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S U M M A R I E S

ON THE ENERGY POLICY OF GEORGIA. *R. Arveladze.* "Energy". №3(67). 2013. Tbilisi. p. 4-12. geo. sum geo.engl.rus.

Energy is the main driving force of industry and the basis of the national economy of any country.

Energy ensures the stable functioning of industry, agriculture, transport, municipal services, tourism and so on.

A stable development of the national economy is impossible without a permanent development of power industry. Hence the fuel and energy complex must be under a special supervision of the government.

In all countries, much attention is given to the science-based elaboration of the power policy and its direct implementation. Georgia must not be an exception.

A justification is given for the necessity of elaboration of the energy strategy and the basic principles are determined, which must be taken into account in the energy strategy.

THE STRUCTURE OF ELECTRICITY PRODUCTION AND PROSPECTS IN GEORGIA. *D.Chomakhidze, Z.Gurielidze.* "Energy". №3(67). 2013. Tbilisi. p. 13-20. geo. sum geo.engl.rus.

The article shows the role and importance of the regional structure of energy in the supply of the country. In this regard, the characteristics of power production and consumption of regions is very different. Specifically, in the eastern and western part of the country on relatively alike areas, the western part gives more share of power production and less share of consumption than the eastern part. In table 5 you can see the expected changes in power production in regional structure within the coming 10 years period. Tabl.5, bibl.3.

ELECTRICITY COMPETITIVE MARKET DEVELOPMENT IN GEORGIA. *Z.Gachechiladze, N.Magradze, T.Magradze.* "Energy". №3(67). 2013. Tbilisi. p. 21-30. geo. sum geo.engl.rus.

The paper discusses the important milestones in development of competitive electricity market for Georgia. Analysis confirmed that the introduction of competition in electricity sector will require significant reforms, structural and legislative changes. Some of the organizations that are currently operating in the field shall be subject to not only structural changes but also subject to procedures change that they use the current period. It will be necessary to separate the functions of the regulated activities that contain elements of competition and must be released for market relations. The reform necessity is based on Georgia's aspiration to become a member of the Energy Community, to enable trading environment to regional and European electricity markets and attract additional investment in hydropower projects. Opening electricity market to competition in Georgia should be gradual and should correspond to the number of generating objects and correspondingly to the increment of competition level. Ill.4, bibl. 15.

FUTURE TRENDS OF THE USE OF A SUPERCONDUCTING INDUCTIVE ELECTRIC POWER STORAGE SYSTEM OF A NEW GENERATION IN GEORGIA'S ELECTRIC POWER NETWORK. *T.Kokhreidze, V. Metreveli, N. Uplisashvili.* "Energy". №3(67). 2013. Tbilisi. p. 31-37. geo. sum geo.engl.rus.

We consider the superconducting inductive electric power storage system (SCIEPSS) of a new generation, with a high power intensity of $10^9 - 10^{13}$ J, which is one of the efficient devices performing the following functions: improving static and dynamic stability, meeting peak demands, keeping voltage at certain points of networks when the active power balance in the frequency restoration system is violated, and also ensuring electric power conservation.

The SCIEPSS has such properties as a high speed of operation, high efficiency, capability of complete automation of power input/output and the damping of electro-mechanical processes in generators operating in the post-damage regime. The SCIEPSS may play an important role in solving problems of the country's energy safety.

The scheme of switching the SCIEPSS in the energy system is elaborated. The mathematical model is obtained, which makes it possible to study steady-state and transient processes. It is shown that the high speed of operation and high efficiency characterize the SCIEPSS as an effective tool of cost-effectiveness and reliability of electric power supply. Ill.3, bibl. 3.

ELECTRONIC CIRCUITRY DESIGN WITH MULTISIM-9 SOFTWARE ON EXAMPLES OF CONTROLLED THYRISTOR RECTIFIER AND SYMISTOR AC CONVERTOR AND ITS PRACTICAL USE. *N.Kvrivishvili.* "Energy". №3(67). 2013. Tbilisi. p. 38-46. geo. sum geo.engl.rus.

