HIGH TECH DIE CASTING 2016
Venice (Italy) 22-23 June 2016
Organised by
ASSOCIAZIONE ITALIANA DI METALLURGIA
with the support of
www.aimnet.it/htdc2016.htm
Scope
Held for the first time in Vicenza, Italy in 2002, HTDC Conference has become a key-event for the international industrial and academic community involved in casting processes of Aluminium, Magnesium and other non-ferrous alloys. The HTDC Conference series has been steadily growing in quality, impact and participation in the following conferences, organised in 2004, 2006, 2008 and 2012. Today, Die Casting production is facing new challenges, from eco-sustainability and efficient energy usage to optimisation of product properties, from alloys’ properties improvement to design of lightweight components. Only an “open minded” approach, resulting in a high capability of being innovation-driven, integration-oriented and implementation-ready, will make Die Casting foundries successful in an international arena dominated by competition.
To sustain the development of this capability, i.e. the competitiveness in Die Casting production, HTDC 2016 will review:
• innovations, from alloys to processes, from design to applications, which are available to foundries, suppliers, end-users;
• multi-disciplinary integration of concepts, methods and processes;
• implementation, into the industrial context, of new and modern solutions for quality, efficiency, high performance.

Conference Chairman
Franco Bonollo · University of Padova, Vicenza, Italy

Conference Co-Chairman
Giulio Timelli · University of Padova, Vicenza, Italy

International Scientific Committee
Kevin Anderson · Mercury Marine, USA
Diran Apelian · WPI, USA
Lars Arnborg · NTNU, University of Trondheim, Norway
Franco Bonollo · DTG, Universita di Padova, Italy
Andreas Bührig-Polaczek · RWTH Aachen University, Germany
Lorella Ceschin · Universita di Bologna, Italy
Mario Conserva · Edimet, Italy
Arne Dahle · Jönköping University, Sweden
Mariso Di Sabatino · NTNU, University of Trondheim, Norway
Derya Disipinar · Istanbul University, Turkey
Gian Luca Goragnoni · Universita di Ferrara, Italy
Elisabetta Garboliti · Politecnico di Milano, Italy
Nicola Gramigna · Enginsoft, Italy
Toshio Haga · Technical University Osaka, Japan
Anders Jarfors · Jönköping University, Sweden
Karl Ulrich Kainer · Helmholtz-Zentrum Geesthacht Magnesium Innovation Centre, Germany
Lothar Kallien · University of Aalen, Germany
Plato Kapranos · The University of Sheffield, UK
Roger Kendrik · Foseco, UK
Jokin Lozares · University of Mondragon, Spain
Xia Mingxu · Shanghai Jiaotong University, China
Roberto Molina · Teksid Aluminium, Italy
Amelio Montedoro · F.O.M.T. SpA, Italy
Giorgio Muneratti · Foseco, Italy
Claudio Mus · Aluminium Rheinfelden, Germany
Adel Nofal · CMRD1, Egypt
Piero Parona · Raffmetal, Italy
Annalisa Pala · Universita degli Studi di Brescia, Italy
Thomas E. Pruchno · American Foundry Society, USA
Didier Rollez · Grillo Werke AG
Mario Rosso · Politecnico di Torino, Italy
Ashok Sharma · Malaviya National Inst. of Tech. Jaipur, India
Jose Talamantes Silva · NEMAK, Mexico
Giulio Timelli · DTG, Universita di Padova, Italy
Daniel Twarog · NADCA, USA
Maurizio Vedani · Politecnico di Milano, Italy
Jessada Wannasin · Prince of Songkla University, Thailand
Qiang Zhu · General Res. Inst. for Non-ferrous Metals, China
Aula Magna OPENING LECTURES HIGH PRESSURE DIE CASTING:
AN EXCELLENT MICROSTRUCTURE POTENTIAL FIGHTING AGAINST DEFECT GENERATION
Chairperson Franco Bonollo

9.00 Welcome Addresses by the Conference Chairman
Franco Bonollo - University of Padova - DTG, Vicenza, Italy

9.30 Genesis of microstructure in HPDC
L. Arnberg - NTNU, Trondheim, Norway

10.00 Genesis of defects in HPDC
J. Campbell - University of Birmingham, UK

10.30 Comment & Remarks chaired by D. Apelian

10.50 Presentation of AIM's Prize Innovation in diecasting

11.00 Coffee break

Aula Magna EXPLOITATION PATHS FOR HIGH PRESSURE DIE CASTING
Chairperson Giulio Timelli

