

CONTENTS, ABSTRACTS AND KEYWORDS OF PAPERS

TO A QUESTION OF DETERMINATION OF DURABILITY OF THE SANDY SOIL BASES RECTANGULAR AND SQUARE THE BASES TAKING INTO ACCOUNT SOIL DESTRUCTION FORMS

V.V. Bessonov, I.V. Karelina

Results of pilot studies of zones of destruction of the sandy soil bases of square stamps are given in article. Results of experiments it is planned to use for a theoretical assessment of durability of the soil bases of the rectangular bases taking into account spatial work of soil on its trailer sites.

Keywords: soil basis, base, square stamp, tension, sandy soil.

INTERRELATION OF MICROSTRUCTURAL FEATURES, STRUCTURAL DURABILITY AND PHYSICO-MECHANICAL PROPERTIES OF LOESSIAL SOIL

E.I. Vjatkina, I.V. Karelina, M.A. Osipova

Quantitative changes of a microstructure of collapsible soil are given. Dynamics of change of its basic structural elements under the influence of heavy tamper is traced. The interrelation of structural durability and deformation characteristics of soil of the basis is shown.

Keywords: soil, tamper, microstructure, particle, quantitative analysis, structural durability, physico-mechanical characteristics.

RESEARCH OF WORK AND DETERMINING OF BEARING CAPACITY OF GALVANISED MULTI-BLADE SCREW PILES BY THE ACTION OF TORQUE

I.V. Noskov, A.V. Kopylov

The article presents the relevance and problem statement of the research and determine the bearing capacity of galvanised multi-blade screw piles by the action of torque.

Keywords: screw pile, multi-blade srew pile, pile testing, load capacity, torque.

A FRICTION-WEDGE'S VALUE ABRASION BY THE NODE OF OSCILLATION SUPPRESSION

A.V. Gabets, I.V. Levkin, M.V. Sapetov, A.V. Semenov

For freight wagon's oscillation suppression, which processing induced by inequality of railway, wedge-type shock absorbers are actively engaged in part of running gear. Overall performance of friction-wedge depends of mainly on its working operation. We present interconnection of the transport, constructive, exploitation and working friction-wedge position. We offer gage of the value abrasion working area by friction-wedge without raising on the truck.

Keywords: the node of oscillation suppression, friction-wedge, abrasion working area of friction-wedge, the transport, constructive, exploitation and working friction-wedge position.

RADIATION-CHEMICAL SURFACE MODIFICATION OF POLYETHYLENE FIBERS FOR THE PURPOSE OF REGULATION OF INTERACTION AT THE INTERFACE

S.V. Ananyin

The results of experimental studies of the effectiveness of regulation of interfacial interactions between polyethylene fibers and epoxy matrix are presented in the article. The adhesion between fiber and matrix is optimized by applying physical effects to the interface.

Keywords: interface, adhesion, shear strength, radiative forcing.

LOST FLOW RATE IN THE OPEN ADIABATIC THERMODYNAMIC SYSTEM

A.A. Balashov, G.V. Pyzhankin

Square lost velocity W_n^2 , characterized by the total loss of the kinetic energy in an open system, represented as separate components from the mechanical and thermal effects of flow resistance to the loss of velocity. An example of the separation energy losses components.

Keywords: lost velocity, kinetic energy, gasdynamic, mechanical, thermal, loss of power, flow rate, velocity squared.

FEATURES ALIGN TORSION SYSTEMS IN MACHINE UNITS WITH A CLEARANCE

V.S. Popovich, R.E. Pestretsov

Theoretical studies multibody systems is very difficult and computationally intensive. The practical value with fluctuations have low natural frequencies of simplified systems with a small number of the masses. Simplified system must be dynamically equivalent to the original system in the sense that the relevant low frequencies and forms of free oscillations of the mentioned systems should be close enough.

In the article considers the theoretical issues of free and forced torsional oscillations in the presence clearances in the systems of machines.

Keywords: torsional oscillations, resonance oscillations, clearances.

MODELING REGENERATIVE AIR HEAT EXCHANGER WITH INTERMEDIATE HEAT CARRIER

V.Yu. Borodulin, M.I. Nizovtsev

The paper deals with regenerative air heat exchanger with intermediate heat carrier for ventilation systems. A physical-mathematical model of heat transfer is proposed. An analysis of the impact of structural and operational parameters on the temperature efficiency of heat transfer is shown.

