



A D V A N C E
P R O G R A M M E

High Tech Die Casting

I N T E R N A T I O N A L
C O N F E R E N C E

V I R T U A L E V E N T
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Scope & Committees

scope

Through the years, the HTDC Conference has grown and become a key-event for scientists and researchers from the foundry field of Aluminium, Magnesium and other non-ferrous alloys as well as for experts from the industry. The HTDC Conference series has been steadily growing in quality, impact and participation in the following conferences, organised in 2004, 2006, 2008, 2012 and 2016.

Due to the ongoing pandemic, HTDC Conference will be held completely online, as virtual event in live streaming, on Zoom platform, on 22-25 June 2021.

The HTDC Conference is the meeting point for experts involved in the research activities and development of foundry technologies, processes or materials, as well as those employed by the foundry companies of light and non-ferrous alloys, and who are prepared to share some of their current experiences.

Today, Die Casting production is facing new challenges: from eco-sustainability and efficient energy usage to optimisation of product properties and finishing, from tailored alloys' properties to design of lightweight larger structural 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 market dominated by strong competition.

To sustain the competitiveness in Die Casting production, HTDC Conference will cover these key features:

- 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.

HTDC will be an exhaustive Conference focusing on scientific, technical and management innovations in the field of Die Casting, with papers and contributions from a very qualified panel of experts, with both academic and industrial background.

conference chairmen

prof. Franco Bonollo - DTG, Università di Padova, Italy

prof. Giulio Timelli - DTG, Università di Padova, Italy

local organising committee

Federica Bassani - Associazione Italiana di Metallurgia, Italy

Franco Bonollo - DTG, Università di Padova, Italy

Fabrizio Carmagnini - Amafond, Italy

Alberto Fabrizi - DTG, Università di Padova, Italy

Maurizio Grillo - Associazione Italiana di Metallurgia, Italy

Yozen Gyursoy - DTG, Università di Padova, Italy

Federico Mazzolari - Associazione Italiana di Metallurgia, Italy

Zohresadat Noohi - Isfahan University of Technology, Iran

Piero Parona - MotulTech-Baraldi, Italy

Giulia Scampone - DTG, Università di Padova, Italy

Valeria Scarano - Associazione Italiana di Metallurgia, Italy

Silvano Squaratti - Assofond, Italy

Giulio Timelli - DTG, Università di Padova, Italy

Committees

international scientific committee

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M. Rosso · Politecnico di Torino, Italy
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G. Timelli · DTG, Università di Padova, Italy
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M. Vedani · Politecnico di Milano, Italy
I. Vicario Gomez · Tecnalia, Spain
Q. Zhu · General Research Inst. for Non-ferrous Metals, China

Tuesday 22 June 2021

conference opening

9.00 ► Welcome Addresses by the Conference Chairmen

Franco Bonollo - University of Padova - DTG, Vicenza, Italy

Giulio Timelli - University of Padova - DTG, Vicenza, Italy

9.15 ► Die Casting: a multi-disciplinary field with open challenges

Panel discussion, chaired by Giulio Timelli

I. Vicario - Tecnalia Research & Innovation, Derio, Spain

C. Mus - Endurance Overseas, Chivasso, Italy

R. Danko - AGH University of Science and Technology, Kraków, Poland

D. Pullini - CRF FCA, Italy (to be confirmed)

exploitation paths for high pressure die casting

Chairperson _

10.00 ► HTDC_052 Effect of ultrasounds degassing treatment in porosity and mechanical properties of cast parts

M. da Silva, S. Cruz - Eurecat, Centre Tecnològic de Catalunya - Cerdanyola del Vallès, Spain

X. Planta - Ultrason, Cerdanyola del Vallès, Spain

J. Tort, G. Aguirre - Hornos y Metales, Ajalvir, Spain

10.20 ► HTDC_055 Development and testing of a conformal cooling insert made with additive manufacturing technology for HPDC die

R. Molina, L. Tortone, G. Saretto - Teksid Aluminum, Carmagnola, Italy

10.40 ► HTDC_054 Comparison between high-pressure die-cast and rheo-cast aluminium-SiCp MMC; Wear and friction behaviour

E.W. Jarfors, C.K. Jammula - Jönköping University, School of Engineering, Jönköping, Sweden

