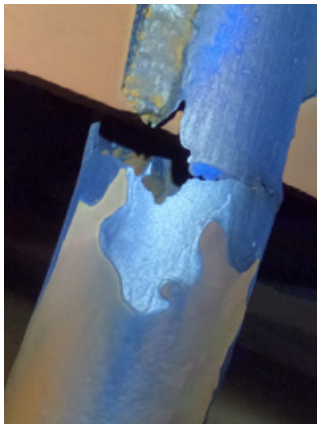
# Inspection of Feedwater Condenser Supports

*Using the FirstLook Robot*

Nuclear Power Products and Services



**PLANT TYPE**
Nuclear Power Plant (BWR)

**LOCATION**
Southeastern United States

**CHALLENGE**
Visually inspecting the bottom vertical and horizonal supports of the plant's Feedwater Condensers for corrosion

**SOLUTION**
FirstLook® robot with a mounted camera

### *Background*

A nuclear power plant in the Southeastern region of the United States experienced challenges when conducting visual inspections of the bottom vertical and horizontal supports of its Feedwater Condensers for corrosion. This inspection activity, which is performed during every outage, is physically demanding, as well as time and dose intensive.

In the past, an engineer wearing protective clothing would crawl and maneuver between the supports to visually inspect the structures in this confined space. Contamination of clothing was not uncommon when performing the activity manually. The process was also time consuming. A typical inspection lasted three days, working around the clock, after which time a report would be generated and subsequent repairs could commence.

To increase operational efficiency and reduce dose, the nuclear plant selected Curtiss-Wright to provide a mobile unmanned system (MUS) solution for the inspection.

### *Results*

Through an agreement with Teledyne FLIR Defense, Curtiss-Wright is able to supply MUS robots and integrated solutions to the U.S. nuclear power market and Department of Energy (DOE). The nuclear power plant selected the Teledyne FLIR FirstLook® robot for their visual inspection project.

Using the FirstLook robot, the plant engineers were able to complete the activity in only 8-12 hours, thus reducing the inspection time by over 75%. The shorter inspection time provided the plant with significant dose savings and resulted in additional plant efficiencies. Plant operators were able to begin necessary repairs much earlier, and engineers were available to move on to other tasks.

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