

INTERNATIONAL MAGMA USER MEETING 2022



October 19-21, Munich, Germany

Wednesday, October 19, 2022

19:00 **MAGMAwelcome**

Thursday, October 20, 2022

08:30 Registration

09:00 **Welcome and User Presentations I**

- **The Impact of Automatic Design Optimization on the Preliminary Evaluation of the Correlations Between HPDC Parameters and Casting Quality**
Alessandro de Mori, Meccanica Cainelli S.r.l., Italy
- **Simulation of Hot Distortion and Creep of 3D Printed Inorganic Sand Cores**
Jochen Wendling, BMW AG, Germany

10:30 Coffee Break

11:00 **User Presentations II**

- **Steel Casting Part Optimization and Method Development Using AUTONOMOUS ENGINEERING for a Printed Sand Mold Process**
Vinícius Úbeda da Rocha, Dipromet, Chile
- **Conformal Cooling and Heat Balancing of the Dies**
Çağatay Zadeoğlu, Kirpart Otomotiv San. ve Tic. A.S., Türkiye
- **Integration of MAGMASOFT® for Design of Cast Iron Component for WIND**
Van Viet Nguyen, Vestas Wind Systems A/S, Denmark

12:30 Lunch

14:00 **MAGMAworkshops**

● **Cast Iron**

- **Runner is not just for Filling**
Anil Gulec DEMİSAŞ Döküm Emaye Mamulleri Sanayi A.Ş., Türkiye
- **Benefits of the Simulation Results to Sampling for Cyclic Material Tests in DNAGuss**
Christian Pittel, Fraunhofer Institute for Structural Durability and System Reliability LBF, Germany
- **Sand Data Determination by Using Inverse Optimization**
Mathias Bodenburg, MAGMA GmbH, Germany
- **Casting Process Simulation in MAGMASOFT® and Loading Case Analysis in Ansys for a Planetary Carrier**
Ali Khalil, Hochschule Bonn Rhein-Sieg, Germany
- **From Horizontal to Vertical Line with Confidence**
Volkan Nesiboglu, Trakya Döküm San. ve Tic. A.S., Türkiye

● **Steel Casting**

- **New Possibilities and Ongoing R+D in MAGMA Steel**
Daniel Schmidt, MAGMA GmbH, Germany
- **Succeeding Stressful Times in Aşçelik**
Okan Balci, AS Celik Döküm Isleme San. Tic. Ltd. Sti., Türkiye
- **Cost Based Engineering – Optimizing Quality and Cost**
Gerald Richard, MAGMA Foundry Technologies Inc., USA

➤ **Getting Rid of Hot Tears by Correct Runner Design Selection**

Yücel Aydoğan, Pinar Döküm Sanayi ve Ticaret A.S., Türkiye

➤ **Useful Tips for Improved Simulations of Steel Castings**

Petr Kotas, MAGMA GmbH, Branch Office Czech Republic

● **Die Casting (HPDC)**

➤ **Virtual Fluid Dynamic and Thermal Optimization Study of the Die and Production Process for a High-End Gear Motor Housing Component**

Giampietro Scarpa, EnginSoft S.p.A., Italy

➤ **Weight Reduction & Topology Optimization**

Samet Şahin, Can Metal Enjeksiyon Döküm San.ve Tic.A.S., Türkiye

➤ **Optimization of the Shot Curve to Improve the Weldability of High Pressure Die Cast Components**

Sebastian Krischke, IFS, TU Braunschweig, Germany

➤ **Configurator for a Shot Chamber**

Klemen Prijanovic, Additherm d.o.o., Slovenia

➤ **MAGMAstress Setting up Deformable Jigs and Fixtures for the Heat Treatment Process**

Jake Edwards, Maxima Eng. & Software Services Ltd., UK

➤ **Autonomous Optimization of the 1st Phase**

Guido Dietrich, MAGMA GmbH, Germany

➤ **CT Scan vs. Simulation Results**

Bernhard Pruß, MAGMA GmbH, Germany

● **Non-Ferrous Applications**

(Permanent Mold/LPDC/Sand Casting)

➤ **How to Use MAGMASOFT® as Project Target Contributor in LPDC**

Mert Çelikkilek, Döktaş AŞ Manisa, Türkiye

➤ **Microstructure Modelling Aluminium Alloy**

Nofri Hasanudin, PT. Akebono Brake Astra Indonesia, Indonesia

➤ **Simulation-Based Machine Learning for LPDC-Process Analysis**

Boris Schulte, Martinrea Honsel Germany GmbH, Germany

➤ **A Method for Yield and Cycle Time Improvements in Al Alloy Castings Using Enhanced Conductivity Steel for Die Construction**

Alberto Vergnano, University of Modena and Reggio Emilia, Italy

➤ **Optimized Casting Program for Low-Turbulence Mold Filling on LPDC with MAGMASOFT®**

Edmundo Oliveira, Fill GmbH, Austria

➤ **Prediction of Pinhole Defects in Aluminum Alloy Sand Casting**

Takato HONMA, Kimura Chuzosho Co., Ltd., Japan



Core Making Processes

- **Core Box Design - Finding Guiding Principles Using MAGMA C+M**
Rune Hansen, Frese Metal og Stålstøberi A/S, Denmark
- **Reduction of Resin and Amine Consumption, Short Cycle Time**
Joern Schmidt, MAGMA Engenharia do Brasil Ltda., Brazil
- **MAGMASOFT® Level 3**
Alan Crawford, Waupaca Foundry, USA
- **Converting a Core Box for Cold Box to Using Inorganic Binder**
Stefano Tamelli, Unimolds S.r.l., Italy
- **Core Box Wear - Erosion Impact**
Lubos Pavlak, MAGMA GmbH, Germany
- **Optimized Core Shooting for a Motorcycle Suspension Casting**
Erhard Kaschnitz, Austrian Foundry Research Institute, Austria

Continuous Casting

- **First Experiences with MAGMA CC in US**
Gerald Richard, MAGMA Foundry Technologies Inc., USA
- **How Electromagnetic Stirring Influences Flow**
Lukas Esken, MAGMA GmbH, Germany
- **Learning World for MAGMA CC**
Constantino Krafthöfer, MAGMA GmbH, Germany
- **The Next Generation - Whats Coming Next**
Erik Hepp, MAGMA GmbH, Germany

17:00 End of Day 1

19:00 **MAGMAevening**

Friday, October 21, 2022

08:30 User Presentations III

- **Standardization and Automation in MAGMASOFT®: Making Life Easier**
Oleksiy Starykov, Bocar GmbH, Germany
- **No-Bake Mold Design Optimization for Sand Casting Through Simulation**
Marcos Paulo Ribeiro and Osvaldo da Silva Neto, Usipe Fundidos e Usinados, Brazil

09:30 The New MAGMASOFT® Version

Tristan Kotthoff and Felix Hirsch, MAGMA GmbH, Germany

10:30 MAGMAforums

- Geometry/Mesh & Optimization
- Result Assessment & Optimization
- Stress & Distortion
- Die Casting (HPDC)
- Cast Iron
- Steel Casting
- Non-Ferrous Applications
- Core Making Processes
- Continuous Casting Processes
- MAGMAacademy

12:30 Your Future with MAGMASOFT®

- **Ongoing MAGMA Research & Development**
Marc Schneider, MAGMA GmbH, Germany

13:15 Lunch

14:30 End of the User Meeting

MAGMA
Committed to Casting Excellence

