

Using RASCAL Code to Analyze the Postulated UF₆ Fire Accident

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Abstract : In this research, the RASCAL code was used to simulate and analyze the postulated UF₆ fire accident which may occur in the Institute of Nuclear Energy Research (INER). There are four main steps in this research. In the first step, the UF₆ data of INER were collected. In the second step, the RASCAL analysis methodology and model was established by using these data. Third, this RASCAL model was used to perform the simulation and analysis of the postulated UF₆ fire accident. Three cases were simulated and analyzed in this step. Finally, the analysis results of RASCAL were compared with the hazardous levels of the chemicals. According to the compared results of three cases, Case 3 has the maximum danger in human health.

Keywords : RASCAL, UF₆, safety, hydrogen fluoride

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