Keywords: heat regenerator, heat exchanger with intermediate heat carrier, packed column, ventilation and temperature efficiency.

DETERMING OF THERMAL CHARACTERISTICS AND ENERGY CONSUMPTION ELECTRIC FLOOR HEATING «HEATING CABLE»

M.I. Nizovtsev, V.Y. Borodulin, V.N. Letushko

In the paper the electric floor heating «heating cable» is described. The results of the experimental determination of its thermal characteristics and energy consumption are shown. A physical-mathematical model is proposed. A comparing of the results of numerical simulation and experiments were carried out.

Keywords: electric floor heating, heating cable, thermal characteristics, the power of heat, mathematical model.

SOLAR WATER HEATERS SIMULATION AND TESTING

S.E. Frid, V.I. Artemov, M.A. Kolobaev

As a result of numerical simulation of integrated solar water heater (SWH) the water flow pattern in its storage tank has been obtained. Using the flow pattern nature simplified SWH model has been constructed and SWH thermal testing procedure has been proposed.

Keywords: solar water heater, solar heating system, integrated solar water heater, solar collector-storage, thermal testing, SWH.

GAS DYNAMIC LOSSES IN OPEN ADIABATIC THERMODYNAMIC SYSTEMS

A. Balashov, E. German, A. Kuzmin

Impact of gas resistance in the channels of open systems in adiabatic process of expanding leading to an increase in flow outlet static pressure, temperature and specific volume, describing the gas and heat losses, which are divided into methods of mechanical and thermal effects of gas flow parameters of the resistances. An example of the separation of thermal losses.

Keywords: adiabatic process, gas dynamic losses, mechanical, thermal, static, impact, stream.

OPTIMIZATION OF PARAMETERS OF FLUCTUATIONS OF THE INTERNAL COMBUSTION ENGINE

V.S. Popovich, A.A. Zherdev

In article the developed and approved technique of definition of optimum parameters dynamic engine systems 4Ч 13/14 is resulted.

Keywords: optimum parameters, mathematical model.

THE ANALYSIS OF THE EFFICIENCY OF THE WORK OF BOILER UNIT «CARBOROBOT–40»

A.R. Bogomolov, B.A. Anferov, E.Yu. Temnikova, A.A. Lapin

The analysis of advantages and defects of automated solid fuel boilers of low power (10–150 kW), available on the market of Russia, both import, and domestic, is presented. The investigation of the working boiler unit «Carborobot–40» with definition of losses of heat on the basis of the compounded heat balance is carried out. The recommendations about advance of a boiler are developed by results of calculation of power efficiency of the boiler unit.

Keywords: the boiler unit, thermal balance, coal, biofuel (pellets).

POSSIBILITY OF FAT-CONTAINING VEGETABLE OIL WASTE RECYCLING RESEARCH

O.M. Gorelova, N.I. Kravchenko

The article presents getting of laundry soap based on fat-containing vegetable oil waste (soapstock). Samples of laundry soap were received by alkaline hydrolysis of soapstock method. There was determination of fatty acids, free caustic soda, sodium carbonate, foaming capacity for receiving the soap.

Key words: oil manufacture, soapstock, waste utilization, laundry soap.

USING METHYL TRIFLUOROMETHANESULFONATE AS AN ALKYLATING AGENT TO FORM DI(PYRAZOLIUM) SALTS

L.V. Zatonskaya, A.S. Potapov, I.A. Shchepetkin, A.I. Khlebnikov

The paper presents a method of obtaining the di(pyrazolium) salts, which is based on reaction of methyl trifluoromethanesulfonate (methyl triflate) with diiododerivatives pyrazole of bis(4-iodopyrazol-1-yl)alkanes and bis(4-iodo-3,5-dimethylpyrazol-1-yl)alkanes with the linker from four to twelve methylene groups.

Keywords: methyl trifluoromethanesulfonate, diiododerivatives pyrazole, alkylation, di(pyrazolium) salts.

STUDY OF THE BURNING RATE OF HIGH-ENERGY MATERIAL CONTAINING MODIFIED NANOALUMINUM

M.V. Komarova, A.B. Vorozhtsov, A.G. Vakutin

The results of experimental studies into the linear burning rate of metallized compositions containing different metal nanopowders, including glycine-passivated nanoaluminum of the mark «Alex», under pressures of 0.1, 4 and 10 MPa are reported. A prediction method based on thermographic and thermogravimetric measurements is shown.

