

RESEARCH OF WORK OF THE ULTRASONIC GAUGE OF THE CONTROL OF FIBER MATERIALS

J.V. Kandrin

In article construction of likelihood models of distribution of a controllable material in a control zone is resulted.

Keywords: ultrasound, the converter, the control, irregular, fiber, acoustic, a wave, pressure, the receiver.

INCREASE OF ACCURACY OF CONTROL OF VOLUME DENSITY OF DISORDER FIBER ENVIRONMENTS BY MEANS OF ULTRASONIC GAUGES

A.A. Bagaev, C.I. Kalinin, R.A. Kunizin

In article the analysis of use of a direct and inclined accepting piezoelement is carried out. Advantage of use of an inclined piezoelement is revealed.

Keywords: acoustic fluctuations, ultrasound, accuracy increases, the receiver, accepting ability, the piezoelement, the disorder fiber environment.

DEVELOPMENT OF METHODS FOR OPTIMAL SELECTION OF SAFETY SYSTEMS OF ELECTRICAL INSTALLATIONS WITH THE ACCOUNTING UNCERTAINTY OF INITIAL DATA

O.N. Drobyazko, S.F. Nefyodov

In this paper was considered a system of figures for single-function systems effectiveness for safety systems of electrical installations as well as their modeling technology with the uncertainty of the source data. Was developed the methods for optimal choice for safety systems of electrical installations based on a comparison of membership functions, what describing the fuzzy figures of different variants of systems.

Keywords: electrical safety, fire safety of electrical installations, safety systems of electrical installations, uncertainty of input data, optimal choice.

RESEARCH AND MODELING OF ELECTRICITY CONSUMPTION IN EVERYDAY LIFE OF RURAL POPULATION

N.I. Cherkasova

Mathematical models of power consumption in everyday life of rural population, living in various types of housing-cottages, private sector multi-storied block of flats, are developed.

Keywords: significant factors, mathematical model, electricity consumption, daily consumption.

ACCOUNTING for UNCERTAINTY in AGRICULTURAL NETWORKS ASYMMETRY 380V

V.S. Grebennikov

The article deals with methods of calculating and determining the level of asymmetry in the distribution of dividing networks for agricultural use 380 volts. The necessity of taking into account the uncertainty of initial information in determining the level of asymmetry. Proposed methods of formalizing

and processing of uncertainty of initial information based on the theory of fuzzy sets and interval method.

Keywords: voltage unbalance, the methods of calculation, the uncertainty of initial information, the theory of fuzzy sets, interval calculation method.

THE ACCOUNT OF DISORDER OF CHARACTERISTICS OF DEVICES OF PROTECTION AT CREATION OF SYSTEMS FIRE SAFETY

B. Kompaneets

In this paper considers the influence of the spread of time-current characteristics of devices of protection to effectively prevent fires from short circuits in electrical wiring on the results of the calculation of fire danger.

Keywords: Fire safety, fire danger indices, the scatter characteristics of protection devices, clarification of the characteristics of devices of protection.

NON-POLLUTING ELECTROTECHNOLOGIES IN AGRICULTURE

A. A. Aleksenko

In work some question on revealing of the best way of preseeding processing of agricultural production is considered. The analysis of existing ways of processing is carried out. It is recommended realization of superhigh-frequency processing of seeds for agricultural crops of Altay territory.

Keywords: electromagnetic field of high frequency, dielectric, superhigh-frequency energy, bactericidal irradiator, microwave processing.

MASS FLOW MEASURING ON THE BASE OF CAPACITY CONVERTER

V.S. Afonin

The article deals with methods of mass flow measuring. The use of capacitance-type transducer in mass flow measuring devices is described in this article. Humidity measurement method of bulk material for making change in mass flow measuring by means of capacity converter was been present in it.

Keywords: mass flow measuring, mass flow measuring device, capacitance-type transducer, dielectric polarization.

ANALYTICAL IMITATIONAL METHOD OF POWER UNITS ELECTROMAGNETIC FIELD MODELING

I.V. Belicyn

The article is devoted to the problems of modeling of electromagnetic field, produced by various technical devices, including power lines. Analytical imitational method of electromagnetic field modeling is described, classification of external influences affecting the system is presented. Models of such external influences as that of solar radiation (direct and dispersed), wind and frazil load to the overhead wire are given.

