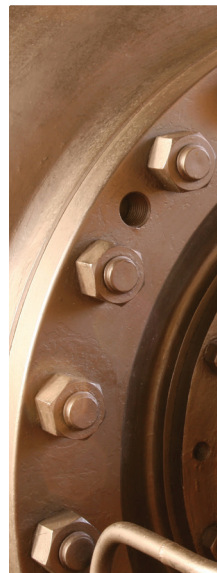
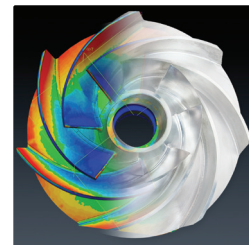
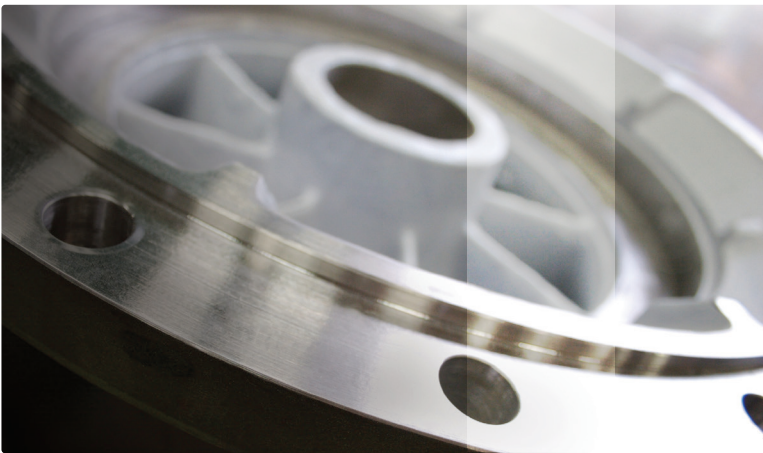
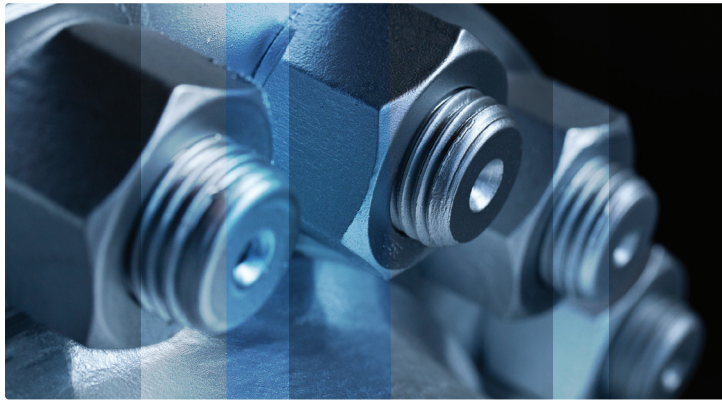


HYDRO EAST



Engineering Pumps for Better Performance and Longer Life – Since 1969





We Are Pump Experts

Engineering expertise is the foundation of our business. Our engineers and technical staff have extensive experience in the pump industry with a broad range of pumping equipment. Utilizing the latest manufacturing and design technologies, we not only repair pumps - we improve their design and reliability. With our broad knowledge base and proven successes for more than 50 years, we are trusted by pump users around the world for better pump performance and longer life.

Our mission is to work hand in hand with our valued customers to optimize the performance and reliability of their pumping systems. We do this by evaluating and understanding root causes of pump degradation or failure and by providing unbiased engineering analysis, quality workmanship, and responsive field service for improved plant operation.



Worldwide Service Centers

24/7 Emergency Response

Field Service

Reliability Services

Quality Pump Repair

Engineering Services

Critical Parts Solutions

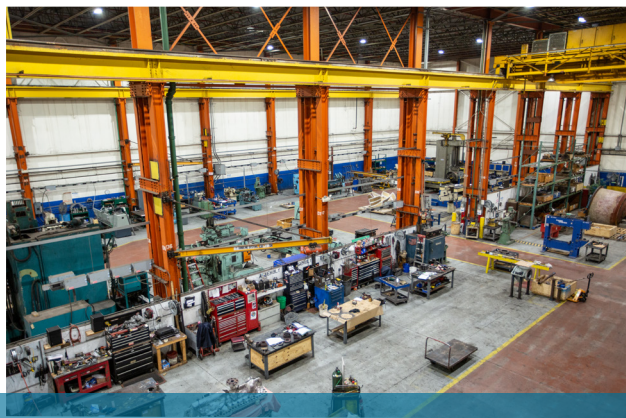
Certified Performance Testing

Condition Monitoring

Education & Training



Hydro provides engineering expertise and essential support to pump users around the world for better performance and longer life.