11.20 Laser-induced breakdown spectroscopy: A new tool for real time melt cognition
S.W. Hudson, D. Apelian - Metall Processing Institute WPI, Worcester, USA
J. Craparo, R. De Saro - Energy Research Company, Plainfield, USA

11.40 Process parameter influence on selected quality features in high-pressure die casting
F. Schmidt, M. Müller, U. Vroomen, A. Bühlig-Polaczek - Foundry-Institute RWTH, Aachen University, Germany

12.00 Designing an AZ based secondary magnesium alloy for high pressure die casting applications
C. Blawert, K.U. Kainer - Helmholtz-Zentrum Geesthacht, Germany

Aula Magna WELDING SOLUTIONS FOR DIECASTING
Chairperson Giulio Timelli

12.30 Laser beam welding of highly ductile secondary HPDC aluminium alloy at reduced ambient pressure
F. Teichmann, S. Müller, H. Pries, K. Dilger, S. Greis - Technische Universität Braunschweig, Germany

12.50 Mechanical properties of a friction stir processed HPDC magnesium alloy
E. Cerri, M.T. Di Giovanni - University of Parma, Italy

13.10 Lunch

Aula 5A ALLOYS FOR HIGH TEMPERATURE APPLICATIONS
Chairperson Marisa Di Sabatino

12.30 Effect of prolonged thermal exposure on hardness and tensile strength of Al alloys for forged pistons:
a comparison between EN AW-2618A and EN AW-4032
L. Ceschini, A. Morri, E. Balducci - Università di Bologna - DIN, Bologna, Italy

12.50 High temperature behaviour of 46000, 46100 and 47100 Al die cast parts
J.N. Lemke, O. Maslovskaja, E. Gariboldi - Politecnico di Milano, Dept. of Mechanics, Milan, Italy
G. Timelli, F. Bonollo - University of Padova - DTG, Vicenza, Italy

13.10 Lunch
Aula Magna - NEW GENERATION OF ALLOYS AND MOLTEN ALLOY TREATMENTS
Chairpersons - Diran Apelian, Karl Ulrich Kainer

14.20 Protecting molten magnesium and its alloys
N. Hort, B. Wiese, H. Dieringa, K.U. Kainer - Magnesium Innovation Centre Helmholtz-Zentrum Geesthacht, Germany

14.40 High performance recycled aluminium alloys
R. Zambelli, P. Parona - Raffmetal, Casto, Italy
F. Bonollo, E. Battaglia - University of Padova - DTG, Vicenza, Italy

15.00 A new secondary AlSi10MnMg(Fe) alloy suitable for manufacture of ductile aluminium parts by vacuum assisted high pressure die casting technology
A. Niklas, A.I. Fernández-Calvo, A. Bakedano, S. Orden - IK4- AZTERLAN, Auzunea, Spain
M. da Silva, E. Nogués - Fundacio Eurecat (Ascann), Barcelona, Spain
E. Rosset - Ruffini, Barcelona, Spain

15.20 Description of Al-Si10-Mg1 alloys microstructural structures by advanced thermal analysis based on their known chemical compositions
I. Vicario, M.B. Djurdjevic, E. Villanueva, A. Meléndez - Tecnalia, Derio, Spain
G. Huber - Nemak, Spain

15.40 Intelligent melt treatment in the production of aluminium castings
R.S. Kendrick - Foseco International
G. Muneratti - Foseco Italy
R. Simon - Foseco Europe

16.00 Coffee break

16.20 Potential nucleation agents in Al-Mg alloys
D. Zhang, L. Wang, B. Chen, M. Xia, J.G. Li - Shanghai Jiao Tong University, China
Y. Wang - Brunel University London, UK
N. Hari-Babu

16.40 Use of vacuum and fluxing on quality of A380 cast parts
I.H. Kalkan, O. Vardar - Arslan Makina Dokum, Istanbul, Turkey
E. Erzi, D. Dispinar - University of Istanbul, Turkey

17.00 The influence of AlTi5B1 grain refinement and the cooling rate on the formation behaviour of Fe-rich compounds in secondary AlSiBCu3 alloys
J. Rakhmonov, G. Timelli, F. Bonollo - University of Padova - DTG, Vicenza, Italy

