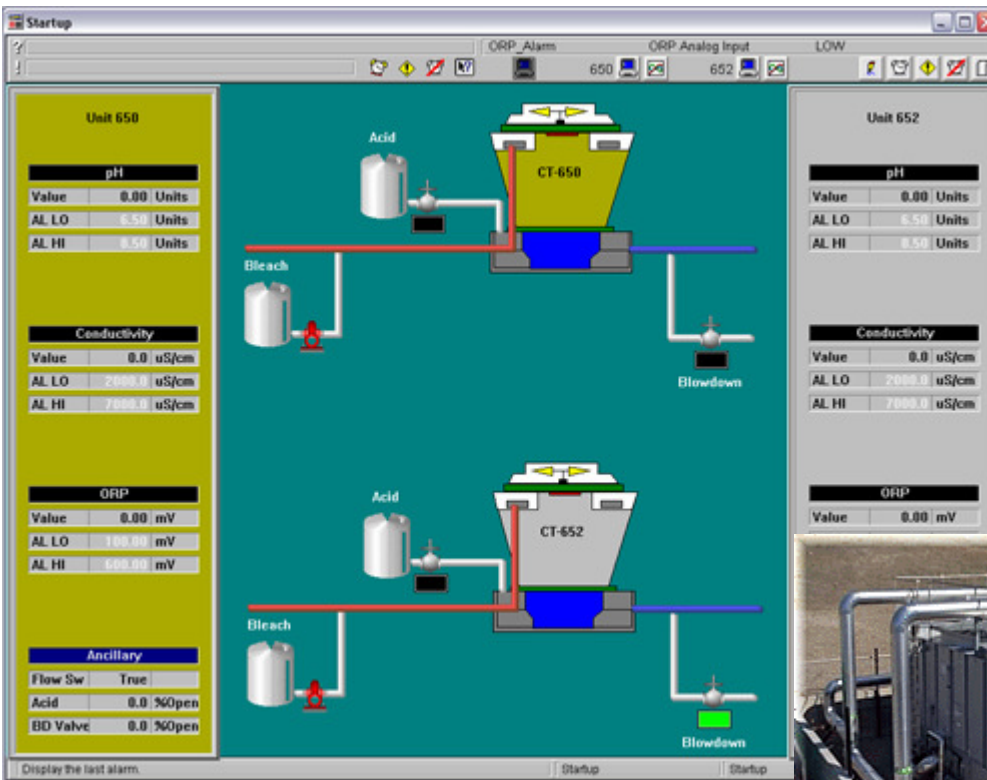


Overview

During the past century, Nalco Company has grown from a fledgling water treatment business to a leading provider of integrated water treatment and process improvement services, chemicals and equipment programs for industrial and institutional applications. The Tosco Refinery located in Long Beach, CA has a number of cooling towers which are operated and maintained by Nalco personnel. Nalco has approximately 10 independent CitectSCADA systems throughout the facility. When Enterprise Automation was first engaged by Nalco, about half of the systems were not functioning correctly.

Solution

Enterprise Automation had a large number of issues to deal with at this facility. They ranged from, CitectSCADA configuration errors, computer and operating system problems, wiring problems, RS232 to RS422 signal converter hardware problems, Sixnet I/O failures, Rosemount transmitter problems, and Modbus communications problems. All of these problems were corrected, and additionally, some of the stations with dual CitectSCADA computers for two cooling towers were consolidated into a single CitectSCADA computer system. One of the most difficult issues with this set of systems was the communication over Modbus to the obsolete Sixnet I/O. CitectSCADA made this possible, as it had all the required parameters to configure the Modbus communications.



Technology

CitectSCADA communicated to Sixnet I/O over an RS422 connection using Modbus protocol. RS232 to RS422 converters were used to allow the computers to monitor the Sixnet I/O from hundreds of feet apart. Most of this work was performed in 2002, but there have been a number of follow up visits for changes to the facility, and computer failures.