

FRAUNHOFER INSTITUTE FOR STRUCTURAL DURABILITY AND SYSTEM RELIABILITY LBF

PRESS RELEASE

Staying innovative: Congress "InCeight Casting C⁸" offers interdisciplinary exchange around cast components from March 6 to 8, 2023

By using cast components, decisive competitive advantages can be achieved along the value chain. The high-quality standard of cast products and the high degree of flexibility offered by. the usable materials and technologies in the foundry industry are unique. On the other hand, there are challenges due to the energy crisis and material bottlenecks, which limit competitive advantages and increase the need for efficiency improvements. In addition to digitalization, efficiency improvements can be driven forward in particular by increased networking of those involved in the development process from industry and research. The international congress "InCeight Casting C⁸", from March 6 to 8, 2023 in Darmstadt, offers for the second time this interdisciplinary exchange of knowledge and interests with the aim of learning from each other and thus remaining fit for the future with specialist lectures, workshops and panel discussions.

The variety of cast parts ranges from small components weighing less than one gram for the medical, electrical engineering and automotive industries to components weighing several hundred tons for mechanical and plant engineering. As in many industries, digitalization in product development and production also requires foundries and the application industry to adopt new approaches and to process and, above all, assess an increasing amount of measurement data. This requires the implementation of new processes. "Increasing automation and digitalization are enlarging the circle of people involved in the product development process of cast components and influencing the quality assurance of cast products. These current challenges must be understood and supported by different disciplines," explains Dr. Christoph Bleicher, congress director of "InCeight Casting C⁸" and director of the division Structural Durability at Fraunhofer LBF.

Maintaining decisive competitive advantages

The energy crisis, material bottlenecks and staff shortages are making life difficult for most small and medium-sized companies. To maintain the in-depth know-how and high innovative capacity of the foundry industry, interdisciplinary networks, the exchange of information on current topics, new contacts and ideas for innovation

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projects are essential for the resilience and competitiveness of the foundry sector. The current challenges will only be mastered as a joint effort by all the players involved.

Interdisciplinary exchange supports small and medium-sized companies

A contribution to active networking and a targeted exchange of all disciplines involved in the product development process is made possible by the international congress "InCeight Casting C⁸". The Fraunhofer Institute for Structural Durability and System Reliability LBF in Darmstadt hosted this congress for the first time in 2021. The German Foundry Industry Association BDG, the German Society for Non-Destructive Testing DGZfP, the Det Norske Veritas Group DNV and the German Engineering Federation VDMA support this congress.

Well-founded expert presentations, selected by a scientific program committee, on the topics of "Product Development", "Foundry technology and simulation", "Structural durability" and "Non-destructive testing" offer participants in-depth insights: for example, on the tasks and needs of digitalization in the casting process, on strength increases using new materials or on the latest developments in quality assurance.

The central objective of the congress is to create networks to gain a feeling for and understanding of each other's concerns, needs and requirements beyond one's own discipline, which concern them in the design, dimensioning, simulation, casting, or quality assurance of any cast component. Voices from the first congress confirm the concept: "The participants in the interdisciplinary forum for casting come in roughly equal numbers from the areas of foundries, casting users and research - perfect for cross-disciplinary exchange", and "We are convinced by the concept and see the 'InCeight Casting' congress as a relevant event for our industry".

More Information and registration www.inceight-casting.de

To attend the meeting for the purpose of reporting, please feel free to contact us.

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Interdisciplinary exchange for competitive cast products. The international congress with exhibition "InCeight Casting C8" in Darmstadt combines competences, bundles knowledge, and motivates the industry. Photo: Fraunhofer LBF, Ursula Raapke

Fraunhofer LBF in Darmstadt has stood for the **safety and reliability of lightweight structures** for more than 80 years. Today, with its expertise in the areas of structural durability, system reliability, vibration technology and polymer technology, the Institute provides solutions for three of the most important cross-cutting issues of the future: lightweight design, functional integration and cyberphysical mechanical engineering systems. The focus here is on solutions to social challenges such as resource efficiency and emission reduction as well as future mobility, like e-mobility and autonomous, networked driving. Comprehensive skills ranging from data acquisition in real operational field use to data analysis and data interpretation, in addition to deriving specific measures to design and improve material, component and system properties form the basis for this. Customers come from automotive and commercial vehicle construction, railway transport engineering, shipbuilding, aviation, machine and plant construction, power engineering, electrical engineering, medical engineering, and the chemical industry. They benefit from the proven expertise of 400 employees and cutting-edge technology accommodated in more than 17,900 square meters of laboratory and experimental space.

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