Integrated Systems

Monitoring of Wastewater in Industry Parks





Objective
Protection of the treatment plant & environmental compliance

Parameter
TOC (Total Organic Carbon)

Integrated system consisting of:
- AnaShell type AS4000 insulated analytical shelter (2 m x 2 m) with H-AC unit, lightning protection, sink and hot water boiler
- BioTector B7000i TOC analyser with Venturi sampler for six sample streams (three different influent streams, the inlet and outlet of the dissolved air flotation unit, and final discharge)

Problem

At a large industrial park in the Netherlands, the diversity of more than 50 different companies with varying production processes, had created challenges for the local wastewater treatment plant. On two occasions, the microbiological stage was compromised, which affected treatment effectiveness and raised the potential for effluent permit violation. The operator therefore decided to purchase a TOC analyser to monitor the incoming organic load, but was unable to identify an appropriate place to install the instrument.

Solution

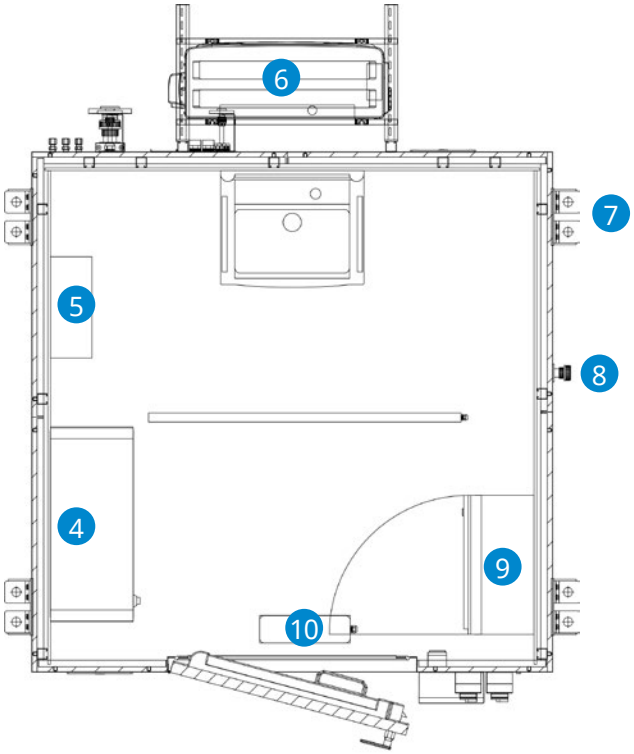
The Hach® inhouse engineering team designed a turnkey monitoring solution for six sample streams. A weather and corrosion resistant AnaShell analytical shelter was chosen to provide sufficient space for the analyser and a Venturi sampler, with the potential for additional equipment in the future. Before delivery the entire shelter and its components underwent a factory acceptance test (FAT) for instant and sustainable operational reliability on site.

Benefits

- Return of investment through reduced risk of fines
- Significantly reduced project management workload through single source supplier with engineering and application expertise
- Fast realisation at a fixed price
- Stable, laboratory-like conditions for optimal analytical performance of the analyser
- Safe working environment for maintenance personnel
- CE certification, full documentation
- Low installation effort, fast start-up

Details & Components









1 Main Power Switches
2 Signal junction box
3 Sink with hot water boiler
4 TOC analyser
5 Venturi sampler, six sample streams
6 Air conditioning unit
7 Lifting / Mounting bracket
8 Manual drain
9 Local power distribution panel
10 Emergency light
11 Door with antipanic bar which can be opened from the inside even when locked