"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.

USSR.

An irreversibly reacting system with immiscibility of the sulfates and chlorides of lithium and cadmium. D. S. Lesnykh and A. G. Bergman. *J. Gen. Chem. U.S.S.R.* 23, 557-61(1953)(Engl. translation).—See *C.A.* 48, 3130f.

H. L. H.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

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LESNYKH, D. S.

Jun 53

USSR/Chemistry - Lithium Salts;
Cobalt Salts

"Mutual System Composed of the Sulfates and Chlorides of Lithium and Cobalt," D.S. Lesnykh, A.G. Bergman, Rostov-on-Don State U im V.M. Molotov

Zhur Obshch Khim, Vol 23, No 6, pp 894-901

Investigated the thermochemical relationships in the mutual ternary system composed of the salts $Li_2Cl_2 + CoSO_4 + CoCl_2 + Li_2SO_4$. Found that this system consists of 2 ternary systems: $CoCl_2$-Li_2SO_4-

273T24

Li_2Cl_2 with a triple eutectic point at 452° and $CoCl_2$ - Li_2SO_4 - $CoSO_4$ with a triple eutectic point at 507°.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

YKH, D.S.

4

USSR

Reciprocal systems: sulfates and chlorides of lithium and cobalt. D. S. Tsuvykh and A. G. Bergman. *J. Gen. Chem. U.S.S.R.* [illegible] (Engl. translation).—See *C.A.* 48, 3181e.

H. L. H.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14695

Author : D. S. Lesnykh, A. G. Bergman
Inst : Rostov on The Don University
Title : On The Problem Concerning Stratification in Fused Chlorides and Sulfates of Monovalent and Bivalent Metals

Orig Pub: Uch. zap. Rost. n/D un-ta, 1954, t. 20. Trudy khim. fak., vyp. 6, 19-31

Abstract: The liquidus graphs of the irreversible reciprocal system Li, Pb // Cl, SO_4 and of the diagonal sections of the systems Li, Cd // Cl, SO_4; Li, Ag // Cl, SO_4, Li, Ca, Cl // Cl, SO_4 and Li, Sr // Cl, SO_4 were studied by the visual-polythermal method. Basing on the obtained data, as well as on data found in the bibliography, the conclusion was arrived at that the stratification in the melted state takes place mainly in systems containing cations with an 8-electron or 2-electron exterior layer,

Card 1/2

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LESNYKH, D.S.

USSR/Physical Chemistry. Thermodynamics, Thermochemistry, Equilibria, Physical-Chemical Analysis, Phase Transitions. B-8

Abs Jour: Ref Zhur-Khimiya, No 5, 1957, 14693

Author : D. S. Lesnykh, Z. M. Karmanova
Inst : Rostov on the Don University
Title : Resiprocal Ternary System of Lithium and Manganese Sulfates and Chlorides

Orig Pub: Uch. zap. Rostovsk. n/D un-ta, 1955, 25, vyp. 7, 19-23

Abstract: The irreversible system of Li, Mn // Cl and SO_4 was studied by the visual-polythermal method. The crystallization field od $MnCl_2.2LiCl$ is of a triangular shape and ends at a point of double ascent. The crest line in the crystallization field of $MnCl_2$ is shifted by about 2.5 percent away from the diagonal $MnCl_2$-Li_2SO_4 towards $MnSO_4$, which indicates some reversibility in the system at melting points.

Card 1/1

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.

USSR/Chemistry - Alkali metals

Card 1/1 Pub. 22 - 24/45

Authors : Sholokhovich, M. L.; Lesnykh, D. S.; Bukhalova, G. A.; and Bergman, A. G.

Title : Stratification in fusions of mutual systems with participation of salts of first and second groups

Periodical : Dok. AN SSSR 103/2, 261-263, Jul 11, 1955

Abstract : Experiments conducted with Na, Cs, Li and other metal systems showed that one of the conditions leading to stratification during the fusion of these elements is the greater difference in the polarizability of the cations and anions of the components. The most vivid difference in the polarizability was established among ions with 8 or 2 external electron layers and ions with external electron structure consisting of 18 or 18 plus 2 electrons. The effect of fluorides on the prevention of stratification in liquid phases is explained. Nine USSR references (1929-1946). Graphs.

Institution : Rostov/Don State University im. V. M. Molotov

Presented by : Academician I. I. Chernyayev, May 13, 1955

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

SEMENTSOVA, A.K.; BERGMAN, A.G.; LESNYKH, D.S.

Complexing and exchange decomposition in the reciprocal system of thallium and cadmium chlorides and sulfates. Zhur.neorg.khim.1 no.1:163-169 '56. (MIRA 9:10)

1.Rostovskiy na-Donu gosudarstvennyy universitet imeni V.M.Molotova.
(Thallium salts) (Cadmium salts) (Compounds, Complex)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

AID P - 5392

Subject : USSR/Engineering

Card 1/1 Pub. 103 - 22/28

Authors : Lesnykh, D. S., M. S. Smovt, and K. K. Moroz

Title : Electro-sulfidation of steel and cast iron in water solutions and in melted salts.

Periodical : Stan. i instr., 9, 35-36, S 1956

Abstract : A brief description of the thermo-chemical, electrolytic process of sulfidation of the 45-steel and gray cast-iron is presented. It was developed in the Rostov University laboratories, and reportedly increases the corrosion resistance of treated metals.

Institution : As above

Submitted : No date

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions. B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26147

Author : D.S. Lesnykh, A.G. Bergman

Title : Mutual System of Lithium and Silver Chlorides and Tungstate with Stratification.

Orig Pub : Zh. obshch. khimii, 1956, 26, No 6, 1560-1564

Abstract : The liquidus surface of the ternary mutual system Ag, Li // WO_4, Cl was studied by the visual-polythermal method. The eutectic points of the binary systems Li_2WO_4 - Ag_2WO_4 and Ag_2WO_4 - Ag_2Cl_2 are at (in equ.%) 55% of Ag_2WO_4 and 560° and at 70.0% of Ag_2Cl_2 and 390° respectively. The crystallization surface of the mutual system is represented by crystallization fields of AgCl, Ag_2WO_4, Li_2WO_4 and solid solutions (Li, Ag) Cl. The ternary eutectic points answer 375°. There is a great region of stratification situated above the Li_2WO_4 field and occupying 63.51% of the area of the square of composition. The diagonal sections Ag_2MoO_4 - Li_2WO_4 with the transition point at 450° and 37.5% of Li_2WO_4, and Li_2

Card : 1/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

USSR/Thermodynamics. Thermochemistry. Equilibria. Physico-Chemical Analysis. Phase Transitions B-8

Abs Jour : Ref Zhur - Khimiya, No 8, 1957, 26147

MoO_4 - Ag_2WO_4 with the transition point at 460° and 67.5% of Ag_2WO_4 were also studied. There is no stratification in both these cases.

Card : 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.

4
4E4g

Reciprocal system with layering of the chlorides and tungstates of lithium and silver. D. S. Lesnykh and A. G. Bergman. J. Gen. Chem. U.S.S.R. 26, 1749-62(1956) (English translation). See C.A. 51, 4806h. B. M. R.

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.

The reaction between some lithium and cadmium salts in the absence of a solvent. D. S. Lesnykh, A. O. Berkman, and N. G. Bukun (State Univ., Rostov-on-Don). *Zhur. Obshchei Khim.* 26, 2673-8(1956).—The ternary reciprocal system Li, $Cd \| Cl^-, MoO_4^{--}$ was studied by the visual, polythermal method. The diagonal cross sections of the reciprocal system of the chlorides and orthovanadates, chlorides and tungstates of Li and Cd were also studied. For the same cation compn. the irreversibility of the double decompn. reaction increases and the mutual solv. decreases with an increase in the difference of the anion polarizability.

J. Rovtar Leach

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.; SMOVT, M.S.; MOROZ, K.K.

Electrolytic sulfiding of steel and cast iron in aqueous solutions and fusions of salts. Stan.i instr. 27 no.9:35-36 S '56. (MLRA 9:11)

(Cementation (Metallurgy))

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D. S.

