



CONTACT US

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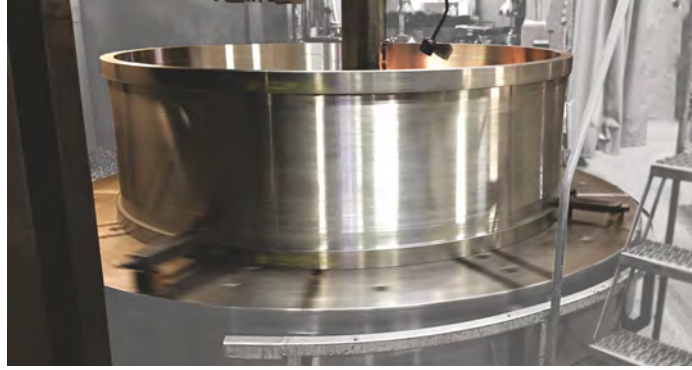
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HYDRO POWER SERVICES

SERVICES WE OFFER



LARGE COMPONENT FABRICATION:

- Western Machine Works is experienced in manufacturing hydro components that include gate shift rings, Kaplan turbine throat liners, and other large precision components.
- New fabricated components are fit tested and inspected prior to being delivered to the job site, ready for installation.
- Western Machine Works provides on-site technicians to take field dimensional measurements of existing components to ensure new parts fit correctly.



WELDING REPAIR:

- Western Machine Works' welding technicians are certified to meet AWS and ASME repair standards as well as fabricating new components.
- Experienced in weld repairs of wicket gates, turbine shafts, and other components to extend the life and reliability of parts.
- Fixtures and positioners are used to rotate parts so weld material is applied uniformly.



THERMAL SPRAY/METALLIZING:

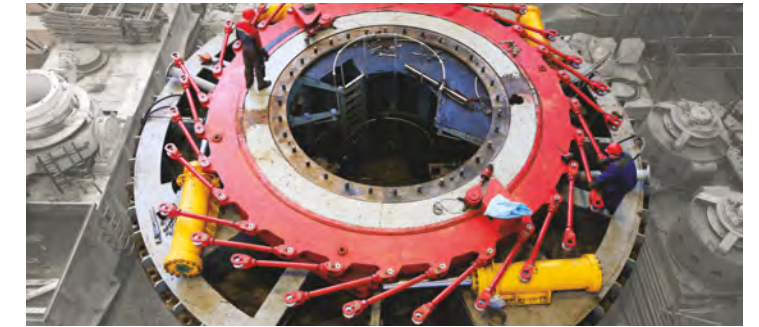
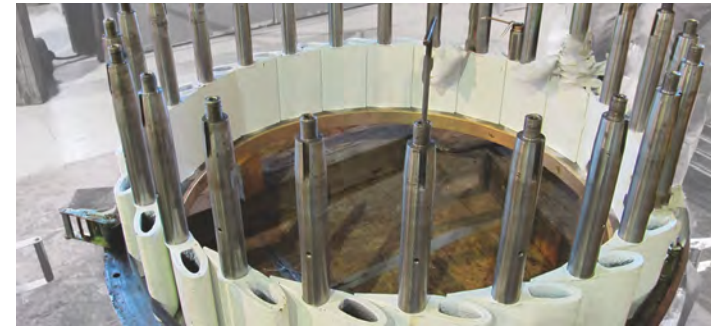
- Western Machine Works' experienced technicians utilize a twin arc metallizing process to restore damaged and degraded components. The 420 stainless steel coating performs very well under compression and enhances corrosion and erosion properties.
- Hydro applications that benefit from our metallizing processes include wicket gates, turbine shaft bearing fits, packing areas, and headcover surface repairs.
- Headcover and discharge ring components that exhibit severe erosion, corrosion, and wear are repaired and protected by metallizing.
- The Thermal spray refurbishment process is a valuable cost savings option to OEM replacement, and is a proven reliable repair option by many Utilities.



MACHINING CAPABILITIES:

- Precision machining capacity to 40,000 pounds and shaft lengths to 40 ft. long.
- Western Machine Works is equipped with vertical turret lathes capacity up to 102" diameter for machining large impellers, headcovers, brake rings, and discharge rings.
- Component dynamic balancing of turbine runner shafts to ISO specifications.

COMPONENTS WE SERVICE



SHAFT MANUFACTURING:

- Western Machine Works manufactures various shafts including turbine runner shafts up to 485" long.
- Experienced in modifying existing shaft designs to meet updated operating parameters.
- Specializing in tight tolerances to assure smooth operation of shafts and assembled components.
- Final dimensional inspection is performed on each job and documented in a final report. Joint inspection of critical inspection points with our customers is encouraged.

PROJECT MANAGEMENT:

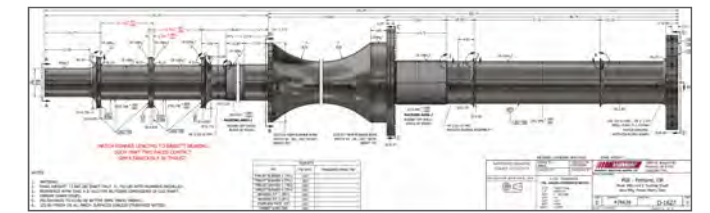
- Western Machine Works can provide project management services to assist you throughout entire projects from conceptual planning, estimating, scheduling, to re-installation and start up assistance.
- Western Machine Works' project management allows you to stay focused on the big picture and leave the details to us.
- We have local engineering staff that are available for consultation and site visits on short notice.
- Our project managers remain close to your projects to identify scope changes and update budgetary concerns, so there is no surprise at the end of the job.

DYNAMIC BALANCING:

- Western Machine Works uses a SCHENCK dynamic balancing machine to balance high speed components at operational speed.
- Single components and/or assemblies are balanced to ISO specifications to match your operating parameters.

ENGINEERING SERVICES:

- Western Machine Works has the engineering capabilities and on-site expertise to design new equipment and to upgrade existing hydro components.
- Our engineers provide CAD drawings and generate manufacturing drawings to ensure specifications are clear and documented.
- Reverse engineering services are available to fabricate new components and upgrade older-style equipment.



WHO WE ARE

Western Machine Works was established in Portland Oregon in 1985 as a full-service machine shop specializing in all facets of equipment repair, upgrades, and new manufacture. More than just a machine shop, WMW provides engineering-focused approach to its repairs, refurbishments, and fabrications. Its 34,000 sq. ft facility is equipped to handle machining, grinding, balancing, welding, and metallizing of large rotating equipment and shafts for the Hydro & Wind Industry, Marine, Pulp & Paper, and other heavy industries. WMW provides reliability while offering reverse engineering, on-site measurements of critical components, in-house transportation services, 24/7 rapid response, and total project management. Minimize downtime and achieve peak efficiency for your hydropower operations with Western Machine Works.