Hydro East – Powerful Capabilities

Hydro East's independent and unbiased approach allows us to repair all makes and models of rotating equipment, as well as non-safety nuclear pumps. Every part that leaves our shop has met stringent quality standards.

With 25,000 sq. ft. of shop space and 50-ton overhead crane capacity, Hydro East is uniquely capable of providing troubleshooting, forensics, and root cause analysis for large vertical circulating pumps, horizontal multi-stage pumps, and much more.

Whether you are experiencing planned maintenance, scheduled outages, or emergencies, Hydro East's unparalleled capabilities and network of expert engineers allow customers to receive total solutions for all rotating equipment issues.

We get it right – the first time.



Our state-of-the-art equipment includes:

HORIZONTAL BORING MILLS

- TOS 4" spindle 48" x 48" table
- Stanko 4 1/2" spindle 71" x 63" table

VERTICAL BORING MILL

- O-M, 63" table x 63" under rail

LATHES

- LeBlond, 24" swing x 10 ft
- Clausing, 16" swing x 7 ft
- Ikegail, 12" swing x 4 ft
- Victor, 12" swing x 4 ft
- Moriseiki, 16" swing x 3.3ft
- Vertical lathe: Bullard, 3ft

KEYSEATER

- Morrison 1/16" x 1 1/4" x 9" stroke

LASER SCANNER / COORDINATE MEASURING MACHINE

- ROMER Absolute Arm

MILLING MACHINES

- Bridgeport Series 1
- Milwaukee

LIFTING EQUIPMENT

- 50-ton overhead crane with 10-ton auxiliary
- 25-ton overhead crane with 5-ton auxiliary
- Five 1-ton jib cranes

TESTING EQUIPMENT

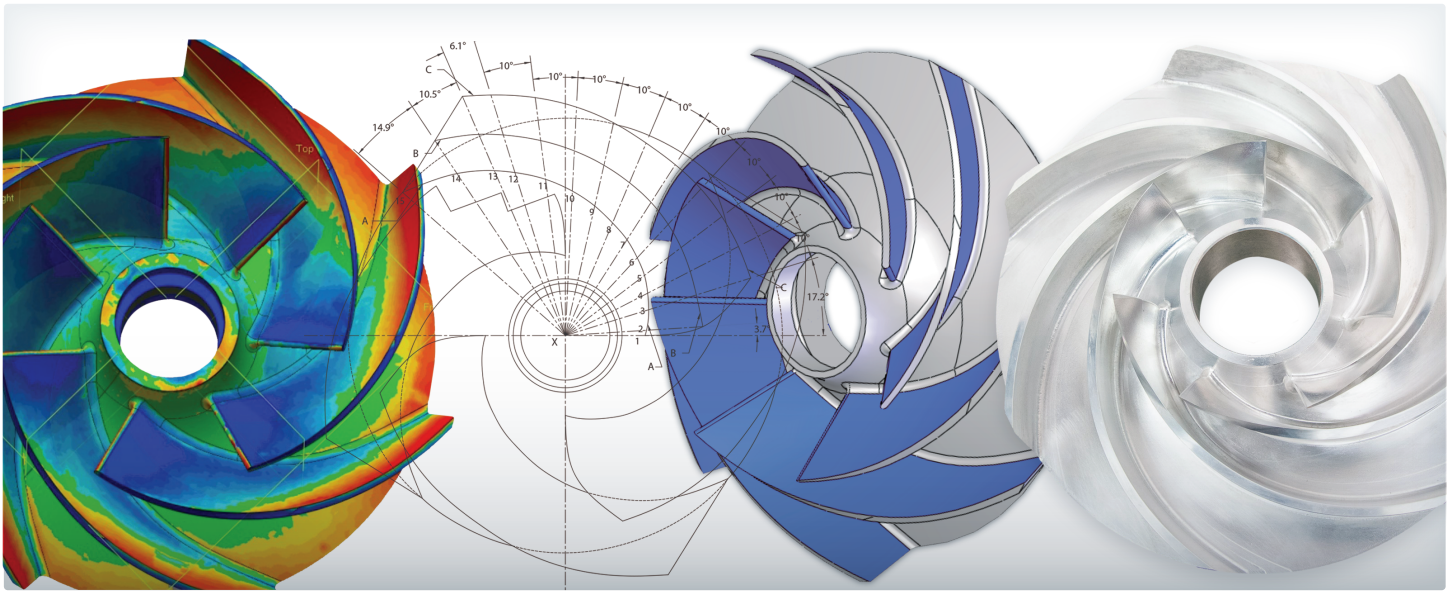
- Hydro test pit up to 6,000 psi
- Hardness tester
- Innov-X material analyzer