R. Ghasemi - Husqvarna, Huskvarna, Sweden

11.00 Break

Tuesday 22 June 2021

alloys for high temperature applications

Chairperson _

11.20 ► HTDC_062 Influence of Cu content on high-temperature fatigue of secondary AlSi7Mg(V,Zr) alloys

A. De Mori, G. Timelli, A. Fabrizi - University of Padova, Vicenza, Italy

F. Berto - Norwegian University of Science and Technology, Trondheim, Norway

11.40 ► HTDC_067 Wear behavior of SiC reinforced AZ91 magnesium matrix composites fabricated by high pressure die casting

A.S. Vanli - Ascast Engineering, Turkey

B.O. Kucukyildirim, A. Akdogan - Yildiz Technical University, Turkey

12.00 ► HTDC_071 Effect of cooling rate of hypereutectic Al-Si alloys on microstructure, mechanical and corrosion behavior

S. Sirin - Sakarya University of Applied Sciences, Sakarya, Turkey

E. Kocaman - Zonguldak Bulent Ecevit University, Zonguldak, Turkey

D. Dispinar - Istanbul Technical University, Istanbul, Turkey

poster session: innovative tools and process

Chairperson _

12.30 ► HTDC_049 Influence of plasma electrolytic oxidation and painting on fatigue performance of AZ60A-T5 wrought magnesium alloy

A. Bernardi, L. Ceschini, C. Martini, A. Morri - Alma Mater Studiorum, University of Bologna, Bologna, Italy

S. Messieri - Ducati Motor Holding, Bologna, Italy

12.35 ► HTDC_081 Die casting and sheet forming of Al-4.8%Mg-2%Si

T. Haga - Osaka Institute of Technology, Japan

12.40 ► HTDC_083 Study of an automated system for surface defects analysis on die-cast components by using Artificial Intelligence

G. Cavaliere, Y. Borgianni - Free University of Bozen, Bolzano, Italy

S. Schäfer - Alupress, Bressanone, Italy

12.45 ► HTDC_084 Selection of innovative material for HPDC dies

B. Baldin, G. Timelli - University of Padova, Vicenza, Italy

D. Grassivaro - Form, Legnano, Italy

12.50 ► HTDC_086 Suction system from the self-induced mold cavity (Venturi)

E. Tonolli - TF, Villa Carcina, Italy

13.00 Break

Tuesday 22 June 2021

new generation of alloys

Chairperson _

- 14.00 ▶ HTDC_064 Effect of Li addition on mechanical properties of Al-Si-Mg alloy**
O. Özyaydin, A.Y. Kaya, E. Armakan - Cevher Wheels, zmir, Turkey
- 14.20 ▶ HTDC_068 The investigation of the effect of nano graphene reinforcement on microstructural and wear properties of aluminium-7075 based metal matrix composites**
S. Aksöz, C. Gök, E. Tan - Pamukkale University, Denizli, Turkey
O. Pamuk - Usak University, Turkey
D. Dispinar - Istanbul Technical University, Turkey
- 14.40 ▶ HTDC_074 The effect of hold time and bifilm index on mechanical properties of high magnesium content aluminum %5 magnesium alloys with boron/Sr/Ti/Zr/Bi addition**
A. Gül, Ö. Gürsoy, Ö. Kesen, D. Dispinar, E.S. Kayali - Istanbul Technical University, Istanbul, Turkey
- 15.00 ▶ HTDC_070 Melt gravity die casting of bulk metallic-ceramic hybrid composites**
S. Aksöz, E. Tan, Y. Kaplan, I. Ovalı - Pamukkale University, Denizli, Turkey
D. Dispinar - Istanbul Technical University, Turkey
- 15.20 ▶ HTDC_025 New hyper-eutectic zinc alloy for hot chamber die-casting application**
D. Rollez - Grillo Werke AG, Duisburg, Germany
L. Montesano, A. Pola - University Brescia, Brescia, Italy
M. Schlotterbeck - Oskar Frech GmbH, Schorndorf, Germany