17.20 Process development and grain refinement
R. Haghayeghi - Islamic Azad University, Tehran, Iran
E.J. Zoqui - University of Campinas Unicamp, Campinas, Brazil

19.15 Departure by boat

20.15 Conference dinner at Le Maschere Restaurant
c.o. Starhotels Splendid Venice San Marco 760
### Innovative Solutions for High Pressure Die Casting

**Chairpersons** Mario Rosso, Roberto Boni

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<th>Time</th>
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<td>14.20</td>
<td><strong>Advanced 3D geometrical and thermal vision casting quality control in HPDC</strong>&lt;br&gt;<strong>Lightweight structural parts production: positioning vacuum technology manufacturers as spectrum-wide service providers</strong>&lt;br&gt;<strong>Virtualization of high vacuum and high performance HPDC machine for top quality casting</strong>&lt;br&gt;<strong>High thermal conductivity HTCS® tool steels for die casting dies: cutting production costs and times through advanced tool materials</strong>&lt;br&gt;<strong>Improvement of surface properties of aluminium die casting moulds through protective coatings</strong>&lt;br&gt;<strong>Minimal spray cooling and tool steel selection</strong>&lt;br&gt;<strong>Progress in the technology of release agents for modern HPDC process</strong>&lt;br&gt;<strong>Innovative circuit for thermal regulation of part of die</strong>&lt;br&gt;<strong>Structural casting from rough pieces to finished components in the HPDC full automatic cell</strong>&lt;br&gt;<strong>Departure by boat</strong></td>
<td>R. Boni - Idra, Travagliato, Italy&lt;br&gt;A. Chillemi - Imago Vision, Italy&lt;br&gt;D. Baumgartner - FONDAREX, St.Légier, Switzerland&lt;br&gt;L. Valente - Ecotre Valente, Brescia, Italy&lt;br&gt;A. Hamasaid, I. Valls - Rovalma, Rubí, Spain&lt;br&gt;I. Peter, M. Rosso, F.S. Gobber - Politecnico di Torino, Italy&lt;br&gt;I. Schruff - Kind &amp; Co., Edelstahlwerk, Germany&lt;br&gt;F. Casarotto - Chem-Trend Italy, Milano, Italy&lt;br&gt;F. Miglierina - Omnia Tecno, Italy&lt;br&gt;R. Vuga - HTS, Slovenia&lt;br&gt;R. Pederzoli - Meccanica Pi.Erre, Bedizzole, Italy&lt;br&gt;—&lt;br&gt;—&lt;br&gt;—&lt;br&gt;—&lt;br&gt;—&lt;br&gt;—</td>
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**Conference dinner at Le Maschere Restaurant c/o Starhotels Splendid Venice San Marco 760**
Aula Magna _INTELLIGENT PROCESS FOR QUALITY & ECONOMICAL SUSTAINABILITY
Chairpersons _Lars Arnberg _Zhu Quiang

9.00  ■ HPDC foundry competitiveness based on smart control and cognitive system in Al-alloy products
N. Gramegna - Enginsoft, Padova, Italy
F. Bonollo - University of Padova - DTG, Vicenza, Italy

9.20  ■ An Integrated and intelligent sensor network as tool for monitoring HPDC process parameters
U. Gauermann, A. Mazzamuto - Electronics, Germany
N. Gramegna - Enginsoft, Padova, Italy

9.40  ■ Intelligent management of the lubrication phase in high pressure die casting
C. Raone - Motultech Baraldi, Castel San Pietro, Italy
N. Gramegna - Enginsoft, Padova, Italy
F. Zuliani - University of Padova - DTG, Vicenza, Italy

10.00 ■ Correlation between process parameters and quality characteristics in aluminum high pressure die casting
M. Winkler, L. Kallien, T. Feyertag - Aalen University of Applied Sciences, Aalen, Germany

10.20 ■ Innovative control and real-time quality prediction for the casting production of aluminum alloy structural components at AUDI AG
B. Kujat - AUDI AG, Ingolstadt, Germany
N. Gramegna - Enginsoft, Padova, Italy
M. Benvenuti - University of Padova - DTG, Vicenza, Italy