Keywords: high voltage electric power unit, system, analytical imitational modeling, classification, external influence, wind load, frazil load, solar radiation.

POWER LINES MAGNETIC FIELD MONITORING ON THE BASIS OF MODULAR INFORMATION-MEASURING SYSTEM

I.V. Belicyn

The article is devoted to the problems of checkup, monitoring and evaluation of the magnetic constituent of the electromagnetic field, produced by electricity transmission facilities. Flowchart and electric circuit of the measuring device are presented and described. The method of output signals processing in order to estimate the elliptic magnetic field, including the instrument function characteristics, is given.

Keywords: information-measuring system, amplifier, filter, industrial frequency, magnetic induction vector, Hall sensor, design procedure.

USAGE OF METHOD OF ELECTRIQUES TOURBILLONNAIRES CONTROL FOR DETERMINATION OF THE TECHNICAL STATE OF ASYNCHRONOUS ELECTROMOTORS

V.V. Bobrov, S.O. Khomutov

This work is devoted for creation a method of quality monitoring of a state of asynchronous electric motors. At the heart of a method the analysis of a spectrum of an external magnetic field. This method is especially actual for the agriculture enterprises because it is simply, low-cost and convenience of diagnostics.

Keywords: the electromotor, reliability, diagnostics, forecasting, isolation, magnetic field, residual resource.

AGRICULTURAL INDUSTRY ELECTRICAL EQUIPMENT SERVICE RELIABILITY STRATEGIES WITH A GLANCE WORK OF SEASONAL NATURE

A.A. Gribanov

Agricultural enterprise electrical equipment's seasonal operation features are described at the article. Agricultural electrical equipment's service reliability support four strategies are presented and realization's variants of them with a glance regular and seasonal work.

Keywords: electrical equipment, seasonal work, reliability, diagnostics, maintenance.

CREATING OF DATA BANK OF TESTS FOR STUDENTS MAJORING IN ELECTROTECHNIC EXAMINATION

I. A. Gutov

The article is devoted to the problems of examination of the students, acquiring profession in the field "Power supply" (code 140211) at "Electric energy transmission and distribution" classes, the creation of bank of tests for electrotechnical staff, the major principals of its creation. Test requirements are described, major stages of test design are given, as well as computer testing merits and demerits.

Keywords: test, computer testing, data bank, electric energy transmission and distribution.

BEHAVIOR OF POWER TRANSFORMERS ACTIVE PART TRANSIENT PROCESS DEPENDENCE ON TEST A-QUAD-B PULSES PARAMETERS

K.V. Delich, P.S. Ponimaskin, A.A. Gribanov

Three-phased power transformer active part experimental test A-quad-B pulses advancing change investigation results are described and analyzed at the article. Core-type double-winding transformer diagnostics arrangements are adduced. Observable process basic regular occurrences are presented and dependence diagnostic alert from scan path circuitry and test pulse parameters changes are accounted.

Keywords: power transformer, diagnostic, wave relaxation oscillations.

THE PROMISING WAYS OF POWER TRANSFORMER'S DIAGNOSTICS DEVELOPMENT

R.V. Moskalenko

Abstract: In article is given to the analysis of modern state and the further development of the system of technical service and the maintenance of transformers in agro industrial complex. Also is considered the question of the general progress strategy of the modern methods of the technical diagnostics of transformers. Is given to the general assessment of the perspective diagnostics method (the method of frequency analysis).

Keyword: power transformer, diagnostics, prognostication, control, the method of frequency analysis.

WORKING OUT OF ELECTROTECHNOLOGY OF SATURATION BY THE PINE FOREST OF THE AGRICULTURAL TOOL

G.V. Plekhanov, G.O. Sinicina

In work possibility of realization of electrotechnology with reference to agricultural details and tools is considered. The course of working out of technology is stage by stage considered. 3 variants of devices for technology realization are considered.

Keywords: Saturation by a pine forest, electrolit, a diffusive layer, heterogeneity of electrolit, a water solution.

