di Milano, Italy
F. Magni - Acciaieria Feralpi, Lonato, Italy

12.10 Study of billet-mould interaction during casting through billet contour measurements
G. Alvarez de Toledo, I. Unamuno, J. Ciriza, J.J. Larraudogoitia - Sidenor Investigación y Desarrollo, Basauri, Spain
I. Alvarez - Universidad de Oviedo, Spain

12.30 Crystallization behaviour of synthetic mould slags
S. Lachmann, P.R. Scheller - TU Bergakademie Freiberg, Germany

12.50 lunch
CASTER INSTRUMENTATION - I
chairperson: F. Milani

9.00 Test of a thermo-graphic slag detection system at the Saudi Iron and Steel Company (HADEED)
C. Pinheiro, K. Al-Jarba - SABIC Technology Center, Jubail, Saudi Arabia
R. Brandao, M. Al-Shammari - Hadeed, Jubail, Saudi Arabia

9.20 Laborsaving and information technology of Kimitsu No. 6 continuous caster in Nippon Steel Corporation
S. Shima, Y. Maruki, Y. Oka, N. Yamasaki, N. Ishikawa, I. Oshita,
T. Matsumoto - Nippon Steel Corporation, Chiba, Japan

9.40 MOREIntelligence, a commitment to excellence in production results
L. Morsut - Danieli Automation, Buttrio, Italy
D. Fornasier - Beantech, Colloredo di Montabano, Italy

10.00 Advances in mold instrumentation at U.S. steel
I. Sohn, T.J. Piccone - United States Steel Corporation, USA
T.T. Natarajan - U. S. Steel, USA
R. Matina, R. Džanik - United States Steel Corporation, Košice, Slovakia

10.20 A system comparison of continuous temperature systems in concast operations
W. Glitscher - Heraeus Electro-Nite Int. N.V., Houthalen, Belgium

10.40 coffee break

CASTER INSTRUMENTATION - II
chairperson: C. Pinheiro

11.10 Up to date measurement devices for continuous caster
O. Lang - Vatron, Linz, Austria
C. Fürst, R. Sandner - Voestalpine Stahl Linz, Austria
S. Buoro - Acciaierie Venete SpA, Italy

11.30 Strand surface temperature measurements using stationary and scanning pyrometers
T.J. Piccone, T.T. Natarajan, I. Sohn, P. Krajny - United States Steel Corporation, Munhall, USA

11.50 A prototype laser-EMAT ultrasonic system to find surface and internal defects in ascast semis
I. Baillie - Corus R, D&T, Middlesbrough, United Kingdom
S. Dixon - The University of Warwick, United Kingdom

12.10 Rapid inspection of the defects of steel by using laser induced breakdown spectroscopy
M. Aimoto, H. Kondo, H. Yamamura, T. Toh - Nippon Steel Corporation, Chiba, Japan

12.30 The newly developed in-situ material characterization (IMC-) test: installation, start-up and first results
A. Tubikaneč, C. Chimani - Siemens VAI Metals Technologies, Linz, Austria
C. Bernhard - University of Leoben, Austria

12.50 lunch
REFRACTORIES - I
chairperson: F. Cirilli

9.00 Refractories: future challenges in the continuous casting of steel
J. Stuck, S. Tiede, M. Wiesel, M-A. Müller - RHI AG, Vienna, Austria

9.20 Optimization of submerged entry nozzles wearing
C. Capurro, C. Cicutti, P. Galliano, F. Fuhr, G. Torga, J. Scoccia - Tenaris Siderca, Campana, Argentina

9.40 Tundish covering materials manufacturing: real technology in tundish metallurgy
R. Carli, A. Del Moro, C. Righi - Prosimet, Filago, Italy

10.00 Study on the damage mechanism between the basic slide gate plate and Ca-alloy treated steel
Yuyanwen, Shenzhongming - Baoshan Iron & Steel Co. LTD, Shanghai, China

10.20 Microscopic analysis of alumographite SEN external deposit
S. Devic, L. Marceta - Institut IMS, Beograd, Serbia

10.40 coffee break

REFRACTORIES - II
chairperson: F. Pastorino

11.10 A study of the interactions of both indigenous and exogenous inclusions with SEN walls during continuous casting
A. Dey, R. Thackray - The University of Sheffield, United Kingdom

11.30 Corrosion mechanism of zirconia/carbon based refractory materials by slag in presence of steel
F. Cirilli, A. Di Donato, U. Martini, P. Miceli - Centro Sviluppo Materiali, Roma, Italy
P. Guillo, J. Simoes - Vesuvius International, Feignies, France

11.50 Roller hearth furnace for thin slab casting. Trend-setting refractory lining for the furnace and the rollers with ultra light weight material
M. Springer - Rath AG, Vienna, Austria
V. Finke, H. Kern - Rath GmbH, Meissen, Germany

12.10 Damage evaluation of two alumina refractory castables
M. Ghassemi Kakroudi, M. Huger, T. Chotard - Tabriz University, Iran

12.50 lunch
**PRODUCT QUALITY & METALLURGICAL RESULTS - I**
chairperson: C. Mapelli

14.00 Why are some peritectic steels susceptible to surface cracking formation for the continuously cast slab?
G. Xia, S. Ilie, C. Fuerst - voestalpine Stahl GmbH, Austria  
C. Bernhard - University of Leoben, Austria

14.20 Studies on off-corner transverse cracking of continuously cast hypoperitectic steel slabs
H. Yin - ArcelorMittal Global R&D, East Chicago, USA

14.40 Influence of thermomechanical schedules on the formation of microalloyed precipitates, hot ductility and transverse cracking of continuously cast C-Mn-Al-Nb-Ti steels
S. Riaz, V. Ludlow, A.S. Normanton - Corus R,D&T, Grangetown, United Kingdom

15.00 Prevention of corner cracks in slab continuous casting
N. Triolet - ArcelorMittal Research, Maizières-les-Metz, France  
K. Poelmans - ArcelorMittal, Bremen, Germany  
P. Mabelly - ArcelorMittal, Fos, France  
Y. Le Papillon - ArcelorMittal, Dunkerque, France

15.20 Mold copper plate coating technology to increasing life cycle of mold and improving slab quality
H-K. Choi, H-G. Ryu - Posco, Kwangyang Works, Korea  
J-W. Park - Jay-tech Corporation, Korea  
S-H. Jeong - Sermatech-Korea Corporation, Korea

15.40 coffee break

**PRODUCT QUALITY & METALLURGICAL RESULTS - II**
chairperson: N. Triolet

16.10 Modelling of mechanical properties at solidification of steel grades in continuous casting
D. Senk, S. Stratemeier, B. Boettiger, I. Steinbach, E. Subasic - RWTH Aachen University, Germany  
K. Goehler - ThyssenKrupp Steel AG, Duisburg, Germany

16.30 Slab quality and mould wear in continuous casting
H-G. Wobker, D. Rode, G. Hugenschütt - KME Germany AG, Osnabrück, Germany

16.50 The research of casting method factors influence on critical mill products quality
A.N. Lutsenko, A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov, S.V. Nikonov, E.A. Savinov, A.G. Lunev - JSC Severstal, Cherepovets, Russia

17.10 The characterization of as cast microstructure and mechanical properties of continuous cast tubes and comparison with the same wrought material
G.H. Akbari, I. Ebrahimzadeh - Shahid Bahonar University of Kerman, Iran
14.00 Improvement of the reliability of Cogne continuous casting process by on-line machine control
A. Poli, V. Vicario, M. Massazza, A. Landini, F. Bego - Cogne Acciai Speciali, Aosta, Italy
E. Tomat - Danieli Automation Spa, Buttrio, Italy

14.20 Optimization of flow control device configuration in the continuous casting process by simulation technology
T. Yong, S. Pischek, M. Friedmann, R. Sherrif - RHI AG, Vienna, Austria

