S/089/61/010/003/004/021
B108/B209

21 1230

AUTHORS: Galkin, N. P., Mayorov, A. A., Polonnikova, G. A., Shcherbakova, V. G., Utkina, L. V.

TITLE: Separation of uranium from impurities by means of ammonium carbonate

PERIODICAL: Atomnaya energiya, v. 10, no. 3, 1961, 233-237

TEXT: The authors investigated the dissolution of pure $(NH_4)_2U_2O_7$ in $(NH_4)_2CO_3$ and NH_4HCO_3, the separation of uranium in the form of $(NH_4)_4[UO_2(CO_3)_3]$, and the behavior of some impurities in the salting out of the crystals of this carbon complex. The dissolution involves the following processes:

Card 1/9

Separation of uranium from ...

$$(NH_4)_2U_2O_7 + 6(NH_4)_2CO_3 + 3H_2O \rightleftarrows \rightleftarrows 2(NH_4)_4[UO_2(CO_3)_3] + 6NH_4OH; \quad (1)$$

$$(NH_4)_2U_2O_7 + 6NH_4HCO_3 \rightleftarrows \rightleftarrows 2(NH_4)_4[UO_2(CO_3)_3] + 3H_2O. \quad (2)$$

(1),

(2)

The experiments were made with a special vessel in a thermostat at 40 ± 0.1°C. Equilibrium was practically reached after one hour. The higher solubility of $(NH_4)_2U_2O_7$ in NH_4HCO_3 (Fig. 1) may be explained by the action of NH_4OH which shifts the equilibrium to the left (see reaction (1)). Dilute solutions containing $(NH_4)_2CO_3$ or NH_4HCO_3 in a stoichiometric ratio (according to (1) and (2)) may completely dissolve ammonium di-uranate without formation of the above carbon complex. The precipitation of small and large crystals was determined in order to study the influence of certain factors upon crystallization. Large

Card 2/9

S/089/61/010/003/004/021
B108/B209

crystals are called such of a size of 100 × 20 - 300 × 60 μ. The experiments were carried out as follows: $(NH_4)_2CO_3$ was added under stirring to the $(NH_4)_4[UO_2(CO_3)_3]$ solution until saturation was reached. After salting out had ceased, the solution with the crystals was stirred further on for some time. The crystals were then filtered off and subjected to sedimentation analysis. It was found that a temperature rise from 20 to 40°C and an increase of the time of admixing $(NH_4)_2CO_3$ lower the quantity of small crystals. The same holds for an increase in the speed of the stirrer from 60 to 180 rpm. However, a further increase has hardly any effect. Fig. 7 shows the uranium concentration in the solution during salting out of $(NH_4)_4[UO_2(CO_3)_3]$. The best conditions of crystallization are: temperature - 40°C; time of $(NH_4)_2CO_3$ admixture - 1 hour; uranium concentration in the initial solution - 30 g/l; speed of the stirrer - 180 rpm. The impurities to be investigated entered the initial $(NH_4)_4[UO_2(CO_3)_3]$ solution immediately before crystallization. The resulting ammonium di-uranate containing one kind of impurity was

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ...

dissolved in a 5% NH_4HCO_3 solution. Under the above conditions, the carbon complex crystallized. The filtered crystals were rinsed with a saturated $(NH_4)_2CO_3$ solution. After drying they were oxidized by annealing. Table 1 shows that most of the elements are easy to separate from uranium. Table 2 shows the results of purification of ammonium di-uranate which contained several kinds of impurities. There are 7 figures, 2 tables, and 3 references: 2 Soviet-bloc.

SUBMITTED: August 11, 1960

Card 4/9

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ...

Legend to Fig. 1: Solubility of ammonium di-uranate in solutions of $(NH_4)_2CO_3$ (curve 1) and NH_4HCO_3 (curve 2). Abscissa: Carbonate concentration, g/l. Ordinate: Uranium concentration in the solution, g/l.

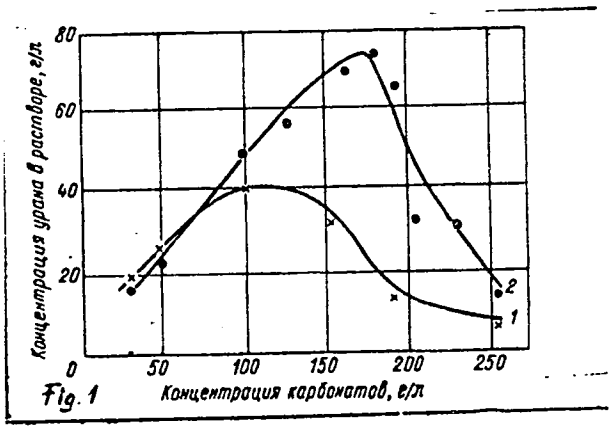


Fig. 1

Card 5/9

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ...

Legend to Fig. 7: Variation in uranium concentration in the solution during $(NH_4)_4[UO_2(CO_3)_3]$ separation. Abscissa: Excess carbonate, g/l. Ordinate: Uranium concentration in the solution, g/l.

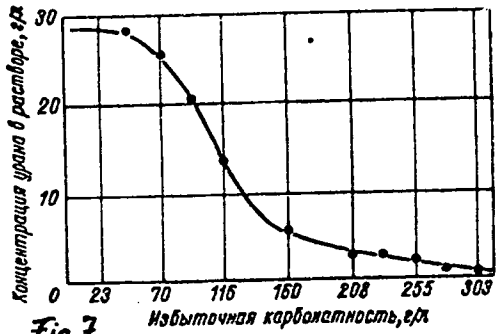


Fig. 7

Card 6/9

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ....

Legend to Table 1: a) Impurity soluble in $(NH_4)_2CO_3$; b) impurity unsoluble in $(NH_4)_2CO_3$.

1) Element; 2) impurity concentration in the initial solution, g/l; 3) impurity concentration in uranium oxide, %, with respect to U; 4) impurity concentration in ammonium di-uranate, %, with respect to U.

Card 7/9

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ...

Table 1

Таблица 2

При помощи $(NH_4)_2CO_3$

Примеси, растворимые в $(NH_4)_2CO_3$ а)			Примеси, перетворимые в $(NH_4)_2CO_3$ б)		
элемент 1)	концентрация примеси в исходном растворе, г/л 2)	концентрация примеси в закисном окиси урана, % к урану 3)	элемент 1)	концентрация примеси в литуратном аммонии, % к урану 4)	концентрация примеси в закисном окиси урана, % к урану 3)
Cu	1,9 1,0 0,1 0,01	0,015 0,007 <0,0001 <0,0001	Fe	4,0 1,0 0,4	0,12 0,055 0,039
B	0,1 0,01 0,001	$\geq 1 \cdot 10^{-4}$ $1 \cdot 10^{-4}$ $1 \cdot 10^{-4}$	Mn	5,0 0,52 0,16	0,059 0,012 0,0083
V	0,5 0,1 0,01	0,076 0,039 0,0032	Al	21,0 8,0 0,83	0,0059 0,0059 0,0048
P	2,0 1,0 0,1 0,01	0,20 0,165 <0,001 <0,001	Cr	8,06 0,83 0,08	0,115 0,077 <0,01
Na	10 5 1	0,012 0,007 0,001	—	—	—
K	10 5 1 0,1	16,6 7,9 1,64 0,102	—	—	—

Card 8/9

S/089/61/010/003/004/021
B108/B209

Separation of uranium from ....

Legend to Table 2: 1) Material; 2) initial ammonium di-uranate (containing 30.0% uranium when dry); 3) uranium oxide (containing 84.0% uranium); 4) content, % by weight (with respect to uranium).

Продукт 1)	Содержание, вес. % (в пересчете на уран) 4)							
	Fe	Al	P	V	Mn	Cu	Cr	Si
Исходный диуранат аммония . . . . . 2)	15,0	26,0	0,66	0,10	1,3	0,03	0,10	1,67
Закись-окись урана . . 3)	0,035	0,0059	0,012	Не обн.	0,035	0,0035	0,0047	0,0035

Card 9/9

L 41872-65 EWT(1)/EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) ES/JD/WW/
JG/GW

ACCESSION NR AM5004510 BOOK EXPLOITATION S/29

Galkin, N. P. (Doctor of Technical Sciences); Sudarikov, B. N.; (Candidate of Chemical Sciences); Veryatin, U. D.; Shishkov, YU. D.; Mayorov, A. A.

Technology of uranium (Tekhnologiya urana), Moscow, Atomizdat, 1964, 308 p. illus., biblio. 173, 650 copies printed.