15.40 Break

die casting with engineered solutions

Chairperson _

- 16.00 ▶ HTDC_020 Advanced PVD coatings for protection of moulds and dies**
P.Eh. Hovsepian, A.P. Ehasarian - National HIPIMS Technology Centre, Sheffield Hallam University, Sheffield, UK
- 16.20 ▶ HTDC_061 Blister formation in chrome plated die cast zinc parts**
C. Mangos, L. Kallien - Aalen University of Applied Sciences, Aalen, Germany
- 16.40 ▶ HTDC_045 Joining A356 aluminum and steel through a compound casting process using metallic coating**
A.O. Bakke, L. Arnberg, Y. Li - Norwegian University of Science and Technology, Norway
- 17.00 ▶ HTDC_077 Procast simulation of the effect of phase change material on solidification structure of a gravity die cast A356 alloy**
Z. Noohi, B. Niroumand - Isfahan University of Technology, Isfahan, Iran
G. Timelli - Università di Padova, Vicenza, Italy

17.30 End of first day

Wednesday 23 June 2021

design and applications of diecast components

Chairperson –

08.40 ▶ HTDC_044 Design of castings and dies for HPDC with the help of optimization software
D. Grassivaro - FORM, Legnaro, Italy

09.00 ▶ HTDC_065 Design and analysis of various cooling conditions of an aluminum wheel mold
O. Özeydin, Y. Çatal, A.Y. Kaya - Cevher Wheels, Izmir, Turkey

09.20 ▶ HTDC_079 Displacements of HPDC components caused by ejecting operation
J. Piekło, R. Danko - AGH University of Science and Technology, Kraków, Poland
S. Pysz - Foundry Research Institute, Cracow, Poland

innovative solutions for die casting

Chairperson –

09.40 ▶ HTDC_041 A Milkrun system for guiding forklifts ladle to supply holding furnaces
A. De Salvo - EDiM, Villasanta, Italy
P. Catterina - Visitrak Worldwide LLC, Prevalle, Italy

10.00 ▶ HTDC_042 New developments in HPDC foundry digitalization oriented to process control and ZDM
N. Gramegna - EnginSoft, Padova, Italy
A. Salata - RDS Moulding Technology, Torreglia, Italy

10.20 ▶ HTDC_003 Micro spray technologies for an efficient die spraying in HPDC
M. Lutz - Wollin GmbH, Lorch, Germany

10.40 Break

11.00 ▶ HTDC_043 A new approach to die lubrication optimization
L. Baraldi, P. Parona, C. Raone - Motultech Baraldi, Bologna, Italy

11.20 ▶ HTDC_021 Application of artificial intelligence in diecasting process for predictive maintenance and efficiency improvement
T. Tronci - Gefond, Milano, Italy

11.40 ▶ HTDC_006 Trim technology and trim process: state of the art and future developments and applications
P. Claus - Tecnopres, Chieri, Italy

12.00 ▶ HTDC_002 HPDC process optimization through thermographic monitoring of the die
S. Bellucco - Marposc, Bentivoglio, Italy

Wednesday 23 June 2021

poster session: alloying additions for high-performance castings - I

Chairperson _

- 12.30 ▶ **HTDC_035 Effect of cerium addition on A356**
F. Tezer, D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 12.35 ▶ **HTDC_036 Effect of erbium addition on microstructure and mechanical properties of A356**
H. Sahin, D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 12.40 ▶ **HTDC_037 The effects of molybdenum edition on mechanical properties and microstructure in A356 aluminum**
M. Atik, D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 12.45 Break

the potential for new process & advanced tooling

Chairperson _

- 13.40 ▶ **HTDC_015 Alternative alloying concepts of hot work tool steels for application in die casting**
P. Niederhofer, F. van Soest, M. Gürcan, H.-G. Krull, T. Schneiders - Deutsche Edelstahlwerke Specialty Steel GmbH & Co. KG, Witten, Germany
- 14.00 ▶ **HTDC_011 A new hot-work tool steel for die casting molds with the highest surface requirements**
E. Meurisse, I. Schruff - Kind & Co., Wiehl, Germany
- 14.20 ▶ **HTDC_005 AM process simulation to optimise diecasting tooling**
N. Gramegna, D. Boscolo, G. Scarpa - EnginSoft, Padova, Italy
N. Nardo, F. Bonollo - Università di Padova - DTG, Padova, Italy
- 14.40 ▶ **HTDC_060 Hollow structural die cast parts using salt cores**
L. Kallien, M. Becker, T. Weidler - Aalen University of Applied Sciences, Aalen, Germany
- 15.00 ▶ **HTDC_072 The effect of deep cryogenic process on the microstructural and wear characterization of 2024 aluminium alloy reinforced with B4C-Co/Graphite by stir casting method**
Y. Kaplan, E. Tan, S. Aksöz - Pamukkale University, Denizli, Turkey
A. Mavi - Gazi University, Ankara, Turkey
D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 15.20 Break