14.40 Automation solutions for ladle gate applications
B. Steiner - Stopinc AG, Hünenberg, INTERSTOP Switzerland

15.00 Continuous casting machine heat programming aid software
A. Arteaga, J. Ciriza, J.L. Muñoz, J.J. Laraudogoitia - Sidenor Investigación y Desarrollo, Basauri, Spain

15.20 Process automation for continuous casting plants
J. Hundrieser - Endress+Hauser, Weil am Rhein, Germany

15.40 coffee break

16.10 Slab caster concepts for the production of pipe and plate grade
C. Geerkens, A. Weyer, M. Becker, D. Letzel - SMS Demag AG, Düsseldorf, Germany

16.30 High tech and high performance continuous casting
A. Flick, C. Stoiber, K. Mörwald, O. Schulz, J. Penn, C. Chimani, M. Stiftinger - Siemens VAI, Linz, Austria

16.50 Enhancement of the Scunthorpe slab caster
B. Barber, V. Ludlow - Corus R&D, Grangetown, United Kingdom
J. Pickford, C. Vaughan, S. McIntosh - Corus CC&I, Scunthorpe, United Kingdom

17.10 Developing the pilot continuous casting facility at Corus, Teesside Technology Centre
A.S. Normanton, A. Scholes, K. Pattison, S. Higson - Corus R&D, Grangetown, United Kingdom

17.30 Suppression of meniscus disturbance during continuous casting of square billets
A. Kolesnichenko, A. Kolesnichenko, V. Buriak - Net Shape Cast (Ukraine) Ltd., Kiev, Ukraine
J. Melton, W. Misch - ArcelorMittal USA R&D, Chicago, USA

17.50 Technological specialities of round billets production
F. Siddiqui, G.I. Kasyan - CJSC Mini Steel Mill ISTIL, Ukraine
A.A. Kuchaev, R.J. Jakobshe - National Academy of Sciences, Ukraine
IMPROVEMENT OF STEEL CLEANLINESS · chairperson: R. Roberti

14.00 Improvement of metallurgical quality of ArcelorMittal Florange steels by the use of Mogul SEN
P. Colucci - ArcelorMittal Florange
F. Leclercq - ArcelorMittal Group, Luxembourg
D. Verrelle - Sidermin SA
E. Iida, M. Nakamura - Shinagawa Group

14.20 Reduction of oxide inclusion-induced hook crack in line pipe steel at ArcelorMittal USA Indiana Harbor No. 2 steel producing
H. Yin, T. Tsai, B. Forman, M. Yavuz - ArcelorMittal, East Chicago, USA
R. Besich, R. Kittridge, F. Demmon - ArcelorMittal, Indiana Harbor, USA
E. Shale - ArcelorMittal, USA

14.40 OES/PDA - a new tool for inclusion and segregation characterization in and rolled products at voestalpine Stahl Linz
A. Pissenberger, S. Ilie, M. Mayr - voestalpine Stahl GmbH, Linz, Austria

15.00 Investigation of forming, removing and transformation of nonmetallic inclusions by applying different types of out-of-furnace treatment and casting for production of large pipes in JSC Severstal pneumatic steelmaking conditions
A.N. Lutsenko, A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov, M.V. Nikonov, M.V. Zhironkin - JSC Severstal CherMK, Cherepovets, Russia

15.20 Practical use of MOGUL shaped submerged entry nozzle at Chubu Steel Plate
E. Iida, M. Ogata, T. Matsunaga, M. Nakamura - Shinagawa Refactories Co. Ltd., Japan
K. Masuda, T. Iwatsuki - Chubu Steel Plate Co. Ltd., Japan

15.40 coffee break

THIN SLAB CASTING - STRIP CASTING · chairperson: G. Abbel

16.10 The CASTRIP® process - the current status of commercial low-carbon steel strip casting
W. Blejde, F. Fisher, R. Mahapatra - Castrip LLC
M. Schueren, P. Campbell, G. McQuillis - Nucor Steel

16.30 Rapid thick strip casting. Continuous casting with moving moulds
R. Nagy, D. Senk - RWTH Aachen University, Germany
A.J. Hulek - Inventmetall, Linz, Austria

16.50 The new generation Danieli of thin slab casters, the new ultra high thin slab caster for POSCO CEM project, Gwangyang site (Korea)
A. Carboni, C.P. Piemonte - Danieli & C. Officine Meccaniche, Buttrio, Italy

17.10 Longitudinal face crack prediction with thermo-mechanical models of thin slabs in funnel moulds
L.C. Hibbeler, B.G. Thomas - University of Illinois at Urbana-Champaign, USA
B. Santillana, A. Hamoen - Corus RD&T, IJmuiden, The Netherlands
A. Kamperman - Corus Strip Products, IJmuiden, The Netherlands

17.30 Water modeling of fluid flow in mould and nozzle of thin slab casting
M. Meratian, N. Alizadragheb, S. Alikhani - Iritec, Tehran, Iran

17.50 Study of fluid flow and mixing characteristic in the pool of twin-roll strip casting process
B. Wang, J. Zhang - Shanghai University, China
PRODUCT QUALITY & METALLURGICAL RESULTS - III
chairperson: D. Senk

9.00 Characterization of hot tear segregations in continuous casting of slabs
S. Ilie, H. Presslinger, J. Fluch - voestalpine Stahl GmbH, Linz, Austria
J. Reiter, C. Bernhard - University of Leoben, Austria

9.20 About the quality improvement of the bloom
S. Kurasako, K. Yoshizawa, S. Tamura, T. Anan - Godo Steel Ltd., Himeji, Japan

9.40 Investigation of the integrated influence of ladle processing and continuous casting parameters on the level of strip steel rejection caused by surface defects and ultrasonic test results
A.I. Zaitsev, I.G. Rodionova - I.P. Bardin Central Research Institute of Iron Industry, Russia
A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov - JSC Severstal, Cherepovets, Russia

10.00 Quality aspects on casting Mn-Cr-B steels billets
L. Fiori, C. Capecchi, S. Caricato - Lucchini, Italy
T. Cimarelli, A. Ferretti, S. Miglietta - Kempro International, Ariccia, Italy

10.20 Improvement of center segregation in a large CC bloom of high carbon steel at the two bloom casters of POSCO
K.S. Oh, J.D. Lee, J.M. Park - Posco, Goedong Pohang, Korea

10.40 coffee break

PRODUCT QUALITY & METALLURGICAL RESULTS - IV
chairperson: S. Riaz

11.10 Model for the primary and secondary cooling control in order to grant the surface and bulk soundness of the square billets
C. Corna, C. Mapelli - Politecnico di Milano, Italy
F. Magni - Acciaieria Feralpi, Lonato, Italy

11.30 Effect of Si content in steel on the formation of TiN and solidification structure
T. Morohoshi, M. Zeze - Nippon Steel Corporation, Chiba, Japan

11.50 Improving quality of high-carbon bearing steel through mechanical soft reduction
P. Cobelli, C. Tercelli - Concast AG, Zürich, Switzerland

12.10 A research study on the metallurgical and operational results in high strength API steel
Sh. Pourmostadam - Mobarakeh Steel Company, Esfahan, Iran

12.30 Effects of final electromagnetic stirring on solidification structure of 60Si2CrVAT spring steel billet
K. Wang, J. Yin, W. Gu, J. Hu - Baoshan Iron & Steel Co. Ltd., Shanghai, China
W. Du - Shanghai University, China

12.50 lunch
MODERNIZATION & NEW IMPLEMENTATIONS - I
chairperson: C. Marchionni

9.00 Successful slab caster design for ultra wide slabs
C. Geerkens, M. Becker - SMS Demag AG, Düsseldorf, Germany

9.20 The new Danieli slab casters in operation in ArcelorMittal Dunkerque
and Fos sur Mer sites (France)
M. Fornasier, C.P. Piemonte - Danieli & C. Officine Meccaniche, Buttrio, Italy

