

**THE SAFETY OF NUCLEAR POWER PLANTS AND THE SAFETY ASSESSMENT
PHYSICAL METHODS – DEVELOPMENT SINCE NPP A1 TO VVER-440
REACTORS**

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The presentation gives a brief description of the development of neutron-physical and thermo-hydraulic methods used for safety assessment during nuclear power plants operation. In addition, some specific calculation codes used for KS-150 and VVER-440 reactor calculations are introduced and discussed. Some interesting analysis results and conclusions used for further development of the codes are presented as well. The development of nuclear safety from the safety level at NPP A1 down to VVER- 440/V213 reactor units is illustrated by selected examples of design safety concept evolutions.