#### ABSTRACTS

#### **TECHNICAL SCIENCES**

#### Abramova L. N. Especially manufacturing hydraulic power cylinder, piping, hydraulic forging and mining equipment with the use of controlled slot sleeves // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

In the article general and special requirements are considered on making of elements of hydraulic forging and mining equipment, including in the fast-acting hydro elastic drive of machines. In hydraulic systems of such machines in their cylinders and guides can be used very effectively specially designed adjustable slotted sleeve. The special attention is spared the special technological receptions which promote transversal (radial) inflexibility of machines and their mechanisms with the use of the managed hobs with a wedge surface attended with a return wedge surface. Attention the correct choice of materials of the attended details, roughness of surfaces of details, requirement to the form and location of surfaces is spared. Requirements are considered in making of pipelines: on their cleaning and control of quality after cleaning; on its flexible steel pipes with the minimum radius of bend and on editing of pipelines.

# Aliiev I. S., Zhbankov Ya. G., Tagan L. V., Shvets A. A. Direction of heavy forging processes improvement based on metal flow control // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

A classification of forging processes large forgings based on the extraction of three factors which allow you to control the stress-strain state of the workpiece is proposed. The factor of the form, kinematic factor and factor of temperature are distinguish. Form factor determines the different shape of billet and tools, the kinematic factors include different kinematics of movement the deforming tool and the different mechanical regimes of forging. Temperature factor describes the different thermal state of the initial billet and the different temperature field. The analysis of the works of domestic and foreign researchers, based on that analysis it is determined level of study, each of the factors of the classification and the ways for further research in the field of forging large forgings.

#### Baranovskij I. V., Zhartovskij A. V., Hudoteplov M. K. Application of system of a computer-aided design Compass 3D v13 in calculations of metalworks // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Efficiency of application of a method of final elements is compared to module use "APM FEM" computeraided design systems Compass 3D v13 with "traditional" methods. The estimation of strength of the metalwork by a method of final elements and on methods of calculations of a strength of materials is spent. The certainly-element model which allows to size up reliability of a product on safety factors and flow is presented. Results of "traditional" calculations are resulted. The gained results of calculations of the metalwork with use of a method of final elements have been confirmed by methods of calculations by rules of a strength of materials. Application of a method of final elements with module use "APM FEM", computer-aided design systems the Compass 3D v13 is more effective, in comparison with "traditional" methods of calculations of reliability of metalworks.

#### Belevtsov L. V., Gudkova E. Yu., Suvorov A. V. Planning of the system of support of making decision for diagnostics of the technical condition of a car // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The principal reasons of worsening of working properties of units (knots), systems of a car are considered. It is shown that a control operation – diagnostics is preceded servicing of a car. Often meeting rejections are selected inprocess systems and units of car, which are diagnostic signs for estimating of his technical state. By facilities of simulation of complex objects of UML language, the system of support of making decision is projected for diagnostics of the technical state of car. The use case diagram and class diagram are shown, allowing to get an idea about the designed system and about her separate components. Forms over of programmatic realization of the presented project are brought.

#### Vasilenko N. A., Kostenko I. G. Comparison of the phase composition and structure of nitride films prepared by different methods of reactive sputtering // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Improving physical, mechanical and chemical properties of thin nitride films depends on the methods of their deposition and improvement of the structure, which identifies and forecasts derived properties. With the help of ion implantation and condensation and ion bombardment method nitride films on the substrates of Ti, Ta, W, Mo, Ni, Si (111) and NaCl (100) have been obtained, and their phase composition and structure have been studied. Multi-phase set of films composed of nitride and oxide substrate material, as well as nitride and titanium oxide with the arbitrary position of the latter in the film. All phases have a polycrystalline structure. Epitaxial Si-substrate influence on the structure and phases formation in the sputtered film has been noticed.

# Getman I. A. Methods of selecting image parameters defects and organization of information-measuring system expert subsystem control the appearance of the ceramic products // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

An effective method of selecting image parameters defects appearance of ceramic tiles on the basis of probability and entropy estimates informative for subsequent use as independent variables in the algorithmic software expert subsystems. The set of parameters that can be used to detect defects of images is classified on estimated their properties. Developed expert subsystem based on neural-fuzzy networks for pattern recognition of defects ceramic tiles appearance. Experimentally confirmed the informativeness of images parameters, whose evaluation used as input to the expert subsystem.