10.40 Coffee break

11.00 ■ Understanding quality of HPDC aluminium alloy products from intelligent sensor network
E. Battaglia, F. Bonollo, A. Brotto, G. Kral - University of Padova - DTG, Vicenza, Italy
A. Mazzamuto - Electronics, Germany

11.20 ■ Real-time HPDC quality prediction and optimization supported by trained cognitive model
N. Gramegna, A. Bassi, G. Scarpa - Enginsoft, Padova, Italy
E. Battaglia, E. Fiorese - University of Padova - DTG, Vicenza, Italy

11.40 ■ Application of cost model approach in HPDC contexts
L. Macchion, G. Kral, F. Bonollo - University of Padova - DTG, Vicenza, Italy
N. Gramegna - Enginsoft, Padova

12.00 ■ Conditions for the onset of blisters during heat treatments of Al-Si-Cu cast part: numerical simulation and experimental validation
E. Gariboldi, O. Ozhaga-Maslovskaja, J.N. Lemke, S. Barella, L. Rovatti, M. Colombo - Politecnico di Milano, Italy

12.20 ■ High tech die casting driven by virtual experimentation and autonomous optimization with MAGMA5 - baseline technology for robust products and processes
H. Bramann, H. Rockmann - MAGMA, Aachen, Germany
G. Scarpa - EnginSoft, Italy
Aula 5A _THE POTENTIAL FOR NEW PROCESSES
Chairperson _Lorella Ceschini

9.00  ● Semi-solid high pressure die casting of high quality and complex shape aluminium components
Q. Zhu, H. Lu - Institute for Non-Ferrous Metals, Beijing, China

9.20  ● The effect of microstructural inhomogeneity on thermal diffusivity in a rheocast component
M. Payandeh, Anders E.W. Jarfors, M. Wessen - Jönköping University, Sweden

9.40  ● GISS slurry casting technology for improving die casting quality and reducing production costs
J. Wannasin - GISSCO Co., Samut Sakhon, Thailand
M.S. Kim, J.S. Park - LG Electronics Inc., Seoul, Korea
M.C. Flemings - Massachusetts Institute of Technology, USA

10.00 ● Casting of product of Al-25%Si with thin fins
T. Haga, H. Fuse - Osaka Institute of Technology, Japan

10.20 ● Effect of shearing forces on the morphological changes of iron-bearing intermetallics in A380 aluminum HPDC alloy
S.G. Shabestari, M. Edalat Shahri - University of Science and Technology (IUST), Iran

10.40 Coffee break

Aula 5A _FROM MICROSTRUCTURE TO PERFORMANCE I
Chairperson _Elisabetta Gariboldi

11.00 ● Effect of Ni additions on A356 alloy’s microstructure and high-temperature tensile properties
D. Casari, Y. Li, M. Di Sabatino - Norwegian University of Science and Technology, Trondheim, Norway
F. Poli, M. Merlin - University of Ferrara, Italy
M.T. Di Giovanni, University of Parma, Italy

11.20 ● Metallurgical bonding between cast-in ferrous inserts and aluminum: Interaction between aluminum alloys and steel inserts
C. Soderhjelm, D. Apelian - Metal Processing Institute WPI, Worcester, USA

11.40 ● Al-Si-Cu alloys for high pressure die casting: influence of Fe, Mn and Cr on room temperature mechanical properties
L. Ceschini, A. Morri, S. Toschi, I. Boromei - University of Bologna, Italy
A. Bjurensted, S. Seifeddine - Jönköping University, Sweden

12.00 ● Effect of cooling rate and eutectic modification on texture and grain structure of Al-Si-Cu-Mg die cast alloy
M. Zamani, S. Seifeddine, E. Ghassemali - Jönköping University, Sweden

12.20 ● Yielding and failure of hot chamber die cast thin-walled AZ91D
A.E.W. Jarfors - Jönköping University, Sweden

12.40 Lunch
**Aula Magna** _APPLICATIONS: THE CHALLENGE FOR MATERIALS & PROCESSES_

**Chairperson** _Gian Luca Garagnani_

14.00  || Numerical and experimental analysis of a high pressure die casting aluminum suspension cross beam for light commercial vehicles
       || S. Cecchel, D. Ferrario - Streparava, Adro, Italy

14.20  || From cast iron to Al-based alloys to produce cylinder blocks through high pressure die casting
       || C. Castella, M. Rosso - Politecnico di Torino, Italy
       || M. Mattiel, L. Tortone, R. Molina - Teksid Aluminum, Carmagnola, Torino, Italy

