Reduce Turnaround Times with Casting Simulation Solution ESI ProCAST 2016

Latest Enhancements Help Increase Productivity for Gravity Casting and High Pressure Die Casting

Paris, France – October 6, 2016 – ESI Group, a leading innovator in Virtual Prototyping software and services for manufacturing industries, announces the new version of its casting simulation software ESI ProCAST; a Virtual Manufacturing solution of ESI that enables foundries to improve the design and quality of the parts they produce. With ESI ProCAST, they're able to predict manufacturing defects early and without the need for costly physical try-out. Consequently, they can correct part design and manufacturing processes well-ahead of production, achieving lower scrap rates and delivering quality parts in a consistent way. ProCAST 2016 promises even quicker turnaround times with new workflows dedicated to Gravity Casting and High Pressure Die Casting. Set-up time for gravity casting — the most widespread sand casting process — is reduced to just a few minutes, while the workflow for high pressure die casting addressed machine selection and bridges the gap between design and production to deliver increased efficiency on the shop floor.

Casting simulation helps industrial manufacturers and foundries comply with new and increasingly stringent market expectations and achieve the highest quality and productivity possible. To that end, ESI ProCAST provides a complete solution, covering all casting processes and the alloys used in diverse industry sectors and the latest 2016 version focuses on key industrial challenges specifically related to sand, investment and die casting processes in the automotive, aerospace and heavy industries.


Image: Fully digital Colosio casting machines - for die casting of aluminum, brass, zinc and magnesium alloys.

In regard to sand casting processes, ESI ProCAST 2016 has been enriched with a dedicated workflow for gravity casting; enabling simulation set-up within minutes. Taking all process parameters into account to deliver highly precise results, this step-by-step approach can be customized to fit any foundry's specific requirements and processes, delivering improved usability when repeating tasks. The new functionality is easy to use and can be mastered by any foundry man within a few days.

Another notable enhancement to ESI ProCAST 2016 is the introduction of the machine selection workflow that draws on a dedicated database for High Pressure Die Casting (HPDC) machines, including the Colosio machines. The new functionality enables the user to define the operating point and operating zone for any machine, using the Pressure (P)-Flow Rate(Q)² graph. This information is linked to ProCAST's solver to achieve virtual piston control in real time. Enabling a user to set-up parameters just as on the real machine, this enhancement provides a considerable time gain for process-design, and delivers the possibility to run a virtual benchmark and select the appropriate machine for specific jobs.

