Аннотации статей на английском языке

ESTIMATION RISKS OF A SECURITY BREACH FOR CRITICAL OBJECT AND CRITICAL INFRASTRUCTURE

V. N. Tsygichko, Federal Research Centre "Information and Management" of the RAS, Moscow

Annotation. The article presents the method for calculating risks of a security breach for critical objects and a critical infrastructure for the existing protection system.

Keywords: security, risk, acceptable risk, vulnerability, threats, security profile, the effectiveness.

ABOUT EFFECTIVE DURATION OF PROCESS OF STEAM FORMATION AT BOILING OF A LIQUID FROM PASSAGE

N. M. Kochetov, Novomoskovsk Institute of Improvement of Professional Skill

A. N. Kochetov, Northwest Management of Federal Service on Ecological, Technological and Nuclear Supervision, St. Petersburg

Annotation. In article effective standards and rules on possibility of their use are analysed at calculation of effective duration of boiling of a liquid from passage. Conditions of course of processes of boiling and evaporation have been considered. It has allowed to estimate effective duration of process of boiling.

Keywords: evaporation, boiling, material and thermal streams.

ON HOW TO CALCULATE DISASTER RISK METRICS IN THE PRESENCE OF UNCERTAINTY

E. Yu. Kolesnikov, Volga State University of Technology, Yoshkar-Ola

V. M. Kolodkin, Institute of Civil Protection, Udmurt State University, Izhevsk

Annotation. At performance of analysis and quantification of the risk of disaster there is a need to take into account the presence of uncertainty of many task parameters. Without the involvement of hypotheses about the behavior of the parameter within the range of its possible changes that can be done by setting these parameters as intervals, and the fulfillment of all required calculations by interval methods. Disaster risk calculations of conditional dangerous object are made in the article by six methods: two – point and four – interval. Point calculations are made: a) in the conservative, and b) averaged statement. Interval calculations are performed as a natural (naive), and the other three methods, with the adoption of measures to narrow the result of interval calculations. Given that emergency risk should estimate as the amount of damage caused by the accident, and the probability of its occurrence, there is provided a method of reducing the width of the interval of this metric. The proposed method can be used only if reliable information is at hand about the behavior of the parameter values within intervals of their changes.
The results of paper show that the methods used in it allow to considerably improve the quality of obtained interval estimates.

Keywords: disaster risk, types of uncertainty and ways to reduce the risk of uncertainty, interval analysis, methods of narrowing intervals.

COMPENSATION OF UNCERTAINTIES IN JUSTIFYING THE TASKS OF ELECTRONIC WARFARE IN OPERATIONS (COMBAT ACTS): METHODICAL ASPECT

A. S. Boev, D. M. Byvshich, Yu. N. Yarygin, Military Training and Research Center of the Air Force "Air Force Academy named after Professor N. E. Zhukovsky and Gagarin", Voronezh

Annotation. The paper sets the methodical approach to the decision of a problem of the account of military uncertainties at a substantiation of tasks of electronic war (EW). The offered approach is based on the complex analysis of processes of functioning of system at substantiation of tasks EW and external factors complicating formation of the relevant list of tasks EW.

Keywords: tasks EW, factor of uncertainty, compensation of uncertainty.

INTENTIONAL DESTRUCTIVE ELECTROMAGNETIC IMPACTS – THE THREAT OF NATIONAL SECURITY

V. I. Gurevich, Central Electric Laboratory of Israel Electric Corporation

Annotation. The problem of Intentional Destructive Electromagnetic Impacts (IDEI) on power systems becomes recently more and more actual in connection with two modern trends: an extending application of microelectronics and microprocessor-based devices and systems in electric power industry — on the one hand, and intensive designs special equipment for distance destruction of electronic devices and systems — with another. The most powerful method for such destruction is the High-altitude

Electromagnetic Pulse (HEMP) as a result of high-altitude nuclear explosion. The history of experimental high-altitude nuclear explosions includes already half a century. During this time many tens the scientific articles, books, reports and standards in details presenting this phenomenon and measures of protection from it, have been published by English. However, all these materials have remained unknown to the Russian experts in civil sectors and especially in power engineering. Consequently, rare publications on this theme cause only negative emotions and indignation. Such relation to a problem and its full ignoring threatens national security and should be radically changed.

Keywords: Intentional Destructive Electromagnetic Impacts, IDEI, electromagnetic pulse, EMP, High Altitude Electromagnetic Pulse, HEMP.

FIRE RISKS IN RUSSIA

Yu. I. Sokolov, All-Russia Scientific Research Institute for Civil Defense and Emergency Management, Moscow

Annotation. The article analyzes the state of fire safety in Russia.

Keywords: fire, individual fire risk, fire-fighting service, forest fire, automatic fire-fighting equipment, fire extinguisher, industrial fire, peat fire, grass fire.

METHODICAL APPROACH OF THE SOLUTION OF A TASK OF OPTIMIZATION OF PLANS ACTIONS FOR DECREASE IN RISK OF EMERGENCY SITUATIONS

S. S. Korshunov, V. M. Egorov, FGBU VNIIGOCHS (FC), Moscow

Annotation. In article methodical approach of the solution of a task of optimization of actions plans on decrease in risk of emergency situations with simultaneous reasons for the admissible (acceptable) extent of possible damage to objects of economy and the territories is stated.

Keywords: risk management, emergency situations, protective measures, optimization, acceptable damage.

ACTIVITIES AIMED AT THE PROTECTION OF WORKERS, INCLUDING THE RAPID MONITORING OF CONDITIONS AND SAFETY, DEVELOPMENT OF TECHNICAL TOOLS THAT IMPROVE WORKING CONDITIONS

I. V. Alibekova, K. S. Laktionov, Federal State Budgetary Educational Institution of Higher Education "Orel State Agrarian University named after NV Parahina"

Annotation. This article discusses the effect of certification of workplaces to industrial injuries, occupational diseases and morbidity with temporary disability workers in the construction industry. It is shown that in addition to training on labour protection and other organizational activities necessary to make changes in the methodology of existing means of monitoring the conditions and safety of labor, making them less expensive and preferably Express methods. They in this article are offered. In addition, the proposed individual technical means of improving the conditions of workers.

Keywords: security, health and safety, working conditions, monitoring.

PROBABILISTIC ANALYSIS OF RISKS IN THE HORIZONTAL INTEGRATION OF THE GOLD MINING COMPANIES

I. A. Kradenyh, Research Associate Mining Institute of the Far Eastern Branch of Russian Academy of Sciences, Khabarovsk

Annotation. Modern vector of development of small and medium businesses in the gold mining industry is determined by the formation of new economic structures, including through the implementation of horizontal integration of enterprises, that allows to expand the opportunities for mining companies. When restructuring is very important take into account factors of uncertainty and control the level of risk.

In the article the methodical approach to determining risk tolerance horizontally-integrated gold mining enterprise. It has been established that it is influenced by various internal and external factors in the process of creating value, the cash flows of the integrated enterprise, a change which must be taken into account, adjusted for appropriate risk. Assessment of occurrence of certain events in the enterprise is established in the quantitative determination of the amount of net present value (NPV) based on a probability deviation indicators such as capital costs, operating costs and gold prices. The results obtained in the study are to establish the relationship between indicators of net present value, taking into account the probability of deviations of economic indicators and the level of risk the functioning of horizontally integrated gold mining company.

Keywords: gold mining industry, horizontally integrated enterprise, investment risk, economic risk, a synergistic effect, the net cash flow.