

Robots make light work

Cleaning Lamella settlers the easy way for better performance

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Lamella settlement tanks are a compact and simple solution that can enhance water treatment processes within a minimal footprint. To maximize their efficiency, the plates inside the tanks need to be regularly cleaned, and a manual process using pressurized water poses several challenges in terms of operator safety and effectiveness. In response, Nordic Water has developed an automated robot cleaner that ensures this task is completed frequently and safely.

As part of a continuous improvement program, Nordic Water, a Sulzer brand, has made several upgrades to its range of Lamella separators, including the introduction of the CleanBot. Designed to offer an automated cleaning solution for the LPS inclined plate separators, the CleanBot ensures optimum efficiency and performance of sludge settlement.

Improving cleaning processes

Within both water and wastewater treatment plants, Lamella settlement processes are used to remove solids from the water stream. The increased surface area of the Lamella plates enables this process to be achieved in a small footprint, making the tanks ideal for increasing treatment capacity without the need for huge areas of land. Conventional cleaning procedures for the plate packs include manual spraying with a water hose, using a built-in water spray system. In all these scenarios, the water

levels in the settlement tank must be lowered to ensure efficient cleaning. Each option poses its own challenges, but all need the process to be halted while the cleaning is conducted.

Nordic Water's CleanBot has the solution: an automated process that is completed during normal tank operation, maximizing process efficiency and maintaining personnel safety. The robot resides in a charging station before it is deployed on a pre-timed basis to mechanically clean the plates.

Automation delivers efficiency

The robot is positioned on the rails above the Lamella plates before it lowers the cleaning head between the plates and removes all the solids that has been deposited. After one set of plates has been cleaned, the robot is moved to the next row, and the process continues until all the plate assemblies have been cleaned.

The interval between each cleaning operation can be adjusted as required depending on the application. Trials of the robot have been completed over the last 12 months and now the fully automatic version has been launched to support operators of the LPS tanks and improve their efficiency.

The charging station also houses the control panel and a lifting mechanism to transfer the CleanBot onto the plate rails. If the CleanBot needs to recharge, it returns to the charging station before completing its task.

Niklas Windahl, Product Manager for Nordic Water, comments: "The CleanBot can be retrofitted to existing LPS equipment and enables enhanced performance without the need for pumps or compressed air. Its automatic operation can also allow the

sludge separation process to continue uninterrupted and as efficiently as possible with the tank kept in operation.”

Find out more here: <https://www.nordicwater.com/product/lamella-lps-plate-pack/>

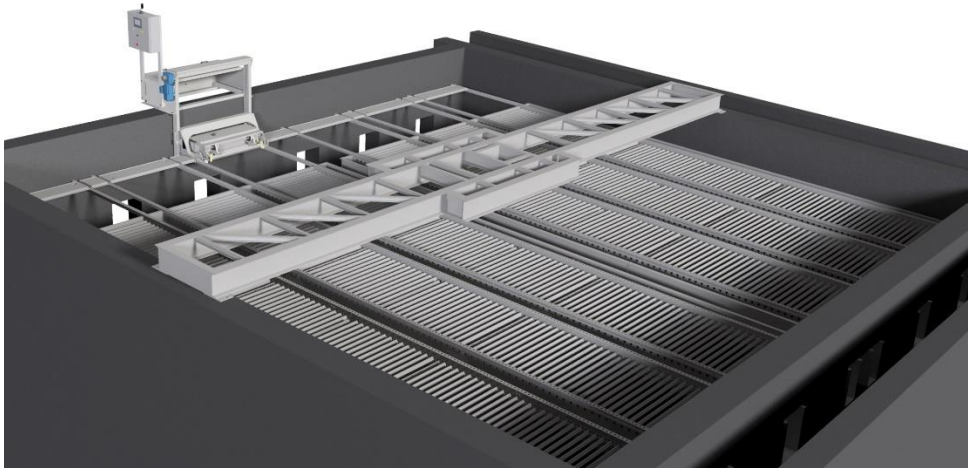
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Image 1: Designed to offer an automated cleaning solution for the LPS inclined plate separators, the CleanBot ensures optimum efficiency and performance of sludge settlement.

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About Nordic Water

Nordic Water offers a wide range of equipment and systems for water purification plants, waste water treatment plants and industries of all sizes. Working on improving the effectiveness of water treatment since 1961, Nordic Water is a pure engineering company with a passion for developing original ideas and technical solutions that have the potential to revolutionise the water sector and drive the whole industry forward.

Nowadays the company is 100% Swedish-owned with the head office based in Gothenburg and its products distributed worldwide through a network of own sales companies and representatives.

For more information, visit <https://www.nordicwater.com/>

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