

New Instruments and Means of Automation for  
Nonferrous Metallurgy

S/119/60/000/008/003/005  
B019/B056

measurement is between 1-320 mg/l. A temperature measuring instrument of the type ИТБ-275М (ИТВ-275м) is provided for the continuous temperature measurement of the surface of the rollers of cold-rolling plants having a diameter of 160 mm and more. Here, the air temperature is measured by means of thermistors in the immediate neighborhood of the roller surfaces. The hygrometer of the type МБ(IV) for determining air and gas moisture operates with a sensitive element of microporous ebonite, a high-resistance bridge having been developed for measuring the transmitter resistance. The instrument of the type МКРТ-445 (IKRP-445) for measuring the concentration of mercury vapors in air consists of a two-part cell. One part of the cell is filled with pure air and hermetically sealed, while air passes through the other part. In both parts, the absorption of the light of a mercury vapor lamp is determined by means of a photocell. If mercury vapor occurs in the air, the photocurrent receives an alternating-current component which is electronically amplified. There are 8 figures.

ZUBKOV, G.A., inzh.; KRYUCHKOV, V.V., inzh.

Review of the book by D.S. Maidan and others "Mechanization and  
automation of industrial processes in mines." Ger. zhur. no.7:76  
J. '64. (MIRA 17:10)

ACCESSION NR: AP4033683

S/0118/64/000/004/0001/0007

AUTHOR: Zubkov, G. A. (Director)

TITLE: Automation of processes in nonferrous metallurgy

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 4, 1964, 1-7

TOPIC TAGS: automation, metallurgy, nonferrous metallurgy, automation in nonferrous metallurgy

ABSTRACT: The introduction of automation in some Soviet nonferrous-metallurgy plants is reported. At the Chimkent Lead Plant, the charging of shaft furnaces was automated, covering all operations of preparing, handling, and charging the mixture; an error of  $\pm 3\%$  for the automatic batcher involved and a 50% reduction in personnel are claimed. Also, cloth dust collectors (bag filters) were automated at the same plant. At the Ural Aluminum Plant, an experimental KUA-670 system of central supervisory control of Al electrolyzers was tested;

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the system was developed under the direction of KB TsMA (Design Bureau of Non-ferrous Metal Automation). At the "Severonikel'" Combine, an automatic cell-voltage monitoring system "Nikel'" was placed in operation in 1963; the system is able to scan up to 300 points. At the Kanaker Aluminum Plant, an experimental system of automatic hauling and distribution of alumina is being readied (Apr64) for operation. At the Elektrotsink Plant (near Ordzhonikidze), automatic control of the rotary furnaces used for producing Zn and Pb oxides was installed. The mix-preparing departments "were automated" at the Chimkent plant, Yuzhuralnikel' Combine, Elektrotsink, Ukrtsink, Yenakiyev Metallurgical Plant, and other factories. A few components used in the automation of the above plants are briefly characterized. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 07May64

ENCL: 00

SUB CODE: MM, IE

NO REF SOV: 000

OTHER: 000

Card 2/2

ZUBKOV, G.A.

New automation equipment. Gor. zhur. no.1:68-69 Ja '64.  
(MIRA 17:3)

1. Konstruktorokeye byuro TSvetnotavtomatika, Moskva.

ZUBKOV, G.A.

Means of automation for crushing and flotation departments of  
ore dressing plants. Gor. zhur. no.5:52-55 My '65. (MIRA 18:5)

1. Direktor Konstruktorskogo byuro TSvetmetavtomatika.

DIOMIDOVSKIY, Dmitriy Aleksandrovich; ZUBKOV, G.A., ref.; BUIROV,  
A.I., red.; KORENDYASEV, G.V., red.

[Control and automation of processes in nonferrous metal-  
lurgy] Kontrol' i avtomatizatsiia protsessov v tsvetnoi  
metallurgii. Moskva, Metallurgiya. Pt.1. 1965. 376 p.  
(MIRA 18:7)

ZUBKOV, G.A., inzh.; FEYGIN, V.I., inzh.

Over-all mechanization and automation is the decisive  
factor in the future growth of labor productivity in mines.  
Gor. zhur. no.6:3-6 Je '62. (MIRA 15:11)

1. Konstruktorskoye byuro TSvetmetavtomatika, Moskva.  
(Mining engineering--Equipment and supplies)  
(Automation)  
(Labor productivity)



ZUBKOV, G.A.

New instruments and equipment for automatic control in the  
nonferrous metallurgy. Priborostroenie no.8:9-12 Ag '60.  
(MIRA 13:9)  
(Electric controllers) (Electronic control)  
(Nonferrous metals--Metallurgy)

SOV/136-58-6-2/21

AUTHORS: Burov, A.I., Zubkov, G.A. and Shterenberg, Ye.I.

TITLE: Automation of Some of the Main Processes in Non-ferrous Metallurgy (Avtomatizatsiya nekotorykh osnovnykh tekhnologicheskikh protsessov v tsvetnoy metallurgii)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 6, pp 5 - 14 (USSR)

ABSTRACT: Although the bedding system of charge proportioning has been adopted at some works, most rely on a bunker system. The KB Tsvetmetavtomatika is concentrating its efforts on the automation of bunker systems. One of the requirements for this, state the authors, is level indicators and the KB TsMA have developed three types: type UEM-151 electromechanical three-position indicator (experimental batches of this are being produced); types ES-1000 and ES-1001 in a dust and moisture-proof case and in a light, portable case, respectively, which are based (Figure 1) on the electronic amplification of a current passing through the charge if present at the given level and have been successfully tested; type URF radioactive level indicators based on the installation of gamma-relays at different levels and linked with the bunker-charging system. The KB TsMA have also developed a belt weigher, type VI-58m, for feed ranges of 0-30, 0-75 and 0-200 t/h

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### Automation of Some of the Main Processes in Non-ferrous Metallurgy

(Figure 2); for smaller ranges (0-300, 0-1000, 0-3000 and 0-5000 kg/h), type VL-159 has been developed. For summing the feed rates of several belt-weighers, the KB TsMA have developed types RS-31 (Figure 5) and RRS-260 summing solid flowmeters based on electronic automatic bridges. For regulating the feed rate of a major component directly while keeping the rates of the others in constant ratios to this, a standard quantity-regulator (type IR-130 or ERK-77) is connected to the RS-31 instrument used for the major component. RRS-260 meters with standard ratio regulators (type ERS-67) are used for the other components.

