



Power Generation - Nuclear PWR



Reactor Vessel Top Head Inspection

NRC mandated reactor vessel head inspections have proven to be both costly and time-consuming. With limited access, high dose rates, and the NRC's documentation expectations, the upper head has posed a constant challenge for the utility. With this in mind, Jamko's engineers have custom designed a crawler to meet the demanding criteria for this inspection.

The **THOR** robotic crawler with a clearance of just 1.9" is capable of maneuvering across the reactor head with the insulation in place. The steerable magnetic crawler is equipped with three cameras for navigation and inspection. The crawler is positioned at each control rod drive mechanism and performs a continuous 360° inspection uninterrupted. The unit can be operated from distances up to 300'.



▫ CRDM inspection with THOR on mock-up



▫ CRDM at 0°



▫ CRDM at 270°

Benefits

Provides continuous 360° coverage

- Eliminates the question, "Are we still on the correct penetration?"

Equipped with 3 cameras

- Two navigational and one inspection camera provide for both correct orientation and examination

Clearance is less than 2"

- Easily placed underneath most insulation configurations

Operate remotely from a distance

- At 300', operator can be located in low dose area