Wednesday 23 June 2021

applications: the challenge for materials & processes

Chairperson _

- 15.40 ▶ HTDC_001 Residual stress analysis applied to HPDC aluminium components: a case study**
E. Fracchia, F.S. Gobber, M. Rosso - Polytechnic of Turin - Turin, Italy
Y. Kobayashi - Sinto Blastec Company Peening Center, Toyokawa, Japan
C. Mus - Endurance Overseas, Chivasso, Italy
- 16.00 ▶ HTDC_066 Evaluation of fracture toughness in HPDC aluminum alloys to estimate crashworthiness in automotive parts**
D. Frómeta, A. Lara, S. Parareda, M. da Silva - Eurecat Centre Tecnològic de Catalunya, Manresa, Spain
D. Casellas - Luleå University of Technology, Luleå, Sweden
- 16.20 ▶ HTDC_048 Save the weight with ZMM LPDC parts using casting simulation**
C. Viscardi - Ecotre Valente, Brescia, Italy
- 16.40 ▶ HTDC_008 Characterization of microstructural and mechanical properties of high-pressure die-cast EN AC 46000 alloy**
M. Tocci, L. Montesano, A. Pola - University of Brescia, Brescia, Italy
S. Ferri - Ghial, Castegnato, Italy

poster session: grain refinement and modification

Chairperson _

- 17.10 ▶ HTDC_022 The effect of Sr modification on feedability and impact strength in A356 alloy**
U. Gözl, M. Özyaydn, M. Uludag - Bursa Technical University, Bursa, Turkey
G. Tekin - Yesilova Holding, Cansan Aluminum, Bursa, Turkey
- 17.15 ▶ HTDC_069 Effect of grain refiner (AlTi5B1) on casting properties of EN AC 46000 alloy produced by HPDC method**
I. Sapmaz, G. Tekin - Yesilova Holding R&D Center, Bursa, Turkey
M. Uludag - Bursa Technical University, Bursa, Turkey
- 17.20 ▶ HTDC_039 Effect of yttrium on grain refinement and bifilm index in A356 alloy**
Ö. Kesen, D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 17.25 ▶ HTDC_028 Assessment of grain refiner quality and its effect on melt cleanliness**
Ö. Gürsoy - University of Padova, Vicenza, Italy
D. Dispınar - Istanbul Technical University, Istanbul, Turkey
- 17.30** End of second day

Thursday 24 June 2021

casting defects & molten metal treatments

Chairperson _

- 8.40 ▶ HTDC_026 Correlation between melt quality and machinability of Al9Si3Cu HPDC alloy**
H. Kalkan - Mercedes, Istanbul, Turkey
D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 9.00 ▶ HTDC_024 Determination of optimum casting temperature to improve casting quality in high pressure die casting**
E. Umay, M. Uludag - Bursa Technical University, Bursa, Turkey
Z. Aday, Ü. Ayyıldız - Prometal Hafif Metaller Döküm, Bursa, Turkey
- 9.20 ▶ HTDC_013 Improvement of bifilm index for liquid metal quality in Al- Si alloys**
S. Erdogan, R.S. Akan, M. Uludag - Bursa Technical University, Bursa, Turkey
R. Öz - Alcast Metal Sanayiye Ticaret, Bursa, Turkey
- 9.40 ▶ HTDC_073 Investigation of porosity formation in controlled solidified AISi10Mg**
S. Sirin, A. Demir - Sakarya Uygulamalı Bilimler Üniversitesi, Sakarya, Turkey
E. Kocaman - Zonguldak Bülent Ecevit Üniversitesi, Zonguldak, Turkey
- 10.00 ▶ HTDC_075 Investigations into the aluminium rotary degassing process become SMARTT - the basis for Foundry 4.0**
K. Berndt, R. Simon - Vesuvius, Borken, Germany
G. Muneratti - Vesuvius, Vermezzo, Italy

