

Energy saving

Bobukh Anatoliy Alekseyevich, Kovalyov Dmytro Oleksandrovich, Klimov Andrii Oleksandrovich. **ADAPTIVE ALGORITHM FOR AUTHENTICATION OF CONTROL OBJECT OF MUNICIPAL ECONOMY.....2**

In the article an adaptive algorithm is worked out for authentication of non-stationary objects, that allows operatively to get reliable information about the object of control, and improves quality control process an object. The worked out algorithm it is expedient to use for development of computer-integrated control system the technological objects of municipal economy, introduction of these systems will assist the increase of economy of power resources.

Keywords: adaptive algorithm, computer-integrated control system, objects of municipal economy, economy of power resources.

Cherniavskiy Anatoliy Volodymyrovych, Mydlovets Olga Andriyivna. **ENERGY EFFICIENCY MANAGEMENT OF THE PUBLIC SECTOR OF UKRAINE.....8**

The use of energy management in housing and communal services will lead to reduction of energy consumption by 10–15 % compared with present situation. This system will enable not only staff management, but due to the complex of technical tools it will be possible to make metering, control, analysis, and planning of efficiency and use of energy resources on the public area.

Keywords: energy saving, energy efficiency, energy management system, energy monitoring, control, housing and communal services.

Power engineering

Andreyev Sergey Yurievich, Malyarenko Vitaliy Andreyevich, Temnokhud Inna Alexandrovna, Nemirovskiy Ilya Abramovich. **COGENERATION AS A CONCEPT OF MUNICIPAL POWER SUPPLI.....15**

The basic constituent parts and the role of Municipal Power Supply in provision of vital functions of society have been considered.

The problems of City Heat Supply have been accentuated. On the basis of power and economic analysis of patterns of tariff arrangement on enterprises has been shown that the power use occupies the second position after consumption of electric energy as a fuel production input.

The analysis of cogeneration installations and the basis for their choice has been made. The power production technologies with the use of cogeneration have been proposed. The economic expediency for the use of cogeneration in boiler-houses and thermal electric plants of Municipal Power Supply industry depending on the cost of the primary fuel and tariff reduction has been shown.

Keywords: cogeneration, energy saving of TEP, biofuel, technical and economic expediency, gas-piston turbine motor, gas turbine installation, Municipal Energetics, steam turbine

Chernyuk Artem Mikhaylovich, Egorov Oleksii Borisovich, Budanov Pavlo Feofanovch, Bykova Viktoriya Sergeyevna. **METHOD OF ESTIMATION INFLUENCE OF MASS AND SIZE INDEXES OF SYNCHRONOUS GENERATORS ON THEIR DYNAMIC STABILITY AT EXTERNAL INDIGNATIONS ..25**

The analysis of methods of decline of mass and size indexes of synchronous generators and increase of their teknik and economic descriptions is conducted in the article. Possible changes are certain in the modes of operations of machine as a result of change of its массо-габаритных indexes. Dependence of dynamic stability of work of machine as function of moment of inertia of its rotor is shown. Descriptions of speed of change of corner of $\ddot{\alpha}$ of synchronous generator are got depending on the moment of inertia of rotor of machine.

Keywords: synchronous generator, moment of inertia, dynamic stability, time of steady work, computer design.

Mannanov Emil Ramilevich, Galunin Sergey Aleksandrovich, Balabanov Michael Stanislavovich, Kozulin Tatyana Pavlovna, Mannanov Marseille Ramilevich. **STUDY OF THE HIGH-FREQUENCY GENERATOR INFLUENCE ON POWER QUALITY OF SUPPLY NETWORK.....33**

In this paper was researched of the high-frequency generator influence on supply network. It is necessary for studying of how the equipment influences quality of the electric power. The analysis of indicators of the electric power was carried out during the operation of the high-frequency generator. Methods of the solution of problems with deterioration of quality of the electric power were found.

Keywords: control of electric power quality, characteristics, standard, filter, harmonics, dependence, methods, supply network.

Cherniavskiy Anatoliy Volodymyrovych, Yakobiuk Dmytro Volodymyrovych, Yakobiuk Iryna Viktorivna. **ANALYTICAL SUPPORT FOR ENERGY MONITORING.....41**

In this paper summarizes the recommendations for the use of analytical tools for energy monitoring. These recommendations formed by the results of the study guidance documents and scientific publications in the field of energy monitoring, as well as on the basis of practical experience in the development and implementation of energy management systems. Given the importance, as well as the lack of elaboration, the work also focused on methodological issues of data collection, processing and analysis of information about objects of the energy enterprise monitoring the industrial enterprises.

Keywords: energy saving, energy efficiency, energy monitoring, energy management, information and analytical tools.

Economy, organization and management

Babaev Vladimir Nikolayevich, Sukhonos Maria Konstantinovna, Beletskiy Igor Vasilyevich. **LIFE CYCLE MODEL OF BUILDING-ENERGY PROJECTS.....46**

It was established in order to ensure better management of a reference to the relevant current operations performing organizations advisable to divide the project into phases, the totality of which is the project life cycle. Based on the concept of life cycle projects possible timing, resource and organizational synchronization of all processes and stages of implementation. That lifecyclical approach allows us to consider the processes of project management and how to dynamically synchronized system. It was established that the construction of high-tech project life cycle (to species which include the building-energy projects) in most cases carried out in two main approaches - predictive and adaptive. It analyzes the main lifecyclical models and methods of these approaches and formed the conceptual and mathematical models of the life cycle of building-energy project, it was given the structure of the functional elements of its phases.

Keywords: lifecyclical concept, predictive approach, adaptive approach, building-energy project, life cycle, the functional elements of the phases of the project lifecycle.

Mekhovich Sergey Anatolyevich. **CONCEPTUAL BASES OF FORMING OF INNOVATIVE-ENGINEERING INDUSTRIAL CLUSTERS.....54**

There are existent approaches of forming of cluster policy in the article of proanazirovaniy, features and pre-conditions for development of innovative clusters and their influence are rotined on dynamic growth of national economy. Conceptual bases of forming of new economi rame of society – «innovative-engineering industrial cluster are expounded».

Keywords: cluster policy, national economy, strategy of development, hi-tech engineer, innovations, innovative-investment climate.

Scientific and technical progress and efficiency of production

Klitnoi Vladimir Viktorovich. **ANALYSIS OF APPLICATION OF ACTIVE VIBRATION ISOLATION SYSTEMS WITH DRIVING QUASI-ZERO STIFFNESS.....61**

The article gives an overview of the vibration isolation system with quasi-zero stiffness. Noting the complexity of adjustment such systems on the design load. This problem can be solved by the control of such systems. Analyzes existing vibration isolation systems with passive and active controlled quasi-zero stiffness. Analyzes the possibility of the application active vibration suppression scheme built using modern adaptive materials in such systems.

Keywords: vibration isolation system, quasi-zero stiffness, active vibration suppression, adaptive materials.