

Pump and Motor Field Services

Background

Westinghouse is the most trusted worldwide industry leader to provide support for all facets of pump, motor and seal field maintenance and repair activities.

The organization is staffed with more than 40 highly experienced engineers dedicated solely to pump and motor engineering and services (auxiliary pumps and motors through primary coolant pumps and motors). When Westinghouse field services personnel are not directly engaged in field activities, they are engaged with shop and engineering activities.

Westinghouse continues to bring the best in quality service, technological expertise and field-tested and experienced personnel to each of the variety of jobs performed for customers every day. Westinghouse has successfully performed more than 400 primary coolant pump, motor and seal field services worldwide. Westinghouse takes steps in order to optimize each customer's schedule without compromising quality.

Company project managers have an average of 15 years of nuclear pump shop and field experience; full-time pump and motor personnel have a cumulative 200 years of shop and field experience. Experience is an essential ingredient for successful outage performance. Westinghouse can provide trained, experienced project managers to plan, integrate, manage and support any and all activities related to the primary coolant pump equipment.



Pump and motor field maintenance activities

Westinghouse has staffing options to help meet each customer's needs, from qualified technical advisors up to complete full -scope crew solutions.

Description

Typical pump and motor field services include the following:

Pumps

- Seal inspections
- Main flange bolt/stud elongation and maintenance
- Pump internals change-out
- Gasket replacement
- Pump and motor alignment
- No. 1 seal housing bolt elongation and maintenance
- Stationary hydraulic inspections
- Casing inspections

Motors

- 1-, 5- and 10-year inspections
- Motor/stator change-out
- Applicable engineering upgrades and modifications
- Stator re-wedging and re-tightening
- Rotor swaging and tungsten inert gas (TIG) weld repair

Start-up

- Vibration diagnostics
- Balance and troubleshooting planning

Benefits

Commitment

Westinghouse is best positioned as the most experienced and qualified vendor to not only perform routine periodic maintenance outage activities, but also address any unanticipated problems and emergent work that may occur during refueling outages. Drawing on the substantial headquarters design engineering, Westinghouse outage services personnel can effectively manage issues, thus reducing both budget and schedule challenges during the outage.

Training

Through the cross-training program, Westinghouse electromechanically trained engineers and technicians are certified to perform all electrical, mechanical and hydraulic inspections on pumps, motors and seals, as well as major components rigging. This allows for optimal staffing and schedule usage to complete all phases of primary coolant pump outage maintenance services, without sacrificing quality, safety or procedural compliance.

In-depth Resources

Westinghouse is a dedicated service organization offering qualified personnel and equipment with a depth and breadth of personnel, facilities and tooling that is unsurpassed in the nuclear services business. Westinghouse has in-depth resources in engineering, maintenance personnel, licensing, analysis and spare parts to anticipate and respond to unusual occurrences, and keep primary coolant pump equipment running in peak condition.

Westinghouse has teamed with Master-Lee Energy Services to provide additional field services resources to the nuclear industry. These combined resources enable more efficient peak demand field resource projection fulfillments. As the nuclear industry leader in the removal, installation, inspection, repair and troubleshooting of primary coolant pump equipment, Westinghouse has the proven ability to perform on-site services.

Human Performance

Westinghouse conducts lessons learned for each outage and applies this knowledge to future projects. The Corrective Actions Process (CAPs) is used to identify and address issues related to quality and performance.

Safety

Safety is very important to Westinghouse and its subsidiaries. Westinghouse conducts extensive safety training for all employees and evaluates Occupational Safety and Health Administration (OSHA) reportable items on a weekly basis.

Experience

- Approximately 200 cumulative years of primary coolant pump maintenance experience (at 50+ sites)
- Global resources and international experience at pressurized water reactors (PWRs) and boiling water reactors (BWRs)
- More than 40 primary coolant pump internal changeouts:
 - All Westinghouse models
 - KSB/CE models
 - Byron Jackson models
- Wide range of services on a variety of primary coolant pump motors (including Allis Chalmers, GE and Westinghouse models)