#### Gitis V. B., Ostash A. S. Develop educational complex support of inventive problem solving // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The process of technical creation is considered on the basis of theory of decision of inventor tasks. The conceptual chart of work of the system is developed with a present patent fund on the basis of model of products. The diagram of variants of the use, determining the basic requirements to the methodical complex, is presented in language of UML, work is described with the tables of patent fund. The first version of software product is described, the separate CRT forms are resulted. Automation of the initial stage of decision of inventor tasks, which the choice of direction cogitative activity is made at, is made.

# Dodrjak S. K., Kotushenko K. S. Finite-element model of overlapping process of the rolling between non-driven and driven rolls // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

One way to improve the quality of cold-rolled strips, including a reduction of their longitudinal polythickness, is the overlaping of the rolling process between non-driven and driven rolls. The realization of this process is characterized by the presence of additional functional connection between the original polythickness and tension. The mathematical finite element model of this process is developed. Using the obtained model estimation of the mode of deformation of metal of the proposed scheme is given. Analysis of the results of numerical realization of testifies to the fact that the increase of the reduction in non-driven working rolls increases the power of rolling in the first mill, increases tension and reduced the power of rolling in the second mill.

# Zaloha V. A., Zinchenko R. N., Honshchyk A. V. To the question of choosing the methodology for the implementation of cutting tool condition diagnosis on the basis of vibration data in the technological system // Scientific Herald of the DSEA. -2012. -N 1 (9E).

The analysis of modern research in the field of development of effective systems for cutting tool condition diagnosis is presented in the article. It has been proved that vibration diagnosis with the application of accelerometers (percussive, tensometric, piezoelectric etc.) may be used as one of the most effective and reliable means for cutting tool condition estimation in the real-time mode. The information about methods used in the systems of cutting tool condition diagnosis is stated. It has been shown that artificial intelligence (artificial neural network including multilayer perceptron, radial basis function network, Kohonen self-organizing maps; hidden Markov model; adaptive neuro-fuzzy inference system and transductive neuro-fuzzy inference system) is effectively used for solving the current task.

# Ivchenko T. G. Optimization of cutting process parameters taking into account temperature limitations // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The method of optimization of cutting process parameters on the criterion of the maximal productivity is improved with the ground of necessity of account of the cutting temperature limitations. The scope values of temperatures for which it is necessary to take into account temperature limitations depending on terms clean and draft lathe treatments are certain which eliminating possibility of the groundless overstatig of the cutting regimes. Analytical dependences for a calculation optimum on the criterion of the maximal productivity of cutting speed and feed for any terms clean and draft lathe treatments taking into account temperature limitations are set.

# Kostyunin M. V. Simulation of coupling of abrasive grains with the surface of work hard metal by hydroabrasive cutting // Scientific Herald of the DSEA. – 2012. – N 1 (9E).

In the article actual use of hydroabrasive cutting for processing of the hard metal preforms is examined. The process of interaction with the surface of work hard metal of the abrasive grains processed hard metal with the processing method hydroabrasive cutting, and the impact of the liquid jet to the surface of processing a hard metal is investigated. The results of the virtual experiment to research the stresses in the zone of interaction with the surface of work hard metal of the abrasive grains processed a hard metal have been proposed. As result was received a mathematical model for determine the stress in the interaction zone, and also built the surface of the dependence stress of the main factors of the process hydroabrasive cutting.

# Kralin A. K., Vodolazhchenko A. G. Advanced methods of plastic shape-forming of inner thread surfaces on thin-walled items // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

One of the most common structural members of the items is the thread. The functions of the threaded coupling are quite diverse, therefore there is a wide range of the threads used. At present thread items are produced by various methods. The paper is aimed at making system analysis of items production process which allows us to determine both advantages and disadvantages of the advanced methods of plastic shape-forming of inner thread surfaces on thin-walled items. The analysis has proved that the most efficient methods of thread forming are those which provide the finished items' high quality, nonwaste production, increase in productivity, etc.

## Kulya V. I., Titkov V. A. Complex computer simulations in training engineering // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

This article analyzes the current trends of organization of higher education in a rapidly changing market conditions of scientific and engineering work environment. Synthesized and developed structure flexible, adaptable training system based on the ideas of artificial intelligence. As a result, the proposed intelligent tutoring system for training engineers and manufacturing allows to integrate knowledge of the subject area, the methods for solving engineering problems, as well as automated methods of design and technological preparation of production. The application of this method of teaching and encourages developers of software and information resources to support the learning process is not to create individual pieces, and educational facilities, providing a full elaboration of teaching material from acquaintance with the theory of non-standard solutions to problems.

