

ABSTRACTS

UDC 691.542

Multicomponent composite cements and concrete / Bazhenov Yu.M. // Collection Building materials, products and technical equipment. – 2012. – №43. P.10-13 : tabl.: 6. Bibliogr.: 1 title.

Multicomponent cements and concretes with using of composite binding materials, complexes of effective organically-mineral additives, multicomponent compositions of concretes and intensive technology was examined.

UDC 691.5:666.94

Burnt soils - an active component of alkaline cements / Krivenko P.V., Rostovskaya G.S., Blazhis G.R. // Collection Building materials, products and technical equipment.. – 2012. - №43. – P. 14-17: tabl.: 2, fig.: 1. Bibliogr.: 3 titles.

In article examples of manufacturing and test of designs on the basis of the alkaline cements containing burnt soils are resulted. It is shown, that on the basis of the alkaline cements containing burnt soils manufacture not only ordinary, but also responsible is large-dimensional designs can be organised.

UDC 666.972.162

The influence of hydrophobic admixture on cement and its components / Niconets I.I., Dobrianskyi I.M., Shmyg R. A., Burchenia S.P. // Collection Building materials, products and technical equipment. – 2012. – №43. P.18-20 : tabl.: 1; fig 3.

The influence of hydrophobic admixture of thallium acid and sodium stearic, when they are compressed, on strength, phase composition and microstructure of stone on the basis of two-and three-calcium silicate, three-calcium aluminate, four calcium alumopherit and Portland cement of Mykolaiv cement plant is highlighted in the article.

UDC 691.5

Development of representations about structure of a plaster stone / Plugin A.N., Plugin A.A., Gasan J.G., Chervenko E.N. // Collection Building materials, products and technical equipment. – 2012. - №43. – C. 21-29: fig.: 13. Bibliogr.: 15 titles.

The critical analysis of existing representations about plaster structure, including about the mechanism of occurrence of phase contacts of accretion between crystals of two-water plaster is made. The small probability of formation of such contacts is shown. It is established, that primary elements of structure of two-water plaster are gel particles forming then at the expense of consolidation crystalline hydrate blocks. The equilibrium sizes of gel particles and crystalline hydrate blocks are defined. Durability and water resistance of a plaster stone are caused by occurrence between particles of individual electroheterogeneous contacts between opposite charged potential-defining ions of type Ca^{2+} - H_2O - SO_4^{2-} (face and longitudinal sides of blocks) and type Ca - H_2O \cdots SO_4 (\cdots - hydrogen bond) between longitudinal sides of crystalline hydrate particles.

Products of hydration of plaster (two-water plaster), represent superfine system with the water dispersive environment. In this connection durability and water resistance are defined, first of all, by the nature and water resistance of contacts between its structural elements, and then and structural elements.

UDC 699.86

Energyeffective materials are for the non-load-bearing constructions of building and building / Kersh V., Kholdaeva M., Fosch A., Shcherbina O., Mikhalevskaya T., Lebedeva A. // Collection «Building materials, products and technical equipment».–2012.-№43–P. 31-34: tabl. 3. Bibliogr.: 13 titles.

To the article the results of analysis of composition materials are driven on the basis of cement and gipseous astrigent on easy fillers: polystyrene concrete - for external non-load-bearing constructions and polystyrene gypsum concrete - for internal walls, that allow considerably to cut down expenses heat, and also bring down resources and building labour intensiveness and cost of building and building.

UDC 666.9; 691.5

Adjusting of composition and structure ma thermal insulation materials based on alkaline aluminosilicate binder systems / Pushkarova E.K., Gonchar O.A., Gurinchuk.D.Yu., Antikalo O.A. // Collection Building materials, products and technical equipment. - 2012. - № 43. - P. 35-39: tabl. 1; fig. 2. Refs.: 4 titles.

In this article describes the results of obtaining inorganic thermal insulation materials based on alkaline aluminosilicate compositions and different types of porous aggregates.

UDC 666.973.2

The low-cost manufacturing of facing silica-lime bricks under the rising prices of natural gas. Gasification of coal ash // Dolgopolov V.N. // Collection «Building materials, products and technical equipment».–2012.-№43/-P.41-46; fig.4. Bibliogr. 10 titles.

In the article the basic equipment and processes for the manufacturing of lime-ceramic binder for facing silica-lime bricks where coal ash is used as a fuel – instead of natural gas.

