

Pulp and Paper industry won over by Orege's SLG® solutions

Orège now assists 3 major manufacturers in the paper / cardboard / packaging sector with the conditioning of their sludge and with improving their economic performance related to the treatment, transportation and recovery of sludge.

The increase in the consumption of more environmentally friendly products has triggered the revival of part of the paper sector leading to an increase in effluents and sludge to be treated and eliminated.

The requirements identified with industrialists are often the same whatever the country:

- Better sludge conditioning and dewatering and improved throughput.
- Reduced polymer consumption.
- Significant improvement in the quality of the filtrate in order to "reuse" it.
- Decrease in odours.

Orege's commercial approach targeting the sector over the last two years is now bearing fruit:

- first Sappi in Germany,
- then Erving Industries in the USA,
- it is now in Japan, in partnership with the Itochu group, that Orege will deploy its next SLG® unit.

1/ Sappi, contract signed and implemented two years ago: 2 SLG® solutions were installed upstream of 2 belt filter presses. The SLG® solutions, that condition a mixed sludge (pulp and paper) upstream of the dehydration stage have given great results for the customer:

- Increased sludge dryness by 3%
- Improved hydraulic capacity of the sludge treatment line by 50%
- Reduction of polymer consumption by 20%

• Significant improvement in filtrate quality (suspended solids concentration divided by 3)

The Sappi contract is a four-year leasing agreement worth € 350,000.

2/ At the end of August 2019, Orège signed a 5-year leasing agreement with Erving Industries in the United States for some \$ 450,000. Erving Industries manufactures high quality tissue rolls and towels from 100% recycled paper.

2 SLG® solutions are used upstream of 2 belt filter presses to treat a mixture of primary and secondary sludge. The SLG® solutions will immediately reduce the costs of sludge disposal. The optimization phase, which has been in progress for two months and which, under the terms of the contract, is to continue for another four months, is already achieving results which exceed those targeted in the contract.

Orège and Erving Industries have estimated that the savings generated could exceed \$ 150 K per year.

3/ Finally, the first firm sale of an SLG® solution to the Itochu Group is expected to result in a first reference in Japan with a paper and packaging group of world renown. The SLG® solution would condition biological sludge upstream of a belt filter press.

The main objectives for the SLG® solution that would be deployed will be to increase the hydraulic flow to help solve the problem of capacity overload of the sludge workshop and to significantly reduce the odors of the site, the paper mill being located in the heart of a big city.

These last two projects consolidate Orège's strategy of concentrating its commercial development on specific industrial sectors internationally.

It should be noted that these three countries, the United States 1st, Japan 2nd and Germany in 4th (with China being 3rd) are the largest paper producers in the world with more than 1,000 production sites. Orège will be able to capitalize on its experience to accelerate its development in the paper industry.

Voisins-Le-Bretonneux, 16 December 2019

About SLG®

SLG® (solid, liquid, gas) is an innovative sludge conditioning, treatment and recovery technology. It offers a cost-effective and high-performance solution for industrial firms, operators and municipalities by significantly reducing sludge volume and promoting sludge recovery by changing its physical, chemical and rheological characteristics.

Fully aligned with new regulatory and environmental requirements, the patented SLG® technology has received several international awards, including 2016 Breakthrough Technology of the Year at the Global Water Intelligence Awards and Most Innovative Technology at Birmingham Utility Week in 2017.

About Orège

Orege is an international cleantech firm specialized in the development, manufacturing and marketing of conditioning, treatment and recovery solutions for municipal and industrial sludge. With bases in France, the US, the UK and Germany, Orege, an Eren Group subsidiary, supports its clients in a dozen countries around the world. The company is a partner of Itochu Machine-Technos Corp in Japan.

Orege has been listed on the regulated market Euronext - Paris since 5 July 2013.

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