Mutual solubility of some lithium and silver salts in the fused state. D. S. Lesnykh and A. G. Berzman (V. M. Molotov State University-on-Don). *Zhur. Fiz. Khim.* 30, 1959-65(1956).—Reciprocal Ag and Li chloride and chromate systems form no complexes, with the equil. strongly displaced towards the AgCl and Li_2CrO_4, and the mutual limited soly. of the stable couple in the fused state. When Cl^- in the Li and Ag chloride-chromate system is replaced with SO_4^{--}, WO_4^{--}, and MoO_4^{--}, $AgCrO_4$ occupies the place of AgCl in the first system discussed. Conclusions are drawn that the polarizability of CrO_4^{--} is intermediate between Cl^- and SO_4^{--}, and that the polarizability decreases in the order $CrO_4^{--} \rightarrow MoO_4^{--} \rightarrow WO_4^{--} \rightarrow SO_4^{--}$. The layer formation in the Li, Ag systems with Cl^-, SO_4^{--}; Cl^-, WO_4^{--}, Cl^-, MoO_4^{--}, and Cl^-, CrO_4^{--} occur at 62.5, 63.61, 57.32, and 25.78% of the square of the compn. of all reciprocal systems, i.e. the difference in the anion polarizability with a high polarizability difference of the cations in the fused salt mixts. is one of the conditions for the layer formation in such fused systems.

W. M. Sternberg

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

L 3 5 2 4 / K 17, D.S.

5(2);25(1) PHASE I BOOK EXPLOITATION SOV/2313

Akademiya nauk SSSR. Institut mashinovedeniya

Povyshenie stoykosti detaley mashin /sul'fidirovanie/: sbornik statey (Increasing the Wear Resistance of Machine Parts /Sulfurization/: Collection of Articles) Moscow, Mashgiz, 1959. 126 p. Errata slip inserted. 4,500 copies printed.

Ed. (Title page): N. M. Khrushchov, Doctor of Technical Sciences; Ed. (Inside book): A.O. Nikitin, Engineer; Tech. Ed.: V.D. Il'kind; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz): K.A. Ponomarev, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical workers of machine-building and overhauling plants.

COVERAGE: This book presents results of investigations of methods to increase the resistance of machine parts to seizure. A new method of sulfurization which improves the friction behavior of cast iron and steel and an analysis of the effect of sulfurization on the antifriction properties and wear of metal are given. These articles are the transactions of a seminar held at the Institute of Mechanical Engineering of the Academy of Sciences, USSR, in December 1956.

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Smovt, N.S., Engineer. Results of Work on the Technology of the Sulfurization Process in Rostsel'mash /Rostov-na-Donu Agricultural Machinery Plant/ 111
The author describes an investigation carried out at the Rostov plant aimed at improving wear resistance of cutting tools by sulfurization.

Lifshits, Ya. O., Candidate of Technical Sciences. Uses of Sulfurization in Manufacturing Agricultural Machinery 115
In this article the author presents the results of laboratory and bench tests of sulfurized and nonsulfurized machine parts carried out by NIISKhM (Rostov Institute for Agricultural Machinery) and ROSTSEL'MASh.

Blokhin, M.A., P.S. Nesterenko, and K.T. Shuvayev. X-ray and Spectrum Analysis of Sulfurized Samples 121
The author describes an investigation of depth distribution of sulfur in type 45 steel and gray cast iron sulfurized at the ROSTSEL'MASh.

Lagutkh, D.S., Candidate of Chemical Sciences. Electrosulfurization 126
The author presents the results obtained from sulfurizing parts in various molten salts at 240 to 270°C and in aqueous solution of salts and 50 to 75°C using electrolytic methods.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, D.S.; LIFSHITS, Ya.G.; OSIPOV, O.A.; SMOVT, M.S.

Electrochemical method for the sulfidization of metals. Uch.zap. RGU no.60:151-172 '59. (MIRA 14:10)
(Metals) (Sulfurization)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

BERLIN, A.Z., inzh.; LESNYKH, D.S., kand.tekhn.nauk

Cementation by natural gas at the Rostov Agricultural Machinery Plant. Metalloved. i term. obr. met. no.3:61-62 Mr '61. (MIRA 14:6)

1. Rostovskiy zavod sel'khozmashinostroyeniya i Rostovskiy gosudarstvennyy universitet.
(Rostov-on-Don--Agricultural machinery industry)
(Cementation (Metallurgy))

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

S/137/62/000/012/065/085
A006/A101

AUTHORS: Lesnykh, D. S., Lifshits, Ya. G., Osipov, O. A., Smovt, M. S.

TITLE: An electrochemical method of metal sulfonation

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1962, 131 - 132, abstract 12I808 ("Uch. zap. Rostovsk.-n/D. un-ta", 1959, v. 60, 151 - 172)

TEXT: The authors studied the effect of factors upon the quality of a forming surface layer in the electrochemical method of cast-iron and steel sulfonation. These factors are: bath composition; metal type used for the cathode specimen (part) prior to sulfonation; current density on the anode; bath temperature; duration of the process and throwing power of the bath. Aqueous solutions and melts of sulfur-containing salts were used as sulfonation baths, e.g. CH_3COOK 50%, CH_3COONa 30%, $Na_2S_2O_3$ 10% and KCNS 10% with an operational temperature of the melt as high as 260 - 240°C, and a 10% aqueous solution of $Na_2S_2O_3$ and KCNS in a 5 to 2 ratio; the sulfonation temperature is 50 - 75°C. To obtain a strong and elastic sulfonated layer, the specimens were

Card 1/2

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

Subject : USSR/Meteorology AID P - 3860

Card 1/1 Pub. 71-a - 23/35

Author : Lesnykh, I. S.

Title : Simplified method of erecting a water-gaging bridge of the crib type

Periodical : Met. i. gidr., 6, 54-55, N/D 1955

Abstract : The author makes some suggestions on erecting gaging bridges on rivers with steep banks and rocky river beds by reinforcing the structure with wooden piles. Two diagrams.

Institution : None

Submitted : No date

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

36950
S/142/61/004/006/015/017
E192/E382

7,2585

AUTHORS: Bolotin, L.I., Volkov, V.I., Lesnykh, M.S., Lyapkalo, Yu.M., Merzlikin, V.A., Pipa, A.V., Sidorenko, I.S. and Chernyak, L.L.

TITLE: A high-power pulsed oscillator

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, v. 4, no. 6, 1961, 726 - 728

TEXT: Generation of high-power bursts of ultrashort-wave frequencies is of importance in linear accelerators of heavy particles. A pulsed oscillator based on the triode, type ГИ-4А (GI-4A), was therefore developed. Constructionally, the oscillator is based on coaxial tuned circuits, in which the tube operates as a grounded-grid system (Ref. 1 - M.S. Neyman - Triode and tetrode generators for UHF (Triodnyye i tetrodnyye generatory SVCh), Sovetskoye radio, 1950). The anode-grid resonant circuit is in the form of a quarter-wave line, terminated with the interelectrode capacitance Cag (Fig. 1). Since the external diameter D = 33 cm, internal diameter d = 14 cm and Cag = 35 pF, the resonance frequency is 142 Mc/s and the length h of the anode grid-tuned circuit is 19 cm;

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these calculated data were verified experimentally. The cathode-grid circuit is in the form of a short-circuited polycylindrical coaxial section of a half-wave line; this is terminated with the capacitance Cag . The feedback is provided by three non-adjustable loops positioned at angles of 120° with respect to each other, in such a manner that the loops pass through the common wall of the resonators. The separator condenser in the anod-grid circuit consists of six groups of condensers, each consisting of two condensers in series. The oscillator was tested with an 82-Ω resistive load, which was in the form of a polystyrol cylinder with a water solution of sodium carbonate. It was possible to obtain a maximum power of 1.2 MW with an anode voltage of 32 kV and pulse duration of 450 μs. The oscillator was also tested with a high-Q load formed by the resonator of a linear proton accelerator; this had a resonance frequency of 142 Mc/s and a quality factor of 50 000. It was found that at an anode voltage of 36 kV the resonator of the accelerator received a power of the order of 500 kW, so that the protons could be accelerated up to energies

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E192/E382

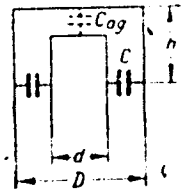
A high-temperature ....

of 5.5 MeV. There are 4 figures.