10.20 Break

from microstructure to performance

Chairperson _

- 10.40 ▶ HTDC_007 An extensive study on hot tearing of Al-Si alloys**
M. Uludag - Bursa Technical University, Bursa, Turkey / R. Çetin - KTO Karatay University, Konya, Turkey
D. Dispinar - Istanbul Technical University, Istanbul, Turkey / M. Tiryakioglu - Jacksonville University, Jacksonville, USA
- 11.00 ▶ HTDC_050 Temperature and microstructural-condition dependence for thermal diffusivity and electrical conductivity of a casting Al-Si-Cu-Mg alloy**
R. Wang, M.C. Poletti - Graz University of Technology, Graz, Austria
B. Stauder, R. Fernández Gutiérrez - Nemak Linz GmbH, Linz, Austria
C. Confalonieri, E. Gariboldi - Politecnico di Milano, Italy
- 11.20 ▶ HTDC_051 Effects of bismuth on the characteristics of eutectic Si particles in Na-modified A356 alloys**
Ö. Gürsoy, G. Timelli - University of Padova, Vicenza, Italy
- 11.40 ▶ HTDC_078 Effect of process parameters on the structure and properties of HPDC castings**
W. Kowalczyk, M. Górny, M. Kawalec, R. Danko - AGH University of Science and Technology, Kraków, Poland
- 12.00 ▶ HTDC_053 Fatigue properties and microstructural analysis of diecast AISi11Cu2(Fe) alloy: effect of surface finishing**
M. Merlin, D. Benasciutti, L. Lattanzi, A. Fortini - University of Ferrara, Ferrara, Italy
G. Timelli - University of Padova, Vicenza, Italy

Thursday 24 June 2021

poster session: alloying additions for high-performance castings - II

Chairperson _

- 12.30 ► **HTDC_019** Natural aging effect on the wear behavior of A380 cast alloy
M. Gurtaran, E. Pehlivan, B. Küçükelyas - C. Kaykilarli, M. Uludag - Bursa Technical University, Bursa, Turkey
- 12.35 ► **HTDC_038** The effect of Co addition on mechanical properties and microstructure in A356 aluminum alloy
O. Aydin, D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 12.40 ► **HTDC_040** Effect of Ni addition on mechanical and microstructural properties of A356 alloy
S. Temel, D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 12.45 Break

intelligent process for quality & economical sustainability

Chairperson _

- 13.40 ► **HTDC_023** A study to determine optimum casting quality of EN AC 46000 alloy in high pressure die casting
S. Erdogan, M. Uludag - Bursa Technical University, Bursa, Turkey
Ö. Öztürk, Ü. Ayyıldız - Prometal Hafif Metaller Döküm San., Bursa, Turkey
- 14.00 ► **HTDC_076** Layout and optimization of a complex 3D temperature control systems to increase the efficiency of an innovative high speed casting cell
W. Sokolowski, R. Aspacher, N. Clauss - Oskar Frech, Germany
G. Hartmann, H. Rockmann, H. Bramann - MAGMA, Aachen, Germany
- 14.20 ► **HTDC_017** A new smart trimming press to trim aluminium and magnesium components
R. Pederzoli - Meccanica Pi.Erre, Brescia, Italy
- 14.40 ► **HTDC_031** Applications of automotive lean production tools on casting industry
Ü. Ayyıldız - Prometal Hafif Metaller Döküm San., Bursa, Turkey
- 15.00 ► **HTDC_080** The new biocide regulations: their impact and innovative sustainable solutions
U. Schmidt-Freytag, A. Kelly - Henkel, Germany
- 15.20 Break
- 15.40 ► **HTDC_056** Adaptive motion technology and off line programming for surfacing finishing solutions
G. Cassanmagnago - ABB, Sesto S. Giovanni, Italy
- 16.00 ► **HTDC_012** An investigation on effect of rotary degassing-ultrasonic method on high pressure die casting products
R. Haghayeghi - Islamic Azad University, Tehran, Iran

