УДК 621.396.932:629.562

**BASIC DIRECTIONS TO INCREASE TELEGRAPHY’S SPEED   
OF MARITIME HIGH-FREQUENCY RADIO COMMUNICATION AT FISHING VESSELS**

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It is shown that the increase of telegraphy’s speed in high-frequency band can be doubled while using multi-frequency signal.

**Key words:** telegraphy, modulation, signal, high-frequency band, subcarrier frequency.

УДК 519.6:550.385.4"2010.04.5"

**WAVELET ANALYSIS OF MAGNETIC DATA DURING   
THE MAGNETIC STORM OF APRIL 5, 2010**

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The authors analyzed the magnetic storm of April 5, 2010 on the basis of their previously developed algorithms. We used geomagnetic data collected from such observatories as “Paratunkaˮ, “Yakutskˮ and data of interplanetary magnetic field of the Earth in the analysis. As a result we studied the dynamics of magnetic storm development at different recording stations. We got parameters of perturbation intensity, narked out weak geomagnetic perturbations preceding the main phase of the magnetic storm.

**Key words:** magnetic storm, geomagnetic data, solar wind, wavelet transformation, digital signal processing.

УДК [004.421:519.16]:621.3.011.7

**OPTIMIZATION OF ALGORITHM OF FORMATION OF THE MASSIF   
OF OBSERVED PARAMETERS**

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The main tendency of decade is automation of processes of information processing, including in the field of identification and diagnosing of a condition of electric chains. In work is analyzed temporary efficiency of consecutive algorithm of the massif formation of observed parameters of passive electric chains. The special attention is paid to temporary efficiency of algorithm of combinatory search of all possible options of the truncated matrixes. Optimization of initial algorithm of formation of a set of observed parameters by use of multiline data processing that gives improvement of speed of operation of the program module approximately for 15% is offered.

**Key words:** algorithm, the massif of observed parameters, combinatory algorithms, parallel calculations, electric chains.

УДК 666.972.163:661.682-911.4-022.532

**USING OF SIO2 LIQUID NANOADITIONS   
FOR BORDERS CHARACTERISTICS IMPROVEMENT**

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Possibility of using SiO2 liquid nanoadditions for improvement of mechanical characteristics of borders made of concrete with road-metal was revealed in the article. Laboratory experiments confirmed concrete’s compressive strength rising from addition of different nano-SiO2 dose. Technological results on producing of SiO2 sols and addition nano-SiO2 to concrete were used to manufacture of borders in “Kamchatzhilstroy” Co.

**Key words:** hydrothermal solutions, silica sol, nanoadditons to concrete, concrete’s compressive strength.

УДК 519.856.3:621.3.011.7

**DIAGNOSTICS OF THE ELECTRICAL CIRCUIT CONTAINING REACTIVE   
COMPONENTS USING WHITE NOISE**

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The article deals with issues concerning definition of the probability characteristics of the sources of test signals, which are mainly selected Gaussian noise, and determined the probability characteristics of the currents and voltages occurring in circuit under the influence of these disturbances. The use of white noise eliminates the calculation of phase relations under the influence of the test signal to the inertia circuit. It simplifies calculation and provides an opportunity to an assessment RMS values.

Evaluation of the main statistical characteristics of the test signal carried by recording a sample implementation of a stationary random process of finite duration. Measuring characteristics reduces the processing implementations of these processes. This made it possible to exclude from consideration the analysis of the phase relations performed using deterministic sinusoidal signals, and the use of white noise as a test signal at diagnosing electrical circuits containing reactive elements.

The resulting values of the equivalent resistances were used to construct diagnostic model, which ensured compliance of the results of theoretical calculations with the results of practical measurements.

**Key words:** Gaussian noise, the probability characteristics, the statistical error, the stochastic model, the diagnostic and adjusting the model, the method of exclusion varied parameter.

