SELECTION CRITERIA OF OPTIMAL CHARACTERISTIC MATERIAL AND TECHNOLOGIES FOR PRECISION PROCESSING OF BASIC WORKING SURFACE OF HUMAN HIP-JOINT IMPLANT

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Abstract.

In view of the fact that the endo-prosthesis heads of human hip-joint are operated in extreme conditions, in respect of load, the selection of corresponding material and also increase of precision and quality of machining of spherical surfaces is rather topical task.

In the submitted work are reviewed the problems connected with definition of the influence degree of orientation of the sapphire crystal on its workability during diamond grinding with a butt of the ring and elaboration of the perspective, original scheme of formation of the incomplete spherical surface, particularly, of the sapphire head of endo-prosthesis of the human hip-joint.

THE EFFICIENCY OF USAGE OF NEW CONSTRUCTION ROTORS WITH THE ABILITY SIMULTANEOUSLY CHANGE BASIC GEOMETRIC PARAMETERS IN THE DYNAMICS AND THEIR CONSUMPTION IN THE FIELDS OF AVIATION AND HIGH-POWER WIND STATIONS

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ABSTRACT

In the report will be presented the investigation results of the working model of rotors with variable geometry parameters in dynamics. Because of aerodynamic and economic calculations, the effectiveness of use of such designs for powerful wind stations is

proved. The analysis of various designs and methods of selection of that or other design for various conditions of operation of wind installations in wide range of the wind speed change is given. Also rather effective by cost-price method of accumulation of wind energy will be suggested that is the topical world problem and for development of which are annually spent some hundreds of millions of US Dollars.

Keywords: Blade, setting angle, blades twist, wind energy

Wind generating wings and rotor manufacturing technology from polymer composite material of basalt fibers

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The study of the production of wind rotor wings from composite materials obtained by basalt fibers are discussed. The mechanical properties of the composition of basalt fiber are studied, tightening and stretching. The forces on the wind rotor wing are studied. This gave us an opportunity to find out what number of materials needed to make the rotor wing.

RESEARCH AND MODELING OF THE LABLE STICKING MECHANISM

J. Uplisashvili, T. Baramashvili, N. Tsivtsivadze

Summary

In the article is considered the research and modeling of the constructed on the inversion transformation label sticking mechanism. Is compiled the useful model of the paired mechanism built on an inversion transformation. Based on the structural scheme of this model, are calculated the laws of movement drive link and as result is compiled and drawn diagram that gives a clear picture of the movement of models.

TYPES OF LEATHER CLOTHES COMMON IN TH E XIXth CENTURY IN GEORGIA

L. Lursmanashvili, L. Kapanadze, T. Kudava

Abstract

The work deals with the development and use of leather in ancient Georgia, and types of leather clothes widely spread in the XIXth century in the country: a short leather, a four coat, a leather dress, trousers, a reaper's apron, fur jacket. The sudy presents their technical description, shapes, terminology, and practical purpose.

Hardware Security Model Algorithm For Cruise Control

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Summary

The article considers the possibility of hardware security model algorithm cruise konrol. As the basis of the model was selected Torque Based Throttle Control technology developed by Ford Corporation. The technology is characterized by a strategy of strengthening the control reliability elektrothrottle that fits well with the basic strategy of the cruise control. Built on the basis of this strategy, the hardware model for cruise konrol takes into account a number of additional factors which ensures enhanced security algorithm.

Improvement of Environmental Ecology Using methods of transport logistics optimization in Tbilisi

R. Tedoradze, G.Sisavadze, G.Gabelaia

Summary

The selection of rational routes of the interconnecting network of traffic flows between the right and left urban settlements of the river Mtkvari of the city of Tbilisi is one of the most important factor, along with other long-term and short-term programs to improve ecological conditions in Tbilisi. These routes will reduce the length of the traffic movement in the traffic flows and will unload ecologically and motion intensity overcrowded districts associated with these routes. For this purpose, the logistic methodology was developed, in which the construction of the overpass between the left and right coast of the river Mtkvari at one of the precincts of the Rustavi-Tbilisi highway was justified

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Using ozogenerator, „Samani - 2" for disinfecting books

Lali Tabatadze

Undoubted advantages of ozone technologies are high application efficiency, low cost of installation and maintenance costs and environmental safety. Ozone drastically reduces bactericidal contamination of surfaces. Especially its use in the treatment of surfaces that are not resistant to temperature treatment, as well as destroyed by acids or alkalis.

The article describes the use of ozone in various areas of the national economy as a means of disinfection and sterilization. For this purpose, the Scientific Group of the Georgian Technical University, TSU and the company "Velimisioni" specially for this purpose, developed various powerful and modification ozogenerators, with which it is possible to disinfect individual objects and objects. One of these ozogenerators is Samani-2, which was used in libraries for the disinfection of books.

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Using ozogenerator, „Samani - 2" In the production of wine

Lali Tabatadze

The paper notes the use of ozone in the food industry, in medicine and in the chemical industry as a means of disinfection and sterilization. Most operations require special preparation of process pipelines, and auxiliary equipment. Disinfection and sterilization of the internal surfaces of the equipment determine the quality and shelf life of the wine, since they directly affect the organoleptic characteristics and the resistance of the wine to obtain an ecological clean product.

In winemaking, the use of ozone has a huge advantage of its high antibacterial activity in minimal contact conditions. The use of ozone in agriculture, particularly in winemaking, can almost completely replace all the chemicals used in the vineyard. And this means koness pesticides and environmental pollution.

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ALTERNATIVE RAW MATERIAL AND TECHNOLOGY TO PRODUCE "MATE" TEA

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ABSTRACT

The article reviews "Mate" tea production, technological characteristics and large companies producing “Mate”. The article considers some disadvantages of well-known technical solutions of "Mate" tea production: Used tropical raw materials with very limited resource area, makes it impossible to produce tea in the quantity corresponding to a market demand that is reflected on the deficiency of tea "Mate". Existing technologies are rather primitive, time-consuming and expensive, not providing standard chemical and qualitative characteristics of the product. Herewith for the high production cost and selling price (30-40 U.S. dollars for 1 kg) the product is priced out of reach for unavailable to a wide segment of the population. We suggest new alternative raw material for the production of "Mate" tea - Caucasian rhododendron leaves and develop new technological scheme. Laboratory samples of rhododendron tea are obtained and carried out the tests. The implementation of the proposed technology is possible by the existing facilities for the green tea production at any small and medium enterprises with minimizing capital costs.