

General information

The congress incl. exhibition takes place virtual and live in Darmstadt: Wissenschafts- und Kongresszentrum "darmstadtium", Schloßgraben 1, 64283 Darmstadt.
Hotel contingent (self booking): Welcome Hotel Darmstadt

The congress aims at people from research & development, construction & design, production & quality assurance from mechanical, automotive and plant engineering as well as metal production and processing.

Optimized cast products

»InCeight Casting« is the first congress for overarching exchange of experience and knowledge of all disciplines involved in the product life cycle of „cast components“.

The aim is to develop a common understanding of the various requirements for high-performance and efficient cast products. Network with experts from design and product development, structural durability, non-destructive component testing, foundry technology and simulation!

Current information, registration and everything else about the congress: www.inceight-casting.com

Organizer

Fraunhofer Institute for Structural Durability and System Reliability LBF, Bartningstraße 47, 64289 Darmstadt, Germany

Partner



Structural durability



Foundry technology and simulation



Product development



Non-destructive testing

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Fraunhofer Institute for Structural Durability and System Reliability LBF

Program




InCeight Casting C⁸
International Congress of
the Foundry Industry
March 6-8, 2023

www.inceight-casting.com

Monday, March 6



11:00 a.m.: Arrival / Registration / Lunch

12:30 p.m.: Session 1

-  **Keynote: Digitalization in the Casting Process: Tasks, Needs & Applications** – Georg Geier, Siepelkamp Giesserei GmbH
-  **Influence of trace elements on microstructure and mechanical properties of ductile cast iron** – Julius Gogolin, Clausthal University of Technology & Tim Steingräber, Fraunhofer LBF
-  **Cast Control: AI-based explanations of casting defects linking process and quality inspection data** – Julius Mehringer & Henning Frechen, Fraunhofer IIS

02:15 p.m.: Network Coffee Break

03:00 p.m.: Session 2

-  **Study on the influence of mold coating thickness on coating thermal resistance, as-cast surface roughness and microstructure in AlSi alloy permanent mold casting production** – Fangtian Deng, Fraunhofer IGCV
-  **Funding opportunities for innovative research projects** – Jan Kremer, AiF InnovatorsNet

04:00 p.m.: Speed dating in groups involving virtual participants

06:00 p.m.: Social event




Departure by bus from darmstadtium to the locomotive shed and museum "Bahnwelt Darmstadt-Kranichstein"

06:30 p.m.: Start of social event with dinner and an introduction of the technology of steam locomotives

11:00 p.m.: Return from "Bahnwelt Darmstadt-Kranichstein"



Tuesday, March 7

08:30 a.m.: Session 3

-  **Keynote: Investigation of fatigue strength of laser-welded aluminum wrought and die-cast alloys** – Martina Zimmermann, TU Dresden
-  **Repair welding of spheroidal graphite cast iron** – Rian Holdstock, FORCE Technology & Masoud Alizadehshamsabadi, DTU
-  **Industry report: Optimizing the cost structure for large ductile cast iron components** – Tea Søre-Rabjerg, Siemens Gamesa Renewable Energy A/S & Pradheep Kumar T, Vestas Wind Systems A/S

10:15 a.m.: Network Coffee Break

11:00 a.m.: Session 4



-  **Statistical evaluation of fatigue tests of ductile cast iron** – Petra Becker, MATPLUS GmbH
 -  **Digital cast iron** – Erik Hepp, MAGMA Gießereitechnologie GmbH
- 12:00 noon: Lunch

01:30 p.m.: **Introductory Lecture: Linking casting simulation, computed tomography and fatigue strength: an industrial application** – Matteo Cova, SACMI S.C.

Panel discussion: Digitalization in foundry technology - Quality assurance through data-driven process optimization

03:00 p.m.: Network Coffee Break

03:30 p.m.: Session 5

-  **Metal casting meets smart systems: Integrating sensors and electronics as contribution to the digitalization of the foundry industry** – Dirk Lehmkus, Fraunhofer IFAM
-  **An interdisciplinary approach to local strength assessment for cast iron components** – Felix Weber & Vitali Züch, RWTH Aachen University




04:30 p.m.: Free availability with the possibility of discussion in small groups

06:30 p.m.: Congress Dinner at darmstadtium

00:00 p.m.: Closing



Wednesday, March 8

08:30 a.m.: Session 6

-  **Chunky graphite - Recognition, quantification, and impact on properties of spheroidal graphite cast iron (SGI) materials** – Wolfram Baer, Federal Institute for Materials Research and Testing (BAM)
-  **Investigation of the microstructure of ADI in thick-walled components and its influence on local mechanical properties** – Patrick Lachart & Eva Stolz, Clausthal University of Technology
-  **On the influence of local microstructure and residual stresses on predicted fatigue life of a ductile iron casting** – Nazar Adamchuk, HS Ansbach

10:00 a.m.: Network Coffee Break

10:30 a.m.: Session 7

-  **Compound casting and following process route** – Julika Hoyer, Technische Universität München
-  **Non-destructive testing of castings with the help of computer tomography (CT) using the BDG Reference Sheet P 203** – Andreas Harborth, Volume Graphics GmbH

12:00 noon: Closing words and subsequent snack

02:00 p.m.: Departure