UDC 666.973.6 (082)

The role of gypsum in the formation of the phase composition of autoclaved aerated concrete neoplasms / Rudchenko DG // Collection Building materials, products and technical equipment. - 2012. - № 43. - C.47-54: tabl.: 2, Fig. 2. Bibliogr. 21 titles.

The article deals with modern approaches to the use of gypsum in the production of cellular concrete technology. The results of the influence of additions of gypsum stone and return sludge on the phase composition and structure of the tumor cell autoclaved concrete.

UDC 666.973.6

Effective filler for porous concrete / Serdyuk V.R., Khristich O.V., Ivanova N.L. // Collection Building materials, sanitary ware and equipment. 2012. - № 43. – P.55-58: Table 1; Fig. 2. Bibliogr.: 4 titles.

In this article describes is necessity of employing recourses saving technologies at building materials and products plants has been grounded. The use of chemically active fly ash in the content of ash cement binding allows to reduce the consumptions of Portland cement to 30% and to reach strength increase to 15%/ It is foreseen that the use of complex binder obtained in content with porous concrete will facilities reduce of formed mass deformations and provide the increase of construction quality effrontery of porous structure products.

Tendencies of modern technology of concrete and company BUDINDUSTRIJA additive / Babaevskaja T.V., Gladun A.L. // Collection Building materials, sanitary ware and equipment. 2012. - № 43. – P.60-63: Table 2; Fig. 5. Bibliogr.: 9 titles.

UDC 666.96; 666.97

The analysis of nano-technologies application in building /Girshtel G. B, Glazkova S.V., Levitsky A.V. // Collection Building materials,

sanitary ware and equipment. 2012. - № 43. – P.64-68: Bibliogr.: 22 titles.

Information review on theme “Application of nano-technology and nano-materials in production of construction materials” is presented in paper.

UDC 691.5

Mix design and investigation of properties of alkaline concretes on fly ash basis/Grabovchuk V.V., Kovalchuk O.Yu., Omelchuk V.P.// Collection Building materials, products and technical equipment.- 2012. -№ 43 . – P.69-72; tabl. 1; fig. 3. Bibliogr.: 7 titles.

It was done optimization of concrete mix design on cement type ПЦЕМ V-400 and pozzolanic cement type ПЦЕМ III-400. Concrete compositions with strength classes B15...B25 were achieved and investigated their service properties.

UDC 666.952

High-performance concretes made of the low water cements using pulverulent waste products / Dvorkin L.I., Dvorkin O.L., Garnitskij Y.V., Chorna I.V., Marchuk V.V. // Collection Building materials, products and technical equipment.–2012.-№43.–P.73-80: tabl 3; fig5. Bibliogr.: 7 titles.

There are results obtained of low water demand cements research using pulverulent waste products – fly ash and cement dust of rotary calcinerselectrofilters. It is shown the possibility of concrete producing with the strength up to 80 MPa using the offered cements. The optimal compositions of binders and concretes have been defined.

UDC 624.07.012.45:666.972

The analysis of researches in the field of reliability of ferro-concrete elements from high-strength concrete / Karpenko O.A. // Collection Building materials, products and technical equipment.–2012.-№43.–P.81-86: tabl 1; fig1. Bibliogr.: 28 titles.

We conducted a review of known methods and offers research papers on the application of high-strength concrete in reinforced concrete elements and set the region its most efficient use. Completed survey reliability analysis of building structures in compressed concrete elements with ductile concrete.

UDC 628.518:539.16

Recycling and localization of a toxic waste in slag-alkaline concrete and compounds / Krivenko P.V., Petropavlovskij O.N., Gelevera A.G., Voznyuk G.V. // Collection Building materials, products and technical equipment.–2012.-№43.–P.87-100: tabl.: 4; fig.: 16. Bibliogr.: 16 titles.

Structurization processes in modelling systems «alkaline cement - salts of heavy metals» are investigated and results of reliability of galvanic slimes localisation in a shlag-alkaline cement stone are resulted. Properties and the structures of shlag-alkaline concrete including galvanic slimes and the electrolits of fulfilled accumulators are considered, experience fixation galvanic slimes as a part of concrete products for road building and small architectural forms is resulted. Efficiency researches fixation a radioactive waste in compounds on alkaline cement are resulted.

UDC 666.19; 677.522

Durability of concrete with an active silica in the presence of high alkali content / Krivenko P.V., Petropavlovskiy O.N., Gelevera A.G., Fedorenko U.V. // Collection Building materials, products and technical equipment –2012, №43, P.101-106: tabl.: 2, fig.: 5, Bibliogr.: 5 titles.

