ALL IN ONE

Comeback of Cast Monoblock Impellers

MONOBLOCK – Still a most innovative technology!

Over the past decades, manufacturing the impeller by welding has become the industry standard. An efficient and reliable alternative has recently become available to OEMs again. Back to the origin and yet brand new: the cast monoblock impeller.

WHAT CHANGED?

- Increased automation in component production e.g. 3D sand printing and robot welding
- Digitalization and linking of production processes e.g. in melting operations
- Component simulation development partner of MagmaSoft

Result: Improved control over the processes, higher and above all more reliable product quality, shorter lead times

Our Portfolio

Steel castings for Francis, Kaplan and Pelton Turbines, as well as Pumped Storage Power Plants:

- Impeller (Monoblock/Bi-Block)
- Francis Crown, Band, Blades
- Kaplan Hub & Blades
- Wicket Gates/Guide Vanes
- Blade Levers
- Propellers
- and many other items

ADVANTAGES

Efficiency Increase

- Faster production and faster delivery
- Use your resources for other purposes and thus generate added value

Quality Improvement

- Highly accurate castings and reliably reproducible
- The component is exposed to the lowest possible residual stresses

Sustainability

- Protect the environment by eliminating wood patterns, reducing logistical effort and optimizing energetic expenditure for heat treatment cycles

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3D SAND PRINTING (3DSP)

Innovative 3D-printing process for the production of sand molds for complex castings.

The 3DSP-process enables the production of sophisticated castings without having to make a pattern. It ensures consistent quality, repeatability, shorter lead times and minimizes the risk of errors or defects in the production of cast parts.

PROCESS RELIABILITY

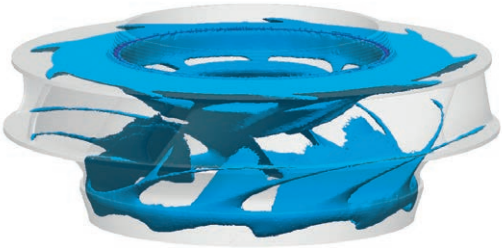
Qualitative excellence and innovation

Recent investments in pioneering technologies such as the robot welding or digitalization of the melt shop linked with the metallurgical processes contribute to a higher level of automation. Thus increasing operational reliability along the entire production.

SIMULATION

As a development partner of MagmaSoft, we have been pioneers in the simulation of casting technology for decades. Precise planning at the beginning of production is the key to success.

Identifying the right stock material and casting technology is particularly important for new product developments. Optimum design is also an essential factor when it comes to keeping the time needed for machining the castings to a minimum.



voestalpine Foundry Group

As an international player in the foundry industry, voestalpine Foundry Group, with its sites in Linz (AUT), Traisen (AUT) and the joint venture in China, has made a name for itself worldwide.

With a broad portfolio of steel castings, including nickel-based alloys, it offers customized solutions in areas ranging from energy production, such as hydro, offshore/wind or oil & gas, to machinery and railroad systems. The weight range goes from a few kilograms to 200 tons.

Please find further information at

voestalpine Foundry Group
voestalpine-Straße 3
4020 Linz, Austria
www.voestalpine.com/giesserei-gruppe/en

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