**TRAINING OF SPECIALISTS IN THE FIELD OF ENERGY EFFICIENCY AS A PRIORITY OF EDUCATION**

G.V.Lepesh

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21

The article examines the role of energy in today's world. Arguments for the training of specialists in the field of energy efficiency and conservation based *St. Petersburg state University of Economics(* *SPbSEU)*.

Keywords: energy saving, energy efficiency, tertiary education.

**The semilattice identifier method to test diagnostics of functional units of microprocessors**

A.T.Tyajev

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*.*

Considered the method of constructing tests of search defects of minimum length for functional units of microprocessors preserving the greatest possible depth of the search.

*Keywords*: functional unit of a microprocessor, a test search for defects, technical diagnostics

**COMPARATIVE CHARACTERISTIC OF FUNCTIONAL PROPERTIES OF HOUSEHOLD WASHING MACHINES OF DRUM AND AIR AND VESICULATE TYPES**

M.I. Dmitrichenko, O.A Truevtseva,

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*.*

In work research of washing ability, quality of an extraction and rinsing of cars of a miscellaneous like washing is carried out, and also the actual electricity consumption for a full cycle of washing is defined. On the basis of the comparative analysis of the obtained dasample possessing the best functional properties is defined.

*Keywords:* washing machines, range, quality indicators, research methods.

**RESEARCH AND COMPARATIVE ANALYSIS OF INDICATORS OF QUALITY OF WASHING POWDERS OF DIFFERENT TRADEMARKS**

O.A Truevtseva1, V.V. Arhalova2, B.M. Primachenko2

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21;

*Saint-Petersburg State University of Technology and Design*

191186*, St.-Petersburg, Bolshaya Morskaya str.,*18

Studied the organoleptic, physical-chemical properties and washing ability of the 4-h brands of synthetic detergents. Comparative analysis of the results obtained and identified the most effective pattern.

*Key words:* synthetic detergents, washing ability of the quality indicators, various pollution.

**RESEARCH OF CONCENTRATION OF TENSIONS AT WELDING OF PIPELINES**

O.V. Makovetskaya-Abramova, A.V. Hlopova, V.A. Makovetsky

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21;

*Vladimirskiy state university*, 600000, *Vladimir, street Gorkogo,*87

The coefficients of concentration of tensions and deformations are certain in the weld-fabricated connections of real steam line and gas pipelines. Dependence of concentration of tensions and deformation from the geometrical form of joint of pipe is considered, and also from the type of mechanical heterogeneity of properties of metal of heat-affected zone.

*Keywords:* microstructure, holography, isochroma, isocline, laser, welding, steel alloy, photoelasticity.

**THE MONITORING SYSTEM OF THE KALININGRAD**

**UNDERGROUND GAS STORAGE**

V.V. Nordin, N.V. Belkina

*Immanuel Kant Baltic federal university,*236041*, Kaliningrad, street Nevskogo,* 14

To enhance the energy security of the Kaliningrad region, given its enclaves, launched the first phase of underground gas storage (UGS). The aim of the study is to identify the problems, connected with operation of gas storage and determination of ways of their overcoming. The article in accordance with the "process approach" ISO 9000 is substantiated the necessity of creating the Kaliningrad UGS system of monitoring and control, including objects, parameters, methods, frequency and corrective action, on the basis of which made structural formula monitoring cycle. The basic indicators of the four interrelated processes of exploitation of underground storage facilities, as well as their regulated value. Qualimetrical approach allows you to define a comprehensive performance evaluation of operating efficiency, which will help to make timely and effective management decisions, including from the perspective of environmental protection.

Keywords: underground gas storage (UGS), monitoring and control, structure monitoring, qualimetrical approach.

**PROTECTION AND MONITORING OF AIR – THE PRIORITY DIRECTIONS OF ECOSYSTEM SERVICE IN St. PETERSBURG AND LENINGRAD REGION**

O.I. Ryabchenko1 and Ya.V. Zachinyaev2

*St. Petersburg state economical university (SPbSEU),*

191023, *St. Petersburg, Sadovaya str.,* 21;

*Russian state pedagogical university named after A.I. Herzen (RSPU),*

191186*, St. Petersburg, emb. of the Moyka river,* 48

The anthropogenic sources of air pollution in St. Petersburg and Leningrad region were considered, as well as main activities to improve the environmental situation in the region. The legal framework, methods and means of implementing of environmental air monitoring has been analyzed.

*Keywords:* pollution of atmosphere, environmental monitoring, air protection.

