



Construction industry in focus (p. 4).

## MATERIALS

### **Chaly A.O. Economy of Aquatron materials application in the waterproofing of concrete structures**

Paper deals with the characteristics and properties of penetrating materials as requiring the least cost when waterproofing concrete structures (p. 8).

### **Stop allergy: complex of knitted plasters and fillers for quick-mix internal works**

The real quality of life does not begin with beautiful wallpapers or a fashionable collection of ceramic tiles, but much deeper – at the nanoscale of building materials that can provide a healthy microclimate in a residential or office building. It concerns people suffering from allergies to microorganisms and the emission of chemicals as well (p. 10).

### **Tsyplakov A.N., Chernousenko G.I. Gypsum composite is a promising building material**

Authors of the article share the experience and results of the experimental construction based on hypos materials (p. 12).

### **Dmitrak Yu.V., Gabaraev O.Z., Tsidaev T.S., Gabaraev G.O., Stas P.P. Properties of dry building mixtures with additives of knitting mineral waste**

The issues of replacing cement with available disposable materials as binders, in particular, phosphor gypsum and belite sludge, are considered. The dependences of the strength of building mixtures on the quantity and quality of mineral additives are experimentally determined. It is concluded that it is possible to obtain binders from mineral waste and the feasibility of combining components during the preparation of building mixtures (p. 16).

### **Ufimtsev V.M. Gypsum instead of clinker**

The possible use of technogenic resources as a replacement for clinker binder is considered in this paper (p. 20).

## EQUIPMENT

### **Helena Keller. Measuring instruments for testing building materials**

The Schleibinger company was founded in 1995. For over 25 years we have been developing, manufacturing and supplying measuring and control instruments, as well as creating innovative building materials based on cement or gypsum, which are in demand by our customers around the world. Over the years, a wide range of different measuring instruments has been developed. Many of them were created in close cooperation with the technical universities and industrial partners of Schleibinger. Main applications: rheology measurement, shrinkage measurement, instruments for measuring frost resistance and strength increase (p. 22).

## СОДЕРЖАНИЕ

Новости строительного комплекса ..... 4

### МАТЕРИАЛЫ

Чалый А.О. Экономика применения материалов «Акватрон» при гидроизоляции бетонных конструкций ..... 8

Стоп-аллергия: комплекс известковых штукатурок и шпаклевок для внутренних работ quick-mix ..... 10

Цыплаков А.Н., Черноусенко Г.И. Гипсокомпозит – перспективный строительный материал ..... 12

Дмитрак Ю.В., Габараев О.З., Цидаев Т.С., Габараев Г.О., Стась П.П. Свойства сухих строительных смесей с добавками вяжущих минеральных отходов ..... 16

Уфимцев В.М. Гипс взамен клинкера ..... 20

### ОБОРУДОВАНИЕ

Хелена Келлер. Измерительные приборы для испытания строительных материалов ..... 22

Саргсян Г.Г. Преимущества двухупаковочной технологии производства сухих строительных смесей ..... 26

### ТЕХНОЛОГИИ

Дворкин Л.И., Бордюженко О.М. Свойства модифицированных цементных растворов с дисперсным гранитным наполнителем ..... 30

Мухаметрахимов Р.Х., Гадаутдинов А.Р. Влияние углеродных нанотрубок в составе поликарбоксилатного пластификатора на основные свойства гипсоцементно-пуццоланового вяжущего ..... 34

Мирюк О.А. Влияние способа приготовления формовочных масс на свойства магниезиальных композитов различной структуры ..... 38

### СОБЫТИЯ

Копылов И.А. Международная научно-практическая конференция «Российские и зарубежные технологии проектирования и строительства мостовых сооружений». Итоги ..... 44

**Sargsyan G.G. The advantages of the two-pack technology for the production of dry building mixtures**

Article is about the use in the manufacture of dry construction mixtures instead of expensive modifying chemical additives in the form of powders, obtained by peptization of dispersions, the corresponding additives in the form of latexes, resins, emulsions and other liquids in plastic containers to give the necessary physical, mechanical and operational properties. This is made possible with the two-pack dry mortar technology (p. 26).

### TECHNOLOGIES

**Dvorkin L.I., Bordyuzhenko O.M. Properties of modified cement mortar with dispersed granite filler**

The results of studies of modified mortars with the dispersed granite filler are presented in this paper. It has been shown that the granite filler at optimal dosing influences on the basic properties of mortars positively (p. 30).

**Mukhametrakhimov R.Kh., Gadautdinov A.R. The effect of carbon nanotubes in the composition of a polycarboxylate plasticizer on the basic properties of a gypsum cement-pozzolanic binder**

This paper presents the results of experimental studies of the effect of a polycarboxylate plasticizer on the rheological and physical and mechanical properties of a gypsum cement-pozzolanic binder. The positive effect of carbon nanotubes in the composition of hyper plasticizers on the studied properties of this binder is shown (p. 34).

**Miryuk O.A. The influence of the preparation method of molding materials on the properties of various structures magnesia composites**

Article deals with the results of a study of composite materials of various structures based on magnesian binders and man-made aggregates. The influence of the method of preparing the molding material on the strength properties of composite materials of various structures is established. In addition, the feasibility of the initial contact of the liquid component with the technogenic aggregate is shown. The microstructure of materials of various compositions was studied by electron microscopy (p. 38).

### EVENT

**Kopylov I.A. International scientific and practical conference «Russian and foreign technologies of design and bridge structures construction». Results**

The event was attended by over two hundred specialists of construction companies, general contractors and bridge subcontractors, representatives of design and research institutes. At the same time specialized exhibition took place. Equipment, machinery and materials for bridge building, represented by Russian and foreign manufacturers were demonstrated here. Publishing house «Kompozit XXI century» tells about some forum participants (p. 44).



## C O N T E N T S

Construction industry in focus .....	4
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### MATERIALS

<i>Chaly A.O.</i> Economy of Aquatron materials application in the waterproofing of concrete structures .....	8
Stop allergy: complex of knitted plasters and fillers for quick-mix internal works .....	10
<i>Tsyplakov A.N., Chernousenko G.I.</i> Gypsum composite is a promising building material .....	12
<i>Dmitrak Yu.V., Gabaraev O.Z., Tsidaev T.S., Gabaraev G.O., Stas P.P.</i> Properties of dry building mixtures with additives of knitting mineral waste.....	16
<i>Ufimtsev V.M.</i> Gypsum instead of clinker .....	20

### EQUIPMENT

<i>Helena Keller.</i> Measuring instruments for testing building materials .....	22
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<i>Sargsyan G.G.</i> The advantages of the two-pack technology for the production of dry building mixtures .....	26
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### TECHNOLOGIES

<i>Dvorkin L.I., Bordyuzhenko O.M.</i> Properties of modified cement mortar with dispersed granite filler .....	30
<i>Mukhametrakhimov R.Kh., Gadautdinov A.R.</i> The effect of carbon nanotubes in the composition of a polycarboxylate plasticizer on the basic properties of a gypsum-cement-pozzolanic binder .....	34
<i>Miryuk O.A.</i> The influence of the preparation method of molding materials on the properties of various structures magnesia composites.....	38

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<i>Kopylov I.A.</i> International scientific and practical conference «Russian and foreign technologies of design and bridge structures construction». Results .....	44
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