14.40  || Quality control and its importance on rejection rate of LPDC cast wheels
       || E. Erzi, D. Dispinar - University of Istanbul, Turkey
       || Ç. Yüksel - Yıldız Technical University, Istanbul, Turkey
       || E. Koca - MaxionWheels, Manisa, Turkey

15.00  || Optimization of heat treatment parameters for a non-conventional Al-Si-Mg alloy with Cr addition by DoE method
       || M. Tocci, A. Pola - University of Brescia, Italy
       || L. Raza, L. Armellin, U. Afeitra - Maxion Wheels, Dello, Italy

15.20  || Coffee break

15.40  || Efficiency and yield evaluation of a stack furnace in aluminum alloy high pressure die casting
       || N. Agostini, G. Timelli, S. Capuzzi - University of Padova - DTG, Vicenza, Italy
       || M. Furlati - SIT Group, Rovigo, Italy

16.00  || Integrated information system for die-casting industry
       || Z. Jia - Ningbo Institute of Technology, Zhejiang University, China
       || D. Thornhill, A. Long, S. Salunkhe, D. Saban, - Queen’s University Belfast, United Kingdom
       || D. Watson - Ryobi Aluminium Casting, UK

**Aula Magna**

**Chairperson** _Franco Bonollo_

16.20  || Innovation and organizational dynamics in the Italian automotive suppliers network
       || A. Moretti, F. Zirpoli - University Ca’ Foscari of Venice

FINAL REMARKS AND OFFICIAL CLOSURE OF HTDC 2016
Room 5A _NEW SCENARIOS FOR PROCESS SIMULATION
Chairperson _Derya Dispinar

14.00 Tracking of collapsed bubbles during a filling simulation
R. Pirovano - XC Engineering, Cantù, Italy

14.20 Dual phase simulation for high pressure die casting: overview and validation of its capabilities
A. Panvini, D. Molin - Piq2, Brescia, Italy
C. Gistl - Co.Stamp, Sirone, Italy

14.40 A new fully virtualized integrated approach in HPDC: from casting to machining
C. Viscardi - Ecotre Valente, Brescia, Italy

15.00 Process and product integrated design for high pressure die casting equipment
C. Apollonio, D. Mancini - SAPP, Italy
G. Scarpio, N. Gramegna, V. Peselli, D. Calsolaro - EnginSoft, Padova, Italy

15.20 Coffee break

Room 5A _FROM MICROSTRUCTURE TO PERFORMANCE II
Chairperson _Anders Jarfors

15.40 Tailoring Al-7Si-0.3Mg cast alloy properties to represent HPDC tensile and fatigue behaviour in component prototypes
M. Riestra, S. Seifeddine - School of Engineering, Jönköping University, Sweden
E. Sjölander - Scania CV AB, Södertälje, Sweden

16.00 Characterisation of properties of V, B, Mo, Sr additions on HPDC of A380 alloy
E. Erzi, D. Gursay, D. Dispinar - University of Istanbul, Turkey
Ç. Yüksel - Yıldız Technical University, Istanbul, Turkey
A.O. Kucuk - Alcast Metal, Bursa, Turkey

Aula Magna
Chairperson _Franco Bonollo

16.20 Innovation and organizational dynamics in the Italian automotive suppliers network
A. Moretti, F. Zirpoli - University Ca’ Foscari of Venice

FINAL REMARKS AND OFFICIAL CLOSURE OF HTDC 2016
Optimization production process optimization of a die-casting component for automotive
L. Bracchi, C. Bettinsoli - Tecnapress, Italy
G. Scarpa, N. Gramegna - EnginSoft, Padova, Italy

Investigation about foam inserts use in diecasting of Zamak 5 parts
D. Rollez -Grillo-Werke AG, Duisburg Germany
L. Montesano, A. Pola, G.M. La Vecchia - University of Brescia, Italy
F. Schumacher - Arthur Monse, Velbert, Germany

Effect of laser surface melting on microstructure and mechanical properties of the rare earth rich magnesium alloy EV31A
L. Ceschini, A. Marri, V. Angelini, F. Tarterini, A. Fortunato, E. Liverani - University of Bologna, Italy

