

A QUICK SOLUTION: MODULAR WASTE WATER TREATMENT

View of the EnviModul plant for chemical-physical wastewater treatment



Rust corrodes materials and may lead to impurities. As a result, there is a demand across most sectors for components that are protected against corrosion. Cantin SA, headquartered in Domdidier in Switzerland, specializes in the metalworking of rust-proof materials. The company produces complete products and individual components for many different sectors, from medical technology through the food industry to electrical engineering.

The first step of the production process involves the experts at Cantin mechanically and thermally moulding the individual components. When welding is required as part of the process, residue which is susceptible to corrosion is frequently left on the surface. The processed components therefore undergo after-treatment and cleaning where they are pickled in an immersion basin containing acid or – if they are too large for this – they are treated with a pickling spray containing adhesion gel. This results in consistently rust-proof surfaces, however it produces contaminated wastewater. "As a result of the pickling process, the water ends up containing acid and heavy metals, among other things, which means we need to treat it before we can release it into the sewer system", explained Christian Guinnard, technical director at Cantin SA.

A flexible system

In 2010, the company found a solution for this. "The old procedure was no longer sufficient. For environmental

Project data

Application	Industrial sheet metal processing
Wastewater volume	2,5 bis 4 m ³ /day
Discharge	Returning water indirectly to the environment
Objectives	Adhere to threshold values in terms of pH value, hydrocarbons and heavy metals
Plant technology	An EnviModul with a Split-O-Mat [®] SOM 1500 wastewater treatment plant and an immersion tank

reasons we wanted a new process that was able to rid wastewater of residues in a targeted way and as quickly as possible." In autumn 2010 in only 11 weeks, Cantin and Swiss company ENVIRO FALK AG, a subsidiary of EnviroChemie headquartered in Germany, installed EnviModul, a modular system for wastewater treatment. The system consists of a retention tank and the chemical-physical process, Split-O-Mat[®] SOM 1500. "EnviModul is a flexible, component-based system, which we can tailor to the individual requirements of our customers. The wastewater treatment is housed in space modules – this is a huge advantage, particularly when speed is of the

essence, because it is not necessary to construct a building or to apply for planning permission", explained Markus Sameli, member of the Management Board at ENVIRO FALK. As a result of the flexible modular construction, the treatment can also be set up at another site or additional modules can be added.

Speed with modular construction

Within four weeks of the start of the project, EnviroFalk had constructed a 5 m³ underground immersion tank in which the rinsing water from the pickling process could be collected. "The wastewater could be collected here initially until the treatment plant was operational. As a result, the customer experienced no loss of production and could remain operational before the system was completely finished", explained Markus Sameli. Another seven weeks later, the Split-O-Mat[®] plant, which had been fully assembled and tested in Eschenbach (Switzerland), commenced operation. The Split-O-Mat[®] is a compact chemical-physical treatment plant. Water treated in this way complies with the cantonal discharge requirements and can be released into the sewer system. "We are very satisfied with this solution", said Christian Guinnard. "This system with the underground immersion tank and the space module requires very little room and any maintenance can be quickly and easily carried out."

Benefits

- ❑ Time and cost savings: No buildings required to house the plant.
- ❑ Erected quickly: Modules are factory-ready and assembled on site.
- ❑ Tailored: The modules are adapted to the customers' requirements.
- ❑ Flexible: The plant can easily be extended and relocated to another site.
- ❑ A one-stop service: EnviModul provides a complete solution for the entire treatment process.
- ❑ Made in Switzerland: Planning and quality production entirely in Eschenbach.



Water treatment plant compactly integrated into an EnviModul

EnviModul – a flexible system

EnviModul system solutions are modular plants for water treatment, pre-treatment and wastewater treatment. They can be set up more quickly, flexibly and cost-effectively than traditional plant solutions. They are also scalable and can be relocated to other sites.