Press release

April 2024

Alfa Laval dedicates a new production line to printed circuit heat exchangers (PCHE) at the Alfa Laval Vicarb factory in Fontanil-Cornillon (Isère)

Cutting-edge expertise comes to the Hydrogen Valley to meet increasing demand in this new market.

The Alfa Laval group, a major player in the decarbonisation industry, has spent 140 years developing solutions that adapt to the evolving energy market. On Thursday the 4th of April 2024, Alfa Laval launched a new production line dedicated to printed circuit heat exchangers (PCHE) at the Alfa Laval Vicarb plant (Le Fontanil, Isère). This new line incorporates cutting-edge diffusion-welding (bonding) technology, making it possible to produce an ultra-compact solution that supports the energy transition in a number of sectors (energy, marine, etc.), particularly in hydrogen-related applications.

With the launch of this new production line, Alfa Laval is bringing specialist expertise to the Hydrogen Valley, making Le Fontanil a hub of excellence among PCHE production sites in France. The new line will also produce around 1,000 Hybloc™ units per year. This French-manufactured PCHE works as a pre-cooler in hydrogen refuelling stations, cooling the hydrogen before it enters a vehicle.

With 300,000 vehicles in Europe estimated to use this energy by 2030, Alfa Laval plans to deploy 1,000 stations across France to support the scale up. Prospects for development in this market therefore come with significant growth opportunities for the group.

Alfa Laval Vicarb, a PCHE excellence hub in France

Established in 1973 in Fontanil-Cornillon, the company Vicarb joined the Alfa Laval group in 2000. With its 230 employees, it has become a nerve centre for the production of welded plate heat exchangers.

In 2024, Alfa Laval is going a step further by investing in a new production line dedicated to printed circuit heat exchangers (PCHE). In this new line, a wet etching technique is used to make the thermal performance of the PCHE fluid-carrying pipes exceptionally high, while cutting-edge diffusion-bonding technology is used to produce an extremely robust heat exchanger core. The result? Alfa Laval's printed circuit heat exchangers (PCHE) offer greater robustness, integrity, and heat transfer rates in a unit that is 85% smaller and lighter than shell and tube heat exchangers. The unique design provides outstanding performance, lower installation and operating costs.

Showcasing Alfa Laval's ISO 50001 certified production site

Alfa Laval products are perfect for customers looking to reduce their greenhouse gas emissions and become carbon neutral by 2030. A commitment which Alfa Laval also applies to its own global activity.

Since 2022, Alfa Laval Vicarb has been leading the way to sustainable production **by becoming the group's first site to obtain ISO 50001 certification**. To comply with the requirements of this certification, Alfa Laval Vicarb needed to initiate various projects that optimise energy consumption, both at the production site and in the neighbouring offices.
This certificate confirms Alfa Laval's sustainable approach to energy management in production.

With Hybloc™ production now in Le Fontanil, Alfa Laval places itself at the core of France's green hydrogen ecosystem.

This new PCHE production line means that Alfa Laval can develop its Hybloc™, the latest solution for hydrogen refuelling, in Europe. As the world's second biggest market for hydrogen, the European Union is a benchmark region for the development of hydrogen-based mobility. So, to anticipate the increase demand, Alfa Laval is introducing a diffusion-bonding technology, previously only used at the Alfa Laval CorHex site in Korea, in the hydrogen valley of France. This unique welding technology simultaneously applies pressure and heat to assemble 2 components and is a vital step in the production of printed circuit heat exchangers.

Thanks to the installation of special furnaces, Alfa Laval is now able to increase its Hybloc™ exchanger production capacity to 1,000 units per year. This all comes alongside the ImaGHYne project, which encourages the development of a major hydrogen valley within the region. Alfa Laval joined forces with the Auvergne-Rhône-Alpes regional council with an investment of €10 million to make it happen.

