



# A positive forecast

With a reputation for bringing cost and quality improvements to the global foundry industries, **Foseco** looks to improve its offer to the investment casting sector in a market facing increasing pressures

## Foseco

### Products:

Multinational manufacturer of consumable products and solutions for the global foundry industry

### Sites:

650

[www.foseco.com](http://www.foseco.com)

**F**ounded in 1932, Foseco is the foundry division of the leading global metal flow engineering group Vesuvius plc. With a focus on continuous innovation, the division acts as a solutions provider applying its expertise and knowledge to help foundries increase efficiency by improving performance, reducing material usage and introducing automation. "Our strengths lie in the skills of our people and application ability," begins International Marketing Manager, Nick Child. "This relates to a good understanding of the industry, our customers' processes and that they need to improve their business. It is our ability to define and solve customer problems, to provide supporting products and services and produce more cost effective and higher quality products, which sets us apart. Our ambition is to provide solutions partnering as opposed to just selling products."

As a division of the globally successful Vesuvius

engineering group, Foseco is not only afforded the financial support of a company that turned over £1.4 billion in 2014, but also the world leading expertise and reputation within the metal flow industry. By applying lean manufacturing across all its sites and taking advantage of an unrivalled and efficient supply chain, the group is able to occupy a leading cost position, which it generously passes on to its array of customers. Within an industry that is becoming increasingly globalised, Vesuvius' high flexibility to encourage and maintain growth within emerging markets is also crucial to the group's ability to well-serve the industry. However, perhaps most important to the company's ongoing success and ability to serve its markets is its commitment to innovation. Maintaining its position as a technology leader is central to the company's overall strategy and informs everything it does.

Research and development has also been a key part of Foseco's historic success and growth. As

R&D Center, Netherlands



*Nick Child, International Marketing Manager*

“We have an expanding portfolio of technologies, which can help the foundryman address many of the key challenges through the optimisation of energy usage, increased metal cleanliness, improved casting quality and higher casting yields

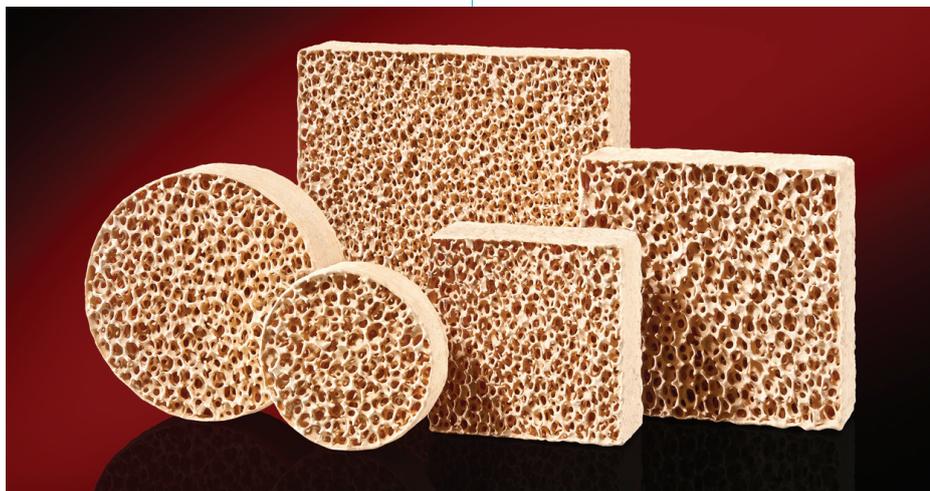
Nick expresses: “Foseco has established a track record for product and process innovations for the foundry industry since the beginning. These include exothermic and insulating feeding systems, filtration of liquid alloys, direct pour technology, solidification simulation software, non-ferrous metal treatment and degassing systems, metal stream inoculation, electrostatic coatings, environmentally friendly binders and insulating ladle lining systems.” In 2014, the company opened up a dedicated and more centralised R&D Centre in Enschede in the Netherlands to complement existing facilities throughout Europe and the US to focus on blue-sky innovation, as the company looks to expand its operations on a global scale.