**THE COMPARATIVE ANALYSIS OF CALCULATIONS OF THERMAL EFFICIENCY AN OREBRE-NIYA AT ONE-DIMENSIONAL AND A TWO-DIMENSIONAL PROBLEM DEFINITION**

V. F. Badakh, A.B. Konovalov, A.D. Kuznetsova

*St. Petersburg state economical university* (*SPbSEU*)*,*

191023, *St. Petersburg, Sadovaya str.,* 21

In work possibility of use of one-dimensional problems of heat conductivity for an assessment of thermal efficiency of edges of various profile was investigated. Comparison of the results received on the basis of the solution of one-dimensional tasks, with the results received at the solution of two-dimensional problems of heat conductivity by a method of final elements is carried out.

*Keywords:* thermolysis, heat conductivity, orebreniye, efficiency.

**USE OF RENEWABLE POWER RAW MATERIALS**

**AND DEVELOPMENT OF BIOFUEL TECHNOLOGIES**

*A.G.Varekhov*

*St. Petersburg state economical university* (*SPbSEU*)*,*

191023, *St. Petersburg, Sadovaya str.,* 21

There is considered and analysed world experience of technological diversification in the energy production sphere in the article. It is shown that classical technologies such as the destructive hydrogenation of coals and gasification of the coals that have a long history and have considerably lost in connection with oil processing and development of gas fields revive on a new technological basis. Some processing methods of receiving liquid fuels from biomass of various origin are analysed. The technological schemes of production of biofuels of three generations using a natural plant material, a waste of various productions, and a biomass of water organisms as a carbon source are provided. There are made numerous estimates of outputs and costs of the synthetic fuels (dimethyl ether, biodimethyl ether, the biodiesel, gasoline and others). The conditions for development of biofuel technologies are formulated.

*Keywords:* destructive hydrogenation of coals, gasification of coals, biofuel technologies, biofuel, biodiesel, biodimethyl ether.

**AUTOMATION OF THE BAKING OF PIECE BAKERY PRODUCTS**

G.V.Alekseev, E.N.Ivleva, А.S.Ivanova

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

*ITMO university, Institute of the chill and biotechnologies,*

191002*, Saint-Petersburg, str.Lomonosov, d.*9

In article are considered questions of the making the technological equipment for baking stocking up opened pie, type "vatruschka", with stuffing from vegetable, fish and meat products. Happen to the information about designs of the lines and technologies fabrication such type bakery products in unceasing cycle, as well as design providing device and mechanism.

*Keywords*: technological equipment, processing food material, opened pies, technology of the unceasing fabrication bakery product.

**EFFECT OF SMOKE ON THE USE OF DIESEL EXHAUST GASES**

A.S. Afanasyev, R.T. Khakimov, S.M. Zagorski

*National Mineral Rеsources University (NMRU) «Gorny»,*

199106, *St. Petersburg, Vasilyevsky island,* 22*nd line,* 1*;*

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*.*

Analysis of the results of the calculation of the dynamic characteristics of the KamAZ-4310, equipped with diesel engine KamAZ-740 allowed us to determine rational modes of motion with minimal fuel consumption and smoke and plenty of power in the hot conditions.

*Keywords:* Diesel, exhaust gases, smoke, towing speed properties, traction and dynamic performance.

**DEVELOPMENT AND JUSTIFICATION OF THE METHOD OF THE PILOT STUDY OF FIRMNESS OF ANTI-EROSIVE SHEETINGS OF GASDYNAMIC PULSE DEVICES**

G.V.Lepesh, D.Yu.Latyshev, M. S. Cherkasov

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

*JSC "The central research institute of materials"* (*JSC СNIIM),*

191014, *St. Petersburg, Paradnay street,* 8

The gasdynamic nozzle installation intended for test of anti-erosive sheetings of gasdynamic pulse devices is developed. Installation provides loading of examinees of samples by a high-temperature thermal impulse by formation of a high-speed stream of products of burning of firm fuel with a high pressure. The technique is developed and justification of imitation of a mode of loading to the real processes happening in gasdynamic pulse systems of a high pressure is carried out.

*Keywords:* anti-erosive sheetings, pilot studies, high-temperature thermal impulse, burning products, imitation of a thermal impulse.

**THE SELECT A PACKAGE OF MATERIALS AND TECHNOLOGIES OF MANUFACTURING PRODUCTS WITH A FEATHER PERVYM FILLER**

L.V. Kochesova T.P Kunaeva

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

The article considers the factors influencing the choice of a package of materials for products with a feather pervym filler. The features of technological processing insulated products and recommendations on the choice of equipment.

Key words: product with a feather pervym filler materials, thermal insulation properties, equipment, peculiarities of processing methods.

