

CASE EXAMPLE

Thermal Oxidizer Controls Upgrade

Application: Process Control

ACS ROLE

Fabricated control panels, procured field devices, managed installation, performed PLC and HMI programming, performed startup & commissioning.

PERFORMANCE FEATURES

Programming – Mitsubishi GX Works 2 PLC programming software, Mitsubishi GT Works 3 HMI development software.

Platform – Mitsubishi MELSEC Q-series PLC, Mitsubishi GOT2000 Series HMIs.

Panel Build – Designed and built qty. (3) control panels: Main Control Panel, Test Cell 1 Remote I/O Panel, and Test Cells 2-8 Remote I/O Panel.

Commissioning – Commissioned thermal oxidizers with new control system; commissioned new test cell devices.

Field Devices – Procured, configured, installed, and commissioned the following devices: LEL transmitters (w/ aspirator panels for harsh environment sampling), pressure transmitters, thermocouples, and control valves

DESCRIPTION

Challenge:

Client needed increased capabilities to test future engine types. The new engines are tested as single and twin turbocharged 4- and 6-cylinder production engines, each with specific boost pressure and horsepower ratings. The existing Thermal Oxidizers were undersized to handle the combined flow rates from the new engines.

Solution:

ACS replaced an outdated Mitsubishi A-series PLC and discrete controllers with a Mitsubishi Q-series PLC to improve the existing thermal oxidizer performance to handle future test cells' exhaust emissions for larger, more powerful engines.

A human-machine interface (HMI) was added on the ground floor near the test cells so the operators don't have to go to the mezzanine level to see alarms, change setpoints, etc.

