

WASTEWATER TREATMENT

DISSOLVED AIR FLOTATION PLANT



RENDERTECH



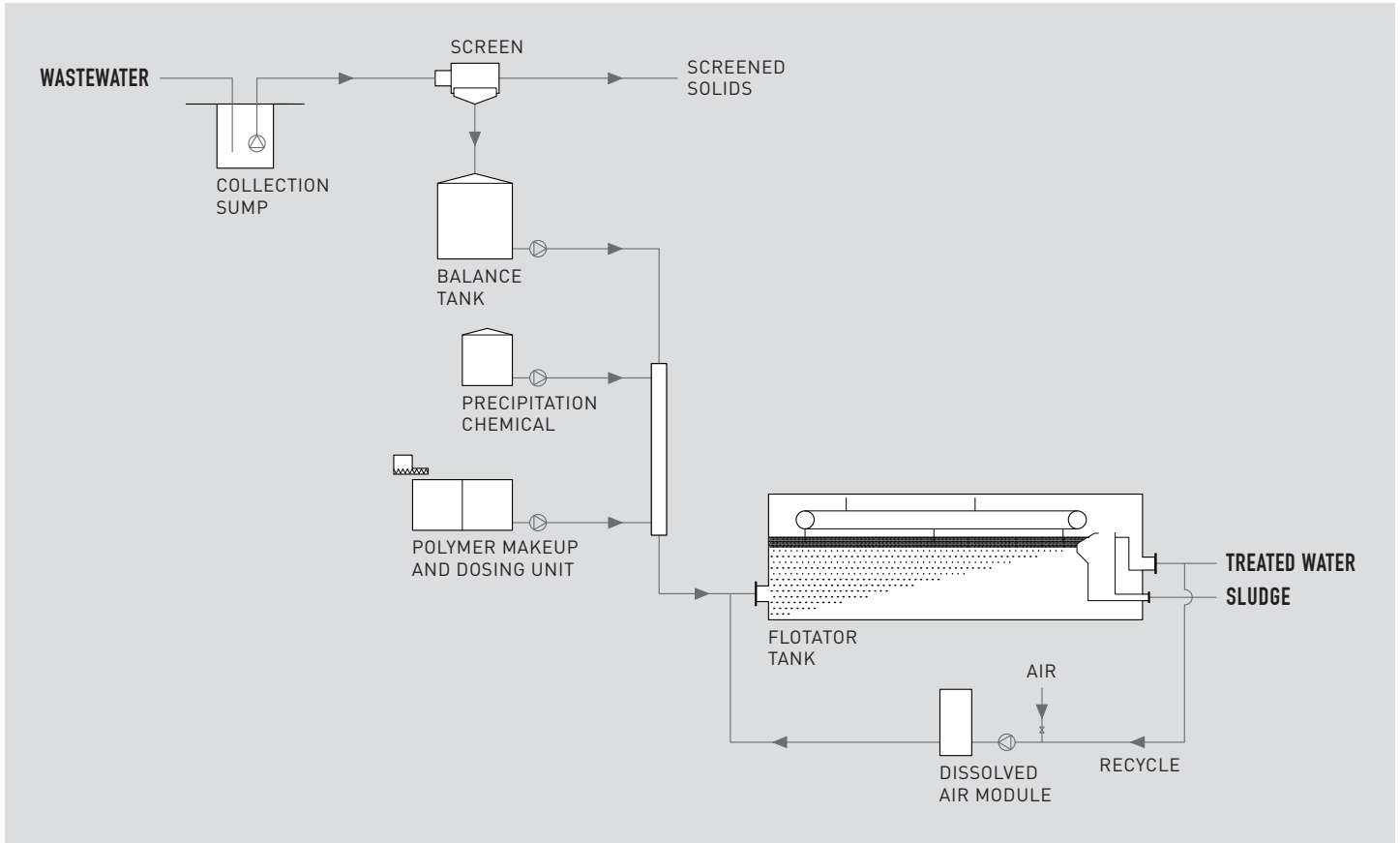


Rendertech Dissolved Air Flotation (DAF) plants provide the solution to many wastewater treatment problems. They are compact, efficient, simple to operate and economical to run. DAFs are used in a variety of industries as a primary method of wastewater treatment before discharge to sewer or irrigation, or for further treatment. Rendertech DAF plants are built using modular construction and can be supplied with chemical treatment modules to increase the degree of treatment.

DISSOLVED AIR FLOTATION PLANT



RENDESTECH



FEATURES AND BENEFITS

REMOVES COD, FATS, OIL, GREASE AND SUSPENDED SOLIDS

The fine air bubbles generated by the dissolved air system attach themselves to the solids in the wastewater stream and lift them to the top of the Flotator Tank, where they can be scraped off. DAFs are particularly effective at removing fats, oils and grease from wastewater.

REDUCED TRADE WASTE CHARGES

Reducing the loadings in your wastewater before discharge can significantly reduce your trade waste costs. A DAF plant will often pay for itself in a short time based on these savings. A Rendertech DAF plant is fully automatic and requires limited operator input. Its footprint is very

compact compared with other wastewater treatment processes.

REDUCED SLUDGE VOLUMES

Due to their large surface area, Rendertech DAF plants produce a drier sludge. Sludge with a dry solid content of up to 15% is achievable on certain applications. Increasing the dryness reduces the sludge volume, therefore reducing the sludge treatment or disposal costs.

NO RISK OF BLOCKAGES

Rendertech Flotators do not require lamella plates, but rely on volume and surface area to achieve separation. This allows our DAFs to handle high contaminate loadings without the plate pack fouling and blocking.

PROCESS DESCRIPTION

CONSTANT FLOW RATES

Screened wastewater is stored in a Balance Tank, where the flow rates and contaminate levels are normalised. From the Balance Tank the wastewater is pumped to the Flotator Tank at a constant flow rate.

PRECIPITATION

Prior to entering the Flotator Tank, a coagulant is added to precipitate the contaminants and form a floc. The floc is then stabilised by the addition of a suitable flocculent.

DISSOLVED AIR REMOVES IMPURITIES

A portion of the treated effluent is recycled through the Dissolved Air System, where a pressurised,



air-saturated, air and water solution is generated using an multiphase pump. When this solution depressurises in the Flotator, the air is released as a cloud of microbubbles, which attach themselves to the suspended material and floc.

IMPURITIES SCRAPED OFF

These impurities rise to the Flotator surface, building up a layer of sludge that is periodically removed by a slow-moving scraper. The sludge is collected in the Sludge Tank and pumped by the sludge pump to further treatment or disposal.

OPTIONS

- Chemical dosing and monitoring
- TSS monitoring
- Pipe flocculators
- Balance tanks and screening
- Control systems

YOUR PROCESS PARTNER

We are specialists in process and storage solutions, providing the products and technical expertise to get the best from your plant. For more information call for a no obligation chat about your processing needs.

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