The Investigation of the Conversion of Carbon Oxide by Water Steam at Increased Pressure

ductivity rises more uniformly. Above 30 atm only a slight technical-economical effect is to be expected. The high pressure has the same effect on high- and low-temperature catalysts.
There are: 2 graphs, 2 tables, 1 diagram and 6 references, 3 of which are Soviet, 2 English and 1 Italian.

ASSOCIATION: Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnical Institute imeni V.I. Lenin).

SUBMITTED: January 6, 1958

Card 2/2

PHASE I BOOK EXPLOITATION SOV/5604

Atroshchenko, Vasiliy Ivanovich, Iosif Il'ich Gel'perin, Anatoliy Petrovich Zasorin, Viktor Ivanovich Konvisar, Antonina Yakovlevna Kraynyaya, Agnessa Grigor'yevna Leybush, and Anism Rudol'fovich Yastrebenetskiy

Metody raschetov po tekhnologii svyazannogo azota (Computational Methods in the Technology of Combined Nitrogen) Khar'kov, Izd-vo Khar'kovskogo univ., 1960. 302 p. 5,000 copies printed.

Ed. (Title page): V.I. Atroshchenko; Ed.: D.A.Vaynberg; Tech. Ed.: V.S. Zadorozhnyy.

PURPOSE: This textbook is intended for graduate students in chemical technology institutes, and may also be used by engineering and technical personnel of the chemical industry.

COVERAGE: The book describes computational methods used in the industrial production of hydrogen, nitrogen, synthetic ammonia, urea, nitric acid, and methanol. Problems in the refining of natural gas are also reviewed. The computations involve material and heat balances and the determination of

Card ~~1/5~~

dimensions of equipment and its design, based on equations of chemical reactions and thermodynamic computations of possible yields or reaction rates per se. Equations and formulas for determining reaction rates are also given. Plant outputs, flow sheets, and technical characteristics are included. The supplement includes an equilibrium state (vapor phase) diagram of a nitrogen-oxygen system; entropy diagrams for ammonia, air, nitrogen, and oxygen; graphs of heat capacity, viscosity, and heat conductance vs. temperature (0 - 350° C) for nitrogen-hydrogen-ammonia mixtures at P = 300 atm; a viscosity vs. percentage composition graph of CO + H_2 mixture at 50 - 400° C; diagrams of CH_4, CO_2, CO, N_2, and H_2 solubility in CH_3OH at 300 atm and 25° C; a compressibility coefficient vs. temperature (25 - 250° C) graph of CO + 2 H_2 mixtures at 250 and 300 atm; a nomogram of physical constants; enthalpy vs. temperature diagrams for alcohols, olefins and methanol; and tables of rate constants, partial pressures, heat contents of solutions, viscosities of gases, average molecular heat capacities of various gases and vapors at different pressures, rate constants of the oxidation of nitric oxide by oxygen at different temperatures, etc. The authors are affiliated with the Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina (Khar'kov Polytechnic Institut imeni V.I. Lenin) and the Gosudarstvennyy institut azotnoy

promyshlennosti i produktov organicheskogo sinteza (State Institute for the Nitrogen Industry and Products of Organic Synthesis). The Introduction and Chs. V, X, and XI were written by V.I. Atroshchenko; Ch. I, by A.G. Laybush; Chs. II, III, VI, and VII, by A.R. Yastrebenetskiy; Ch. IV, by I.I. Gel'perin; Chs. VIII and XIV, by V.I. Konvisar; Chs. IX and XIII, by A.P. Zasorin; and Ch. XII, by A. Ya. Kraynyaya. No personalities are mentioned. References, mainly Soviet, accompany individual chapters.

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Ch. II. Computations and Design of a Carbon Dioxide Conversion Plant 37

S/064/60/000/01/20/024
B022/B008

AUTHORS: Atroshchenko, V. I., Tseytlin, A. N., Zasorin, A. P., Zolotarev, V. S.

TITLE: The Utilization of Nitrogen Oxides - the Waste From Some Processes

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 1, pp. 79 - 80

TEXT: The problem of the utilization of nitrogen oxide waste developing during the manufacture of some products of the organic synthesis is dealt with in the paper under review. The development of a simple method for the utilization of nitrogen oxide waste in industry is desirable. The principal reactions which determine the forming of nitric acid from nitrogen oxide are mentioned and equations for the reaction rate are given. The utilization of highly concentrated nitrogen oxides permits the production of 55% nitric acid in accordance with the equation of equilibrium of the second reaction ($K_p = P_{NO}/P_{NO_2}$). The absorption takes place in a bubbling column which represents an absorber of improved type in the

Card 1/2

ATROSHCHENKO, V.I., doktor tekhnicheskikh nauk; ASNIK, Ya.I., kand.tekhn. nauk; NIKITSKAYA, Z.A.

Investigation of the stability of KU-2 and AN-2F ion exchangers used in the filtration of concentrated solutions. Khim. prom. no. 7:551-553 O-N '60. (MIRA 13:12)
(Ion exchange)

ATROSHCHENKO, V.I.; KORDYSH, Ye.I.

Optimum relation between the oxidation processes of nitric oxide and the absorption of nitrogen dioxide in the production of nitric acid. Izv. vys. ucheb. zav; khim. i khim. tekh. 3 no. 5:885-891 '60. (MIRA 13:12)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I. Lenina Kafedra tekhnologii neorganicheskikh veshchestv.
(Nitric acid) (Nitrogen oxide)

5.1110,5.2400

77631
SOV/80-33-2-6/52

AUTHORS: Atroshchenko, V. I., Konvisar, V. I., Kordysh, Ye. I.

TITLE: Concerning the Efficiency of Nitrogen Oxide Absorption in Bubble Plate Columns

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 2, pp 289-295 (USSR)

ABSTRACT: The rate of formation of diluted nitric acid is governed chiefly by the reactions of NO oxidation and the absorption of NO_2 thus formed. In designing bubble-cap and sieve plate absorption columns, the oxidation of NO and the composition of the nitrogen oxides is determined for each successive plate. The rate of NO_2 absorption and the amount of nitric acid formed is then calculated from the equation of equilibrium and the experimental value of the plate efficiency. The present study deals with the determination of the plate efficiency which is a function of several variables:

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$$C = f(c_{HNO_3}, P, t, w, h), \quad (1)$$

where c_{HNO_3} is the acid concentration (in % based on weight); t is the temperature of the acid (in ° C); P is the pressure (in atm); h is the distance between the plates (in m); w is the gas velocity (in m/sec). The study was made in a column consisting of cylindrical sections of various lengths from which columns with various distances between the plates were assembled. Plots of the plate efficiencies C against the acid concentration at various pressures and plates distances, in conjunction with data on C values at various gas velocities and acid concentrations (supplied by the Lisichansk Branch of the State Institute of Nitrogen Industry and the Central Laboratory of LKhK) allowed for establishing the empirical equations (5) and (10):

$$K = 0.0071 + 2 \cdot 10^{-4} \cdot P - 0.015 \cdot w. \quad (5)$$

where K is the coefficient expressing the change of C for 1% change of acid concentration:

$$C = 0.3 + K \cdot c_{HNO_3} + 0.0041\ P^{1.85} + \\ + 0.067\ h - 0.002\ t - 0.43\ w, \quad (10)$$

where 0.3 is a constant for a given plate construction and initial gas composition. Preliminary calculations of the values of C by means of the above equations showed that they can be used successfully in designing absorption columns for the production of weak nitric acid. The following workers of the TsZl LKhK (Abstracter's note: Presumably stands for the Central Factory Laboratory of the Lisichansk Chemical Combinate) took part in the study: M. T. Ivakhnenko, A. N. Berezhnaya, N. A. Rassypkina, Z. A. Makarova, A. N. Lyashenko, N. S. Bezperstova, N. N. Nikolayeva, and K. A. Dubenko. There are 6 figures; 3 tables; and 10 references, 1 U.S., 2 U.K., 1 Polish, 6 Soviet. The U.S. and U.K. references are: K. G. Denbigh, A. J. Prince, J. Chem. Soc., 6, 790 (1947); P. G. Caundl, K. G. Denbigh, Trans. Faraday Soc., 49, 1, 39 (1953); T. S. Chambers, T. K. Sherwood, Ind. Eng. Chem., 29, 12, 1515

Concerning the Efficiency of Nitrogen Oxide Absorption in Bubble Plate Columns

77631
SOV/80-33-2-6/52

(1937).