It is this commitment to innovation that allowed Foseco to enter into the industry of investment casting. “Foseco’s core business for many years has been iron, steel and non-ferrous foundries employing resin bonded sand, green sand and die casting processes,” explains Nick. “However, following the development of STELEX ceramic foam filters in 1988, Foseco established a business in the investment casting sector with filters, exothermic compounds and insulating ladle linings. Following the acquisition by Vesuvius in 2008, the portfolio expanded to include

furnace linings, crucibles and porous plugs.”

The appeal of the investment casting industry is clear to see for Foseco as its reputation to help companies achieve greater efficiency and quality is crucial in today’s challenging foundry industry. Nick explains that the investment casting sector is currently healthy as it continues to produce high value and technically advanced castings. As such the sector is currently experiencing strong growth of five to six per cent per annum. However, as the foundry industry in general develops at a rapid rate in the Far East, long standing companies in the West are having to turn to higher quality, higher integrity and more difficult to produce specialist products in order to maintain the high value, high technology offering of their businesses. As such, the investment casting industry is facing pressures from rising quality demands, globalisation, threats from alternative technologies, environmental compliance and increasing energy costs. Foseco prides itself on being able to help its customers overcome these challenges.

“We have an expanding portfolio of technologies, which can help the foundryman address many of the key challenges through the optimisation of energy usage, increased metal cleanliness, improved casting quality and higher



casting yields," says Nick. "Our engineering capabilities can also assist in the drive to improve process control in key areas, such as melting, transfer and mould filling"

At this year's quadrennial GIFA exhibition in Dusseldorf, Foseco launched its latest innovation, which specifically targets the investment casting market. "The STELEX ZR ULTRA finer porosity zirconia ceramic foam filters are the latest addition to the filtration portfolio from Foseco," explains Nick. "This development allows finer porosity filters

to be used to achieve improved levels of filtration efficiency while maintaining high metal flow rates into the mould. Essentially, we have developed a product based on a traditional concept that allows a higher level of filtration efficiency to be achieved without slowing down the metal flow, which is really important to investment foundries."

Alongside this latest innovation, the backing of Vesuvius' vast range of refractory solutions suitable for melting steels and super-alloys gives Foseco the knowledge and experience to suit the specific and

highly demanding needs of the investment casting foundry. The company also offers porous plugs to be deployed in melting furnaces to remove unwanted inclusions and crucibles specifically designed for application in vacuum melting furnaces. A variety of insulating ladle linings to provide temperature control and reduce the need to superheat alloys, thus saving energy and avoiding temperature related defects in the finished casting, are also present in Foseco's specialist offering. To complete the line-up it has also developed high purity FERRUX exothermic feeding compounds, to optimise yield and avoid expensive shrinkage related defects in high alloy and super alloy casting applications.

As a member of the EICF, Nick is quick to praise the efforts of the federation in an industry that remains vital to the global casting needs, but needs more attention brought to it. "The investment casting industry needs to have a unified approach to further grow the awareness of its business and products, and grow together for further improvement," he says. "The EICF is a significant mechanism for doing this, and by supplying the technical forums that they do, it is a wonderful exchange of information and therefore we believe the federation is extremely important." ❄



**NEW!**  
STELEX\* ZR *ULTRA* fine  
porosity framed filters



# Invest with Foseco

STELEX ZR *ULTRA* fine porosity framed zirconia filters are the latest addition to Foseco's growing range of products and services for investment casters.

Whether it be reducing energy consumption, enhancing metal cleanliness, driving casting quality or improving yield, Foseco has the solutions to meet today's challenges.

So, to release your true potential: **invest with Foseco.**

- + Zirconia filters
- + Crucible liners
- + Furnace linings
- + Ladle linings
- + Porous plugs
- + Feeding compounds

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