

## ABSTRACTS

UDC 691.175:699.8

**Use of non-metal composite armature for reinforcement of concrete constructions** / Klimov Y.A., Vitkovskiy Y.A., Soldatchenko A.S. // Collection Building materials, products and technical equipment. - 2011. - №42, p.13-17; fig.6. Bibliogr.: 5 titles.

On the basis of analysis of literary and patent data and results of laboratory researches the use of composite armature is recommended on the basis of basaltic and sklorovingu for re-enforcement of concrete elements and constructions which are under the action of aggressive environments.

UDC 691.175:699.8

**The development of scientific and practice bases for conduct the repair and renovation works on hydraulic structures of water management and reclamation systems** / Kovalenko A.V. // Collection Building materials, products and technical equipment – 2011. - №42. - P. 18-25: tabl. 3; fig. 3. Bibliogr.:5 titles.

Research results carried out by specialists of laboratory of water management and reclamation systems IWPALR aimed at development of scientific and practice bases for conduct repair and renovation works on hydraulic structures are presented in article.

UDC 691.175:699.8

**Strength and rheological properties of polymer-cement fibre concretes** / Kovalenko A.V., Dehtiar O.O., Bryuzgina N.D., Litvinenko P.E. // Collection Building materials, products and technical equipment – 2011. - №42. - P. 26-31: tabl. 4; fig. 3. Bibliogr.:6 titles.

It is presented the results the investigation on strength and rheological properties of polymer-cement fibre concretes subject to quantitative and qualitative composition, which are the base for development of new composite materials.

UDC: 691.328

**Main conditions of use Betell-M for immobilization of liquid radioactive wastes** / Serdyuk V.R., Khrystych A.V., Ivanova N.L. // Collection Building materials, products and technical equipment.– 2011.-№42.– P.32-36.: fig. 2. Refs.: 8 titles.

In this article describes the urgency of the problem of radioactive wastes storage in Ukraine is grounded. The analysis of the existing immobilization technologies of liquid radioactive wastes in Ukraine and abroad. The possibility of modified betell-M as a matrix material for immobilization of liquid radioactive wastes is grounded.

UDC 666.963.3/4.669.15-198

**Physical and chemical particularly of structure formation gas silicate matrix in the system “CaO-Al<sub>2</sub>O<sub>3</sub>-Ca(OH)<sub>2</sub>-SiO<sub>2</sub>-Al-FeSi-H<sub>2</sub>O”** / Djuzhilova N.A. // Collection Building materials, products and technical equipment. - 2011. - №42. – P.38-45: fig. 5. Bibliogr.: 5 titles.

