New High Pressure Die Casting Capability in CD-adapco's STAR-Cast v11.02 Improves Quality and Reduces Cost of Automotive Manufacturing

High Pressure Die Casting module helps casting engineers design stronger, lighter and higher quality casted parts

New York and London (PRWEB) March 22, 2016 -- CD-adapco, a global provider of multidisciplinary engineering simulation and design exploration software, today announced the availability of STAR-Cast v11.02, the casting simulation add-on for STAR-CCM+®. STAR-Cast features a new High Pressure Die Casting module, providing casting engineers with an accurate and user-friendly tool for designing stronger, lighter and higher quality casted parts.

High Pressure Die Casting is a fast and inexpensive process for mass manufacturing of precision components, resulting in excellent dimensional accuracy and requiring minimal machining. However, defects such as gas inclusions and misruns are hard to control and remain a challenge. This process has traditionally also been difficult to simulate due to the complexity of the physical processes including multiphase flows consisting of both melt and gas.

STAR-Cast is a casting dedicated simulation software resulting from a strong partnership between Access e.V. and CD-adapco. Drawing on CD-adapco's expertise in thermal-fluid simulation and Access' experience in casting and metallurgy, STAR-Cast integrates industry-leading CAE technology with the detailed models required for casting, enabling highly accurate simulation of interactions between molten metal and air. By resolving all the physics at once, engineers can now get a better understanding of the complete High Pressure Die Casting process using STAR-Cast v11.02 and discover better designs, faster.

"High Pressure Die Casting is quickly becoming the manufacturing process of choice for mass production of parts in the automotive industry," according to CD-adapco Senior VP of Product Management, Jean-Claude Ercolanelli. "More and more, companies are turning to simulation to optimize these complex processes with the goal of obtaining repeatable product quality and reducing manufacturing costs. STAR-Cast v11.02 has all the capabilities in place to achieve just that."

In addition to the new High Pressure Die Casting module, STAR-Cast v11.02 incorporates enhancements that streamline simulation workflow and increase productivity for casting simulations in general, including:
> Overall improvement of user experience, streamlining the setup of all casting processes.
> Reduced turnaround time of casting simulations with a new compressibility feature and smarter determination of number of inner iterations required per time step.
> Easier material handling and manipulation, including a brand new material database builder for integration of proprietary materials into the customer's material database.

About CD-adapco
CD-adapco (http://www.cd-adapco.com) is a global engineering simulation company with a unique vision for Multidisciplinary Design eXploration (MDX). Engineering simulation provides the most reliable flow of information into the design process, which drives innovation and lowers product development costs. CD-adapco simulation tools, led by the flagship product STAR-CCM+®, allow customers to discover better designs, faster. The company's solutions cover a wide range of engineering disciplines including Computational Fluid Dynamics (CFD), Computational Solid Mechanics (CSM), heat transfer, particle

dynamics, reacting flow, electrochemistry, acoustics and rheology. On average, CD-adapco increased its revenue at constant currencies by more than 12 percent annually over the past three fiscal years. CD-adapco employs over 900 talented individuals, working at 40 strategic locations across the globe.

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