

Job Title:

Equalisation Tank Upgrade

Company:

API Company

Location:

Wicklow, Ireland

Duration:

8 months

Objectives:

Collect all aqueous and organic wastes

Achieve homogeneity of waste before further treatment.

Get In Touch

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Our Client had an existing 2000m³ Equalisation (EQ) tank in their WWTP. Located underground, the tank was of concrete construction and was used to handle concentrated waste (organic and aqueous process waste streams and cleaning washes). Changes in the client's internal regulations necessitated the replacement of the concrete EQ tank, and **Prochem** were awarded the contract to provide a complete EPC (Engineering Procurement Construction) solution.

The project scope included:

- Detailed design
- Development of P&ID's, GA's and isometrics.
- Project Management
- Equipment Specification
- Mechanical & Electrical contract tendering
- Construction Support

An early task for **Prochem** was to review the volume requirements and provide advice on optimum tank configuration considering mixing systems, energy efficiency, costs, operations and required redundancy. The chosen solution was to install two smaller 500m³ stainless steel tanks within the existing EQ tank, thereby ensuring maximum containment integrity.

Key Engineering Challenges which **Prochem** overcame in the course of the project were:

- Constructability given the requirement to remove and dispose of sludge from the existing tank prior to commencement.
- On site construction of 2 x 500m³ SS tanks within the existing EQ tank.
- How to achieve homogeneity of waste and reduction of sedimentation in the new tanks – resolved through the integration of jet mixers into the design.
- Transfer of materials and clearance of spills – resolved through selection of suitable pumps for the new tanks and the old concrete tank.
- Integration with the existing WWTP Control system – resolved through the addition of additional instrumentation and I/O, removal of redundant I/O and PLC and SCADA modifications.

Prochem completed the project within budget (€2M) on schedule within the 8 month time frame allotted, including a 6 month Construction and Commissioning phase. Waste from the plant was diverted to temporary storage facilities for treatment offsite during the construction phase thus ensuring no disruption to plant operations.