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Sludge Acceptance and Screening at Wanlip STW for Severn Trent Water

A HUBER Technology Wastewater Case Study

HUBER Technology recently completed a project for Severn Trent Water at Wanlip STW on the outskirts of Leicester. This was a project that had been looked at for a long period of time but was commissioned in early 2020.



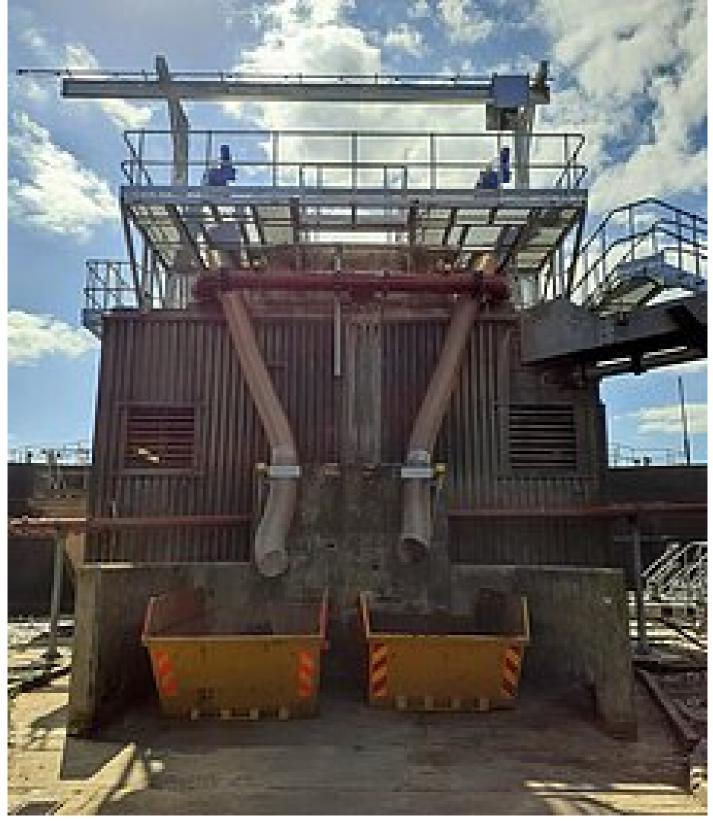
2x HUBER Sludge Acceptance Plant ROTAMAT® Ro3/1200/355 units installed at Wanlip STW



Existing building



New screen adjacent to the old channel



4/6

New screens and discharge chutes

Project Profile

This project was part of the upgrade to the sites indigenous sludge treatment to replace ageing step screens, which were installed in the 1990's.

HUBER Technology were first involved in the project in the late 2000's to see what options were available to improve the process.

The challenge was to improve the sludge screening on the site but we were constrained by the location of the screens at high level receiving the pumped sludge.

HUBER Technology Supplied

■ 2 x HUBER Sludge Acceptance Plant ROTAMAT [®] Ro3/1200/6 tank mounted sludge screens

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2 x HUBER Severn Trent Water specification control panel

Objective

The primary objective was to improve the sludge screening on site to prevent screenings that had bypassed the inlet works entering the picket fence thickeners and further downstream parts of the treatment process within the constraints of the high-level sludge screening area.

Solution

As outlined above this was a project that HUBER Technology had been involved with for a long time with various contractors.

We had previously looked at utilising the existing 600mm concrete channels but these were no longer wide enough for the increased flow rate.

The current screens were installed in a building but this was deemed to be beyond repair and was removed, this allowed clear access for the new screens.

The tank mounted screen were mounted alongside the existing channel retaining the original upstream balancing tank. Flow from the balancing tank then flowed to each of the two screens whilst maintain a bypass channel between the screens if it was required.

The screens sludge was discharged back into the original channel prior to it being fed to the adjacent picket fence thickeners.

Each screen was provided with its own dedicated control panel fully built to Severn Trent Waters specification.

Product Profile

HUBER Sludge Acceptance Plant ROTAMAT[®] Ro3 – The robust and efficient Ro3 has become the most popular system of its kind. Its superior design and engineering guarantee the most dependable operation day after day, year after year. The main component of the Sludge Acceptance Plant ROTAMAT[®] Ro3 is the reliable Fine Screen ROTAMAT[®] Ro1. It excels with its high capacity, good separation efficiency and low head loss. Another exceptional feature is its integrated screenings press with all its benefits.

The Fine Screen ROTAMAT® Ro1 is extremely sturdy, able to deal with rocks and grit, and entirely made of stainless steel. It is fully self-cleansing as its rake tines fully engage the basket bars.

With over 500 units installed in the UK and just under 100 supplied to Severn Trent Water since 1988.

"Having been involved with this project for over 10 years it's great to see finished solution completed on site at Wanlip. Severn Trent Water should hopefully see the huge benefit this technology brings to the downstream process very quickly." Richard Willis-Area Manager

Key Features & Benefits

- High capacity to minimise waiting time for tank discharge
- High separation efficiency
- Often used with Sludgecleaner STRAINPRESS® to provide a robust 2 stage sludge screening and dewatering process
- Automated operation of the raked bar screen
- Fully enclosed to eliminate odour
- Intergrated screenings washing and compaction in a single unit
- · Low maintenance fully self cleaning as its rake tinesfully engage with the basket bars
- 500+ successful UK installations

Related Products:

HUBER Sludge Acceptance Plant ROTAMAT® Ro3

Related Solutions:

- HUBER Solutions for Sludge Screening
- HUBER Solutions for efficient Sludge Treatment

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