9.40 New secondary cooling systems and practices
J. Frick - Lechler GmbH, Metzingen, Germany

10.00 New slab casting technologies at ArcelorMittal Tubarão - Brazil
A.D. Nascimento, K.B. Andrade, I.P. Sant’Anna, A.L.G. Reis - ArcelorMittal
Tubarão, Brazil

11.10 Concast integrated mould for CC of blooms - First experiences at
ArcelorMittal Ruhrort
M. Lüttenberg, B. André, D. Kirsch - ArcelorMittal Ruhrort GmbH, Duisburg,
Germany
F. Kawa, A. Röhrig - Concast AG, Zürich, Switzerland

11.30 Stretching the boundaries of bloom mould operation with Castcoat
D. Preshaw, B. Stalker, S. Shepherd - Corus Process Engineering
M. Pitchford - Corus Engineering Steels

11.50 The Danieli large-size round bloom caster at Jiangsu Huaigang, P.R. of
China
C. Travaglini - Danieli Centro Met, Italy

12.10 Startup and practice of No. 4 slab CC at Baosteel
Shanghai, China

12.30 Modification of bloom continuous casting machine from square to
round geometry
P. Kotrbáček, J. Horsky, J. Bohácek - Brno University of Technology, Czech
Republic
L. Válek - ArcelorMittal Ostrava a.s., Czech Republic

12.50 lunch
FLUID FLOW & EMS ACTUATORS - I
chairperson: M. Venini

9.00 Observation of molten steel flow in submerged entry nozzle
T. Kato, M. Hara, A. Muto, S. Hiraki, M. Kawamoto - Sumitomo Metal Industries Ltd., Kamisu Ibaraki, Japan

9.20 Physical investigations of temperature influences on the flow field and mixing processes in a two-strand-tundish water model using PIV - and LIF - methods
A. Braun, A. Rueckert, H. Pfeifer - RWTH Aachen University, Germany

9.40 Application and effect of MD-EMS in slab caster of BaoSteel
A. Hou, G. Xu, J. Kang, Y. Miura, J. Zhi, J. Yang - Baoshan Iron & Steel Co. Ltd, Shanghai, China

10.00 Introduction of EMS system in bloom caster at Bhilai Steel Plant for improvement in rail quality
N.K. Ray, S. Das, et al. - Steel Authority of India Ltd., Ranchi, India

10.20 Optimum flow condition in conventional slab mould with the use of electromagnetics
A. Lehman, H. Hackl, Kollberg, Seden, J.E. Eriksson - ABB AB, Vasteras, Sweden

10.40 coffee break

FLUID FLOW & EMS ACTUATORS - II
chairperson: H. Pfeifer

11.10 A novel method of electromagnetic stirring of liquid metals at an advanced solidification stage
L. Beitelman, C. Curran - ABB Inc., Whitby, Canada
D. Lavers - University of Toronto, Canada
G. Tallback - ABB Ltd., Vasteras, Sweden

11.30 Prediction of equiaxed zone in continuous cast slabs when using electromagnetic stirring
J-M. Galpin, M. Bobadilla, N. Bontems - ArcelorMittal R&D, Maizières, France

11.50 Use of swirling flow on CC mould billets
S. Kholmatov - KTH, Stockholm, Sweden

12.10 Electromagnetic control of solidification and morphological transformations by continuous steel casting
J. Melton, R. Moravec - ArcelorMittal USA R&D, Chicago, USA
A. Kolesnichenko, A. Kolesnichenko, V. Buriak - Net Shape Cast (Ukraine) Ltd., Kiev, Ukraine

12.30 Control devices design in tundish using numerical approximate solution

12.50 lunch
OPERATIONAL PRACTICES & EQUIPMENTS - I
chairperson: P. Ravanelli

14.00 Operational results on casting 355 mm thickness slab on a bow-type caster at voestalpine Stahl Linz
P. Hodnik, C. Fürst, S. Ilie, K. Etzelsdorfer, C. Priemetshofer - voestalpine Stahl Linz GmbH, Austria

14.20 Experimental study on heat transfer intensification in secondary cooling
Y. Itoh, I. Shimoda, M. Suzuki, T. Murai, M. Abe, Y. Miki - JFE Steel Corporation, Kurashiki, Japan

14.40 Benefits of stopper rod argon injection at the Ruukki production, Raahe works
V. Liisanantti - Vesuvius Finland Oy, Tornio, Finland
J. Matkala, J. Pirinen, H. Nevala - Rautaruukki Oyj, Raahe, Finland

15.00 Implementation of an advanced mould level control strategy to improve peritectic steel surface quality
D. Smart - Corus R,D&T, Grangetown, United Kingdom

15.20 Global approach of mold level control up-grade and performances at DOFASCO CC1
P. Arnulf, M. Dussud - Sert-Avemis, France
C. Singh - ArcelorMittal Dofasco, Canada

15.40 coffee break

OPERATIONAL PRACTICES & EQUIPMENTS - II
chairperson: L. Zampetti

16.10 The formation, detection and prevention of off-corner narrow face depressions and bleeds during the continuous casting of slabs
G. Stephens, B. Patrick, M. McDonald - Corus, United Kingdom
A. Gotti, M.R. Ridolfi, S. Notargiacomo, A. de Vito - CSM, Italy
A. Sormann, M. Forsthuber - VASD • L. Sancho - Arcelor, Spain
J. Barco - Labein • N. Link - BFF • B. Seher, R. Klöppel - Arcelor Eisenhüttenstadt

16.30 Modification of secondary slab cooling method at continuous casting machine of pneumatic type at JSC Severstal CHERMOK, Cherepovets, Russia
A.V. Kuklev, U.M. Aisin, V.L. Danilov, G.V. Sgibnev - Korad Ltd
A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov, S.V. Nikonov - JSC Severstal CherMK, Cherepovets, Russia

16.50 Start-up and operation of the No. 6 continuous slab caster at Kimitsu Works, Nippon Steel Corporation
M. Niizuma, T. Matsumoto, J. Fukuda, M. Kuroki, S. Shima, Y. Maruki - Nippon Steel Corporation, Chiba, Japan

17.10 Prevention of bleeding breakout in slab continuous casting

17.30 Ramp up of the continuous casting machine of the new steelplant build in ArcelorMittal Chatelet
J-M. Detry, V. Lambert, S. Castiglia, Ph. Loperfido, Th. Caillis - ArcelorMittal, Chatelet, Belgium

17.50 Optimization of the in-mold electromagnetic stirring conditions for the slab casters
M. Morishita, T. Nakaoka, M. Terauchi - Kobe Steel Ltd, Hyogo, Japan
MODELLING & LAB STUDIES - I
chairperson: C. Chimani

14.00 An overview on solidification modelling
M.R. Ridolfi - Centro Sviluppo Materiali, Roma, Italy

14.20 Dynamic 3D heat transfer simulation of continuous casting
K. Dittenberger, S. Hahn, K. Hauser, C. Chimani - Siemens VAI, Linz, Austria
S. Ilie, L. Lindenberger - voestalpine Stahl GmbH, Linz, Austria

14.40 Investigations on inclusion agglomeration and separation in a continuous slab casting tundish applying new numerical simulation approaches
K. Marx, R. Koitzsch, S. Rödl - Betriebsforschungsinstitut, Düsseldorf, Germany

15.00 Dynamic modelling and validation of the metal/flux interface in continuous casting
K. Pericleous, G. Djambazov - University of Greenwich, London, United Kingdom
JF. Domgin, P. Gardin - ArcelorMittal Research, Maizieres-les-Metz, France

15.20 Optimization of numerical simulation of the bottom blowing process in a plasma heated six-strand Tundish
J. Fan, J. Lu, S. Ren, S. Zhao - Baosteel Research Institute, Shanghai, China
J. Liu - Baosteel Branch, Shanghai, China

15.40 coffee break

MODELLING & LAB STUDIES - II
chairperson: S. Rödl

16.10 A generalised mathematical model for multicomponent alloy solidification simulations
S. Ganguly - Tata Steel, Jamshedpur, India