"Finally, a die casting machine and a simulation software are able to communicate properly to facilitate the lives of foundries. Transforming reality into virtual and vice versa is no longer just a project, but a reality for all our customers," says **Davide Colosio**, CEO of Colosio S.r.l
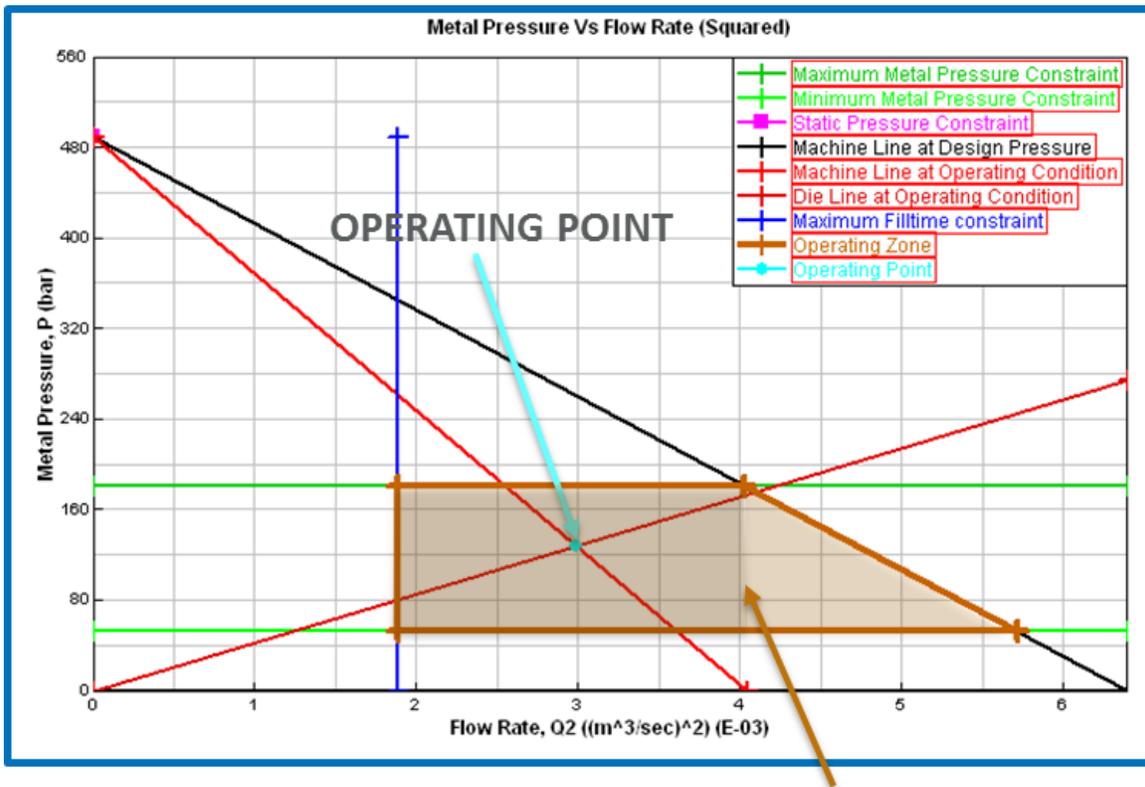
Image: Pressure(P)-Flow Rate(Q)² Graph, as seen in ESI ProCAST, showing the operating point & operating zone on a Colosio PFO 750 machine.
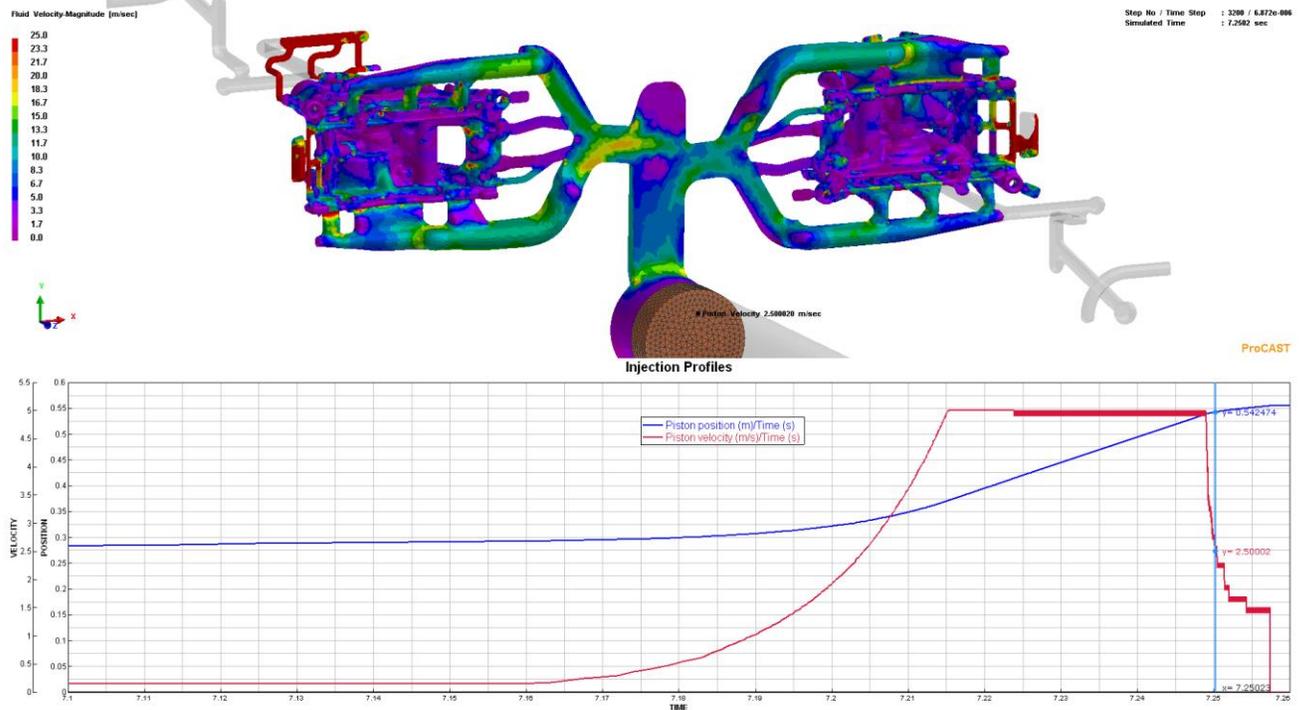
Image: ESI ProCAST simulation results using the new Real Time Piston Control feature.

For more information about ESI ProCAST, please visit www.esi-group.com/casting or contact your nearest ESI office.

Join ESI's customer portal myESI to get continuously updated product information, tips & tricks, view the online training schedule and access selected software downloads: https://myesi.esi-group.com

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About ESI Group

ESI Group is a leading innovator in Virtual Prototyping software and services. Specialist in material physics, ESI has developed a unique proficiency in helping industrial manufacturers replace physical prototypes by virtually replicating the fabrication, assembly and testing of products in different environments. Today, coupled with Virtual Reality, animated by systems models, and benefiting from data analytics, Virtual Prototyping becomes immersive and interactive: ESI's clients can bring their products to life, ensuring reliable performance, serviceability and maintainability. ESI solutions help world-leading OEM's and innovative companies make sure that their products will pass certification tests - before any physical prototype is built - and that new products are competitive in their market space. Virtual Prototyping addresses the emerging need for products to be smart and autonomous and supports industrial manufacturers in their digital transformation.

Today, ESI's customer base spans nearly every industry sector. The company employs about 1100 high-level specialists worldwide to address the needs of customers in more than 40 countries. For more information, please visit www.esi-group.com/

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