System for Eddy Current Inspection of VVER-440/1000 SG's Tubes

MLADEN PAJNIĆ,
KRUNOSLAV MARKULIN,
HRVOJE FRANJIĆ,
SERGIO GALOŠIĆ
"INETEC" Institute for Nuclear Technology
28 Dolenica, 10250 Lučko, Croatia
mladen.pajnic@inetec.hr,
krunoslav.markulin@inetec.hr,
hrvoje.franjic@inetec.hr,
Sergio.galosic@inetec.hr

The most important task of every utility operating a nuclear power plant is the continuously keeping of the desired safety and reliability level. This is achieved by the performance of numerous inspections of the components, equipment and system of the nuclear power plant in operation and in particular during the scheduled maintenance periods at re-fueling time. Periodic non-destructive in-service inspections provide most relevant criteria of the integrity of primary circuit pressure components. The task is to reliably detect defects and realistically size and characterize them.

One of most important and the most extensive examination is a Steam Generator (SG) in-service inspection. That inspection demand high standards of technology and quality and continual innovation in the field of non-destructive testing (NDT) advanced technology as well as regarding SG inspection tools, control systems and techniques.

This article presents overview of the system for SG examination with focus on bobbin and array probes eddy current of the tubes, ultrasonic examination of SG collector welds and service – mechanical plugging of the tubes.

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