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CLIENT CASE STUDY

CUSTOMER

An international manufacturer of jet engines and appliances. The customer has numerous facilities to clean and refurbish used engine parts.

CHALLENGE

Five different manufacturing facilities across the United States receive and process jet engine parts. During refurbishing the parts may be sandblasted, polished or cleaned with chemicals which may not be released into the municipal sewer system under EPA guidelines. The customer required a system to treat up to 50,000 gallons of water per day so that it could be safely released from the plant. It was critical that the system be constantly monitored to prevent any violations. Lastly, it was important for the process to be automatic and to minimize operator involvement in the process.

SOLUTION

For each facility, Acutek interfaced directly with a national engineering firm to aid in the selection of appropriate sensors and controllers. The system for each facility utilized an HMI touchscreen for operator control and system information, together with a PLC-based program for system control. Acutek also designed and assembled the main control panel as well as numerous local and remote operator stations. The systems were designed to provide:

- Efficient separation of metals from the wastewater
- Continuous flow batch processing
- pH balancing
- Batch processing screens to step an operator correctly through the treatment process
- Automated additions of chemicals during the batch process
- Bulk chemical storage and operator notification of low levels
- Remote monitoring from the operations lab
- Critical and continuous effluent sewer monitoring to ensure EPA compliance
- Custom printable data reports

RESULTS

The customer was able to guard against accidental releases of toxic materials and chemicals into the municipal sewer system. By treating the wastewater internally, the customer was also able to save significant sums of money for hauling the water elsewhere for treatment.