SUBMITTED: June 23, 1959

Card 4/4

SEMKO, Mikhail Fedorovich; ATROSHCHENKO, Vasiliy Ivanovich; NESTERENKO, Yu.Yu., red.

[For the development of cooperation between the workers of science and production] Za razvitie sodruzhestva rabotnikov nauki i proizvodstva. Khar'kov, Izd-vo Khar'kovskogo gos. univ., 1961. 106 p. (MIRA 18:1)

ATROSCHENKO, V.I., doktor tekhn.nauk; ASNIN, Ya.I., kand.tekhn.nauk; NIKITSKAYA, Z.A.

Investigating the possibility of the repeated use of a part of wash waters in desalting units. Khim.prom. no.1:66-68 Ja '61. (MIRA 14:1)

(Saline waters—Demineralization)

ATROSHCHENKO, V.I.; BIBR, B.

Kinetics of the conversion of carbon monoxide by water vapor.
Ukr. khim. zhur. 27 no.1:63-72 '61. (MIRA 14:2)

1. Khar'kovskiy politekhnicheskiy institut im. V.L.Lenina.
(Carbon monoxide) (Water vapor)

ATROSHCHENKO, Vasiliy Ivanovich; KARGIN, Stepan Ivanovich; CHULKOVA, I.S., red. ZAZUL'SKAYA, V.F., tekhn. red.

[Technology of nitric acid] Tekhnologiia azotnoi kisloty. Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry, 1962. 523 p. (MIRA 15:3)

(Nitric acid)

ATROSHCHENKO, Vasiliy Ivanovich; ALEKSEYEV, Arkadiy Mefodiyevich; ZASORIN, Anatoliy Petrovich; KIRILLOV, Ivan Petrovich; KONVISAR, Viktor Ivanovich; YASTREBENETSKIY, Anisim Rudol'fovich; VVEDENSKIY, P.I., prof., retsenzent; VARLAMOV, M.L., prof., retsenzent; BAZILYANSKAYA, I.L., red.; TROFIMENKO, A.S., tekhn. red.

[Technology of combined nitrogen] Tekhnologiia sviazannogo azota [By] V.I.Atroshchenko i dr. Khar'kov, Izd-vo Khar'kovskogo univ. 1962. 322 p. (MIRA 17:1)

ACCESSION NR: AR4015647 S/0081/63/000/022/0440/0440

SOURCE: RZh. Khimiya, Abs. 22N87

AUTHOR: Atroshchenko, V. I.; Shchedrinskaya, Z. M.

TITLE: Catalysts for the heterogeneous oxidation of natural gas to formaldehyde and methanol

CITED SOURCE: Tr. Khar'kovsk. politekhn. in-ta, v. 39, 1962, 19-24

TOPIC TAGS: catalysis, oxidation, oxidation catalyst, natural gas, natural gas oxidation, heterogeneous oxidation, formaldehyde, methanol, metal oxide catalyst

TRANSLATION: As catalysts for the partial oxidation of natural gas (93% CH_4, 2% O_2), the authors investigated the metal oxides ZnO, CuO, Al_2O_3, Fe_2O_2, MnO_2, MoO_3, Cr_2O_3, V_2O_5, BaO, Ag_2O, ThO_2, U_2O_5 and $AlPO_4$, glass wool, asbestos and pumice (also used as carriers), as well as Cu-Ni and Cu tubing. The catalysts were prepared from the carbonate or ammonium salts by precipitation, filtration, and baking at 600-700C, followed by briquetting, and by the application of nitrate solutions to heated pumice, drying at 110C, and baking for 3 hrs at 750C. The carrier, 3% by weight MoO_3, was prepared as follows: the carrier was treated

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with a solution of $(NH_4)_2MoO_4$, boiled for 45 min., and 12 hrs later the samples were dried for 2 hrs at 110C and baked for 3 hrs at 750C (for glass wool, at 450C). The authors then studied single, double, and triple catalysts and the effect of the carrier. Determinations of catalytic activity were made at various temperatures (375-500C), volume speeds (15,000-50,000 hr^{-1}), and amounts of catalyst (0.5-50% metal). For each catalyst there is an optimal volume speed and temperature at which a high yield of CH_2O and CH_3OH is obtained. The optimal content of metal applied on pumice is 2-10%. In the presence of metals on carriers, the overall yield of useful products (from the participation of CH_4 in the reaction increases considerably and a selective catalytic action is observed. The most active catalysts are MoO_3, ThO_2, Cr_2O_3, Ag_2O, and a mixture of Ag_2O + Cr_2O_3 on pumice and without it. Triple catalysts are less active than double or single. A high yield of CH_3OH, up to 32.6%, is obtained on Cr_2O_3 and Cu_2O; up to 25% on MoO_3 and Ag_2O. The best carrier is pumice. An outline and description of the process of contact oxidation of natural gas are presented. L.R.

DATE ACQ: 07Jan64 SUB CODE: CH ENCL: 00

Card 2/2

ATROSHCHENKO, V.I.; ZHIDKOV, B.A.; ZASORIN, A.P.

Small-scale experimental process of carbon monoxide conversion by water vapor. Kin.i kat. 3 no.4:605-609 Jl-Ag '62. (MIRA 15:8)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
(Carbon monoxide) (Water vapor) (Chemical models)

ATROSHCHENKO, V.I.; YEFIMOV, V.T. [IEfimov, V.T.], LITVINENKO, I.I. [Lytvynenko, I.I.]; ALEKSEYEV, V.N. [Alekseiev, V.N.]; GALINSKIY, A.G. [Halyns'kyi, A.H.]

Investigating the process of the production of concentrated nitric acid in an autoclave with reflux packing rings. Khim. prom. [Ukr.] no.3:35-39 Jl-S '63. (MIRA 17:8)

1. Khar'kovskiy politekhnicheskiy institut (for Atroshchenko, Yefimov, Litvinenko). 2. Lisichanskiy khimicheskiy kombinat (for Alekseyev, Galinskiy).

ATROSHCHENKO, V.I.; KUSHNARENKO, I.P.

Kinetics of the contact oxidation of methyl alcohol to formaldehyde on a silver catalyst. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.5:774-780 '63. (MIRA 16:12)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina, kafedra tekhnologii neorganicheskikh veshchestv.

ATROSHCHENKO, V.I.; IVANOVA, L.N.; GERNET, D.V.