16.30 Numerical modelling of the mesoscopic intergranular damage in CC via macroscopic numerical and experimental tests
R. Schwartz, A-M. Habraken - ArGenCo Université de Liège, Belgium

16.50 The modelling tools in ArcelorMittal R&D, a way to better understand steel cleanliness in CC mould
M. Simonnet, P. Gardin, J. Gaspard, JF. Domgin - ArcelorMittal R&D, Maizières, France

17.10 Modelling the effect of argon injection and casting speed variations on the meniscus behaviour during continuous casting
P.E. Ramirez-Lopez, P.D. Lee, K.C. Mills - Imperial College London, United Kingdom
R.D. Morales, R. Sanchez-Perez - Instituto Politécnico Nacional, México
A. Ramos-Banderas - Instituto Tecnológico de Morelia, México

17.30 Characterization of initial solidification of steel using a mold simulator
T.T. Natarajan, T.J. Piccone, I. Sohn, K.D. Powers, C.C. Snyder - United States Steel Corporation, Munhall, USA

17.50 A finite-element description of the continuous casting of steel slabs
A.J.C. Burghardt, G. Abbel, S.P. Carless - Corus Research, IJmuiden, The Netherlands
R.G.B. van Arendonk, J.P.T.M. Brockhoff - Corus Strip Products, IJmuiden, The Netherlands
**STAINLESS AND SPECIAL STEELS - I**  
chairperson: V. Vicario

14.00 **Influence of slag rim formation on initial solidification of stainless steel**  
C-A. Däcker, P. Andersson, A. Salwén, C. Eggertsson - *Kimab, Stockholm, Sweden*  
M. Glaes - *Outokumpu Stainless AB, Avesta, Sweden*

14.20 **Villares metals, continuous casting of special steel with advanced technologies**  
U. Zanelli - *Siemens VAI Metals Technologies, Linz, Austria*  
E. Netto de Sousa, B. Pessoa Ramos, W. Meyer - *Villares Metals S.A., Brazil*

14.40 **Control of columnar-to-equiaxed transition in continuous casting of 16% Cr stainless steel**  
J.C. Kim, J.J. Kim, J.Y. Choi, S.K. Kim - *Posco, Gyeongbuk, South Korea*

15.00 **In-situ investigation on delta ferrite evolution in an AISI304 stainless steel during solidification and subsequent solid-state transformation**  
G.F. Liang, Y. Fang - *Baosteel, Shanghai, China*

15.20 **Layers in the film originating from the casting powder between steel shell and mould and associated phenomena in continuous casting of stainless steel**  
P. Hooli - *Outokumpu Stainless Oy, Tornio, Finland*  
L. Holappa - *Helsinki University of Technology, TKK, Finland*

15.40 coffee break

**STAINLESS AND SPECIAL STEELS - II**  
chairperson: P. Hooli

16.10 **Early alarming and simple breakout prediction algorithm for a high-speed continuous casting of stainless steel**  
M. Petäjäjärvi, P. Hooli - *Outokumpu Stainless Oy, Tornio, Finland*

16.30 **Effect of several kinds of metallurgical factors and thermal hysteresis on the formation of surface crack of high nitrogen content special steels for bar and wire rods**  
K. Isobe - *Nippon Steel Corporation, Muroran R&D Lab, Japan*

16.50 **Technological aspects of ShH-15 bearing steel production meant for rolling elements made from sections by JSC Severstal**  
A.N. Lutsenko, A.A. Nemtinov, S.D. Zinchenko, K.E. Prudov, S.N. Kuznetsov, O.S. Ziganshina - *JSC Severstal, Cherepovets, Russia*

17.10 **Continuous casting of titanium alloy**  
X. Dong, M. Xiemin, L. Chonghe, D. Ki - *Shanghai, China*

20.00 **CONFERENCE DINNER**
OPERATIONAL PRACTICES & EQUIPMENTS - III
chairperson: A. Cristallini

9.00 An application for sequence optimization based on numerical modeling of grade transition process
S. Ferro, N. Di Luozzo, M. Goldschmit - Tenaris, Buenos Aires, Argentina

9.20 Tundish management systems at Corus TCP
M. Stockwell, D. Stamp, J. Marsden - Corus Teesside Cast Products, United Kingdom
A. Chown - Corus Teesside Technology Centre

9.40 Improvement of quality of slabs by using the upgraded geometry of the casting surface of mold narrow plates
S.D. Zinchenko, A.D. Tsvetkov, S.V. Efimov, S.V. Nikonov - JSC Severstal, Cherepovets, Russia
E.Yu. Serebryakov - JSC Domnaremont, Russia

10.00 Failure mechanisms of continuous casting rollers and possible remedies
S. Atamert, D. Tecco, S. Kondapalli - Welding Alloys Ltd., Royston, United Kingdom

10.20 Concast introduces Optical Product Recognition (OPR)
M. Hogenschurz - Concast AG, Zürich, Switzerland

10.40 coffee break

ADVANCED TECHNOLOGIES FOR SLABS
chairperson: H.P. Narzt

11.10 The technology of decreasing the surface crack on the AHSS (Advanced High Strength Steel) slab
J. Choi, S-E. Kang, H-G. Ryu - Posco, Gwangyang-si, South Korea

11.30 Improvement of castability and surface quality of continuously cast AHSS slabs
J-W. Cho - POSCO, Pohang, Korea

11.50 Slab quality improvement by soft reduction technology
S. Ilie, R. Fuchs, K. Etzelsdorfer - voestalpine Stahl GmbH, Linz, Austria
C.M. Chimani, K. Mörwald - Siemens VAI Metals Technology, Linz, Austria

12.10 High speed casting studies of a slab caster using a SEN mold water model
J.S. Sylvestre Begnis - Instituto Argentino de Siderurgia, San Nicolas, Argentina
MODELLING & LAB STUDIES - III
chairperson: U. Sjöstrom

9.00 Autonomous mathematical optimization of continuous casting processes
W. Schäfer, G. Hartmann, E. Hepp - Magma GmbH, Aachen, Germany
D.G. Senk, S. Stratemeier - IEHK RWTH Aachen University, Germany

9.20 Heat transfer in a round CC mould: measurement, modelling and validation
W. Rauter, M. Erker, W. Brandl - voestalpine Stahl Donawitz GmbH & Co KG, Leoben, Austria
S. Michelic, C. Bernhard - University of Leoben, Austria

9.40 Optimization of melt shop logistics using dynamic computer simulation
C.E. Green, V.C. Kendrick - Gallatin Steel
J.T. McGinty, J.D. Young - Hatch Ltd, Hamilton, Canada

10.00 Supplementary tools to measure and understand the flow in the continuous casting mould

10.20 IDS tool - Theory and applications for continuous casting and heat treatment including modeling of microstructure and inclusions
S. Louhenkilpi, H. Kytönen, J. Miettinen, J. Laine - Helsinki University of Technology, Espoo, Finland

10.40 coffee break

MODELLING & LAB STUDIES - IV
chairperson: M.R. Ridolfi

11.10 Mathematical mould level model based on numerical simulations and water model experiments
M. Javurek, M. Thumfart, K. Rieger - Johannes Kepler Universität, Linz, Austria
M. Hirschmanner - Siemens VAI, Linz, Austria

11.30 Physical and mathematical simulations of the inclusion removal and determination of the deposition rate for the continuous casting process
M. Warzecha, R. Koitzsch, M. Wagner, H. Pfeifer - RWTH Aachen University, Germany

11.50 Optimized continuous casting simulation model
J. Barco, J. Libano, M. Serna, J.I. Barbero - Labein Tecnalia, Derio, Spain

12.10 Combine modeling inclusions behavior during tundish process
A. Smirnov, S. Grydin - Donetsk National Technical University, Ukraine
S. Louhenkilpi, P. Väyrynen - Helsinki University of Technology, Finland

12.30 An innovative integrated method in MHD design of electromagnetic stirrers
E. Nobile - Università di Trieste, Italy
C. Persi, S. Spagnul - Ergolines Lab., Italy

