

CASE STUDY: Mogden STW - Digesters & Powerhouse

Project Description

Adsysst undertook a large, continuous contract in excess of £1.2 million, to provide complex integration services for the Mogden STW. The contract was with Binnie Black and Veatch (BBV) and Thames Water. The initial contract involved the refurbishment of 16 existing digestors (from 20 original units on-site). Phase 1 was to refurbish 8 digesters; Phase 2 was the second set of 8. Phase 3 involved the supply of a new control system solution for the heat recovery systems / engine control. Other phases included modifications to the existing gas main, a new control system for the storm tanks, improvements to Lucifer's gate, addition of a stand-alone industrial SQL server data logging system and modifications to the FIX / Bristol Babcock RTU network. In addition to this contract we have also now delivered 6 off drum thickener control panels and 3 off centrifuge control panels through Alfa Laval.

Our BBV scope included –

- Design assistance for all control system solutions
- Design of hazardous area control system solutions
- Provision of all PLC, SCADA and telemetry hardware
- Provision of ICA control panels, some positioned in hazardous, zone 1 areas.
- On-site electrical installation services
- On-site commissioning services.
- Final Documentation

Adsysst became an integral part of the BBV design team, and influenced / assisted with all aspects of integrating a new Rockwell system into an existing BB configured site whilst keeping the plant running.

Added Value Engineering and Innovation

In particular we were praised by Paul Dench and Steve Francis of the BBV team for the following added value and innovation –

- Contributing to the over all control system and SCADA design
- Our open book policy when requested to detail prices for additional or variations of scope
- Our flexible approach to site availability, coming on/off site, at short notice, fitting in with a start/stop commissioning strategy necessary at times to ensure the site remained operational at all times.
- Flexible commercial strategy – delivering systems, on-time, to budget, and where cost savings were made in one area, off-setting this saving against increases in scope in other areas.

Benefits / Cost Reductions

- The crucial saving made on this site is our seamless integration with the BBV design team, supplying software, design and commissioning services to bring about an extended running of the powerhouse engines. After refurbishment, and crucially the installation of our digester and gas mixing software, operations reported that a third engine could now be run for up to 7 hours per day. This saved on fuel / running costs, and Thames advised BBV that it is estimated, comparing previous fuel bills, an annual saving has been achieved of between £300K to £400K.
- Designing local client SCADA solutions using lower cost PC work stations, 6 off local SCADA clients engineered to <£2,5K, rather than £5K, saving 6 x £2.5K = £15K



No. GB4311



No. GB11318

Mogden STW Control System

Control System Overview