The major feed rate can be controlled by, e.g. a suitable signal related to the productivity of the sinter strand via a type BO-264 transducer block. The authors mention the work at the Chimkent Lead Works in which compressed-air nozzles are provided at three levels in the bunkers for preventing sticking of materials in bunkers by blowing for 0.5-1 sec into successive layers until the sticking has been eliminated; if this fails, the whole feed system automatically stops. At that works, the

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productivity of the sintering machine is said to have increased by 6-8% and a saving of at least 2.5 million roubles is said to have been effected through the automation (costing 0.8 million roubles) carried out in 1957 by the KB TsMA. The automation of crushing and sintering operations at the old plant at Yuzhuralnikel' is now being completed and plans have been drawn up for the integrated automation of the new plant; at the Severonikel' plant, the planning of the automation of the charging sector of the electric smelting plant has been completed. The authors list the requirements for the integrated automation of sintering and describe the decisions made by the KB TsMA for the automatic control of the following units of the new Yuzhuralnikel' plant; bin charging (Figure 4); moisture additions; charge-height on cut-off plate (Figure 5); ignition temperature; strand speed (in relation to peak windbox temperature); fan-motor power; materials flows. Dealing with the integrated automation of shaft furnaces, the authors mention experimental work by the KB TsMA on a small experimental furnace at the Yuzhuralnikel' Combine; the results and those obtained

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Automation of Some of the Main Processes in Non-ferrous Metallurgy

by the Gintsvetmet and Gipronikel' Institutes showed that with open-top furnaces only some operations could be automated. The KB TsMA together with the Giprotsvetmet and Uzbekgiprotsvetmet Institutes are working on charging automation at the Chimkent Lead Works and with the Gipronikel' Institute on designs for the smelting-plant reconstruction at the Yuzhuralnikel' Combine. An automatic stockline-depth indicator has been designed (Figure 7). An automatic system for closed-top furnace charging (Fig. 8) has also been devised based on experience in East Germany; work on this is being carried out by the Kavkazgiprotsvetmet and the Gipronikel' Institutes for the "Elektrotsink" and the Novo-Ufaleyskiy Nickel Works, respectively. There are 8 figures.

ASSOCIATION: KB Tsvetmetavtomatika

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ANFILOV, A.A., inzh.; BAKALEYNIK, Ya.M., inzh.; BERGER, G.I.,  
inzh.; BRUK, B.S., inzh.; BUROV, A.I., inzh.; GINZBURG, V.L.,  
inzh.; ZABELIN, V.L., inzh.; ZAPLECHINYY, Ye.G., inzh.; KSAYEV,  
D.V., inzh.; KLIMOVITSKIY, A.M., inzh.; KRYUCHKOV, V.V., inzh.;  
KOTOV, V.A., inzh.; LEYDERMAN, A.Ye., inzh.; FODGOYETSIIY,  
M.L., inzh.; SAZHAYEV, V.G., inzh.; SEVAST'YANOV, V.V., inzh.;  
FILIPPOV, S.F., inzh.; FROMBERG, A.B., inzh.; SHNEYENOV, M.S.,  
inzh.; ERLIKH, G.M., inzh.; VERKHOVSKIY, B.I., red.; ZIL'KOV,  
G.A., red.; KARKLINA, T.O., red.; OVCHARENKO, Ya.Ya., red.;  
ANTONOV, B.I., ved. red.

[New means of automatic and centralized control for nonfer-  
rous metal mines] Novye sredstva avtomatizatsii i dispetcher-  
skogo upravleniia dlia rudnikov tsvetnoi metallurgii. Moskva,  
Nedra, 1965. 93 p. (MIRA 18:4)

ZUBKOV, G.A.

Automation of technological processes in the nonferrous  
metallurgy. Mekh. i avtom. proizvod. 18 no.4:1-7 Ap'64.

(MIRA 17:5)

1. Direktor Konstruktorskogo byuro "TSvetmetavtomatika."

ZUBKOV, G.A.

New devices and means for automatic control. Priborostroyeniye  
no.12:21-23 D'63. (MIRA 17:5)



SOV/136-58-6-3/21

**AUTHORS:** Averbukh, M.A., Burnashev, A.A., Birger, G.I., Baysh, L.G.,  
Zubkov, G.A., Zhiryakov, N.I., Isayev, D.V., Ovcharenko,  
Ye.Ya., Fromberg, A.B. and Shneyerov, M.S.

**TITLE:** New Means for Automatic Testing and Control in Non-ferrous Metallurgy (Novyye sredstva avtomaticheskogo kontrolya i regulirovaniya v tsvetnoy metallurgii)

**PERIODICAL:** Tsvetnyye Metally, 1958, Nr 6, pp 15 - 25 (USSR)

**ABSTRACT:** Many processes in non-ferrous metallurgy involve corrosive media and the Konstruktorskoye byuro (Design Bureau) Tsvetmetavtomatika (KB TsMA) have since 1955 been working on pneumatic control methods, which are especially suitable for such conditions. Other organisations named by the authors as some of those working in the same field are: Institut avtomatiki i telemekhaniki AN SSSR (Institute of Automation and Telemechanics of the Ac. Sc. USSR), NIITeplopribor, TsLA of the "Energochermet" Trust and the "Tizpribor" Works. A wide range (Table 1) is covered by the pneumatic transducers, produced by the KB TsMA (Figures 1 and 2) in which use is made of a corrosion-resistant Soviet plastic. A series of corrosion-resistant valves have also been produced (Table 2), including a diaphragm type with a position indicator

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New Means for Automatic Testing and Control in Non-ferrous Metallurgy

(Figure 3). For the continuous analysis of hydro-metallurgical solutions, the KB TsMA in 1957 developed (Figure 4) an automatic polarographic concentration-meter, type KAP-225, with a transducer type DAPK-226: this device has been successfully used at the "Elektrotsink" Works for analysing for cadmium in zinc electrolyte and is based on alternating-current polarography. The KB TsMA have developed a series of radioactive methods, particularly for level indication over a wide (type URF) (Figure 5) and a relatively narrow (type URPR) (Figure 6) range. A radioactive density-meter, type PR-150, independent of the mineralogical and size composition of pulp over a wide range has been successfully tested at the Zolotushinskaya obogatitel'naya fabrika (Zolotushinskaya Beneficiation Works) (ranges 1.5-2.5 and 1-2 kg/litre). Work is proceeding on other radioactive meters including a moisture meter, for concentrates and similar materials. Based on corrosion-resistant, differential, thermo-electric anemometer (electrical circuit proposed by engineers V.A. Drozdov and A.M. Listov), a flowmeter for pure or air-diluted chlorine has been developed by the

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KB TsMA; they have also developed an analyser (type GAKh-239) for chlorine which is accurate to  $\pm 3\%$  and these two instruments are to be used in an integrated automation system being devised for the magnesium industry. The KB TsMA have developed an automatic installation for (Figures 7 and 8) controlling a single pump in relation to the liquid level. Another recent activity of this organization has been the development of the type ATV-229 overheating protective device (Figure 9) and a twelve-point temperature signalling device (Figure 10). The ATV-229 device is to be produced by the Tsvetmetpribor Works. In collaboration with the Institut gigiyeny truda i profzabolevaniy AMN SSSR (Institute of Work Hygiene and Occupational Diseases of the AMS USSR), the KB TsMA have developed a device (Figure 11) for continuous measurement and recording of mercury-vapour concentration in air in the range  $0.1 - 0.6 \text{ mg/m}^3$ . This instrument (IKRP-445) (Figure 11) also gives an alarm signal if the concentration becomes excessive and its range is being extended in both directions.