WELDING EQUIPMENT

- Miller XMT 350cc/cv power source stick, MIG
- Miller 250 DX/ 350 LX, TIG
- Weld rod oven
- Miller plasma cutter spectrum 875

MISCELLANEOUS EQUIPMENT

- Shenck balance machine, 5,000 lb capacity
- Inverna radial arm drill press
- Pedestal grinder
- Hydraulic vertical stacking pit
- Reco induction bearing heater
- Grieve industrial oven, 36" x 36"
- Blast-it-all bead blaster
- DoAll vertical saw
- DoAll horizontal saw



Engineering Makes All the Difference

Engineering expertise is the foundation of our business.

Hydro's engineers and technical staff have extensive experience in the pump industry and understand a broad spectrum of pumping equipment. By fully understanding the unique characteristics of the customer's application and by applying their hydraulic, mechanical and materials knowledge, Hydro's engineers can make recommendations for restoring parts to achieve optimal pump performance and longer life.

An engineering review is a key element of our quality manufacturing process. Technical specifications are typically developed for parts via Hydro's proven reverse engineering practices.

Reverse engineering is quite different from "replicating." We are not interested in just replicating the existing component as it is, but also in evaluating the failure modes and defining the critical characteristics required to minimize the possibility of failure in the newly manufactured unit.

While accuracy, thoroughness, and technology are important elements of reverse engineering, it is Hydro's pump-specific engineering knowledge, understanding, and experience that distinguish and define our process.

Hydro's process for providing difficult-to-source cast parts, such as impellers, diffusers, discharge head casings, bowls and suction bells, may include:

- **Laser scanning and reverse engineering**
- **Solid modeling**
- **Hydraulic and metallurgical upgrades**
- **Solidification simulation**
- **Patternless casting/precision sand mold printing**
- **Casting metals that you specify**
- **Testing to verify pump performance when required**

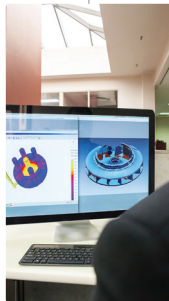
To achieve the best results for our customers, expert engineering is supported by the latest technology and proven process control procedures.



