

# Innovation is the DNA of TAMI Industries

## A brief history of TAMI Industries and its founders

Dr. Grangeon and Mr. Lescoche first met in 1977 while both working for the French Alternative Energies and Atomic Energy Commission. Both highly instructed in research and development (R&D) of innovative materials, ceramics in particular, they identified the demand in the market for more resistant, durable and selective filtration technologies.



The founders of TAMI Industries.

This is how Dr. Grangeon and Mr. Lescoche founded TAMI Industries in April 1993 with one vision in mind: to make tangential flow filtration more efficient, by continuously innovating to produce the most advanced ceramic membranes in the world.

## Performance, Specialization and Innovation

To pursue the vision of making tangential flow filtration more efficient, it was clear for Dr. Grangeon and Mr. Lescoche that continuous innovation focused on performance was the key to success. But how to ensure that R&D activities will consistently result in best performance? The answer was the recipe long known by the scientific community: specialization.

And this is how the founders of TAMI Industries decided to focus on tangential flow filtration by tubular ceramic membranes, which would certainly reduce the product breadth and business opportunities but would most importantly keep the recently created company loyal to their vision.

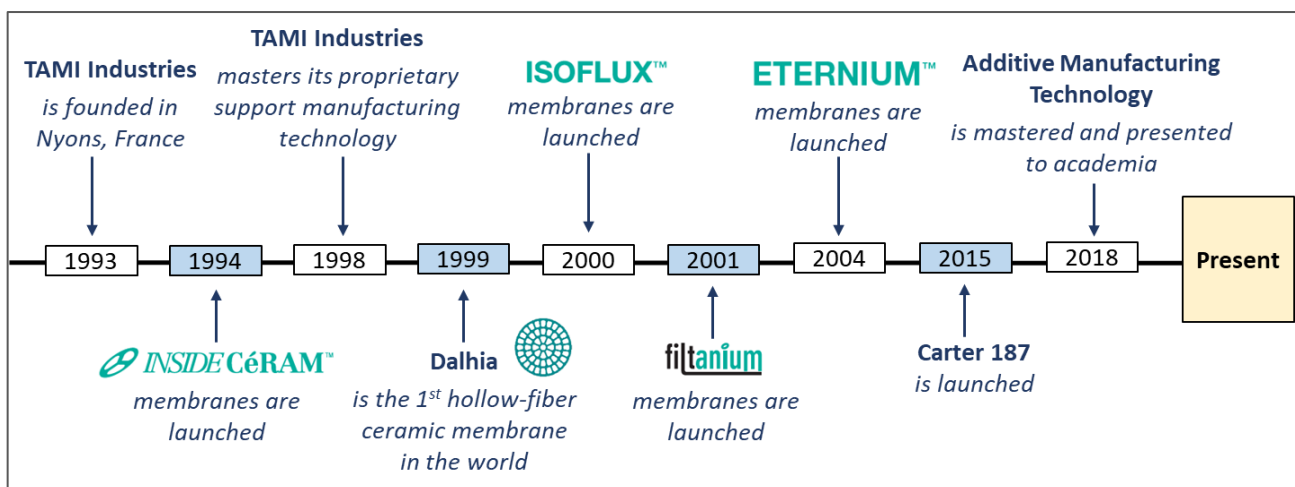
And today, nearly 30 years later, the advantageous positioning of TAMI Industries in the tangential flow filtration industry is the proof that having a vision and staying loyal to it pays off. TAMI Industries currently leads the industrial R&D efforts in

tubular ceramic membranes and is globally recognized as the benchmark in the design, production and supply of the most advanced ceramic membranes in the world.

*Staying loyal to the vision and science was never an option. This has been the only way of doing business*

## How the Innovation differentiates TAMI Industries?

TAMI Industries has steadily created an average of 1.5 patents per year since 1993, all in the field of ceramic membrane filtration. There are currently more than 30 international patents in force, along with many that have expired in the last decade. A dedicated team of researchers with background in fluid mechanics, materials science and process engineering work full-time researching opportunities to improve the performance of tubular ceramic membranes, by designing and testing



Key dates and R&D achievements of TAMI Industries.