Kinetics of the conversion of carbon monoxide with water vapors on a zinc-chromium catalyst. Izv.vys.ucheb.zav.;khim. i khim. tekh. 7 no. 1:70-76 '64. (MIRA 17:5)

1. Khar'kovskiy politekhnicheskiy institut im. V.I.Lenina i Lisichanskiy filial Gosudarstvennogo nauchno-issledovatel'skogo i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

ATROSHCHENKO, V.I., doktor tekhn.nauk; ZELIGMAN, N.A., kand.ekonom.nauk

Contribution of Khar'kov chemists to the chemization of the country. Zhur. VKHO 9 no. 3:342-345 '64. (MIRA 17:9)

AITROSHCHENKO, V.I., doktor tekhn. nauk; GONCHARENKO, G.K. [Honcharenko, H.K.]

Kinetics of the absorption of nitrogen dioxide by solid calcium oxide. Khim. prom.[Ukr.] no.1:27-29 Ja-Mr '65. (MIRA 18:4)

KUSHNARENKO, I.P.; ATROSHCHENKO, V.I.

Contact oxidation kinetics of methanol to formaldehyde on a silver catalyst under pressure. Izv. vys. ucheb. zav.; khim. i khim. tekh. 8 no.1:47-54 '65. (MIRA 18:6)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina, kafedra tekhnologii neorganicheskikh veshchestv.

ATROSHCHENKO, V.I.; IVAKHNENKO, M.T.; KONVISAR, V.Z.

Studying the sieve plates for the absorption of nitrogen oxides. Khim. prom. 42 no.9:678-680 S '65. (MIRA 18:9)

1. Khar'kovskiy politekhnicheskiy institut imeni Lenina i Severodonetskiy khimicheskiy kombinat.

ATROSHCHENKO, V.I.; ZASORIN, A.P.; MINIOVICH, M.A.

Prospects for the use of oxygen in the production of nitrous acid. Khim. prom. 41 no.10:743-745 O '65. (MIRA 18:11)

L 10197-66 EWT(m)/EWP(t)/EWP(b) LJP(c) JD

ACC NR: AP5028456 SOURCE CODE: UR/0286/65/000/020/0019/0019

AUTHORS: Mjniovich, M. A.; Shneyerson, A. L.; Filippova, Zh. M.; Atroshchenko, V. I.; Zasorin, A. P.; Ivanovskiy, F. P.

ORG: none

TITLE: Method for obtaining nitric acid. Class 12, No. 175492 [announced by State Scientific Research and Design Institute for the Nitrogen Industry and Products of Organic Synthesis (Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza)]

SOURCE: Byulleten' izobretenly i tovarnykh znakov, no. 20, 1965, 19

TOPIC TAGS: nitric acid, nitrogen oxide, nitrogen compound

ABSTRACT: This Author Certificate presents a method for obtaining nitric acid at a pressure of 4--9 atm by absorbing gaseous nitrogen oxides in water in an absorption tray-type column. To obtain 68—80% nitric acid, liquid oxides of nitrogen are introduced into the column at a point below the formation of 50—63% nitric acid. The reaction may also be carried out by introducing air into the column at a point below which the liquid oxides of nitrogen are introduced.

SUB CODE: 11/ SUBM DATE: 18Oct63/

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UDC: 661.56

ATROSHCHENKO, V.I.; SHCHEDRINSKAYA, Z.M.; GAVRYA, N.A.; Prinimali uchastiye: AYRAPETYAN, M.T.; ABDULAYEVA, G.A.; TIMOKHINA, M.S.; RUD', A.A.

Catalysts for oxidation processes of natural gas to form formaldehyde and methanol. Zhur.prikl.khim. 38 no.3:643-649 Mr '65. (MIRA 18:11)

1. Submitted Febr. 27, 1963.

Card 1/2

L 29895-66 EWT(m)/EWP(t)/ETI IJP(c) WW/JW/JD

ACC NR: AP6006464 SOURCE CODE: UR/0064/65/000/010/0743/0745

AUTHOR: Atroshchenko, V. I.; Zasorin, A. P.; Miniovich, M. A. 39 B

ORG: none

TITLE: Prospects for using oxygen in the production of nitric acid

SOURCE: Khimicheskaya promyshlennost', no. 10, 1965, 743-745

TOPIC TAGS: nitric acid, nitric oxide, nitrogen compound, oxygen, air

ABSTRACT: The article discusses the advantages of using oxygen in the production of nitric acid and discusses several flow schemes using pure oxygen instead of air. It is the expressed opinion of the authors that completely replacing air with oxygen in the production of nitric acid is full of promise. They point out that as a consequence of the fact that the cost of electrical energy is continually dropping and that the technology of separating air into its components is continually improving ensures the continued drop in the cost of oxygen. It is noted that the cost of stainless steel materials used in nitric acid production and the extent of capital investments required for

Card 1/2

ATROSHCHENKO, V.T.

Our suggestions. Avtom., telem. i sviaz' 7 no.12:40 D '63.
(MIRA 17:4)

1. Starshiy elektromekhanik Kanashskoy distantsii Gor'kovskoy dorogi.

ATROSHCHENKO, Ya.S. (Vinnitsa)

Therapy of whooping cough in children with phytoncides of garlic. (MLRA 7:8)
Sov. med. 18 no.8:33-34 Ag '54.
(WHOOPING COUGH, in infant and child)
ther., garlic phytonicides)
(GARLIC, ther. use
whooping cough in child.)

ATROSHCHENKO, Ye.S.; PASHKOV, P.O.; RYADINSKAYA, I.M.

Hardening of metals under the effect of explosive loading conditions. Fiz. met. i metalloved. 19 no.4:619-623 Ap '65.
(MIRA 18:5)

1. Volgogradskiy politekhnicheskiy institut.

ATROSHENKO, A.P.

137-1958-3-5045

Translations from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 84 (USSR)

AUTHOR: Atroshenko, A. P.

TITLE: The Role of Leningrad in the Development of the Press-forging Industry (Rol' Leningrada v razvitii kuznechno-shtampovochnogo proizvodstva)

PERIODICAL: V sb.: Kuznechno-shtampovochn. proiz-vo. Leningrad, Lenizdat, 1957, pp 7-24

ABSTRACT: A description of equipment and forgings manufactured in the blacksmith shops in the pre-revolutionary period. The author points our the role of the scientists, D. K. Chernov, I. A. Time, P. A. Afanas'yev, N. S. Vereshchagin, and S. V. Poretskiy, in the development of the theory and application of the forging industry. Among the efforts of Leningrad's blacksmith-innovators the following topics are presented: the effectiveness of the method of combined forging and hot stamping on presses equipped with crankshafts; forging in insert dies; a method of manufacturing forgings with negative allowances, a system which raised the output of sound metal to 89-91 percent; the manufacture of forgings from hollow ingots, as well as a score of other measures employed by Leningrad's blacksmiths. P. S.

Card 1/1

GINZBURG, Zalman Moiseyevich; STEL'MAKOV, Sergey Mikhaylovich; BANGE, B.O., inzh., retsenzent; PAVLOVICH, P.M., inzh., retsenzent; KAMNEV, P.V., dotsent, kand.tekhn.nauk, obshchiy red.; ATROSHENKO, A.P., dotsent, kand.tekhn.nauk, red.; BORODULINA, I.A., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Modernizing the press-forging equipment and dies used in forge shops] Modernizatsiia kuznechno-pressovogo oborudovaniia i shtampovoe khoziaistvo kuznechnykh tsekhov. Pod obshchei red. P.V.Kameneva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1958. 66 p. (Bibliotechka kuznetsa-novatora, no.8) (MIRA 12:12)

(Forge shops--Equipment and supplies)

PHASE I BOOK EXPLOITATION SOV/3656

Atroshenko, Aleksey Petrovich, Gavriil Tarasovich Vasil'yev, and Mikhail Sergeyevich Eduardov

Izgotovleniye pokovok pod shtampovochnymi molotami i na gorizontal'-nokovochnykh mashinakh (Forging With Hammers and Horizontal Forging Machines) Moscow, Mashgiz, 1958. 91 p. (Series: Bibliotechka kuznetsa-novatora, vyp. 6) Errata slip inserted. 6,500 copies printed.

