

Reactor Cavity Services

Background

In today's market, the primary focus is to "do more with less." Utilities no longer have the luxury of keeping all functions needed to run their businesses in-house. With the deregulation of the electric utility industry and the continuous push to lower costs associated with the production of electricity, many utilities need to outsource more and more of the functions they once performed themselves to remain competitive. As the foremost nuclear service supplier, Westinghouse offers a comprehensive, cost-effective solution to a utility's long-term viability.

Westinghouse's unparalleled experience, combined with a comprehensive portfolio of cavity service capabilities, makes us the vendor of choice for those utilities striving for cost-effective performance. Specifically, we provide more than just staff to do limited work scope activities. We offer the complete package to address a utility's needs through our in-house service capabilities, our strategic alliances and our ability to integrate them. These elements, combined with engineering to support emergency and non-emergency situations, along with remote technology to address schedule and exposure issues, make it possible to supply all facets of reactor cavity refueling operations.

Description

Since 1968, Westinghouse has provided refueling services for more than 350 plant outages worldwide. The experience and qualification of our personnel, combined with a broad service base, has made Westinghouse the foremost supplier of refueling services in the industry. Through the years, the

refueling services product portfolio has evolved to encompass several major applications that include: tool maintenance; fuel inspection and equipment repair services; seal table services; cavity decontamination; radiation exposure reduction tooling; and refueling equipment upgrades.

The goal of the reactor cavity services group is to optimize reactor equipment services through an integrated process improvement methodology that involves teaming, training and technology, resulting in reduced exposure, cost and schedule. This has enabled the team to enhance the refueling process through consolidation and coordination of refueling operations, repairs, services and upgrades. The result is a more efficient, simpler and less confusing process for the utility.

Benefits

There are a number of additional benefits that Westinghouse provides. Depending on specific requirements, some of these benefits may be more attractive to the utility than others.

- Single-point contact
- Quality assurance (QA) program
- Equipment reliability
- 24-hour headquarters technical support
- Engineering resolution of anomalies
- Original equipment manufacturer (OEM) access to original design-base documentation
- Ability to optimize and reduce schedule
- Personnel training facility
- Personnel technical expertise
- Unmatched field experience
- Prior refueling experience at plant

- Labor support personnel
- Communications (field summary report)
- Master services agreements
- Integration with other services
- Strategic alliances
- No charge for inter-service delays
- Storage of decontaminated equipment
- Industry technical communications

Deliverables

Provided below is a partial list of the many products and services offered by Westinghouse to utilities worldwide. More specific information is available for most of those listed.

Refueling Services

- Electrical disconnects/reconnects
- Reactor disassembly/reassembly
- Fuel movement
- Insert change-outs
- Stuck-stud removal (continental machining)
- Equipment maintenance
- Transfer system maintenance
- Manipulator crane maintenance
- Reactor vessel inspections
- Polar crane operation and maintenance
- Other core empty activities (e.g., flange cleaning and O-ring groove cleaning)
- Refueling tool maintenance and upgrades
- Diving services
- Vacuum refill services
- Foreign object search and retrieval

Fuel Inspection

- In-can sipping
- Ultrasonic inspection
- In-mast sipping
- Visual inspections
- Post-irradiated examinations

Fuel Repair

- Fuel assembly reconstitution
- Fuel assembly/reassembly (re-caging)

Thimble Tube Service

- Seal table assembly/disassembly
- Flux thimble tube cleaning
- Flux thimble tube replacement
- Flux thimble tube eddy current

Rod Cluster Control Assembly (RCCA) Eddy Current

- Cavity decontamination (subcontract)
- Refueling equipment (PaR)
 - Maintenance
 - Upgrades

Engineered Services

- Funnel welding
- Reactor vessel loop plugs