TOPIC TAGS: uranium, uranium compound, geochemistry, nuclear fuel

PURPOSE AND COVERAGE: The book is intended for training engineers in the specialty "technology of natural radioactive elements". In the course that is offered in the Moscow Order of Lenin Chemical Engineering Institute imeni D. I. Mendeleyev. The description of the technological processes is preceded by a section covering the history of the uranium industry, the use of uranium, the chemical and physical-chemical properties of metallic uranium and its most important compounds, and some problems of the geochemistry of uranium. The technological processes for processing uranium or to obtain metallic uranium and its compounds used for nuclear fuel are presented in sequence, beginning from the ore beneficiation plant and ending in the specialized plants producing the finished product. Basic attention in this text is given to the

producing the valuable products ... chemical and physical-chemical bases of the processes and their equipment.

Card 1/2

L 41872-65
ACCESSION NR AM5004510

TABLE OF CONTENTS [abridged]:

SUBMITTED: 28Oct64 SUB CODE: MM, GC

NO REF SOV: 026 OTHER: 002

Card 2/2

GALKIN, N.P., doktor tekhn. nauk; SUDARIKOV, B.N., kand. khim. nauk; VERYATIN, U.D.; SHISHKOV, Yu.D.; MAYOROV, A.A.; BABUSHKINA, S.I., red.; TARASENKO, V.M., red.

[Uranium technology] Tekhnologiia urana. Moskva, Atomizdat, 1964. 395 p. (MIRA 17:12)

ROZIN, Ye.Ye.; MAYOROV, A.D.

Rapid method of evaluating the ability of ores to undergo treatment in heavy suspensions. Sbor. nauch. trud. Gintsvetmeta no.19:181-190 '62. (MIRA 16:7)

(Ore dressing)

MITROFANOV, S.I. (Moskva); ROZIN, Ye.Ye. (Moskva); MAYOROV, A.D. (Moskva)

Influence of the speed of pulp flow in a compartment flotation machine on the rate of flotation. Izv. AN SSSR. Met. i gor. delo no.6:188-191 N-D '64. (MIRA 18:3)

ACCESSION NR: AP5012330 UR/0286/64/000/022/0085/0085

AUTHOR: Kurenova, M. B.; Mayorov, A. D.; Kononova, T. N.; Nikitin, A. Ya.

TITLE: Dust filter case. Class 61, No. 166577

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 22, 1964, 85

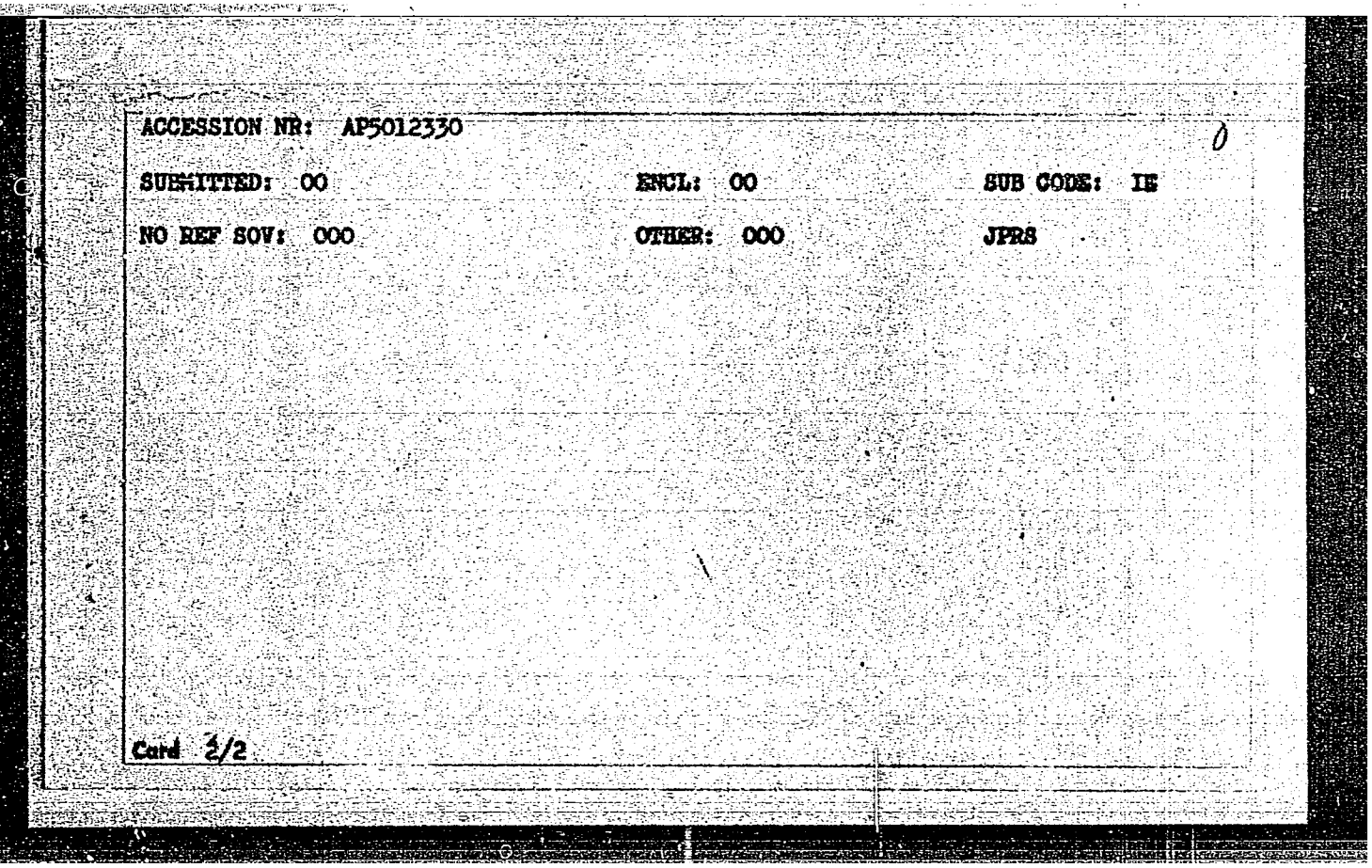
TOPIC TAGS: industrial filter

Translation: A patent for a filter case which contains a cover, housing, valve case and rod. In order to simplify manufacture and facilitate replacement of the filtering elements, the housing is made as a single unit

so that the unit will be airtight. 0 tab. 0 fig. 1 figure.

ASSOCIATION: Predpriyatiye gosudarstvennogo komiteta khimicheskoy promyshlennosti pri GOSPLANE SSSR (Enterprise of the State Committee on the Chemical Industry Connected with GOSPLAN, SSSR)

Card 1/2



ACCESSION NR: AP5012330

SUBMITTED: 00 ENCL: 00 SUB CODE: IE

NO REF SOV: 000 OTHER: 000 JPRS

Card 1/2

KORSHUNOV, A.I., inzh.; KOMOLOV, V.G., inzh.; MAYOROV, A.I., inzh.

Telescoping elevator for repairing converter linings.
Mekh.i avtom.proizv. 14 no.9:43-44 S '60. (MIRA 13:9)
(Converters--Maintenance and repair) (Elevators)

L 36231-65

ACCESSION NR: AP5010132 UR/0286/64/000/013/0116/0116

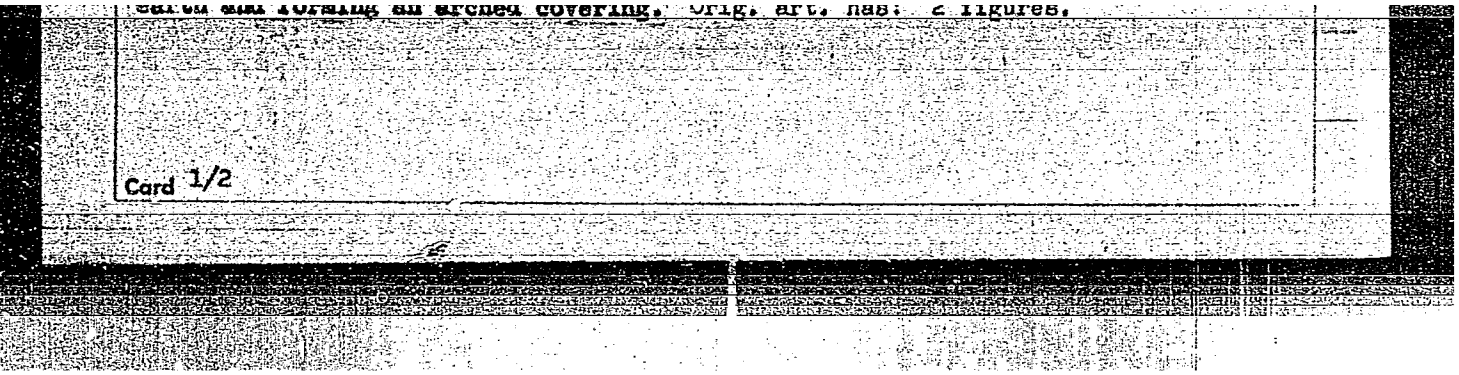
AUTHOR: Maycrov, A. I.; Prukhnikov, I. N.

