

# VALSEM HAS NO LIMIT WITHIN PACKAGING

**A**nuclear reactor cannot be stored in a cardboard box. A fighter jet can't be shipped in just any package. A satellite requires special packaging to be protected and delivered. For these non-standard products or for "critical missions", Valsem offers innovative packaging systems. "We are an industrial start-up in stealth mode in the beet fields north of France. Paris," says Dr. Jean-François Daviet, its president & CEO, with humor. The company, based in Lachelle, not far from Compiègne (Oise), designs and manufactures flexible membranes for the preservation of industrial assets during their transport and their storage. Its products protect against corrosion, shock, fire, moisture, electrostatic discharge (ESD) and electromagnetic interference (EMI), as well as weather and theft. "We work with the most rigorous standards, those defined by the military-industrial sector." A physicist trained at Polytech Grenoble, Dr. Jean-François Daviet began his career in Silicon Valley. He spent 25 years there before getting his hands on the Picardy Valsem Industries in 2010. Founded in 1977, the company had slowly declined. It went into receivership for the first time in 2002. A second, in 2010, was fatal and led to its liquidation. Dr. Jean-François Daviet then bought the assets before carrying out a "reboot". The company has a turnover of €1.8 million. It now stands at €11 million. "I have promoted reasoned and profitable growth, with compound average annual growth of 15% in turnover and 20% in profitability." The workforce amounts to 70 people: 50 in France, 20 in Dubai. Today, Valsem Industries is accelerating its development, focusing on nuclear, international and innovation.

## NUCLEAR FUSION

The company has joined ITER as a Key Supplier of anti-Corrosion Solutions, which Jean-François Daviet describes as "human-kind's biggest project." (www.iter.org). The nuclear fusion reactor project involves 35 countries. Its objective is to demonstrate that fusion, i.e. the subsequent generation of nuclear



Fighter Aircraft in a Valsem Preservation System



«WE'RE AN INDUSTRIAL START-UP IN STEALTH MODE IN THE BEET FIELDS NORTH OF PARIS»

JEAN-FRANÇOIS DAVIET, PHD

**LACHELLE (60).** The state-of-the-art packaging manufacturer is accelerating its development. It activates levers such as nuclear, international and innovation, while reducing its carbon footprint. With the ambition to become a unicorn.

energy obtained by fusing hydrogen nuclei, can be used as a large-scale energy source. Its advantages: it makes it possible to produce electricity without emitting CO<sub>2</sub>, and without problematic radioactive by-products. In France, Valsem is a partner of the reactor located in Cadarache, near Aix-en-Provence. "We pack part of the reactor's heart," explains Jean-François Daviet. We have designed a highly technical cover, 480 m<sup>2</sup>, which has nine layers, with a thickness of 150 microns. It will be used to store and transport the reactor from one building to another. After that, it will be kept there for almost two years », in perfect conditions of preservation, with constant remote monitoring via Valsem's own IOT embedded tracking devices. This protection will prevent the core of the reactor from being corroded. "The hidden corrosion market is huge," says Alexandra Deville-neuve, Business Development Director. Experts estimate that at least 3% of the world's GDP is destroyed by the corrosion in a sneaky way. This hidden market is worth 2,000 billion dollars! » Currently, several nuclear reactors in France are shut down precisely because of corrosion problems. With the development of civil nuclear power and the commissioning of six EPRs by the French government, Valsem Industries will record a sharp increase in its activity. Last December, EDF already approved

ten new products designed by the manufacturer and intended for the nuclear sector, i.e. PMUC (Products and Materials Usable in Power Plants).

## HEADING FOR THE MIDDLE EAST

Development is international. Currently, Valsem generates 20% of its business there. This figure is expected to rise very quickly to 30% through IPAC - Valsem LLC, a joint venture created in Dubai with an industrial packaging services company, run by a Frenchman who is a Valsem customer. "Dubai is part of an extremely dynamic region," continues Dr. Jean-François Daviet. There are a lot of opportunities in the Middle East, especially since the Emirates has lifted the requirement for a company to have a local person as a majority shareholder. Valsem also intends to take ad-



Oversize Jet engine UK (top right), urban electronic display (Japan) and nuclear reactor packaged by Valsem Industries.

vantage of the momentum set in motion in Saudi Arabia by the accession of His Highness Crown Prince Mohammed bin Salman to the Kingdom's leadership. A subsidiary is in the process of being created. It will make it possible to work with other nearby countries such as Kuwait, Oman or Qatar. "Too often, we think that there is only oil in these countries but there are also many industries as well as an incredibly strong and genuine global environmental policy, in synch with Valsem's own engagements. And the authorities strongly encourage implantations. »

## NOBEL PRIZE

To boost its growth, Valsem is also focusing on innovation beyond industrial preservation. For more than a decade, the company has been working to reduce its carbon footprint, through materials science. In 2022, she launched her first 100% recyclable military-grade film. "Membranes can replace high-volume wooden crates. With a single membrane, we can save a ton of wood," says the manager. At the same time, Valsem is working on projects for new industrial membranes in the United States, in collaboration with Caltech University, which is reputed to have the highest density of Nobel Prize winners in relation to the number of students. DAPHNÉ™ is a biomimetic membrane that converts moisture from the air into fresh water, anywhere on the planet, at a very low cost. THERMAP™, on the other hand, is a very large thermal mapping membrane inspired by rattlesnake biosensors. The field of industrial applications for this inexpensive, very thin and very large membrane is as immense as it is varied. It ranges from battery packs from electric vehicles to medical beds. "If all goes well, we'll be the next unicorn," Dr. Jean-François Daviet wants to believe. Let's not forget that a unicorn is a company valued at \$1 billion. The market launch of these two membranes is scheduled for the fourth quarter of 2024 ■ Yann Suty

VALSEM IS WORKING ON A BIOMIMETIC MEMBRANE THAT TRANSFORMS MOISTURE FRESH WATER AIR