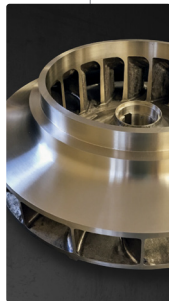
24/7 FIELD & EMERGENCY SERVICES



RELIABILITY SERVICES



QUALITY REPAIR & ENGINEERING SERVICES



CRITICAL PARTS SOLUTIONS



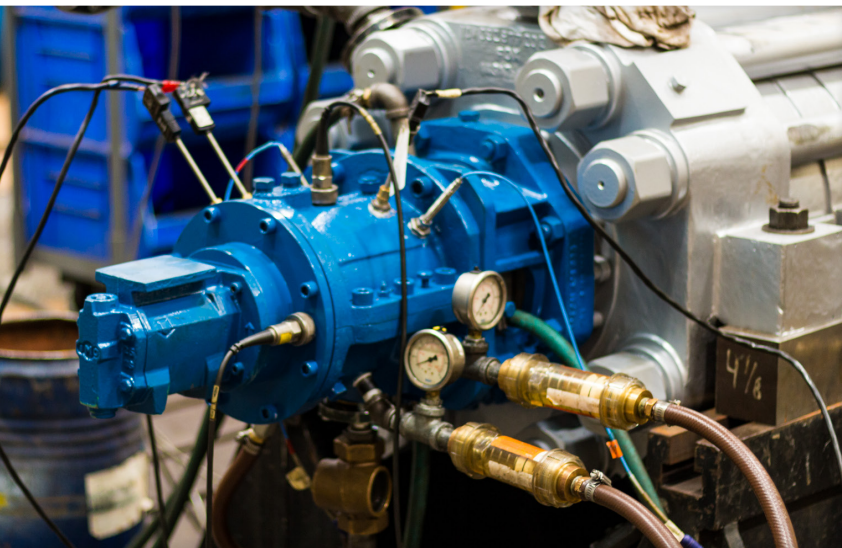
CERTIFIED PERFORMANCE TESTING



CONDITION MONITORING



EDUCATION & TRAINING



Reliability Services – Prevention is Power

Sometimes what doesn't happen is what matters most.

Hydro Reliability Services provides expert troubleshooting and health audits for your rotating equipment. Hydro's master pump improvement engineers work with your maintenance and engineering staff to provide complete reliability support for your pump installation base, whether the equipment has been recently commissioned or has been in service for many years.

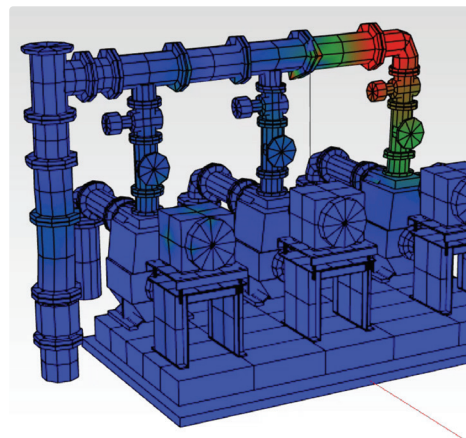
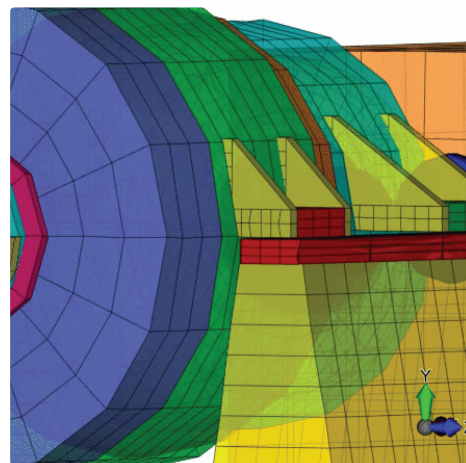
Whether you are in need of troubleshooting or a complete health audit, Hydro Reliability Services can provide comprehensive data aimed to improve the performance of your pumps.

Troubleshooting & Field Engineering

To help our customers maintain critical pump equipment, Hydro's reliability engineers review the pump operating and maintenance history, provide a thorough on-site inspection, troubleshoot, and perform pump, driver, and system testing.

Health Audits

Hydro performs on-site health audits on customer pumps and drivers. They include flow, vibration, temperature, and mechanical condition inspections to help determine the overall condition of the equipment.





Pump Performance Testing – Smart and Fast

The highest standard of testing in a fraction of the time.

A faulty pump can cause entire plant failures and cost thousands of dollars in maintenance and downtime. That's why Hydro designed and built a state-of-the-art test lab, dedicated to the needs and requirements of the pump aftermarket. And because Hydro is independent, we offer unbiased recommendations in every test situation.

Our testing capabilities enable us to work with our customers to develop and implement engineering modifications for improving the performance of critical pumps and then to verify that performance in the lab. And because our test lab is dedicated to the aftermarket, we have the flexibility to schedule tests to meet our customers' needs. We test day and night so you receive the highest standard of testing in a fraction of the time.

