





BAPTISTE ROGÉAU

Water pollution is an increasing global concern impacted by numerous factors, including rapid urbanisation and agricultural intensification. In many parts of the world, water utilities are facing the daunting task of treating and purifying contaminated water, which requires significant resources and can be costly. However, Filtralite, with its unique porosity, offers to retain and absorb more contaminants, allowing for larger volumes of water to be filtered through the same volume as the contact area is increased. Baptiste Rogéau, Key Account Manager at Filtralite, sat with SWM to explain the advantages and technology behind the forward-looking filter media Filtralite offers.

SALES MANAGER AT FILTRALITE.

“Filtralite® Filter media is the perfect fit for the challenges of today”

Part of the Saint Gobain Group, Filtralite is the registered trademark for all expanded clay products used as filter media that are manufactured by Leca Norge AS in Norway. The company's products not only increase water output volumes, but also decrease operation costs.

OLIVIA TEMPEST

Can you tell us briefly about your career path and your current role at Filtralite?

I joined Saint-Gobain back in 2015 to develop our presence within French-speaking countries. After two years, I became Sales Representative, then a key Account Manager and recently I accepted the role of Sales Manager.

What is Filtralite's position within the Saint-Gobain Group?

A worldwide leader in light and sustainable construction, Saint-Gobain designs, manufactures and distributes materials and services for the construction and industrial markets.

Filtralite is one of many innovative brands within the Saint Gobain Group. We are dedicated to water filtration and are part of the LECA International organisation, which is famous for producing Lightweight Expanded Clay Aggregates.

Filtralite offers various solutions for water treatment, including Filtralite

Pure, Filtralite Clean and Filtralite Nature. Could you tell us a bit more about the firm's filter media?

Filtralite offers various solutions to answer a large range of needs in the field of water purification and filtration. Our most popular product family is *Filtralite® Pure*. It is used for drinking water purification, presenting different types of product characteristics (grain sizes and density) to adapt perfectly to every situation. We also have *Filtralite® Clean*, for wastewater. Our goal with this product is to decrease the pollution from the wastewater before it goes back to nature or is reused. Finally, *Filtralite® Nature* is a media specialised in the local treatment of wastewater with a focus on phosphorous. Additionally, we have a product named Filtralite® AIR used for bio filtration of air filters.

What types of pollutants do Filtralite's solutions remove and how effectively?

Filtralite® Filter media is a lightweight filter media used for both physical and biological water filtration, just like the

commonly known sand filters. The filter setup and processes are similar but with improved advantages for the filter output. Filtralite offers the same treatment process as the most common solution, sand. In all the projects we have completed, Filtralite always performs better than sand in terms of water quality, while reaching much better filtration performance in terms of duration between backwash (between x2 and x4) and higher filtration speed. In addition, our media can be used to remove iron, manganese, ammonia, TOC, arsenic... You can find more detailed information on our website: www.filtralite.com

"Filtralite is one of many innovative brands within the Saint Gobain Group, dedicated to water filtration and part of LECA International"



What benefits does Filtralite offer water utilities compared to other companies in the market?

Without going into details, the solution we are offering has higher porosity. It helps to capture more suspended solids in the water, as well as a higher bacterial activity per volume of filter media. Sand is characterized as being rounder and with less porosity, which results in reduced water cleaning; simply, it cannot catch as well all the residues pres-

ent in the water. Hence, our filter media will need less backwashing. This results in fewer filter stops and saves all the water and energy we need for this operation. Finally, we can clean more water in the same amount of time. It gives the possibility for our clients to deliver more water or to save operation costs by using fewer filters.

Where in the world is Filtralite active? Could you tell us a bit about the projects you are working on?

Filtralite is active on all continents, and we have completed more than 400 projects worldwide which offers a solid reference list. We are currently working on many desalination projects and are happy to collaborate with some major international expert companies in this domain. We are learning a lot from them, and we hope to bring improve-

ment to their pretreatment processes. Also, the lack of water all around the globe allows us to show our solutions to a larger public who are interested in water reuse. We are expecting 2023 to be a year where water issues are going to be even more central. For this reason, we are doing our best to inform the public about our solutions, since we are confident that we can help a big range of actors in the water market. We are fully aware that we provide solutions to a specific part of the filtration process. Nevertheless, we strongly believe that now every m³ of water saved will count, no matter if it is in Europe, Africa, Asia or North and South America...

Population growth, strict water treatment regulations and the growing demand for new water resources are some

"Our most popular product family is Filtralite® Pure, for drinking water purification, with different types of product characteristics"

of the factors driving the water and wastewater treatment market's growth. How do you see the water and wastewater sector evolving in the next decade?

Filtralite® Filter media is the perfect fit for the challenges of today, as mentioned in your question. The water market is changing quickly, and it is difficult to know how fast it will grow in the future. After a dry summer in 2022 and now a dry winter in 2023, we see public awareness about water issues increasing. Governments need to act now to secure water access in the next decade for their population. We believe there is an important investment to plan to achieve it. But what is more important than securing safe access to water for everyone? Based on the local situation, there are different issues to address, such as the lack of water or the need for extra production capacities. For example, in major cities such as New Delhi, where urbanisation is increasing the water demand tremendously. We are also offering simple solutions to this kind of situation by increasing production capacity with existing plants.

A large portion of operating costs for drinking water systems can be for energy. How can Filtralite contribute to energy savings?

I probably answered this question, but it will be a pleasure to complete my answer. Our solution needs less backwash. This operation consists of rinsing the filter media with air and/or water. This task takes a lot of water and energy. We decrease drastically this operation, which means less water and energy used to pump and evacuate this water.

Also, our media allow a higher quantity of water filtered, so less energy is needed for the same period.

With this solution we have a 100% rate of satisfaction from all customers, no one ever said after using our product that they wanted to go back to their previous solution, and we have an average Return on Investment of less than 3 years, sometimes



In all our projects, Filtralite performs better than sand in terms of water quality, while reaching much better filtration performance



even a few months, while the lifetime of the material is longer than 20 years.

How can Filtralite help reduce the carbon footprint of water treatment?

Filtralite can help to reduce the carbon footprint for both new and existing water treatment plants: The filter operation using Filtralite® Filter media needs less energy to process the same amount of water. For greenfield sites, we can design for a small overall footprint. For now, the main cost when we talk about water prices is the energy needed to produce and carry it. Especially, during this period of uncertainty in the energy market, we are proud to propose spending less energy with our media. In many countries, energy is produced with fossil fuels. Therefore, by using less energy, we reduce the carbon footprint of water treatment plants. Finally, we propose a solution that can operate with higher filtration speed which means designers have fewer filters to build and so less concrete, equipment, etc.

In 2021, Filtralite and Ingeobras launched a new line of business based on the creation of biological water treatment plants integrated in a container. Could you tell us a bit more about this partnership?

We have had a partnership with IN-GEOBRAS for a few years now. They are highly experienced in the water market, and we are having efficient exchanges with them. We developed with them a solution that integrates the most cost-effective, efficient, and sustainable technology.

This technology is a plug-and-play system, integrated into a container, that can be deployed everywhere in the world very quickly and it can be used to treat wastewater or drinking water.

Furthermore, it is 100% customisable and it does not require civil works to be used. We are proud of our collaboration with INGEOBRAS. We can realize this solution in 6 weeks, and we already sent it to Ecuador. We hope we will be able to continue this collaboration because innovation is in the DNA of both our companies.

"We can clean more water in the same amount of time, so our clients deliver more water or save operation costs by using fewer filters"