

Using TRACE and SNAP Codes to Establish the Model of Maanshan PWR for SBO Accident

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Abstract : In this research, TRACE code with the interface code-SNAP was used to simulate and analyze the SBO (station blackout) accident which occurred in Maanshan PWR (pressurized water reactor) nuclear power plant (NPP). There are four main steps in this research. First, the SBO accident data of Maanshan NPP were collected. Second, the TRACE/SNAP model of Maanshan NPP was established by using these data. Third, this TRACE/SNAP model was used to perform the simulation and analysis of SBO accident. Finally, the simulation and analysis of SBO with mitigation equipments was performed. The analysis results of TRACE are consistent with the data of Maanshan NPP. The mitigation equipments of Maanshan can maintain the safety of Maanshan in the SBO according to the TRACE predictions.

Keywords : pressurized water reactor (PWR), TRACE, station blackout (SBO), Maanshan

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