JEGAN uses ESI's Casting Simulation Suite to optimize its HPDC process

The simulation of foundry processes reduces the number of physical prototypes.

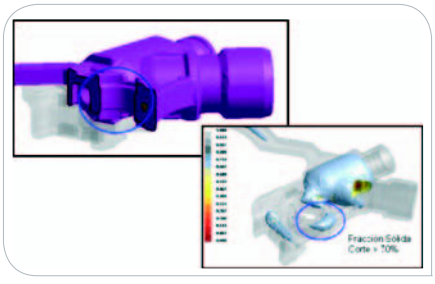
To remain competitive in the global marketplace, components manufacturers are constantly being asked to focus on Research and Development to increase efficiency while lowering production costs and shortening delivery times. JEGAN, one of the main suppliers of Zamak High Pressure Die Casting (HPDC) components for the European and American automotive industry, as well as for the electronics, domestic appliance and construction equipment industries, is thus implementing new technologies to enhance its competitiveness.

In JEGAN's production facility, the various stages of casting production are integrated with a range of alternative surface finishing processes to produce finished castings components and assemblies. In its effort to allocate resources more efficiently for a shorter time to market and to reach product excellence, JEGAN uses ProCAST and QuikCAST, ESI's Casting Simulation Suite. The suite offers a comprehensive set of dedicated applications for the foundry industry to improve casting yield and quality.

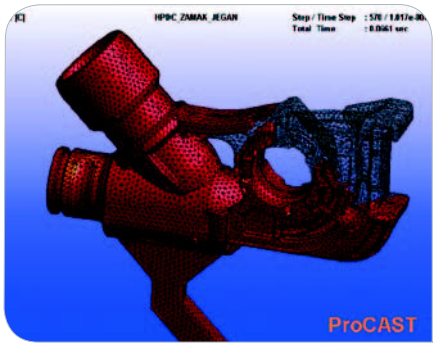
Indeed, while QuikCAST focuses on the basics of casting such as filling, solidification and porosity prediction, ProCAST, based on Finite Element technology, is able to predict deformations and residual stresses, microstructure, grain structures and also address more specific processes such as semi-solid modeling, core blowing, centrifugal casting, lost foam and continuous casting. "ESI's casting set of applications assists us in simulating foundry processes, and thus providing answers to questions that arise in the initial phase of the projects. It not only allows us to solve filling or porosity problems, but also helps us in taking decisions on the design of the filling systems, vents, and overflows," said **Bart Goes**, Project Coordinator, JEGAN.

> "ProCAST and QuikCAST give us the ability to see the injection as if we were inside the mold. With ESI's Casting Simulation Suite, we actually reduce the number of physical prototypes, which means significant cost and time saving."
>
> **Bart Goes,**
> Project Director,
> JEGAN

JEGAN is supported by ANÁLISIS Y SIMULACIÓN, ESI's trusted engineering partner for the sale, support and training of ProCAST and QuikCAST in Spain and Portugal. ANÁLISIS Y SIMULACIÓN has over 17 years of experience in the implantation of solutions inside the foundry industry, including design and simulation of all process types (gravity, LPDC and HPDC) and employs over 60 high-level specialists covering different engineering areas.



Shrinkage porosity analysis during solidification
Shrinkage porosity result (left)
Liquid pockets formation (right)



Temperature contour during filling

ABOUT JEGAN

JEGAN began its activity in 1972 in the field of parts produced by Pressure Die Casting and utilize today the latest technology in Hot Chamber die casting machines. JEGAN is headquartered in Itziar, Spain and employs 60 people.

www.jegan.es

► for more information:
www.analisisysimulacion.com
www.esi-group.com/casting