

This invention relates to a method and systems of safety analysis and evaluation of engineering processes and may be used for safety analysis of atomic power stations. According to the invention, distribution of risk factors is analysed on different stages of the engineering process, and safety intervals are determined where safety conditions remain invariable. The method further includes analysis of failures transitions from one safety interval into another by means of cause-effect analysis. Based on the results of this analysis, deterministic safety models are created for possible scenarios of transition of failures from one safety interval into another. The method and system according to the invention provide quantitative safety analysis and evaluation for engineering processes in variable safety conditions and enable creating valid safety requirements to perform optimisation of an engineering processes control system.