General Ed.: P.V. Kamnev, Candidate of Technical Sciences, Docent; Ed.: I.M. Din, Engineer; Ed. of Publishing House: I.A. Borodulina; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine Building Technology (Leningrad Division, Mashgiz): Ye.P. Naumov, Engineer.

PURPOSE: This booklet is intended for forging machine operators, technicians, and engineering personnel. It may also be used by students at technical schools.

COVERAGE: The booklet describes basic forging operations on drop hammers and horizontal forging machines, and discusses the principles involved. Emphasis is placed on describing mechanization and

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Forging With Hammers (Cont.) SOV/3656

automation of various forging and auxiliary operations. Examples of applied mechanization and automation in forging shops are described and illustrated. No personalities are mentioned. There are 6 Soviet references.

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PHASE I BOOK EXPLOITATION SOV/3655

Atroshenko, Aleksey Petrovich, Georgiy Tikhonovich Obolduyev, and Semen Mikhaylovich Khesin

Izgotovleniye pokovok pod krivoshipnymi i vintovymi pressami (Forging on Crank and Percussion Presses) Moscow, Mashgiz, 1958. 126 p. (Series: Bibliotechka kuznetsa-novatora, no. 5) 6,000 copies printed.

General Ed.: P.V. Kammev, Candidate of Technical Sciences, Docent; Reviewer: Sh.N. Gil'denblat, Engineer; Ed.: B.O. Bange, Engineer; Ed. of Publishing House: A.I. Varkovetskaya; Tech. Ed.: O.V. Speranskaya; Managing Ed. for Literature on Machine-Building Technology (Leningrad Division, Mashgiz): Ye.P. Naumov, Engineer.

PURPOSE: This book is intended for operators of forging presses, and may also be used as a textbook by technical personnel of forging shops attending secondary and higher technical schools.

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Forging on Crank and Percussion Presses

SOV/3655

COVERAGE: This issue contains basic information on modern methods of forging on crank and percussion presses, accompanied by discussion on the rational construction of dies in the manufacture of large and small lots. No personalities are mentioned. There are 13 references, all Soviet.

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Forging on Crank and Percussion Presses SOV/3655

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Forging on Crank and Percussion Presses SOV/3655

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VK/mas
6-29-60

YEKIMOV, Konstantin Konstantinovich; PAVLOVICH, P.M., inzh., retsenzent; ATROSHENKO, A.P., dotsent, kand.tekhn.nauk, red.; CHFAS, M.A., red.izd-va; SPERANSKAYA, O.V., tekhn.red.

[Mechanization and automatization of forging processes] Mekhanizatsiia i avtomatizatsiia kuznechno-shtampovochnogo proizvodstva. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 161 p. (MIRA 13:6)

(Forging machinery) (Automatic control)

S/182/61/000/006/002/007
D038/D112

AUTHOR: Atroshenko, A.P.

TITLE: Stamping round pieces with low loss in dies with a wedged burr space

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, no. 6, 1961, 4-7

TEXT: A new design of wedged burr space was developed by the Minskiy traktornyy zavod (Minsk Tractor Plant). The development was prompted by a number of shortcomings in closed-die forging (forgings ruined by insufficient quantity of metal; too high burrs which required additional dies; uneven forging height) and the design of open dies with a parallel burr surface (adopted from US practice 20 years ago) which caused too high losses of metal. The design (a) (Fig. 3) is used for round forgings, and design (b) for almost round ones. Metal losses in the new wedge space dies fell from 20-30% to 5-10%, stamping output rose 30-50%, and die durability increased 1.5-2 times. The volume of metal entering the wedged space - $V_0 = V_T + V_{изл} + V_\delta$, where V_T is the minimum volume of metal needed to form a wedged burr filling the die impression cavity, which depends on the shape of forging;

Card 1/4

$V_{изн}$ (wear)- the volume of metal which compensates the wear of the die impression cavity with a resulting 1-2% increase of forging volume, and $V_д$ - the total volume of metal determined by negative deviations of the diameters and length of a calculated blank. The volume of wedged space - $V_{о.к.}$ (Fig. 3) =

$$V_т + V_{изн} + V_д = \frac{\pi}{8}(D^2 - d_п^2)(h_н + h_к).$$

The following formula, (Ref. 6: Severdenko, V.P., Prosvirov, N.T., Kovylyayev, N.P., Maloobloynaya shtampovka i elementy rascheta maloobloynykh shtampov dlya pokovok tel vrashcheniya [Low Burr Stamping and Calculation Elements for Low Burr Dies for Solids of Revolution], Sb. trudov FTI, AN BSSR, no. V, 1959), obtained from the preceding equation, determines the outer diameter of the wedged space cavity:

$$D = \sqrt{d_п^2 + \frac{8V_о}{\pi(h_н + h_к)}},$$

where D is the diameter of the wedged space; $d_п$ - the diameter of the forging along the section of wedged space; $h_н$ - the front end height of the wedge bridge of the space; $h_к$ - the far end height of the wedge bridge of the space. The initial height of the space bridge is defined by M.V. Afanas'yev's formula (Ref. 7: O roli i tolshchine zausentsa pri goryachey shtampovke [On the Role and Thickness of Burr in Hot Stamping], "Vestnik metallo-

promyshlennosti", no. 18, 1936): $h_{\kappa} = K\frac{F_n}{P_n}$, where K is the factor considered as being equal to 0.07-0.1; F_n - the projection of the forging onto the plane along the burr section, and P_n - the top-view perimeter of forging along the line of cutting of the burr. For round forgings (top view): $h_n = (0.018 - 0.025)d_n$. The end height of the wedge bridge of the space: $h_к = (0.3 \div 0.5)$ h_n. The bridge width is calculated as being a half-difference of the diameters of the space D and of the forging d_n: $b = \frac{D - d_n}{2}$. The width of the space with an irregular flow burr is taken as: $b_1 = 10 \div 35$ mm. An industrial standard for calculation of dimensions of these spaces in drop forging dies was developed by Minsk Tractor Plant, where 30 different forgings are in production. Development of the wedged burr space by N.T. Prosvirov, M. Ye. Gavrilov, N.P. Kovylyayev and V.S. Degtyarev (Minsk Tractor Plant) was registered at the Committee of Inventions, USSR Council of Ministers under no. 598917/25 of 30 April 1958. There are 4 figures, 2 tables, and 7 Soviet references.

Stamping round pieces ...

S/182/61/000/006/002/007
D038/D112

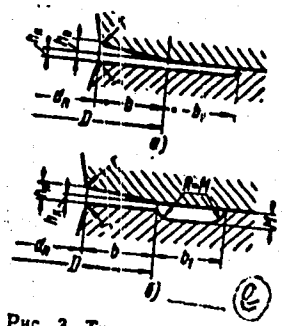


Рис. 3. Типы облойной канавки с клиновым мостиком.

Fig. 3. Designs of burr space with wedge bridge

Card 4/4

ATROSHENKO, A.P.

New design of combined trimmers with buffer springs. Kuz.-shtam. proizv. 3 no.9:43-45 S '61. (MIRA 14:9)
(Forging machinery)

GOLOVNEVA, Mariya Alekseyevna; ATROSHENKO, Aleksey Petrovich; KORNEYEV, D.M., kand. tekhn.nauk, retsenzent; RAKOSHITS, G.S., inzh., retsenzent; GOLOVNEV, I.F., kand. tekhn.nauk, red.; DENINA, I.A., red.izd-va; SHCHETININA, L.V., tekhn. red.