ATOMATIC REACTIVE POWER COMPENSATION UNIT

A.N. Popov

The article presents a solution of one of the urgent problems of modern energy, that is compensation of reactive power. The use of static condenser batteries proved to be one of the cheapest and easiest ways to compensate reactive power. The goal of the research is to eliminate the key drawback of this method, which is the impossibility to change the value of compensation. In order to do this a special device based on microcontroller was designed and produced. It diagnoses the electric power line characteristics, estimates output coefficient in real time, states the needed compensation value.

Keywords: reactive power, power coefficient, condenser battery, microcontroller, ADC.

ANALYSIS METHODS FOR THE PLANNING OF ELECTRIC MOTORS REPAIR WORKS FOR ENTERPRISES OF AGRICULTURE

V.A. Rybakov

The article deals with the the queuing of electric motors. The analysis of the various queuing systems care, given their advantages and disadvantages. The possibilities of various service disciplines

application in a terms of practical use have been identified. An example of making the equations describing the outages flow and electric motors restoration was shown.

Keywords: electric motors, the queuing system, the intensity of the events flow, maintenance.

ENSURING THE RELIABILITY OF ELECTRICAL EQUIPMENT BASED ON MODERN INFORMATION TECHNOLOGIES IN THE CONDITIONS OF AGRARIAN AND INDUSTRIAL COMPLEX

V.I. Stashko, O.I. Khomutov

Paper is devoted to developing a system to maintain the reliability of using Internet resources. The author proposes to establish a regional center for the diagnosis of electrical equipment on the site. The author pointed out the structure of the diagnostic center, information about the scheme and the results of experimental studies. The article describes a method for assessing the residual life of induction motors using temperature-time parameters.

Keywords: Diagnostics, reliability, electrical motor, induction motor, system, program, website.

DETERMINATION OF A RESIDUAL RESOURCE OF INTERNAL ELECTRIC CONDUCTINGS IN HOUSES, PUBLIC UTILITIES AND INDUSTRIAL PREMISES 220/380V CITIES AND COUNTRYSIDES

A.R. Upit, N.M. Gesenko, E.O. Martko

The article describes the questions, associated with determining the remaining resource of the internal electrical wiring in houses, public utilities and production facilities 220/380V cities and countrysides.

Keywords: specifications, wiring, residual life.

A COMPUTER PROGRAM FOR THE SELECTION PROCESS OF GRAIN CROPS (FOR EXAMPLE TRITICALE)

I.G. Grebennikova, A.F. Alejnikov, P.I. Stepochkin

In this paper there is reported the result of developing a computer program to calculate the combining ability and genetic variability of triticale varieties quantitative traits. The program was tested to calculate the trait "grain weight unit" of the hybrids, made by complete diallel crossing, and their four parental varieties. There was revealed a variety Gabo worth-wile for further breeding.

Keywords: program supply, triticale, diallel analysis, combining ability, genetic parameters

METHODS OF TEMPERATURE FIELDS IN SOIL AND MEASURING THE TEMPERATURE OF FENCES

A.G. Ivanov, A.K. Orazbekova

The article discusses issues related to methodology of research in both fixed and dynamic temperature fields during heating of the soil. Also, this method is proposed to apply after the change of the thermistors type MMT-4 on ETRM to measure the temperature barrier. The results of the study of stationary fields and the heating of the soil in spring.

Keywords: temperature field, temperature protections, the method of investigation, the bridge circuitry, thermal resistance, protected ground, soil.

PERSPECTIVE ELECTRO TECHNOLOGIES OF THERMAL PROCESSING OF DETAILS AGRICULTURAL

V.S. Rutin, D.D. Sherbinin

In work technologies of thermal processing of details and tools selskhozjaj-stvennyh cars are offered. Transients in various phases of formation of the elektrolitno-plasma category are investigated.

Keywords: an alloying, operation of details, the cathode, the anode.

APPLICATION METHOD OF DIAGNOSING PARAMETER IN THE SERVICE STRATEGY OF ELECTRIC MOTORS

N.N. Surysh, A.I. Nekrasov, A.A. Nekrasov

In the article the rationale for the use of radial clearance of bearings in the motor as a parameter for any screening strategy for maintenance of electrical state. In determining the status to failure based on the principle of destination pre-emptive admission, which is located between the limiting values and to the refusal of any screening parameter. It was established that the value of pre-emptive admission depends on the periodicity of any screening parameter, and the time of the first test is determined from a given probability of failure-free operation of the motor. When serving as significantly increased resource use electric motors involved in responsible manufacturing processes in agricultural production.