# Nazarova E. S. Application of structural modeling in the development of complex of interconnected models of electromechanical systems of cold rolling // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

A complex of interrelated models of electromechanical systems of cold rolling, which takes into account the elastic of first and second kind between drives rolling stand and winding-unwinding mechanism. Comparison of electromechanical processes used in the simulation, with real hardware monitoring data confirms their adequacy. The proposed complex of models can be used in the development of new and reconstruction existing control systems of cold rolling mills, as well as for research multimass interconnected drivers the basic mechanisms of cold rolling mills.

# Nechvoloda L. V., Krikunenko E. N., Sagayda P. I. The improvement of methodology of conducting value analysis of technology equipment based on the use of fuzzy cognitive maps // Scientific Herald of the DSEA. -2012. $-N_{2}$ 1 (9E).

In conducting value analysis to evaluate the technical condition of the production equipment is often used methods of peer review, in which experts often try to get a direct numerical estimates of parameters, which entails getting an errors of model in interpreting the results of such analysis. In our method is suggested to obtain from experts qualitative evaluation of paired comparisons of characteristics and alternatives. More detail is considered the technique of improving the functional cost analysis based on the introduction of its composition of fuzzy cognitive maps. Proposed to use semantic models of processes for a specific hardware functions for those units that have been received in the course of the structural decomposition.

# Pankratov A. I., Lutaja A. V., Vereshko V. P. Experimental research of influence of vibrations of flexible current leads to the stability of the regulators of move of electrodes of arc furnace // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The results of statistical research of random processes of change operating currents, voltages, and lengths of the arcs of three-phase furnaces. Based on autocorrelation analysis of random processes of change of currents, voltages, and lengths of arcs ergodicity of these processes and the strict periodicity of the fluctuations are identified. Established that the frequency intervals of fluctuations of the electrical parameters coincide with intervals of natural frequencies of flexible cables. The diagnostic of impact of the disturbances in power circuit of the arc steel furnace will improve the quality of power regulation and therefore increase the productivity of the furnace. Received frequency characteristics give the opportunity to develop energy-efficient regulators of move of electrodes. Results of researches can be used for all electroarc furnaces.

## Polikarpov J. V., Zhykov K. K. Finding output-input ratio polyspast and pulls of ropes on the basis of principle of the possible moving // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

In the domestic periodic seal from time to time is levitating a question about correctness of the generally accepted approach to determination efficiency polyspast. A reason is covered in the insufficient argumentation of initial positions, and also in that efficiency polyspast consisting of one block, appears higher, than efficiency separate block. In-process, on the basis of principle of the possible moving correctness of the generally accepted approach is confirmed and explanation is given to the noted correlation efficiency. Offered in educational literature to expound the decision of this task on the basis of principle of the possible moving.

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## Polschykov K. A. Functional model of data flows intensity control in the mobile radio network of the special setting // Scientific Herald of the DSEA. – 2012. – N 1 (9E).

In the article the system analysis of data flows intensity control in the mobile radio network of the special setting is presented. The elements of analysable process are selected. Indexes, characterizing efficiency of management intensity of flows of data, are offered. Functional model of data flows intensity control in the mobile radio network of the special setting is proposed. Application of the neuro-fuzzy systems for a control of knots-sources information dispatch intensity, a control of repeated transmissions intensity and a control of packets casting-out intensity in transit knots is grounded.

# Razzhivin A. V. The mathematical modelling and an estimation of size of thermal losses of the regenerative period of fusion in an electric arc furnace // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Special and actual the question of an estimation of some conditions of processes of the fusion having likelihood character and resistant direct control is special. The most actual are problems of definition of thermal losses at arc fusion. The spent mathematical modelling for the purpose of an estimation of size of thermal losses of the regenerative period of fusion, has allowed to define value of the capacity brought to liquid metal. By results of theoretical researches of process of heat exchange in the closed space of the furnace surfaces of change of capacity of thermal losses in the course of heating of liquid metal which allow to raise accuracy of modelling of an electro-thermal mode on all campaign of fusion are received.

