

N50. General Electric's NEW INSPECTION SYSTEM GIVES INSIDE INFORMATION ON BWR RPV WELDS

The aim of General Electric's new manipulator and ultrasonic test system for inspecting seam welds of the BWR reactor pressure vessels from the inside diameter is to give plant managers the means to fulfill the new AMSE requirements, while also reducing dose rates and examination costs.

A unique design feature is the linked belt mechanism, which hugs the vessel wall while extending from inside the upper mast assembly to reach welds that are both between and behind jet pumps. The new manipulator has been designed to:

- Perform examinations while the vessel cavity is flooded.
- Permit access to the core for refueling or for in-core changeouts during examinations.
- Operate independently without use of the refueling bridge or overhead crane.
- Meet the 100% RPV seam weld examination requirement, including the belt line region down to the core shroud support ledge.
- Provide position location references for accurate repositioning in future examinations.

A customized ultrasonic data acquisition and analysis system is being developed to make reliable and repeatable examinations and on-line evaluations possible.

For more, see Nuclear Engineering International, December 1990, p. 41, or contact T.L. Chapman, Manager, Reactor & Fuel Examination Technology, GE Nuclear Energy, 175 Curtner Avenue, MC1384, San Jose, CA 95125.