Аннотации статей на английском языке

HOW LARGE COMPANIES MANAGE RISK. THE PRACTICE OF RISK ASSESSMENT IN PUBLIC CORPORATION «RUSSIAN RAILWAYS» AND THE DIRECTION OF DEVELOPMENT

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Annotation. The article considers some methods of risk management at production facilities and problems of residual risk assessment. A brief review of the areas of application of standardized methods for risk assessment was conducted, as well as an analysis of the results of assessing occupational fire and occupational risks in railway transport. The approach to management of residual risk is offered on the basis of the factors forming it.

Keywords: risk, residual risk, hidden failure, human factor, quantitative assessment, risk matrix, integrated assessment.

INFORMATION SUPPORT OF MONITORING AND DEVELOPMENT RISKS FOR SOCIAL, NATURAL AND TECHNOGENIC SYSTEMS

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Annotation. This paper presents the methodology and technologies of information resources formation for informational analytical systems in the territorial management of development risks and safety of social, natural and technogenic systems. The structure of information flows of spatial monitoring data as a basis for centralized data warehouse and information exchange methods is proposed here. Principal requirements to information resources for risk assessment are formulated.

Keywords: S-N-T system, information exchange, data analysis technologies.

INTRODUCTION PROBABILISTIC AND STATISTICAL METHOD AND RISK — THE ORIENTED APPROACH IN PRACTICE PLANNINGS OF CIVIL DEFENSE

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Annotation. On the basis of probabilistic-statistical method methodical aspects of formation of system of initial data on an assessment of a possible situation which can develop as a result of influence of the opponent in the territory of the Russian Federation in the conditions of the modern military conflict are considered. The advantages of the probabilistic-statistical method over the traditional deterministic one are shown on the example of "fast global impact". It is shown that the risk-based approach can be successfully applied in civil defense planning activities in conjunction with the state supervision in the field of civil defense. The introduction of a risk-based approach will help to determine the risks of possible military conflicts against Russia, to identify priority scenarios of military conflicts for civil defense planning, to assess the effectiveness of planning, to make timely adjustments to the results of monitoring of potential threats and the state of civil defense.

Keywords: «fast global blow», probabilistic and statistical method, possible situation, civil defense, planning, risk — the oriented approach, system of basic data, modern military conflict, distribution function.

THE RISKS OF RUSSIA'S GARBAGE ECOLOGICAL CATASTROPHE

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Annotation. The article deals with the risks associated with the uncontrolled increase in the volume of municipal waste placed around cities, and the lack of an infrastructure for the safe disposal of waste.

Keywords: municipal waste, solid municipal waste landfills, places of unauthorized garbage disposal, garbage disposal, separate garbage collection, garbage disposal, garbage truck, incineration plant, reclamation of garbage disposal sites, accumulated environmental damage.

NEGATIVE ECOLOGICAL CONSEQUENCES OF DEVELOPMENT OF MINERAL DEPOSITS IN RUSSIA IN 20-TH CENTURY: ISSUES OF FORMER MINING AND PROCESSING PLANT "TUVACOBALT"

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Annotation. The article regards the main factors of harmful impact on environment as well ecological security issues of former Mining and Processing Plant (MPP) "TUVACOBALT" on the base of geoecological researches of Tuvinskiy Institute of Integrated Development of Natural Resources of the Siberian Department of the Russian Academy of Sciences in 1962—2017. Analyses results of arsenic containing cobalt ores as well as tails of their hydrometallurgical conversion, soils, waters and plants are presented; it is highlighted the hazard from huge volumes of accumulated high concentration arsenic waste products, including in the toxic soluble state. At present the waste products are exposed to wind and water erosion, at possible mass effluence into High Yenisei basin they represent the large scale threat of environment pollution. To solve the problem of territorial ecological safety of former MPP is possible only by creation of the new technologically advanced mining and processing enterprise that disposes of arsenic containing waste products.

Keywords: arsenic, cobalt, waste products, threats, pollution, new enterprise

ASSESSMENT AND CONSIDERATION OF INVESTMENT RISKS IN FORECAST STUDIES OF ENERGY DEVELOPMENT

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Annotation. The research substantiates the importance of the investment risk assessment and consideration in the energy development forecasts. A focus is made on the methods of such an assessment in determination of strategic threats to energy security and in optimization models applied in the long-term energy planning.

Keywords: energy sector, forecasting, uncertainty, strategic threats, investment risks, modeling, optimization, discounting.

RISK ASSESSMENT OF THE EMERGENCY EXPIRATION OF GAS FROM THE GAS PIPELINE UNDER ABNORMAL METEOCONDITIONS OF THE NORTH

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Annotation. Low temperatures and abnormal meteoconditions of the North have significant effect both on the frequency of accidents, and on development of accidents. Abnormal weather conditions of the North are characterized by the powerful temperature inversions arising at an anti-cyclone at the expense of the radiation of permafrost soil at extremely low temperatures of air and conditions of air stagnation. These abnormal conditions influence process of gas dispersion in the atmosphere, promoting his delay and formation of explosive concentration of gas at the Earth's surface. As a result the accidents risk of the gas pipelines occurring according to the scenario — the expiration of gas without the subsequent ignition increases. The formed congestion of explosive concentration of gas at Earth can lead further to explosion and the fire.

Methodical approach to risk assessment of the emergency expiration of gas from the gas pipeline under abnormal meteoconditions of the North is presented in article. "The event tree " of the gas expiration from the gas pipeline at low ambient temperatures taking into account abnormal meteoconditions is developed. The implementation frequencies of emergency scenarios at the expiration of gas from the gas pipeline intended for quantitative assessment of accidents risk of gas pipelines at low ambient temperatures are estimated. Influence of temperature inversion on the size of excessive pressure of a shock wave at explosion of a cloud of air-gas mix of methane and to increase in range of the striking factors at failure of the gas pipeline is proved.

Keywords: risk analysis, gas expiration, temperature inversion, dispersion, frequency of emergency scenarios, shock waves.

ESTIMATING THE PROBABILITY OF OIL COMPANY DEFAULT BASED ON SYSTEM DYNAMICS MODEL

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Annotation. This study demonstrates the possibility of using a system-dynamic model of oil producing and refining enterprise for assessing the probability of its default. The obtained results are compared with the estimations of rating agencies.

Keywords: system dynamics, credit risk, reverse stress testing, risk management.