Keywords: metal nanopowders, high-energy materials, burning rate.

PECULIARITIES OF PAPER-FORMING PROPERTIES OF MISCANTHUS PULP

V.V. Budaeva, Yu.V. Sevast'yanova, Yu.A. Gismatulina, V.N. Zolotukhin,
M.N. Denisova, I.N. Pavlov, G.V. Sakovich

Paper-forming characteristics of pulp samples obtained by the hydrotropic and combined methods from Miscanthusvar Soranovskiy were studied. Lab-scale paper samples derived from wet pulp specimens were found to have a breaking length of 2775 to 3050 m, the hydrotropic pulp showing an advantage, and a bursting strength in the narrow range of 86–90 kPa, the fiber length of the hydrotropic pulp (0.667 mm) being 1.4–1.7 times higher than that of the combined method pulp (0.385–0.470 mm). The paper samples made from the combined method pulp were shown to exhibit a higher stress-strain behavior; in particular, greater values were detected for tensile stiffness (802 kN/m versus 312 kN/m), breaking stress (77 MPa versus 16 MPa), and breaking strain (18.11 % versus 1.23 %). A conclusion that Miscanthus of the Russian origin is a promising raw material for individual types of paper in the pulp and paper industry is justified.

Keywords: Miscanthus, hydrotropic method, combined method, pulp, paper-forming characteristics.

STRUCTURAL-DIMENSIONAL CHARACTERISTICS OF HYDROTROPIC PULP FIBERS

M.N. Denisova, I.N. Pavlov, V.V. Budaeva, G.V. Sakovich

Structural-dimensional characteristics of fiber samples of hydrotropic pulps obtained from Miscanthus and oat hulls were studied. Common regularities inherent in fibrous semi-products of non-woody origin were revealed as well as conceptual distinctions of the pulp specimens derived from Miscanthus and oat hulls by the hydrotropic process. The Miscanthus and oat hull semi-products were found to refer to short-fiber types; therefore, mild conditions of milling are required to make the fibers fibrillated and prevent them from shortening. It was ascertained that, prior to milling, the length-to-width ratio for the Miscanthus pulp fibers (49) is higher than that for the oat hull pulp fibers (13). The roughness value of the fibers during the milling was found to be decreased by a factor of 2 for both the Miscanthus pulp and the oat hull pulp.

Keywords: Miscanthus, oat hulls, hydrotropic process, pulp, fiber's structural-dimensional characteristics.

THE CATALYTIC ACTIVITY OF SILVER WITH DI(IMIDAZOLIDINE)ALKANES

T.V. Goncharova, A.S. Potapov

The interaction imidazolium salts and silver oxide Ag_2O in acetonitrile were obtained silver complexes. Synthesis was carried out for 24 hours with stirring at a temperature of 75 °C. The resulting compounds were studied by IR and NMR spectroscopy.

Keywords: imidazolium salt, complexes of N-heterocyclic carbenes, the catalytic activity.

MODERNIZATION OF THE METHOD OF MEASURING CONDUCTIVITY OF LIQUIDS, WATER AND CHEMICAL SOLUTIONS

B.S. Pervuhin, V.B. Yushkova

The article is devoted to the modernization of the method of measuring conductivity of liquids, water, and chemical solutions. Modernization is to determine the contact parameters of the primary Converter. Analysis of the method showed the presence of systematic errors. To eliminate systematic errors of the proposed two methods. Elimination of systematic errors will allow for better control of liquid composition intended for chemical processes.

Keywords: chemical engineering process, conductivity, primary measuring Converter, impedance, transient conductivity, characteristic equation, transfer function, voltage experimental model.

CONCENTRATION OF CHLOROPHYLL "A" IN POLYTYPIC LAKES OF ALTAI TERRITORY IN 2012–2015

I.A. Sutorikhin, V.I. Bukatov, O.M. Frolenkov, I.M. Frolenkov

The results of the measurements in the winter 2012–2015 chlorophyll "a" concentration in three different types of lakes in the Altai Territory: Lapa, Krasilowsky, Bolshoe Island at different depths and with different coordinates of the points. The concentration of chlorophyll "a", measured within the specified period, ranged from 0,2 to 16 mg/m³ in the surface layer of these lakes. In the study of the chlorophyll concentration-dependence of the depth of lakes found that the maximum content of it takes place in the bottom layers of the studied reservoirs.