Thursday 24 June 2021

poster session: casting defects and quality

Chairperson _

- 16.30 ▶ HTDC_009 Effect of degassing process on casting quality of AlSi12Fe alloy casting in permanent mold
E. Umay, G. Zorman, M. Uludag - Bursa Technical University, Bursa, Turkey
- 16.35 ▶ HTDC_010 Analysis of the effect of liquid metal quality on mechanical properties in Al8Si3Cu
G. Zorman, E. Umay, M. Uludag - Bursa Technical University, Bursa, Turkey
- 16.40 ▶ HTDC_027 The effect of bifilm size, location and orientation on the tensile properties of A356 alloys
Ö. Kesen, O. Aydin, S. Temel, F. Tezer, H. Sahin, M. Atik, D. Dispinar - Istanbul Technical University, Istanbul, Turkey
Ö. Gürsöy - University of Padova, Vicenza, Italy
- 16.45 ▶ HTDC_034 Role of metal quality and porosity formation in low pressure die casting of A356:
Experimental observations
D. Dispinar - Istanbul Technical University, Istanbul, Turkey
M. Colak - Bayburt University, Bayburt, Turkey
A. Nordmark, F. Syvertsen - SINTEF Materials and Chemistry, Trondheim, Norway
- 16.50 ▶ HTDC_004 Relationship between porosity and mechanical properties in heat treated Al-Si alloys
M. Çal, E. Pehlivan, M. Uludag - Bursa Technical University, Bursa, Turkey
- 16.55 ▶ HTDC_085 Formation and distribution of oxide-related defects in gravity AlSi7Cu0.5Mg alloy castings
G. Scampono, G. Timelli - University of Padova, Vicenza, Italy
R. Pirovano, S. Mascetti - XC Engineering, Italy
- 17.00 ▶ HTDC_014 Comparison of pore mechanisms of directionally solidified Al-Si alloys
C. Korkmaz, M. Uludag - Bursa Technical University, Bursa, Turkey
D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 17.05 ▶ HTDC_018 Investigation of the effect of heat treatment and fluid processes on mechanical properties of performed permanent mold casting of A380 alloys
M. Gurtaran, R.S. Akan, S. Erdogan, M. Uludag - Bursa Technical University, Bursa, Turkey
- 17.10 ▶ HTDC_029 Development of bifilm index for the assessment of melt quality and its use in LPDC casting of wheels
Y. Sagnak, A. Kaya - Cevher Wheels, Izmir, Turkey
D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 17.15 ▶ HTDC_030 Evaluation of provider quality and its influence on LPDC cast wheels
Y. Sagnak, A. Kaya - Cevher Wheels, Izmir, Turkey
D. Dispinar - Istanbul Technical University, Istanbul, Turkey
- 17.30 End of third day

Friday 25 June 2021

new scenarios for process simulation

Chairperson _

- 8.40 ▶ **HTDC_016 Integration of casting simulation with virtual dimensional control. Predictive and reliable stress simulation in HPDC**
L. Valente - Ecotre Valente, Brescia, Italy
- 9.00 ▶ **HTDC_032 Advanced solidification model for multicomponent alloys simulations**
E. Palo - XC Engineering, Cantù, Italy
- 9.20 ▶ **HTDC_047 Validation of a model for simulating T6 heat treatment of Al-Si-Mg casting alloys**
C. Ransenigo, M. Tocci, A. Pola - University of Brescia, Brescia, Italy
C. Viscardi - Ecotre Valente, Brescia, Italy
M. Serafini - Maxion Wheels Italia, Dello, Italy
- 9.40 ▶ **HTDC_033 Innovative and unconventional simulation approaches in support of the development of lightweight casting processes**
R. Pirovano - XC Engineering, Cantù, Italy
- 10.00 ▶ **HTDC_057 Investigation on effects of different casting parameters on filled mould volume percentage [or shrinkage behaviour] of steel die casting via using simulation software**
M. Uludag - Bursa Technical University, Turkey
C. Aydin - Döktas Dökümcülük Ticaret ve Sanayi, Turkey
E. Alan - Çemtas Çelik Makina Sanayi ve Ticaret, Turkey
- 10.20 ▶ **HTDC_082 Using casting process simulation to improve castings' environmental footprint**
H. Fransson - NovaCast Systems, Ronneby, Sweden

10.40 Break

hpdc supporting eco-sustainability and circular economy

Chairperson _

- 11.00 ▶ **HTDC_046 Development of a new process to recover aluminium from contaminated granulated or thin complex materials to employ for primary aluminium alloys**
I. Vicario, J. Antoñanzas Gonzalez, L. Yurramendi Sarasola, J.C. Múgica Iraola, A. Abuin Ariceta - Tecnalia Research & Innovation, Derio, Spain
- 11.20 ▶ **HTDC_058 Eco-sustainable lightweight automotive part manufacturing: GHGs-free die casting of brake leverage prototype made of AZ91D-1.5CaO magnesium alloy**
E. D'Errico, A. Gruttadauria - Politecnico di Milano, Department of Mechanical Engineering, Milan, Italy
G. Perricone, D. Casari - Brembo Breaking Systems, Stezzano
F. Pappada - Innsigth, Milan, Italy
- 11.40 ▶ **FINAL REMARKS AND OFFICIAL CLOSING OF HTDC CONFERENCE**
F. Bonollo, G. Timelli - University of Padova - DTG, Vicenza, Italy