TITLE: Field fortification structure. Class 72, No. 163924

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1964, 116

TOPIC TAGS: structural engineering, military engineering, defense installation

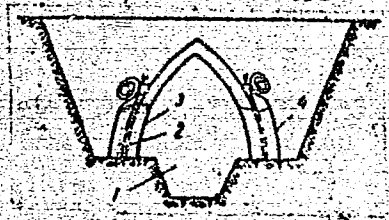
Translation: A field fortification structure, consisting of a trench, a load-bearing construction with a flexible casing and ground sprinkling. The distinguishing feature is simplification of the device and its utili-

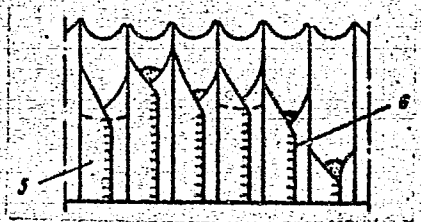


L 36231-65

ACCESSION NR: AP5010132

Key: 1 - trench; 2 - load-bearing construction; 3 - lower strip; 4 - upper strip; 5 - vents; 6 - fasteners





ASSOCIATION: Tsentral'nyy nauchno-issledovatel'skiy i ispytatel'nyy inzhenernyy institut im. D. M. Karbysheva (Central Scientific Research and Testing Engineering Institute)

SUBMITTED: 23Nov63 ENCL: 00 SUB CODE: MS, GO

NO REF SOV: 000 OTHER: 000 JPRS

Card 2/2 10

MAYOROV, A. M.

"The Action of Phosphates on the Yield of Cotton in Central Asia as Shown by Field Test Data." Sub 0 Nov 51, Sci Inst for Fertilizers and Insectofungicides.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

1. DAVYDOVA, M. I., MAYOROV, A. K.
2. USSR (600)
4. Spinning Machinery
7. New maintenance chart for spinning machinery. Tekst.prom. 12. no. 10, 1952.

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

MAYOROV, A.M.

Effectiveness of various mineral fertilizers under different geographical conditions. [Trudy] NIUIF no.164:74-75 '59.
(MIRA 15:5)

(Fertilizers and manures)

MAYOROV, N.V.

DMITRIYEV, S.D.; MAYOROV, A.N.

A type of granitic pegmatite of central Kazakhstan. Inform. sbor. VSEGEI no.4:78-85 '56. (MLRA 10:4)
(Kazakhstan--Pegmatites)

S/119/62/000/007/006/006
I045/1245

AUTHORS: Bragin, V. A., Mayorov, A. N., Yudochkin, V. G.

TITLE: Cooling experiments with the "Ural" machine

PERIODICAL: Priborostroyenie, no. 7, 1962, 30-31

TEXT: The cooling system of ЦВМ (TsVM) "Ural 1" has a thermostat consisting of a thermometer and a relay which activates a cooling water valve to reduce the temperature of the circulating air to 29-29.5°C. When the temperature of the air falls below 29°C the valve is closed by means of a spring. The overheating of the circulating air is signalled at 32-33°C. by a system consisting of a thermometer, a relay, and a bell. There are 2 figures.

Card 1/1

MAYOROV, A.N.; KHOROSHEV, V.N.; SOSONKO, A.M.

Gamma defectoscope with a remote control device. Stroi. truboprov. 10 no. 11:34 N '65. (MIRA 18:12)

L 21844-66 EWA(h)/EWP(c)/EWP(k)/EWT(d)/EWT(m)/ETC(m)-6/T/EWP(t)/EWP(v)

ACC NR: AP6010273 DIAAP SOURCE CODE: UR/0381/66/000/001/0042/0048

AUTHOR: Sul'kin, A. G.; Mayorov, A. N.; Zhukovskiy, Ye. A. 37 34 B

ORG: none

TITLE: New γ-flaw detectors 14

SOURCE: Defektoskopiya, no. 1, 1966, 42-48

TOPIC TAGS: nondestructive testing, nondestructive quality control, flaw detector, gamma flaw detector

ABSTRACT: The satisfactory performance of Soviet rockets, atomic submarines, new types of aircraft, and thousands of kilometers of gas mains has been made possible for the most part by extensive use of nondestructive testing methods. Among the nondestructive-testing methods, those based on the use of γ-radiation are particularly significant. The γ-flaw detectors are simple, reliable, mobile, self-contained, and compact. They can be used under field conditions and in congested areas. Cobalt-60, cesium-137, iridium-192, thulium-170, and selenium-75 are the most widely used sources of γ-radiation. The Council for Mutual Assistance of Socialist Countries divided the general-purpose γ-flaw detectors, RID, into three classes, each for a certain range of material thicknesses. Each class is divided into types according to the type and size of the radiation source (see Table 1). The Soviet Union is a leader in the development and manufacture of γ-flaw detectors. However, all the existing types

Card 1/3 UDC: 620.179.152

3

Table 1. Gamma-flaw detectors

Designation	Class	Type	Radiation source	Thickness range, mm	
				Steel	Light alloys
RID-11	1	1	—	1—15	5—150
RID-12	1	2	Thulium-170	1—15	5—150
RID-21	2	1	Cesium-137	10—80	50—300
RID-22	2	2	Cesium-137	10—80	50—300
RID-31	3	1	Cobalt-60	60—200	—
RID-32	3	2	Cobalt-60	60—200	—
RID-33	3	3	Cobalt-60	60—200	—

of these flaw detectors are either obsolete, as is the case with the GUP-line of detectors supplied by the Mosrentgen Plant, or are equipped with nonstandard radiation sources, as with the GD detectors made by the Experimental plant "Latvenergo" in Riga. Only recently the All-Union Research Institute of Radiation Engineering has developed several flaw detectors in accordance with directives of the Council for Mutual Assistance of Socialist Countries. The first one to be lot-produced is the RID-21, intended for use under widely varying conditions from laboratory to field. This detector can be used for steel and light-alloy sections with respective thicknesses up to 60 and 120 mm. Two other modifications of this detector are intended for testing

L 21844-66

ACC NR: AP6010273

pipeline welds and concrete structures. Two detectors, RID-22 and RID-33, are in the design stage. Orig. art. has: 6 figures and 1 table. [DV]

SUB CODE: 13/ SUBM DATE: 04Nov65/ ATD PRESS: 4227

Card 3/3

MAYOROV, A.P.

Veterinary medicine on the Luzino State Swine Farm in Omsk Province. Veterinariia 36 no.1:27-29 Ja '59. (MIRA 12:1)

1. Glavnyy veterinarnyy vrach Luzinskogo sovkhoza Omskoy oblasti.
(Omsk Province--Veterinary medicine)

PHASE I BOOK EXPLOITATION 1122

Mayorov, Aleksandr Stepanovich

Al'bom chastotnykh kharakteristik dobrotnosti katushek induktivnosti na bronevykh serdechnikakh tipa SB (Collection of Graphs Showing Q Versus Frequency in Inductance Coils With SB-Type Armored Cores) Moscow, Gosenergoizdat, 1958. 39 p. 11,000 copies printed.

Ed.: Akalunin, S.A.; Tech. Ed.: Fridkin, A.M.

PURPOSE: The book is intended for specialists working in the design and development of various types of radio and wire communication equipment. It may also be useful to radio amateurs.

COVERAGE: The book is a collection of 68 graphs showing the Q of various coils as a function of frequency. The graphs are the result of experimental work conducted by the Central Scientific Research Institute. The coils used in the experiment were fitted with types SB-1a, SB-2a, SB-3a, SB-4a, and SB-5a armored cores made of iron carbonyl. The data was measured by a type TF329G Marconi Q-meter. Use of the manual may decrease the time needed to calculate the inductance of coils with a given Q. No personalities are mentioned. There are no references. There is no table of contents.

Card 1/1

JP/sfm
1-23-59

MARGULIS, V.E., inzh.; GRUSHEVSKIY, Ya.I., inzh.; MAYOROV, A.S., inzh.

New electric stop for the doffer of carding machines. Tekst. prom. 24 no.9:70-71 S '64. (MIRA 17:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut legkogo i tekstil'nogo mashinostroyeniya.

MAYOROV, A.V.

USSR/Automatics and telemechanics-reliability FD-2761

Card 1/1 Pub. 10 - 6/11

Author : Mayorov, A. V. (Baranovichi)

Title : Contribution to the question of enhancing the exploitational reliability of automatic regulators

Periodical : Avtom. i telem., 16, Sep-Oct 1955, 476-480

Abstract : An article on the order of a discussion. The author concludes that in the creation of regulators one must solve the problem of enhancing their reliability of use both by way of seeking improved constructional-technical accomplishment and by way of synthesizing principal circuit schemes optimal from the viewpoint of reliability of use. For the evaluation of reliability of a synthesized regulator the author thinks it expedient to apply criteria of optimal character to variants of the principal theoretical circuit schemes. Only those theoretical circuits which are optimal from the viewpoint of reliability should in the author's opinion be admitted to design realization. This would permit excluding accidents connected with failures of regulators in the entire fields of their application. Two references: V. A. Trapeznikov and A. Ya. Lerner, "Automatic regulators of an aggregate system," ibid., No 5, 1951; G. P. Boyev, Teoriya veroyatnostey [Theory of probability], 1950.