Keywords: chlorophyll, lakes, spectrophotometric method.

STUDY OF CHARACTERISTICS OF HIGH-ENERGY COMPOSITIONS CONTAINING MODIFIED DERIVED NITROTRIAZOLUMS NANOALUMINUM

M.V. Komarova, N.V. Kozyrev, N.V. Boyarinova, YU.V. Perederin, A.G. Vakutin

The results of experimental studies of physico-chemical characteristics nanoaluminum coated by tret-butyl-nitrotriazole are shown. The possibility to use in high-energy compositions is discussed.

Keywords: aluminum nanopowders, functional covering, high-energy compositions.

FORMATION MEMBRANES BASED ON MINERAL AND ORGANIC COMPONENTS TO REMOVAL IRON FROM GROUND WATER

I.G. Chigaev, L.F. Komarova

The properties of the deposited membrane selective layer of bentonite and organic polymer binders when removing from water iron in ionic and colloidal forms. The technology of cleaning with the combined application of precipitation and polymeric membranes. It proposes a nonchemical method of regenerating membrane.

Keywords: precipitated membrane, ultrafiltration, iron removal, water treatment, bentonite.

SYNTHESIS OF N-MONO- AND N,N-DISUBSTITUTED DERIVATIVES OF 4-NITRO-1,2,3-TRIAZOLE WITH ALICYCLIC SUBSTITUENTS

I.A. Krupnova, G.T. Sukhanov, Yu.V. Filippova, A.G. Sukhanova, K.K. Bosov

A distinctive feature of the alkylation of 4-nitro-1,2,3-triazole with menthol in an acidic medium is the formation of N1-R-4-nitro-1,2,3-triazoles (where R=2-isopropyl-5-methyl-cyclohexyl-, 2-methyl-5-isopropyl-cyclohexyl-, 2-(4-methylcyclohexyl)propan-2-yl- and 2-(3-methylcyclohexyl)propan-2-yl). The products formed only by the N1-substitution and their structural diversity are governed by skeletal rearrangements of the alicyclic moiety and by isomerization of the N2- and N3-derivatives with secondary and tertiary substituents into the most thermodynamically stable N1-substituted derivatives.

Quaternization of 1-R-4-nitro-1,2,3-triazoles (where R=cyclohexyl-, 2-isopropyl-5-methyl-cyclohexyl-, 2-methyl-5-isopropyl-cyclohexyl-, 2-(4-methylcyclohexyl)propan-2-yl- and 2-(3-methylcyclohexyl)propan-2-yl) with dimethyl sulfate comes with a partial heterolysis of the N1_{heterocycle}-C_{alicyclic} bond of the 1-R-3-methyl-4-nitro-1,2,3-triazolium salts. The reaction products are consequently a blend of the desired, mixed 1-R-3-methyl-4-nitro-1,2,3-triazolium salts and symmetrical 1,3-dimethyl-4-nitro-1,2,3-triazolium salt.

Keywords: 4-nitro-1,2,3-triazole, 1-disubstituted 4-nitro-1,2,3-triazolium salts, alkylation, quaternization, menthol.

EXCESS SLUDGE UTILIZATION RESEARCH

O.M. Gorelova, K.Y. Titova

The article presents excess sludge using problems in view of its salt of heavy metal filthiness. Methods and research results of sludge detoxication for the purpose of using as organic are given.

Keywords: excess sludge, heavy metals, biologic water purification, sewage sludge neutralization.

THE ACYLATION 2,6,8,12-TETRAACETYL-2,4,6,8,10,12-TETRAAZATETRACYCLO[5,5,0,0^{3,11},0^{5,9}]DODECANE OF NICOTINIC ACIDS

D.A Kulagina, V.V. Malykhin S.V. Sysolyatin

Obtained acyl derivatives 2,6,8,12-tetraacetyl-2,4,6,8,10,12-tetraazatetracyclo[5,5,0,0^{3,11},0^{5,9}]dodecane as hydrochloride salt.

Keywords: 2,6,8,12-tetraacetyl-2,4,6,8,10,12-tetraazatetracyclo[5,5,0,0^{3,11},0^{5,9}]dodecane, nicotinic acids, acylation.