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New Means for Automatic Testing and Control in Non-ferrous Metallurgy

There are 11 figures.

ASSOCIATION: KB Tsvetmetavtomatika

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ZUBKOV, G.A.

New means of automatic control and traffic control produced by the testing establishments of the Construction Bureau of Automatic Control in Nonferrous Metal Mines. Gor. zhur. no.8:46-48 Ag '63.

(MIRA 16:9)

1. Konstruktorskiye byuro TSvetmetavtomatika, Moskva.

(Automatic control)

(Mine communications--Equipment and supplies)

ZUBKOV, G.A.

Result of the introduction of automation and centralized control  
at the Degtyarsk Mine. Gor.shur. no. 2:49-52 P '61. (MIRA 14:4)

1. Direktor konstruktorskogo byuro TSvetmetavtomatika.  
(Automatic control) (Degtyarsk--Copper mines and mining)

ZUBKOV, G.A.; FBYGIN, V.I.

Automatization and dispatcher control in mining enterprises. Gor.  
zhur. no.11:64-72 N '57. (MIRA 10:12)  
(Mining engineering) (Automatic control)

AVERBUKH, M.A.; BURNASHEV, A.A.; BIRGER, G.I.; BAYSH, L.G.; ZUBEKOV, G.A.;  
ZHIRYAKOV, N.I.; ISAYEV, D.V.; OYCHARENKO, Ye. Ya.; FUCHBERG, A.B.;  
SHMEYEROV, M.S.

New means of automatic control and regulation in nonferrous  
metallurgy. TSvet. met. 31 no. 6:15-25 Je '58. (MIRA 11:7)  
(Nonferrous metal industries)  
(Automatic control)



BUROV, A.I.; ZUBKOV, G.A.; SHTEINBERG, Ya. I

Automatizing certain basic technological processes in the nonferrous industry. TSvet. met. 31 no. 6:5-14 Ja '59. (MIRA 11:7)

1. Konstruktorskoye byuro TSvetmetavtomatika.  
(Nonferrous metal industries)  
(Automatic control)

ZUBKOV, G.A.

127-11-10/12

AUTHORS: Zubkov, G.A. and Feygin, V.I.  
TITLE: Automation and Dispatching in the Ore-Mining Enterprises (Avto-  
matizatsiya i dispetcherizatsiya na gornorudnykh predpriyatiyakh)  
PERIODICAL: Gornyy Zhurnal, 1957, # 11, pp 64-72 (USSR)

ABSTRACT: The authors describe the work performed by the Designing Bureau of the "Tsvetmetavtomatika" Trust (KB UMA) on the automation and dispatcher control of processes in the ore-mining enterprises. Designs and schemes of the developed equipment are briefly described. A set of signalization, centralization and blocking equipment for the control of underground transport, CUE, has been constructed. The set includes: a dispatcher panel, relay-cases, inlet-distributing boards, devices for communication with portable and stationary objects, switch drives, traffic lights, relay and cable cases, pulse indicators, etc. The large-scale manufacture of this equipment has begun in the "Tsvetmetpribor" Plant in Mal'chik. Automatic ventilation doors for the mines of non-ferrous metallurgy have been designed to operate concurrently with the CUE - and dispatcher systems. The door is moved by a 180-w electric motor. New communications means have been constructed for dispatcher control: loudspeaking communication apparatus of the ITCH

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Automation and Dispatching in the Ore-Mining Enterprises

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3-120 type for underground operation which contains only semiconductor elements; high-frequency installations for loud-speaking communication of the B43-1M type high-frequency installation for information, search and communication of the BCO-124 type, etc. High-frequency equipment with semiconductor elements for communication with a moving shaft cage has been constructed and put into operation in one mine in Degtyarka. At the present time, a system of automatic and remote control of shaft mechanisms is being designed; only one worker, the cager, will be needed to operate mechanisms in all horizons of a mine. As soon as television sets are installed in all the horizons, the operation of shaft mechanisms and the mine car-exchange will be carried out automatically, even without a cager. In 1955, Tsvetmetavtomatika and Gintsvetmet designed standard installations for the automation of mining pumping. Since 1956 these installations have been manufactured by the Tsvetmetpribor Plant. Tsvetmetavtomatika has designed ATB-229 apparatus for temperature protecting of electric motor windings and bearings by means of thermistors connected with relays. The relays can be fixed for various critical temperatures from 80° to 110° C with intervals of 10°. Experimental consignments of these devices with TP-33 thermistors are being manufactured

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by the Tsvetmetavtomatika, and beginning from 1958 their mass production is planned in the L'vov plant "Termopribor". Tsvetmetavtomatika together with the Degtyarka Mining Administration are developing a system of electric locomotives remote control from a switchboard located at a loading (or unloading) point. Tsvetmetavtomatika carries out designing, manufacturing and introducing dispatcher control systems into operational mines. Standard devices manufactured by industry are used for this dispatcher control. However, some special indicators have been designed and are being designed for the control of some parameters. In particular, a special gamma-relay has been developed for the control of the ore level in hoppers. The relay operates on semiconductor elements and cobalt radioisotopes. The article contains 10 photos, 1 figure and 10 Slavic references.

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ZUBKOV, G.A.

Work of the construction bureau "Tsvetmetavtomatika" on the  
automation of technological processes at nonferrous metallurgy  
plants and factories. Tsvet. met. 38 no.641-5 Je '65.  
(MIRA 18:10)

ZUBKOV, G.A.

Automation should meet the challenge of new objectives. Gor.zhur.  
no.8:3-6 Ag '65.

(MIRA 18:10)

1. Direktor konstruktorskogo byuro TSvetmetavtomatika.

GREBENNIKOV, O.F.; MYASHNIKOV, S.I.; KARELIN, Yu.A.; ZUBKOV, G.A.

