

water reuse technology saves european packaging mill €500k per annum

challenge

An Italian facility that makes containerboard from recycled paper and board resides in an area that suffers from subsidence & periodic water shortage, so much so that the local authorities asked the facility to reduce its borehole water consumption.

To achieve production targets, the mill was using 6,000 m³ per day of borehole water and discharging 5,000 m³ per day of effluent.

solution

SUEZ Water Technologies & Solutions created a tertiary effluent reuse solution utilizing ultrafiltration (UF) and electro dialysis reversal (EDR) technology to return highly clarified water back to the process.

To avoid capital outlay, the facility requested that the solution be build, own, operate (BOO), whereby they paid a monthly fee over a 10-year period to Water & Process Technologies to rent and operate the equipment. By signing over their day-to-day operations to SUEZ, the facility could better focus on key priorities.



results

With SUEZ' BOO UF and EDR solution, water usage from boreholes was reduced from 6,000 m³ per day to 2,000 m³ per day; 33 percent of previous usage.

In addition, warm treated effluent is returned to the process, thus reducing energy costs required to heat the process water to 500°C. The total water and energy savings for the facility is €500K per annum.

SUEZ' BOO model offers a unique advantage, enabling the mill to achieve their goals whilst paying for the solution from the ongoing savings that is generated from the solution's operation.

conclusions

- Closing water systems are an opportunity for the paper industry; they provide paper mills with potential financial & environmental benefits.
- EDR technology can play a fundamental role for this strategy; UF pre-treatment is key to success.
- This paper mill reduced its usage of fresh water from wells by 67 percent and reduced discharge volumes by 40 percent.
- Further savings are being looked at - this is a modular approach, enabling additional capacity to be added to further close up the water loop & hence reduce water usage.

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