UDC 7.045; 7.011

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IMAGES AND SYMBOLS ON THE BANKNOTES OF COUNTRIES WITH ABSOLUTE MONARCHY

The article examines the images and symbols on the banknotes of countries with an absolute monarchy: t he United Arab Emirates, Qatar, Saudi Arabia, Brunei, Eswatini, Oman. The purpose of the article is to a nalyze what images and symbols on the banknotes of countries with an absolute monarchy express and c onvey their key values. Objectives of the article: to analyze the symbols reflected on the banknotes of co untries, and to identify: in what percentage is each group of symbols found in the images on the banknote s of countries; patterns of occurrence of images and symbols on banknotes. As a result of the study, the p ercentage ratio of the occurrence of images and symbols on the banknotes of countries is presented, the k ey values of a particular country are identified, depending on the symbols and images present on bankn otes, the symbols and images through which states reflect their values are determined. The conclusion is made about the similarity of the symbolic techniques used in the design of banknotes of different countri es. Keywords: banknotes, banknote design, money design, banknote design, monarchy, banknote image, banknote symbols, countries with absolute monarchy, absolute monarchy image, UAE banknotes, Qatar banknotes, Saudi Arabian banknotes, Brunei banknotes, Eswatini banknotes, Omani banknotes

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UDC 7.021 I. I. Verkhovskaia*

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IDENTIFICATION OF MATERIALS IN AMBER DECORATIVE AND APPLIED ART

The article presents a study of amber decorative and applied art by Raman spectroscopy methods. The cal ibration spectrum of Raman scattering of amber materials was obtained. Raman scattering spectra of amb er decorative and applied art were obtained. A comparative analysis was carried out by the methods of cor relation of the main components in the obtained spectra of samples in the SPSS software, the results of w hich made it possible to further identify the materials of amber products of decorative and applied art. Keywords: Raman spectroscopy, amber, decorative and applied art

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EXCLUSIVE CLOTHING DETAILS AS A FACTOR OF COMPETITION IN THE READY-TO-WEAR MARKET

Fast fashion, poor quality of clothing and environmental problems have led to the realization that it is nec essary to reconsider the attitude to consumption. Conscious consumption trends suggest that clothes shoul d be of high quality in every sense, form an image and emphasize individuality. The relevance of the desi gn and production of author's, exclusive clothes, against the background of the same type of samples, is i ncreasing. The purpose of the study is to determine the feasibility of designing clothes with non-

standard design elements on the example of a women's shirt. As a result of the study, 42% of respondent s preferred a design solution. The time spent on processing slightly exceeded the standard norms, which i ndicates the expediency of including design elements in the basic assortment. In a market economy, only those brands that offer high-
quality, inexpensive products with original design elements manage to maintain demand for products.
Keywords: clothing, designer details, competition, clothing industry, shirt

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THE USE OF NEURAL NETWORKS IN INDUSTRIAL DESIGN

he paper considers the method of generating images using trained neural networks, its use and possible pl ace in the technological process on the example of the field of industrial design. The article also examine s the algorithm for the development of industrial design products, taking into account the use of neural net works in the production process in design design, using the example of creating a sample of industrial de sign in the field of creating household drills as an illustration of the relevance of creating a product design using neural networks

Keywords: industrial design, neural networks, industrial design, design engineering

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UDC 7

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DEVELOPMENT OF TECHNOLOGY FOR CREATING A PROJECT OF A CERAMIC PRODUCT

The article reveals the significance of the art of ceramics for various types of human activity. The necessit y of studying historical experience for the design and creation of modern ceramic products is described. T he technology of manufacturing a project of a ceramic teapot based on the culture of ancient China is pre sented.