Attachment to the 16S-2 "Kiev" motion-picture camera for semiautomatic control of the lens diaphragm. Trudy LIKI no.11:35-38 '64.

(MIRA 18:10)

1. Kafedra kinofotoapparatury Leningradskogo instituta kinoinzhenеров.

MEDVINSKIY, Ye.O., kand.med.nauk; ZUBKO, G.I.; TOPCHIIY, N.G. (Kiyev)

Treatment of peptic ulcer patients with serum "F". Vrach.delo no.10:  
1079 0 '59. (MIRA 13:2)

1. Dorozhnaya ob'yedinennaya bol'nitsa No.2 Yugo-Zapadnykh zheleznykh  
dorog.

(PEPTIC ULCER) (SERUM THERAPY)



20470, 17,  
MEDVINSKIY, Ye.O., kand.med.nauk; ZUBKO, G.I. (Kiyev)

Treating gastric and duodenal peptic ulcer with lary blood combined  
with bromine and novocaine. Vrach.delo no.2:195 # '58. (MIRA 11:1)

1. Dorozhnaya ob'yedinennaya bol'nitsa No.2 Yugo-karadnoy zheleznoy  
dorogi.

(PEPTIC ULCER) (BLOOD AS FOOD AND MEDICINE)

28(5)

SOV/32-25-8-36/44

AUTHORS:

Druz', B. I., Zubkov, G. S., Kulagin, V. D., Magula, V. E.,  
Rasskazov, Ye. V., Tsukerberg, B. I.

TITLE:

Determination of Internal Stresses According to the Method  
of the Control Points

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 8, pp 1005-1006 (USSR)

ABSTRACT:

The most reliable determination methods of the absolute internal stresses of sheet metal constructions are the trepanation methods based on cutting out smaller sections of the structure. The method described in this article is of this type and is suitable for the determination of stresses of the first order which are of the greatest importance in large sheet metal structures. The designed instrument consists of an optical comparator and a special puncher (Fig 1). The puncher is a solid disk of steel with three cones arranged to form a delta-rosette and made of a hard alloy (from the Rockwell instrument). Under a 2-3 kg pressure three microscopical imprints are made on the surface to be investigated and on the standard sample. The latter is made of the same material as that of the tested sheet metal structure and both are kept at the same temperature

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Determination of the Internal Stresses According to the Method of the Control Points

during several hours. Then they cut out strips (90-100 mm wide) from the sheet metal structure (the stresses of the first order developed at cutting-out are removed) and the distances between the imprints on the strips and on the standard samples are measured in three directions with the optical comparator. The comparison with the standard sample is necessary because of the temperature deformation of the metal. The distances between the imprints are indirectly measured (Fig 2) and the dimension and direction of the stresses is determined by means of an equation. This method was used for stress determination on two large seagoing vessels and can also be applied at reservoirs, bridges, and other structures. There are 2 figures.

ZUBKOV, I., prepodavatel' (g. Omsk)

Planning study activities on one subject. Prof.-tekh.obr. 15  
no.1:20 Ja '58. (MIRA 11;1)

1. Tekhnicheskoye uchilishche No.2.  
(Technical education)

VASIL'YEV, A., arkhitektor; ZUBKOV, I., inzh.; CHELNOKOV, Ye., inzh.

Apartment houses built of vibrorolled panels. Zhil.stroi. no.7:  
2-5 Jl '60. (MIRA 13:7)  
(Kolpino--Apartment houses)  
(Concrete slabs)

ZUBKOV, I.

Source of strength and good spirit. Sov. profsoiuzy 17 no.1:33-35  
Ja '61. (MIRA 14:1)

1. Predsedatel' Vsesoyuznogo soveta Dobrovol'nogo sportivnogo  
obshchestva profsoyuzov.  
(Callisthenics) (Industrial hygiene)

Z 01  
LAVROVA, L., kandidat tekhnicheskikh nauk; DERGUNOVA, A., mladshiy nauchnyy  
sotrudnik; POLETAYEV, T.; ZUBKOV, I.

Diagrams for salting hams by injection with a hollow needle. Mias.  
ind. SSSR 26 no. 4:16-17 '55. (MIRA 8:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlen-  
nosti (for Dergunov and Poletayev). 2. Master 1-go klassa Moskovskogo  
myasokombinata (for Zubkov)  
(Pork industry) (Meat--Preservation)

22 (1)

SOV/27-59-3-6/37

AUTHOR: Zubkov, I., Instructor

TITLE: An Experiment That Deserves Attention  
(Opyt, zasluzhivayushchiy vnimaniya)

PERIODICAL: Professional'no-tekhnicheskoye obrazovaniye, 1959, Jr 3,  
p 6 (USSR)

ABSTRACT: The author suggests a change in the organization of the teaching process in technical schools of metal workers. In training turners, grinders, milling machine operators and fitters, these changes will reduce the cost and increase the training quality. The author mentions several themes taught to the students in groups of about 25. He suggests that these themes be presented to several groups of students by the lecturing method, which will be more useful than lessons delivered at individual classes. The author examines the pros and cons of his suggestion and points out that this question should be discussed by the methodological commissions to determine the subjects and method of conducting seminary exercises. A similar discussion and correction of

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An Experiment That Deserves Attention

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the training programs was carried out at the Tekhnicheskoye  
uchilishche Nr 19 (Technical School Nr 19), Novosibirsk  
(Director Voskoboynikov).

ASSOCIATION: Tekhnicheskoye uchilishche Nr 2, Omsk (Technical School  
Nr 2, Omsk).

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ZUBKOV, I.

27-1-9/19

AUTHOR: Zubkov, I., Teacher at the Omsk Technical School # 2

TITLE: Planning of the Teaching Procedure on one Particular Subject  
(Planirovaniye zanyatiy po odnoy teme)

PERIODICAL: Professional'no-Tekhnicheskoye Obrazovaniye, 1958, # 1,  
p 20 (USSR)

ABSTRACT: The article shows how the teacher at a Soviet technical school is teaching his students (future mechanics for industrial equipment repair) within 28 hours the "General Knowledge of Industrial Equipment Structure".

At first the teacher begins to acquaint his students with separate machine parts, as: axles, spindles, pinions, bearings, etc. Then comes the study of certain standard mechanisms, like crank-connecting rods, link type and cam type mechanisms; tooth, friction and belt gearings; screw-nuts and others. After having familiarized themselves with these mechanisms, the students will better understand the working principles of machine tools. Special attention is drawn to the study of the screw-cutting lathe "1 A 62" (or "1 D 62"). Afterwards the students get acquainted with the peculiarities of the machine tools "1 K 62",

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Planning of the Teaching Procedure on one Particular Subject 27-1-9/19

"1620", "1 M 620", etc., then with the milling machines "612" and "682" and subsequently with turret lathes, drilling, boring, planing, grooving, polishing, gear-cutting, gear-grooving machines and finally with automatic and semiautomatic lathes.

