

## ABSTRACT

### Energy saving

A. L. PEREKREST, S.S. ROMANENKO, V.V. NAIDA. **OPTIMIZATION OF PROCESS OF THERMAL CONSUMPTION OF EDUCATIONAL ESTABLISHMENT**.....2

*The problem of improving the efficiency of heating systems of educational buildings of the university is considered. The analysis of the modes of heat buildings academic institution is conducted. It is suggested to estimate efficiency of work of thermal points of building by means of specific index that takes into account a volume and consumable building thermal energy. Technical solution is offered on the increase of efficiency of work of the systems of heating systems of education corps universities.*

S. A. MEHOVICH, S. A. POKLITZYN **REALIZATION OF THE ENERGY SAVING POTENTIAL DURING PREPARATION OF AN INDUSTRIAL ENTERPRISE FOR ISO 50001 CERTIFICATION**.....9

*To reduce the amount of time between the diagnostic audit and certificate, as well as reducing the costs of enterprise to work on fix mistakes and deficiencies noted by the certification organization for ISO 50001, it is proposed to start certification procedure after an energy audit performing.*

### Power engineering

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*In the article ways are described reformation of wholesale market of electric power and perfection of the system of prices and tariffs on electric and thermal energy.*

V. A. MALIARENKO, P. M. KANILO. **INCINERATION OF ORGANIC FUELS AND EKOLOGO-CHEMICAL SAFETY**.....30

*The specific integral indexes of ekologokhimicheskoy danger of the power settings are considered at incineration of organic fuels. The results of complex research of maintenance of carcinogenic matters (including heavy metals) are expounded in smoke gases, sewages and ash of power units of coal TES at the use of the oil-fired and gas illuminating from beneath.*

I. A. CHERENKOV. **PRICE FORECASTING BASED ON NEWS FLOW THROUGH ASSOCIATION RULES**.....38

*Subject of this paper are methods of short-term price forecasting on the example of polymer market applicable to the electricity market. Experimentally confirmed the superiority of the methods of price forecasting based on news flow through association rules over regression methods.*

**Keywords:** price forecasting; ARIMA; exponential smoothing, association rules.

A.O. OMELCHUK, A.M. SKRYPNIK, V. S. TRONDIUK. **OPTIMIZATION OF PARAMETERS AND MODES OF SOURCES OF REACTIVE-POWER IS IN ELECTRIC NETWORKS OF DIFFERENT LEVELS OF TENSION**.....43

*The analysis of normative documents is conducted in relation to indemnification of reactive-power in the networks of the electric system. The necessity of creation of management algorithm is reasonable by parameters and modes of operations of all sources of reactive-power with the purpose of providing of her balance in the knots of loading and economic work of electric networks of all levels.*

**Keyword:** sources of reactive-power, balance of reactive-power, management algorithm, optimal parameters, office hours, cost transport per units.

- I. M. TRUNOVA, K. F. BEZSONOVA. **IMPROVEMENT OF THE STANDARD METHOD «THE GENERAL REQUIREMENTS TO THE ORGANIZATION AND REALIZATION OF POWER AUDIT»**.....50

*Improvement of the typical method «The general requirements to the organization and realization of power audit» by inclusion in the typical form of the Questionnaire of audit's object the form of the table «The information about the process equipment and units, which use the electric power» is offered.*

### Scientific and technical progress and efficiency of production

- J. E. PACHKOLIN. **DEFINITION OF VALUE AND ACTION DIRECTION OF ELECTROMAGNETIC FORCES IN STEELMELTING COMPLEXES**.....54

*Theoretical researches using the necessary mathematical basis and special computer programs were conducted. Practical experiments of influence of interaction between electromagnetic fields, created by an electric arc and an inductor, on metal melting in a steelmelting complex in order to decrease energy consumption and to improve the environmental situation in a region.*

**Key words:** *steelmelting complex, electromagnetic field, inductor.*

- E. L. PIROTTI, L. N. MIHAILOVA. **RESEARCHES OF PROBLEM OF INFLUENCE OF ULTRASONIC WAVES IN THE PROCESS OF KRIOKONSERVACH**.....62

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- N. P. KUNDENKO. **DETERMINATION OF GOOD QUALITY OF RESONANT OPEN SYSTEM IS IN MODE OF LOOSELY-COUPLED INTERFACE**.....65

*Advantages of method of equivalent charts are presented for determination of efficiency of excitation of vibrations in resonant open system.*