By means of physical and chemical methods of researches it is established that introduction in structure of a raw mix of 5-10 % from mass of aluminium powder of a waste of crushing ferrosilicon with the subsequent autoclave processing leads to formation confusingly prismatic-needle-shaped the structure presented by new formation C<sub>2</sub>SH(B), C<sub>3</sub>S<sub>6</sub>H<sub>8</sub>, C<sub>4</sub>S<sub>3</sub>H, CSH(I), C<sub>6</sub>S<sub>6</sub>H, C<sub>2</sub>S<sub>3</sub>H<sub>2</sub>, tobermoryte 1,13 nm and reinforced calcium pedalferric hydrosilicates of type C<sub>3</sub>AS<sub>1,6</sub>H<sub>2,28</sub>, C<sub>3</sub>FS<sub>2</sub>H<sub>2</sub>, C<sub>3</sub>F(SiO<sub>2</sub>)<sub>0,24</sub>·5,16H<sub>2</sub>O, C<sub>2</sub>FH<sub>5</sub>, Ca<sub>2</sub>Al<sub>2</sub>Si<sub>3</sub>O<sub>10</sub>(H<sub>2</sub>O) i Ca<sub>3</sub>(Al, Fe)<sub>2</sub>(OH)<sub>4</sub>(SiO<sub>4</sub>)<sub>3</sub>, allows to stabilise gas silicate masses, promotes reduction of the shrinkable phenomena in new molded samples, activates processes of new formation which have prismatic-needle-shaped the form - Fe<sub>3</sub>Si<sub>2</sub>O<sub>5</sub>(OH)<sub>4</sub>, FeAl<sub>2</sub>SiO<sub>5</sub>(OH)<sub>2</sub>, Fe<sub>2</sub>Al<sub>4</sub>Si<sub>6</sub>O<sub>22</sub>(OH)<sub>22</sub>, Fe<sub>2</sub>SiO<sub>4</sub>, 3CaO·Fe<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>·2H<sub>2</sub>O, Ca<sub>2</sub>(Al, Fe)Al<sub>2</sub>Si<sub>3</sub>O<sub>12</sub>(OH), Ca<sub>10</sub>Fe<sub>5</sub>Al<sub>27</sub>Si<sub>18</sub>O<sub>89</sub>(OH)<sub>5</sub>, CaFe<sup>2+</sup>Fe<sup>3+</sup>Si<sub>5</sub>O<sub>14</sub>(OH), Ca<sub>4</sub>Si<sub>6</sub>O<sub>15</sub>(OH)<sub>2</sub>2(Fe(OH)<sub>2</sub>), CaAl<sub>2</sub>(SiO<sub>3</sub>)<sub>4</sub>2H<sub>2</sub>O, 3CaO·Fe<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>·2H<sub>2</sub>O, allows to receive an artificial stone with average density 540-580 kg/m<sup>3</sup>, compressive strength 4,5-5,2 MPa and water absorption of 33-38,5 %. Reduction of average density of a material by 8 % is thus carried out at increase its strength at 20 % in with characteristics of control composition.

UDC 666.97

**Experimentally-statistical modelling for analysis of building materials** / Lapovskaya S.D. // Collection Building materials, products and technical equipment. - 2011. - №42. – P. 46-49: fig. 1. Bibliogr.: 5 titles.

By results of research the offered decision on elimination of negative influence of fluctuations of parametres of quality of raw materials on properties of cellular concrete is theoretically proved and experimentally confirmed. Automated control system of technological process of manufacturing AAC products under condition of use of sub-standard raw materials is developed. On the basis of program definition and an establishment of interrelation of is reactionary-optimum structures of cellular concrete and technological parametres ways of their transfer on the mechanisms executing these works are developed. Experimentally-statistical researches AAC of various average density made on is reactionary-optimum structures in comparison with industrial structures and quality of cellular concrete, made by the enterprises are carried out.

UDC 666.9; 691.5

**Features of receipt of thermal insulation materials on basis of alkaline geopolymer compositions and siopor** / Pushkarova E.K., Gonchar O.A., Borisova A.I., Eine I.A. // Collection Building materials, products and technical equipment. - 2011. - №42. – P. 50-54: Fig. 2; Tabl. 5; Refs.: 5 titles.

Possibility of receipt ecological inorganic heat-insulation materials on the basis of alkaline geopolymer compositions and porous artificial filler siopor is presented in paper.

UDC 691.5

**Influence of multifunctional additive on character of new growths and property of artificial stone made from modified composite gypsum-containing binder substance** / Gasan J.G., Borzjak O. S, Chervenko E.M., Berdnik A.V. // Collection Building materials, products and technical equipment. - 2011. - №42. – P. 56-62: Fig. 4. Refs.: 5 titles.

In article a question is about features of formation of composite materials containing gypsum materials hydrosilicate calcium. Analysis of their effect on strength and water resistance of artificial stone. Illuminated mechanism of primary structure of artificial stone and positive role of ettringit in its formation. We describe usefulness of multifunctional additives in composite materials containing gypsum materials that affects processes of hydro and possibility of polymerization. We consider positive effects of calcium sulfate hemihydrate to strength characteristics of artificial stone, made of composite containing gypsum materials binder.

UDC 691.5

**Dry gypsum-containing stucco mixes for elevation of building furnish** / Gasan Yu.G., Kirilenko D.A. // Collection Building materials, products and technical equipment. - 2011. - №42. – P. 63-65: Fig. 3. Refs.: 6 titles.