Concluding, the author expresses his opinion that it is also necessary to familiarize the future repairmen with internal combustion engines, e.g. with the auto engine "GAZ-51".

AVAILABLE: Library of Congress

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ZUSKOV, I.

For collaboration in work. Voen.znan.32 no.12:16 D '56.  
(MLRA 10:2)

1. Zaveduyushchiy otdelom fizkul'tury i sporta Tsentral'nogo  
komiteta Vsesoyuznogo Leninskogo kommunisticheskogo soyuza  
molodezhi.  
(Military education)

ANDRIANOV, K.A.; ZUBKOV, I.A.; GRINEVICH, K.P.; SHASHKOVA, Z.S.;  
KLEYNOVSKAYA, M.A.

Methylfluoroarylchlorosilanes. Zhur.ob.khim. 30 no.10:3380-  
3382 0 '61. (MIRA 14:4)

(Silane)

SHCHERBATENKO, V.V.; MIKULINSKAYA, L.R.; BEGANSKAYA, L.S.; ZUBKOV, I.A.;  
GRINEVICH, K.P.

Testing organosilicon compounds for the glazing of bread molds.  
Trudy TSNIKHP no.8:88-89 '60. (MIRA 15:8)  
(Bakers and bakeries--Equipment and supplies)  
(Protective coatings)

DCEROMSECV, I., TOLERAKOV, V. A., LUKIN, A. A.

Tomatoes

More about the wonder-tomato. Sad i og. No. 2, 1993.

Monthly List of Russian Accessions, Library of Congress  
June 1993. UNCL.

ZUBKOV, I.A.

Production of hammer mark enamels. Plast.massy no.5140-41 '60.  
(MIRA 13:7)

(Enamel and enameling)



ZUBKOV, I. A.

79-2-47/5

**AUTHORS:**

Andrianov, K. A.; Zubkov, I. A.; Krasovskaya, T. A.; Kleynovskaya, M. A.

**TITLE:**

Derivation of Polyethylsiloxanes of Linear Structure (Polucheniye polietilsiloksanov lineynoy struktury)

**PERIODICAL:**

Zhurnal Obshchey Khimii, 1957, vol 27, No 2, pp. 491-494 (U.S.S.R.)

**ABSTRACT:**

Report describes the method employed in the synthesis and separation of ethylsiloxane polymers of linear structure with 3 to 5 Si atoms in the molecule. The catalytic regrouping method in the presence of aluminum silicate was used in the derivation of ethylpolysiloxanes of linear structure. Hexaethylcyclotrisiloxane, octaethylcyclotetrasiloxane and hexaethyldisiloxane, were used as the basic substances for the synthesis. The separation of the individual polymers from the hydrolysis products was accomplished by fractionation in a rectification tower with an effectiveness of 20 theoretical plates. During the fractionation of hexaethyl-disiloxane, the rate of flow of the liquid was 200-250 ml/hr and the reflux number was 10-15. Rectification of the cyclic polymers was conducted at the same rate of flow of the liquid but the reflux numbers were

Card 1/2

Derivation of Polyethylsiloxanes of Linear Structure 79-2-47/58

25-30. The properties of the products obtained are listed in the tables.  
2 tables. There are 6 references, of which 1 is Slavic

ASSOCIATION:

PRESENTED BY:

SUBMITTED: February 17, 1956

AVAILABLE: Library of Congress

Card 2/2

*Zubov*  
ANDRIANOV, K.A.; ZUBKOV, I.A.; KHASOVSKAYA, T.A.; KLEYNOVSKAYA, M.A.

Preparation of polyethyl siloxanes of linear structure. Zhur. ob.  
khim. 27 no.2:491-494 F '57. (MLBA 10:6)  
(Siloxanes) (Polymers)

SOV/60-32-4-32/47

5(3)

AUTHORS: Andrianov, K.A., Zubkov, I.A., Semenova, V.A. and Mikhaylov, S.I.

TITLE: The Arylation of Methylchlorosilane by Aromatic Hydrocarbons  
(Arilirovaniye metildikhlorosilana aromaticheskimi uglevodorodami)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 883-888 (USSR)

ABSTRACT: As the reaction of arylation of alkylhalidesilanes is of extreme technological importance, the authors investigated the arylation of methylchlorosilane by benzene, toluol, diphenyl and naphthalene, in the presence of boric acid. The interaction of toluol, diphenyl and naphthalene with methylchlorosilane in the presence of boric acid resulted in the formation of tolylmethylchlorosilane, diphenylmethylchlorosilane and naphthylmethylchlorosilane. Some physical constants, such as boiling points, densities and refraction indices, were determined for these synthesized compounds

Card 1/2

SOV/80-32-4-32/47

The Arylation of Methylchlorosilane by Aromatic Hydrocarbons

and shown in the tables.

There are 10 tables and 8 references, 1 of which is Soviet, 4  
English and 3 American.

SUBMITTED: December 19, 1957

Card 2/2

ZUBKOV, I.A., inzh.

Compaction of the trunnions of the gate mechanism of hydraulic  
turbines. Energomashinostroenie 10 no.4:37-39 Ap '64.  
(MIRA 17:6)

SHCHERBATENKO, V.V.; MIKULINSKAYA, L.R.; BEGANSKAYA, L.S.; ZUBKOV, I.A.;  
GRINEVICH, K.P.; KOTRELEV, V.H.; VOLODIN, P.A.

Use of organosilicon compounds and fluoroplast in the baking  
industry. Trudy TSNIKHP no.8:85-88 '60. (MIRA 15:8)  
(Bakers and bakeries--Equipment and supplies)  
(Protective coatings)

ZUBKOV, I.A., inzh.

Present-day packing materials and packing techniques.  
Energomashinostroenie 10 no.4:46 Ap '64. (MIRA 17:6)



GRINEVICH, K.P.; ZHINKIN, D.Ya.; ZUREKOV, I.A.; POPOVA, S.L.; VOZKOV, A.N.