Metallographic studies of aluminum-lithium alloys added with rare earths
I. Calliari, L. Pezzato - University of Padova, Italy
S. Nazarov - Technological University of Tajikistan, Republic of Tajikistan

Morphology and distribution characterization of different types of porosities in high pressure die cast AM60B magnesium alloy
X. Li, S.M. Xiong - School of Materials Science and Engineering, Tsinghua University, Beijing, China

Performance analysis of an Aluminum alloy for the production of commercial high pressure die castings
E. Battaglia, F. Bonollo, P. Ferro, A. Cenghiatta, G. Mazzacavallo - University of Padova - DTG, Vicenza, Italy

Optimization of production parameters for semisolid casting of 6082
O. Vardar, I. Ergun, E. Erzi, D. Dispinar - University of Istanbul, Turkey
C. Yüksel - Yildiz Technical University, Istanbul, Turkey

The effect of Si content on microstructure and mechanical properties of Al-Si alloys
T. Bogdanoff, S. Seifeddine, A.K. Dahle - Jönköping University, Jönköping, Sweden

Computer modelling of quenching of steel die for industrial purpose
B. Smoljan, D. Ilijkć, L. Štic - University of Rijeka, Rijeka, Croatia

Improved metamodels for the optimization of high-pressure die casting process
E. Fiorese, D. Richiedei, F. Bonollo - University of Padova - DTG, Vicenza, Italy

An industrial perspective on providing workers safety and increase of productivity for the wellbeing of people and enterprises
F-P. Kirgis - ABB Robotics, Baden, Switzerland
D. Pintar - ABB Robotics, Friedberg, Germany

Hydraulic fluids contribution to eco-sustainable die casting
R. Knecht - Quaker Chemical B.V., Ulthoorn, The Netherlands

Surface defects of anodized HPDC Al alloy components
D. Caliari, G. Timelli - University of Padova - DTG, Vicenza, Italy
T. Salata, G. Cavognini, S. Maestri - Alfa Ossidazione, Borgosatollo, Italy

Evaluation of thixoforging process for steering piston production as possible alternative to hot forging
I. Peter, M. Rosso - Politecnico di Torino - DISAT, Torino, Italy
Development of pre-normative documents to support quality of HPDC products
G.C. Mei - Unimet, Milan, Italy
E. Battaglia, G. Kral, F. Bonollo, D. Caliari, G. Timelli - University of Padova - DTG, Vicenza, Italy
F. Voltazza - SAEN, Italy
N. Gramegna - Enginsoft, Italy

The new european standards on mechanical potential of Al-based casting alloys and on defects in Al alloy castings: an overview
G.C. Mei - Unimet, Milan, Italy
F. Bonollo, G. Timelli, E. Fiorese - Università di Padova, Vicenza, Italy
E. Gariboldi - Politecnico di Milano, Italy
P. Parona - Raffmetal, Italy
L. Arnberg - NTNU, Trondheim, Norway

Thermal, microstructural and mechanical characterization of innovative Al-Si-Mg alloys for high temperature applications
M. Colombo, E. Gariboldi - Politecnico di Milano, Italy

The effect of secondary scrap ratio on the quality of LPDC cast wheels
C. Yuksel, M. Cigdem - Yildiz Technical University, Istanbul, Turkey
E. Erzi, D. Dispinar - University of Istanbul, Turkey
U. Aybarc, E. Cubuklu, O. Topcuoglu - MS Wheels, Izmir, Turkey

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, timetable or duration, etc. Possible changes in the programme will be communicated before the beginning of the Conference.
GENERAL INFORMATIONS

Conference Venue
The Conference will be held in Venice, at Cà Foscari - Aula Magna of San Giobbe, Via Cannaregio 873, Fondamenta San Giobbe (http://static.unive.it/mappe/sede/990021).

Conference website
www.aimnet.it/htdc2016.htm
You can find all the information on the HTDC 2016 and fill in the online registration form on the Conference website.

Language
The official language of the Conference will be English.

Proceedings
The full text of the accepted papers will be published in the form of electronic proceedings and issued to attendees on arrival at the Conference.
A selection of the best papers will also be published on “La Metallurgia Italiana –International Journal of the Italian Association for Metallurgy”, the scientific journal of AIM which is covered in the Science Citation Index Expanded by Thomson Reuters and in Scopus by Elsevier B.V.