[Equipment and technology of drop forging]Oborudovanie i tekhnologiia goriachei shtampovki. Moskva, Mashgiz, 1962. 368 p. (MIRA 16:3)

(Forging)

GINZBURG, K.S.; ATROSHENKO, A.P.

Constructive solutions of mechanization and automation of forging processes. Trudy LPI no.222:201-218 '63. (MIRA 16:7)
(Forging machinery) (Automation)

ATROSHENKO, A.P.; GINZBURG, Z.M.; YEKIMOV, K.K.; PAVLOVICH, P.M., inzh., retsenzent; KAMNEV, P.V., kand. tekhn.nauk, red.

[Mechanization and automation of forging and stamping operations] Mekhanizatsiia i avtomatizatsiia kuznechno-shtampovochnogo proizvodstva. Izd.2., perer. i dop. Moskva, Mashinostroenie, 1964. 149 p. (Bibliotechka kuznetsa-novatora, no.8) (MIRA 17:9)

ATROSHENKO, A.P.; STEL'MAKOV, S.M., inzh., retsenzent

[Mechanization and automation of drop forging] Mekhanizatsiia i avtomatizatsiia goriachei shtampovki. Moskva, Mashinostroenie, 1965. 227 p. (MIRA 18:4)

GOFFENSHEFER, V.S.; ATROSHENKO, A.P., kand. tekhn. nauk, retsenzent;

[Combination drop-hammer dies] Gruppovye molotovye shtampy. Moskva, Mashinostroenie, 1965. 83 p. (MIRA 18:2)

EWT(k)/EWT(m)/EWP(t)/ETI IJP(c) JD/HW

ACC NR: AR6033114 SOURCE CODE: UR/0137/66/000/007/I040/I041

AUTHOR: Atroshchenko, E. S.

TITLE: Some peculiarities of hardening Armco iron in explosive forming

SOURCE: Ref. zh. Metallurgiya, Abs. 7I262

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovarnkhoz Nizhne-Volzhsk. ekon r-na. Volgogradsk. politekhn. in-t. T. 1. Volgograd, 1965, 272-274

TOPIC TAGS: explosive forming, hardening, plastic deformation, grain size, microhardness, recrystallization, martensite/Armco iron

ABSTRACT: An investigation has been made of changes in the hardening of Armco iron under conditions of explosive forming with a considerable degree of remanent plastic strain. The stress diagram made it possible to obtain on one specimen values of plastic deformation near the collision surface under conditions of hindered heat exchange between the deformed area and the surrounding medium (process close to adiabatic). The degree of deformation was estimated by the ratio of grain size a/b toward the directions of the main axes of deformation. The mean values

Card 1/2 UDC: 539.4.019.1:669.1

L 09392-67
ACC NR: AR6033114

of microhardening were measured at these points. In explosive forming, the degree of increased plastic deformation does not result in increased hardening as in the static deformation, but in a decrease in hardness as a result of tempering because of the hindered heat exchange. At a/b = 3.2, the beginning of recrystallization is marked by the appearance of new equiaxial small grains in the structure. In points where local plastic deformation is particularly high, the appearance of martensite is observed. L. Gordiyenko. [Translation of abstract]

SUB CODE: 11/

Card 2/2

L 47377-66 EWT(m)/EWP(w)/T/EWP(t)/ETI/EWP(k) IJP(c) JD/HW

ACC NR: AR6028531 SOURCE CODE: UR/0276/66/000/005/B047/B047

AUTHOR: Atroshchenko, E. S.; Kofman, A. P.; Mantaroshin, A. P.; Nagornov, G. M.; Popov, N. V.; Ryadinskaya, L. M.

26
B

TITLE: A possibility of using explosion energy for strengthening tractor lug tracks

18

SOURCE: Ref. zh. Tekhnologiya mashinstroyeniya, Abs. 5B314

REF SOURCE: Sb. Materialy Nauchn. konferentsii. Sovnarkhoz Nizhne-Volzhsk. ekon. r-na. Volgogradsk. politekhn. in-t. T. 1. Volgograd, 1965, 284-287

TOPIC TAGS: tractor, lug track, explosion energy

ABSTRACT: The use of explosion energy for strengthening tractor lug tracks was found to be feasible. A diagram for strengthening the lugs was shown. The use of explosive cords is considered to be the most acceptable from the engineering aspect. Studies were made of the effect of the medium on the magnitude and

Card 1/2 UDC: 621.789:621.81

L 47377-66

ACC NR: AR6028531

character of strengthening and of the effect of allignment of cords on the uniformity of strengthening along the circumference of the lugs. Casting defects in the tracks can lead to the failure of a lug. Orig. art. has: 3 reference items. [Translation of abstract]

[FM]

SUB CODE: 13/

Card 2/2 mjs

ATROSHENKO, M. (Batumi, GruzSSR)

The fire department became an excellent unit. Pozh.delo 9 no.12: 26 D '63. (MIRA 17:1)

M

Country : USSR
Category: Cultivated Plants. Grains.

Abs Jour: RZhBiol., No 22, 1958, No 100241

Author : Atroshenko, M.D.
Inst : Khar'kov Agricultural Institute
Title : Spike Formation in Ramose Wheat in Relation to the Growing Conditions.

Orig Pub: Zap. Khar'kovsk. s.-kh. in-ta, 1958, 15 (52), 39-44.

Abstract: No abstract.

Card : 1/1

KOVALEV, N.D., prof.; ATROSHENKO, M.D., dots.; DEKONNOR, A.V., dots.; LITVINENKO, A.N., dots.; OZEROV, V.N., red.; CHERMENSKIY, A.D., red.; GONCHAROVA, T.I., tekhn. red.; DEYEVA, V.M., tekhn. red.

[Fundamentals of farming and plant growing] Osnovy zemledeliia i rastenievodstva. [By] N.D.Kovalev i dr. Moskva, Sel'khozizdat, 1963. 566 p. (MIRA 17:3)

Atroshenko, M.P.

AUTHORS: Atroshenko, M.P., Kozyreva, M.S. 32-11-20/60

TITLE: The Quantitative Determination of Silicon and Phosphorus as Admixtures in Titanium Dioxide by Spectral Analysis (Kolichstvennoye opredeleniye primesi kremniya i fosfora v dvuokisi titana metodom spektral'nogo analiza)

PERIODICAL: Zavodskaya Laboratorya, 1957, Vol. 23, Nr 11, pp. 1317-1320 (USSR)

ABSTRACT: The above mentioned determination was carried out with a quarts spectrograph of the type "ИСП-22", a "standard generator" with alternating current arc "ПС-39", and a microphotometer "МФ-2". The standard gauged samples were prepared from dry powder. As an initial mixture the basic substance with a 3% addition of one of the admixtures was assumed. Each of the next standard samples consisted of the previous mixture plus the threefold quantity of titanium dioxide - in three stages. The spectrally pure carbon of the Kudinovsk works was used as an electrode. Spraying of the samples during the experiment was prevented by suitable admixtures. In the chapter: The determination of phosphorus this process is described. It is pointed out in this connection that, in order to obtain the necessary intensity of the analytical line, it was necessary to have the amperage in the 20 A. Determination was carried out according to the absolute blackening of the analytical line. In the chapter: The determination of silicon

Card 1/2

The Quantitative Determination of Silicon and Phosphorus as Admixtures in Titanium Dioxide by Spectral Analysis 32-11-20/60

this process is described, and it is said that because of the spattering of the sample the following 3 stabilisers were tested: 50% carbon powder, 25% sodium chloride, 25% each of nickelous oxide and carbon powder (the gas volume being meant in each case). The third case was found to be the most favorable. As some types of carbon contain silicon they must first be investigated spectroanalytically. The method described was found to be well practicable with a silicon content of 1-0.1%. The possible errors are up to ± 8%. There are 4 figures and 2 tables.