Polymer materials in the fishing industry. Plast.massy no.11:18-19  
'60. (MIRA 13:12)  
(Polymers) (Fishing—Implements and appliances)

S/191/51/000/001/006/015  
B101/B205

AUTHORS: Grinevich, K. P., Zubkov, I. A., Odishariya, S. N.  
TITLE: Synthesis of GKZh-10 and GKZh-11 - hydrophobic organosilicon liquids

PERIODICAL: Plasticheskiye massy, no. 1, 1961, 21-22

TEXT: Commercial synthesis of methyl and ethyl chlorosilanes is performed by reaction of methyl and ethyl chloride with elementary silicon in the presence of a catalyst. The residue (6-10%) from fractional distillation of the reaction mixture has different compositions. A suggestion has now been made to use the residue for synthesizing GKZh-10 (sodium ethyl silicoate) and GKZh-11 (sodium methyl silicoate). The distillation residues were hydrolyzed with water at 45-50°C. The powdery methyl and ethyl silanols thus obtained were treated with solid caustic soda and ethanol at 78-80°C and gave sodium-methyl and sodium-ethyl silicoates, respectively. GKZh-10 was obtained with equal composition, no matter whether ethyl chlorosilane or a 1:1 mixture of ethyl chlorosilane and ethyl trichlorosilane was hydrolyzed. By calculating the addition of

Card 1/2

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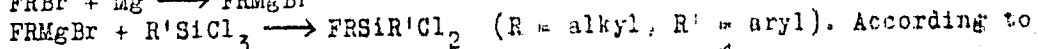
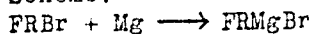
S/079/60/030/030/021/030  
B001/B066

AUTHORS: Andrianov, K. A., Zubkov, I. A., Grinevich, K. P.,  
Shashkova, Z. S., and Kleynovskaya, M. A.

TITLE: Fluoroaryl Methyl Silane Chlorides

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol. 30, No. 10,  
pp. 3380 - 3382

TEXT: The authors of the present paper synthesized some fluoroaryl silane chlorides and studied their reactions with ethyl alcohol. These fluoroaryl silane chlorides were obtained according to the following Scheme:



According to this reaction, p-fluorophenyl magnesium bromide and o- and p-fluorobenzyl magnesium bromides were obtained. Irrespective of the high yield of the organomagnesium compound (95-96%), the yields of the end products (p-fluorophenyl methyl silane dichloride, p-fluorophenyl methyl silane

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Fluoroaryl Methyl Silane Chlorides

B4880

S/079/60/030/010/021/030  
B001/B066

monochloride, p-fluorobenzyl methyl silane dichloride, o-fluorobenzyl methyl silane dichloride) were only 40-45%. A large quantity of di-(fluoroaryl) methyl silane chlorides and other reaction products formed in this process could not be separated. Table 1 presents the separated and identified compounds along with their constants. Fluoroaryl methyl ethoxy silanes were obtained from compounds synthesized according to the Scheme  $\text{FRSiR}'\text{Cl}_2 + 2\text{C}_2\text{H}_5\text{OH} \rightarrow \text{FRSiR}'(\text{OC}_2\text{H}_5)_2 + 2\text{HCl}$ . This reaction took place when passing the reactants through a column filled with Raschig glass rings at  $60^\circ\text{C}$ . This experimental set-up hampered the development of side reactions occurring when alkyl and aryl halogen silanes are esterified, and giving water, HCl, and alcohol. The silanes of p-fluorophenyl methyl diethoxy, o-fluorobenzyl methyl diethoxy, and p-fluorobenzyl methyl diethoxy have thus been synthesized (up to 45% yield). Their properties are specified in Table 2. There are 2 tables and 6 references: 2 Soviet, 2 Czechoslovakian, 1 US, 1 British, and 1 Canadian.

SUBMITTED: October 24, 1959

Card 2/2

ANDRIANOV, K.A.; ZUBKOV, I.A.; SEMENOVA, V.A.; MIKHAYLOV, S.I.

Arylation of methyldichlorosilane by aromatic hydro-  
carbons. Zhur.prikl.khim. 32 no.4:883-888 Ap '59. (MIRA 12:6)

(Silane) (Arylation)

ZUBKOV, I.A.

Trimming of mold outflow from automobile tire casings. Kauch. i  
rez. 23 no. 11:50-53 N 164. (MIRA 184)

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy  
institut shinnoy promyshlennosti, g. Omsk.

**GRINEVICH, K.P.; ZUBKOV, I.A.; ODISHARIYA, S.N.**

Synthesis of the GKZh-10 and GKZh-11 organosilicon liquids having hydrophobic properties. Plast.massy no.1:21-22 '61. (MIRA 14:2)  
(Silicon organic compounds)

ZUBKO, I.A., starshiy inzh.

Improved circuit for connecting signal light repeaters. Avtom., telem.  
i zviyaz' 5 no.4:37 Ap '61. (MIRA 1416)

1. Kovel'skaya distantziya signalizatsii i svyazi L'vovskoy dorogi  
(Railroads--Signaling)



**ZUBKOV, I.A., inst.**

Power characteristics of a new mechanism for rotating the blades  
of a Kaplan-type runner. [Trudy] IZM no. 4:369-377 '57. (MIRA 11:4)  
(Hydraulic turbines)    (Servomechanisms)

ZUBKOV, I.A.

Training of vulcanizer operators. Kauch. i rez. 24 no.5.52-53  
My '65. (ИРРА 18:9)

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskii  
institut shinnoy promyshlennosti, g. Omsk.

ZUBKOV, I.A., inzh.

Structural features of the seal units of hydraulic turbines.  
[Trudy] LMZ no.10:253-261 '64. (MIRA 18:12)

ZURBON, I.L.; ZURBON, E.M. (Duchess, I.L.M.)

... ..  
... ..  
... .. (1816)

ZUBKOV, Ivan Ivanovich, kandidat tekhnicheskikh nauk; UGRYUMOV, A.K.,  
kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., redaktor;  
VERINA, G.P., tekhnicheskiiy redaktor

[Organization of traffic in railroad transportation] Orga-  
nizatsiia dvizheniia na zheleznodorozhnom transporte. Moskva,  
Gos.transp. shel-dor. izd-vo, 1955. 443 p. (MLRA 9:4)  
(Railroads--Traffic)

L 06200-6

ACC NR: AP6031748

SOURCE CODE: UR/0191/66/000/007/0023/0025

AUTHOR: Zhinkina, L. N.; Vishnevskiy, F. N.; Zhinkin, D. Ya.;  
Zubkov, I. A.

