

CUSTOMER CASE



Fredericia Central Wastewater Treatment Plant

Capacity 420,000 PE

Denmark

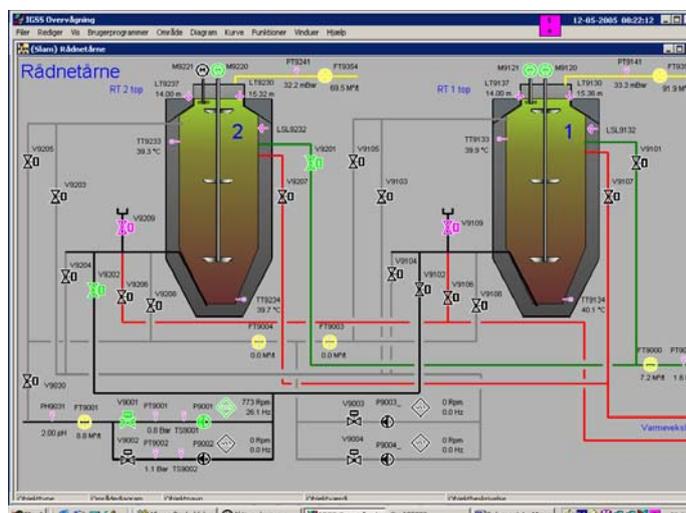
Plant Description

Fredericia Central Wastewater Treatment Plant was built in the late '70s as a mechanical treatment plant. The plant was later expanded to implement biological and chemical cleaning of the effluent. When cleaning is finished, the water is led down to the seabed of Little Belt through a 700 meter long pipe.

Wastewater comes from households, industry and percolation into sewers. Wastewater-inflow in dry weather is about 2200 m³/hour and in rainy weather around 4400 m³/hour. The treatment plant currently has a capacity of 420,000 PE, representing wastewater from 420,000 people.

Biogas Facility

Methane gas is extracted from concentrated sludge in decomposition tanks. The sludge is heated to 35 °C which decomposes the sludge in an oxygen-free process. The methane gas is used as a propellant for a gas engine generator which contributes 15% of the wastewater treatment plant's energy consumption; additionally the engine's cooling water covers the entire treatment plant's heat consumption.



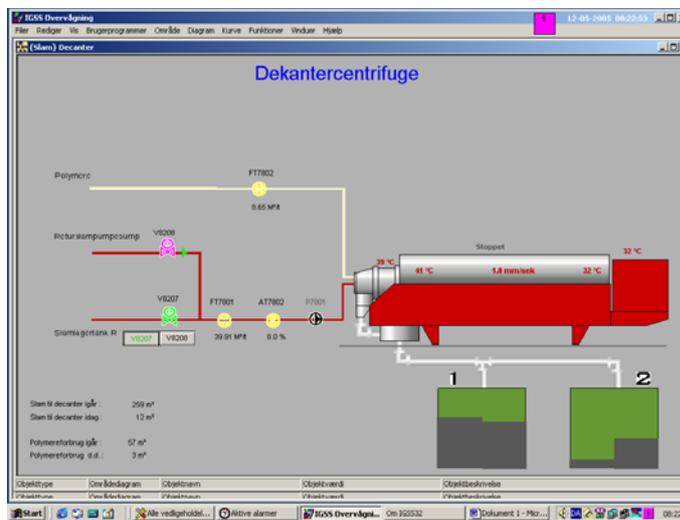
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Cambi Plant

In 2002 a Cambi plant (thermal hydrolysis) was put into operation with the purpose of reducing the production of sludge and to increase the volume of biogas. It was a requirement that the plant was to be fully automated and IGSS was chosen for the purpose.

Control and Monitoring

Fredericia Central Wastewater Treatment is fully supervised and managed through an IGSS system that registers data to an operations database. The monitoring ensures that an alarm is automatically enabled if a failure occurs at the plant. The facility is monitored 24 hours a day via a home emergency service.



IGSS

The treatment plant's IGSS system is a 2000 object single-user installation with an operator station, and for the pump stations there is a 2000 object single-user installation with an operator station as well. Furthermore, a Cambi plant with a 400 object single-user installation and an operator station exists.

Owner

Municipality of Fredericia

System Integrator

YIT A/S