Baraldi

THE NEXT RELEASE

HPDC DIE LUBRICANTS OPTIMIZATION



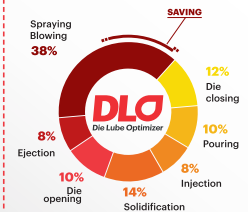
4 STEPS FOR THE BEST RESULTS

THE RIGHT AMOUNT OF DIE LUBRICANT APPLIED IN THE SHORTEST TIME POSSIBLE

- 1 DIE SURFACE TEMPERATURE MONITORING
- 2 DIE LUBRICATION CYCLE ANALYSIS
- 3 RANGE OF OPTIMIZER DIE LUBRICANTS



- 4 THE NEXT RELEASE OUR NEW CONCEPT



General information

HTDC Conference will be held completely online, on 22-25 June 2021, as virtual event in live streaming, on Zoom platform. Zoom is compatible with Windows, macOS, iOS, Android, Chrome OS, and Linux. For a better usage of Zoom, we recommend using the desktop client or the mobile app (both with free download).

language

The official language of the Conference will be English.

proceedings

Full papers will be published, after peer-review, on La Metallurgia Italiana – International Journal of the Italian Association for Metallurgy, on Nov-Dec 2021 issue and on February 2022 issue.

registration

ONLINE REGISTRATION

It is possible to register and pay by credit card online at the following link: [REGISTER ONLINE](#)

REGISTRATION FORM

Complete and return the registration form to met@aimnet.it [DOWNLOAD REGISTRATION FORM](#)

conference registration fees

EARLY REGISTRATION FEES (by June 4, 2021)

	Delegate	Speaker/Chairperson Scientific Committee Member
AIM members	Eur 180,00	Eur 150,00
NON members *	Eur 290,00	Eur 260,00
Students	Eur 140,00 (VAT included)	

STANDARD REGISTRATION FEES (after June 4, 2021)

	Delegate	Speaker/Chairperson Scientific Committee Member
AIM members	Eur 230,00	Eur 150,00
NON members *	Eur 340,00	Eur 260,00
Students	Eur 190,00 (VAT included)	

All above registration fees are revenue stamp included.

SOCI JUNIOR AIM:

La partecipazione per i Soci Junior AIM è gratuita se fatta entro il 4 giugno. Dopo tale data, sarà richiesto un contributo pari a € 50.

conference registration fees include

- Admittance to technical sessions
- (*) The NON members registration fees include AIM membership for the second half of 2021 and the year 2022.

payment and remittance

- by **bank transfer**, to the order of Associazione Italiana Di Metallurgia – AIM at “Intesa Sanpaolo S.p.A.”, branch no. 5500 – FIL ACCENTRATA TER S, Cod. IBAN IT14P0306909606100000145117, Swift code: BCITITMM
The transfer order must specify the name of the participant and the reference “HTDC”.
A copy of the transfer order must be sent to aim, together with the registration form.
- by **credit card** online: www.aimnet.it/htdc.htm

speakers registration

Registration for speakers is due by April 23, 2021. Speakers failing to register or to pay by the deadline will not be included in the program and their paper will not be published. We consider one speaker (presenter) for paper, co-authors must register as delegate.

SPEAKERS CANCELLATION AND REFUND POLICY

A refund, less 20% deduction for administrative costs, will be issued for written cancellations received before April 23, 2021. For speakers who notify their cancellation after April 23, 2021 or will not attend the Conference, a charge of 100% of the Conference fee will be withheld. Their papers will be published anyway.

cancellation and refund policy

A refund, less 20% deduction for administrative costs, will be issued for written cancellations received by June 4, 2021. For attendees who notify their cancellation after June 4, 2021 or will not attend the Conference, a charge of 100% of the Conference fee will be withheld.

organising secretariat



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NOTE OF THE PROGRAMME

This programme is not definitive and it may be slightly modified: title and authors, cancelled or added papers, chairperson, timetable or duration, etc. Possible changes in the programme will be communicated before the beginning of the Conference.



INTERNATIONAL
CONFERENCE

www.aimnet.it/htdc.htm

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