39  
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B

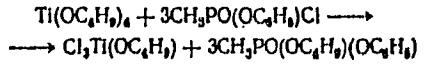
ORG: none

TITLE: Reaction of butyl orthotitanate with phenyl methylphosphono-  
chloridate or phosphorus oxychloride

SOURCE: Plasticheskiye massy, no. 7, 1966, 23-25

TOPIC TAGS: butyl orthotitanate, phenyl methylphosphonochloridate,  
phosphorus oxychloride, polyorganophosphorustitanoxana, *TITANATE,*  
*PHENYL COMPOUND, POLYMER STRUCTURE, CHEMICAL REACTION*

ABSTRACT: A study has been made of the reaction of butyl orthotitanate  
(I) with phenyl methylphosphonochloridate (II) as with phosphorus  
oxychloride (III). At up to 90C, I and II taken in a 1/3 ratio react  
as follows:



At above 100C the reaction products undergo condensation to form a  
polymer with a titanoxane backbone. The presumed structure of the

Card 1/2

UDC: 678.85+678.868.24

ZUEKOV, Ivan Ivanovich, kand. tekhn. nauk; UGRYUMOV, Arkadiy  
Konstantinovich, kand. tekhn. nauk; BERNGARD, K.A., doktor  
tekhn. nauk, retsenzent; BOGDANOV, I.A., inzh., retsenzent;  
ZHURAVLEV, M.M., inzh., retsenzent; KOZAK, V.A., inzh.,  
retsenzent; ROZENBERG, A.D., inzh., retsenzent; RYAZANTSEVA,  
Yu.A., inzh., retsenzent; SKALOV, K.Yu., kand. tekhn.nauk,  
retsenzent; PREDE, V.Yu., inzh., red.; KHITROVA, N.A., tekhn.  
red.

[Traffic organization in railroad transportation] Organizatsia  
dvizhenia na zheleznodorozhnom transporte. Izd.2., perer. 1  
dop. Moskva, Transzheldorizdat, 1962. 399 p. (MIRA 16:1)  
(Railroads--Traffic)

ZUBKOV, I. I., kand. tekhn. nauk

Computation of empty car mileage. Sbor. LIIZHT No. 170:87-90 '60.  
(MIRA 13:8)

(Railroads--Freight cars)



ZUBKOV, I.I., kand.tekhn.nauk

Specification of calculations for the planning of empty car  
transfers. Sbor. LIIZHT no.170:91-94 '60. (MIRA 13:8)  
(Railroads--Cars)

ZUEKOV, I.I., kand. tekhn. nauk; ROMANOV, A.P., kand. tekhn. nauk;  
TETREEV, M.N., kand. tekhn. nauk; UGRYUNOV, A.N., kand. tekhn. nauk;  
KUZ'MIN, N.N., inzh. (g. Leningrad)

"Aspects of railroad operation, Zhel. dor. transp. 41 no.1:94-96  
Ja '59. (MIRA 12:1)

(Railroads)

ZUBKOV, I.I., kand.tekhn.nauk

Remarks concerning the operational requirements for the automation  
of operations in classification yards. Sbor.trud.LIIZHT no.189:  
140-159 '62. (MIRA 16:7)  
(Railroads—Hump yards) (Automation)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3  
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3"

ZUBKOV, I.I., kand.tekhn.nauk, dotsent

Experience in working out the technical procedures at the  
Leningrad railroad terminal. Sbor. LIZHT no.153:10-42 '58.

(MIRA 11:8)

(Leningrad--Railroads--Yards)

"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3  
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3"

ZUBKOV, I.I., kand.tekhn.nauk, dotsent

Determining empty car runs. Sbor. LIIZHT no.153:118-123 '58.  
(MIRA 11:8)

(Railroads--Management)

SMIRNOV, Mikhail Vasil'yevich; BAZ', I.S.; ZUBKOV, I.I., nauchnyy red.

[On Soviet military science] O sovetskoi voennoi nauke. Moskva,  
Voen.izd-vo, 1960. 333 p. (MIRA 13:11)  
(Military art and science)

ZIMIN, V.I.; ZUBKOV, I.I., kandidat tekhnicheskikh nauk.

Technological process of operating a rail junction. Zhel.dor.transp.  
37 no.4:55-58 Ap '56. (MLRA 9:7)

1.Glavnyy inzhener Oktyabr'skey deregi (for Zimin)  
(Railroads--Station service)

KORNIYENKO, Daniil Iosifovich, general-mayor,; ZUBKOV, I.I., general-mayor,  
nauchnyy red.; KAPLUNOV, A.S., red.; BERLOV, A.P., tekhn. red.

[Role of the morale factor in modern war] O roli moral'nogo faktora  
v sovremennoi voine. Moskva, Izd-vo "Znanie," 1958. 47 p.  
(Vsesoiuznoe obshchestvo po rasprostraneniю politicheskikh i  
nauchnykh znaniy. Ser. 1, no. 28). (MIRA 11:11)  
(Morale)



"APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3  
APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065520017-3"  
ZUBKOV, I.I., kand.tekhn.nauk (Leningrad)

Interaction of freight and classification yards in junction stations.  
Zhel.dor.transp. 44 no.4:53-55 Ap '62. (MIRA 15:4)  
(Railroads--Traffic)

**ZUBKOV, I.K., inzh.**

Unit for making reinforced concrete ceiling slabs with two oval cavities. *Biul. tekhn. inform.* 4 no.5:29-30 My '58. (MIRA 11:8)

1. Stroytrest No.87.

(Concrete slabs)

ZUBKOV, I.K., inzh.

Unit for making reinforced concrete ceiling slabs with two oval cavities. Suggested by I.K.Zubkov. Rats.i izobr.predl.v stroi. no.14:59-61 '60. (MIRA 13:6)

1. Stroytrast No.87 Glavleningradstroya, Leningrad, ul.Pirogova, 7.

(Concrete slabs)

ZUBKOV, I.K., inzh.; CHELNOKOV, Ye.L., inzh.

Experimental apartment house built of rolled panels in the city  
of Kolpino. Biul. tekhn. inform. 5 no.3:3-7 Mr '59.

(MIRA 12:7)

(Kolpino--Apartment houses) (Concrete slabs)

GORUSHKIN, V.I.; ZUBKOV, I.P.; BRUK, I.S., chlen-korrespondent.

Increasing the stability of synchronous generators by controlling the excitation followed by rotor slips and accelerations. Izv. AN SSSR Otd. tekhn. nauk no. 9:1262-1281 S '53. (MIRA 6:10)

1. Akademiya nauk SSSR (for Bruk). (Dinamos--Alternating current)

1. KULIKOV, N.S., Eng.: NAZARENKO, I.I., Eng.: ZUBOV, I.V., Eng.: SPERMITSKIY, V.S., Eng.
2. USSR (600)
4. Kilns, Rotary
7. Problems concerning the further improvement of rotary kiln  
Tsement 18 No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

ZUBKOV, K.