In this article through definite examples some of the Multisim-9's software possibilities are shown. The main idea of operation principles of controlled rectifiers power components with their triggering circuits and AC convertors are very shortly and easily explained. The electronic circuitry development practical methods are presented. Also article is saturated with particular technical details which are barely shown even in subject specific manuals. The content of this article may be useful for electronic circuit designers, also for every individual who is interested in electronic circuitry design in their practical occupations. Ill. 12, bibl. 3.

DETERMINATION OF OPTIMAL PARAMETERS OF THE PRODUCTION OF COMPLEX BRIQUETTES FROM FERROALLOY INDUSTRY TAILINGS. *Z.Simongulashvili, I.Maisuradze, B.Maisuradze.* "Energy". №3(67). 2013. Tbilisi. p. 47-51. geo. sum geo.engl.rus.

We consider the optimal parameters of the production of complex briquettes from ferroalloy industry tailings, in particular, the dependence of physico-mechanical and electric characteristics on the moisture content of furnace charge, the quantity of bonding substances and finely-dispersed components, also on the metal concentrate content and the briquette drying duration.

It is established that the produced complex briquettes are a valuable furnace charge material for the thermal-electric production of silicomanganese. Ill. 6, bibl. 5.

PHYSICO-MECHANICAL PROPERTIES OF CONCRETE UNDER ITS DELAYED REVERSIBLE DEFORMATION. *M.Lordkipanidze.* "Energy". №3(67). 2013. Tbilisi. p. 52-55. rus. sum geo.engl.rus.

It has been established that concrete behaviour in time is subject to the Hook's law. The origin of concrete ultimate characteristics has been found out. Ill. 2, bibl. 2.

DISCUSSION ABOUT THE STRUCTURE OF USE GEO-INFORMATION DATA BANK TO RESEARCH COMPLEX SELF-ORGANIZING GEODETIC SYSTEMS. *M.Nadiradze, L.Leonidze.* "Energy". №3(67). 2013. Tbilisi. p. 56-58. geo. sum geo.engl.rus.

The article provides discussion about the structure of use geo-information data bank to research complex self-organizing geodetic systems. With the help of block diagrams it has been shown created flow chart of a data bank to account of technogenic load on the territory of large-scale industrial complex; and, the structure of subject area of a data bank. Diagr.2, bibl.3.

TAKING URGENT SAFETY MEASURES IN EMERGENCY CIRCUMSTANCES USING SULFUR-CONCRETE AND MOLTEN CONCRETE TO ELIMINATE RESULTS CAUSED BY WATER ELEMENT. *V.Loladze, M.Lordkipanidze, I.Zubitashvili.* "Energy". №3(67). 2013. Tbilisi. p. 59-65. rus. sum geo.engl.rus.

In order to avoid negative results caused by abnormal intensity and duration of the sediments and respectively significant increase of the river level, several options are given to use sulfur-concrete, mixture and molten sulfur for arranging protective units. Sulfur concrete based soil anchors with the drainage systems are suggested for stabilizing the landslide zones. Inexation of the sulfur liquid into the soil holes under pressure is obtained to reinforce the anti-filter walls.

Suggestions are based on quick hardening feature of the sulfur concrete and sulfur liquid in the structures providing high technical and exploitation features of the buildings and units. Ill 5, Lit. 6.

DETERMINATION OF NON-STATIONARY FLOW PARAMETERS OF THE RIVER JET. *E.Khatiashvili, Z.Bagashvili, N.Kavtuashvili, N.Tsivtsivadze.* "Energy". №3(67). 2013. Tbilisi. p. 66-71. geo. sum geo.engl.rus.

Non-stationary flow parameters of the river jet in the reservoir - dependencies to calculate jet discharge, speed, area of latitudinal section reflecting inflow turbulent jet parameters of the rivers in real situations and used for any area of jet distribution are obtained.

The obtained results make it obvious that sedimentation of floating particles in the reservoir occurs slower than during stationary motion and the particles are taken to a larger area from the confluence section by the water jet flow. Lit. 4.