ASSOCIATION: Uchenyy sovet FTI AN UkrSSR (Learned Council of FTI AS UkrSSR)

SUBMITTED: April 28, 1961

Fig. 1:



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BOLOTIN, L.I.; VOLKOV, V.I.; LESNYKH, M.S.; LYAPKALO, Yu.M.; MERZLIKIN, V.A.; PIPA, A.V.; SIDORENKO, I.S.; CHERNYAK, L.L.

Power impulse self-oscillator. Izv.vys.ucheb.zav.; radiotekh. 4 no.6:726-728 N-D '61. (MIRA 15:4)

1. Rekomendovano Uchenym sovetom Fiziko-tekhnicheskogo instituta AN USSR.
(Oscillators, Electric) (Pulse techniques (Electronics))

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SURMELI, D.D., kand.tekhn.nauk; MAR, Ch.D., inzh.; LEVCHENKO, G.I., inzh.; KRYLOV, I.F., inzh.; LESNYEH, M.V., inzh.

"Poroizol" is a material for packing joints. Stroi. mat. 7 no.9: 31-32 S '61. (MIRA 14:11)

(Rubber, Synthetic)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESNYKH, R.M.

Experience in decreasing the incidence of tuberculosis in the Ural Heavy Machine Fatory. Probl.tub. 39 no.1:10-13 '61. (MIRA 14:1)

1. Glavnyy vrach protivotuberkuleznogo dispansera Ural'skogo zavoda tyazhelogo mashinostroeniya. Iz Sverdlovskogo instituta tuberkuleza (dir. - prof. I.A. Shaklein, konsul'tanty raboty S.Ye. Gorbovitskiy i M.A. Perebatova).
(SVERDLOVSK—TUBERCULOSIS—PREVENTION)

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ACC NR: AM6021067 Monograph UR/

EWP(t)/EWP(l) IJP(c) EM/RM/JH/WW/JD/HM

Bersudskiy, Vladimir YEfimovich (Candidate of Technical Sciences); Krysin, Vladimir Nikolayevich (Engineer); Lesnykh, Sergey Ivanovich (Engineer)

Production of honeycomb structures (Proizvodstvo sotovykh konstruktsiy) Moscow, Izd-vo "Mashinostroyeniye," 1966. 281 p. illus., biblio. Errata slip inserted. 3700 copies printed.

TOPIC TAGS: honeycomb structure, honeycomb filler, honeycomb structure manufacturing, honeycomb filler manufacturing, filler nonmetallic material, aluminum alloy, titanium alloy, stainless steel

PURPOSE AND COVERAGE: This book is intended for engineers-designers and technologists in various branches of the machine-building industry. It may also be useful to teachers and senior students of schools of higher education specializing in machine building. The book deals with problems connected with designing and manufacturing glued and brazed structures containing honeycomb fillers, the use of which in aviation, automobile, shipbuilding and construction industries is rapidly growing. Data on designs and strength of

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ACC NR: AM6021Q67

parts with honeycomb fillers made of nonmetallic materials, aluminum and titanium alloys or stainless steel are presented. Methods of making honeycomb fillers and structures having honeycomb fillers are described as well as equipment and instruments used for mechanization and automation of manufacturing and control of honeycomb fillers and parts containing them. Chapters I, II, and III were written by Engineer V. N. Krysin, and Chapters IV, V and VI by Candidate of technical sciences B. E. Bersudskiy and Engineer S. I. Lesnykh.

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Part II. Making of Honeycomb Fillers and Structures -- 80

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ACC NR: AM6021067

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LESNYKH, V., gornyy inzhener

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1. Kadiyevskiy obshchestvennyy nauchno-issledovatel'skiy gornyy institut.

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GOGOLIDZE, A.S.; OGNEV, G.I.; FRIDMAN, L.Yu.; BUYDENKO, I.A.; LESNYKH, V.A., TARARYKO, F.M.; YURILIN, G.M.

Making 541 m. of crosscuts in one month. Ugol' 40 no.12: 17-19 D '65. (MIRA 18:12)

1. Shakhta im. XXII s"yezda KPSS tresta Kadiyevugol' (for Gogolidze, Ognev, Fridman). 2. Trest Kadiyevugol' (for Buydenko). 3. Kadiyevskiy filial Kazakhskogo gorno-metallurgicheskogo instituta (for Lesnykh, Tararyko, Yurilin).

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RZHONDKOVSKIY, R.P., dotsent; SINOPAL'NIKOV, K.G., dotsent; SAKHAROV, D.M.; GRIN'KO, N.K.; ZAKHAROV, Ye.P.; KHADZHIKOV, E.N.; LESNYKH, V.A.

Problems of orogeny. Ugol' 40 no.12:19-24 D '65. (MIRA 18:12)

1. Gornyy fakul'tet Permskogo politekhnicheskogo instituta. (for Rzhondkovskiy, Sinopal'nikov). 2. Kadiyevskiy gorodskoy komitet Kommunisticheskoy partii Ukrainy (for Sakharov). 3. Kombinat Luganskugol' (for Grin'ko, Zakharov). 4. Kadiyevskiy filial Kommunarskogo gorno-metallurgicheskogo instituta (for Khadzhikov, Lesnykh).

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Chemical color reaction for diagnosing hog cholera. Veterinariya 40 no.2:73-74 F '63. (MIRA 17:3)

1. Nachal'nik veterinarnogo otdela Voronezhskoy oblastnoy veterinarno-bakteriologicheskoy laboratorii (for Goncharov). 2. Starshiy veterinarnyy vrach-epizootolog Voronezhskoy oblastnoy veterinarno-bakteriologicheskoy laboratorii (for Lesnykh). 3. Liskinskaya mezhrayonnaya veterinarno-bakteriologicheskaya laboratoriya (for Grigor'yeva).

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[illegible], M.N.; [illegible]GOROVA, M.N.; SHNOL', S.[illegible]

Method of inorganic phosphate determination [illegible] absorption spectra in ultraviolet. Biokhimiia [illegible] My-Je '65 [illegible]

1. Biologo-pochvennyy i fizicheskiy fakul'tety [illegible] universiteta imeni Lomonosova i Institut farmakologii [illegible], Moskva.

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KHLEBNIKOV, Ye.L. professor; ANDREYEV, O.V., kandidat tekhnicheskikh nauk; BEGAM, L.G., kandidat tekhnicheskikh nauk; BERG, O.Ya., kandidat tekhnicheskikh nauk; GAMAYUNOV, A.I., kandidat tekhnicheskikh nauk; DUCHINSKIY, B.N., kandidat tekhnicheskikh nauk; KAZEY, I.I., kandidat tekhnicheskikh nauk; LEMOKHIN, B.I., kandidat tekhnicheskikh nauk; LUGA, A.A., kandidat tekhnicheskikh nauk; LYALIN, N.B., kandidat tekhnicheskikh nauk; MEL'NIKOV, Yu.L., kandidat tekhnicheskikh nauk; POL'YEVKO, V.P., kandidat tekhnicheskikh nauk; PROKOPOVICH, I. G., kandidat tekhnicheskikh nauk; STRELETSKIY, N.N., kandidat tekhnicheskikh nauk; TYULENEV, Ye.A., kandidat tekhnicheskikh nauk; KHROMETS, Yu.N., kandidat tekhnicheskikh nauk; SHELESTENKO, L.P., kandidat tekhnicheskikh nauk; SHPIRO, G.S., kandidat tekhnicheskikh nauk; YAROSHENKO, V.A., kandidat tekhnicheskikh nauk; ZELEVICH, P.M., inzhener; CHEGODAYEV, N.N.; BOBROVA, Ye.N., tekhnicheskiy redaktor.