Registration fees

<table>
<thead>
<tr>
<th>STANDARD REGISTRATION FEES (after April 30, 2016)</th>
<th>AIM MEMBER</th>
<th>NON MEMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>SESSION CHAIR/COMMITTEE MEMBER</td>
<td>€ 480 (*)</td>
<td>€ 560 (*)</td>
</tr>
<tr>
<td>DELEGATE</td>
<td>€ 580 (*)</td>
<td>€ 660 (*)</td>
</tr>
<tr>
<td>STUDENT *</td>
<td>FREE</td>
<td>€ 440 (*)</td>
</tr>
<tr>
<td>ADDITIONAL TICKET FOR SOCIAL EVENT</td>
<td>€ 110</td>
<td></td>
</tr>
<tr>
<td>(includes only the social event on June 22)</td>
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</tbody>
</table>

(*) revenue stamp included

Conference Registration fees include admittance to technical sessions, Conference bag with electronic proceedings, coffee breaks, lunches and the social event on June 22. For non-members the fee includes AIM Membership for the last three quarters of 2016 and for the year 2017.

*Students will have to provide valid proof of student status. The social event on June 22 is not included in the student registration fee.

Payment and remittance
• by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at “Banca Popolare Commercio e Industria (UBI Banca)”, Branch no. 2 - Via Borgogna, 2/4 - 20122 Milano- Italy, account no. 000000022325 - cod. ABI 05048 - CAB 0102 - cin L, IBAN: IT92L05048160200000022325, swift code BLOPIT22. The transfer order must specify the name of the delegate and the reference “HTDC 2016”. A copy of the transfer order must be sent to AIM, together with the Registration Form.
• by credit card online: www.aimnet.it/htdc2016.htm.

Cancellation and refund policy
A refund, less 20% deduction for administrative costs, will be issued for written cancellations received by May 15, 2016. For attendees who notify their cancellation after May 15, 2016 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.

Social programme
For the evening of June 22nd, the Conference organizers AIM have planned the Conference dinner, in order to give delegates the opportunity to meet informally and enjoy Venice’s atmosphere:
19.15 Departure from the Conference venue, Aula Magna di San Giobbe - Cà Foscari, to Venice by boat;
20.15 Conference dinner at Le Moschere restaurant (c/o Starhotels Splendid Venice San Marco 760);
22.45 Return by boat to Piazzale Roma (Venice) for who stay in Mestre.
Insurance
The Organising Secretariat cannot assume any responsibility for personal accident, loss or damage to the private property of participants and accompanying persons, which may either occur during or arise from the Conference. Participants 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 best before April 30, 2016, complete with family and first name, Mr/Mrs, birth date, passport number, arrival and departure dates, nationality and fax number of the Italian Embassy for your Country.

Sponsorship opportunities
Companies will be able to enhance their corporate identification by taking advantage of benefits offered to them as Sponsors of the Conference. The HTDC 2016 Organising Committee has prepared a selection of sponsorship opportunities designed to increase the visibility and to optimize the return of investment for sponsors participating in the HTDC 2016 Conference. For further information, please visit the Conference website (www.aimnet.it/htdc2016.htm) or refer to the Conference Secretariat: info@aimnet.it.

Mobile/cell phone
Mobiles must be kept turned off or in silent mode in all Conference rooms.

Venice
Venice, “La Serenissima”, holds a mystical aura and is one of the most enchanting places in the world. Built on 117 small islands in a lagoon, Venice is a unique blend of water, art and romance with exquisite canals, charming bridges, magnificent palaces and churches, and world famous landmarks rising from the water’s surface up to sky. Whether skimming over a cozy canal on a gondola or strolling around its “calle”, visiting Venice is a magical experience for everyone. It is a treasure from the artistic and architectural point of view.