Institutions : -

Submitted : January 22, 1955

MAYOROV, A.V. (Moskva)

Theory of reserve elements in automatic systems. Izv.AN SSSR Otd. tekh.nauk. no.9:108-110 S '56. (MLRA 9:9)
(Automatic control)

MAYOROV, A.V.

AUTHOR: Mayorov, A. V. (Moscow) 103-12-10/12

TITLE: Note on the Increased Reliability of Automatic Regulators (O povyshenii nadezhnosti avtomaticheskikh regulyatorov).

PERIODICAL: Avtomatika i Telemekhanika, 1957, Vol. 18, Nr 12, pp. 1144-1145 (USSR)

ABSTRACT: This is an answer to the critical review by N. M. Margolis in the same number on page 1142. A number of arguments for the defence of the proposal for the estimation of the operation reliability of principal schemes with automatic installations. The author is of the opinion, that in all cases of actual mass operation the technical security is not absolute which means that $S_T < 1$, whereas the probability for the occurrence of defects $P_T > 1$. Therefore an additional problem arises; namely to ensure a minimum of defects during an operation interval t_1-t_2 at a given technical security. Allegation is made to the analogy of the example of the deformation of bodies by torsion. At the same time it is referred to the fact, that it is suitable to guarantee in constructing the desired value of technical

Card 1/2

'Note on the Increased Reliability of Automatic Regulators 103-12-10/12

security as well as the desired value of the scheme security S_o.

AVAILABLE: Library of Congress

Card 2/2

SOV/24-59-3-28/33

AUTHOR: Mayorov, A. V. (Moscow)

TITLE: Use of a Quantitative Estimate of the Reliability of Components in an Automatic System

PERIODICAL: Izvestiya Akademii nauk SSSR Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1959, Nr 3, pp 181-182 (USSR)

ABSTRACT: This note deals with reliability as indicated by past fault experience with that equipment, and with the choice of times for routine overhaul in accordance with the required standard of reliability. Similar material has been published repeatedly elsewhere by this author. The paper contains 3 figures and 2 Soviet references.

SUBMITTED: December 17, 1958.

Card 1/1

S/024/60/000/02/029/031
E140/E135

AUTHORS: Zakharov, A.V., and Myorov, A.V. (Moscow)
TITLE: The Question of Reliability of Control Equipment

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1960, Nr 2, pp 205-207 (USSR)

ABSTRACT: In the technical exploitation of equipment its parameters vary with time. As a result it is necessary to undertake periodic maintenance and emergency repairs. It is important to determine the optimum period and volume of maintenance for reasons of economy and reliability. Since in practice it is difficult to obtain sufficient statistical information for an analytical solution the following procedure may be employed. The mathematical expectation of breakdown is found and if it is less than the time required for testing the equipment during maintenance, the volume of the latter is considered satisfactory. It is necessary to vary the volume and interval between maintenance operations to determine their optimum value.
There are 4 figures and 2 Soviet references.

Card 1/1

SUBMITTED: October 15, 1959

MAYOROV, A.V. (Moskva); VASIL'YEV, L.V. (Moskva)

Quantitative evaluation of the effect of operating conditions on the reliability of automatic control devices. Izv. AN SSSR. otd. tekh. nauk. tekh. kib. no.3:50-55 My-Je '63. (MIRA 16:7)

(Automatic control)

ACCESSION NR: AP4013492 S/0181/64/006/002/0382/0389

AUTHORS: Pavlov, P. V.; Panteleyev, V. A.; Mayorov, A. V.

TITLE: Diffusion of antimony along dislocations in silicon

SOURCE: Fizika tverdogo tela, v. 6, no. 2, 1964, 382-389

TOPIC TAGS: impurity diffusion, antimony, dislocation, silicon, impurity concentration, boundary diffusion, body diffusion

ABSTRACT: Increase in number of dislocations in a crystal generally leads to worsening of electrical properties, but certain data indicate that dislocations may, under certain circumstances, improve some properties of actual crystals. In pursuing this possibility, the authors have solved equations for diffusion along individual tubular dislocations. The solution has been used to study the diffusion of antimony in single crystals of silicon along dislocations. Etching removed a layer from the samples on the order of 100 microns thick. This indicates that the destroyed layer was not complete. For this reason, rapid diffusion as observed in the experiments cannot be considered a surface effect. Samples were carefully selected, with uniform dislocation distribution, and this precaution eliminated the

Card 1/3

ACCESSION NR: AP4013492

possibility of diffusion along low-angle faces, microfractures, or other similar defects. It appears obvious that antimony has migrated through silicon along individual dislocations. Such an interpretation is confirmed by data on increased concentration of the diffusing impurities with increase in dislocation density. The activation energy of diffusion along the dislocations is substantially less than the activation energy of ordinary body diffusion (about one-fourth). This indicates an easier path of diffusion and is in agreement with the view that the dislocations are disordered zones with abundant vacancies. However, the individual dislocations must possess a lower penetration than grain boundaries, and this conforms with experimental data that prove the activation energy of diffusion along a face to be less than body diffusion (about one-third). The coefficient of diffusion along these dislocations was found to depend on temperature according to the following equation: $D_d = 4.5 \cdot 10^2 \exp\left(-\frac{69900}{RT}\right)$ cm^2/sec. Orig. art. has: 3 figures, 3 tables, and 6 formulas.

ASSOCIATION: Gor'kovskiy gosudarstvennyy universitet im. N. I. Lobachevskogo (Gorkiy State University)

Card 2/3

ACCESSION NR: AP4013492

SUBMITTED: 15Jul63 DATE ACQ: 03Mar64 ENCL: 00

SUB CODE: EC, SS NO REF SOV: 006 OTHER: 045

Card 3/3

MAYOROV, B.

Handbook of foreign trade of the U.S.S.R ("The reference book on Soviet foreign trade." Reviewed by B.Maiorov). Vnesh.torg. 30 no.1:46-47 '60. (MIRA 13:2)
(Russia--Commerce)

SHEVCHENKO, S.; MAYOROV, B.

International payments of European countries. Den.i kred. 15 no.7:58-62 Jl '57. (MLRA 10:8)
(Europe--Balance of trade)

MAYOROV, B.; SHEVCHENKO, S.

The world's most stable currency. Vnesh. torg. 41 no.1:7-9 '61. (MIRA 14:1)

(Money) (Foreign exchange)

MAYOROV, B.V.

KAPELINSKIY, Yu.N.; POLYANIN, D.V.; MENZHINSKIY, Ye.A.; IVANOV, I.D.; SERGEYEV, Yu.A.; KOSTYUKHIN, D.I.; DUDUKIN, A.N.; IVANOV, A.S.; FINOGENOV, V.P.; ZAKHMATOV, M.I.; SOLODKIN, R.G.; DUSHES'KIN, V.N.; BOGDANOV, O.S.; SEROVA, L.V.; GONCHAROV, A.N.; KARKHIN, G.I.; LYUBSKIY, M.S.; PUCHIK, Ye.P.; SEROVA, L.V.; KAMENSKIY, N.N.; SABEL'NIKOV, L.V.; FEDOROV, B.A.; GERCHIKOVA, I.N.; KARAVAYEV, A.F.; KARPOV, L.N.; SHIPOV, Yu.P.; VLADIMIRSKIY, L.A.; KUTSENKOV, A.A.; RYABININA, E.D.; ANAN'YEV, P.G.; ROGOV, V.V.; BELOSHAPKIN, D.K.; SEYFUL'MULYUKOV, A.M.; PARFENOV, A.Ya.; SMIRNOV, V.P.; ALEKSEYEV, A.F.; SHIL'DKROT, V.A.; CHURAKOV, V.P.; BORISENKO, A.P.; ISUPOV, V.T.; ORLOVA, N.V., red.; GORYUNOVA, V.P., red.; BELOSHAPKIN, D.K., red.; GEORGIYEV, Ye.S., red.; KOSAREV, Ye.A., red.; KOSTYUKHIN, D.I., red.; MAYOROV, B.V., red.; PANKIN, M.S., red.; PICHUGIN, B.M., red.; POLYANIN, D.V., red.; SOLODKIN, R.G., red.; UFIMOV, I.S., red.; EKHIN, P., red.; SMIRNOV, G., tekhn.red.