[Technical specifications for designing bridges and pipes for railroads of a normal gauge (TUPM-56). Effective July 1, 1957 by order of Ministry of Means of Communication and the Ministry of Transportation Construction, September 15, 1956] Tekhnicheskie usloviia proektirovaniia mostov i trub na zheleznykh dorogakh normal'noi kolei (TUPM-56). Vvedeny v kachestve vremennykh s 1 iiulia 1957 g. prikazom Ministerstva putei soobshcheniia i Ministerstva transportnogo stroitel'stva of 15 sentiabria 1956 g. No.250/TsZ/213. Moskva, Gos.transp.zhel-dor.izd-vo, 1957. 221 p. (MLRA 10:5)

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BONDAR', Nikolay Gerasimovich, doktor tekhn. nauk, prof.; KAZEY, Igor' Ivanovich, kand. tekhn. nauk; LOSKHIN, Bernard Falkovich, kand. tekhn. nauk; KOZ'MIN, Yuriy Georgiyevich, kand. tekhn. nauk, dots.; Printimali uchastiye: TARASENKO, V.P., kand. tekhn. nauk; YAKOVLEV, G.N., kand. tekhn. nauk dots.; DOROSHENKO, Ye.V., kand. tekhn. nauk; NEVZOROV, I.N., inzh.; KONASHENKO, S.I., kand. tekhn. nauk, dots.; ORLENKO, V.P., inzh.; KHOKHLOV, A.A., kand. tekhn. nauk, dots.; ZELEVICH, P.M., kand. tekhn. nauk, red.

[Dynamics of railroad bridges] Dinamika zheleznc-dorozhnykh mostov. [By] N.G.Bondar' i dr. Moskva, Transport, 1965. 411 p. (MIRA 18:12)

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LESOKHIN, B.F., kand.tekhn.nauk

Operational performance of bridges. Trudy TSNIIS no.27:246-278 '58. (MIRA 11:7)

(Bridges--Testing)

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LESOKHIN, B.F.; IGEL'NIKOV, Yu.L.; POL'YEVSKO, V.P.; KHROMETS, Yu.N.; KAZEY, I.I., kand.tekhn.nauk, red.; GOLOVANOV, A.L., red.; BOBROVA, Ye.N., tekhn.red.

[Metal bridges; testing the performance of metal spans in currently used railroad bridges] Metallicheskie mosty; issledovanie raboty metallicheskikh proletnykh stroenii na ekspluatiruemykh mostakh. Moskva, Gos. transp. zhel.dor.izd-vo, 1959. 186 p. (Batushkin. Vsesoiuznyi nauchno-issledovatel'skii institut transportnogo stroitel'stva. Trudy, no.29) (MIRA 12:8)

(Railroad bridges--Testing)

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KAZEY, I.I., kand.tekhn.nauk ; LESOKHIN, B.F., kand.tekhn.nauk

New norms for accounting for the action of live loads on railroad bridges. Trudy TSNIIS no.46:31-54 '62. (MIRA 15:9)
(Railroad bridges)

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ESOKHIN, I. G.

B-I-8

Pyrites as a source of sulphur. K. F. Pavlov and I. G. Lesokhin (J. Chem. Ind. Russ., 1935, 12, 453—460).—6 : 2 pyrites-coal mixture yields, when heated in a current of air of an appropriate H_2O content at 700°, a 2 : 1 mixture of H_2S and SO_2 (diluted with CO_2 and N_2), which can be converted quantitatively into S by passing into 70% H_2SO_4 at such a temp. as to prevent condensation of H_2O. R. T.

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PROCESSES AND PROPERTIES INDEX

Ca

1

The kinetics of burning raw materials in sulfuric acid production. B. D. Mel'nik, I. G. Leonkina, B. A. Kopylev and D. G. Traber. *J. Chem. Ind.* (U. S. S. R.) 15, No. 2, 16-21(1938).—At all temps. the amt. of S burned in FeS_2 powder decreases with time, due to formation of an oxide film over the particles. Hence the FeS_2 should be finely ground. At 500°, slow oxidation of the S occurs, but at 1100° actual burning takes place and is much more complete. Equations are derived for calcg. the rate of burning of FeS_2 at various temps. H. M. L.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Converting gypsum into cement and sulfur. K. F. Pavlov, I. G. Lesokhin and D. G. Traber. *J. Chem. Ind.* (U. S. S. R.) 15, No. 3, 5-10(1938). When a mixt. of gypsum, clay and coal is heated in a rotary furnace at 1300-50°, it gives off 88.9% of its S as SO_2 and H_2S. These pass into a cooler zone at 600-700° and deposit 85-90% of their S as the free element. The residual clinkers satisfy the standards for cement. H. M. L.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

2

Kinetics of the formation of calcium aluminates and the role of mineralizers. V. F. Zhuravlev, I. G. Lesokhin, and R. G. Tempel'man. *Zhur. Priklad. Khim.* (J. Applied Chem.) 21, 887-902(1948).—(1) Mixts. of finely ground $CaCO_3$ and Al_2O_3, intimately mixed and pressed, in the mol. ratio $CaO:Al_2O_3$ = 1:1 and 3:1, were heated at temps. 800-1300° for 30, 60, 120, and 180 min., and the progress of formation of Ca aluminate was measured by anal. detn. of unbound CaO. In the 1:1 mixt., binding of CaO begins to be noticeable at 800°; with the addn. of 2% (by wt.) of CaF_2, at 700°. In the 3:1 mixt., it begins at 900°, and, with 2% CaF_2, at 800°. The rate of binding is greatest in the initial stages (approx. the 1st hr.), then becomes slower, and, finally, comes to a halt. The rate increases with the temp., except in the case of the 1300° isotherm of 3:1 + 2% CaF_2, which lies below that of 1200° and intersects the 1100°, and, later, probably also the 1000° isotherm. This is consistent with Eitel's observation (*C.A.* 35, 4274[7]) of the promotion of decompn. of $3CaO.Al_2O_3$ by CaF_2. (2) Microscopic examn. showed that samples heated 180 min. at 1300° without CaF_2 contain 30-40% more $3CaO.Al_2O_3$ than if heated with 2% CaF_2. Addn. of CaF_2 accelerates the formation of aluminate (binding of CaO) from 900° upward in the case of the 1:1 mixt., but only above 1100° for the 3:1 mixt. By microscopic and x-ray examn., the main products, in the 1:1 mixt., are $CaO.Al_2O_3$ and $5CaO.3Al_2O_3$. The former begins to be formed at as low as 800°, and its abs. and relative amt. increases with the temp.; the latter begins to be formed at 800°, and, with increasing temp., its abs. amt. increases but its relative amt. decreases. $3CaO.Al_2O_3$ appears over the whole temp. range in the form of isolated grains; 0.5 $CaO.Al_2O_3$ appears, in the same form, between 900 and 1100°. The nature and the relative amts. of the minerals produced do not vary with the length of the heating or in the presence of CaF_2. In the 3:1 mixt., the amt. of $CaO.Al_2O_3$ increases with the temp., but it increases also with the length of the heating, and in the presence of CaF_2. The abs. amt. of $5CaO.3Al_2O_3$ increases with the temp.; at 900°, it predominates markedly over $CaO.Al_2O_3$, but, from 1200° on, its relative amt. decreases. Significant amts. of $3CaO.Al_2O_3$ are formed only from 1200° up; CaF_2 lowers both its temp. of formation and its temp. of decompn. (3) Jander's kinetic equation (*C.A.* 22, 1518), which does not take into account the change of the concn. of the reactants during the reaction, is not applicable to the exptl. data. Much better agreement is found if the change of concn. is taken into account, which leads to the differential kinetic equation $dy/dt = k'D(100 - x)/y$, where y = thickness of the reaction layer at the time t, D = diffusion coeff., and x = percentage conversion at the time t. In terms of the radius r of the grains of the solid reactants, the integrated form becomes $(\sqrt[3]{[100/(100 - x)]} - 1)^2 = 200\ kt$, where $k = k'D/r^2$. In contrast to rate consts. defined by a definite order of reaction, and which do not fit the exptl. data, the const. k defined by this equation does not vary by more than 24% at a given temp. Examples of av. values of k (time in hrs.) are: 1:1 mixt., 900, 1000, 1200.