#### Roganov M. L., Roganov L. L., Abramova L. N., Granovsky A. Y. Qualification of functions for the basic characteristics of hydroelastic drive //Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Such important behaviour like value of the energy accumulating when compression of the working fluid and motion of movable parts of a drive have been qualified at period of formation of the impulse of shock acceleration. These behaviour are functions of the basic characteristics of hydroelastic drive such as working pressure, volume of deforming fluid, work area of plunger, the bulk modulus variation of the fluid and a mass of movable parts. Relative errors for oil AM $\Gamma$ -10 in interval of pressure 2...300 MPa have been calculated. The most accurate formulas for determination of the energy of compressed working fluid and motion of movable parts of a drive have also been deduced and confirmed by suitable calculations. According to the data corresponding graphs have been constructed Conclusions about the intervals of pressure for which use of these qualified functions is possible have been inferred.

#### Roganov M. L., Roganov L. L., Granovsky A. Y. Mathematical models of hydroelastic motion // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The research relevance and sphere of application have been determined, the main goal of which is the development of mathematical models of hydroelastic motion aimed at the computational clarification of the shock stands which are used in modern technics. Four mathematical models of hydroelastic motion for different laws of pressure change of working fluid have been drawn up. The most accurate model of hydroelastic drive has been derived, which takes into account the bulk modulus variation of the fluid pressure of working fluid. Analysis of the mathematical models within the parameters of the impact stand physical model has been done. It was noticed that differences at a results of calculations increase with the pressure growth at the working chamber versus the most accurate model. Conclusions about the data accuracy and spheres of application of mathematical models of hydroelastic motion have been inferred.

# Rozov Y. G. Finite element model of forming of internal surface of barrel of polygonal profile by dragging on the moving mandrel in a smooth conical matrix // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The barrel of small-arms requires the special care during designing and making, especially at profiling of internal cavity so-called the bore of the barrel. Making of barrels by the methods of plastic deformation presently sufficiently actual. However, the traditional analytical methods of analysis do not allow to get the exact calculations of basic parameters of technological processes of making of barrels. In this work the results of computer design of process of forming of internal surface of barrel blank of polygonal profile are presented by dragging in a smooth conical matrix with fixing (centring) of blank on a calibrating string-course, by the method of eventual elements.

## Rutkovskiy M. A. Development of mathematical models of deformation shell drum shaft hoist // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

A mathematical model of deformation drum shell under the effect of the rope load. Mathematical model derived from the system of canonical equations by the method of forces. In contrast to the known, the model contains a matrix of pliability, the value of the components of which depends on the design of the drum and the physical and mechanical properties of materials is based on the semi-empirical approach. Propose a highly efficient method for analyzing the structure of the drum, which allows to determine the influence of the location and mechanical characteristics of reinforcements on the maximum sag of the drum shell. Application of the model to determine the rope loads will significantly reduce the complexity.

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#### Scriabin S. A., Gunko I. V., Chaika D. S. Study of the deformation resistance when rolling the billets from alloys AK6, AK8, AMΓ, AMI // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The paper described the methodology of the research implementation on the determination of the stress state factor and calculated this factor for the AK6, AK8, AMIL, AMF alloys. The method using the testing results of strain resistance while sample tension on plastometer and correction factor  $K_{\sigma} = n_{\sigma} \cdot n_{B}$ , that takes into account tension

condition of deformed metal and billet width influence on unit pressure (at determination of the base pressure  $K_{\sigma} = P_{cp.}/\sigma_{0,2}$ ) is described. In the article, formula, obtained by the authors according to which, considering available data given on determination of  $\sigma_{0,2}$ ,  $\sigma_e$  and  $\delta$  for alloys AK6, AK8, AM $\Gamma$  and AMII and  $K_{\sigma}$  for alloy AK6 when rolling the billets, the corrective factor  $K_{\sigma}$  for alloy AK8 when rolling the billets, having temperature 420 °C and 470 °C is found.

# Stupnytskyy V. V. Imitating rheological modeling of chip formation in the cutting zone// Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article describes and analyzes the results of the rheological model of the cutting process in the area of chip formation. Simulation results provide important indicators such calculation of the stress-strain state of the machined surface, the residual stress type I and II, microtopology surface layer hardening etc. Analyzed the contact process on the front of the cutting edge. The effect of the force factors on the stress-strain state of the workpiece in the cutting zone. The calculation of these indicators will help to establish the predictive relation between the structure and the parameters of technology transition and performance of workpieces. This will create the preconditions for the realization of the principle of function-oriented process design.