A resulted result of researches of containing gypsum of clout mixtures for finishing of facades and optimum composition of mixture is offered. The analysis of petrographic researches is conducted artificial a stone from containing gypsum of clout mixtures.

UDC 678.744

**Protective polymeric tapes on the basis of epoxy-oligoester compositions** / Bratychak M. M., Bratychak M. M., Chopyk N.V. // Collection Building materials, products and technical equipment.- 2011.- №42.- P. 67-71: tabl. 1; pic. 2. Refs. 4 titles.

Crosslinking of epoxy-oligoester systems in the presence of epoxy resin on the basis of Bisphenol A modified by tert-butylhydroperoxide has been studied. Dependence of gel-fraction content and hardness of films on the basis of such systems upon different factors has been investigated.

UDC 666.767

**Anticorrosive protection drying trolleys compositions on the basis of geocement** / Guzii S.G., Konstantinovskii B.Ya. // Collection Building materials, products and technical equipment. - 2011. - № 42. - P. 72-75.: fig. 3. Bibliogr.: 13 titles.

In article the data on anticorrosive processing of metal surfaces drying trolleys by compositions on the basis of geocements from impacts of corrosive damp gas atmosphere on the Skvirsky brickworks (the Kiev area) is cited. The protected trolleys are in operation, have passed 20 rotation, damages compact, presence of cracks and traces of corrosive attack of corrosive damp gas atmosphere on coatings is not revealed. Supervision over a condition of coatings proceeds.

UDC 678.664:691.58

**Functional polymers and composite materials on their basis for building** / Lebedev E.V., Savelev J.V., Koljada V.N. // Collection Building materials, products and technical equipment. - 2011. - № 42. - P.76-80

Report is devoted creation on the basis of the fundamental scientific researches spent at Institute of chemistry of high-molecular compounds NAS of Ukraine, wide scale of new functional polymeric and composite materials for the decision of an actual problem of present time in building branch - to increase and lengthening of an operational resource of new and existing building constructions, preservation of a historical heritage of Ukraine - history and architecture monuments.

UDC 678.643

**Structurization of epoxy-oligoesteric mixtures in the presence of peroxide containing methacrylic oligomer** / Bratychak M.M., Chervinskyy T., Iatsyshyn O. // Collection Building materials, products and technical equipment.-2011. №42.- P. 81-86: tabl. 3; fig 3. Refs.: 5 titles.

The structurization of polymeric films based on epoxy-oligoesteric mixtures that consist of industrial dianolic epoxyresin ED-22, modified by tert-butylhydroperoxide methacrylic epoxyresin (peroxide containing methacrylic oligomer), oligoesteric acrylate TGM-3 and polyethylenepolyamine has been studied. The influence of ratio of components of mixture, temperature and the time of process on gel-fraction content and the hardness of films under various temperatures and times of process has been investigated. Obtained films had satisfactory hardness value and gel-fraction content. Such films can be successfully applied as protective coatings stable to environment action.

**PVC-membranes "TehnoNicoll" for modern roof covering** / Burchak D.V. // Collection Building materials, products and technical equipment.-2011. №42.- P.88-89: fig.2

UDC 699.8; 725

**New technology of waterproofing on the objects NSK "Olympic"** / Garmash A.I., Galinsky A.M. // Collection Building materials, products and technical equipment.-2011.-№42.-P. 90-94: tabl. 1; fig. 3.

In this article describes the technology of the waterproofing, made from lying freely waterproofing rolled material, welded into a single waterproof membrane with hot air. Due to the free fitting waterproof reduce the time of its construction. This technology gives the waterproofing membrane high maintainability, since a free gap between membrane surface can be downloaded waterproofing solution.

New technology has been successfully applied at reconstruction NSK "Olympic".

UDC 699.8

**About some basic properties of hydroisolating materials** / Dats Z.M. // Collection Building materials, products and technical equipment.-2011.-№42.-P. 95-99: tabl. 1. Bibliogr.: 8 titles.

