



# SEFPRO focuses on future glassmaking with low-carbon furnace investment

French refractories company SEFPRO has invested in a new furnace as it prepares for low carbon glass manufacturing. The furnace will be fired by 20% hydrogen and reduce energy use for annealing by 65%. Jean Hardy\* attended.

**S**EFPRO's Cruciforms brand has been a mainstay of refractories production for 50 years.

Since 1973, when production of the refractory began, the solution has been used in glassmaking furnaces around the world. Its Cruciforms checkerpacks are installed in 20 furnace regenerators per year around the globe, and deliver huge energy savings as they help reduce natural gas consumption.

To celebrate the golden anniversary of the brand, the company took the opportunity to highlight an investment it will make as it prepares to face the challenges of the future.

At a recent open day at its historic site

in Le Pontet, near Avignon, France, to celebrate the anniversary, participants had the opportunity to learn more about Cruciforms production, their importance to the glass industry as well as what the future holds for the company as it adapts to low carbon refractory manufacturing.

SEFPRO has a rich history with Le Pontet. The site has been in existence since 1947 and before that, the Electro-Refractaire company was created in 1929 on the Modane site. It was the first factory in the world to produce fused cast refractory materials.

## Decarbonisation

Construction of the furnace has already



◀ The La Pontet refractories site will benefit from an investment in a new furnace.

consumption of 3,000 households of four people for one year.

CO<sub>2</sub>, Scope 1 & Scope 2, were reduced by 66% and non-recovered production waste by 84%.

It reduced water consumption by 25% on its most consuming site by installing closed loops for furnace cooling and by installing a new generation of equipment.

For the non-recovered waste, the

◀ CEO Laurent Cohen-Scali, discussed the investment during a presentation at the open day.

begun and will be ready to start operations at Le Pontet in September next year.

This investment has a dual purpose: not only will it increase the production capacity of Cruciforms, it will also enable the company to develop and test refractories for the new glass melting furnace designs of the future.

This furnace will use up to 20% hydrogen instead of natural gas, which will enable energy savings using a new way for melting with decarbonised energy. In addition, the energy requirement for annealing will be reduced by 65% compared to current traditional furnaces.

Laurent Cohen-Scali was appointed CEO in September 2021. A key watchword for today is sustainable development, he states: "The glass industry is facing an exciting and crucial period, where innovation and transformation are more than ever necessary and possible.

"The transition to 'all-electric' or the use of alternative energy sources such as oxygen and hydrogen should not be a constraint but a real opportunity to radically transform the glass industry and

make it more sustainable, efficient, and competitive.

"SEFPRO, as the leader in refractory solutions for the glass industry, is fully committed and geared to accompany this transformation. We are constantly developing new expertise and services to help our customers on that journey. Together with our customers, we shape a carbon neutral glass industry for a brighter future."

### Sustainable footprint

The company supports its customers throughout the whole lifecycle of the customers' furnaces. This includes the definition of the initial investment, maintenance, hot and cold repair, dismantling at the end-of-life cycle and recycling of refractories.

In addition, SEFPRO is proactive within its own facilities and has reduced its own environmental footprint.

Taking the year 2017 as a basis, it achieved the following results in 2023:

Water withdrawal was reduced by 35%, namely the equivalent of the annual

company reduced the quantity of materials to be used and developed the recycling – both internal and external - of by-products.

Again, taking 2017 as a basis, its objectives to 2030 are clearly displayed inside the factory for all workers and stakeholders. The objectives are to reduce water withdrawal by 50%; CO<sub>2</sub>, Scope 1 & Scope 2, by 75% and non recovered production waste by 90%.

Additional objectives have also been set to support their sustainable journey.

CO<sub>2</sub>, Scope 3, emissions will decrease by 16%. All its products will be covered by LCA / EPD (Life Cycle Analysis / Environmental Product Declaration); and it will use 100% recyclable packaging, with 30% of recycled or bio-sources contained. In terms of longer-term objectives, SEFPRO's target is the same as the global target taken up by glass federations such as FEVE and Glass for Europe – to be climate neutral by 2050.

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▶ Mr Cohen-Scali with Marie-Alix Bur, General Manager at Valoref.

## INTERVIEW WITH LAURENT COHEN-SCALI, SEFPRO CEO

*Mr Cohen-Scali has worked with Saint-Gobain since graduating in 1997. Here he explains his passion for glass and refractories, his experience as a young engineer and why innovation remains key to both SEFPRO and the glass industry.*

**Q:** As a young engineer, freshly graduated from ESCPI in Paris, you joined Saint-Gobain in 1997. Your first assignment was in the Glass Division in the Auvelais site, Belgium, where two float lines were running and you were in charge of the R&D projects department where you took care of the deposit of layers on the glass ribbon.

What did you learn from this first experience in the glass sector?

**A:** This first experience was extremely enriching. I explored the intricacy and the beauty of the glass process, from the melting to the coating, i.e from the magic of the molten glass fusion to the ultra-precision of the nanolayer. As a young engineer this was unique to be hired to transform science into industrial realisation as well as to investigate new glass functions and applications.

**Q:** Afterwards, you carried out projects in various divisions within the Saint-Gobain group such as Abrasives and Performance Plastics. You also worked for SEFPRO between 2011-2013. What were your impressions of the company?

**A:** I had the opportunity to work in different divisions and countries within Saint-Gobain, which was rewarding and stimulating. I learned a lot from the different markets, products, technologies and cultures that I encountered. I also enjoyed working with various and talented teams, who shared the same values and vision of the group. My first foray into SEFPRO was interesting. I discovered the refractory world was different from the glass one, but also complementary and essential. I was impressed by the level of expertise and innovation of the SEFPRO teams, who were able to design and produce high-performance refractory solutions for the most demanding glass applications.

**Q:** What do you like the most about your role at SEFPRO?

**A:** A lot of things, if not everything. But mainly, I think it's when we can bring our passion for glass and expertise into the refractory world to work with our customers and make the glass even more brilliant through innovation.

**Q:** What do you believe is the DNA of SEFPRO?

**A:** SEFPRO's DNA is made of three crucial ingredients. The most important is its passion for glass which will never be satisfied. Its focus is also on innovation, shared in close co-operation with its customers, while finally it has a vast amount of know-how acquired through its own manpower and experience in the industry.

Furthermore, SEFPRO always had strong relationships with other companies, in particular with Valoref which, since its creation in 1997, has carried out work within the recovery of refractory waste. In 1997, nobody was speaking about the Circular Economy, but Valoref was already considerably focused on it.

Today, SEFPRO has 11 factories, four Research Centres and 12 sales offices

located around the world.

Its approach is based on four pillars.

First, the world is changing and the challenges are speeding up. SEFPRO believes it has the capacity to offer solutions for all glass sectors, in partnership with its main customers.

Then, there is no sustainable development without economic performance. One is not at the expense of the other. Any solution must ensure results or at least give an improvement.

Thirdly, faced with globalisation, there is a certain regionalisation of the solutions. There is no single solution. Each region will have to find its most suitable solution, taking into account the local availability of energy and raw material and domestic manufacturing costs. Hence the importance for SEFPRO to have global coverage and the recent acquisitions of Monofrax in the USA and AFR in China.

Finally, it provides a solutions-focused approach rather than products-based. Within this 'Solutions' approach, digitalisation is expected to play an increased role. ■

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◀ The 'cutting of the ribbon' which symbolised the foundation stone of the new furnace.