# Tarasov A. F., Sagayda P. I., Podlyesnyj S. V., Krasyko Z. A. Development of a standard for Master degree "Information technology design" based on the ontological approach // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The analysis of structure of information which joins in the educational standard of teaching of bachelors and master's degrees was executed. Concepts were formulated and subject of higher education domain taxonomy was formed, the ontological model of educational process was developed. On the basis of ontological model, development the elements of design standard for the Masters of Education degree "Information technologies design" (ITD) was executed. The article include a fragment of the intensional detailed ontology "Preparation Masters in ITD", where shows are expected to master some skills ITD to ensure professional competence, as well as production skills of graduates as employees in the field of information technology.

## Tarovik N. G. The influence of the geometric parameters of the crank-hinged walking mechanism for the stroke of dragline // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Kinematic analysis conducted of the crank hinge mechanism walking dragline. Block diagram of the mechanism described. In the graphical analysis of the trajectory of the mechanism is built ball bearing units at different positions in the movement of the dragline and when you return to the starting position of skis. The shape of this trajectory can judge the size of the course and a lifting height of the excavator. Drafted system describes the position of all links of the mechanism under any of the provisions of the drive crank. The influence of the geometric dimensions of the lever on the stroke length of the excavator. Obtained relationships allow for a series of numerical experiments on the selection of the geometric parameters of the rational parts of the mechanism in terms of the maximum speed of movement excavator.

### Fedin V. F., Sokol G. V., Polschykov K. A., Balashova Y. A. The analysis of methods of resource allocation in mobile communication systems // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The analysis of methods of resources allocation in mobile communication networks is presented. The paper considers the efficiency of cellular communication systems, justified its dependence on the method of access to the resources of the communication system, the signal/noise ratio and the size of the cluster. The efficiency of the methods of access to the resources of the base station, which are used in modern mobile communication systems. Evaluation of cellular communication systems for your criteria and options for the use of cellular communication systems, depending on the size of the service area is proposed.

# Chosta N. V., Vladiviriv E. A., Sholeninov V. E. Method of metrical synthesis of scissors with rolling rezom for trimming of sheet rental // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Two methods are developed, allowing to execute a metrical synthesis scissors with rolling rezom for cutting of sheet rental which is mechanisms of 3th class: drafting of the system of equalizations, and also universal method of «fictitious» mechanism. Comparison of these methods rotined that maximal relative difference between sizes, got 0,1% does not exceed in number of different ways. The program, allowing to design motion of mechanism, is developed. The chart of dependence of corner of turn of knife is resulted from the corner of turn of entrance link. Directions of further research of scissors are certain with rolling rezom.

#### Chubik R. V., Mokritsky R. B., Denschikov A. Y. Automated unbalanced vibration drive // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The authors proposed a constructive solution managed vibration drive that allows remotely to arbitrary limits (and in any direction) to control the amplitude vibration of the working body in many adaptive vibration technology machines by changing the angle between the unbalance, located on the shaft vibration drive by industrial microcontroller through the next loop system control: uniaxial module positioning, cable, servo amplifier, servo motor - by removing the specified number of pulses for a given angle of rotation of the shaft servomotor. Application of the proposed controlled vibration drive will integrate such processes as vibration abrasion, vibratory cleaning, vibration hardening, vibratory stress relief and other vibrating processes in complex highly flexible production lines and robotic systems.

#### **ECONOMIC SCIENCES**

# Bezzubko L. V., Goncharova L. A. Problems of public examination of local government // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

This article discusses the problems and difficulties of implementation of public evaluation of executive and state power. The main constraints are: lack of qualified personnel for inspection, the lack of financial and organizational support of the examination, the possibility of conflict of interest of members of the public organizations that conduct an examination, lack of validity of the conclusions and proposals. The paper suggests ways of improving public examination: implement a system of training for NGOs and governments; to create a system of public examination at authorities; to create a a system of selection of participants of public examination, assessment of competence.

# Belovodskaya E. A. The influence of environment's factors on formation of effective banking communication policy // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

In article the choice's expediency of the environment factors which are influencing to the formation of banking communication policy, such as change in real GDP, inflation, dollar exchange rate, real disposable income, unemployment, real average wages, the loan and deposit portfolios of banks in Ukraine, the structure of the loan and deposit portfolios is proved. Their influence on groups of macroeconomic indicators, indicators of the general situation in the country, and also indicators of a banking system of Ukraine is analysed.