12.50 State of the art in modeling of continuous casting
O. Ludwig, M. Aloe, P. Thévoz - ESI Group, Lausanne, Switzerland
L. Valente - Ecotre, Italy
POSTER SESSION

Progress in continuous casting technology and equipment at Ukrainian steel works - a review
A. Smirnov, A. Minayev - Donetsk, Ukraine

Numerical analysis of the lubrication process in steel continuous casting
R. Roberti, A. Pola - Università di Brescia, Italy

Optimization of steel flow in CC submerged nozzle and mold to reduce clogging phenomenon
A. Smirnov, A. Kravchenko - Donetsk National Technical University, Ukraine
A. Naumenko, K. Pismaryov - JSC “Alchevsky Iron and Steel Works”, Ukraine
R. Giessen - Feuro GmbH, Germany

Production and properties of V-Nb (Ti) - N micro-alloyed steels
J. Melecký - ArcelorMittal Ostrava a.s., Czech Republic
L. Dobrovský, G. Kostiuková - Technical University Ostrava, Czech Republic

Numerical simulation of coupled turbulent flow and heat transfer with solidification in a steel thin slab continuous caster
A. Hadjari, M.R. Aboutalebi, S.H. Seyedein - Iran University of Science & Technology, Tehran

Water modeling of fluid flow during tundish filling and using of flow controls for decreasing clogging phenomena in thin slab casting
M. Meratian, N. Alizadragheb, S. Alikhani - Iritec, Tehran, Iran

Fluctuated macrosegregation phenomenon ‘FMP’ new technique to evaluate the mould heat flux in continuous casting processes
M.O. El-Bealy - Ain Shams University, Cairo, Egypt

Flow accelerated corrosion in the secondary circuit of pressurized water reactor from nuclear power plant
A. Amimer, N.P.C. Stevens - University of Manchester, United Kingdom

Temperature fluctuation and its effects of initial solidified process caused by mold oscillation in continuous casting
Z. Lei, X. Jin, N. Ma, Z. Ren, K. Deng - Shanghai University, China

Electromagnetic mold level detectors
J. Rohac, A. Pawlik, T. Krhut - Vuhz a.s. Dobra, Czech Republic

On the centerline segregation of CC slabs
M. Reger - Budapest Tech, Hungary
H. Kytönen - HUT, Finland
B. Vero - Bayati, Hungary
A. Szelig - ISD Dunaferr Co.

Modeling of intermix during the grade transition for non-isothermal conditions in the steel continuous casting process
M. Alizadeh, H. Edris - Isfahan University of Technology, Isfahan, Iran

Practice of increasing casting speed on round billet caster in Baosteel
J. Liu, S. Li, H. Xu, Y. Wang, H. Wang - Shanghai, China
Design aspects of secondary cooling zone of enhanced and new slab casters of JSC NKMZ (Ukraine)
Y. Sus, V. Pilgayev, A. Tkachenko - Novokramatorsky Machine Building Plant, Ukraine
A. Smirnov - Donetsk National Technical University, Ukraine
A. Tsuprun - JSC Donix, Ukraine
Y. Frick - Lechler GmbH + Co KG, Germany
V. Kislitsa - Iron & Steel Work Azovstal, Ukraine

Influence of control devices on metallurgical performance of a continuous casting tundish
A. Bellaouar, S. Beleulmi - University of Constantine, Algeria
A.F. Boudjabâ - Oum-El-Boughi University Center, Algeria
N. Bensid - University of Skikda, Algeria
C. Dumortier - Polytechnic Faculty of Mons, Belgium

Continuous casting predictions and validation in a thin slab caster with CON1D
B. Santillana, J. Kromhout, F. Grimberg - Corus RD&T, IJmuiden, The Netherlands
B.G. Thomas - University of Illinois at Urbana-Champaign, USA
A. Kamperman, H. van Eerden, E. Dekker - Corus Strip Products, IJmuiden, The Netherlands

Optimization the temperature of the secondary cooling zone in the radial casting machine
F. Daoud, A. Akni - Université 20 août 1955, Skikda, Algérie
A. Bellaouar, O. Khollai - Université Mentouri Constantine, Algérie

The up-to-date approach to development of slag-forming blends for continuous casting of steel with high operational and ecological properties
A.I. Zaitsev, I.G. Rodionova - I.P. Bardin Central Research Institute of Iron Industry, Russia
A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov - JSC Severstal, Cherepovets, Russia

Computer methods of estimation of efficient process conditions of the CCM’s casting mold
A.A. Nemtinov, S.D. Zinchenko, S.V. Efimov - JSC Severstal, Cherepovets, Russia

An experimental method to measure flow rate of gaseous species produced by refractory materials for continuous casting at service temperature
F. Cirilli, A. Di Donato, U. Martini, P. Miceli - Centro Sviluppo Materiali, Roma, Italy

Mould powder thermal conductivity characterization by experimental measurements and mechanical calculus
E. Brandaleze, A. Martin, G. Di Gresia, E. Benavidez, L. Santini - Instituto Argentino de Siderurgia, Buenos Aires, Argentina

Identification of causes for surface longitudinal crack type defects occurring on CC low alloy steel blooms. Case study
F. Zaman, G. Iorga, P. Ene, R. Vasile, S. Stan - Metallurgical Research Institute, Bucharest, Romania
A tribological model for steel continuous casting equipment
I. Crudu, C. Teletin, C. Bendrea, C. Spânu, C. Gheorghies - “Dunarea de Jos” University, Galati, Romania

Original position analysis: a new technique for analysis of inclusions and segregations
S. Garetto, G. Martinat - SKF Industrie, Airasca, Italy
A. Cinosi, A. Nigro - GNR, Agrate Conturbia, Italy

Mould powder properties characterisation for billet casting at Sidenor Basauri
I. Unamuno, J. Ciriza, A. Arteaga, J.J. Larraudogitia - Sidenor R&D, Basauri, Spain

Control of molten steel streams during the continuous casting
V.A. Matochkin, D.N. Andrianov, M.N. Novikov, A.I. Stolyarov - Byelorussian Steel Works, Belarus

The effect of slag nature on deskulling of tundish lining, studied in Mobarakah Steel Plant
M.H. Amin - Material and Energy Research Center, Tehran, Iran

Thermal optimization of continuous casting based on metallurgical criteria
O. Kholai, A. Bellaouar, S. Beleulmi - Université Mentouri-Constantine, Algeria
T. Mai - Université de Reims

Numerical simulation of flow structure in centrifugal flow tundish
Y. Wang, Y. Zhong, Z. Ren, B. Wang - Shanghai University, China

Electromagnetic stirring and experiments of horizontal continuous casting of super thin-slab
K. Deng, Z. Lei, Z. Ren - Shanghai University, China
Z. Cheng - Sunshine Electronic Copper-tape Ltd. Co., Zhejiang Province, China

Continuous casting of steel round billet with high frequency electromagnetic field
E-G. Wang, A-Y. Deng, X-J. Xu, L-T. Zhang, L. Kang, J-C. He - Northeastern University, Shenyang, China
Y-J. Zhang - Baosteel Ltd., Shanghai, China

Development and application of dynamic control system for secondary cooling of slab continuous casting
Y. Tian, G-L. Yu - Angang Steel Co. Ltd., Liaoning Province, China
H-F. Shen, L-L. Guo, J. Zhang - Tsinghua University, Beijing, China

The comparison of steady state and transient numerical methods on effects of traveling magnetic field in continuous casting
H. Park, J. Lee, K-a. Han, J. W. Pinheiro Shim - Kookmin University, Seoul, Korea

Flow behaviour in continuous casting mould. A comparison study between CFD techniques and water model scale
V. Munteanu, A. Ivanescu - Universitatea “Dunarea de Jos”, Galati, Romania
O. Costea - S.C. Industrial Parc S.R.L., Galati, Romania