УДК 519.856.3:629.5.06

**BAYESIAN MODEL OF TECHNICAL CONDITION ASSESSMENT   
OF SHIP ELECTRIC AUTOMATION DEVICES**

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The method offered in paper based on the use of the bayesian model constructed by process of elimination of varied parameter. At the operational stage, technique makes it possible to carry out preemptive regulation on restoration and rehabilitation of the components of reliability that is close to the original. Advanced control that runs on the basis of the results of forecasting pre-exemption states, allows the assessment of efficiency of the object on the current state of diagnosis maintain the required level of reliability for process operation. The research of results obtained with the implementation of rectifier bridge control scheme confirmed the viability of theoretical development, a sufficiently high accuracy and adequacy of the models of these algorithms.

**Key words:** diagnostic feature, stochastic model, regular model, variation, adjustable parameter.

УДК 621.311:629.5.06

THE ANALYSIS AND RESEARCH OF WORK OF SHIP ELECTRICAL POWER SYSTEM   
IN A DYNAMIC MODE

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This article is devoted to questions of dynamic stability of ship electrical power system. The dynamic mode of ship electrical power system on the example of the virtual model developed in the program MATLAB is analyzed. Need of improvement of existing ship power plants which will be able to provide output parameters of quality of electric energy with the minimum deviations is revealed and proved.

**Key words**: generator, model, MATLAB, loading, diesel.

УДК 639.223.053(265.5)"323"

**COMPARISON OF THE SPECIES COMPOSITION OF CATCHES PELAGIC   
AND BOTTOM TRAWLS IN THE WATERS OF THE PACIFIC COAST SOUTHEAST   
OF KAMCHATKA AND NORTHERN KURILES IN AUTUMN**

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In the article we compare the composition of the catches of bottom and pelagic trawls when fishing for Pollock in the exclusive economic zone of the Russian Federation in the South-East of Kamchatka and Northern Kuriles in autumn on the Pacific shelf and upper continental slope (depth 100–400 m).

**Key words:** Kuril Islands, Kamchatka, shelf, continental slope, bottomand pelagic trawls, catches.

УДК 639.223.3(265.53)

**MODERN STATE OF PACIFIC COD FISHERY   
ON THE WEST COAST OF KAMCHATKA**

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The paper provides analysis of the state of Pacific cod fishery on the West coast of Kamchatka for   
2001-2012. The major fishing gears used in the fishery for the period were long-line and Danish seine. The paper has demonstrated dynamics of the TAC realization intensity by subzones, fishing gears and years. It also demonstrates dynamics of the number of vessels engaged in fishing Pacific cod for the decade. The number of long-lining vessels decreased for recent five years, whereas the number of Danish seining vessels increased. The highest intensity of the fishery was observed in May in 2009-2011 and in March in 2012. In summer months the intensity was decreasing until September, but in November and December it increased visibly.

**Key words:** West coast of Kamchatka, Pacific cod, fishery, long-line, Danish seine.

УДК [502.174:628.4](430.117)

**PARTICULARITIES OF COLLECTION, PROCESSING AND DOMESTIC WASTE   
DISPOSAL IN NIEDERSACHSEN (GERMANY)**

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Main ways of collection, processing and domestic waste disposal are demonstrated on the example of waste processing complex functioning in Hannover (Niedersachsen, Germany).

**Key words:** waste, garbage, site, sorting, biogas, compot, combustion plant.

УДК 658.152:639.25.06

**EFFECTIVENESS INCREASE WAYS OF OFF-SHORE FISHING FIXED ASSETS**

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Main ways of assets’ restoration and repair were stated and studied on the basis of results obtained from state and fixed assets of off-shore fishing exploitation analysis. Offered metrics will provide receiving reliable information during monitoring process of availability, technical state and efficiency utilization of fixed assets.

**Key words:** ship repair, shipbuilding, expanded reproduction (fixed assets), preventative maintenance, repairs, average repair, overhaul, warranty repairs, emergency repairs, available power, fixed assets saturation, available fixed asstes.

УДК [331.55:316.3](571.66-25)

**THE ROLE OF LABOR MIGRATION IN THE SOCIAL STRUCTURE   
OF PETROPAVLOVSK-KAMCHATSKY**

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This study is the result of carried out research together with students concerning migrants’ social influence, the character of their labor activity and the level of social adaptation and also concerning ratio of social and economic indexes of migrants and native population living standards, rapprochement (coincidence) of “We” and “They” images, characterizing identification of newcomers and the mutual assimilation of migrants and native population the cultural elements, social standards and values.