### Bersutsky A. Y., Kamenskaya O. A. Informative support of functioning of strategic budgets of human capital // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

This article presents a methodical approach promoted by the operation of strategic human capital budgets industrial enterprise. The essence of which is to create an effective system of strategic reporting, which allows you to monitor the implementation of planned strategic indicators of human capital in the strategic budgeting using forms developed strategic reporting. Studies need to use strategic human capital budgets as the main instrument of industrial enterprise strategy. The aspect of human capital enterprise characterizes the ability of companies to durable development and is a prerequisite for successful long-term survival. Using a system of strategic budgeting, which aims at improving the efficiency of an intangible asset, the company provides the strategic objectives in relation to their economic (financial) activities.

# Bolotina E. V. Institutional structure in the transitional Economy of Ukraine // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

In this article it is possible to consider the analysis of institutional structure of economy of Ukraine, and also will familiarize with essence and nature of institutional changes in her from positions of institutional approach. Neoinstituthionalizm extends the analysis property, to include, in addition to private property, collective and State-owned property by comparing levels of efficiency. Proposed in article institutional approach is based on the need to build institutional matrix, flexible to breaks in the modern economic system. Analysis both in Ukraine giver evidence of origin a new phenomenon – institutional trap, its types, functions and peculiarities. Topics include the essence of formation institutional environment, which adaptations of institutional modifications by economical system of Ukraine.

#### Goncharova S. U., Sotnikova U. V. The natural and the actual level of unemployment in the regions of Ukraine: dynamics and features of the distribution // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The current stage of market relation's development in Ukraine is characterized by significant level of unemployment. However, unemployment is not always the result of economic uncertainty, for example, the natural unemployment is an integral part of the functioning of the labor market. In the article the analysis of the dynamics of the actual and the natural level of unemployment in Ukraine over the past ten years has been presented. The distribution of Ukrainian regions based on unemployment levels with BCG matrix has been implemented. The distribution shows that the largest number fell into the quadrant of backward regions, and the developing regions.

#### Grishina U. V., Prokopenko R. V. Estimation of disbalances in the aim system of industrial enterprise // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Offered approach to the estimation of disbalances in the aim system of industrial enterprise. Approach is based on comparison of vectors of development, that is set by owners and the balanced system of scorecard set, that is set by the management of enterprise. Offered approach allows to educe disbalances between the aims of subdivisions of enterprise, and disbalances between changeability of environment and enterprise results, that gives an opportunity to promote efficiency of plan activity of enterprise and improve the adaptivity of administrative.

#### Duginskyi B. L. A Design of registration decisions // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article examined the problem of making accounting decisions and behavior accountant, as the person who makes these decisions in the application of national standards. Accounting decisions are usually to the tactical decisions that require performing activities at the operational level. Introduced classification of structured and semi-structured problems and the problems of choice of alternative accounting decisions on different criteria. A solution to the problem of large class accounting tasks as a function of the effectiveness of decision-making accountant. In this case, the function is described as a model of the first level. Models of the second and subsequent levels will act as a model selected parameters.

### Ivanov S. V. Optimization of the range of services on the basis of decisions taken by price // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Bases of formation of price policy of the enterprise in close interrelation with assortment policy, stockpile management, fixed assets, expenses as a whole are considered. The attention is focused on problems of formation of price policy in market conditions. Approaches to price formation from a position of lack of necessary means are developed for financing of market researches and strategic planning. The technique of effective implementation regulatory parametric methods of analysis and justification of prices, which allows you to optimize the range of services and resources based on the pricing decisions taken by a result of the proposed measures to optimize cost management, pricing methodologies enterprise gets real economic benefits.

# Isikova N. P. Theoretical analysis of basic concepts of control system by the dealer network of industrial enterprises // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

On the basis of analysis of dynamics of basic economic indicators of functioning of industrial production of Ukraine the actuality of perfection system of control of the dealer network of domestic industrial enterprises is proven. Formalization of basic concepts of control system by the dealer network of industrial enterprises of Ukraine is conducted. The features of understanding of the probed concepts are exposed in interpretation of different authors. Importance of the theoretical positions selected in the real work is certain. The perspective problems of research of processes of forming and development of dealer networks are set at mastering of new markets of sale products on domestic industrial enterprises.