AVAILABLE: Library of Congress

Card 2/2

ACC NR: AP6031790 SOURCE CODE: UR/0064/66/000/007/0038/0040

AUTHOR: Atroshchenko, V. I.; Yefimov, V. T.; Litvinenko, I. I.; Alekseyev, V. N.; Kutovoy, V. V.; Abrosimova, A. M.; Galinskiy, A. G.; Goltius, L. M.

ORG: none

TITLE: Film-type autoclave for the production of concentrated nitric acid

SOURCE: Khimicheskaya promyshlennost', no. 7, 1966, 38-40

TOPIC TAGS: nitric acid, nitrogen compound, chemical engineering, chemical reactor, chemical plant equipment

ABSTRACT: A film-type autoclave (liquid reagents flow over the packing in form of a film) packed with aluminum coil coated with a fluorinated resin for production of concentrated nitric acid is described and its advantages over the conventional flooded-type autoclave are pointed out. The schematic of the autoclave is shown in figure 1. 98.4% nitric acid was obtained in this film-type autoclave at 25 atm, N_2O_4:H_2O ratio of 8.5-8.9, and a contact time of 17 min. At 40 atm and N_2O_4:H_2O = 8.1-8.7 and 17 min contact time, the acid concentration was equal to 98.7-99.2%. The oxygen consumption was close to the stoichiometric amount. It was found that the film-type autoclave is twice as effective as the flooded-type autoclave and that it compared very favorably from the standpoint of corrosion. Orig. art. has: 4 figures, 2 formulas.

UDC: 661.565 : 66.023.7

Card 1/2

ACC NR: AP6031790

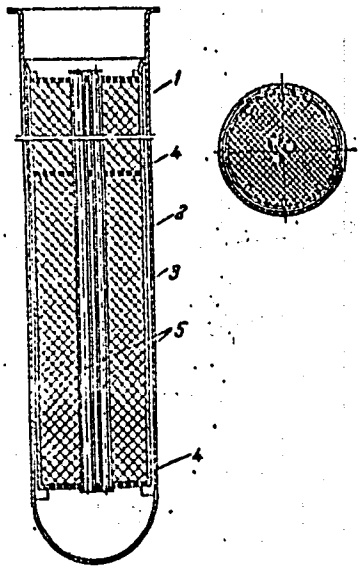


Fig. 1. 1--vessel; 2--shell; 3--coated aluminum coil; 4--grid; 5--concentrating tubes.

SUB CODE: 13,07/ SUBM DATE: none

Card 2/2

S/049/60/000/03/018/019
E131/E691

AUTHORS: Avaste, O.A. and Atroshenko, V.S.

TITLE: On the Accuracy of V.V. Sobolev's Method

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1960, Nr 3, pp 507-509 (USSR)

ABSTRACT: V.V. Sobolev's method (Ref 1) is used to obtain an approximate solution of the radiation transfer equation in an anisotropic scattering atmosphere. The present note represents an attempt to estimate the errors involved in this method by comparing the data reported by Feygel'son et al. (Ref 2) with calculations by the Sobolev method (in Ref 2 the radiation transfer equation was solved numerically by a successive approximation method). Sobolev (Ref 3) showed that in a single-layer model of the atmosphere the approximate formulas involve an error not exceeding 10%. He did not, however, indicate the optical thicknesses, the forms of the scattering functions etc. to which this figure applies. It is, therefore,

Card 1/2

S/169/62/000/003/045/098
D228/D301

3.5150

AUTHOR: Atroshenko, V. S.

TITLE: Some estimates of the accuracy of solution of the transfer equation by the method of V. V. Sobolev (Theses)

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 17, abstract 3B146 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 270)

B

TEXT: The accuracy of the solution of the transfer equation (for the case of a two-layer atmosphere) according to V. V. Sobolev's method is appraised by comparing the results of the numerical solution of the transfer equation. It is shown that in calculating multiple scattering and the intensity of ascending radiation by V. V. Sobolev's method there is an error of about 25 - 30% which may reach 100% in the case of descending radiation. [Abstracter's note: Complete translation.]

Card 1/1

ATROSHENKO, V.S.; GLAZOVA, K.S.; MALKEVICH, M.S.; FEYGEL'SON, Ye.M.; Prinimali uchastiye: KIM, E., studentka; TOMASHOVA, L., studentka; ROZENBERG, G.G., prof., doktor fiz.-matem.nauk, otv.red.; PENKINA, N.V., red.izd-va; SUSHKOVA, L.A., tekhn.red.

[Calculation of light intensity in the atmosphere during anisotropic scattering. Part 2] Raschet iarkosti sveta v atmosfere pri anizotropnom rasseianii. Chast' 2. Moskva, Izd-vo Akad.nauk SSSR, 1962. 222 p. (Akademiia nauk SSSR. Institut fiziki atmosfery. Trudy, no.3). [MICROFILM] (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet (for Kim, Tomashova).
(Light—Scattering) (Atmosphere)

ATROSHKIN, N.T., mayor meditsinskoy sluzhby

Method of selecting operators of radar stations by sensory motor reactions. Voen.-med. zhur. no.11:66-69 N '61. (MIRA 15:6)
(RADAR OPERATORS)

ATEUSHKEVICH, A.G., inzhener; TSYLISHCHEV, P.A., inzhener, redaktor; KHITROV, F.K., tekhnicheskiy redaktor

[Advanced methods of organizing locomotive boiler working in the depot] Peredovye metody organizatsii promyvochnogo remonta parovozov v depo. Moskva, Gos. transp. zhel.-dor. izd-vo, 1954. 82 p.
(Locomotive boilers) (MLRA 8:5)

MOROZOV, M.P.; ATRUSHKEVICH, L.G.; GUTOROV, V.G.; KONDRASHOV, A.M.; MOROZOV, K.S.; NIKITENKO, I.S.; TATARENKO, V.A.; USHAKOV, P.N.; ZHILYAYEV, A.V., otv.red.; VOLKOVA, V.A., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Regulations for the construction and safe operation of steam boilers and air tanks in industrial locomotives] Pravila ustroistva i bezopasnoi ekspluatatsii parovykh kotlov i vozdushnykh rezervuarov parovozov promyshlennykh predpriiatii. Obiazatel'ny dlia vsekh ministerstv, vedomstv i sovnarkhozov. Moskva, Ugletekhizdat, 1958. 25 p. (MIRA 12:7)

1. Russia (1917- R.S.F.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.
(Locomotives)

ACC NR: AP6006716 (A) SOURCE CODE: UR/0303/66/000/001/0001/0003

AUTHOR: Blagonravova, A. A.; Tartakovskaya, A. M.; Pronina, I. A.; Slivochnikova, M. V.; Atryasina, V. P.

ORG: none

TITLE: Single component cold-setting polyurethane varnishes

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 1, 1966, 1-5

TOPIC TAGS: polyurethane, isocyanate resin, polyester plastic, varnish, paint

ABSTRACT: Several polyester-type prepolymers were synthesized from 2,4-tolyulenediisocyanate and esterified glycerides of the castor oil and from 2,4-toluylenediisocyanate and polyesters prepared by condensation of propylene oxide with glycerine, trimethylolpropane, and ethylenediamine and were cold-set in humid air for 0-60 days. The properties of the starting materials and products are tabulated and graphed. It was found that all the synthesized single component prepolymers undergo cold-setting in humid air. It was also found that the setting of these prepolymers is catalyzed by triethanolamine. The hardened films exhibited excellent mechanical properties (hardness) and are recommended for use as varnishes. Orig. art. has: 4 figures, 2 tables, 5 formulas.

