

## CASE STUDY

# Closed Loop Cooling Water System

### CLIENT SITUATION

The Power and Propulsion Test Facility in Building 633 sought Rhoads to complete the Closed Loop Cooling Water (CLCW) System. Building 633 is an existing Navy facility that was being retrofitted to house the Power and Propulsion Test Facility, which this cooling water system supports.



### RHOADS SOLUTION

Rhoads recommended a phased approach to this project. Phase 1 of the CLCW piping system interconnected two fully independent pumps, a plate heat exchanger, two duplex strainers, an ion exchanger and a compression tank. This phase required approximately 900 linear feet of Schedule 40 welded stainless steel piping ranging in size from 1/2 inch through 18 inches. In addition, this piping system required more than 137 slip-on welded flanges, 104 butt welded fittings, 77 swage type fittings, 13 linear feet of flex hoses with flanged ends, 95 valves and 72 instruments with related sensors.

The system was broken into more than 50 spool pieces that were fabricated offsite at Rhoads' facility, with all welds inspected by an AWS certified inspector and 10% of welds radiographically tested. These spools were then installed and tested on site by Rhoads. This piping system along with the Government-provided equipment will supply cooling for two Load Generators, two Prime Movers, the Power Recirculating Drive System and other loads in the auxiliary systems and the system under test. This piping system interconnects to a Phase II system awarded to Rhoads.

### RESULT

The system was completed successfully amidst continual customer schedule and priority changes. Upon completion of this more than 11,000 man-hour job, the piping system and quality documentation passed the meticulous inspection of the Naval Surface Warfare Center.

Contact us today to  
learn how Rhoads  
Industries can help  
with your next project.

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