[Economy of capitalist countries in 1957] Ekonomika kapitalisticheskikh stran v 1957 godu. Pod red. N.V.Orlova, IU.N.Kapelinskogo i V.P.Goriunova. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1958. 686 p. (MIRA 12:2)

1. Moscow. Nauchno-issledovatel'skiy kon"yunkturnyy institut. (Economic conditions)

POLYANIN, D.V.; ZOTOV, G.M.; GRYAZNOV, E.A.; MENZHINSKIY, Ye.A.; RUBININ, A.Ye.; CHEBOTAREVA, Ye.D.; ZAKHMATOV, M.I.; OKUNEVA, L.P.; SHMELEV, V.V.; STULOV, A.A.; POKROVSKIY, A.N.; SHIL'DKROT, V.A.; IVANOV, A.S.; NABOROV, V.B.; FINOGENOV, V.P.; KUR'YEROV, V.G.; KHRAMTSOV, B.A.; BATYGIN, K.S.; BOGDANOV, O.S.; KROTOV, O.K.; GONCHAROV, A.N.; KRESTOV, B.D.; LYUBSKIY, M.S.; SOKOL'NIKOV, G.O.; KAMENSKIY, N.N.; YASHCHENKO, G.I.; SABEL'NIKOV, L.V.; GERCHIKOVA, I.N.; FEDOROV, B.A.; STEPANOV, G.P.; BORODAYEVSKIY, A.D.; INGATUSHCHENKO, S.K.; VARTUMYAN, E.L.; KAPELINSKIY, Yu.N., red.; MAYOROV, B.V., red.; NABOROV, V.B., red.; SOLODKIN, R.G., red.; DROZDOV, A.G., red.; ROSHCHINA, L., red.; SOLOV'YEVA, G., mladshiy red.; CHEPELEVA, O., tekhn. red.

[The economy of capitalist countries in 1961; economically developed countries] Ekonomika kapitalisticheskikh stran v 1961 godu; ekonomicheski razvitye strany. Pod red. IU.N.Kapelinskogo. Moskva, Sotsekgiz, 1962. 447 p. (MIRA 16:2)
(Economic history)

VOLOSOV, M.S., inzhener; MAYOROV, B.A., inzhener; ROZHAVSKIY, I.M., inzhener.

Automatic control of the process of the heat and steam treatment in autoclaves. Stroi.pred.neft.prom. 1 no.8: 8-10 O '56. (MLRA 9:12)

(Lightweight concrete) (Automatic control)

BAKOROV, B.A., MOTIN, Yu.D., OZERKOV, L.M., KHAZANOVICH, K.K.

Producing a light filler from shale ash by the agglomeration method. Trudy VNIIT no.12:109-118 '63. (MIRA 18:1)

L 9455-66 EWT(m)/EWP(j) RM

ACC NR: AP5025011 SOURCE CODE: UR/0286/65/000/016/0075/0075

AUTHORS: Takhtarov, G. N.; Trofimovich, D. P.; Gerlakh, L. R.; Podshibyakina, G. S.; Zaborina, N. B.; Lazovskaya, R. A.; Yefimov, V. M.; Kalachev, V. A.; Mayorov, D. A.

ORG: none

TITLE: Foam generator for an installation for continuous mixing and foaming of latex mixtures. Class 39, No. 173911 announced by the Scientific Research Institute for Rubber and Latex Products (Nauchno-issledovatel'skiy institut rezinovykh i lateksnykh izdeliy)

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 75

TOPIC TAGS: foam generator, latex foamer, latex mixer, SYNTHETIC RUBBER, RUBBER WORKING MACHINERY

ABSTRACT: This Author Certificate presents a foam generator (see Fig. 1)

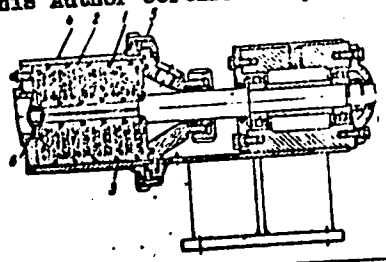


Fig. 1. 1 - Rotor; 2 - stator; 3 - seals; 4 - body; 5 and 6 - nuts.

UDC: 678.021.1:621.187.115

Card 1/2

L 9455-66

ACC NR: AP5025011

for installations for continuous mixing and foaming of latex mixtures. This device includes an electric drive on the shaft of which is mounted a rotor in the form of disks with concentric circular teeth on both sides which fit into the clearances between the circular teeth mounted on stator disks. To increase the foaming capability and capacity while decreasing the physical size, the rotor and stator consist of many-sectioned dismountable disk packets mounted through rotary seals inside a cylindrical body and tightened by nuts. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 05Mar64

Card 2/2

1. MAYOROV, D. M.

2. USSR (600)

4. White Russia - Lupine

7. Sowing lupines in crop ratations in the White Russian S.S.R. Sov.agron. 11 no. 1, 1953

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

MAYOROV, D. M.

"Conversion of Hydrocarbons by Liquid Phase Hydrogenation Over Technical Catalysts." Cand Chem Sci, Leningrad State U, Leningrad, 1955. (KL, No 9, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

MAYOROV, D. M.

USSR/Chemical Technology / Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants, I-13

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62585

Author: Vishnevskiy, N. Ye., Mayorov, D. M.

Institution: None

Title: Concerning the Procedure of Carrying Out Autoclave Experiments on Hydrogenation of Hydrocarbons

Original Periodical: Zh. prikl. khimii, 1955, 28, No 4, 391-401

Abstract: On hydrogenation of hydrocarbons with catalyst suspensions which is conducted in autoclaves provided with stirring devices or in rocking or revolving autoclaves it is necessary to take into account the critical properties of substances. Under temperature conditions above the critical temperature of the hydrocarbon being hydrogenated the process takes place in vapor phase as a result of which the proper contact of hydrocarbons with the catalyst does not occur.

Card 1/2

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants, I-13

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62585

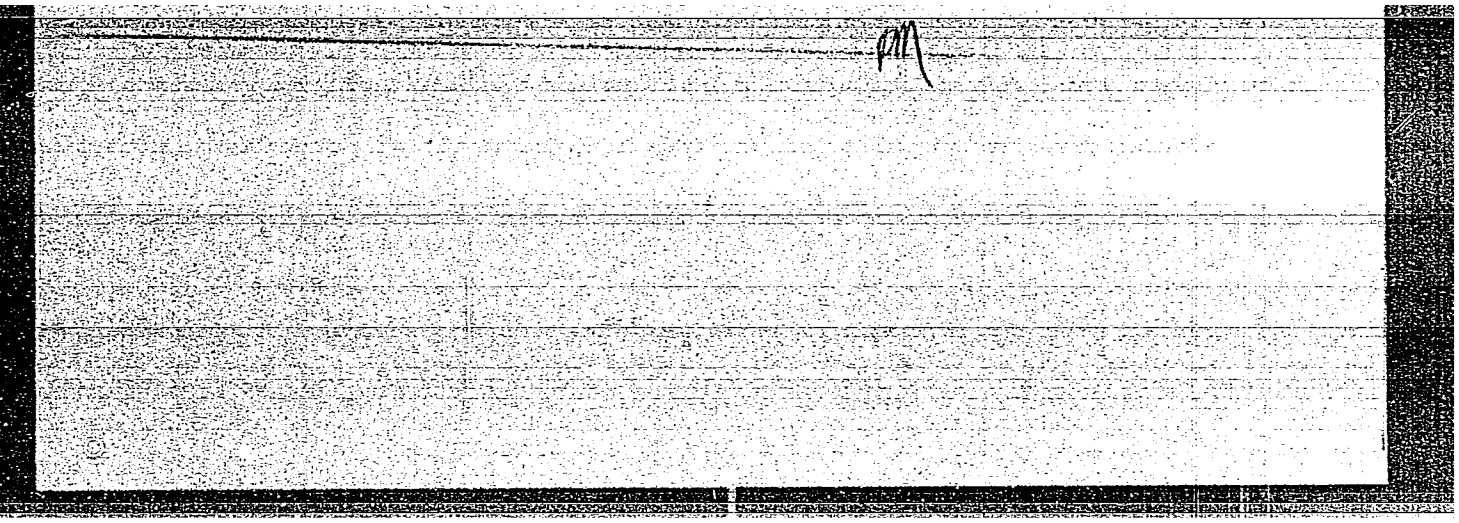
Abstract: An analogous situation occurs on hydrogenation of mazut, tars and coal when the starting products are in liquid phase while the final products are entirely or partially in the vapor phase. As the raw material undergoes conversion the level of the reacting liquid will become lower as a result of which the temperature and hydraulic conditions of operation of the autoclave will deteriorate. When the starting raw material remains in liquid phase and the reaction products pass into vapor phase it is necessary to use an amount of raw material that ensures the necessary contact with the catalyst of the reactants that remain in liquid phase. The authors consider that hydrogenation of hydrocarbons must be conducted in reactors wherein a current of gas and vapor moves at a certain speed in relation to the stationary catalyst or in reactors containing a fluidized bed of catalyst.

Card 2/2

MAYOROV, D. M.