SUB CODE: 07,11/ SUBM DATE: none/ ORIG REF: 003/ OTH REF: 005

UDC: 667.633.263.3

Card 1/1

ANDA, Geza; ATS, Illes; SEBO, Geza

Designing small transformers. Villamossag 11 no.5:131-135 My '63.

1. "Transzvill" Transzformator es Villamoskeszulekgyar.

ATS, Illes

The new "Transavill" transformer. Villamossag 13 no.1:27 Ja '65.

ACCESSION NR: AP4034710 S/0303/64/000/002/0003/0006

AUTHORS: Blagonravova, A. A.; Proninn, I. A.; Tartakovskaya, A. M.; Atryasina, V.P.

TITLE: Polyisocyanates suitable for protective coatings with superior photoresistance

SOURCE: Lakokrasochny*ye materialy* i ikh primeneniye, no. 2, 1964, 3-6

TOPIC TAGS: lacquer, polyisocyanate, allylurethane, isocyanate polymerization, isocyanate telomerization, polyisocyanate nitrocellulose lacquer, photoresistant polyisocyanate lacquer, PAU polyisocyanate enamel

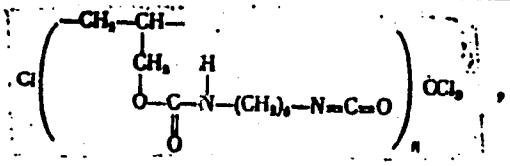
ABSTRACT: The present study deals with the polymerization of hexane-1-isocyanate-6-allylurethane (HICAU), $OCN(CH_2)_6NHCOOCH_2-CH=CH_2$.

The polymerization was conducted without solvents, in inert solvents, and in a carbon tetrachloride medium. Benzoyl peroxide (0.2-3.0%), di-ter.butyl peroxide, or dinitril-2,2'-azo-bis-isobutyric acid (DABIBA) were used as initiators. The reaction was allowed to run for 6 to 20 hours at 80 and 120C before the viscosity and isocyanate numbers of the obtained poly-HICAU were determined. It was found that, in an inert solvent medium (toluene) and without solvent, the transformation

Card 1/3

ACCESSION NR: AP4034710

of the monomer did not exceed 45-50%, irrespective of the amount of initiator present. Extension of the polymerization time caused the formation of a precipitate of high-molecular compounds, which was soluble only in the original monomer. When the polymerization of HICAU was conducted in carbon tetrachloride (in a 1:1 ratio at 70-75C for periods to 21 hrs in the presence of 1% DABIBA) there occurred a more rapid and complete polymerization of the monomer with the formation of low-molecular products. To these the authors ascribe the formula



where n is 5 or 6. The obtained polymer had a molecular weight of 1050-1070 and contained 13-14% of chlorine. Samples of such poly-HICAU of 1500 molecular weight were assigned the trade name PAU, and their solutions in various solvents were subjected to extensive lacquer and enamel coating tests, either by themselves or mixed with titanium dioxide, with nitrocellulose and alkyd and with phenolic resins. Films of high strength and good adhesion were obtained. They were superior in

Card 2/3

ACCESSION NR: AP4034710

light resistance to enamel M-300. Orig. art. has: 6 tables, 4 charts, and 4 formulas.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 20May64 ENCL: 00

SUB CODE: MT NO REF SOV: 007 OTHER: 004

Card 3/3

NAGY, Istvan, dr.; ATS, Maria, dr.; KASZORU, Maria, dr.; LUST, Ivan, dr.

On the clinical significance of the effect of drugs on the serum properdin level. Orv. hetil. 104 no.11:492-495 17 Mr '63.

1. Budapest XIII. Visegradi utcai Szakorvosi Rendelointezet.
(PROPERDIN) (ZYMOSAN) (STOMACH NEOPLASMS)
(LUNG NEOPLASMS) (UTERINE NEOPLASMS)

ATSAGORTSYAN, Z.A.

Rigidity calculations of reinforced concrete constructions. Izv. AN Arm.SSR.Ser.FMET nauk 1 no.2:153-165 '48. (MLRA 9:8)

1. Institut stroymaterialov i sooruzheniy Akademii nauk Armyanskoy SSR.

(Reinforced concrete construction)

ATSAGORTSYAN, Z.A.

Determining the optimum section of reinforced concrete slabs taking into consideration the effect of the change of their own weight. Izv.AN Arm.SSR.Ser.FMET nauk 1 no.6:495-500 '48. (MLRA 9:8)

1. Institut stroitel'nykh materialov i sooruzheniy Akademii nauk Armyanskoy SSR.

(Concrete slabs)

ATSAGORTSYAN, Z. A.

30260

Vybor optimal'nykh marok byetonov dlya konstrucktsiy iz lyegkogo zhyelyezobyetona. Trudy IV Vsyesoyuz. konf-teii po byetonu i zhyelyezobyeton. Konstruktsiyam. Ch. 3, M-L., 1949, s. 91-100.

SO: LETOPIS' NO. 34

ATSAGORTSYAN, Z.A.

New method of on-the-job control of concrete quality. Izv.AN Arm. SSR.Ser.FMET nauk 1 no.2:187-193 '52. (MLRA 9:8)

1. Institut stroymaterialov i sooruzheniy Akademii nauk Armyanskoy SSR.

(Concrete--Testing)

ATSAGORTSYAN, Z. A.

Elasticity and Plasticity, Mechanical Properties and Testing of Materials (3891)
Doklady Akademii Nauk Arm SSR, Vol. 16, No 5, 1953, pp 141-147
Atsagortsyan, Z. A.
Correlation Connection of the Strength of Porous Material With the Degree and Character of Its Porosity.

By methods of mathematical statistics there are given the results of tests of 24 cube-shaped blocks made from lithoid pumice w th a 10-cm side. Article demonstrates that there is a linear correlation between the strength of lithoid pumice, porosity and water absorption.

So: Moscow, Referativnyy, Zhurnal -- Mekhanika No 6, 1954 W-31059

ATSAGORTSYAN, Z.A.

Uniformity factors for building stones and masonry. Izv.AN Arm.SSR. Ser.tekh.nauk 10 no.4:61-68 '57. (MIRA 10:10)

1. Institut stroymaterialov i sooruzheniy AN Armyanskoy SSR.
(Building stones) (Masonry)

SEDRAKYAN, L.G.; RZHANITSYN, A.R., prof., doktor tekhn.nauk, retsenzent; AT'SAGORTSYAN, Z.A., kand.tekhn.nauk, red.; GOROYAN, G., tekhn.red.

[Statistical theory of strength] K statisticheskoi teorii prochnosti. Erevan, Armianskii in-t stroimaterialov i sooruzhenii, 1958. 103 p. (MIRA 13:8)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury (for Rzhanitsyn).
(Strength of materials) (Statistics)

ATSAGORTSYAN, Zaven Arsenovich; MARTIROSYAN, Cnik Artem'yevich

[Tuffs and marbles of Armenia] Tufy i mramory Armenii. Erevan, Armianskoe gos.izd-vo, 1959. 141 p. (MIRA 13:10)
(Armenia--Volcanic ash, tuff, etc.) (Armenia--Marble)

ATSAGORTSYAN, Z.A.