Estimation of hook depth calibrated with measured mean heat flux in plant
H-J. Shin, W-Y. Choi, J-M. Park, S-Y. Kim, J-H. Park - Posco, Gwangyang-si, South Korea
B.G. Thomas - UIUC
G-G. Lee, S-H. Kim - Postech
Microstructural features for identification of continuous cast slabs’ defects
A.A. Kazakov, L.S. Chigintsev, A.A. Nemtinov, S.D. Zintchenko, S.V. Efimov - Saint-Petersburg State Polytechnical University, Russia

Identification of convection heat transfer coefficient of secondary cooling zone of CCM based on least squares method and stochastic approximation method
G. Ivanova - IAMM of NASU, Donetsk, Ukraine

Modeling study of slag behavior in a slab continuous casting mold
L.E. Huirache-Ixta, A. Ramos-Banderas, J.de J. Barreto, A. Maciel - Instituto Tecnológico de Morelia, México
G. Solorio-Díaz - Universidad Michoacana de San Nicolás de Hidalgo, Morelia, México

Approximation of the solid region in the continuous casting process of steel via phase field transition system
C. Morosanu - University “Al.I. Cuza”, Iasi, Romania

Effects of electromagnetic brake on flow patterns in thin slab continuous casting mold
B. Li - Northeastern University, Shenyang, China

Fluid flow and mould slag entrainment in the continuous twin-slab casting mould
Q. He, G. Evans - University of Newcastle, Callaghan, Australia
R. Serje, T. Jaques - BlueScope Steel, Port Kembla, Australia

The phenomenon of avalanche nucleation in a solidifying melt at vibration impulse excitation
A. Smirnov - Donetsk National Technical University, Ukraine

Effect of continuous casting process on ultrasonically tested defects in plate

POSTERS WILL BE DIPLAYED FOR THE ENTIRE PERIOD OF THE CONFERENCE

NOTE ON THE PROGRAMME
This programme is a preliminary programme. It is not definitive and it may be slightly modified: title and authors, cancelled or added papers or posters, chairmen, timetable or duration, etc. Possible changes in the programme will be communicated before the beginning of the conference.
GENERAL INFORMATION

ORGANIZING SECRETARIAT
AIM - Associazione Italiana di Metallurgia
Piazzale Rodolfo Morandi 2,
I - 20121 Milano, Italy
Phone:+39 02.7602.1132 or +39 02.7639.7770
Fax +39 02.7602.0551 - e-mail: aim@aimnet.it
Conference website: www.aimnet.it/eccc2008.htm

CONFERENCE VENUE
The 6th European Conference on Continuous Casting will be held at “Le Conchiglie” Congress Center in Riccione, Viale d’Annunzio 227, 47838 Riccione (RN)
Phone +39-0541-640422 - Fax. +39-0541-642520 - www.leconchiglie.com

LANGUAGE
The official language of the conference will be English.

EXHIBITION
The Conference will be enhanced by an Exhibition at which companies will have the opportunity to inform all attendees of their latest developments. The Exhibition area will be a focal point of the Conference.
Limited exhibition space is still available. For further details, please contact:
Honegger srl - tel. +39 02 47791421; fax +39 02 47791492;
e-mail: eccc@honegger.it

PROCEEDINGS
The full text of the accepted papers will be published in the Cd-Rom proceedings and issued to attendees on arrival at the Conference together with a book of abstracts.

SOCIAL PROGRAMME
A social programme has been designed to give attendees the opportunity to meet informally and enjoy Riccione’s atmosphere.

WELCOME COCKTAIL
A Welcome cocktail will be offered on 3 June 2008, at 19.30 to allow attendees to meet friends and fellow professionals from around the world.

CONFERENCE DINNER
On the evening of 5 June 2008, at 20.00 a Conference dinner will be served at Casa Zanni, in Via Casale 213, Villa Verrucchio (Rimini).
A bus transfer will be provided. The departure is at 19.30 from “Le Conchiglie” Congress Centre.

The Conference dinner is sponsored by

ArcelorMittal
REGISTRATION INFORMATION

REGISTRATION FEES

Payment BEFORE April 30, 2008
AIM MEMBERS EUR 790 (Revenue Stamp included)
NON MEMBERS EUR 940 (Revenue Stamp included)
AIM Junior Members FREE
Students* EUR 300 (Revenue Stamp included)

Payment AFTER April 30, 2008
AIM MEMBERS EUR 890 (Revenue Stamp included)
NON MEMBERS EUR 1040 (Revenue Stamp included)
AIM Junior Members FREE
Students* EUR 400 (Revenue Stamp included)

Accompanying persons EUR 84 (VAT included)
(includes only conference dinner and welcome cocktail)

Registration fees include access to technical sessions and exhibition, conference bag with CD Rom proceedings and book of abstracts, welcome cocktail, conference dinner, coffee breaks and lunches.
For non-members the fee includes AIM Membership for the second half of 2008 and for the year 2009.

* Students will have to provide valid proof of student status. Standard Student rate includes access to technical sessions and exhibition, conference bag with CD Rom proceedings and book of abstracts, welcome cocktail, coffee breaks and lunches. It does not include conference dinner.

Cumulative registrations for over 3 attendees from the same company will entitle to a discount of 15% of the total amount.

PAYMENT AND REMITTANCE

- by non-transferable bank draft or cheque, negotiable in Italy, to the order of Associazione Italiana di Metallurgia - AIM
- by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at “Banca Popolare Commercio e Industria”, Branch no. 2 - Milano, account no. 000000022325 - cod. ABI 05048 - CAB 01602 - cin L, IBAN: IT92 L05048016020000000022325, swift code POCIITM1002. The transfer order must specify the name of the attendee and the reference “6° ECCC 2008”.
A copy of the transfer order must be sent to AIM, together with the Registration Form.
- by credit card Visa, American Express, Diners cards, Carta Sì, and cash at the registration desk in Riccione only for non-speaker attendees.

SPEAKERS REGISTRATION

Speakers are required to register and pay the conference fee not later than March 31, 2008. Otherwise the paper will be removed from the Proceedings. Registration forms will not be processed without payment. A maximum of two papers will be considered for each author registered in time.

ADVANCED REGISTRATION

If you plan to attend, please download the Registration Form on the conference website www.aimnet.it/eccc2008.htm or fill in the enclosed Registration Form and send it to the Organising Secretariat at your earliest convenience, but not later than May, 16 2008. After April 30, 2008 the registration fees will be subject to an extra charge of 100 €.
Please use a separate form for each attendees. Photocopies can be used. Please contact the Organising Secretariat by fax or e-mail, if possible.

**ON-SITE REGISTRATION**

All attendees must be registered at the registration desk, located in the foyer of “Le Conchiglie” Congress Center, in Viale D’Annunzio 227 - 47838 Riccione (RN).

Attendees will be able to register on **Tuesday 3 June 2008 from 14.00 to 17.30**. Registration will continue the following days at the on-site registration desk.

**CANCELLATION AND REFUND POLICY**

A refund, less **20%** deduction for administrative costs, will be issued for written cancellations received by **May 23, 2008**. For attendees who notify their cancellation after **May 23, 2008** or will not attend the conference, a charge of **100%** of the conference fee will be withheld and a copy of the proceedings will be sent after the event.

**INSURANCE**

The Organising Secretariat cannot assume any responsibility for personal accident, loss or damage to the private property of attendees and accompanying persons, which may either occur during or arise from the conference. Attendees should therefore take whatever steps they consider necessary as regards insurance.

**VISA APPLICATION FORM**

If you need an official invitation please send your request to the Organising Secretariat before May 23, 2008 complete with family and first name, passport number, Italian Embassy fax and nationality.

**TRAVEL AND ACCOMMODATION**

**Riccione**

Riccione is known as the “Green Pearl” of the Adriatic for its exclusive atmosphere, elegance and charm, with the typical beach awnings, the magnificent gardens and stately villas.

Frequented by artists since the beginning of the 20th century, Riccione is synonymous with all that is smart and fashionable and Viale Ceccarini is one of the most famous streets in Italy.

