We consider the mechanisms of action of non-governmental environmental organizations on the issue of environmental safety of the fuel and energy complex of country. The paper set out the requirements for expert of the fuel and energy complex with subject to the conditions of a realization the new paradigm of training and creative approaches to solving complex energy end environment issues. Specified areas of public activity of power engineering specialists and their impact on decisionmaking by state agencies and management of enterprise.

Energy

In the article the features of increase of efficiency of work of the systems of elektrosupply of industrial enterprises are considered due to conducting of complex analysis of texniko-economic indexes, conducting of power audit of existent networks.

A. L. SHUBENKO, V. A. MALYARENKO, N. U. BABAK, A. V. SENECKIY. UTILIZATION OF WASTE WARMTH OF TECHNOLOGICAL PROCESSES OF THE INDUSTRIAL ENTER-PRISE FOR THE PURPOSE OF ELECTRIC POWER DEVELOPMENT.......22

Questions of utilization of dumped warmth of technological processes of the industrial enterprises by means of installation of turbines on low-boiling working bodies are investigated. The assessment of the received electric capacity is executed at realization of ORC of a contour at the metallurgical enterprise with a full cycle. For two sources of warmth of small capacity of this enterprise the main characteristics of turbines with application of working bodies R-600 and R-134a for different frequencies of rotation of a rotor are calculated. The rational option is chosen.

The method of producing a constant lead time is based in the article. This method allows to diminish the angular mistake in the forming of the command on switching on in the synchronization of synchronous generators. And it does not allow to appear the disturbances in the electricity supply system.

Key words: synchronization of synchronous generators, constant lead time.

Alternative energy sources

V. A. MALJARENKO, I. K. GALETICH, Yu.I. VERGELES. RENEWABLE ENERGY SOURCES FOR KHARKIV REGION: CURRENT STATE, TRENDS AND PROSPECTS.35

Contemporary trends in the development and consumption of the Renewable Energy Sources (RES) are analyzed for the Kharkiv region, Ukraine, with references to the World's and national trends. Modern energy consumption in the region is supplied mainly from the imported and locally extracted natural gas (up to 95 % of total energy production). It was shown that the highest value for substitution of ca. 50 % of total natural gas consumption in the region goes to biomass and low-potential energy of raw wastewaters.

V. A. GNEUSHEV, A. S. STADNIK, Ju. A. KROHMALIUK. LOGIC OF BUILDING AND PROVIDING THE BIOPROPELLANT OF MINI-TEC IS IN UKRAINE.......43

In the article perspective of realization of projects TEC is rotined with the use of local types of fuel and biopower cultures, and also meaningfulness of presence of effective users of heat and electricity near-by TEC.

ABSTRACTS

Scientific and technical progress and efficiency of production

The possibility of improving the qualitative characteristics of the original structure of welded joints of heat-resistant pearlitic steels by the use of mechanized welding process in the shielding gas mixture of CO2 + Ar.

G.G. ZHUN'. STUDY OF COUPLED HEAT EXCHANGE IN CRYOVESSELS.......59

The paper is devoted to study of processes of heat exchange between cryogenic agent within the vessel neck and the neck-wall connected ends of mounted superinsulation sheets. These processes determine efficiency of the cryovessel construction as a whole.

N. KUNDENKO. DEVELOPMENT AND RESEARCHES OF GENERATORS ON AVA-LANCHE-FLIGHT DIODES AND BULK NEGATIVE CONDUCTIVITY DIODES...65

Experimental studies of spectral and power descriptions of generators are undertaken on avalanche-flight diodes and bulk negative conductivity diodes steady-state a semidisk лейкосапфировым resonator for work in setting on measuring of acoustic vibrations

Technology of production of form coke is offered, what on the basis of physical and chemical effects provides the acceleration of processes of coal and coking coke, cooling complex utilization of financial and power vast, decline of anthropogenic influence on an environment.

In the article the method of providing of effective and manoeuvre work of every element of flowsheet of TES is offered in the conditions of the use of fuels of the worsened quality.