Keywords: art of ceramics, history of ceramic art of ancient China, technology, project, ceramic teapot

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UDC 74.01/.09 V. L. Zhukov*, A. B. Kirillova

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SYNERGY OF SONA-NEAL CHESS COMPOSITIONAL MORPHOGENESIS IN THE FUNCTIONAL DOMINANTS OF THE «SICILIAN DEFENSE» STUDIO INTERIOR

Philosophy of symbolism and mysticism, design theory and chess composition formed the basis of researc h and design of the image of the studio's interior, which is represented by a visual-symbolic cognitive information dynamic system with a locally-stable structure in an eclecticism of symbolism, high-tech and modernism.

Keywords: design theory, visual cognitive information systems, symbolism, mysticism, chess, interior

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3D CERAMIC PRINTING

The article discusses issues related to 3D printing with ceramics, the effective use of 3D printing with cer amics in the aerospace and medical fields, and analyzes various types of ceramics in terms of their most preferable application.

Keywords: 3D printing, ceramics, additive technologies, silicon carbide

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FLEXIBLE DESIGNING TECHNOLOGIES OF MODERN DAIRY PRODUCTS PACKAGING

The research of modern design trends in the field of dairy products packaging of Russian national and reg ional brands. Rebranding of dairy products packaging as an example of modern design technologies. Ana lysis of the dairy products packaging design for enterprises in the Vologda Region.

Keywords: packaging design, packaging attributes, dairy products, rebranding of dairy enterprises, Vologda Region

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ANALYSIS OF COGNITIVE TECHNOLOGIES IN THE CREATION OF JEWELRY IMAGES BASED ON ONTOLOGICAL AND SEMIOTIC REALITIES IN THE CLUSTER OF FLOREAL BIOSYSTEMS

This work is devoted to the study of the influence of the morphology of plant biosystems on the work of t he classics of Russian and European fairy-

tale creativity, representing symbolism, the study of the influence of cognitive technologies on the morph ology of the flora of ontological and semiotic realities, when creating images of design objects, and their effect on the formation of artistic images of design objects in jewelry.

Keywords: biosystems, design, poppy, still life, symbolism, bindweed, calla lilies, flower-seven-flower, iris

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MODIFICATION OF FIBROUS MATERIALS USING BIMETALLIC NANOPARTICLES IRON-SILVER

The article discusses methods for obtaining fibrous materials modified with bimetallic iron-silver nanoparticles, including cotton, linen, viscose, wool, silk, polyamide fabrics. This modification ma kes it possible to impart antimicrobial and antifungal properties, as well as resistance to microbiological degradation. At the same time, a coloristic effect is observed: colours from golden yellow to rich brown. The resulting colour was characterized by reflection spectra recorded using a SHIMADZU UV-2401PC spectrophotometer. Photographs of modified fibrous materials and X-ray spectra obtained using a HITACH S-4700 emission scanning electron microscope are presented.

Keywords: bimetallic nanoparticles, iron, silver, modified fibrous materials, antimicrobial, antifungal

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GEOMETRIC CHARACTERISTICS OF REGULAR PACKINGS AND THEIR HYDRAULIC RESISTANCE

Analyses of the mutual influence of the main geometric characteristics of structured industrial packings o n each other and on their hydraulic resistance in the range of Reynolds numbers have been made. The ar ticle presents dependences of the geometric surface area of packing per unit volume, a, m2/m3 and hydra ulic diameter of packed bed, dh, m. The effect of the geometric characteristics of structured packings on t he value of their resistance coefficient for single phase flow of gas phase at flooding point has been studi ed.

Keywords: geometric surface area, relative void fraction, hydraulic diameter, resistance coefficient

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FEATURES OF THE TECHNOLOGY OF MEN'S SHIRTS WITH DECORATIVE TRIMS

A man's shirt defines the taste, style, well-
being and character of its owner at the present time. A shirt with various types of decorative trims, which differ in the use of decorative trims seams and additional parts made of other materials, has become wide spread. The features of the processing of fasteners, collars and the bottom of the sleeves of shirts with vari ous types of decorative trims are considered by the authors of the article, the schemes of their assembly a re presented. The disclosure of the aspects of the manufacturing technology of such products will allow c lothing manufacturers to solve the issues of designing the processes of manufacturing new models of men 's shirts in a timely manner and create conditions for the preparation of production in a short time.