In the model systems studied in the processes of structure formation occurring in the contact zone “cement stone – filler”. It is shown that the reaction of “alkali – silica” can be effectively controlled by introducing, in the alkaline cement in the form of an active alumina, such as metakaolin or fly-ash. It is shown that the stability of strength and deformation parameters of concrete based on alkali cement with alkali-aggregates reaction time, which allows them to predict a high durability.

Savings of cement in the production of custom and constructional concrete / Kriachek Vitali // Collection Building materials, products and technical equipment. - 2012. - № 43. - P.107-108: Fig. 3. Bibliogr.: 6 titles.

This article describes the possibility of obtaining an ideal curve of concrete and reducing costs of concrete manufacturing with the help of using washing sand from waste and crushed stone with cubical shape as concrete aggregates. Equipment and technology for producing the concrete aggregates are identified.

UDC 691.5, 961.333

Mortars for floors on the modified fly ash-cement binders basis / K. Pushkarova, V. Pavliuk, I.Pavliuk // Collection Building materials, products and technical equipment.–2012.-№43.–P.109-118: tabl. 5; fig. 5. Bibliogr.: 10 titles.

Dispersed reinforcement mortars on the modified fly ash-cement binders basis, containing up to the 60% of fly ash in their composition, were developed. Service and technological properties of developed binders and mortars were investigated.

UDC 691.3

Complex admixture based on ethylene glycol as plasticizer for alkali concretes / Igor Rudenko, Anatoliy Gergalo, Vitaliy Skorik // Collection Building materials, products and technical equipment.-2012.-№43.- P.119-124: tabl.2; fig.4. Bibliogr.: 10 titles.

This article describes one of the options for plasticizing of concretes based on alkali – blast furnace slag cements modified by complex admixtures containing polyols. The plasticizing effect is obtained due to formation of surface-active substances in the form of alcoholates of alkali and alkaline earth metals during cement hydration. The influence of complex admixture on the physicomechanical properties of fine-grained concrete is discussed for the system “ethylene glycol - sodium lignosulfonate”. The optimization of this system, namely the minimum quantity of ingredients at which the maximum plasticizing effect can be obtained, including the specified strength of concrete. According to DSTU B V.2.7 - 171:2008 the investigated admixture can be classified as forcible plasticizer, that is characterized by additional effects - slower setting time as well as hardening of alkali concretes and mortars in the early stages.

UDC 691.3

Evaluation of concrete strength: normative documents, test conditions, the reliability / Runova Raisa, Rudenko Igor // Collection Building materials, products and technical equipment.-2012.-№43.- P.125-132: fig.4.

This article assesses the strength of concrete as a physical value, taking into account the features of the material and the factors contributing to its formation. It is presented the analysis of the standards of Ukraine, which regulates the requirements for raw materials, fresh concrete and hardened concrete in the performance of tests to determine strength. The differences in the requirements for strength tests in the documents, not adapted to the norms of Ukraine, were showed. The peculiarities of the new generation of concretes, including alkali concretes, were described. It was emphasized the need to assess the reliability index of strength according to its homogeneity. The complex decision for determining strength during construction of a massive monolithic raft foundation was given as an example.

UDC 693.5
Influence of chemical admixtures on kinetics of carbonating of concrete // Runova R., Troyan V., Kamenotrus S., Tyholaz E. // Collection Building materials, products and technical equipment.–2012.–№43.–P. 133-138: fig 12. Bibliogr.: 4 titles.

On a speed-up method kinetics of carbonation of concretes with a different structure is investigated. The influence of admixtures of different chemical nature and functionality on the diffusion permeability of concretes is found.

UDC 691.53
Complex modifiers for high-performance building solutions / Sanytsky MA, Kropyvnytska T.P., Kotiv R.M., Mazurak T.A. // Collection Building materials, sanitary ware and tehnika. 2012. - № 43. - P. 139-143: Table. 3, Fig. 5, Bibliogr.: 7 titles.

The paper considers the influence of complex modifiers of plasticizing air-entraining, accelerating and decelerating actions that ensure obtaining of high workability mortar mixtures and quality indicators of high-performance building mortars for masonry and finishing works in different operating conditions.

UDC 666.974.2
Refractory concrete on the base of spinel-containing cement / Shabanova G.N., Korogodskaya A.N. // Збірник Будівельні матеріали, виробити та санітарна техніка. - 2012. - № 43. - P. 144 - 149: table. 2; fig. 4. Bibliogr.: 8 titles.