Hydrogenation of phenanthrene on commercial catalysts. D. M. Malorov (Synthetic Liquid Fuel Inst., Leningrad). *Zhur. Prikład. Khim.* 29, 1108–15(1956).—Hydrogenation of phenanthrene over a com. Fe catalyst at 400–85° and 80–300 atm. follows nearly zero-order kinetics for phenanthrene; an aluminomolybdenum catalyst is considerably more active. Over Fe the reaction is of first order with respect to H. The need for high pressures in com. applications is caused by the low activity of Fe catalysts. The products represent a very complex mixt.

G. M. Kosolapoff



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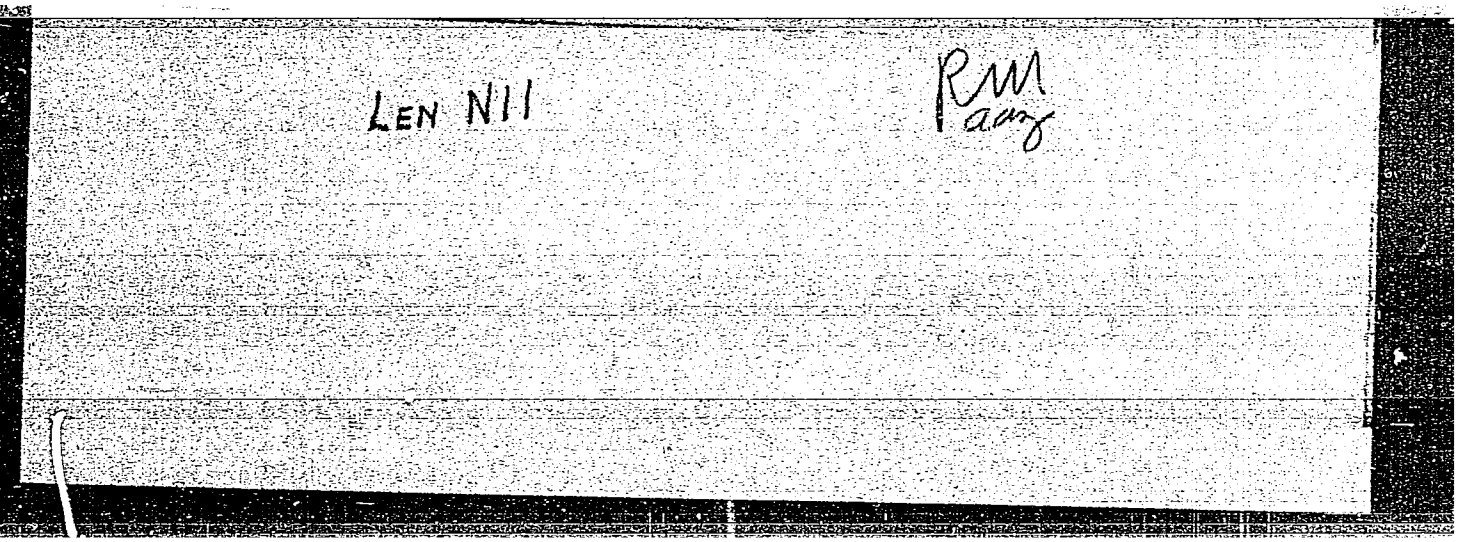

Mayorov, D. M.

7

Reaction equilibrium of hydrocarbons. X. Heat capacity of naphthalene, tetrahydronaphthalene, and decahydronaphthalene / A. A. Vvedenskii and D. M. Mayorov (Sci. Research Inst. Petroleum Treatment and Synthetic Liquid Fuels, Leningrad). *Zhur. Obshchei Khim.* 27, 2052–4 (1957).—Heat capacities of naphthalene, decahydronaphthalene (I), and tetrahydronaphthalene (II) were calcd. from spectroscopic data, by the formula of Stull and Mayfield (*C.A.* 37, 4002⁹). In the range 300–1500°K. the values for $C_{10}H_8$ agree with the exptl. data of McClellan and Pimental (*C.A.* 49, 6720f) with the largest deviation of −1.69 at 300° and the smallest one of −0.12 units at 1200°K. The following calcd. values of C_p° were found for I and II, resp. (in cal./degree mole): 300°K. 44.60, 36.22; 400° 60.03, 48.89; 500° 73.57, 60.12; 600° 85.65, 69.41; 700° 95.43, 77.08; 800° 103.65, 83.45; 900° 110.64, 88.81; 1000° 116.56, 93.30; 1100° 121.72, 97.17; 1200° 127.44, 101.32; 1300° 130.01, 102.3; 1400° 133.32, 105.77; 1500° 136.23, 107.80. The following empirical equations are applicable: for $C_{10}H_8$, $C_p^\circ = -7.05 + 0.14711T - 0.0000.$ $0.0887T^2$; for I: $-10.18 + 0.2097T - 0.0999823T^2$; for II: $-8.50 + 0.1[illegible]57T - 0.0[illegible]707T^2$. G. M. Kosolapoff

7E4
4E3d

AUTHORS: Mayorov, D. M. and Musherko, D. V. SOV/65-58-6-5/13

TITLE: Hydrogenation of C_{10} - C_{16} Acids to Alcohols (Gidrirovaniye kislot C_{10} - C_{16} v spirty)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.6, pp. 24 - 29 (USSR).

ABSTRACT: Primary high-molecular aliphatic alcohols and some of their derivatives have recently gained increasing importance in the USSR as well as abroad. Work carried out in the USA, UK, and France is reviewed. In 1956 the authors investigated the hydrogenation of C_{10} - C_{16} acids to the corresponding alcohols. The acids were obtained from the Shebekino Combine SZhK. Their properties and composition are tabulated. Distillation was carried out on a 15-plate vacuum rectification column. A laboratory continuous circulation plant was used for tests at 200 - 300 atms pressure for 30 - 450 hours with 200 - 400 ml of copper chromate catalyst. The raw materials and the hydrogenate were analysed for their acid number, saponification number, quantity of non-saponified matter and water content. In the non-saponified part the content of hydrocarbons and alcohols was determined chromatographically . It could

Card 1/2

Hydrogenation of C_{10} - C_{16} Acids to Alcohols. SOV/65-58-6-8/13

be seen that with increasing temperature the depth of conversion of acids increases from 19%- 78% (Table 1) and that the alcohol and hydrocarbon content in the hydrogenate increases sharply. At pressures of 300 atms and a ratio of hydrogen to raw material equalling 200:1 much greater rates of conversion of the acid with appropriate yields of the products could be achieved (Table 2). Experiment 36 was carried out to investigate conditions for increasing the yield of alcohols and for decreasing the yield of hydrocarbons. Conditions of this test as well as characteristics and composition of the hydrogenate are tabulated. Samples of sodium salts of alkyl sulphonates were tested for their detergent properties and experiments using these alcohols for synthesizing high quality oil additives were carried out by members of the VNIINP. The corrosion resistance of various metals to fatty acids was tested (Tables 3 and 4); chemically pure Al and Ni, and some types of stainless steel, were found to have the highest corrosion resistance. There are 4 Tables and 8 References: 1 French, 3 English, 1 Japanese and 3 Soviet.

Card 4/4

ASSOCIATION: LenNII

5.3400,5.4220

77389
SOV/79-30-1-50/78

AUTHOR: Mayorov, D. M.

TITLE: Concerning Demethylation of Toluene and Xylene Under Conditions of Destructive Hydrogenation

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 1, pp 230-232 (USSR)

ABSTRACT: The author calculated the equilibrium constant as a function of temperature for the reactions:

$$C_6H_5CH_3 + H_2 \rightleftarrows C_6H_6 + CH_4. \quad (I)$$
$$C_6H_4(CH_3)_2 + 2H_2 \rightleftarrows C_6H_6 + 2CH_4. \quad (II)$$

Knowing the values for the heats of reaction, ΔH, at 298° K (-10,015, -20,241 cal/mole for reactions I and II, respectively)--which were calculated from the heats of combustion and heats of formation of the reacting substances--the equilibrium constants, K_p, were found from equations (III) and (IV):

Card 1/6

$$\log K_p = -\frac{\Delta H_0}{4.573 \cdot T} + \frac{\Delta\Gamma_0}{1.986}\log T + \frac{\Delta\Gamma_1}{2 \cdot 4.573} T + \frac{\Delta\Gamma_2}{6 \cdot 4.573} T^2 + \ldots - \frac{I}{4.573} \quad \text{(III)}$$

$$\Delta H = \Delta H_0 + \Delta\Gamma_0 T + \frac{\Delta\Gamma_1}{2} T^2 + \frac{1}{3}\Delta\Gamma_2 T^3 + \ldots \quad \text{(IV)}$$

where the coefficients $\Delta\Gamma_0$, $\Delta\Gamma_1$, and $\Delta\Gamma_2$ were found from equations for heat content of hydrocarbons and hydrogen as a function of temperature (Vvedenskiy, A. A., Thermodynamic Calculations in Fuel Industry (Termodinamicheskiye raschety toplivnoy promyshlennosti), GNTI of oil and fuel and mining literature (neft. i gorno-topl. lit.) (1949)).
For reaction (I) $\Delta\Gamma_0 = -3.64$, $\Delta\Gamma_1 = -0.0036$, $\Delta\Gamma_2 = 0.0000008$; for reaction (II) $\Delta\Gamma_0 = -7.72$, $\Delta\Gamma_1 = 0.00408$, $\Delta\Gamma_2 = 0.0000009$. Substituting these values into equations (III) and (IV), equations (V) and (VI) are

obtained:

$$\log K_{P_I} = \frac{1919}{T} - 1.833 \log T - 0.000393\,T + 0.00000000029\,T^2 + 5.823 \quad (V)$$

$$\log K_{P_{II}} = \frac{3965}{T} - 3.887 \log T + 0.000446\,T + 0.0000000328\,T^2 + 12.688. \quad (VI)$$

The equilibrium constants, calculated from these equations, are shown in Table C.

