

# Envirogen Water Technologies Minimise Water Wastage At Large Production Site In The UK.

Following a decision to bring the maintenance of their waste water treatment plant in house and legislative changes, a large equipment manufacturing company with premises in the UK realised the need to bring the effluent treatment system at their production site up to date.

They decided to approach Envirogen Water Technologies to assess the waste water treatment system, and see how the system could be improved. Envirogen were already servicing equipment on site and the customer was very pleased with the service they had received from them.

Following inspection, Envirogen recommended two key ways of improving the existing system: Firstly the Effluent Treatment Plant's efficiency could, with some simple modifications be improved. These improvements included:

- Replacing a number of different pumps that were either undersized or damaged ensuring correct PH levels could be achieved within the coagulant system
- Cleaning and replacing some of the consumables on the filter press, enabling it to remove the necessary particles and produce the correct cake consistency so working more effectively and efficiently.
- Putting a new V notch tank in place to measure the flow of water to drain helping ensure the system complied with government regulations



A Deioniser system

The above modifications to the effluent treatment system minimised potential future down time to the system, which could ultimately lead to a closure of the production site, and be very costly to them.

The second area identified for improvement was the process line. Historically the process line involved using de-ionised water to clean the machinery made on site in preparation for painting. As the water overflowed from tank to tank it became dirtier and was then sent to the effluent treatment plant as waste water, after treatment it was ultimately sent to drain. In addition to this, each week the main tank (circa 140m<sup>3</sup>) was drained and refilled with DI water in preparation for the next weeks work.

Envirogen suggested a closed loop water system which reduced the environmental impact, by reusing water already in the system. They would then top up the water as required instead of completely replacing all water each week.

To do this, they:

- Introduced a deioniser in the overflow line
- Increased the flow of water through the tanks via the overflow system already in place
- Added particulate filters, and an additional Deionised return tank with supporting pipe work, to ensure the water quality was maintained

All of this enabled the water in the system to be recovered and re-circulated, considerably reducing the need for water wastage and system replenishment.

The above modifications were undertaken on Envirogen's suggestion and have led to the following benefits :

- Less water wastage across the system
- Fewer chemicals are used (acid and caustic) as the previous system needed to regenerate 3 times a day, plus during the weekend.
- Less transport and storage costs for chemicals across the site
- Increased efficiency at the site
- Lower running costs of the plant
- A reduction in the environmental impact from the site, as per the customer's commitment to environmental responsibility.

They also have an Envirogen PureCare maintenance agreement that gives them the security, reliability and peace of mind they look for in their systems.



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