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Saliev E.I.

SELECTION CRITERION OF THE MAINTAINABILITY INDICATORS COMPOSITION OF THE WATER SUPPLY AND SANITATION SYSTEMS

This article discusses the classification and main indicators of the maintainability of the structural elements of the equipment and components of systems of water supply and sanitation, calculations of key indicators and ratios technical usage, and also identified additional indicators and factors of maintainability.

Ponomarenko A.V., Ved` V.E.

SURFACE CATALYST CONCENTRATION INFLUENCE ON MASSOUTPUT INTENSIFICATION PROCESS IN REACTION OF A BENZENETHERMOCATALYTIC DESTRUCTION

The identification methodology of influence of size of surface catalyst concentration on extent of benzene thermocatalytic conversion is introduced which includes use of the Frendlikh adsorption equation. The positive analysis of this methodology efficiency via comparison of settlement values with experimental data is conducted.

Ponomarenko A.V., Ved` V.E.

SURFACE CATALYST CONCENTRATION INFLUENCE ON MASSOUTPUT INTENSIFICATION PROCESS IN REACTION OF A BENZENETHERMOCATALYTIC DESTRUCTION

Podustov M. A., Bobukh A. A., Kovalyov D. A.

MODELLING OF PROCESSES OF NONLINEAR DYNAMIC SYSTEMS

In article the algorithm of a choice of structure of nonlinear dynamic system in relation to a type of required model allowing to use it for the solution of the various tasks arising at creation is offered is computer the integrated control systems of technological processes.

Ogurtsov A.N., Bliznjuk O.N., Kleshchev N.F., Masalitina N.Yu.

CHEMICAL-PHYSICS MECHANISMS OF THERMAL INACTIVATION OF THE PROCESSES OF EXCITONIC DEFECT FORMATION AND BIOMOLECULAR NANOCOMPLEXES FORMATION IN RADIATION TECHNOLOGY, BIOTECHNOLOGY AND BIOPHYSICS: SPECTROSCOPY AND THERMODYNAMICAL MODELING

Within the framework Arrhenius-Eyring approach the thermal inactivation processes of excitonic traps in krypton cryocrystals and enzyme-substrate nanocomplexes were studied. Such thermodynamics parameters of these processes as activation energy, enthalpy and entropy of inactivation were determined.

Mulenko A.O.

PRACTICAL RECOMMENDATIONS FOR CORRECTION ACTIONS RELATED TO USE AUTOMATIC SMALL ARMS AMMUNITION IN APPLYING AFTER WARRANTY PERIOD OF STORAGE

The article presents recommendations for the practical application of the results of theoretical and experimental studies to improve the operation of automatic small arms ammunition when applying post-warranty periods of storage.

Kudelya A.A., Kiselyov V.M., Lavrova I.O.

HIGHT-SPEED MASS-TRANSFER APPARATUS APPLICATION
FOR BENZENE-TOLUENE RECTIFICATION

The calculation and comparison of the benzene-toluene distillation columns with Mellapac-250Y and CSE are approved. The data of removal of per unit volume of the apparatus by 29 % during the transition to a distillation column contact and the separating element increasing are obtained. the of the. Falling of the pack efficiency with diameter increasing effect with Mellapak using and it absence with CSE is described.

Atamanov J., Krutikov G., Strizhak M.

IMPROVING ECONOMY IMPACT PNEUMOUNIT THROUGH JUDICIOUS MANAGEMENT OF
THE POWER SUPPLY CIRCUIT

The schemes are considered using pneumounit with built-in reservoir. The scheme of management by the shock pneumatic cylinder, allowing considerably to improve all most important operational indicators of the unit is offered: degree of power perfection, durability at the expense of unaccented landing of the piston in a saddle at reverse motion, decrease in marriage when performing shock operations as a result of lack of repeated blows, safety degree owing to unaccented operation in case of lack of preparation.

Atamanov J., Krutikov G., Strizhak M.

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Demirskyy A., Babich M.

EXPERIMENTAL STUDY HEAT CORRUGATED SURFACE PLATE HEAT EXCHANGER

Obtained criterion equations to evaluate the intensity of heat transfer heat-transfer surface.

Vurje B.A. Gordiuhin A.A., Salyga T.S.

CONTROL SYSTEMS OF HYDROUNITS OF AGRICULTURAL MACHINES

Questions of the control system modelling in the proportional valve with a feedback on loading with electroproportional control are considered in the article for a hydrodrive of the hinged equipment. The mathematical model describing work of the slide of proportional valve and control system is made.

Bratakh M.I., Varavina O.P., Kutya M.M., Tkach V.A.

THE ESTIMATION OF GAS PRODUCTION DYNAMICS FOR FIELD IN THE FINAL STAGES OF DEVELOPMENT

In the article a mathematical model of the gas production dynamics for fields in the final stages of development are developed and implemented for practical purposes. Also authors estimated the effect of liquid plugs creation in the tubing of the well and in the cavity of its field line on modes of the system "well–field line–collecting unit".

Bratakh M.I., Kusturova O.V., Ruzina I.M., Krymov A.P.

MODELING OF PIGGING FIELD LINE

The paper presents the results of experimental studies of the pigging field line process with flexible polymer pistons equipped self-destroying shell. The passage of elastic polymer composition through the cavity of the pipeline and the pollution that is removed from the plume within the cleaning process are calculated and approximated to the real conditions of exploitation.

Bratakh M.I., Skrylnyk K.Y., Burova M.Y.

SYNTHESIS OF MULTIPHASE FLOWS PIPELINE SYSTEM TRANSPORTATION PROBLEM

Based on systematic literature, regulatory documentation and patent search algorithm is presented for calculating the parameters of hydraulic condition of pipelines transporting multi-phase flows, which may contain oil, condensate, water, gas and mechanical impurities. The algorithm makes it possible to evaluate the pressure drop in the pipeline sections and the change in mass of the fluid in the pipe, respectively, the cycle of "compression–expansion" gas caps in the crossover points of the system.