Keywords: electrical system operation, maintenance and repair, electric motor, diagnosing option, engine bearing, radial clearance, a pre-emptive admission, frequency of service.

IMPROVEMENT OF MONITORING THE TECHNICAL CONDITION OF ASYNCHRONOUS ELECTRICAL MOTORS

A.I. Nekrasov, Yu.S. Borisov, A.A. Nekrasov, A.V. Efimov

The results of many years research of insulation resistance variation for different combinations of operational factors, bearing assembly technical condition and heating of asynchronous squirrel-cage electrical motors are presented.

Keywords: asynchronous electrical motors, insulation resistance, resource, inspection, performance factors, maintenance period, heating, bearing module.

METHOD OF REAL PARAMETERS AT CALCULATION OF CURRENTS OF SHORT CIRCUIT IN THE NON-UNIFORM IS DIFFICULT-CLOSED NETWORKS

E.V. Lesnyh, N.S. Burjanina

In this paper the method of real parameters for drawing up of universal programs of calculation of currents of short circuits of the is difficult-closed networks, especially with different factors of transformation in non-uniform rings which is simply enough realized in system MATHCAD is considered.

Keywords: transmission line, the transformer, equivalent circuit, short circuit currents, method of real parameters.

COMPLEX ANALYSIS OF EFFICIENCY OF WIND TURBINES IN THE REPUBLIC OF SAKHA (YAKUTIA)

V.A. Shakirov, A.Y. Artemiev

In the article the structure of complex analysis of efficiency of wind turbines is proposed. The three stage selection of promising areas and wind turbines based on a daily data of weather stations over a decade is conducted.

Keywords: wind turbine, power curve, wind speed frequency distribution, effectiveness analysis.

HIGH-FREQUENCY AC GENERATORS for RESONANT ELECTRICAL SYSTEMS (RES)

V.Z. Trubnikov

The article is devoted to the problem of development of high-frequency AC generators to supply resonant electrical systems of electrical energy transport.

Keywords: Generator of alternative current (AC), resonant electrical system, inverter.

USE OF RENEWABLE ENERGY SOURCES IN COMPLEX SYSTEMS OF ENERGY SUPPLY OF RURAL BUILDINGS

O.V. Shepovalova

In this paper questions of necessity of use of renewable energy sources in agriculture are considered, at energy supply of rural buildings. Features of creation of systems of energy supply of rural buildings, country and the farms using renewable energy sources are reflected. Tables of growth of manufacture of energy and a potential estimation, the forecast of depreciation of systems in our country under condition of their mass introduction are presented.

Keywords: complex systems of energy supply, the rural buildings, renewable energy sources, the forecast, potential, cost.

THE GENERAL MODEL OF SYSTEMS OF ENERGY SUPPLY OF RURAL BUILDINGS

O.V. Shepovalova

In this paper considers the construction of a general mathematical model of energy supply systems of rural buildings as a complex multidimensional multivariable systems. Describes the objective function, the optimal strategy, the problem of maximum energy efficiency and the problem of minimizing energy consumption. We consider the modeling of individual parameters of the complex systems of energy supply to determine the impact of their values at the complex systems of energy supply and interference.

Keywords: mathematical model, objective function, complex systems of energy supply, the multivariate analysis, dynamic programming, the relationship and interaction parameters of the subsystems

SYSTEM OF INDISTINCT LOGIC FOR DEFINITION OF A RESIDUAL RESOURCE OF THE ASYNCHRONOUS ELECTRIC MOTOR IN AGRICULTURE

G.V. Sukhankin, N.P. Vorobjev, S.N. Vorobjeva

In article the method of definition of a residual resource of the asynchronous electric motor on the basis of use of indistinct logic is proved, the structure of the developed system of indistinct logic and results of modelling experiments by definition of a residual resource of the asynchronous electric motor is resulted.

Keywords: asynchronous, the electric motor, the factor, indistinct, logic, operation, isolation, residual resource, term, diagnostics.