TO DEFINITION PRESSURE-VOLUME RATE CHARACTERISTICS OF THE FLOWING FILTER

M.S. Vasilishin, O.S. Ivanov, A.G. Karpov, A.A. Kuhlenko, A.G. Ovcharenko, D.B. Ivanova

Analytical dependences for an estimation of pressure-volume rate characteristics of the flowing filter with reference to process of continuous washing of a solid phase of suspensions are gained. The obtained data can be useful at calculation and designing of the corresponding process equipment.

Keywords: flowing filter, calculation of hydrodynamic parameters.

DEVELOPMENT OF A SYNTHETIC METHOD FOR ALKYL UREA DERIVATIVES

D.S. Il'yasov, S.G. Il'yasov

The paper reports a new method developed for the preparation of alkyl urea derivatives via decomposition of the nitrourea ammonium salt and nitrourea alkylamine salts in organic aprotic and protic solvents, depending on temperature. The formation of alkyl ureas was shown to be dependent on the nature of organic solvent: the greater the dielectric permittivity, the higher the yield of the target product; and vice versa, the lower the dielectric permittivity, the less the yield of alkyl ureas. This method allows the synthesis of a wide array of primary and secondary alkylureas. The formation reaction of alkyl- and dialkylureas can take place in anhydrous solvents.

Keywords: alkylureas, dialkylureas, organic solvents, decomposition, dielectric permittivity.

HEAT RESISTANCE OF POLYMERIC COMPOSITES BASED ON EPOXY MATRICES

V.V. Samoilenko, E.V. Atyasova, A.N. Blaznov, D.E. Zimin,
O.S. Tatarintseva, N.N. Khodakova

The effect of the epoxy binder formulation on the heat resistance of cured specimens was experimentally studied. The content of a curing agent was shown to be the most influencing factor. The optimal composition ensuring the highest value of heat resistance up to 111 °C includes 85 parts by weight of a curing agent and 1,5 parts of an accelerator per 100 parts of epoxy resin. The Martens method was used to examine the heat resistance of glass fiber-reinforced and basalt fiber-reinforced plastic samples having different sections to create stresses in the range of 5–75 MPa. As the stress in the sample was increased, the thermomechanical curve was observed to show a more notable knee upon heating, which suggests the transition of the matrix from the glassy state to the high-elastic state, the heat resistance of the reinforced plastic being 30 °C higher than that of the binder. A modified Martens method is suggested to measure heat resistance of reinforced plastics.

Keywords: Martens heat resistance, epoxy binder, glass fiber-reinforced plastic, basalt fiber-reinforced plastic, thermomechanical curve.

NANOMETAL ALLOYS FOR USE IN HIGH-ENERGY MATERIALS

M.V. Komarova, A.B. Vorozhtsov, M.I. Lerner

The results of thermogravimetric measurements of high-energy materials are shown. The high-energy materials contains nanopowders Al, Cu, Fe, Ni, their mixtures and alloys. Excellent characteristics of composite metal nanoparticles are presented. The possibility to use this in high-energy materials are discussed.

Keywords: metal nanopowders, alloys, high-energy materials.

CYANOMETHYLATION / NITROTRIAZOLATION BY THE INTERACTION OF SODIUM 3-NITRO-1,2,4-TRIAZOLATE WITH CHLOROACETONITRILE

G.T. Sukhanov, A.G. Sukhanova, Yu.V. Filippova, K.K. Bosov,
I.A. Krupnova, A.N. Novitskiy

The reaction between sodium 3-nitro-1,2,4-triazolate and chloroacetonitrile was found to be accompanied by the tandem processes, cyanomethylation and heterylation. The cyanomethylation proceeds nonselectively all over the three nitrogen atoms in the heterocyclic ring to form a mixture of N(1)-, N(2)- and N(4)-cyanomethyl-3(5)-nitro-1,2,4-triazoles. The heterylation of the C(3)-nitro group of the N(2)-substituted nitrotriazole, the most reactive in the series of isomeric derivatives, takes place to furnish 2-(3-nitro-1,3'-bi(2H-1,2,4-triazole)-2'-yl)acetonitrile.

Keywords: sodium 3-nitro-1,2,4-triazolate, chloroacetonitrile, cyanomethylation, nucleophilic substitution, heterylation.

