

OSART Good Practices
ACCIDENT MANAGEMENT
Verification and validation of procedures and guidelines

Paks, Hungary

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The verification and validation of important SAM provision was done by dedicated research and own experiments for the validation of hardware

The plants SAM concept realised in each unit is based to an important extent on hardware modifications (see topic 14.1) in addition to the SAMG concept. The validation of these measures is based on analyses done together with the Hungarian institute NUBIKI and experiments performed at the Hungarian institute AEKI especially for the IVR strategy. Supporting analyses provided showed that the solution might be effective in preserving RPV integrity. The efficiency of the cooling loop outside the RPV was proven experimentally by AEKI on the build CERES test facility. The CERES test facility is an integral model of the ex-vessel cooling loop for the plant. The scaling ratio for the reactor vessel surface is 1:40 (1/40 slice of the RPV) and for the elevation 1:1. Wall heating provides the driving force for the natural circulation in the 8 m high channel. Many experiments have been done simulating a large variety of different situations expected to occur during severe accidents. The experiments have proven the robustness of the measure as implemented in the plant.