Waterproofing materials used for roofing and another building construction. It is not logical to division these materials of the roofing and waterproofing. Principal property of these materials is capable to damp-proof. It may be determined with succession tests of water-saturation and water resistance in dependence of time water-saturation to constant mass instead of metrological don't logical definition water absorbing.

UDC 699.82

**Upgrading of ventilation processes of roofs** / Zhvan V.D. // Collection Building materials, products and technical equipment. - 2011.-№42. - P. 100-108: fig. 12

In this article were described new ways for providing ventilation system of flat and sloping roofs, which are protected by patent rights of Ukraine.

UDC 691.175:696

**Drainage tubular filters "POLISTOK" for waterfall systems and waterproofing**/ Karmazin A.M. // Collection Building materials, products and technical equipments/ - 2011. - № 42. - P. 109-112: fig. 4. Bibliogr.: 1 title.

In this article described design of composite tubular filters "POLISTOK"®. Examples of their use for water fall systems are given.

**Prospects of application roofing insulation materials on a bitumen basis** / Makovetskij I.V. // Collection Building materials, products and technical equipments/ - 2011. - № 42. - P.113

UDC 624.21

**Offer nice shooting efficiency rating for waterproofing "REBIT" pavement on orthotropic plate South bridge** / Mozgovoi V.V., Onishchenko A.M., Nevnhlovskyy VF, Riznichenko O.S, Melnichenko V.G, Levchenko A.A , Klimchuk V.M // Collection Building materials, products and technical equipments - 2011 - № 42. P.114-119: Table. 1.; Fig. 3. Bibliogr.: 5 titles.

The purpose of the production test was most characteristic of the southern bridge across the Dnieper River in Kiev waterproofing materials when constructing asphalt concrete pavement on orthotropic plate roadway.

**Roofing material "Keramoplast"** / Novosizhnjaja T.A.// Collection Building materials, products and technical equipments - 2011 - № 42. P.120-121

UDC 69.024

**About reliability of erection of attic roofs** / Pavljuk P.O, Pavljuk of M.P. // Collection Building materials, products and technical equipment. - 2011. - №42. - P. 122-129: tabl. 3 ; fig 4.

In given article the covered problems of state size standards operating now on designing, the device and operation of roofs DBN V. 2.6-14-95 placed in operation still in 1995 and constructed on application out-of-date roofing and thermal insulation materials which actually any more have no place in domestic building practice. In this question full revision and an operating time of the new domestic standard documentation, not only on the maintenance, but also on structure and sufficient fullness, proceeding from market conditions of activity of the roofing enterprises is necessary. Proceeding from it, in a tie in to DBN V. 2.6-14-95 for corporation "TechnoNICOL", concerning the combined roofs, are developed and installed: "Recommendations about designing and the device of roofs from to melt bitumno-polymeric materials "TehnoNIKOL"; "Recommendations about designing and the device of roofs from single layer polymeric diaphragms of company "TehnoNIKOL". These normative and technical documents, are approved at section session "Architecture and building inhabited and public buildings and constructions" by TNR Minregionstroj of Ukraine.

Article main objective is acquaintance with prepared for the statement and the edition "Recommendations about designing and the device of roofs from flexible tile SHINGLAS" corporations "TehnoNIKOL". This normative and technical document is analogue and the "TechnoNICOL" in a tie in to standard building requirements which operate in the conditions of Ukraine concerns a regulation attic and mansard roofs with application of a complex of heat-waterproofing materials, elements and corporation tools.

UDC 665.7.035.6

**Changing the viscosity of bitumen, as a result of the effect of high temperature** / Politova N.P. // Collection Building materials, products and technical equipment.- 2011. - № 42. - P. 130-133; table. 1, fig. 1. Bibliogr.: 4 titles.

The results of studies of viscosity when exposed bitumen samples studied in the high temperature of 80 °C and 140 °C. Also, using the results of a study was determined the index for the study of aging grade bitumen BND 90/130, after exposure with high temperatures.