#### Kolomiyets V. M. The influence of the useful lives of fixed assets at the conduct accounting at the enterprise // Scientific Herald of the DSEA. – $2012. - N_2 1$ (9E).

Rationalized useful life of fixed assets is an important step in accounting for assets in the enterprise, receiving profit. Creating an effective asset accounting to improve the management level, the timing of the useful purpose of the study was and is one of the key aspects of accounting and management accounting. In article influence of terms of useful use of fixed assets much conducting accounting is investigated, influence factors (technical, economic, standard) are allocated, dependence of quality of management on the accounting of terms of useful use of fixed assets is defined. Risks of the enterprise are considered at wrong definition of terms of useful use of fixed assets.

### Kostrovets L. B. Formation mechanisms of stimulating educational migration // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article describes the factors and determinants stimulating educational migration in Ukraine, is an analysis of recent studies, the ways of settlement of educational mobility, identify key cultural, educational, economic and social determinants, given the strategy of internationalization of higher education, studied factors interstate redistribution of educational potential, based conclusion, the role of educational migration in the redistribution of human potential. Based on the foregoing, it should be noted that the role of educational migration in the redistribution of human potential is ambiguous nature. On the one hand the country of destination are the obvious benefits of internationalization of higher education.

# Kotkovskyy V. S., Kosenkova K. V. Ways to increase the competitive position of commercial banks in Ukraine // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Are factors reducing the competitiveness of domestic banking institutions in the context of a weakening of the banking system. Lighted the importance of the issue for the management of a competitive banking institutions.

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Investigated the current models of the strategic approach, depending on which use methods and techniques of development and achieve the strategic objectives of the Bank. Focuses on the selection of definition requirements of the competitive strategy of commercial banks. The advantages and opportunities of marketing strategy for the implementation of integrated banking services to commercial banks. Directions of improving the competitive position of commercial banks in Ukraine.

#### Lepa R. N., Ustinov E. A. The informative providing of reflexive management the processes of mastering of new markets of sale the industrial products // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The informative providing of reflexive management the processes of mastering of new markets of sale industrial products is developed. IDEF0-model of process of realization of mechanism of reflection management processes mastering of new markets of sale industrial products is offered. The basic system concepts of it are forming the base of the future informative system of enterprise. Presented and described context diagram and diagrams of decoupling of reflection management the processes of mastering of new markets of sale industrial products. Advantages of the use of the offered informative model are certain on an enterprise. Perspective directions of researches are set.

# Maltsev D. S., Prokopenko R. V. Analytical review of the development of the methodology of large economic information systems // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article describes the basic methods and practices in the development and use of large information systems (decision support systems for state economic management). The most significant trends in addressing relevant state economic management are assessed in cybernetic terms. The most relevant and feasible approaches for Ukrainian conditions are identified through the analysis of the constraints and requirements. The relatively invariant measures to improve the information support of Ukrainian state economic management are identified through the analysis of the implementation prospects.

## Rekova N. Yu., Andrushchenko E. Yu. Methodical approaches to estimation sanation abilities an enterprise // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article is dedicated to analysis methodical approach to estimation sanation abilities an enterprise. It is offered author's determination organizing-analytical provision to sanation abilities. Conclusion is made about to consider the sanation ability necessary as collection of the current estimation to abilities of the enterprise to survival and practicability of the development in the future. Practicability of the development is defined in majority qualitative factor, possibility of financial recovery – a quantitative expression sanation potential, but for this it is necessary to take into account the key elements of the potential, their quantitative features.

## Rybalko N. V. Ecological and economic aspects of the auto service // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The article investigates environmental aspect formation service centers. Road transport is directly related to all aspects of environmental issues. On the one hand, the level of motorization, reflecting the technical and economic potential of society, contributes to the satisfaction of social needs, and on the other – makes zooming impact on society and the environment, leading to violations of environmental equilibrium level biosphere processes. This paper presents the balance and sources of pollution transport complex scheme of work with sales, processing and disposal of waste, helping to reduce the negative impact on the environment, as well as a scheme of collecting, processing and recycling.

# Stalinskaya E. V., Bersutsky A. Y. Modelling the decision-making in the field of strategic management on metallurgical enterprises on sustainable development principles // Scientific Herald of the DSEA. – 2012. – $N \ge 1$ (9E).