IN RELATION TO THE QUESTION OF DIAGNOSTICS OF ELECTROTECHNICAL EQUIPMENT

N.V.Silin, D.G.Sheverdin, E.N.Pavlov

Methodical aspects of noise diagnostics of electrotechnical equipment according with spectrums of its own electromagnetic radiation are considered. Method of diagnostics is based on using of noise radiating model. This model takes into account inner noises in isolation and constructive elements of the equipment and conditions of their radiation in ambient space. It is presented that proposed method allows to extend and to improve reliability of equipment diagnostics considerably.

Keywords: Electromagnetic noises, diagnostics of electrotechnical equipment, autotransformer, antennas, power spectrum, information frequency band.

THE KINETIC AND DYNAMICS OF CRUSHING OF VEGETATIVE RAW MATERIALS FOR MANUFACTURING OF FOODSTUFF

O.V. Oshkordin, L.Yu. Lavrova, G.A. Usov

The results of research of vegetative raw materials processing technology parameters for the purpose of process of its crushing optimization are presented.

Keywords: vegetative raw materials processing, crushing, technology parameters.

ESTIMATION OF WATER QUALITY INFLUENCE ON CONSUMER PROPERTIES OF FOODSTUFF

Yu.Ribakov, Yu.A.Ovsiyannikov

The problems of foodstuff safety by a water filtration are considered.

Keywords: foodstuff safety, water filtration.

ULTRASONIC QUALITY MONITORING OF THE FIBRE

A.F Kostyukov

In this paper the issue of the interaction of the front of flat acoustic wave with compact ordered set of fibres presented in the form of multilayer diffraction grating is considered. Recommendations on developing the method of the continuous control of physical-mechanical properties of compactly generated set of fibres are proposed.

Keywords: mathematical model, properties of fibres, nondestructive control, physical-mechanical parameters, acoustic fluctuations

THE QUANTITATIVE ASSESSMENT OF THE RISK OF THE ELECTRICITY SUPPLY OF CITIES

A.K. Musin, S.A. Hudorozhko

In this paper is suggested the method of the quantitative assessment of the risk of the electricity supply of cities. The quantitative measure of risk is size to аварийно недопоставленной the consumers of power for fixed period of time. Determining of this power is performed with the help of computer model in program environment MatLab envisaging the probabilistic disposition of place and the time of accident in the known scheme of electricity supply and the capacities of the nodes of charge.

Keywords: Risk, assessment, electricity supply, city, accident, damage, power.

RESEARCH AND PRODUCTION TESTS IN KRASNOYARSK SOKAR WATER HEATING PLANTS WITH VACUUMED COLLECTORS

A.V. Bastron, E.M. Sudaev

In this paper the results of the research of the vacuumed solar heating collector work modes. Seido 1-16 and the results of the production tests in the spring period of 2011 in the climatic zone of Krasnoyarsk-city the water solar-heater HM-16×18/58 with vacuumed solar collector.

Keywords: solar water heater, vacuumed solar collector, hot water supply.

XPERIMENTAL RESEARCH OF KEY PARAMETERS OF AGRICULTURAL FIBER RAW MATERIALS FOR THE TEXTILE INDUSTRY BY MEANS OF ULTRASOUND

A.F Kostyukov

The description of laboratory installations and the basic experimental dependences is given, allowing to realise a method of the statistical express control of parametres of fibres of a vegetative and animal origin.

Keywords: fibres, ultrasound, the laboratory express control, experimental dependences.

THERMAL ENERGY REGENERATION BY MANUFACTURE OF OIL-RICH EXTRUDED SOY

A.V. Fominyh, D.N. Ovchinnikov, A.V. Saveliev, D.V. Kovshov

In this paper we offer constructive-technological scheme of the cooling line of oil-rich extruded soy. For reduction of costs of the electric power in line we introduced the heater of soybeans before extrusion which uses the hot air received from pneumatic transport system. Also in this article we present researches of the heat exchanging processes by manufacture oil-rich extruded soy.

Keywords: fodder, soy, extrusion, regeneration, cooler, technology.

