

# PRESS RELEASE

## Simufact and MAGMA: Pushing forward the Process Chain in Casting and Forming Simulation

**Hamburg/Aachen (Germany), July 16, 2018** - Simufact Engineering GmbH, an MSC Software company, and MAGMA Giessereitechnologie GmbH are collaborating to push forward the efficient, state-of-the-art optimization of the manufacturing process chain from casting to forming. MAGMA and Simufact have developed a new interface between casting process, annealing and forming simulation, which enables the transfer of simulated local properties of the cast part to the subsequent forming process simulation. The innovative interface is offered by both companies, along with their new software releases MAGMASOFT® Rel. 5.4 and Simufact Forming 15.

MAGMASOFT® allows for realistic starting conditions of forming simulation as it predicts various local properties as well as defects in the casting or ingot. This helps to achieve the essential improvements for the final part quality since local properties or defects heavily impact the subsequent forming process. The new approach enables the design of a robust forming process. Potential risks that originate from shrinkage porosities inside the workpiece can now be identified early in all processes and for any casting materials like steels, aluminum or others.

MAGMASOFT® is capable of establishing robust process conditions and the best possible layout of a casting process for an optimized product quality using Autonomous Engineering. All aspects of the casting process are considered, including pouring, solidification, removal of the die and cooling down of the casting. The simulation delivers various criteria describing the quality of a casting part, such as shrinkage distribution, porosity, macro segregation, and inclusions at the casting surface. It also allows assessing residual stresses, risk for cracks and local material properties such as tensile strength or ductility.

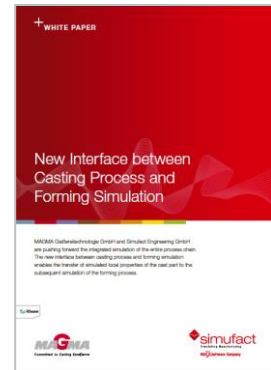
Simufact provides proven process simulation solutions for the design and optimization of forming, thermal and mechanical joining as well as additive manufacturing processes. The use of Simufact simulation tools helps customers significantly reduce production development and operational costs.



## White Paper available for download now:

5-pages White Paper providing more detailed information on the new interface and the integration of casting process and forming simulation.

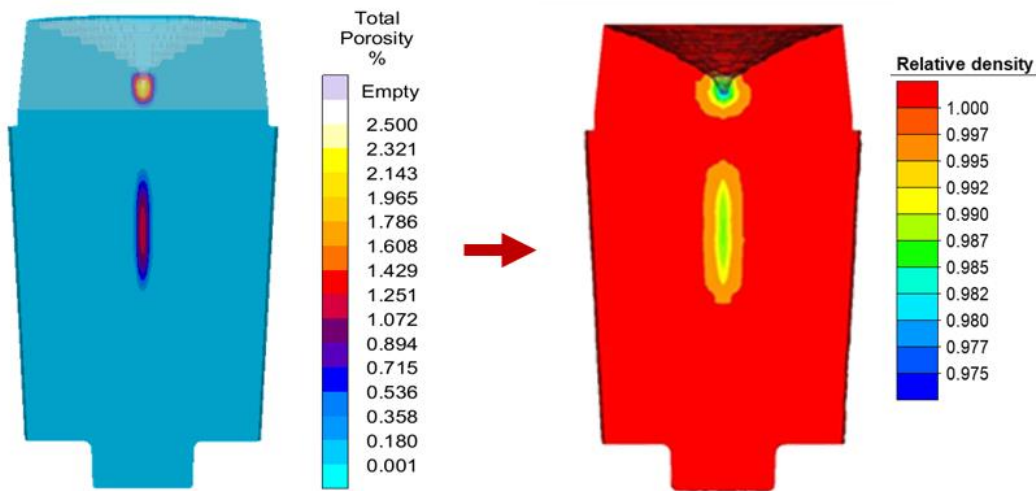
<https://www.simufact.com/registration-whitepaper-magmasoft.html>



## Press Pictures

For download of press pictures please go to the Simufact website:

<https://www.simufact.com/news-detail/simufact-and-magma-pushing-forward-the-process-chain-in-casting-and-forming-simulation.html>



**Caption: Mapping of porosity result from MAGMASOFT® to the relative density in Simufact Forming**

## About MAGMA

MAGMA offers comprehensive solutions to the metal casting industry, casting buyers and casting designers world-wide.

MAGMA's range of products and services includes the simulation software MAGMASOFT® autonomous engineering for virtual designs of experiments and autonomous optimization of casting processes as well as comprehensive engineering services for casting design and process optimization. Today, MAGMA's software is used by companies all over the world for cost-effective casting production, reducing quality costs and establishing robust processes for all applications, particularly in the automotive and heavy industries.

With the MAGMAacademy, MAGMA provides extensive educational offerings including trainings, workshops and seminars both for MAGMASOFT® users and for users of casting process simulation results and virtual casting optimization.

MAGMA Giessereitechnologie GmbH was founded in 1988 and is headquartered in Aachen, Germany. A global presence and support are guaranteed by offices and subsidiaries in the USA, Singapore, Brazil, Korea, Turkey, India, China and the Czech Republic. Additionally, more than 30 qualified partners represent MAGMA around the world.

[www.magmasoft.de/en](http://www.magmasoft.de/en)

## About Simufact

Simufact Engineering – an MSC Software company – is a global operating software company providing process simulation solutions and services to manufacturing industries. More than 20 years' experience with providing simulation solutions for the design and optimization of manufacturing techniques in metal processing and a dynamically growing customer base exceeding a number of 800 customers have made the Hamburg (Germany) headquartered company a leader in this business area. The software primarily aims at the automotive industry, mechanical engineering, aerospace industry and their respective suppliers. Typical fields of application for Simufact software are hot forging, cold forming, sheet metal forming, rolling, ring rolling, open die forging, mechanical joining, heat treatment, different welding processes, and additive manufacturing. Learn more at [simufact.com](http://simufact.com) and follow us @Simufact.

*Simufact, Simufact Forming, Simufact Welding, and Simufact Additive are trademarks or registered trademarks of Simufact Engineering GmbH. All other trademarks belong to their respective owners.*

### Contact:

Volker Mensing  
simufact engineering gmbh  
Director Marketing & Communications  
+49 (0)40 790 128-160  
[volker.mensing@simufact.de](mailto:volker.mensing@simufact.de)

Anja Pretzell  
MAGMA Giessereitechnologie GmbH  
Press Relations  
+49 (0)241 889 01-9613  
[a.pretzell@magmasoft.de](mailto:a.pretzell@magmasoft.de)