**TECHNOLOGIES OF DESIGN DESIGNING CORPORATE STYLE IN THE DRESS**

E.S.Badmaeva

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

Article is devoted structuration of technology of design designing of a corporate style in a dress. As a result of research the conclusion that at designing of a dress of a corporate style visualization of the concept of development of a brand should be focused not so much on maintenance of corporate spirit, how many on formation of the emotional installation inducing "recipient" to certain sort action is drawn.

*Keywords:* a corporate style, a dress, a brand, the consumer, advertising, corporate solidarity

**DESIGNER AND INTELLECTUAL TECHNOLOGY**

V.V. Buhinnik , A.V. Konovalova

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

In article possibilities of application of concept "technology" in the appendix to design practice at an information (postindustrial) stage are considered. As a result of research the conclusion about necessity of use of intellectual technology and intellectual algorithms for design activity is proved.

*Keywords:* design, designing practice, intellectual technology, intellectual algorithms.

**THE TECHNICAL AND CONCEPTUAL DESCRIPTION OF THE DRESS: MATERIALIZATION OF SENSE**

V.M. Lipskaia

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

Article is devoted division of the technical and conceptual description of the dress, corresponding in the first case – to the clothes description, and in the second case – to the description of a conceptual component of a dress. As a result of research updating of the levels of structure of a dress offered by Rolan Bart is made: the description should be understood focused on iconic and index types of signs, and the conceptual description focused, first of all, on symbolical signs.

*Keywords:*the description, the conceptual description, a dress, clothes, a sign, a symbol, an image, sense.

**PRECONDITIONS OF SCIENTIFIC APPROACH TO THE DEVELOPMENT OF MEASURES TO IMPROVE TRANSPORT INFRASTRUCTURE IN ST. PETERSBURG**

E.B. Sinitsyna

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21*;*

This article analyzes the ways raise exploitation efficiency of motor transport in St.-Petersburg on the basis of improving transport infrastructure.

*Keywords:* transport infrastructure, motor transport, efficient exploitation of motor transport, carrying capacity.

**TENDENCIES OF THE «ASSISTANCE» SERVICE DEVELOPMENT ONTHE ROADS OF THE NORTHWESTERN REGION.**

Y.G. Lazarev, Y.A.Grigoreva

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21

This article is devoted to a problem of formation of modern system attitudeto a choice of the directions of the Assistance service, design of the interconnected processes on various sites of vehicles movement, questions of coordination of often rather contradictory interests as well as to other questions concerning the organization and transport streams service.

*Keywords:* «Assistance» service, efficient use of the motor transport, transport infrastructure, stream scheduling, transport processes.

**VEHICLE AS A SOURCE OF ELECTROMAGNETIC HAZARD**

A.M. Kuharev, M.V. Evdokimov

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street*, 21

Authors of this article explore deterioration of electromagnetic situation in environment. Increasing of speed, volume and intensity of modern vehicles flow and spread of electric vehicles increased level of electromagnetic hazard. Also in this article authors consider impact of such hazard on those human’s health who are leaving near motorways and on humans who are sitting inside vehicles (passengers and drivers). In accordance of all facts necessity of increasing quantity of electromagnetic impact’s on environment, human’s health researches and on development proposals how to decrease negative impact.

*Ключевые слова:* intensity of transport streams, new means of transport, elektrik cars, elektro magnetic radiation, the human environment, health, negative impact.

**THEORETICAL ASPECTS OF RESOURCE-SAVING TECHNOLOGIES IN THE HOSPITALITY INDUSTRY**

E.V. Pecheritsa

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street,* 21.

The article examines the introduction of environmental innovations in the hotel business. Considered saving technologies applied directly to the hotels. The measures relevant to reduce energy consumption in the hospitality enterprise.

*Keywords:* hotels, resource-saving technologies, innovation, ecology.

**INNOVATIVE ADVERTISING AND PROBLEMS OF THEIR USE IN THE SERVICE SPHERE**

V.A.Baburin, N.L. Goncharova

*St. Petersburg state University of Economics* (*SPbSEU*),

191023, *Saint-Petersburg, Sadovaya street,* 21.

*Scientific educational institution of higher professional education "Institute of television, business and design",* 191124, *Saint Petersburg, Sinopskaya embankment, the house 64, let. a,*

The analysis of prospects of development of the market of advertising innovative technologies in the service sphere is carried out. Possibility of application of innovative technologies for increase of competitiveness of the enterprises of service is shown. Recommendations to marketing services on use of innovative advertising technologies in marketing strategy of innovative development are formulated.

*Кeywords:* advertising technology, innovation , marketing , service sphere