**Key words:** migrants, labour migration, sociological poll, survey.

УДК 332.14(571.66)

**COOPERATION PECULIARITIES BETWEEN BUSINESS   
AND AUTHORITY FOR GENERATION CLUSTER POLICY**

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Small business plays an essential role in ensuring stability of social and economic development of Russian regions, in this connection assistance to development of small and medium business is officially recognized as one of key priorities of social and economic policy of the state. The present article considers the role and value of business in development of the economy, measures of the state support provided to subjects of small and medium business of Kamchatka region and the results obtained.

**Key words:** regional economy, business development, management arrangements.

УДК 657.6:378.4

**IMPROVEMENT OF INTERNAL AUDIT PROCESS AT THE UNIVERSITY**

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Reasonability of establishing internal audit department in state-run institute of higher education with specific functioning different from other economic entities is given in the article. Structure of internal audit department

Interrelation with other institute departments is shown. Constructive advice to improve realization of internal audit process at the university is also described.

**Key words**: internal audit, state-run university, economic entities, constructive advice.

УДК 371.1:174

**SOCIOCULTURAL COMPETENCE OF EDUCATIONAL INSTITUTION PRINCIPAL   
IN INFORMATION-ORIENTED SOCIETY**

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The abstract deals with educational management problems in the information-oriented society. Conceptual positions of institution of higher education control strategy in modern society are stated. Different interpretations of the concept social cultural competence in the context of global informatization and management intellectualization processes are represented.

**Key words:** sociocultural competence**,** intellectualization of management process, information-oriented society.

УДК [316.344.42:070](571.66)

**CONTENT-ANALYSIS OF REFERENCES TO REGIONAL POLITICAL ELITE   
REPRESENTATIVES IN MASS MEDIA**

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Content-analysis of references to regional political elitefrom 2010 to 2012 is carried out on the basis of periodicals in Kamchatka region.

**Key words:** governor ofKamchatka region, State Duma deputy, member of Federation Council, political activity, printed mass media, news report, reference intensity, size of news report, press report subject, press report type, press report grounds, editorial office’s opinion.

УДК 811.111

**THE DEMO VERSION OF THE “MARLINS ENGLISH LANGUAGE TEST”:   
LANGUAGE ASPECT**

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In the article the demo version of the test program “Marlins English Language Test”, one of the most popular with crewing agencies in assessing the candidates’ knowledge of English for the work in foreign shipping companies, is considered. The level, volume and degree of the test tasks’ language complexity are identified. The procedure of estimating these testing parameters objectively is suggested. The grammar facts which studying in domestic marine Engish textbooks is not provided for are enumerated. The testee’s having to reveal his knowledge of English as executor of his straight-line job responsibilities, possessing English on the Beginner’s level, with a tendency towards the elementary one, is ascertained.

**Key words:** test,level of proficiency in a language,level of language complexity, volume of language complexity, degree of language complexity, reading, auding.

УДК 627.33(571.66-25)"1944/1945"

**EXPERIENCE OF MODERN HYDRO CONSTRUCTION TECHNOLOGIES ADOPTION   
DURING BUILDING PETROPAVLOVSK SEA PORT IN 1944–1945**

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The given article introduces information about the first national experience of waterside structure erection with the help ofmetal rabbet. Original photographs demonstrating the main construction stages which took place in the war time in the condition of scare resources were used in scientific paper for the first time.

**Key words:** commercial sea port,lend-lease, construction, rabbet, berth, poppet, wall dowel.

УДК [338.48-6:36](517.66)

**КOLE OF ETHNIC TOURISM FOR KAMCHATKA REGION**

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This study is devoted to the analysis of ethnic tourism development prospects in Kamchatka. Ethno tourism is the branch of cultural & educational tourism which is widespread in different countries all over the world. The purpose of ethno tourism is an acquaintance with the way of life, culture, traditions and customs of people who live in harmony with natural environment. The development of ethno tourism in Kamchatka region is becoming a new direction of activities. This kind of tourism is going to be highly demanded in future because of its uniqueness and beauty and because of economic and social advantages for the region.

**Key words:** ethno tourism, traditions, multiculture, ethnography.