

Case Study - Biopharma Site

PW Storage, Sanitization & Distribution
System

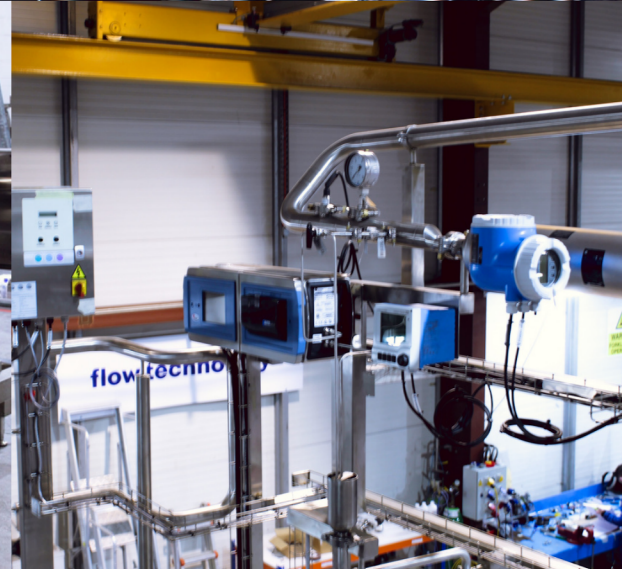
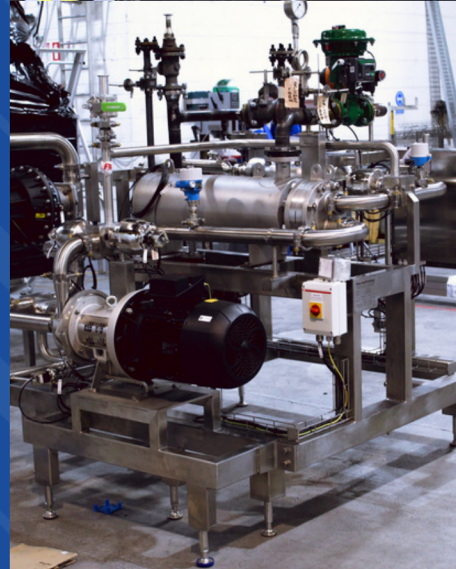
Technology Overview

- 6kL PW Vessel, PED Cat III
- Allegheny Bradford Shell & Tube HXs (Sanitisation & Cooling)
- Hanovia PharmaLine UV Light Sanitization System
- Hilge Hygia 15kW Pumps, E&H Promass Flowmeter, Anatel PAT700 TOC Analyser

Process Parameters & System Details

- Loop max flowrate: 31.1m³/hr (80mm loop)
- Ambient (25°C) Operating temp
- Sanitisation ramp up to 85°C over 60 mins
- Sanitisation hold at 85°C for 180 mins
- Cooling down to ambient over 90 mins
- Control: Loop pressure, Return flow, Temperature
- MCC & Electrical panels included.
- IO to Clients PCS system

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Case Study - Biopharma Site Large Scale WFI Distribution & POU System

- Full WFI (Water for Injection) distribution system, comprising of 6 loops, running up to 60m³/hr.
- Two large cooling heat exchangers, one with tower water, the other with cooling water.
- Hot loops with 33kW trim heaters
- Ambient loops with heat exchangers up to 2,900kW and 1,400kW.
- Full system designed, built and tested in Flow Technology's workshop
- System handled WFI for the single largest pharmaceutical project in Europe at that time.



System Overview

Materials	316L SS
Sanitary Valves	GEMU
Pumps	Alfa Laval
Heat Exchangers	Allegheny Bradford
Filters	Sartorius
Codes	ASME BPE, PED

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Case Study

WFI Point-of-Use (POU) Coolers

System Overview

- Duty: 690kW
- Surface Area: 6.8m²
- Shell Design: Shell-in-tube
- Tube Design: FV/10 barG
- MOC: 316L/304L

WFI & PW Distribution and POU System Design.

Flow Technology has experience in the sanitary design and implementation of hot, ambient and cooled sub-loop systems. System design can utilise drain and blow, or constant sanitisation as a means of bioburden control

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Small Volume WFI POU: Standardised Cabinet

- Flow Technology works with Allegheny Bradford Corporation (ABC) to deliver WFI sample cabinets which are ASME BPE and CE compliant.
- These systems support CIP, SIP, timed shut off, indirect immersion RTDs, temperature displays and ethernet connections.