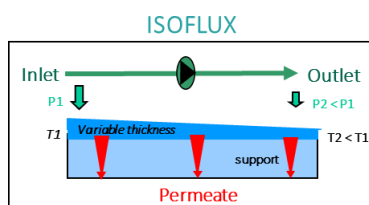
*Do you have a question? Want to learn more about Ceramic Tangential Flow Filtration? Contact us!!*

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new ceramic filtration concepts and exploring new uses of tubular ceramic membranes that contribute to the society and the environment. The following are results of the continuous R&D work that differentiates TAMI Industries in the market:

**INSIDE CéRAM™** : the flagship membranes of TAMI Industries. Made of  $TiO_2$  and  $ZrO_2$ , this range of membranes is offered in 4 different external diameters, 10 different internal diameters, 16 different pore sizes (from Fine Ultrafiltration to Microfiltration) and unlimited length possibilities. The vast number of options allows customers to always have the right membrane for each application.

**ISOFLUX™** : the top performance membranes for solutions containing combinations of complex organic materials. The permeation across the length of the membrane is controlled by adjusting the thickness of the active layer and therefore limiting membrane fouling.

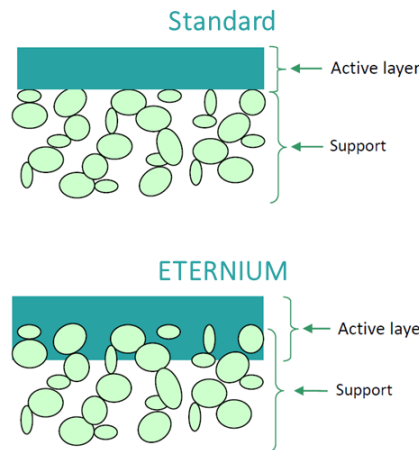


The active layer of ISOFLUX membranes.

**filtranium** : membranes made of pure  $TiO_2$ , both the support and the active layer.  $TiO_2$  is a chemically inert material well known and used by industries that require a high level of safety such as the pharmaceutical, food & beverage and cosmetics.

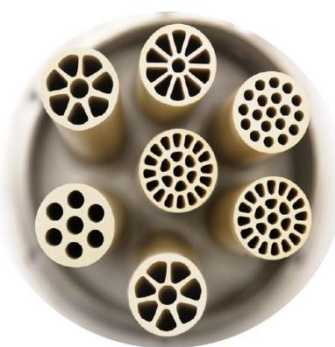
**ETERNIUM™** : ceramic membranes are among the most resistant filtration elements, but sometimes even greater resistance is needed. And this is what

ETERNIUM membranes offer: top resistance to abrasion. The support and active layer structures are blended to get the best of both: strength and selectivity.



Difference between Standard vs. ETERNIUM.

**Non-circular channel membranes:** the entire range of ceramic membranes produced by TAMI Industries are available in non-circular channel geometries. Considered a key breakthrough in the history of tubular ceramic membranes, the non-circular channels allow the increase of filtration area per filter element without reducing the internal diameter.



Membranes with different channel geometries, by TAMI industries.

In practical terms, the non-circular channels can offer between 25 to 40% more filtration area per filter element than circular channels.

## What comes next?

The R&D of TAMI Industries is driven by performance, the performance customers want. After listening carefully to the market, TAMI Industries concluded that reducing the energy consumption of tangential flow filtration systems is the priority to better serve customers, respect the society and protect the environment.

And this is why in June 2018, TAMI Industries presented at ICIM (International Conference on Inorganic Membranes, Dresden – Germany) its scientific findings and progresses made in the use of additive manufacturing technology in the production of the next generation of ceramic membranes. This patented manufacturing technology pioneered by TAMI Industries will soon allow the production of ceramic membranes that will again change the history of tangential flow filtration.

## Related articles:

- Non-circular channel ceramic membranes: Why are they worth it?
- How a biorefinery increased capacity by 40%. Faster, cheaper and conveniently

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