In the article the results of development of refractory concretes based on the spinel barium-containing cement. Found that in their physico-mechanical and technical properties of concrete designed not concede firing refractory products, this makes it possible to recommend them for wide use as linings in high-temperature units in various industries.

UDC 691.3
Influence of additive polyethyleneglycol on concrete properties/Leonid Sheynich, Dmitriy Ionov//Collection Building materials, products and technical equipment.–2012.–№43. – P.150-154: tabl. 4; fig. 3. Bibliogr.: 11 titles.

In this article describes the influence of additives polyethyleneglycol on technological properties of concrete mix and concrete. Investigate the joint action of polyethyleneglycol and polycarboxylate additives SKY 593 on concrete.

UDC 666.972.16
Research on possibility of usage of metal working wastes as catalyst for cement stone hardening / Sheinich L., Kyrychok. O., Belokon A., Orlova L., // Collection Building materials, products and technical equipment. – 2012. - № 43. – P. 155-161: tables 4, fig. 6. Bibliogr.: 11 titles.

Research on possibility of usage of metal working wastes as activator for cement stone hardening are analyses in paper. There is stated usage of metal working wastes is influencing positively to strength of cement stone when compressing. Optimal volume of metal working wastes is determined for different cement sorts.

UDC 691.87
Stand-form to determine the effect of concrete admixtures on the corrosion resistance of hard reinforcement in concrete / Sheinich L.A., Mykolayets M.G.// Collection Building materials, products and technical equipment. - 2012. - № 43. – P.162-164: Fig.2. Bibliogr.: 3 titles.

In this article describes the basic scheme of equipment, the power stand-forms, for the tension reinforcement. Stand-form is intended for testing to determine the influence of chemical admixtures for concrete on corrosion resistance of hard reinforcement in concrete.

UDC 691.3
Realization of modern trends of concrete science at enterprises of Industrial-Construction Group «Kovalska» / Surup V.J., Perekhrest A.I., Pashina L.D. // Collection Building materials, products and technical equipment.–2012.–№43.–P. 165-168: tabl 1; fig 2. Bibliogr.: 15 titles.

Realization of the modern trends of the concrete science at enterprises of ICG «Kovalska» has been described. Usage of the continuous particle size distribution of the aggregates, effective utilization of the modern superplasticizers, usage of the mineral admixtures, concrete mix production at the modern automatic concrete mixing units, usage of high quality cement make it possible to produce high quality level building materials, to realize the last achievements of the concrete science, to widen the assortment of the production at the enterprises of ICG «Kovalska».

UDC 666.9
Investigation of modified plugging mortars with low density / V. Terlyha, Kh. Sobol, Yu. Novytskyi // Collection Building materials, products and technical equipment.–2012.–№43.–P. 170-173: tabl. 3; fig. 4. Bibliogr.: 4 titles.

This article describes questions of development of modern plugging materials with high technological characteristics. By X-Ray and microscopically analysis high structure formation role of mineral additives, those bind free lime, that outcomes from Portland cement hydration was proved.

UDC 693.5
Performance aspects of concrete for monolithic structures // Troyan V. // Collection Building materials, products and technical equipment.–2012.–№43.–P. 175-179: fig 12. Bibliogr.: 4 titles.

The performance aspects of concrete of monolithic structures are considered. By results of the analysis of statistical data criteria of an express estimation of performance of concrete are proved. The values of these criteria for high performance concrete are received.

UDC 691.175:699.8
Restore concrete method of surface impregnation polymer compositions usingultrasonic vibrations/ Witkowski Y.A. // Collection «Building materials, products and technical equipment. – 2012. - № 43. - P. 181-184; Fig.2. Bibliogr.: 17 titles.

Developed and investigated a new way to protect and repair of concrete structures of hydraulic and industrial buildings at the site of their operation – surface impregnation polymer compositions under the influence of ultrasonic vibrations.

UDC 666.772.1:698.9.03
Effect of composition and temperature geocement processing on the properties of coatings /Guziy, S.G., Krivenko P.V., Konstantinovskiy B.Ya., Kirichok V.I. // Collection Building materials, products and technical equipment. - 2012. - № 43. – P. 185-191; table 2; fig. 2; Bibliogr.: 18 titles.

In this article describes we consider the influence of geocement and temperature treatment on the properties of the coatings. It is shown that in the temperature range 60-900°C compressive strength from 0.4 to 8.95 MPa and the strain shrinkage/expansion at a temperature of 300°C up to -3.4%, and in the temperature range 600-900°C from 0.58 to 4.2% of artificial stone is characterized on the basis of geocement $(0.35K_2O+0.65Na_2O)\times Al_2O_3 \cdot 3,5SiO_2 \cdot 10,5 H_2O$. Protective coatings based on it, which are deposited on a metal surface under the action of temperatures from 300 to 900°C keep up with the metal base by combining the shrinkage and expansion deformation of the coating and metal.

