MULTI-PURPOSE SUBMARINE INSPECTION SYSTEM SUSI-GEN3

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Today nuclear power plants are constantly challenged when trying to examine hard-to-reach areas. The execution of inspections during outages is on the critical path, where time pressure is an important issue. This calls for rapid performance without compromising precision and reliability. Time constraints also require efficient contingency tools for ad-hoc inspections or foreign object search and retrieval. SUSI is a multi-purpose submarine system for underwater visual inspection (VT-1 and VT-3) and NDE of various reactor areas, coolant lines, piping, tanks as well as steam generator primary and secondary side. This small, remote-controlled submarine navigates the different areas of nuclear power plants and is equipped with technology for various applications. Specific add-ons for foreign object search and retrieval (FOSAR) extend the application range in order to efficiently support plant FME programs. SUSI submarines have already proven their versatility and reliability in many outages in the past. The paper will give an overview on the present development and capabilities of the latest version SUSI-Gen3. The focus is on the new camera solution (HD camera, fully integrated high-rad tube camera) in combination with a line and distance laser and the new control unit with different recording possibilities integrated. Keywords: Visual Inspection, FOSAR, Submarine System, High-Rad Camera