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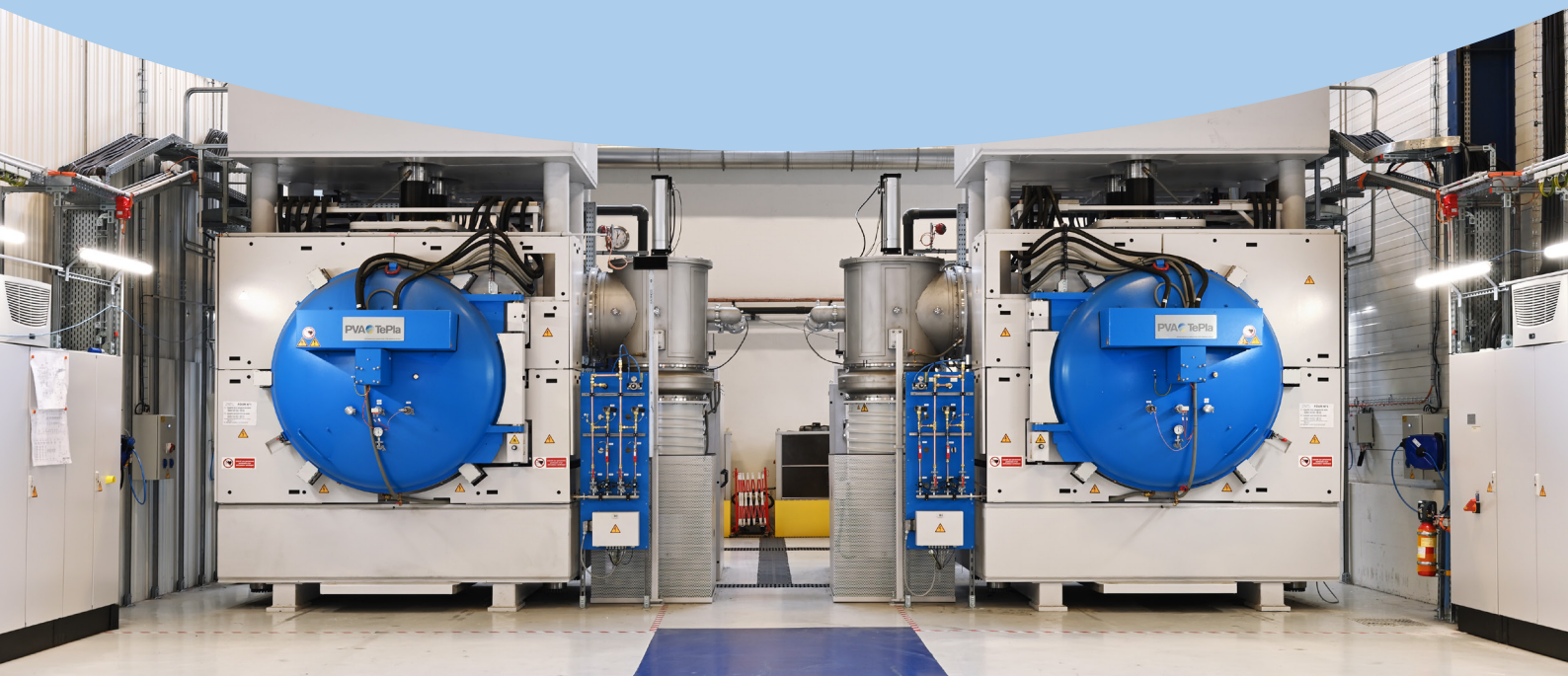
Alfa Laval's new site in Auvergne-Rhône-Alpes has the support of a region that aims to install 130 refuelling stations and produce 120,000 tonnes of green hydrogen by 2030, representing 13% of domestic capacity.

Looking to the future with technologies and expertise in tomorrow's industries

The new production line requires its welders to be trained in diffusion-bonding techniques; the latest of many qualifications and skills needed when creating Alfa Laval Vicarb heat exchangers. This comes in addition to the thorough checks that need to be carried out during and after the production process to guarantee end product quality, including :

- Visual and dimensional checks conducted entirely by operators
- Non-destructive tests conducted by independently-trained verifiers
- Hydraulic pressure tests (up to 2,000 bars)
- Process assessments and monitoring by quality control staff
- Audits and checks performed by various external inspectors accompanied by Alfa Laval own inspection department

These measures comply with ISO standards, PED regulations, and the ASME code applying to pressure vessels.



Key figures :

€10
million
in investment costs

1
new production line
installed with 2 new-generation welding furnaces

1,000
heat exchangers:
Alfa Laval Vicarb's annual PCHE production capacity

230
employees
on site

30,000
units
designed by Alfa Laval Vicarb and installed around the world

A key player in the green hydrogen market

According to forecasts, green hydrogen could account for up to 24% of the energy market by 2050. So, to meet the increasing demand for solutions across the hydrogen value chain, Alfa Laval is positioning itself as a key supplier for all its applications. It is doing so by supplying a wide range of economical, high-performance heat exchangers intended for:

- The distribution and transportation sectors. In the form of hydrogen refuelling stations, as well as hydrogen storage, compression, and decompression systems
- The industrial-scale production of green hydrogen

Thanks to major R&D investments, the group is constantly developing new solutions that can reach new heights when it comes to heat exchanger performance, no matter the intended end use.

For example, Alfa Laval's ultra-compact solutions are designed to operate at the high standards required by the marine, energy, hydrogen, oil, and gas sectors. The group also provide equipment for long-term energy storage for renewable energy options such as wind and solar power.

About Alfa Laval:

The ability to put what we have to the best possible use is more important than ever. In close collaboration with our customers, we are pioneering the game changing technologies that will have a positive impact on the areas that society depends on. We are determined to help billions of people meet their needs in terms of energy, sustenance and drinking water. At the same time, we are decarbonising the maritime vessels that are the very backbone of world trade.

Alfa Laval has the cutting-edge technology to support customers as they reach their full potential. This all made possible by optimizing processes, driving environmentally-friendly growth and achieving progress that will help our customers reach their sales targets as well as sustainable development goals.

Together, we're pioneering positive impact.

Alfa Laval Group key figures:

Alfa Laval was established 140 years ago, has clients in around 100 countries, employs over 21,300 people and, in 2023, generated an annual turnover of 63.6 billion Swedish krone (5.5 billion euros). The company is listed on the Nasdaq stock exchange in Stockholm.

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Online press kit

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