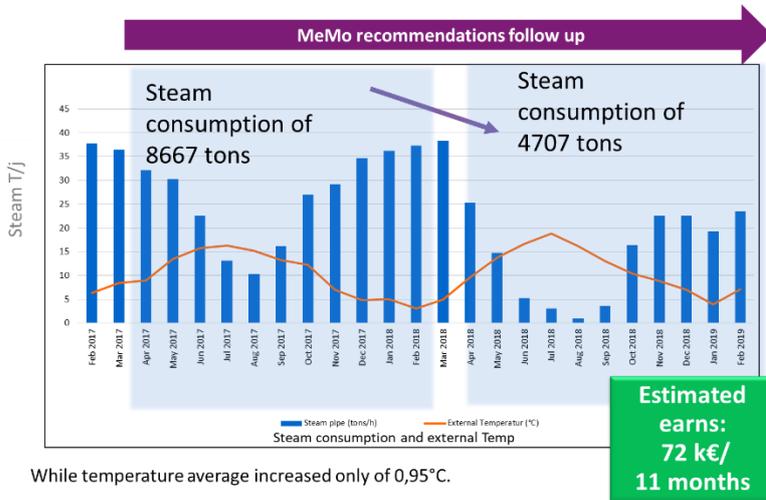
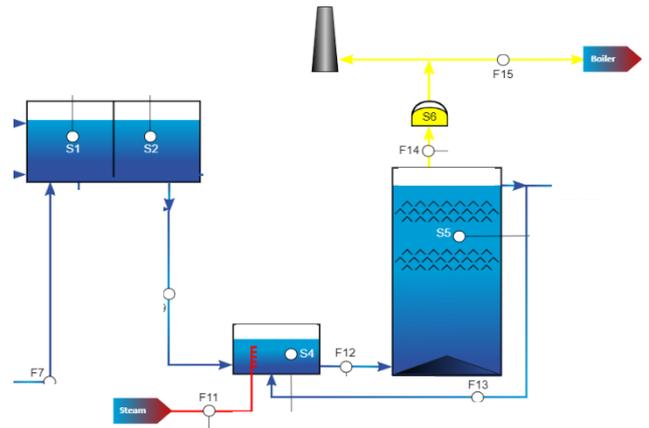


The cost of wastewater treatment in Europe is €30 million per year. This operating cost of wastewater treatment plants is due to the consumption of energy, chemicals and the disposal of plant sludge. Advanced station control reduces OPEX by 10%.

Constraints of industrial STEP

Industrial WWTP are subject to high load variations and frequent pollution leading to operational difficulties.

The MeMo® control solution was deployed on an IC (granular sludge) methanizer treating 150 m³/h of an industrial brewery effluent. The effluent load varies greatly depending on the production stages of the brewery (41-625 kgDCO/h) and may contain high MES pollution. These factors complicate the management of the digester which must adapt quickly to the variation of the effluent. For safety, the digester is permanently heated to 32°C in order to guarantee the efficiency of the treatment of the material. This results in significant operating costs due to high steam consumption.



While temperature average increased only of 0,95°C.

Cutting OPEX thanks to advanced control

A dynamic control with MeMo®, adapted to the constraints of the site, has been deployed to reduce operating costs while securing the biology of the system

BioEnTech's MeMo® control solution met the needs of the operator. The load control module showed recurring under-load periods, where the methanizer could treat up to 30% more COD. Since all the wastewater was already treated on the methanizer, load regulation was not sufficient to increase the profitability of the site. BioEnTech's experts, in collaboration with the operating team, proposed a module to regulate the temperature of the methanizer.

Reduction of site steam consumption

By controlling the working temperature of the methanizer, steam consumption was reduced by 8000 tons per year for an estimated profit of €72k/year.

The module regulates the temperature of the methanizer according to its biological stability, its purification performance and the evolution of the load to be treated. Temperature variation was limited to a range of 27° to 32°C to ensure stability of bacterial populations. A temperature recommendation is issued every 15 minutes. This reduced steam consumption by 8000 t/year in the first year and by an additional 4700 t/year in the second year.

These elements demonstrate that MeMo® is suitable for the operation of industrial sewage treatment plants. MeMo® allows the operator to better understand the operation of his site and to anticipate its drifts. It is secure and can focus on optimizing operating parameters. MeMo®'s decision support allows customer sites to save €4 for €1 invested in BioEnTech's solutions.



BioEnTech

Pépinière d'entreprises EINSTEIN

13 avenue Albert Einstein

69100 VILLEURBANNE, FRANCE

web: <http://www.bioentech.eu>