CONSTRUCTION OF MATHEMATICAL MODELS TO PREDICT THE CHARACTERISTICS OF THERMAL DESTRUCTION AND SMOKE FLOORING WITH THE MASS RATIO OF THE COMPONENTS

G.N. Isakov, A.R. Manaeva

Experimental studies of thermal decomposition of floor coverings based on polyvinyl chloride (PVC), and various fillers are presented. A kinetic approach to the mathematical description of thermal destruction and smoke generation proposed. Prediction ablation flooring under the fire conditions can be carried out by solving a system of ordinary differential equations with the mass of components .

Keywords: thermal destruction, smoke generation, kinetic constants, thermal gravimetric analysis.

DEVELOPING A METHOD OF MODIFYING AN EPOXY BINDER POLYMETHYLENE-P-THREEPHENYL ESTER OF BORIC ACID

A.V. Ozhogin, M.A. Lenskiy, D.V. Korabel'nikov, A.V. Gorbynov,
I.A. Skytary, I.V. Vashyrin, R.R. Kel'm

The article analyzes the methods of administration of polymethylene-p-threephenyl ester of boric acid in the epoxy binder EDI shows the results of the study of the kinetics of the interaction of polymethylene-p-threephenyl ester of boric acid with the components of the binder. Based on these results, we propose a new method for introducing a modifier.

Keywords: fiberglass, epoxy binder, polymethylene-p-threephenyl ester of boric acid, modification.

STUDY OF THE POSSIBILITY OF EDUCATION INTERPENETRATING THREE-DIMENSIONAL GRIDS IN COMPOSITE MATERIALS CONTAINING RUBBER, MODIFIED BY THE ADDITION OF POLYMETHYLENE-*p*-THREEPHENYL ESTER OF BORIC ACID

D.V. Korabel'nikov, M.A. Lenskiy, A.V. Ozhogin, A.V. Gorbynov, R.R. Kel'm, I.V. Vashyrin, I.A. Skytary

*It is shown that the use of polymethylene-*p*-threephenyl ester of boric acid as a modifier of the strength and performance of polymer-based composites rubbers leads to the formation of interpenetrating three-dimensional grids last bororganic polymer. Introducing said polymer increases the elastic modulus the polymer compositions as based rubbers and phenolic resins in the temperature range of operation.*

*Keywords: the polymer composition, the rubber, the modification, the polymethylene-*p*-threephenyl ester of boric acid, the modulus of elasticity, the interpenetrating grids.*

COMPUTATIONAL STUDY 2-STEP OIL-FREE BURNING DEVICES USING MICRONIZED COAL

A.P. Burdukov, O.L. Magdeevs, V.A. Kuznetsov, M.J. Chernetskiy

This paper presents the results of numerical studies of several prospective designs oil-free fuel burner using coal microgrinding, high reactivity is used to ignite the bulk of the coal dust standard grinding. Studies have shown that snail supply air and coal for the first stage of the burner, and the second stage provides sufficient conditions of temperature at the exit of the burner.

Keywords: micronized coal, 2-step burning devices, ignition coal dust, mathematical models, software package SigmaFlow.

STUDY DEPENDENCE OF THE CHEMICAL PRODUCTS OF COKING FROM CONCENTRATE COALS OF KUZNETSK BASIN FROM OF THEIR ELEMENTAL COMPOSITION

E.V. Vasileva, T.G. Cherkasova, S.P. Sybbotin, A.V. Nevedrov, A.V. Papin

The method and results of experimental studies of output chemical products of coking and built the relationship between these parameters and the qualitative characteristics of the coal concentrates Kuznetsk Basin. The dependences of the yield of chemical coking products (coke, coal tar and crude benzene) on the content of the main elements of organic mass of coal (carbon and hydrogen) for the studied concentrates coal of the Kuznetsk basin, which allowed to determine the main patterns of output data products.

Keywords: coal, coking, chemical products of coking, coke, tar, benzene.

**RESEARCH OF THE PROCESS OF SILILIRATION
THE WOOD OF PINE**

N. G. Komarova, A.S. Bogatyreva

The process of sililiration vinilmethylchlorosilane of pine. The influence of raw material pretreatment conditions (predgidroliz and explosive auto hydrolysis) on weight gain and associated content of Silicon.

Keywords: wood of pine, physical and chemical modification, sililiration, vinylmethylchlorosilane.