UDC:620; 624.21
Concrete density and strength increasing with impregnation of liquid glass by means of inner vacuuming / Kritov V.A., Kritova O.M., Tokarev M.N. // Collection Building materials, products and technical equipment. - 2012. - № 43. - P. 192-196: tabl.: 3; fig. 6; Bibliogr.: 4 titles.

Experimental research results concerning to increasing of concrete density and strength by means of inner vacuuming in porous material and its further impregnation with liquid glass are presented in paper.

Strength of concrete samples is increased to 1-2 times when strain and to 2-3 times when tension and water-absorption is decreased to 3-4 times after that.

UDC 699.8
Protection and restoration of concrete materials, IZO / Ignatova I.V., Sheynich L.A., Popruga P.V., Mykolayets M.G., Ionov D.S., Mazer E.A. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 197-199: tabl.2. Bibliogr.: 14 titles.

The article describes the main construction material specifications IZO intended for the protection and restoration of concrete structures.

UDC 628.7/8
Method of determination of index of fatigue of monolithic road-buildings materials / Mozgovoy V.V., Onischenko A.N., Kucman O.M., Nevinglovskiy V.F., Garkusha N.V., Aksenov S.Y. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 201-205: tabl. 1; fig. 6. Bibliogr.: 7 titles.

The analysis of experimental data, which a conclusion is done as a result of, is executed in the article, that the curves of fatigue of all materials are near to linear dependences in logarithmic co-ordinates. As a result of what on the basis of the unique dependence there is possibility to describe resistance of different materials tireless destruction.

UDC 666.972.16
Concrete for bridge construction / Chistyakov V.V., Shurgaya A.G., Doroshenko U.M., Gudimenko K.V., Serbin V.P. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 7: tabl. 2; fig. 2. Bibliogr.: 9 titles.

In this article describes the influence of complex modifier on the hydration process of Portland cement and the properties of high-mobility concrete mixes. The efficiency of the modifier in bridge construction, providing increased strength and durability. It is established that the use of complex modifier provides not only high-mobility concrete mixes with a long term preservation, but also given classes of concrete with improved physical and mechanical properties.

UDC 666.972.16
Modified for cement-concrete roads / Chistyakov V., Shurgaya A., Doroshenko Y., Chyzenko N., Kaboos A., Koval L. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 212-216: Table., 2, Fig.2. Bibliogr.: 12 titles.

Displaying one of the ways to improve the properties of cement-concrete for roads - changes the complex addition of polyfunctional action. Explored the effect of strength, frost resistance, vodonepronytsaemost cement-concrete, and the nature of solidification processes.

UDC 666.972.16
Experience of application of the complex additive AC-1M / Shurgaya A.G., Kharchenko S.Z. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 217-218.

Application complex additives AC-1M (SHAG) is effective way of increase of durability of concrete and ferro-concrete designs. Use of the given additive will allow to increase durability of concrete, in comparison with reference samples more than by 30 % and as to raise frost resistance in 3 times and to reduce water absorption in 2,5 times.

UDC 666.647.046.4
Deformation processes as occurring during heat treatment of ceramic masses containing chamotte used for the production of sanitary ceramic products / Palienko E.A., Lugovets S.Z. // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 220-222: tabl. 1; fig.: 2. Bibliogr.: 7 titles.

The possibility of directed regulation of the properties of ceramic materials containing fireclay, by changing the structure of a pseudo-condensation, namely, the degree of contact with the granules of clay particles grog, a set of changes in process conditions and methods for their preparation.

UDC 666.973
Influence of soaking compositions on operating properties of cellular concrete / Influence of soaking compositions on operating properties of cellular concrete // Collection Building materials, products and technical equipment. - 2012. - №43. - P. 223-226: fig.: 1; tabl.: 4. Bibliogr.: 6 titles.

The chemical properties of soaking compositions and starting cellular concrete was researched and were shown the influence each of them on operating properties of concrete. The benefit of concrete surface modification with increasing its properties for the ability of more widely application in building are represented.

*Автор статті несе відповідальність за наданий матеріал.
Будь-які вимоги до Оргкомітету щодо відповідальності та відшкодування
моральних або матеріальних збитків, спричинених через помилково чи невірно внесені дані,
виключаються.*