

First for Filtration: the FOSECO story

It's a FOSECO "first" that has transformed modern metal casting. From its introduction twenty one years ago, the FOSECO filter has enabled castings to be poured with greater productivity, to higher quality standards, at lower scrap rates. Machining costs have been reduced, and advances like thin wall castings have been supported. FOSECO has supplied more than four billion filters from its manufacturing units across the world, and continues to provide the application and methoding support that helps foundries put filters to work to deliver real added value. The new STELEX Pro carbon bonded ceramic filter, to be launched at GIFA 2003, is the latest development in a line of Foseco filtration "firsts" that started in 1982...



First SEDEX

It was the year that the much-publicised but ill-starred DeLorean sports car met its end, just a few months after its launch. That year, 1982, another significant and far more lasting development was taking place in the automotive industry: FOSECO were introducing the first SIVEX and SEDEX filters, products that were to have an extraordinary impact, not just in the automotive industry, but wherever metal was poured.



SEDEX now

From FOSECO's introduction of casting filtration over twenty years ago, filters have become an essential component in the production of quality steel, iron and non-ferrous castings worldwide, delivering dramatic cost savings and quality superiority with a product that is easy to apply. At the heart of its success is FOSECO's leadership in all aspects of filtration technology, with ongoing development and manufacture of filters for every type of casting as well as a depth and breadth of application expertise unrivalled elsewhere. With comprehensive analytical resources, FOSECO provides full technical support to help the foundryman solve just about any metal pouring problem. Additionally, manufacturing facilities across the world provide reliability of supply with the highest standards of product integrity and quality. This is why FOSECO has supplied more foundry filters than anyone else over the last two decades.

This is the success story that started twenty years and four billion filters ago. It continues today.

Early days

The FOSECO SIVEX F filter for aluminium casting was launched in 1982, after a development and trialling process that had taken over two years. It was quickly followed by SEDEX iron casting filter, a product still going strong more than twenty years later. STELEX S filters were introduced for steel

casting a few years later, to be followed by the STELEX ZR filter in 1991, a filter using zirconia ceramic on a foam matrix. During this period, FOSECO also introduced the patented KALPUR system, integrating a ceramic foam filter in a sleeve, the so called direct pouring of a mould and this is enabling gating systems to be eliminated and production times reduced.

In 1992 the SIVEX FC filter was introduced, solving the problem of contamination through the break-up of the materials used in the SIVEX F filter. The new material used in the SIVEX FC filter is lighter than aluminium so that it floats to the top and can easily be removed on remelting. By 1996 the STELEX ZR filter had become so widely accepted that the original STELEX S product was phased out. Seven years later the new STELEX Pro filter is further

increasing filtration possibilities. Much lighter in weight, this new uniquely bonded ceramic filter reduces heat loss and enables steel to be poured at lower temperatures, delivering energy savings. So impressive have been the results that one customer undertaking tests described STELEX PrO as 'the invisible filter'; pour rates were as fast as without filtration, and metallurgical analysis confirmed the casting's integrity.

FOSECO filtration expertise has helped customers producing every type of casting to add real value through yield improvements, lower scrap, reject and return rates. Downstream savings have also been achieved from improved casting integrity, such as less machining and heat treatment, and longer cutting tool life, thanks to the dramatic reduction of inclusions. Customers have even achieved higher sales margins as a result of FOSECO filtration! A manufacturer of excavation buckets cast in a hard alloy had never been concerned about inclusions in the castings. However, when FOSECO demonstrated that longer product life could be achieved with filtration, the customer realised that a higher price could be charged for his new, 'premium' product.

So as foundry filtration comes of age, it is important to remember that although SEDEX and SIVEX filters have been around for 21 years, only the name remains the same. The products introduced all that time ago bear no resemblance to the product today. Ongoing research development and investment in manufacturing mean that today's products are stronger, lighter and greatly improved in terms of their level and consistency of performance. This is a process which continues today.

Likewise, our unrivalled experience and expertise in applying filtration technology is constantly improving and evolving, enabling our customers to produce stronger, better, more technically advanced castings at lower cost.

Success stories like this are typical of the ways in which FOSECO is helping customers not just to apply the latest filtration technology effectively, but to derive significant added value from the products that the company 'first' launched onto the market twenty one years ago.



SEDEX launch – GIFA 84



SIVEX launch – GIFA 84

FOSECO Filtration evolution

- 1982 SEDEX iron casting filters introduced
- 1983 SIVEX F filters for non-ferrous casting introduced
- 1984 SEDEX and SIVEX F filters first on show at GIFA
- 1988 STELEX S filters introduced for steel casting
- 1989 KALPUR direct pour sleeves with integral filters launched
- 1991 STELEX ZR filters launched
- 1992 SIVEX FC filters launched
- 1996 STELEX S filter production ceased
- 2003 STELEX PrO filters introduced



THEY ALL RELY ON OUR FILTERS' PERFORMANCE.

Foseco's SEDEX and SIVEX Foundry Filters allow castings to be used in the most rigorous safety-critical applications.

On the Tornado all-weather fighter, and the Ford Sierra 4 x 4, and Cosworth engined race cars.

Each incorporates high technology castings using



SEDEX and SIVEX Foundry Filters, with the aim being to obtain zero inclusions, reduced machining time and improved fatigue properties.

Sedex (for ferrous castings) and SIVEX (for non ferrous castings) – the safest way to produce critical castings.

Send for your Foseco information pack now.



Foseco®

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Improving
 productivity
 and quality
 together
 with our
 customers

Technical expertise and a thorough understanding of the filtration process form a solid foundation for improving casting quality and productivity.

Since Foseco introduced the first foundry foam filters in 1952, we have been working in close partnership with our customers to develop innovative solutions to casting problems. Ongoing investment in manufacturing and R&D means that today Foseco is the world leader in the supply of foundry filters to the steel, iron, non ferrous and investment casting industries. Whether it's casting integrity, reduced scrap, smoother mould filling, lower machining costs or higher productivity, our unrivalled process knowledge and application expertise can help you to achieve your objectives. **Foseco – Committed to Foundries.**

- Metal Treatment 
- Filtration** 
- Feeding Systems 
- Coatings 
- Binders 
- Ladle Linings 

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