The article develops an approach to substantiating decisions in the strategic management of metallurgical enterprise development on the principles of sustainable development, based on optimization economic-mathematical model, which allows to ground decisions in the field of production, withdrawal of funds, implementation of social and environmental projects with the priorities of sustainable development and the interests of owners, as well as current and future needs of the enterprise. The approach allows selecting and planning time for activities related to the achievement of sustainable development priorities with limited resources and to plan investments in such a way as to take into account both the needs of the development of production and achievement of sustainable development priorities.

# Storozhev S. V. Fuzzy model for determining the economical losses in corrupt structures // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

Are generated the multilevel economical-mathematical model of decision support at the option of anticorruption strategies given the high degree of uncertainty, based on the evaluation of a special indicator of corruption losses for economic operators. The model has a multi branches structure and includes fifty fuzzy partial criteria of the lower levels of measurable and verbal types as determined on the basis of expert evaluation. Method of analysis of the model are constructed using the application of apparatus of the theory of fuzzy intervals - fuzzy sets with trapezoidal profile, as well as the concepts of the calculation of rank and aggregation of individual fuzzy sets criteria for systems with a hierarchical structure.

# Turlakova S. S. Analysis of the scientific-methodical going to a modeling and design the information systems of prognostication of city development // Scientific Herald of the DSEA. – 2012. – $\mathbb{N}$ 1 (9E).

The analysis of the scientific-methodical going to a modeling and design the information systems of prognostication of city development is conducted. The basic features of scientific-methodical approaches, their advantages and failings are resulted for the decision of task of prognostication of development of domestic cities are considered. Conclusions about absence of adequate tool for the decision of tasks in the cities of Ukraine are done. Actuality of creation the information system of prognostication of development of city is grounded with the use of modern tool. Perspective direction of development of prognostication of development of domestic cities is set.

### Fomichenko I. P., Pichadzhi Y. K. The conceptual foundations of regional marketing// Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The essence and main goals of regional marketing and peculiarities of its functioning are considered under modern conditions. The attention is focused on circumstances which constrain development and marketing functioning at all levels of management. It is offered to broaden the existing goals of regional marketing. It is stated that, acting as a part of regional economic policy, regional marketing differs by it's orientation, on the solution of problems of the region and includes development and implementation of the concept of complex development of economy and the social sphere of the territory, directed on the solution of it's socio-economic problem.

#### Khavanova M. S. Financial strategy tools // Scientific Herald of the DSEA. – 2012. – № 1 (9E).

The process of the company strategy developing is considered in connection with the strategic management and strategic financial planning. In the economic literature there is such a concept as tools of financial strategy, which ensure the effective development and implementation of financial strategies. Tools of financial strategy include a set of measures that are directly related to its implementation, which is essential for development of the company in the long term. With the tools of financial strategy its effectiveness is achieved. Today, the financial strategy tools structure is not defined clearly. However, financial policy, financial restructuring, globalization, diversification, information support can be regarded as the main financial strategy tools.

# Chernyavskiy I. B. Evaluating the effectiveness of regional divisions multiple office bank methods: theoretical aspect // Scientific Herald of the DSEA. – $2012. - N \ge 1$ (9E).

The article examines the basic scientific and methodological approaches to the assessment of the regional divisions of the bank's extensive branch network. Separately identified approaches to determine the effectiveness of bank branches, a list of indicators that should be used in the process of evaluating the effectiveness of the regional divisions of the bank were proposed. The appropriateness of the method of analysis of the functional environment as the most appropriate and modern. Done graphical construction method of DEA to determine the limits of the effectiveness of a particular branch. Determined the future prospects of this method in terms of assessing the efficiency of bank branches.

# Olkhovska O. L. Conceptual statutes of construction of neyronechetkoy of ekonomiko-mathematical model of evaluation of competitiveness of insurance company // Scientific Herald of the DSEA. – 2012. – $N_{2}$ 1 (9E).

Conceptual positions are formulated on constructing of the multilevel hierarchical system of quantitative evaluation of competitiveness of insurance company on the base of synthesis of methods of fuzzy logic and neuron networks. Built on their basis a neyronechetkaya model allows to get an inferencing both in relation to the level of competitiveness of insurer and competitiveness of insurance product, financial activity, management, marketing and social policy of insurance company, that is provided bringing in of elements of theory of neuron networks at distributing of complete set of factors of influence between the generalized groups of indexes.