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Partition of a process as a tool of risk reduction

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The algorithm of risk management for implementing events, which are related to natural hazards, is proposed. It includes operations that divide the process into manageable steps.

Covering a wide range of human activities and spheres of its existence, it can be assumed that the risk is the uncertainty in the realization occurrence of a possible event. Nuance in above definition of risk is to emphasize the difference between the amount of risk and the value of the probability of an event. For example, if the risk is zero, the event is sure to be done. However, if the probability of its occurrence is zero, it means that the event will not happen. Indeed, the probability of any outcome is an independent characteristic of the event.

From general considerations, we can assume that an increase (decrease) in the instability of the events will increase (decrease) the risk. On the other hand, the more we know about the history of the origin of the event, the less is uncertainty in the prediction of new developments. Thus, the expectation, based on knowledge of the previous information allows us to apply the exponential dependence of the risk from entropy.

Power engineering of the developed countries passed the same way, which passed the weapon - from Greek fire to hydrogen bomb. The energy industrial boom has focused on nuclear reactor that is an analogue of the atomic bomb as if were in delayed-action. For instance, France is the first in the world on atomic power station: about 80% of power there "is done" by nuclear reactors. France is literally littered with them, and terrorism or disaster threatens her at least a new Chernobyl, God forbid.

Physicists offer to move to thermonuclear power plants on the microexplosion, which in principle are safe: they themselves do not explode more than do it themselves inside their reactor. For a nuclear reactor resulting risk can increase substantially, as when the final product resulting entropy is defined by the sum of the entropies, is high (controlled by the inaccuracy in the late act of the reaction). In thermonuclear on a large number of microexplosions resulting risk according to the exponential function does not increase this quantity of controlled implosions, only one of which actually determines the entropy of the output power. In turn, thermonuclear microexplosions will provide more energy from the middle of the XXI century.

Thus, according to the exponential dependence of the risk from the entropy we may conclude that the algorithm to reduce the risk is required to maintain operation of division the process into stages in order to find the most unreliable link. This approach based on the partition process into a series of controlled steps can be proposed to assess consequences of an accident, various scientific and technical proposals, economic projects, test ideas, and more. Therefore, experiments should be avoided, not consisting of duly observed phases. For example, we must adhere to the attention and the work of the most powerful accelerator in the U.S. Brookhaven National Laboratory, for reception "at once" new, so-called quark-gluon plasma, where there is a risk of spontaneous emergence of a black hole that could swallow up not only the lab, but also the entire planet.

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