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Sensonet Tech. Inst., Leningrad

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CA 18

Influence of iron sulfates on vanadium catalysts in the production of contact sulfuric acid. I. G. Lesokhin, D. G. Traber, and I. P. Mukhlenov (Leningrad Tekhnol. Inst.). *Zhur. Prikład. Khim.* (J. Applied Chem.) 23, 345-9(1950).—Mech. deposition of $FeSO_4$, up to 7%, on the catalyst causes some lowering of its activity only at 450°, none at 485 and 500°. The formation of rinds at points of contact of the catalyst with the heat-exchange pipes is due to condensation of H_2SO_4 which, at lower temps., dissolves the active components of the catalyst. At higher temps., H_2SO_4 evaps. and leaves a solid rind of catalyst granules cemented by sulfates. If $FeSO_4$ or $Fe_2(SO_4)_3$ is incorporated into the catalyst at its prepn., its activity is lowered proportionally to the Fe content. The poisoning coeff. α, defined by $\alpha = (2.303/g) \log (k/k')$, where g = g. $FeSO_4$ l. catalyst, k and k' the reaction rate consts. without and with Fe, is 0.022 at 450° and 0.010 at 485°.

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Chemical

13

Arsenic poisoning of vanadium catalysts in the production of sulfuric acid I. G. Teodkin and I. P. Mukhlenov (Leningrad Technol. Inst.). *Zhur. Prikkl. Khim.* (J. Applied Chem.) 23, 440-50(1950). The effect of different amts. of As_2O_3 on the degree of oxidation of SO_2 to SO_3 was tested in SO_2-air mixts. contg. known contents of As_2O_3 flowing at a space velocity of 185-200 cc./cc./hr. over a catalyst

be at 485 and 500°. At any given t., the catalyst retains only a fraction, increasing with time, of the As_2O_3 passed until a satn. amt. is reached. The plot of the rate const. k of the oxidation as a function of the amt. g of As_2O_3 retained (in g./l. satd. catalyst) consists of an initial rectilinear portion representable by $k = k_0 - ag$, where the poisoning coeff. a = 0.2 (in a mixt. contg. 7% SO_2, 9.0% air, at 485°, c = 0.5 mg./l.). On further prolonged poisoning, desorption of As_2O_3 by the catalyst decreases and stops at 11-12% of the wt. of the satd. catalyst, or 13% of the wt. of the unsatd. catalyst. Over that range, the rate const. can be represented by $k = 7.5\ g^{-0.5}$, i.e. the decrease of the rate is hyperbolic. The limit of poisoning is represented by $a = c(g/(k_0 - k))$, where the subscripts 0 and c refer to the initial and total k, resp. The values at 450-475-485-500° with respect to the satd. catalyst are a = 0.0250, 0.0180, 0.0185, 0.0182, 0.0170, and with respect to the unsatd. catalyst a = 0.0202, 0.0220, 0.0215, 0.0211, 0.0208. The activation energy E for the poisoned catalyst, in the temp. range 475-505°, is 20.22 kcal., vs. close to the figure (18.20 kcal.) for the unpoisoned catalyst. However, below 475°, E for the poisoned catalyst is increased by a factor of 2, whereas on an unpoisoned catalyst the same increase is observed only at as low as 440°. Catalysts poisoned with small amts. of As_2O_3 cannot be regenerated by an air blast at 450-575°, only the As_2O_3 retained at higher t. and over longer times can be removed in a hot-air stream. With c = 2.6 mg./l. and 24 hrs., the total amt. of As_2O_3 retained consists of an irreversible and a reversible part. Under production conditions, c is usually low, and therefore the poisoning is mostly irreversible. More efficient is the removal of As_2O_3 (in the form of $AsCl_3$) by HCl; this operation, however, entails a loss of activity of the catalyst. Some elimination of the As_2O_3 is also achieved by H_2O vapor.

S. Ibert

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LESOKHIN, I.G

Chemical Abst.
Vol. 48 No. 8
Apr. 25, 1954
Apparatus, Plant Equipment,
and Unit Operations

Apparatus for determining nitrogen in gas mixtures. I. G. Lesokhin, B. A. Kopylev, and A. Ya. Averbukh (L[illegible] [illegible] Technol. Inst.). J. Anal. Chem. (U.S.S.R.) 7, [illegible] (1952)(Engl. translation).—See C.A. 47, 1089g. H. L. [illegible]

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LESOKHIN, I. G.

5

Apparatus for determination of solubility. I. G. Lesokhin, B. A. Kopylev, A. Ya. Averbukh, and V. P. Bogdanov. U.S.S.R. 100,966, Sept. 25, 1955. A thermostat-flask inside of which is placed a transparent ampul contg. the substance and the solvent is used to det. the soly. at temps. above 100° by observation of incipient turbidity (supersatn.). The ampul is held by a yoke attached to a reciprocating mechanism. M. Hosch

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LESOKHIN, I. G.

Apparatus for determination of nitrogen in gases. I. G. Lesokhin, M-B. A. Kopylev, A. Ya. Averbukh, and V. P. Bogdashev. U.S.S.R. 104,153, Nov. 25, 1956. N is detd. by adsorbing it on heated Mg placed in a loop in the absorption train. M. Hosch

Chem

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

SOV/80-59-1-1

AUTHOR: Lesokhin, I.G.

TITLE: On the Problem of Obtaining Powdered Iron out of Pyrite Cinders in a Suspended Layer (K voprosu polucheniya [illegible] chkoobraznogo zhelezu iz piritnykh ogarkov ve vzveshennoy sloye)

PERIODICAL: Zhurnal prikladnoy khimii, 1[illegible], Nr 1, pp [illegible] ([illegible])

ABSTRACT: This is a study of the reducing process of iron out of pyrite cinders by various gaseous and solid reducing a[illegible]. The pyrite cinders were obtained in the process of reasoning flotation pyrite in the mechanical furnace of the Levskiy Chemical Plant. They were reduced by a gaseous reducer (illuminating gas) in the suspended layer, i.e. when the layer of a solid material from the stationary (filtering) state passes over into the suspended state. As a result of this study, in which took part N.A. Shilova, it [illegible] established that: 1. The degree of iron reduction increases with a rise of temperature. The degree of reduction amounts to 61.5; 72 and 76% at temperatures of 700; 800 and [illegible] respectively, under the same other conditions; 2. The degree of reduction depends on the chemical composition of the initial cinders. Preliminary sulfur removal increases somewhat this degree; 3. The reduction degree increases with the rise of the velocity of the reducing gas (under the same other conditions): at a velocity of 0.11 m/sec the degree

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[illegible]

[illegible] the Problem of [illegible] Iron [illegible]
[illegible]

of iron reduction [illegible] at temperatures [illegible] 7 [illegible] velocity [illegible] sec, [illegible] values [illegible] respectively.
There are [illegible] and 14 Soviet references.

[illegible]: Leningradskiy tekhnologicheskiy institut imeni Lensovet (Leningrad Technological Institute imeni Lensovet)

[illegible]: March [illegible], 1957

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, I.G.

Mass transfer during the roasting of iron sulfides in a fluidized bed. Trudy LTI no.54:71-81 '59. (MIRA 13:8)
(Iron sulfide) (Combustion) (Mass transfer)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, I.G.; TSITOVICH, O.B.; BALABANOVICH, G.N.; VINNIKOV, L.I.

Analyzing the speed rate in the formation of a fluidized bed. (MIRA 17:9)
Trudy LTI no.59:83-94 '61.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

BALABANOVICH, G.N.; VINNIKOV, L.I.; LESOKHIN, I.G.

Resistance to acids of acid-resistant bricks. Trudy LTI no.59:95-100 '61. (MIRA 17:9)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, L.G.