Card 3/6

Concerning Demethylation of Toluene and Xylene Under Conditions of Destructive Hydrogenation

77389
SOV/79-30-1-50/78

Table C. Numerical values of equilibrium constants, calculated from equations (V) and (VI).

$T°K$	$\log K_{p_I}$	K_{p_I}	$\log K_{p_{II}}$	$K_{p_{II}}$
300	7.564	$36.65 \cdot 10^6$	16.409	$25.64 \cdot 10^{15}$
400	5.699	$50.01 \cdot 10^4$	12.699	$50.00 \cdot 10^{11}$
500	4.525	$33.50 \cdot 10^3$	10.362	$23.02 \cdot 10^9$
600	3.703	$50.47 \cdot 10^2$	8.778	$59.98 \cdot 10^7$
700	3.088	$12.25 \cdot 10^2$	7.618	$41.50 \cdot 10^6$
800	2.605	$40.28 \cdot 10$	6.738	$54.70 \cdot 10^5$
900	2.209	$16.19 \cdot 10$	6.038	$10.92 \cdot 10^5$
1000	1.879	$7.57 \cdot 10$	5.471	$29.60 \cdot 10^4$

Card 4/6

If for 1 mole of equilibrium mixture at temperature T there are x moles of benzene in reaction (I) and y moles in reaction (II) (in this problem $x \leqslant 1/2$ and $y \leqslant 1/3$), the equilibrium-concentration relationship can be expressed by equations (VII) and (VIII):

$$K_{P_I} = \frac{4x^2}{1 - 4x + 4x^2} \qquad \text{(VII)}$$

$$K_{P_{II}} = \frac{27y^3}{1 - 9y + 27y^2 - 27y^3} \qquad \text{(VIII)}$$

At $K_P \gg 1$ (which is the case for the temperature interval 300-1,000° K), the values of x and y are 1/2 and 1/3, respectively. Thus, in the temperature interval studied, the equilibrium of reactions (I) and (II) is completely displaced to the right. Production of benzene by demethylation of toluene and xylenes can be carried out in a wide temperature range (more advantageously at lower temperatures) and its

Concerning Demethylation of Toluene and Xylene Under Conditions of Destructive Hydrogenation

77389
SOV/79-30-1-50/78

practicability will depend only upon the choice of the catalyst which would increase the rate. There is 1 table; and 7 references, 3 Soviet, 2 German, 2 U.K. The U.K. references are: K. Laidler, A. Szayna, J. Inst. Petr. Techn., 20, 162 (1934); K. I. Silsby, E. W. Sawyer, J. Appl. Ch., 8, 8, 347 (1956).

SUBMITTED: November 16, 1958

Card 6/6

S/064/61/000/003/008/009
B101/B203

AUTHORS: Mayorov, D. M., Merkulova, O. P., Mushenko, D. V., Teodorovich, V. P.

TITLE: Selection of material for the apparatus of direct hydrogenation of higher fatty acids

PERIODICAL: Khimicheskaya promyshlennost', no. 3, 1961, 62-64

TEXT: In connection with the development of the production process of higher aliphatic alcohols by direct hydrogenation of fatty acids, the problem of selecting suitable corrosion-resisting material for the apparatus arose. The present paper reports on corrosion tests. Two methods were applied: 1) To select the material for the hydrogenation vessel and the separator, metal specimens were tested directly in the reaction vessel of the hydrogenation plant at 340°C, 300 atm, or in the separator. After testing for 1978 hr, the following corrosion rates (mm per year) were found: Ст -20 (St-20) steel 7.0; 1Х13 (1Kh13) steel 0.4; 1Х18Н9Т (1Kh18N9T) steel 0.002; 1Х18Н12М2Т (1Kh18N12M2T) 0.01; ЭИ-435 (EI-435) 0; industrial aluminum 0.08. 2) The material for the heat exchangers was

tested by heating the specimens with the fatty acids (C_7 - C_{20}) in an autoclave at 5 atm hydrogen pressure up to 150°C. For less important parts, they were heated in a thermostat to 50°C. Table 5 gives the experimental data (mm per year). Testing of the electrically welded seams (analysis of electrodes, Table 4) by method 2 showed that the seams were also resistant. In a test plant, various metals were tested for corrosion resistance during hydrogenation of C_7 - C_9 and C_{10} - C_{16} acids at 230°C and 300 atm. It was found that steels with 18-20% Cr were sufficiently resistant. Test results of metals and welding seams at 100° and 150°C in an autoclave are given in Table 8. The widely used 1Kh18N9T steel proved to be suitable. Testing for intergranular corrosion (t = 230°C, p = 300 atm) of untreated and thermally treated specimens of this steel showed corrosion rates of 0.001 mm/year in both cases. A hydrogenation apparatus made of this steel has been operating 4 years now. Low-alloy steels (EI-579) are suited for temperatures up to 50°C. For temperatures between 70 and 150°C, the steel must contain at least 13% of chromium. Aero-fireclay bricks proved to be stable in tests during 200 hr at 100 and 150°C in the presence of C_{10} - C_{16} acids. There are 9 tables

Selection of material for ...

and 1 Soviet-bloc reference.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (All-Union Scientific Research Institute of Petrochemical Processes)

Таблица 4

Химический состав наплавленного металла электродов, использованных для сварки сталей 1Х18Н9Т и 1Х18Н12М2Т (%)

1 Тип наплавленного металла	C	Si	Mn	Cr	Ni	Mo	V	Nb	S	P
2 ЦЛ-11 . . .	0,12	0,95	1,90	19,7	9,40	—	—	0,9	0,008	0,02
3 ЭНТУ-3 . .	0,12	1,04	1,58	19,3	10,33	1,87	—	—	0,004	0,015
4 КТИ-5 . . .	0,08	0,36	3,80	21,0	11,15	1,99	0,55	—	0,01	0,017
5 ЦТ-15 . . .	0,09	0,27	1,73	19,5	9,70	—	—	0,9	0,007	0,011

Table 4

Legend to Table 4: 1) Type of metal welded-on. 2) TsL-11. 3) ENTU-3. 4) KTI-5. 5) TsT-15.

Card 3/5

Таблица 5

Скорость коррозии металла (мм/год)

1 Металл	2 Температура 50°	2 Температура 150°	1 Металл	2 Температура 50°	2 Температура 150°
3 Ст-20	0,35	4,0	9 ЭИ-943	0,002	0,001
4 ЭИ-579	0,0007	1,9	10 Алюминий технический	0,002	0,025
5 1Х13	0,001	—	11 Сплав Al + Mg	0,02	0,03
6 1Х18Н9Т	0,002	0,07	12 Медь	—	0,03
7 1Х18Н12М2Т	0,001	0,002	13 Латунь	—	0,02
8 ЭИ-432	0,0006	0,003			

Table 5

Legend to Table 5: 1) Metal. 2) Temperature. 3) St-20. 4) EI-579. 5) 1Kh13. 6) 1Kh18N9T. 7) 1Kh18N12M2T. 8) EI-432. 9) EI-943. 10) Industrial aluminum. 11) Alloy. 12) Copper. 13) Brass.