Keywords: men's shirt with decorative trims, classification of decorative trims, technology, processing schemes

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COLORISTIC PROPERTIES OF DECORATIVE COPPER COATINGS APPLIED BY THE METHOD OF COLD GAS-DYNAMIC SPRAYING

The results of the study of the coloristic properties of artistic products with copper coatings applied by the method of cold gasdynamic spraying (HGDN), as well as the method of color determination, which allo ws improving the approach to decorating and restoring art products, are presented. This makes it possible to study the quantitative properties of the color of decorative surfaces, which largely determines the qual ity and aesthetic properties of coatings and their subsequent decorative processing.

Keywords: copper coatings, cold gas-dynamic spraying, decorative coatings, gloss, roughness, spectrophotometer, coloristic properties, artistic products

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DIGITALIZATION OF PREDICTION OF SEWING MATERIALS CREEP PROCESSES

The article discusses the digitalization methods for predicting the processes of creep of sewing materials u sed for the manufacture of individual means of protecting a person from external mechanical impact.

Keywords: creep, viscoelasticity, deformation, sewing materials, forecasting, recovery processes

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METHODS FOR PRODUCING NON-WOVEN MATERIALS BASED ON TECHNICAL NON-NARCOTIC HEMP

The article discusses methods for obtaining non-woven materials based on technical non-narcotic hemp, as well as the possibility of obtaining non-woven materials using a needle-punched method.

Keywords: technical non-narcotic hemp, non-woven materials, needle-punched method

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SIMULATION OF MECHANICAL PROCESSES OF POLYMERIC TEXTILE MATERIALS

A variant of mathematical modeling of mechanical processes of polymeric materials is proposed, on the b asis of which deformation processes of varying complexity are predicted — from simple relaxation and s imple creep processes to complex deformation-recovery processes and reverse relaxation processes with alternating loading and unloading.

Keywords: mathematical modeling, polymeric textile materials, deformation properties, relaxation processes, operational processes

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SYSTEMIC ANALYSIS OF THE ACTIVATION ENERGY OF RELAXATION AND CREEP PROCESSES OF POLYMERIC MATERIALS

The article considers a systematic analysis of the activation energy of the relaxation and creep processes o f polymeric textile materials. A method for calculating the indicated activation energy based on mathema tical modeling of relaxation processes and creep processes of these materials is presented.

Keywords: activation energy, relaxation, creep, viscoelasticity, deformation

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WAYS TO INCREASE THE COMPETITIVENESS OF PRODUCTS OF THE TEXTILE AND LIGHT INDUSTRY

The key problems of ensuring the competitiveness of the textile and light industries are considered. Factor s are noted that objectively predetermine the need for state participation in the formation and implementat ion of innovative programs in traditional industries, which include the textile and light industries. The imp ortance of state support for the initial phases of innovation processes — scientific, design, technological — is emphasized. The role of such an innovative resource as staffing is noted. The expediency and poten tial possibility of increasing the role of universities as centers for the development of scientific research o n the problems of the industry and the training of highly qualified personnel capable of ensuring the imple mentation of innovative processes at all stages, from scientific ideas to their commercialization, are subs tantiated.

Keywords: textile and light industry, innovations, competitiveness, management, organization of production

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COMPUTER SIMULATION AND PREDICTION OF OPERATIONAL PROCESSES OF POLYMERIC TEXTILE MATERIALS

The methods of computer modeling and forecasting of operational processes of polymeric textile material s based on mathematical modeling of these processes are considered. This forecasting makes it possible t o solve the problem of a comparative analysis of the properties of materials, as well as to investigate the r elationship between the properties of materials and their structure.

Keywords: computer prediction, mathematical modeling, polymeric materials, deformation properties, relaxation, creep

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