Using pyrite cirders for the production of iron powder. Trudy LTI no.54:82-93 '59. (MIRA 13:8)
(Powder metallurgy) (Pyrite)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M.

Some properties of generalized characters of semigroups. Uch. zap. Ped. inst. Gerts. 183:277-286 '58. (MIRA 13:8)
(Groups, Theory of)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

[illegible], [illegible]

[illegible]

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M. M., Cand Phys-Math Sci -- "Systems with an ~~[illegible]~~ multiplication." Sverdlovsk, 1961. (Min of Higher and Sec Spec Ed RSFSR. Ural State U im A. M. Gor'kiy) (KL, 8-61, 227)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M.

Note on the regularity of systems with external multiplication and the simplicity of their components. Uch.zap.Ped.inst.Gerts. 218:23-37 '61. (MIRA 14:10)

(Groups, Theory of)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M.

Ideals of the second component of a system with external multiplication. Trudy Nauch.ob'ed.prep. fiz.-mat. fak.ped.inst. Dal'.Vost. 1:60-73 '62.

Note on the article of Sh. Shwarts "Characters of finite commutative semigroups." 74 (MIRA 17:3)

1. Khabarovskiy gosudarstvennyy pedagogicheskiy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M. (Khabarovsk)

Completeness of systems with external multiplication. Izv. vys. ucheb. zav.; mat. no.5:59-62 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M. (Khabarovsk)

Correctness of systems with external multiplication having a regular first component. Izv. vys. ucheb. zav.; mat no.4:89-91 '63. (MIRA 16:10)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M. (Khabarovsk)

Galois connections in systems with external multiplication. Izv.vys.ucheb.zav.; mat. no. 1:84-86 '64. (MIRA 17:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M. (Khabarovsk)

Exte.nal multiplication systems with periodic and complete components. Izv. vys. ucheb. zav.; mat. no.2:94-99 '64. (MIRA 17:8)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHIN, M.M. (Khabarovsk)

Semigroup of multiplications of a commutative regular semi-group. Izv. vys. ucheb. zav.; mat. no.3,84-87 '64. (MIRA 17:12)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

IESCHEN, M.M. (Leningrad)

Duality of complex characters and semi characters of commutative semigroups. Mat. sbor. 66 no.3 378-383 Mr '65. (MIRA 18:5)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

DMITRIYEVSKIY, N.V., inzh.; LESOKHINA, G.M., inzh.; SHAL'NIKOV, G.I., kand.tekhn.nauk

Introducing automatic processes in stone-crushing plants. Stroi. i dor. mashinostr. 5 no.8:8-13 Ag '60. (MIRA 13:8)
(Sand and gravel plants) (Automation)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

S/064/62/000/002/002/008
3101/3144

AUTHORS: Mukhina, T. N., Lesokhina, G. F., Itsek, S. Ye.

TITLE: Pyrolysis of straight-run low octane number gasoline to butylenes, divinyl and aromatic hydrocarbons

PERIODICAL: Khimicheskaya promyshlennost', no. 2, 1962, 4 - 6

TEXT: Gasoil from the Romashkino deposit (specific weight 0.730, mean molecular weight 105) was submitted to pyrolysis in a laboratory apparatus. The pyrogas was analyzed chromatographically with an -2 (KhPA-2) apparatus. Results: (1) The optimum butylene yield was obtained with 25% admixture of water vapor at 725°C and a contact duration of 0.5 - 1 sec, 7.8%. 750°C and a contact duration of 0.5 - 1 sec were the optimum for high butadiene yield: olefin yield about 51%, butadiene content in the C_4 fraction 30.4%. (2) Aromatization took place under conditions under which a pyrogas rich in olefins developed simultaneously. No water vapor was added. (a) Single-stage process: At 750°C, contact duration 4.0 sec, 8.5% benzene related to the initial gasoline was obtained. The benzene fraction contained 95.0% C_6H_6. At 750°C and contact duration

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of 4 sec, 5.8% toluene (95% in the toluene fraction) was obtained. The yield was: 20% ethylene, 4% propylene, 2% butylenes, 1.5% divinyl. (b) Two-stage process: After a contact of 1 - 2 sec at 725 - 750°C, the high-boiling part of the pyrocondensate was further pyrolized at 650 - 680°C with a contact duration of 10 - 20 sec. At a contact duration of 1 sec in the first stage (750°C) and 14 sec in the second stage (680°C), the content of aromatic hydrocarbons increased from 60% to 93 - 96%. At a contact of 2 sec in the first stage (725°C) and 15 sec in the second stage (650°C), the content of aromatic hydrocarbons increased from 45% to 80 - 85%. The suitability of the two-stage process depends on whether the increased costs may be covered by savings from easier separation of the aromatic hydrocarbons. There are 3 figures, 3 tables, and 2 references: 1 Soviet and 1 non-Soviet.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

MUKHINA, T.N.; LESOKHINA, G.F.; ITSEK, S.Ye.

Low octane straight-run gasoline decomposed by pyrolysis into butylenes, bivinyl, and aromatic hydrocarbons. Khim. prom. no.2:80-82 F '62. (MIRA 15:2)

(Gasoline) (Butadiene)
(Butene)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

S/204/62/002/004/007/019
E075/E436

AUTHORS: Mukhina, T.N., Lesokhina, G.F., Itsek, S.Ye.

TITLE: Preparation of lower olefines, divinyl and aromatic hydrocarbons by the pyrolysis of benzene fractions

PERIODICAL: Neftekhimiya, v.2, no.4, 1962, 495-497

TEXT: An investigation was made of the pyrolysis of straight-run benzene from Romashkino crude, boiling between 30 - 180°C and having the molecular weight of 105. The pyrolysis was carried out in a tubular reactor on a laboratory and semi-industrial scale. High yields of ethylene, propylene, butylenes and divinyl were obtained at 800°C and contact time of 0.5 sec (ethylenic regime), the total yield of unsaturated hydrocarbons reaching 50% of the feed and the content of divinyl in the gaseous products being close to 45%. The liquid condensate has a highly aromatic nature. For the butylenic regime the best conditions are: temperature - 760°C, contact time - 1 sec at 50% steam dilution. The yield of butylenes reaches 645 kg and that of propylene 880 kg per 1 ton of ethylene produced. In addition 1800 kg of liquid condensate is obtained boiling between 47 - 195°C and

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S/204/62/002/004/007/019
E075/E436

Preparation of lower olefines ...

containing more than 50% of compounds capable of being sulphonated. The condensate has the research octane number of 84. The hydrogenated condensate resulting from the ethylenic regime pyrolysis has the "research" octane number of 99. It is concluded that the pyrolysis of benzenes gives a more flexible product distribution than that of n-butane or propane and may be economically advantageous. There is 1 table.

ASSOCIATION: Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov (Scientific Research Institute of Synthetic Alcohols and Organic Products)

Card 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

MUKHINA, T. N.; LESOKHINA, G. F.; ITSEK, S. Ye.

Production of lower olefins, bivinyl, and aromatic hydrocarbons by the pyrolysis of gasoline fractions. Neftekhimia 2 no.4: 495-497 Jl-Ag '62. (MIRA 15:10)

1. Nauchno-issledovatel'skiy institut sinteticheskikh spirtov i organicheskikh produktov.

(Gasoline) (Olefins) (Butadiene)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

S/0065/64/000/005/0023/0029

ACCESSION NR: AP4036979

AUTHOR: Vol'-Epshteyn, A. B.; Zabryanskiy, Ye. I.; Krichko, A. A.; Leschkina, G. F.; Malyavinskiy, L. V.; Mukhina, T. N.; Robert, Yu. A.

