



Control Rod Drive Housing Repair for BWR Reactors

The only vendor in the industry with a permanent solution to stop control rod drive nozzle leaks

Challenge

Some BWR control rod drive nozzles have thru-wall cracks that are leaking. Utilities can roll expand to stop the leak, but they are limited to a maximum of six percent wall thinning before they must make a permanent weld repair as described in BWRVIP-58A. The repair must be made in a pressurized environment to avoid leakage during the welding process.

Solution

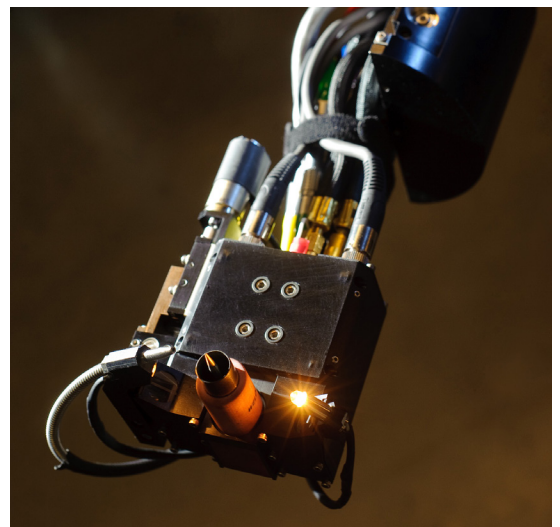
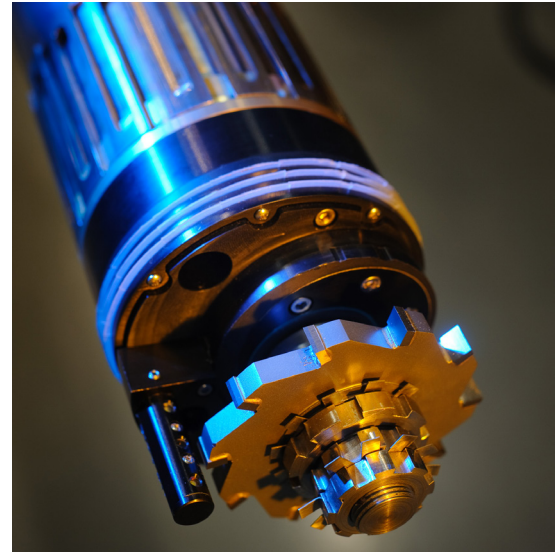
Framatome has developed and qualified tooling and processes to support the current and future needs of BWR control rod drive (CRD) housing repairs. We worked with EPRI to develop the standard BWRVIP-58A repair for CRD housings and the tooling to implement the CRD housing repair design geometries. In addition, Framatome has designed the repair based on experience with PWR head penetrations utilizing Code Case N-638.

Our CRD housing repair, performed from under vessel, addresses the high tensile stresses through an innovative weld joint design. Internal access weld repair replaces the load carrying capability of the CRD housing to stub tube J-weld, and provides a seal to prevent leakage from the reactor vessel. Framatome now offers three basic repair designs: the standard BWRVIP-58A repair, a modified BWRVIP-58A repair based on Code Case N-638, and complete CRD housing replacement. The repair design optimizes schedule and dose considerations for the final repair and provides a permanent solution.

Customer benefits

- Permanent weld repair
- Complete CRD housing replacement option
- Optimized for schedule/dose considerations

Your performance
is **our everyday commitment**



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