Study of the effect of some atmospheric influences on properties of volcanic tuffs. Trudy Arm. inst. stroimat. i soor. no.1: 77-[illegible]. (MIRA 14:12)

(Volcanic ash, tuff, etc.--Testing)

ATSAGORTSYAN, Z.A., kand.tekhn.nauk

Natural porous aggregates occurring in the Armenian S.S.R.
Stroi.mat. 5 no.2:8-11 F '59. (MIRA 12:2)
(Armenia--Volcanic ash, tuff, etc.) (Armenia--Pumice)

ATSAGORTSYAN, Z.A., kand.tekhn.nauk

Methods for prolonging the life of various facing stones. Stroi. mat. 6 no.12:14-17 D '60. (MIRA 13:11)
(Building stones)

ATSAGORTSYAN, Z.A.; KHACHIYAN, M.G.

Methods for investigating the strength and durability of stone materials. Zav.lab. 26 no.1:98-99 '60. (MIRA 13:5)

1. Armyanskiy institut stroitel'nykh materialov i sooruzheniy.
(Building materials--Testing)

ATSAGORTSYAN, Z.A., kand.tekhn.nauk

Basalts for the woodpulp and paper industry. Bum.prom. 35 no.10: 14-16 O '60. (MIRA 13:10)
(Basalts) (Woodpulp industry)

KHORASANYAN, G.A.; ATSAGORTSYAN, Z.A., otv. red.; SHTIBEN, R.A., red. izd-va; KAPLANYAN, M.A., tekhn. red.

[Economics of large-panel house building in Armenia] Ekonomika krupnopanel'nogo domostroeniia v Armenii. Erevan, Izd-vo Armianskoi SSR, 1961. 137 p. (MIRA 15:3)
(Armenia--Construction industry--Costs)

S/081/62/000/006/064/117
B149/B108

AUTHOR: Atsagortsyan, Z. A.

TITLE: Hydrophobization of felsite tuffs with organo-silicon compounds

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 439, abstract 6K447 (Sb. "Materialy Ob"yedin. Nauchn. sessii In-tov stroit. materialov i sooruzh. Zakavkazsk. respublik 1958". Tbilisi, AN GSSR, 1961, 119 - 132)

TEXT: The rate of water absorption by felsite tuff (FT) on being kept in water for up to 1 hour, showed a 1.6 fold decrease after a single treatment with a 1% solution of sodium methylsiliconate (SMS), and dropped to one-quarter after triple treatment. This difference in water absorption diminishes with prolonged water-saturation. The concentration of SMS used should be as high as possible (up to 3%). The coefficient of softening of untreated FT is 0.49, that of SMS-treated (3% solution) FT 0.65. SMS treatment has a positive effect on the dynamic modulus of elasticity of water-saturated FT. SMS also acts favorably in cases of alternating

Card 1/2

Hydrophobization of felsite ... S/081/62/000/006/064/117
B149/B108

water saturation and drying, and of freezing and thawing. Atmospheric air and heating do not affect the hydrophobic properties of SMS. The depth of penetration of SMS into FT is 0.06 mm after a single treatment, and 1.45 mm after triple treatment. [Abstracter's note: Complete translation.]

Card 2/2

ATSAGORTSYAN, Z., kand.tekhn.nauk

Increasing the durability of stone facing of buildings.
Prom.Arm. 4 no.1:55-59 Ja '61. (MIRA 14:6)
(Building stones)

ATSAGORTSYAN, Z.A., kand. tekhn. nauk; MARTIROSYAN, O.A., kand. tekhn. nauk; ARZUMANYAN, G., red.; KHACHATRYAN, S., tekhn. red.

[Tuffs and marbles of Armenia]Tufy i mramory Armenii. Erevan, Armgosizdat, 1962. 157 p. (MIRA 16:2)
(Armenia--Volcanic ash, tuff, etc.)
(Armenia--Marble)

AKOPOV, A.A.; ATSAGORTSYAN, Z.A.; SIMONOV, M.Z.; STEPANYAN, V.A.; TER-AZAR'YEV, I.A.; RODIN, B.M.; STUGAREV, A.S., kand. tekhn. nauk, nauchnyy red.; ZAYCHIKOVA, E.A., red.izd-va; KASIMOV, D.Ya., tekhn. red.

[Production of natural stone wall materials and lightweight aggregates]Proizvodstvo prirodnykh kamennykh stenovykh materialov i legkikh zapolnitelei; sostoianie i perspektivy razvitiia. Moskva, Gosstroiizdat, 1962. 211 p. (MIRA 15:12)

1. Armyanskiy nauchno-issledovatel'skiy institut stroitel'nykh materialov i sooruzheniy. 2. Armyanskiy nauchno-issledovatel'nyy institut stroitel'nykh materialov i sooruzheniy (for Akopov, Atsagortsyan, Simonov, Stepanyan, Ter-Azar'yev). 3. Nauchno-issledovatel'skiy institut stroitel'nykh materialov i izdeliy Akademii stroitel'stva i arkhitektury Ukr. SSR (for Rodin).
(Building stones)
(Aggregates (Building materials))

ATSAGORTSYAN, Z.; ISAAKYAN, S.

Effect of petrographic characteristics on the strength of basalt. Prom.Arm. 5 no.4:54-58 Ap '62. (MIRA 15:5)
(Armenia—Basalt)

ATSAGORTSYAN, Z.; VERMISHEV, G.; ZAKHAROV, L.; OGANESYAN, M.

Efficient use of light fillers in the Armenian S.S.R. Prom. Arm. 6 no.1:10-14 Ja '63. (MIRA 16:4)

1. Nauchno-issledovatel'skiy institut kamnya i silikatov Soveta narodnogo khozyaystva Armyanskoy SSR.
(Armenia—Lightweight concrete)

ATSAGORTSYAN, Z.A., kand.tekhn.nauk

Methods for large-scale tests of stone for tension and shear.
Stroi.mat. 9 no.3:29-30 Mr '63. (MIRA 16:4)
(Stone--Testing)

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AUTHORS: Atsarkin, V.A. Zhabotinskiy, M.Ye., and Frantsesson, A.V.

TITLE: Achieving the limit sensitivity of a radio-spectroscope for the observation of electron paramagnetic resonance

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 5, 1962, 866 - 873

TEXT: The authors consider the three basic noise sources which limit the sensitivity of a paramagnetic radio-spectroscope; the SHF receiver noise, the relative frequency instability of the signal generator and of the cavity resonator and amplitude and frequency instability noise of the local oscillator (where applicable). After comparing various radio-spectroscope systems it is concluded that maximum sensitivity is obtained in a superheterodyne system with double magnetic field modulation and AFC from the cavity resonator, in which system the effect of both klystron and resonator instability on sensitivity may be neglected. Relevant circuits of an actual

superheterodyne radio-spectroscope are given, the instrument operates at 29,5 mc/s and has a deep 50 c/s modulation of the magnetic field. Its calculated sensitivity, with the receiver noise only, should be 6 x 10^{-13} g/mol DPG [Abstractor's note: Diphenyl guanidine?] with the Q of the resonator equal to 10^4 and the indicating instrument passband of 2 c/s. The experimentally measured sensitivity was actually found to be 2 x 10^{-12} g-mol DPG, which is considered to be in good agreement, if the inaccuracy of such factors as the r.m.s. value of noise is taken into account. The experimentally found sensitivity of the instrument when observing the paramagnetic resonance signal on a CRO was found to be 2 x 10^{-10} g-mol DPG with the receiver pass-band of 12.5 kc/s. There are 4 figures.

SUBMITTED: June 17, 1961