TITLE: Production and motor properties of gasolines from pyrolysis products

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1964, 23-29

TOPIC TAGS: gasoline, production, motor property, octane number, pyrolysis resin, pyrocondensate, low pressure hydrogenation, high octane gasoline, aluminum cobalt molybdenum catalyst, monoolefin, antidetonation property, octane rating

ABSTRACT: Conditions were developed for the low pressure hydrogenation of fractions of pyrolysis resins and pyrocondensates to obtain high octane gasolines. Pyrolysis resins of the ethylene system and pyrocondensates of the butylene-divinyl system, boiling up to 200 C, were hydrogenated at 10-40 atmospheres at a space velocity of 1.6-8.5 hr^{-1} in the presence of a technical aluminum-cobalt-molybdenum catalyst using a hydrogen:crude oil volume ratio of 500-800:1. In the hydrogenation of the pyrolysis resins at 40 atm. from 225-300C it was found that 235C was optimum: 75% of the dienes were hydrogenated to monoolefins; at higher temperatures the

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

ACCESSION NR: AP4036979

higher octane number monoolefins were hydrogenated to saturated hydrocarbons. The octane ratings were obtained on 1 cylinder test units IT9-2 and IT9-6 and auto engines MZMA-407. Changing the depth of hydrogenation of the unsaturated hydrocarbons of the highly aromatic distillates of these pyrolysis resins had little effect on the antidetonation properties of the gasolines; these had octane numbers of 86-96 by the motor method and 99-110 by the test unit method. Increasing the depth of hydrogenation of the unsaturated hydrocarbons of gasoline from pyrocondensates having a lower aromatic hydrocarbon content somewhat lowered its antidentonation properties; the octane number was lowered from 78.5 to 75.0 upon complete hydrogenation. It was shown that hydrogenated gasolines from pyrolysis resins of gaseous and liquid hydrocarbons can be used as highoctane components in the production of automobile gasolines. Gasolines A-66 (e.g., from commercial A-56 + 20% hydrogenated gasolines), A-72 (commercial A-66 + 30% hydrogenated gasolines) and A-80 (commercial A-72 + 45% hydrogenated gasolines) have higher antidetonation properties than commercial gasolines bearing these designations. Orig. art. has: 5 tables and 2 figures.

ASSOCIATION: IOI, VNII NP, NIISS

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

ACCESSION NR: AP4036979

SUBMITTED: 00 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: FP NO REF SOV: 005 OTHER: 004

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHINA, G. F. Cand. Chem. Sci.

Dissertation: "Adsorption from Solutions on Porous Adsorbents." Sci Res Order of the Labor Red Banner Physicochemical Inst imeni L. Ya. Karpov, 23 Jun 47.

SO: Vechernyaya Moskva, Jun, 1947 (Project #17836)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHINA, G.F.

26

Adsorption from Solution by Porous Adsorbents. (In Russian.) G. F. Lesokhina, K. A. Gol'bert, and A. A. Zhukhovitskii. Zhurnal Fizicheskoi Khimii (Journal of Physical Chemistry), v. 21, Mar. 1948, p. 363-377.

Adsorption from solutions of C_6H_6 and CCl_4 by seven adsorbents (sugar, bakelite, charcoal, anthracite, silica gel, ascarite, and hopcalite) was determined.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHINA, G.F.

CA

2

PROCESSES AND PROPERTIES INDEX

Adsorption from solutions by porous adsorbents. G. F. Lesokhina, K. A. Gel'bert, and A. A. Zhukovitskii (Karpov Inst. Phys. Chem., Moscow). *J. Phys. Chem.* (U.S.S.R.) 22, 368-77(1948)(in Russian); cf. Cherneva, *et al.*, *C.A.* 42, 8810i.—C_6H_6 is positively adsorbed from its mixts. with CCl_4, whatever the concn., by sugar charcoal, bakelite charcoal, birch charcoal, anthracite charcoal, silica gel, hopcalite, and ashanite (activated clay). The max. of the apparent adsorption is near 20 mol. % of C_6H_6. C_6H_6 is positively adsorbed also from cyclohexane by charcoal and silica gel, and the max. is near 25% C_6H_6. From CCl_4-C_6H_{12} mixts., CCl_4 is adsorbed by charcoal and silica gel, and the max. is near 20% CCl_4. In the systems C_6H_6-heptane and CCl_4-heptane, C_6H_6 and CCl_4 are adsorbed by birch charcoal, and the max. is near 80 and 55 mol. %, resp. The behavior of a system depends on the product $\beta\gamma$ of the affinity coeff. and the ratio of the partial mol. vols. of the 2 components. When $\beta\gamma$ is very different from 1, the adsorption isotherms do not yield any information on the phys. state of the adsorbed phase. When $\beta\gamma$ is approx. 1 and the max. of apparent adsorption is independent of the adsorbent, then neg. deviations from Raoult's law are probable in the adsorbed phase. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

L 40769-65 EWT(d)/EWA(d)/EWP(v)/EWP(k)/EWP(h)/EWP(1) Pf-4
ACCESSION NR: AP5012331

UR/0286/64/000/022/0093/0094

18
17
B

AUTHOR: Dmitriyev, P. N.; Kazimirov, A. Ye.; Lesokhina, G. M.

TITLE: Hopper feeder on a forced air installation for transporting loose materials. Class 81, No. 166600

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1964, 93-94

TOPIC TAGS: conveying equipment, 14

Translation: This inventor's certificate introduces a hopper feeder for a forced air installation which transports loose materials. The device includes a hopper which feeds the material alternately into two transfer hoppers equipped with feed valves. The material is transported from the transfer hoppers to a mixing chamber where the end of the main pipeline is located. At the end of the pipeline is a movable cone which controls the concentration of the mixture being transported along the line with compressed air. In order to transport the material by gravity feed from the transfer hoppers to the mixer, the transfer hoppers are mounted above the mixing chamber, and the conical dump valves are mounted where they are joined. Orig. art. has: 1 figure.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

L 40769-65

ACCESSION NR: AP5012331

ASSOCIATION: Leningradskiy filial vsesoyuznogo nauchno-issledovatel'skogo instituta stroitel'nogo i dorozhnogo mashinostroyeniya (Leningrad Branch of the All-Union Scientific Research Institute of Construction and Road Building Machinery)

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 000 OTHER: 000 JPRS

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHINA, L.M.

Periodic and recurrent psychoses in the works of Russian authors. (MIRA 11:8)
Vop. psikh. i nevr. no.1:182-206 '58

1. Iz Leningradskoy psikhonevrologicheskoy bol'nitsy im. I.M. Balinskogo.
(PSYCHOSES)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOKHINA, [illegible]

Some charac[illegible] of water metabolism in periodical psych ses. Zhur. nevr. i psikh. 64 no.9 [illegible] [illegible] 17.12

1. Psikhon[illegible] [illegible] im. Balinskogo (glavnyy vrach S.N. [illegible]), Leningrad.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

BARABANENKOV, Yu.N., [illegible], A.A.; [illegible]ZHIN, N.A.; LESOTA, O.K.

Scattering of an electromagnetic δ-impulse on perfectly conducting bodies with finite dimensions. Radiotekh. i elektron. 8 no.6: 1060-1071 Je '63. (MIRA 16:7)

(Electromagnetic waves)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

LESOTA, S.K.

621.385.029.6 2966

Minimum Noise Coefficient of Double-Stream Valve. S. K. Lesota.

(Radiotekhnika i Elektronika, Sept. 1956, Vol. 1, No. 9, pp. 1288-1291.) The calculation presented takes into account the correlation of fluctuations of the current and voltage in the double electron stream. A linear approximation and lossless multipole theory are used. Results show that the minimum noise coefficient is higher for the double-stream valve than for a travelling-wave valve operating under similar conditions for fluctuations in the potential minimum.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

SOV/109-3-9-9/20

AUTHOR: Lesota, S. K.

