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Leading Paper Manufacturer PANASA Profits From Green Energy

Global paper manufacturer and distributor PAPELERA NACIONAL S.A. (PANASA) is enhancing its sustainability with a new Global Water & Energy (GWE) wastewater treatment plant in Guayaquil, Ecuador.

The GWE anaerobic plant will convert organic contamination present in the wastewater to up to 4,200 Nm³ of biogas, which when utilized as a fuel, is an equivalent of 2,818 kg fuel oil per day.



PANASA has been producing Kraft paper since 1968. Throughout the years the company has increased its production, installed new equipment and optimized fiber control and preparation processes. 50 years later, it can produce 18 times more paper, with annual production volumes exceeding 180,000 metric tons.

By choosing GWE's solution, PANASA has the opportunity to tackle two of the most significant problems faced by the pulp and paper industry – efficient wastewater treatment and fossil fuel dependency.

Turning problem into profit

The organic contamination present in the PANASA's wastewater stream will be converted to biogas by GWE's ANUBIX – T Expanded Granular Sludge Bed (EGSB).

“ANUBIX -T reactors are designed with a focus on minimal maintenance and operational requirements. Their tower-like design also saves a significant amount of space compared with other wastewater treatment plant designs,” says GWE, which has more than 400 high-efficiency wastewater treatment projects in 64 countries. GWE recently rebranded from Global Water Engineering to reflect a growing focus on green energy generation.

“The high efficiency of the wastewater treatment system helps to reduce the environmental footprint of forward-thinking companies like PANASA,” says GWE.

The savings produced by replacing fossil fuels will ultimately cover the entire cost of the wastewater treatment plant and then go on producing profit virtually in perpetuity, says GWE.

GWE's ANUBIX -T, including auxiliary equipment and tanks, was chosen after a thorough supplier selection process. GWE's new waste-to-energy technologies will be incorporated into PANASA's existing aerobic wastewater treatment facilities as a turn-key project.

“Selection of the ANUBIX -T turn-key solution is a testament to the engineering ingenuity of the system, and the hard work of the entire GWE team in making sure all of PANASA's needs were met,” says GWE.

ANUBIX -T ultra-high loading rate anaerobic reactor

GWE's ANUBIX -T can be used for the anaerobic treatment of wastewater streams in a broad range of applications, including breweries, soft drinks and other beverages production, paper mills, starch production, and many others.

ANUBIX -T is an ultra-high loading-rate system utilizing expanded granular sludge bed technology. It is suitable for high-strength wastewaters with organic content up to 15,000 mg/l.

GWE has ANUBIX -T installations in several countries globally, where the generated biogas is often used to power boilers, or sold back to the grid for a profit.

At the project design phase, additional provisions can be implemented for pre-settling of solids, heating, cooling, CO₂ degasification, and inline neutralization, to customize the installation to suit unique requirements.

The ANUBIX -T reactor is capable of handling very high loading rates of up to 25 kg COD/m³/d, depending on the type of wastewater.

For more information, visit www.globalwe.com.

SOURCE: Global Water & Energy (GWE)