THE ANALYSIS OF BASIC TECHNOLOGICAL PARAMETERS OF PROTECTIVE COATINGS MADE BY COMBINED METHODS

M.V. Radchenko, O.I. Khomutov, T.B. Radchenko, Yu.O. Shevtsov, V.S. Kiselev

The analysis of basic parameters of protective coatings made by combined methods and technological demands as well, are presented in the article.

Keywords: basic parameters, protective coatings, combined methods, technological demands.

THE DEVELOPMENT OF TECHNOLOGICAL DEMANDS FOR THE GAS POWDER CLADDING PROCESS FOR THE SPESIAL BOILERS

M.V. Radchenko, O.I. Khomutov, Yu.O. Shevtsov, V.G. Radchenko, S.G. Uvarova, T.B. Radchenko, V.S. Kiselev

The results of coatings properties investigations, made by gas powder cladding process and technological demands as well, are presented in the article.

Keywords: gas powder cladding process, coatings properties, technological demands.

ETHANOL FROM GREEN MASS OF PLANTS KIND HERACLEUM

S.S. Dorje, I.B. Pateeva

The article touched upon the problem which consists in choosing crops for biofuel production in our country. The method to solve - to use as raw green weight of the genus Heracleum. The high content of sugars in the green mass and high productivity will get a cheap biofuel acceptable amounts, which can provide not only domestic needs but also to become worthy of ethanol exporter in the world. At the same time gathering wild plants of Heracleum will limit their widespread uncontrolled spread and harmfulness.

Keywords: ethanol, gasoline, Heracleum, sucrose.

MODELLING OF THE MECHANICAL PART OF WIND POWER INSTALLATION

M.A. Andreeva, S.N. Udalov

In article theoretical modeling of a rotor and a reducer is considered. For a rotor are offered model with a variable hade and model with the fixed hade.

Keywords: the blade, a nave, a rotor, a power transmission, mathematical model.

METHODS AND INSTRUMENTS OF INSULATION DIAGNOSIS INDUCTION MOTORS

N.P. Vorobev, S.N. Vorobeva, G.V. Sukhankin, N.T. Gertsen

The efficiency of induction motors is largely dependent on environmental conditions and operating modes. According to statistics of failure of blood pressure, the greatest number of exits from their failure due to stator winding insulation damage. Crash stop the process leads to the damage associated not only with the need to repair or purchase new equipment, but also with reduction in output products, and therefore received profit [1]. Thus, the diagnosis and monitoring of insulation important and responsible task of preventing the induction motor.

Keywords: diagnosis, isolation, induction motor, monitoring, fuzzy logic.

USING VALUE ANALYSIS METHODS IN DESIGNING GRAIN PROCESSING SYSTEMS FOR ENERGY SAVING PURPOSES

V. V. Aksenov, A. K. Gladkov, and E. G. Porsev

This paper considers the use of value analysis methods to optimize the technologies and reduce energy consumption in processing grain raw materials to fodder molasses.

Key words: value analysis, grain raw materials, fodder molasses, energy saving.

OPTIMIZATION OF DETECTION AND MEASUREMENT OF PARAMETERS DBC BY MEASURING EXPERT SYSTEM

I.P. Dobrolyubov, O.F. Savchenko, S.N. Olshevsky

Questions of optimization of accuracy of detection and measurement of parameters the engine with the help of measuring expert system by criterion of a minimum of an average quadratic error are considered.

Keywords: the engine, parameters, detection, measurement, accuracy, optimization.

THE PRINCIPLES OF THE BUILDING AND VARIANTS TO REALIZATION OF THE SYSTEMS OF SUPPLY, NAVIGATIONS AND MOTION MANAGEMENT THE PERSPECTIVE AGRARIAN UNITS

D.S. Strebkov, A.M. Bashilov, V.A. Korolev, V.Z. Trubnikov

The use of resonance methods of the electric powers transmission for supply agricultural units, the element resonance systems of supply infrastructure for navigation and the motion of the control mobile rolling agricultural units is considered in the article.

Keywords: resonance system of supply, cable from one wire, line of the transmission to electric powers, standing wave.