Accommodation
The Conference venue can rely on a great variety of accommodations situated in the surroundings, ranging from comfortable mid-range hotels, to religious hotel-quality accommodations. To book for accommodation, we invite you to contact the Conference official travel agency, Arzanà, by filling in the online hotel reservation form (http://htdc.arzanadv.it/). For any further question, please refer to the official travel agency Arzanà (e-mail: htdc2016@arzanadv.it - tel. +39 041 2750223). Due to a high demand of rooms in Venice, we recommend to book hotels at your earliest convenience to ensure availability.
REGISTRATION FORM

Please complete and return this form to HTDC Conference Secretariat - info@aimnet.it

To register please fill-in the following registration form in all its parts
It also possible register online: www.aimnet.it/htdc2016.htm. Please use BLOCK letters throughout form

PERSONAL INVOICING DATA

<table>
<thead>
<tr>
<th>Field</th>
<th>Information</th>
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<td>Family Name</td>
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<td>Order ref. Number (if requested on the invoice)</td>
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REGISTRATION FEES AND PAYMENT

I will attend the Conference as

<table>
<thead>
<tr>
<th>Role</th>
<th>AIM MEMBER</th>
<th>NON MEMBER</th>
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</thead>
<tbody>
<tr>
<td>SPEAKER/SESSION CHAIR COMMITTEE MEMBER</td>
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</tr>
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</table>

N. _____ ADDITIONAL TICKET(S) FOR SOCIAL EVENT € 110  
(22% VAT included)

TOTAL AMOUNT BEING PAID.......................... €_________________

☐ by bank transfer, to the order of Associazione Italiana di Metallurgia - AIM at “Banca Popolare Commercio e Industria (UBI Banca)”, Branch no. 2 - Milano, account no. 000000022325 - cod. ABI 05048 - CAB 01602 - cin L, IBAN: IT92L0504801602000000022325, swift code BLOPIT22. The transfer order must specify the name of the delegate and the reference “HTDC 2016”. A copy of the transfer order must be sent to AIM, together with this Registration Form.

☐ by credit card online (www.aimnet.it/htdc2016.htm)

In accordance to article 13 of the D.lgs n. 196/03 we inform you that: personal data are required, collected and treated following the normal institutional activity of AIM and according to law; in every moment the interested party can exercise the rights foreseen in the in article 7 of the D.lgs n. 196/03; data controller is AIM in Milan – Piazzale Rodolfo Marandi 2; data processor is AIM President, prof. Carlo Mapelli. You authorize AIM to the sending:

☐ of newsletters/ communications concerning institutional activities carried out by the Association:

☐ yes ☐ no

☐ also through other metallurgic associations worldwide, of invitations to events of interest:

☐ yes ☐ no

☐ to the input of your name in the list of the participants to the event:

☐ yes ☐ no

Date Signature
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event Description</th>
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<tbody>
<tr>
<td>21 June 2016</td>
<td>17.30 - 19.00</td>
<td>Pre-registration</td>
</tr>
<tr>
<td>22 June 2016</td>
<td>8.30</td>
<td>Registration</td>
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<tr>
<td></td>
<td>9.00</td>
<td>Opening lectures, High pressure die casting</td>
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<tr>
<td></td>
<td>11.00</td>
<td>Coffee break</td>
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<tr>
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<td>11.20</td>
<td>Exploitation paths for high pressure die casting</td>
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<td></td>
<td>12.30</td>
<td>Welding solutions for diecasting, Alloys for high temperature applications</td>
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<td>13.10</td>
<td>Lunch</td>
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<td>14.20</td>
<td>New generation of alloys and molten alloy treatments, Innovative solutions</td>
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<td>16.00</td>
<td>Coffee break</td>
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<tr>
<td></td>
<td>16.20</td>
<td>New generation of alloys and molten alloy treatments, Innovative solutions</td>
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<tr>
<td></td>
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<td>Conference dinner</td>
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<tr>
<td>23 June 2016</td>
<td>9.00</td>
<td>Intelligent process control for quality &amp; economical sustainability, The potential for new processes</td>
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<td>10.40</td>
<td>Coffee break</td>
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<tr>
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<td>11.00</td>
<td>Intelligent process control for quality &amp; economical sustainability, From microstructure to performance I</td>
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<td>Lunch</td>
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<td>Applications: the challenge for materials &amp; processes, New scenarios for process simulation</td>
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<td>Applications: the challenge for materials &amp; processes, From microstructure to performance II</td>
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<td>16.40</td>
<td>Final remarks and official closure of HTDC 2016</td>
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</tbody>
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Platinum sponsor

Golden sponsors

Silver sponsors

Bronze sponsors

Item sponsors

Organising Secretariat
AIM - Associazione Italiana di Metallurgia
Piazzale R. Morandi 2
20121 Milano (MI)
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www.aimnet.it/htdc2016.htm