Integrated Systems

Monitoring of Wastewater from Beverage Production





Objective
Process monitoring & environmental compliance

Parameters
TOC (Total Organic Carbon), Phosphate (in phase 2)

Integrated system consisting of:

- AnaShell type AS4300 insulated analytical shelter (2 m x 3 m) with H-AC unit, lightning protection
- Two BioTector TOC analysers
- Two sample vessels
- Phosphax sigma with Sigmatax sample preconditioning unit (in phase 2)

Problem

A beverage production site in Germany discharges wastewater into the public sewer system. Due to a high organic load, the receiving municipal wastewater treatment plant occasionally struggled to meet its permit limits. In order to avoid fines in the future both businesses cooperated on an optimisation solution to reduce organic load (phase 1) and nutrients (phase 2).

Solution

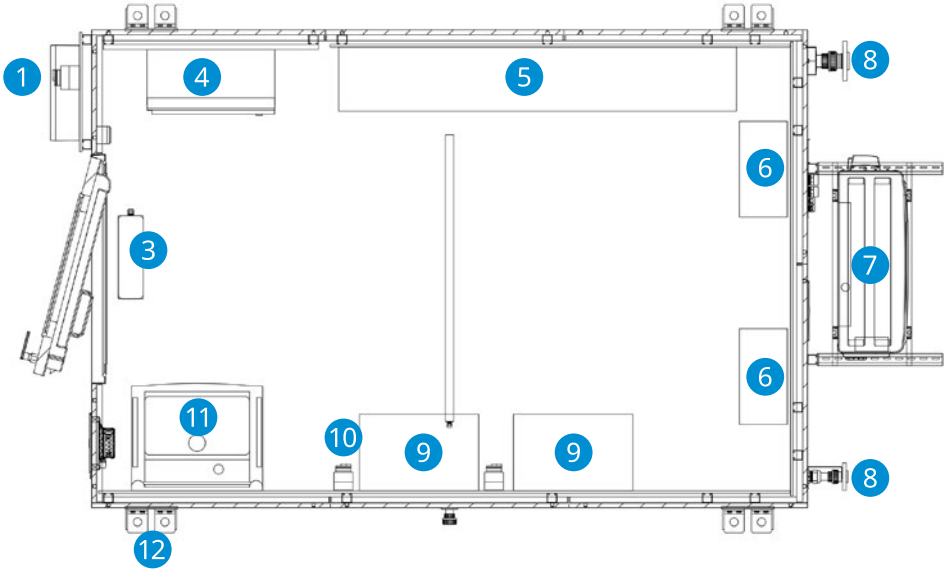
The Hach® inhouse engineering team designed a turnkey monitoring solution for the influent and effluent of the wastewater plant. A weather and corrosion resistant AnaShell analytical shelter was chosen to provide sufficient space for two TOC analysers, two sample vessels, and an additional analyser which will be installed later to monitor Phosphate. Before delivery, the entire shelter and its components underwent a factory acceptance test (FAT) to ensure instant and sustainable operational reliability on site.

Benefits

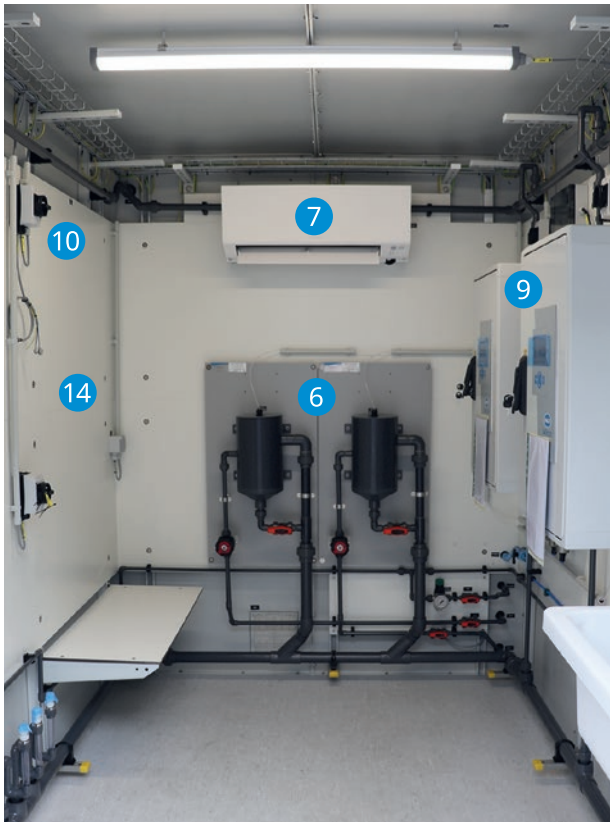
- Significantly reduced project management workload through single source supplier with engineering and application expertise
- Stable, laboratory-like conditions for the instruments to achieve high accuracy and uptime.
- Safe working environment for maintenance personnel
- Low installation effort, fast start-up
- CE certification and full documentation

Details & Components









1 Main Power Switch
2 Signal junction box
3 Emergency light
4 Local power distribution panel
5 Phase 2: Phosphax sigma and Sigmatax
6 Sample vessels
7 Air conditioning unit
8 Sample inlet / outlet flanges with protective stainless steel mounting brackets
9 BioTector TOC analyser
10 Individual maintenance switch for every instrument
11 Sink with hot water boiler
12 Lifting / mounting bracket
13 Lightning protection
14 Durable chemical resistant HPL (high pressure laminate) mounting plates