

INNOVATIVE TECHNOLOGIES OF ANTICRISIS MANAGEMENT FOR PRODUCTION-TRANSPORT COMPLEX

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Summary. Work is devoted to one of moistures problem of the day modern economy – to the innovative instruments of anticrisis management for a production-transport complex (PTC). To consider The problem of development and use of the systems of information technologies and ecologic-economic control management for PTC in the conditions of crisis, t unstable and indefinite external environment.

Key words: innovative technologies, ecologic-economic control, anticrisis management, instability.

INTRODUCTION

Today the level of public and socio-economic development of Ukraine and many other countries is characterized by not only serious economic cataclysms but also difficult technogenic and ecological crises and catastrophes.

Development and research of economic-mathematical models and use of information technologies in the ecologic-economical control for a production-transport complex (EEC PTC) as the economic subjects of manage in the modern terms of instability and crises is enough the issue of the day, that in full is confirmed by opinion of acad. NAS of Ukraine M.Z. Zgourovsky, concerning conception of steady development [1].

Work is devoted to the problem of ecologic-economical control of PTC that functions in the modern terms of unstable and indefinite environment, that is the factor of modern stage of development of Ukraine and other countries. The bases of theoretical methodological and applied tasks of the ecologic-economical monitoring, design, prognostication, planning, control and acceptance of decisions, for PTC in the conditions of uncertainty and risks are examined.

OBJECTS AND PROBLEMS

As the considered problem on the whole is multidimensional and intersubjective, it is necessary to attract the results of many scientific and technical directions for its decision [1-5]: theory of the systems, systems and complex approaching, that allow to

take into account as intercommunication of three types of processes – production-economical (technological), ecological and market ones, so multilevel systems of the ecologic-economical monitoring (local, regional, state and world); methods of theory of informative-computer technologies and conception four "I"; methods of modern theory of control, planning and acceptance of decisions, including theory of computer modeling of the complex systems, robustic, management assured, adaptive and intellectual control; methods and languages of description of complex indefinite informative wicket, including fuzzy data and knowledges; methods, that take into account "Not-factors" (nonlinear, instability, unstationary, uncertainty fuzziness nonedeterminanty and etc.) and "Multy-factors" (multidimensional, multicriterial and etc.); methods of computer design of the technical systems, including informative-measuring ecological devices, tools and technologies of cleaning and utilization; methods and models of production control and marketing. Methods of theory of co-operative and noneantogistic differential games for acceptance of concerted and mutual cousentive ecologic-economic decisions; methods and models of riskology, theory of attractor and catastrophes, taking into account, that the ecologic-economichni systems behave to the class that is selfdeveloped and selforganized etc.

Any economic systems, for example PTC, functions in a market environment, and works in the conditions of risk and uncertainty. Subject to the because of instability economic environment the levels of factors of risk and uncertainty rise and activity of PTC can turn out ineffective and stimulate the crisis of enterprise. But the crisis state of any enterprise, for example PTC is not the end of their activity. Even when an enterprise is found in the crisis state, there is possibility to draw on certain complex of measures, models and methods that can help an enterprise to overcome a crisis and pick up effective activity. This complex a base for anticrisis management.

Unfortunately, the enormous potential fixed in an anticrisis management base, is not enough used in practice of management. Even large enterprises are now in the crisis state, on verge of bankruptcy. So, 17 958 files of bankruptcy was taken during 2003 year by the economic courts of Ukraine. It makes 113% in relation to 2002 year (15 851 files accordingly). 8 102 businesses were thus excited about bankruptcy (in 2002 this number was equal 7 424 ones) and 7 904 ones are completed (5 698 businesses in 2002 accordingly). In connection with conducting of anticrisis sanation procedures of enter 20 files were stopped only (22 files in 2002 accordingly). This tendency testifies that the problems of anticrisis management is spared not enough attention; successful experience of enterprises which succeeded to overcome a crisis and pick up thread effective activity does not spread and remain out of eyeshot managers and leaders of enterprises.

In this connection there is the necessity of research, systematization and decision one of most hard problems of the day, that is new for our society - problems of anticrisis management for PTC as the economic system.

The scientific-practical problem of economic-mathematical design and development of the systems of information technologies of ecologic-economical of is considered as production transport complex on the whole, that functions in the conditions of instability, uncertainty and risk (dangerous) of external and internal environment that is characteristic for the modern stage of development of Ukraine and many countries of the world.

Taking into account scientific and practical necessity, authors did an attempt to consider all problems, that characterize the processes of anticrisis management by the of system approaching positions and to lay incident out the suggestions in relation to the decision of problems, that incident to the crisis phenomena.

