

N67. INSPECTING BWR IN-CORE HOUSINGS FROM THE REFUELING BRIDGE

A non-destructive examination system designed to perform automated inspections of in-core instrumentation housings from inside the pressure vessel was developed and then successfully applied at three BWRs in early 1990. The system uses ultrasonic radio-frequency wave form A-scan recording and imaging, eddy current, and visual inspection techniques. Special probes were developed to access the inside surface of the housings from the refueling bridge, substantially reducing exposure to operators. The ultrasonic and eddy current examinations are performed simultaneously because their sensors are located in the same inspection probe.

For more, see Nuclear Engineering International, November 1990, pp. 42-43.

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transport) in the hotter assemblies.

Present data on Zircaloy and Alloy-600 suggest some circumspection in utilizing elevated pH chemistry and operating plants at 3.5 ppm lithium. It would be more appropriate to wait for completion of the tests at Millstone-3, Calvert Cliffs, and additional fuel examinations at Ringhals 3, 4. Plants with susceptible tubing should be particularly careful before opting for 3.5 ppm Li/pH 7.4 or 2.2ppm Li/pH 7.4 regimes and wait for cracking tests data.

References and Selected Abstracts:

1. Bergman, C.A., W.T. Lindsay, D.E. Durkosh and J. Roesmer, "The Role of Coolant Chemistry in PWR Radiation-Field Buildup", EPRI Report NP-4247, 1985. (Available from Research Reports Center, Box 50490, Palo Alto, CA 94303.)
2. "EPRI Seminars on PWR Water Chemistry and Radiation Field Control", Berkeley, California, 1986 and 1988. (Available from Research Reports Center, Box 50490, Palo Alto, CA 94303.)
3. "PWR Primary Water Chemistry Guidelines", PWR Chemistry Guidelines Committee, Chairman C.J. Wood, Electric Power Research Institute, Palo Alto, CA 94304, 1988.