THE COMPACT MICROSTRIP FILTER WITH THE INCREASED SELECTIVITY BASED ON NONUNIFORM TRANSMISSION LINE

D.N. Klimenko, B.I. Ivanov

Use cases of open stub nonuniform transmission line use in filters based on parallel coupled lines for the purpose of the filter selectivity increase at the expense of parasitic resonant frequencies suppression are described. The technique of the filter synthesis is offered. The filter with the central frequency 2.5GHz has been designed, produced and measured. The characteristic of this new filter shows efficiency of the offered approach in level improvement out of band suppression more than 40dB in a wide pass band.

Keywords: the filter, VHF, a wide stop band, selectivity, a nonuniform transmission line.

COMPUTER TECHNOLOGY IN ASSESSMENT AREAS OF PLANE FIGURES

G.V. Seroklinov, D.A. Khaidukov

In clause substantive provisions of processing of images of flat figures are considered at an estimation of the area of these figures. Methods of segmentation of figures are presented and the method of definition of contours of objects on the basis of detection of breaks of brightness is in detail opened. The given method is incorporated in algorithm of the program of an estimation of the area of flat figures ArealImage.

Keywords: an estimation of the area, segmentation, processing of images, detection of contours.

ANALYSIS OF THE PROBLEMS AND PERSPECTIVE OF OPTIMAL USING OF THE NON-CONVENTIONAL AND RENEWABLE SOURCES OF ENERGY FOR THE AGRICULTURAL CONSUMERS

L.V. Kulikova, A.M. Hudonogov, A.V. Grigoriev

In this article authors made analysis of the problems and perspective of optimal using of the non-conventional and renewable sources of energy for agricultural consumers, and also authors describe methods of optimization algorithms integrated electrification of agro-industrial areas.

Keywords: non-conventional and renewable sources of energy, optimization algorithms.

THERMOPHYSICAL BASIS OF CALCULATION ELECTRICAL-TELEY FOR AGRICULTURAL PRODUCTION

T.M. Khalina, A.I. Tishchenko, A.B. Dorosh

The energy efficient multi-electrode composite electric heater for surface-distributed heating systems.

Keywords: multi-electrode, composite, electric heater, energy efficient systems.

METHOD OF CALCULATION OF POWER AND ELECTROMAGNETIC TORQUE DEVELOPED BY MOTOR WITH VECTOR-ALGORITHMIC MANAGEMENT IN CONDITIONS AGRICULTURAL PRODUCTION

T.M. Khalina, M.I. Stalnaya, S.U. Eremochkin, A.I. Tischenko

In this article the method of calculation of electric power and electromagnetic torque three-phase induction motor, launch and operation of which the single-phase network by means of vector-algorithmic switched stator windings. We propose a block diagram of the algorithm for calculating power and electromagnetic torque, developed by an electric motor with a vector-algorithmic control.

Keywords: three-phase induction motor, vector-algorithmic method, the electric drive.

INNOVATIVE TECHNOLOGY IS EXTENDING THE LIFE OF AN ASYNCHRONOUS MOTOR IN CONDITIONS AGRICULTURAL PRODUCTION

A.M. Khudonogov, I.A. Khudonogov, A.A. Vasiliev

A scheme for industrial units for realization of an efficient encapsulation technology frontal part of the insulation of the stator winding induction motor. Optimization of the process of heat treatment is carried out in the case of an oscillating mode infrared energy supply.

Keywords: induction motor, the IR energy supply, ostsillirovanie, ceramic transducers radiation, resource, isolation.

PROTECTIVE SHUTDOWN IN SYSTEMS OF RURAL POWER SUPPLY

A.M. Khudonogov, O.K. Nikolsky, A.A. Soshnikov

The article discusses the features of electrical low-voltage power supply systems and proposed options for the use of such systems, combined with the protective shut-down device.

Keywords: electrical protection, electrical system, cutout

CHANGE OF ICE COMPRESSION C/A PURPOSE FOR LIFE CYCLE

O.D. Cherepov

The article discusses changes in the degree of compression of the life cycle due to manufacturing tolerances on the crank, the combustion chamber and crank wear and tear, the dependence for calculating the compression ratio over the cycle.

Keywords: ICE, the compression, the life cycle.