RESULTS

Development and research of models and systems of instruments of innovative and informative ecologic-economical control (EEC) on the basis of the proper integration and intellectualization of subsystems and for process EEC in the modern terms of crises, instability and risks is enough topical of the day. It accords by triune conception of steady ecologic-social-economic development and construction of integral model of «ecological economy» and «economy of knowledges», that is there are the models of «clever society», that is the higher form of development of the society based on knowledges. Thus it is necessary to develop the integrated intellectual system of the ecologic-economical monitoring, design, control and acceptance of ecologic-economichnih decisions.

For this purpose the proper tool is created by an author, namely: conceptions, principles, methodologies of creation of the integrated system of the ecologic-economical monitoring, modeling and controlling (SEEMC); complex of models and system of information technologies for SEEMC; system of monitoring (analysis, treatment, modeling and prognostication of sufficiency of ecological environment in the area of technogenic industrial enterprise – TIE); complex of optimization is criteria and control (production-economical, ecological, technological, transport and etc., that is for all production-transport complex TIE); estimations of efficiency of realization and perspective of development SEEMC. The integrated computerized system of the ecologic-economical monitoring, modeling and management by a technogenic industrial enterprise (by the production-economical system that is represented three leveled structure, that is the control is carried out on all levels of hierarchy) in the conditions of instability is the result of research. It is new paradigm of management for the complex systems and processes. The system is based on the following results is given [1-5]:

- conceptions, principles, complex of nonlinear models (about 30 models both integral and local, that form the mathematical base of the system), methods of taking of and EEC;
- integral criteria (economic, ecological, technological, transport and etc.);
- use of «five poles», instead of traditional «four poles», were output is presented as 2 sets of outputs: «useful» and «harmful»;
- use and presentation of the mixed informative base: determined, as a sets and fuzzy for EEMC;
- intellectualization and integrations SEEMC and etc.

Developed integrated intellectual computerized system for EEC is the system, that was built on the basis of principles: system and interscience approaching; four "I", that is the maximal integration, intellectualization, individualization and unique informative base; maximal taking in account «not-factor» (that is nonlinear, instability, unstationary, uncertainty, fuzzy, undetermined, not gauss type etc.) and «MUCH -

synthesis of factors» (that is multidimensionality, multicriterity, multifactor, multiparameter etc.); maxima of ecology production-transport processes and principles of modeling of the complex systems; thus, system result the is built conception "four "I" + 2".

Basic directions of integration of subsystems in the system «X» are the next: integration of data bases and knowledges and creation unique data bank of the distributed processing; technical integration and creation of heterogeneous local to the informative-computer net of AWPS and work stations; mathematical, algorithmic and programming integration on the levels of hierarchy.

Directions levels of intellectualization the system are: intellectualization of AWP of all levels; intellectualization of controllers on the basis of active consulting models by the mixed knowledge base, including fuzzy base; intellectualization of interfaces of programs packages of the system; intellectualization of the problems planning of the checking and diagnostics systems of technogenic industrial objects.

Basic methods, used in SEEMC are: methods of theory of informative-computer technologies and conception «four "I" + 2»; methods of modern theory of control and taking of decisions, including theory of computer modeling of the complex systems, robustic, adaptive and intellectual control; methods and language description of sticky uncertain informative situation, including fuzzed data and knowledges; methods, that take into account "not-factors", and "multi-factors"; «soft» methods and models and etc.

CONCLUSIONS

Problem of development and creation of the integrated intellectualization computerized control systems and taking of ecologic-economical decisions for the production-transport systems (PTS) and processes, that function in the system of the ecologic-economical monitoring and control in the conditions of unstable environment and in the crisis situation is an actual scientific and technical problem. This paper, in particular, devoted to the decision of problem of ecologic-economical modeling and control in the PTS within the framework integrated automated system of control. This system provide the increasing ecologic-economical safety and economical efficiency of PTS in the conditions of the unstable economics, that is in the condition of stochastic of environment, fuzzy information and risks.

Conceptions that was developed, principles, methods and systems of innovative and informative technologies, are used in the economical-mathematical modeling of processes of ecologic-economical control PTS.

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ИННОВАЦИОННЫЕ ТЕХНОЛОГИИ АНТИКРИЗИСНОГО УПРАВЛЕНИЯ ПРОИЗВОДСТВЕННО – ТРАНСПОРТНЫМ КОМПЛЕКСОМ

Рамазанов С.К.

Аннотация. Работа посвящена одной из актуальнейших проблем современной экономики - инновационным инструментам антикризисного управления производственно-транспортным комплексом (ПТК). Рассмотрена проблема разработки и использования систем информационных технологий и эколого-экономического управления ПТК в условиях кризиса, нестабильной и неопределенной внешней среды.

Ключевые слова: инновационные технологии, эколого-экономическое, антикризисное управление, нестабильность.