S/064/61/000/003/008/009
B101/B203

Таблица 8

Скорость коррозии металлов в жирных кислотах C_{10}—C_{16} (автоклав с мешалкой)

1 Марка металла	2 Скорость коррозии, мм/год		1 Марка металла	2 Скорость коррозии, мм/год	
	100°	150°		100°	150°
3 Медь	0,02	0,02	13 Алюминий технический	0,01	0,03
4 Латунь	0,01	0,03	14 1Х18Н9Т с электродами		
5 Ст. 20	0,3	1,5	15 ЦЛ-11	—	0,04
6 ЭИ-578 (Н-8)	0,3	0,8	16 ЭНТУ-3	—	0,04
7 ЭИ-579 (Н-10)	0,3	0,9	17 КТИ-5	—	0,08
8 1Х13	0,3	2,4	18 1Х18Н12М2Т с электродами		
9 1Х18Н9Т	0,02	0,07	15 ЦЛ-11	—	0,003
10 1Х18Н12М2Т	0,01	0	16 ЭНТУ-3	—	0
11 ЭИ-432	0,02	0	17 КТИ-5	—	0,001
12 ЭИ-943	0,006	0			

Table 8

Legend to Table 8: 1) Type of metal. 2) Corrosion rate, mm/year. 3) Copper. 4) Brass. 5) St-20. 6) EI-578(N-8). 7) EI-579(N-10). 8) 1Kh13. 9) 1Kh18N9T. 10) 1Kh18N12M2T. 11) EI-432. 12) EI-943. 13) Industrial aluminum. 14) With electrodes. 15) TsL-11. 16) ENTU-3. 17) KTI-5.

VISHNEVSKIY, N.Ye.; MAYOROV, D.M.; MUSHENKO, D.V.

Hydrogenation of fuel oil under a pressure of 100 atm. Trudy VNIINeftekhim no.3:183-186 '60. (MIRA 14:2)
(Petroleum as fuel) (Hydrogenation)

MAYOROV, D.M.; MERKULOVA, O.P.; MUSHENKO, D.V.; TEODOROVICH, V.P.

Selection of materials for the units performing the direct hydrogenation of higher fatty acids. Khim.prom. no.3:210-212 Mr '61. (MIRA 14:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.

(Acids, Fatty) (Hydrogenation)

MUSHENKO, D.V.; VISHNEVSKIY, N.Ye.; MAYOROV, D.M.

Organizing the production of methyl ethyl ketone. Khim.i tekh.topl.i masel 6 no.8:66-67 Ag '61. (MIRA 14:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.
(Ketone)

MAYOROV, D.M.; BELOKOPYTOVA, S.P.

Hydrogenation of butyl esters of C_7 - C_9 acids over copper-chromium and zinc-chromium catalysts. Zhur.prikl.khim. 35 no.6:1343-1347 Je '62. (MIRA 15:7)
(Esters) (Hydrogenation) (Catalysts)

BELOKOPYTOVA, A.P.; BLANDIN, Yu.V.; MAYOROV, D.M.; MUSHENKO, D.V.

Hydrogenation of the C_{10} - C_{16} acids over copper-chromia and zinc-chromia catalysts. Khim.i tekh.topl.i masel 8 no.8: 6-10 Ag '63. (MIRA 16:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov.
(Acids, Organic) (Hydrogenation) (Chromium catalysts)

TOVBIN, I.M., inzh.; PETROV, N.A., kand. tekhn. nauk; MAYOROV, D.M., kand. khim. nauk; STERLIN, B.Ya., kand. tekhn. nauk; NEVOLIN, F.V.; VARLAMOV, V.S., kand. tekhn. nauk; CHERKAYEV, V.G., kand. khim. nauk; BLIZNYAK, N.V., inzh.; ORECHKIN, D.B., kand. tekhn. nauk; RADCHENKO, Ye.D., inzh.; SHEPOT'KO, O.F., inzh.

Obtaining higher unsaturated alcohols by the method of selective hydrogenation of whale oil. Masl.-zhir. prom. 29 no.3:18-21 Mr '63. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (for Mayorov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (for Sterlin, Nevolin, Varlamov). 3. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskikh i natural'nykh dushistykh veshchestv (for Orechkin, Radchenko, Shepot'ko).
(Whale oil) (Alcohols)

MAYOROV, D.M.; MUSHENKO, D.V.; BOYARINOVA, L.A.; BELOKOPYTOVA, A.F.

Production of technical lauryl and stearyl alcohols from petroleum products. Zhur.prikl.khim. 37 no.7:1640-1642 Jl '64. (MIRA 18:4)

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MAYOROV, D.M.; BLAN[illegible], Ya.V.; [illegible], [illegible]; [illegible], [illegible];
KALASH[illegible]OVA, [illegible]

Preparation of [illegible] lauryl and stearyl alcohols from fatty raw materials. [illegible] prik. khim. [illegible]
1811-18 [illegible]

APPROVED FOR RELEASE: 06/14/2000 CIA-RDP86-00513R001033110009-3"

MAYOROV, D.M.; BOYARINOVA, L.A.; BLANDIN, Yu.V.

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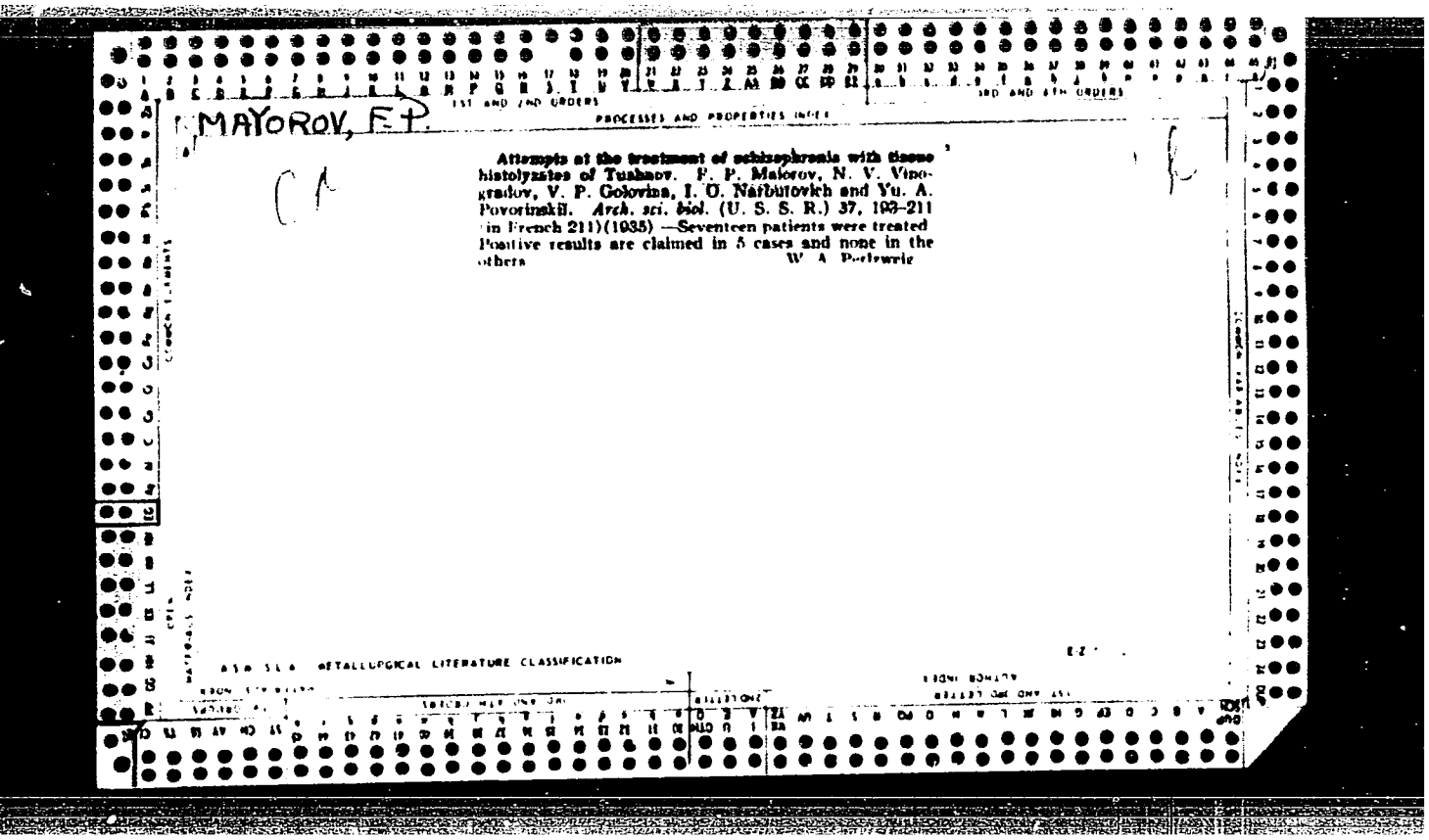
KRYZHANOVSKIY, G.V.; MAYOROV, E.G.

Operation of a transition relay. Elek.i tepl.tiaga 3 no.8: 35-36 Ag '59. (MIRA 12:12)

1. Mastera reostatnykh ispytaniy depo Likhobory.
(Diesel locomotives)
(Electric relays)

MAYOROV, Edving Grigor'yevich, inzh.; GNEZDILOV, B.V., red.

[Rheostatic tests and the electrical circuits of ChME2 diesel locomotives] Reostatnye ispytaniia i elektricheskie skhemy teplovozov ChME2. Moskva, Transport, 1965. 64 p. (MIRA 18:7)



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MAYOROV, F.P.

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1. Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences USSR.

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