Test Lab Key Features

Designed in compliance with API 610 and Hydraulic Institute Standards

Capable of testing horizontal, vertical and submersible pumps

Maximum of 5,000 HP

Variable Frequency Drive; 2,300–4,160 volts

Flows of up to 35,000 GPM on the horizontal loop and 42,000 GPM on the vertical loop

State-of-the-art data collection system

Emergency testing in 7 days



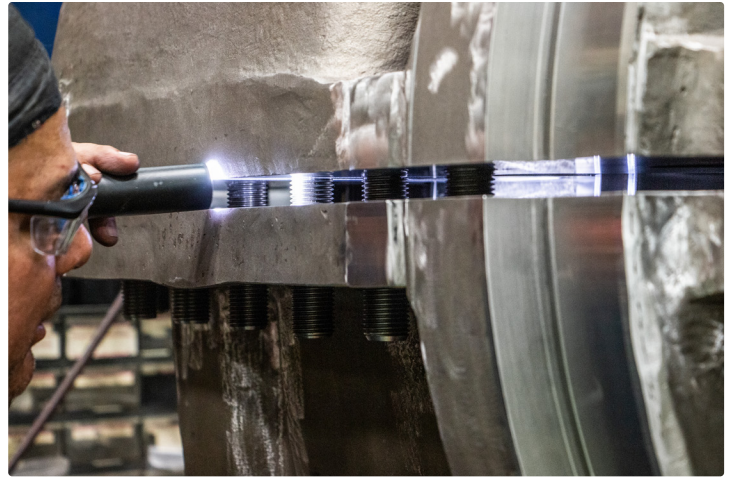
**Certified by
the Hydraulic Institute**

A Dedication to Quality and Commitment to Excellence

Systems and processes – High standards for every step

For over half a century, Hydro has worked closely with our valued customers to provide industry-leading quality standards, customer-focused responsiveness, and unparalleled turnaround time to pump users globally across all industries.

Our global aftermarket service network is dedicated to providing its customers with high quality, engineered solutions to complex pump problems and implementing creative solutions within an expedited time frame. Our 360-degree total support framework has been made achievable through decades of accumulated expertise and commitment to a rigorously developed and carefully implemented Enterprise Resource Planning System (ERP).



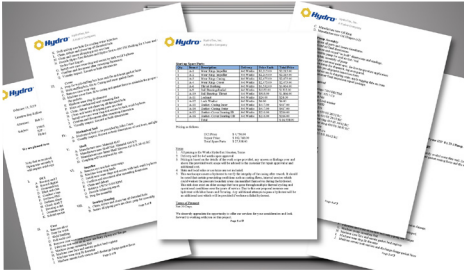
Hydro's ERP System was specifically configured for the pump building aftermarket process and provides an integrated and continuously updated view of core business processes using network-wide databases. These databases allow us to share vital engineering data across our entire network of service centers and generate consistent, uniform parts lists for every pump that comes into one of our shops, ensuring consistent quality and faster turnaround time.

At the root of a quality job is a quality process. Our ERP system allows us to digitize each and every step of our workflow. From the initial inspection to final billing, every aspect of each project is turned into a datapoint, and is available to the customer.

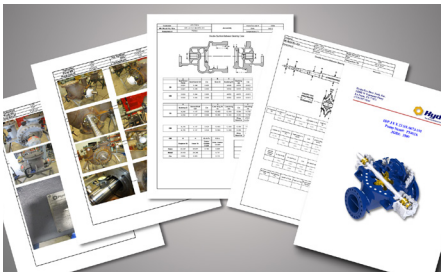




As-Found Inspection Documentation – Providing high-quality information and assets in regard to the unit's problem areas, breakage, signs of degradation, and other issues examined upon receiving.



Customer Data Management and Processes – All aspects of the scope of work are processed through Hydro's ERP systems. This enhances transparency, quality assurance, accountability, traceability, consistency, and two-way communication during the repair process.



As-Built Documentation – When a unit leaves the shop, customers are provided with a full spectrum of post-repair documentation. This highlights all aspects of the servicing, engineering support, and forensics, as well as documentation on further improvements, suggestions for optimizing operations, and support services.

Our ERP system continues to evolve, increasing in efficiency, guaranteeing optimal turn-around times, and streamlining in scalability, to leverage the resources and wealth of knowledge across the global network of Hydro Facilities.

At Hydro, it's about more than quality – it's about our commitment to **consistent quality and ensuring that our customers are provided with a superior product and optimized mean time between repairs for years to come.**



ATLANTA | BEAUMONT | CHICAGO | DEER PARK | DENVER | HOUSTON | LOS ANGELES | PHILADELPHIA
AUSTRALIA | CANADA | CURAÇAO | ENGLAND | FRANCE | INDIA | KOREA | OMAN | UNITED ARAB EMIRATES | VIETNAM



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