TITLE: The Minimum Noise Figure in Travelling-Wave Tubes (O minimal'nom koeffitsiyente shuma LBV)

PERIODICAL: Radiotekhnika i elektronika, 1958, Vol 3, Nr 9, pp 1193-1198 (USSR)

ABSTRACT: The noise figure in a travelling-wave tube at a cross-section corresponding to the input of the helix can be written as:

$$F - 1 = \alpha \overline{|MU(\omega) + NI(\omega)|^2} \qquad (1)$$

where $U(\omega)$ and $I(\omega)$ are the noise modulation of the voltage and current in the beam, M and N are the coefficients depending on the excitation conditions of the wave at the input to the helix and the propagation constants of all the waves, and α is the parameter dependent on the DC components of the voltage, current and space charge as well as the thermal noise at the input of the tube. Eq.(1) can be written as Eq.(2) or as Eq.(4) if the notation of Eq.(3) is adopted; in Eq.(4) Δf is the bandwidth of the measuring device and $\beta = 4\pi\alpha\Delta f$. The minimum value of the noise figure is given by Eq.(6); this occurs when ϕ and Λ fulfil the conditions expressed by Eqs.(5). Finally,

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

SOV/109-3-9-9/20

The Minimum Noise Figure in Travelling-Wave Tubes

the minimum noise figure can be written as:

$$F - 1 = 2\beta \, | \mathrm{Re}(\mathrm{Mn}^{*}) | \, [S(\omega) \pm \Pi(\omega)] \quad . \qquad (7)$$

It is of interest to determine the form of Eq.(7) when the current and voltage modulations are known at an arbitrary cross-section of the helix instead of its input. The segment of the tube between the two cross-sections can be described by a matrix, as given by Eq.(9), so that the minimum noise figure is given by Eq.(11). If the matrix parameters satisfy the conditions expressed by Eqs.(12) and (13), the first term of Eq.(7) can be expressed by Eq.(15). If it is assumed that the section of the tube has purely passive parameters such that the modulation coefficients are expressed by Eqs.(17), the quadripole is a "reciprocal" of that defined by Eq.(11) and it has a smoothing effect on the noise figure of the tube. From the analysis it is concluded that the minimum noise figure for the tube depends on

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SOV/109-3-9-9/20

The Minimum Noise Figure in Travelling-Wave Tubes

the amplitude of the amplified wave, the beam velocity and the current modulation; further, if the transformation of the noise modulations in the system is described by a passive lossless quadripole, the minimum noise figure is independent of the conditions of the transformation. The paper contains 9 references, 6 of which are English and 3 Soviet.

SUBMITTED: March 21, 1957.

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

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SOV/55-59-1-13/2

AUTHOR: Lesota, S.K.

TITLE: On the Methodology of [illegible] easurement of the Reciprocal Correlation of Amplitude- and Frequency- Fluctuations of a Real Generator According to the Method of Bernshteyn

PERIODICAL: Vestnik Moskovskogo universiteta. Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1959, Nr 1, pp 109-116 (USSR)

ABSTRACT: The author considers a harmonic generator the oscillations of which with respect to amplitude and phase are modulated randomly

(1) $V(t) = V_0 \left[1+m(t)\right] \sin \left[\omega_0 t + \varphi(t)\right]$,

where $\varphi(t) = \int_0^t \omega(t)dt$, $m(t)$ and $\omega(t)$ are random functions with a stationary distribution, and V denotes the stationary oscillation amplitude. After passage of a line with frequency dispersion and a certain given transfer function, one obtains for the initial signal

(10) $V_2(t) = V_0\left[1+m(t-\tau)\right]\sin\left[\omega_0 t - \beta_0 l + \varphi(t-\tau)\right]$.

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On the Methodology of Measurement of the Reciprocal Correlation of Amplitude- and Frequency- Fluctuations of a Real Generator According to the Method of Bernshteyn

SOV/55-59-1-13/28

The fluctuations show a delay compared with the phase of the carrier frequency ω_o. The phenomenon is explained by the fact that the obtained spectral components are certain temporal mean values. The results obtained according to the method of I.L.Bernshteyn [Ref 1] confirm measurements of V.S.Troitskiy [Ref 3] and others.
There are 3 figures, and 6 Soviet references.

ASSOCIATION: Kafedra radiotekhniki (Chair of Radio Engineering)

SUBMITTED: August 25, 1958

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R000929410016-9

21606

S/188/61/000/002/001/010
B113/B203

9.4220

AUTHOR: Lesota, S.K.

TITLE: Measurement of the correlation between amplitude and frequency fluctuations in a reflecting klystron

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya 3, fizika, astronomiya, no. 2, 1961, 3 - 8

TEXT: The correlation between amplitude and frequency fluctuations in a reflecting klystron was studied by I.L. Bershteyn's interference method of measuring amplitude and frequency fluctuations in radio-frequency generators. The measurements were made in a wavelength range of 3.4 cm. A waveguide about 17 m long was used as delay line in the measuring arrangement. The fluctuation signal of the klystron generator investigated was received by a crystal detector (rectifier) with a constant current of 0.4 ma. The correlation function $R(\tau)$ can be determined from the spectral density $S_{\omega m}(\omega)$ of the intercorrelation functions of amplitude and frequency fluctuations; $R(\tau) = \frac{1}{2\pi}\int_{-\infty}^{\infty} S_{\omega m}(\omega)\cos\omega\tau d\omega$. The normalized correlation

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Measurement of the correlation ...

function $R_n(\tau)$ is determined from the relation $R_n(\tau) = R(\tau)|R(0)$. The results of measurement showed that for $\tau < 1 \div 3 \cdot 10^{-8}$ sec a correlation existed which decreased substantially with increasing τ. The measured values of the spectral density corresponded to a relative generation power of $p \cong 0.6$ and to a relative voltage $\Delta V|V \simeq 0.1$ on the klystron reflector; at $p = 1$, the voltage on the reflector was V_0, and the generation power for the given generation range was at a maximum. The author also studied the behavior of the correlation function on a change in voltage on the klystron reflector within the limits of the individual generation ranges. Measurements for some voltage values on the reflector within the limits of the generation range showed that the absolute spectral density of the correlation function increased at the boundaries of the generation range. The spectral density $S_{\omega n}(\omega)$, however, changes its sign when passing through the middle of the range. The author observed a similar dependence for the correlation function $R(\tau)$ on a change in the reflector voltage. The mean correlation time was of the order of 10^{-8} sec. There are 8 fig-

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Measurement of the correlation ...

ures and 7 Soviet-bloc references.

ASSOCIATION: Kafedra radiotekhniki (Department of Radio Engineering)

SUBMITTED: June 3, 1960

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L 25695-65 EWT(d)/EWT(1)/EEC(k)-2/EEC-4/EEC(b)-2/EWA(b) Pn-4/Po-4/Pq-4/Pg-4/Pi-4/Pj-4/Pk-4/Pl-4/Pac-4/Peb

ACCESSION NR: AP5001544 S/0188/64/000/006/0025/0035 61

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AUTHOR: Lesota S K.

TITLE: Experimental investigation of fluctuations in a reflex klystron gm

SOURCE: Moscow. Universitet. Vestnik. Seriya 3. Fizika, astronomiya, no. 6, 1964 25-35

TOPIC TAGS: klystron oscillation, reflex klystron, oscillation fluctuation, electron velocity, spectral density, cross modulation

ABSTRACT: The paper deals with fluctuations of the oscillations of low-power klystrons in the 3-cm wavelength range, under various operating conditions. Previous work by the present and other authors has provided data only at isolated points of the frequency range and has not aided evaluation of the effect of electron velocity spread on fluctuations in oscillation. Measurements were conducted as a function of current (two-fold increase), voltage on the reflector (decrease to 1/3 center power) and for the ends and center of mechanical tuning adjustment of frequency. Fluctuations were measured by the delay-line method for the frequency range 0.15 to 18 Mc. The spectral density, r.m.s. amplitudes and frequencies, cross-modulation for 0-20 Mc and the mean time of cross-correlation

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were determined. The results were compared with the theory based on the work of Bazarov and Zhabotinskiy. There is a monotonic dependence of some fluctuation parameters on the frequency of the resonator and an optimum condition which is not that of maximum power. "The author thanks V.M. Lopukhin for his aid." Orig. art. has: 6 figures, 1 table and 8 formulas.

ASSOCIATION: Kafedra radiotekhniki Moskovskogo universiteta (Radio engineering department, Moscow State University)

SUBMITTED: 23Nov63 ENCL: 00 SUB CODE: EC

NO REF SOV: 018 OTHER: 000

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