The complete conversion of traction substations to alternating  
current. Zhil.-kom.khoz. 7 no.9:16 '57. (MIRA 10:10)

1.Glavnyy inzhener Upravleniya trolleybusa g. Kalugi.  
(Electric railroads--Substations)

ZUBKOV, K., inzh.

Automatic tray with pneumatic hoist. Stroitel' no.2:12 F '58.  
(MIRA 11:2)  
(Hoisting machinery)



ZUBKOV, K.

Controlling mercury vapors in the operation of traction substations.  
Zhil.-kom.khoz. 6 no.4:24-26 '56. (MIRA 9:8)  
(Electric railroads--Substations)

1. ZUBKOV, K. YE., SURNOVO, P. P., MISHENIN, YU. V.
2. USSR (600)
4. Glass manufacture
7. Mechanization of laborious processes in the production of medical glassware.,  
K. E. Zubkov, P. P. Surnovo, Yu. V. Mishenin., Med. prom., no. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

SOV/72-59-6-11/18

15(2)

AUTHORS:

Vladychenskaya, V. V., Zubkov, K. Ye.

TITLE:

Improved Construction of Molds for Pressing Plungers and Bushings (Uluchshennaya konstruktsiya form dlya trambovaniya plunzherov i bushingov)

PERIODICAL:

Steklo i keramika, 1959, Nr 6, pp 43 - 45 (USSR)

ABSTRACT:

In a number of glass-works the feeder plungers of automatic glass-molding machines are hand-made by the method of plastic molding although pressed plungers feature certain advantages. The authors of this article developed a new construction of molds for pressing plungers and bushings, i.e. the two-wing construction was replaced by a three-wing construction from which the product can be easier removed. Figure 1 illustrates the steel mold for pressing plungers, and figure 2 shows bushings, followed up by corresponding descriptions. The experiments were made with fire-clay-, kaolin-, and mullite layers, the compositions of which are given. Due to the introduction of the pressing method the output was increased by 1.5 times and the number of defective specimens was reduced. There are 2 figures.

Card 1/2

Improved Construction of Molds for Pressing Plungers and SCV/72-59-6-11/18  
Bushings

ASSOCIATION: Solnechnogorskiy stekol'nyy zavod (Solnechnogorsk Glass-Works)

Card 2/2

**ZUBKOV, K. Ye.**

Use of machinery in finishing the neck of glassware with ground glass stoppers. Med.prom. no.1:38-39 Ja-Mr '55. (MLBA 8:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskogo instrumentariya i oborudovaniya.  
(GLASS BLOWING AND WORKING)

ZUBKOV, L.

In the world of polymers. IUn. tekhn. 2 no.7:7-12 J1 '58.  
(Plastics) (MIRA 11:10)

44(0)

AUTHOR:

Zubkov, A.

NY 27-53-12-5, 21

TITLE:

Ionis - Bug, Workers (Iony - truzheniki)

PERIODICAL:

Tekhnika molodezhi, 1953, nr 10, pp 6-8 (333)

ABSTRACT:

In this popular scientific article the author reports on ionites referring to a talk with Mr. Kirill Aleksandrovich Kulada, Candidate of Technical Sciences. Ionite powders can be used in a wide range of application. They have quite a special peculiarity being capable of regenerating. At first, this very capability had restricted their application in some fields. But after extensive theoretical studies the Soviet scientists have succeeded in solving this problem. Chemists are beginning to give planning orders for the erection of ion-exchanging plants. These plants are provided for desalting highly saline waters in Turkmenistan, Kazakhstan, in the Caspian Sea, and in the Polar Region. Ionites are also used in the dairy industry. Nadezhda Mikhailovna Marozova, worker at the kafedra analiticheskoy khimii Instituta molozhno-melkchnoy promyshlennosti (Chair of Analytical Chemistry at the Institute of Meat and Dairy Industries), has shown to the author a

Card 1/3

Ions - Busy Workers

001/29-98-12-4/21

simple device that prevents the milk from getting sour. Ionites are also used in medicine. With their help it is possible to prepare, in a most simple and rapid way, such important drugs as streptomycin, aureomycin, biomyoin, spallin, novocain, and many others. Ionites are employed for the production of champagne, sugar, sodium chloride, for the processing of cotton, corn and sunflower waste from which valuable chemical products are obtained with the help of ionites. They serve for the collecting of noble metals from the waste water of metallurgical works. They clean waters of industrial waste water, thus preserving the fish stocks. It is impossible to name all fields where ionites are being used. So the question, what ionites really are you will get the answer that they are polymers, ion-exchange resins, substances similar to synthetics. All this is true. For the greater part, ionites are made of phenol, melamine, guanidine, formaldehyde, and other chemical substances. In 1955 scientists tried to synthesize ion-exchange polymers like those occurring in nature. They obtained artificial ionites reflecting a much more intensive ion-exchange than the natural ones. Beside the capacity of exchanging ions, the ionites have two more equally important

Card 2/3



Ions - Busy Workers

SOV/29-56-12-6/23

properties: they are mechanically very durable and chemically resistant. By these properties the ionites remain practically unchangeable. In the USSR, the manufacture of ionites is somewhat lagging behind due to the war. But in recent years this lag has been made up for. In the laboratory of A. K. Galadze alone about 2 dozen different ionites have been synthesized. Besides, there is the work done at the Moskovskiy khimiko-tekhnologicheskii institut imeni Mendel'eyeva (Moscow Chemical-Technological Institute imeni Mendel'eyev) as well as numerous universities and research centers of the country. How great the importance of ionites is can be seen from the fact that their application in power economy can bring to the State yearly profits amounting to billions. Moreover, the ionites - because of a most simple equipment of apparatus - can be introduced into industry much more easily than any other achievement of modern science. There is 1 figure.

Card 3/3

ZAKOVENKO, Z.S.; ZUBEO, L.A.

On the viral etiology of acute respiratory diseases. Vop. virus  
9 no.1(15)-16. Jibig 1961

1. Gdanskij institut epidemiologii i mikrobiologii imeni I.I.  
Mednikova.

GURVICH, S.I.; ZUBKOV, L.B.; GALETSKIY, L.S.

Genthelvite from silicified syenites. Dokl. AN SSSR 150  
no.5:1123-1124, Ja '63. (MIRA 16:8)

1. Predstavleno akademikom D.I.Shcherbakovym.  
(Syenite) (Genthelvite)

ZUBKOV, L.B.; KNYAZEV, V.N.

Radiometric methods in prospecting for rare metal carbonatite  
deposits in Siberia. Sbor. st. MGION no.1:65-77 '62. (MIRA 16:3)  
(Siberia--Trace elements)  
(Radioactive prospecting)