In recent years, Riccione has progressively enhanced and promoted its inland country side area, which for its natural beauty, historic attractions, arts and crafts and cuisine traditions, make Riccione an exciting town that differs from the usual tourist clichés.

Riccione is very closed to Rimini, a city with Etruscan and Celtic origins and many splendid monuments. During the Renaissance, it was the capital of the Malatesta Seignory with all the splendour of its magnificent court.

Nowadays, the Arch of Augustus, Tiberius Bridge, and Rimini Cathedral are only some of the historical and cultural sites that can be visited.

Over one hundred and fifty years ago the first bathing establishment was opened in Italy on Rimini beach. Since then, throughout the years, this vocation for hospitality has spread from Rimini all along the coast, from Riccione to Cattolica, from Bellaria to Misano.
How to reach Riccione

The Adriatic Riviera is well linked to the main towns by motorway, railway and charter and scheduled flights.

By car
Motorway A14 which links Bologna with the coast and with Ravenna; Bologna in turn is linked to the main Italian motorways including the Brenner Pass motorway (A22 via Modena)
State Road S.S. 309 from Venice-Mestre State Road S.S. 16 from Ferrara Freeway E45 from Rome to Ravenna

By train
There are fast rail connections with north and central-south Italy. From Europe the Riviera is reached (via Bologna) by the Tarvisio, Brenner, St.Gothard and Sempione passes

By plane
The airports of Bologna, Forlì and Rimini are linked to the most important Italian and European cities by scheduled and charter flights.
From 1st May the Forlì airport is linked to the main towns of the Adriatic coast through a shuttle service.

We are looking forward to welcoming you in Italy!

ACCOMMODATION

An allotment of rooms has been reserved for conference attendees at:
HOTEL LE CONCHIGLIE DI CONQUISTA SRL
Viale G. D’Annunzio, 227 47838 - Riccione (RN), Italy
Phone: +39 0541 640422 - Fax: +39 0541 642520
e-mail: infohotel@leconchiglie.com
website: http://www.leconchiglie.com

If no more rooms will be available at Hotel Le Conchiglie bookings will be made in hotels of the same category (4 stars) at same rates

Hotel rates B&B per night Special Rates B&B (7 nights)
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Single Room € 75.00 Single Room € 490.00
Double Room € 118.00 Double Room € 770.00
Double Room Single Use € 82.00 Double Room Single Use € 560.00

To reserve accommodation the attached Hotel Reservation Form should be filled out and transmitted to HOTEL LE CONCHIGLIE DI CONQUISTA by May 16, 2008.

After May 16, 2008, rates and accommodation will be subject to availability.

To confirm your reservation, the payment of the total stay is required in advance.
This payment can be made by bank transfer or by credit card:
- by Bank Transfer to Hotel Le Conchiglie, Bank info: CA.RIM. Filiale di Riccione Centro - Italy - IBAN: IT 56 X 06285 24120 007084255507
- by Credit Card: Visa (Carta Sì, Mastercard, Eurocard) - American Express

If you wish to reserve accommodation on your own, you may visit the website: http://www.riccione.net
ACCOMPANYING PERSONS PROGRAMME

The following guided tours will be available for accompanying persons. If you wish to attend the tours, please fill in the enclosed form and send it within **April 30, 2008** to the Conference Secretariat by e-mail (aim@ aimnet.it) or fax (+39 02 76020551).

4 June 2008 - All Day - VENICE BY BOAT

Even if you have been to this fantastic city before, it is wonderful to approach Venice from the lagoon. The trip from Chioggia by boat is extremely relaxing, because the lagoon is shallow and the boat slides through the water. The visit of Venice with its 3000 little streets, 400 bridges and 150 picturesque canal will make this an unforgettable day.

**PROGRAMME**

7.30  Departure by coach from Le Conchiglie Congress Centre
9.45  Arrival in Chioggia Sottomarina, then a motor-ship will take you for a cruise into the Venetian Lagoon
11.30  Arrival in Venice through the Laguna:
- possible Gondola tour (not included Euro 16.00 pp)
- visit to a glassware (included)
- sightseeing: Saint Marc’s square and surroundings (about 1 hour)
- free time
16.45  Return to Chiogga Sottomarina by motor-ship
20.30  Arrival in Riccione by coach at Le Conchiglie Congress Centre

**€ 59.50 adults - € 29.50 children (minimum of 30 people)**

5 June 2008 - Morning - RAVENNA

Ravenna was founded earlier than one thousand years B.C and it is the most important town in Italy from a historical and cultural point of view. Its monuments of Bizzantine, Gothic and Roman origin bear witness, after many centuries, to the high standard of civilisation reached by this city in the past. The mosaics, unique through the world; the Tomb of Dante Alighieri, the poet who gave origin to the Italian language; its marvellous monuments and churches, provide the vivid picture of an harmonious blending of styles from different epochs.

**PROGRAMME**

8.00  Departure by coach from Le Conchiglie Congress Centre
9.00  Arrival in Ravenna
9.30  Guided visit to: St.Apollinare Nuovo, Dante Alighieri’s grave, Piazza del Popolo, San Vitale, Mausoleum of Galla Placidia.
Sant’Apollinare in Classe - entrance Euro 2.00
Mausoleum of Teodorico - entrance Euro 2.00
Ravenna Visit Card: San Vitale + Sant’Apollinare in Nuovo + Mausoleum of Galla Placidia - Euro 8.50 - Children from 0 to 10 free of charge. Entrances are optional. For the disabled, entrance is free of charge.
11.30  Free time
12.30  Departure
13.30  Arrival in Riccione by coach at Le Conchiglie Congress Centre

**€ 32.00 adults - € 22.50 children-(minimum of 30 people)**
6 June 2008 - Morning · REPUBLIC OF SAN MARINO

This is one of the smallest and most interesting Republics of the world. San Marino, its capital was built on Mount Titano, a majestic cliff 2493 feet above sea level, from which the plains of Romagna could be controlled and dominated. This natural rock overlooks a splendid landscape. Free time for shopping in the typical narrow little streets of its capital.

PROGRAMME

8.30  Departure by coach from Le Conchiglie Congress Centre
9.00  Arrival in San Marino; shopping time
11.30 Departure from San Marino
12.00 Arrival in Riccione by coach at Le Conchiglie Congress Centre

€ 16.00 adults - € 7.50 children (minimum of 30 people)
# Time Table

## Tuesday, 3 June 2008

<table>
<thead>
<tr>
<th>Time</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
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<tbody>
<tr>
<td>14.00</td>
<td>Registration</td>
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<tr>
<td>17.30</td>
<td>Opening Ceremony</td>
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<tr>
<td>19.00</td>
<td>Opening of the Exhibition &amp; Welcome Cocktail</td>
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## Wednesday, 4 June 2008

<table>
<thead>
<tr>
<th>Sala</th>
<th>Session 1</th>
<th>Session 2</th>
<th>Session 3</th>
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</thead>
<tbody>
<tr>
<td>Sala Madreperla</td>
<td>Mould Lubrication I</td>
<td>Caster Instrumentation I</td>
<td>Refractories I</td>
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<tr>
<td>Sala Polivalente</td>
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<td>Sala Gorgonia</td>
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<td>Coffee Break</td>
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<td>11.10</td>
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<td>Coffee Break</td>
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## Thursday, 5 June 2008

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<tr>
<th>Sala</th>
<th>Session 1</th>
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<th>Session 3</th>
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</thead>
<tbody>
<tr>
<td>Sala Madreperla</td>
<td>Product Quality &amp; Metallurgical Results I</td>
<td>Modernization &amp; New Implementations I</td>
<td>Fluid Flow &amp; EMS Actuators I</td>
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<tr>
<td>Sala Polivalente</td>
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<td>Sala Gorgonia</td>
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## Friday, 6 June 2008

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<tr>
<th>Sala</th>
<th>Session 1</th>
<th>Session 2</th>
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</thead>
<tbody>
<tr>
<td>Sala Madreperla</td>
<td>Operational Practices &amp; Equipments III</td>
<td>Modelling &amp; Lab Studies III</td>
</tr>
<tr>
<td>Sala Polivalente</td>
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<tr>
<td>Sala Madreperla’s Foyer</td>
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<td>POSTER SESSION</td>
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<tr>
<td>11.10</td>
<td>Advanced Technologies for slabs</td>
<td>Modelling &amp; Lab Studies IV</td>
</tr>
</tbody>
</table>

# Conference Dinner

20.00
SPONSORED BY

Endress+Hauser
People for Process Automation

KEMPRO

prosimet

Tech - Gate S.A.