UDC 666.964.3:691.163

**Waterproofing flat and arch roof covering with application of a roofing and waterproofing rolled material on the basis of butyl rubber** / Saly V.I.// Collection "Building materials, products and technical equipment." - 2011. - № 42. - P.134-136

More than ten years have passed from the beginning of manufacture of a roofing and waterproofing rolled material on the basis of butilkauchuk under the trade mark "Roof-butyl". The lead tests of samples of a material lain on roof ten years have confirmed stability of key parameters and durability.

**To a question on a choice of a waterproofing and quality of performance of waterproofing works** / Tchertkov O.Yu. // Collection Building materials, products and technical equipment. - 2011. - № 42. - P.137-141

**High-quality roofing materials of "EURODAH" company** /Volkov R.V.// Collection "Building materials, products and technical equipment." - 2011. - № 42. - P.142-145: fig. 1.

UDC 625.731.2

**Strengthening and stabilizing of soils by mineral binder "ODOL-SG"** / Garkusha M.V. // Collection Building materials, products and technical equipment. - 2011. - №. 42. P. 147-153: tabl.1. Bibliogr.: 8 titles.

In the articles resulted planning of compositions of soils fixed addition of "ODOL-SG" and the optimum expenses of this addition for strengthening of soil and research of influence are set on physycal-mechanical indexes. The purpose of this research was an estimation of efficiency of the use of addition of "ODOL-SG" during stabilizing and strengthening of soils.

UDC 665.637

**Oxidated bitumens and bitumen-polymeric mixtures based on residue of Orkhovitsk oil** / Grynshyn O.B., Muhammad Shakir Al-Ameri, Bratychak M.M. // Collection Building materials, products and technical equipment.– 2011.– №42.– P. 154-158: tabl. 4. Bibliogr. 8 titles.

This work deals with the experimental results of main regularities of production of oxidated petroleum bitumen based on the oil residue from Orkhovitsk oil field. It has been shown that due to the changes in temperature, process time and oxygen consumption we may produce petroleum bitumens in accordance with the Ukrainian standards. The bitumen-polymeric mixtures with improved operational characteristics and adhesive properties have been obtained on the basis of residual bitumen of Orkhovitsk oil.

UDC 625.855

**Repair of fissured asphalt pavement with application membrane technologies** / Kishchinskij S.V., Kirichenko L.F., Kopinets I.V., Goncharenko J.F. // Collection Building materials, products and technical equipment.– 2011.– №42.– P. 159-165: tabl. 6, fig.1. Bibliogr.: 4 titles.

The structure is defined and the technology of preparation and packing mix polymer-asphalt-concrete is developed. Norms of repair old fissured coverings on membrane technologies which provides the device on a covering membrane layer from special polymer-bitumen binder with the subsequent packing on it of polymer-asphalt-concrete of certain structure are defined.

UDC 691.175

**Increase of asphalt pavement crack resistance temperature of ferro-concrete bridge constructions at expense of polymers using** / Nevinglovskiy V.F. // Collection Build materials, wares and sanitary engineering.-2011.-.№42. P. 166-171: fig.2. Bibliogr.: 8 titles.

In the article speech goes about the terms of work of asphalt carpet on reinforce-concrete bridge buildings. About the necessity of development of method of calculation on the remaining resource of asphalt carpet simultaneously taking into account a temperature factor with influence of time of action of a transport loading taking into account the use of polymeric lateksiv and with more complete account of features of his work on reinforce-concrete bridge buildings of highways.

UDK 625.7/8

**Analysis of laboratory test methods for asphalt concrete on cement concrete at shear** / Riznichenko O.S. // Collection Building materials, products and technical equipment. - 2011. - №42. - C. 172-175: fig.7. Bibliogr.: 7 titles.

Article presents analysis of laboratory test methods for asphalt concrete on cement concrete at shear.

UDC 699.86

**To estimation the destruction of polymers** / Dudarenko G. // Ccollection Building materials, products and sanitary technics. – 2011. –№42. – P.177-180, fig.2. Bibliogr.: 9 title.

In given clause modern problems of use of polymeric materials in building technologies which are connected with their specific destruction Necessity of the control of the given process are considered is by a guarantee of maintenance of durability and stability of characteristics of polymeric products in conditions of their operation.