FEATURES OF FILMS IN RESERVOIRS ICE S/A PURPOSE

O.D. Cherepov

The article deals with the conditions of the flow of fuel film in the collector engine. The characteristics of the film and the current dependence of the rate of failure drops from the current acceleration.

Keywords: ICE, mixing, collector.

TERMS OF MOBILE ICE IN AGRICULTURE

O.D. Cherepov

The article discusses the causes of the mass forces in the interaction with the surface of paths and their effect on the characteristics of the process in engines with external mixture formation.

Keywords: ICE, mixing, oscillations, vibrations.

FORMATION OF "DEFICIENCY CARDS» OBJECT OF CONTROL ON THE BASIS OF STATISTICAL TEORETIKO-GROUP METHODS OF PRO- CESSING OF IMAGES

V.A. Baranov, U. Evret, V.K. Kuleshov, M.N. Janushevskaya

The statistical teoretiko-group approach to processing of images is used as a conceptual basis for new interpretation of concept "defect" and for the directed reconstruction of cards of deficiency. Whether application of local group as the tool for the task of structural norm of control is considered. Methods of recognition and a statistical estimation of abnormal structurally functional communications in object for the purpose of revealing of defects are offered.

Keywords: structural invariant, Lie group, statistical hypothesis, image processing, spatial filtering.

«NONLINEAR TOMOSINTES» AS THE METHOD OF THE DECISION OF RECON- STRUCTIVE PROBLEMS OF RADIATING CONTROL

V.A. Baranov, U. Evret, V.K. Kuleshov, M.N. Janushevskaya

Methods nonlinear томосинтеза, based on estimations of nonlinear return displaying, suitable for the decision of problems tomographies are considered. Their comparison with classical methods of return displaying is spent. Examples reconstruction and mathematical modeling are resulted. Spheres of successful application nonlinear томосинтеза are listed. Advantages of estimations of nonlinear return displaying over linear aren'ted at the decision of sharply incorrect reconstructive problems.

Keywords: inverse problem, ill-posed problem, nonlinear backprojection, image processing, spatial filtering

FORECASTING METHOD OF FIXING FRAGMENTS LOWER JAW WITH INJURY

V.S. Popovich, V.I. Semennikov, N.V. Semennikova

The results obtained using the finite element method to analyze the stress-strain state of the lower jaw shows a typical design, discrete computational model, circuits of loading elements, strain and stress state of the design.

Keywords: forecasting, finite element method, strain, stress.

THE USE OF MODERN EDUCATIONAL TECHNIQUES FOR TRAINING OF AUDIENCE ACCORDING TO MODULAR SYLLABUSES OF ADDITIONAL VOCATIONAL TRAINING

T. Fedorova

The facilities of training individualization and use of modern educational techniques for training of audience according to modular syllabuses of AVT are considered in the article. The basic educational techniques that are used for training of lecturers of higher school in the Centre of engineering pedagogics of the IDAVT in the Altay state technical university are also described in the article.

Keywords: training individualization, modern educational techniques, method of specific situations, roundtable discussions, training.

METHODICAL APPROACHES TO THE ESTIMATION OF EFFICIENCY OF EDUCATIONAL SERVICES

A.S. Kniga, T.N. Glazkova, O.M. Knyazeva

The substantiation of necessity of the subject approach to an estimation of efficiency of educational services is presented. The subjects who are interested persons with reference to further professional education are shown. On the basis of the characteristic of features of educational services directions of an estimation of efficiency of programs of additional further professional vocational education from a position of interests of the state, region, educational institution, listeners of programs are offered.

Keywords: further professional education, educational services, economic efficiency of an educational program.

PROBLEMATIC CHARACTER OF ADMINISTRATION TYPOLOGIZATION

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The article is devoted to the study of the problem of administration typologization. The author analyses various approaches to administration typologization existing in social sciences. Speaking about the necessity of such investigation for administration practice the author states the presence of a serious contradiction between the significance of administration typology issues for administration practice and insufficient development of them in theory, and consequently complete lack of mastering and using them in administration practice. For that purpose the rich material of philosophy and concrete sciences as well as cultural and historical material is drawn on. This gives the author the opportunity to single out various criteria and grounds for administration typologization the analysis of which can help in investigation of current administration problems.

Keywords: administration, social administration, type, typology.