Vatron

VESUVIUS

Welding Alloys Group

OUR SPECIAL THANKS TO:

ArcelorMittal

SIEMENS

VAI
REGISTRATION FORM

Please fill out and return this form by May 16, 2008 to:
ASSOCIAZIONE ITALIANA DI METALLURGIA - AIM
Piazzale Rodolfo Morandi 2 - I - 20121 Milano, Italy
Tel. +39 0276021132 / 0276397770 - Fax +39 0276020551
e-mail: aim@aimnet.it - VAT entry no. 00825780158

6th European Conference on Continuous Casting
Riccione, Italy · 3-6 June 2008

REGISTRATION FEES
payment BEFORE April 30, 2008
AIM MEMBERS EUR 790 (Revenue Stamp included)
NON MEMBERS EUR 940 (Revenue Stamp included)
AIM Junior Members FREE
STUDENTS EUR 300 (Revenue Stamp included)

payment AFTER April 30, 2008
AIM MEMBERS EUR 890 (Revenue Stamp included)
NON MEMBERS EUR 1040 (Revenue Stamp included)
AIM Junior Members FREE
STUDENTS EUR 400 (Revenue Stamp included)

ACCOMPANYING PERSONS EUR 84 (VAT included)
(includes only conference dinner and welcome cocktail)

To register please fill in the following registration form in all its parts.
(It is also possible to register online)

Please use BLOCK letters throughout form (photocopies can be used)

PERSONAL AND INVOICING DATA

Family Name .....................................................................................................................
First Name(s) .......................................................................................................................

Company Name .............................................................................................................

Company Fiscal Address ..............................................................................................

ZipCode .........................................................................................................................
Town.................................................................................................................................
Country .........................................................................................................................

e-mail for invoicing and billing information ..............................................................
e-mail for correspondence ..........................................................................................

Phone .............................................................................................................................
Fax .......................................................................................................................................

VAT number and fiscal code (if different) ....................................................................

Order ref. number (if requested on the invoice) ........................................................

I will attend the Conference as:

☐ AIM MEMBERS € ........................................
☐ NON MEMBERS € ......................................
☐ AIM Junior Member free
☐ STUDENT (proof of student status required) € ......................................................
☐ n. ____ Accompanying Persons € .................................................................

Total amount being paid: € .......................................................................................

☐ by non-transferable bank draft or cheque, negotiable in Italy, to the order of Associazione Italiana di Metallurgia – AIM
☐ by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at “Banca Popolare Commercio e Industria”, Branch no. 2 - Milano, account no. 000000022325 - cod. ABI 05048 - CAB 01602 – cin L, IBAN: IT92L0504801602000000022325, swift code POCIITM1002. The transfer order must specify the name of the attendee and the reference “6° ECCC 2008”. A copy of the transfer order must be sent to AIM, together with this Registration Form
☐ by credit card Visa, American Express, Diners cards, Carta Si, and cash at the registration desk in Riccione (only for non-speaker attendees)

We inform you that data collected will be treated following the normal institutional activity of AIM. In accordance to article 130 of the D.lgs 196/03 in every moment the interested party has the right to oppose the treatment of one’s personal data. Your data will be dealt with in accordance of the D.lgs in 30th June 2003 n.196, guaranteeing the rights of the interested parties foreseen in the 7 art. of the Decree. We also inform you that AIM will communicate to foreign partners the personal data only for above reasons. We also inform you that your personal data will be on the list of the conference participants. In the case that you do not want to appear on this list you may block the mail box. We also inform you that the holder of the personal data is AIM in Milan in P.le Morandi 2, while owner of the personal data is Prof. Walter Nicodemi, available near the AIM offices.

Date ............................................................................................................................
Signature .....................................................................................................................
HOTEL RESERVATION FORM

Please use BLOCK letters throughout form (photocopies can be used)
To send back by e-mail or fax within May 16, 2008 to:

HOTEL LE CONCHIGLIE DI CONQUISTA SRL
Viale G. D’Annunzio, 227 47838 - Riccione (RN), Italy
Phone: +39 0541640422 - Fax: +39 0541642520
e-mail: infohotel@leconchiglie.com - website: http://www.leconchiglie.com

6th European Conference on Continuous Casting
Riccione, Italy · 3–6 June 2008

Family Name: ____________________________________________________________
First Name: ______________________________________________________________
Company: ________________________________________________________________
Address: _________________________________________________________________
Zip Code: ___________________ Town: ___________________ Country: ________________
Phone: ___________________ Fax: ___________________ Mobile: ___________________
E-mail: ___________________

I Will Share A Room With

Date Of Arrival: ___________________ Arrival Time: ___________________
Date Of Departure: ___________________

Please Reserve Nr. ____________

☐ Single Room
☐ Double Room
☐ Double Room Single Use

Hotel rates B&B (per night) Special Rates B&B (7 nights)
SINGLE ROOM Euro 75.00 SINGLE ROOM Euro 490.00
DOUBLE ROOM Euro 118.00 DOUBLE ROOM Euro 770.00
DOUBLE ROOM SINGLE USE Euro 82.00 DOUBLE ROOM SINGLE USE Euro 560.00

• Reservation forms sent after May 16, 2008 will be considered according to rooms availability;
• Reservations will not be accepted without the entire payment for the stay;
• In case of cancellation before May 16, 2008 we will refund the entire sum minus the refund’s costs; after May 16, 2008 we will keep the entire sum due;
• After termination of the availability in Hotel Le Conchiglie the rooms required will be booked in hotels of the same category (4 stars) at same rates.

To confirm your reservation, the payment of the total stay is required in advance.
This payment can be made by bank transfer or by credit card:

☐ by Bank Transfer to Hotel Le Conchiglie, Bank info: CA.RIM. Filiale di Riccione Centro
Italy IBAN: IT 56 X 06285 24120 007084255507

☐ by Credit Card: ☐ Visa (Carta Sì, Mastercard, Eurocard) ☐ American Express:

Number of the card ___________________ Expire date ___________________

Credit Card Holder

N.B.: Send together a copy of the identity card/passport

Date __________________ Signature ___________________
TOURS FOR ACCOMPANYING PERSONS
REGISTRATION FORM

Please use BLOCK letters throughout form

6th European Conference on Continuous Casting
Riccione, Italy · 3-6 June 2008

Family Name
First Name(s)
Address
Zip Code Town Country
Phone Fax
E-mail

Please reserve me:
n. adult/s vouchers n. children vouchers (4-12 years old)
for VENICE - 4 June 2008 (all day) € ..................
€ 59.50 adults - € 29.50 children (minimum of 30 people)

n. adult/s vouchers n. children vouchers (4-12 years old)
for RAVENNA - 5 June 2008 (morning) € ..................
€ 32.00 adults - € 22.50 children (minimum of 30 people)

n. adult/s vouchers n. children vouchers (4-12 years old)
for the REPUBLIC OF SAN MARINO - 6 June 2008 (morning) € ..................
€ 16.00 adults - € 7.50 children (minimum of 30 people)

Total amount being paid: € ..................

Children under 4 years old: FREE

For administrative purposes, we need you to fill in the following form, where you confirm your commitment to pay.

I undersigned
commit myself to pay the sum due of Euros to the ECCC Conference Secretariat on arrival in Riccione.

Date Signature

p.s. The above mentioned tours will be guaranteed only with a minimum participation of 30 persons.