

PANYUSHKIN, S.I., inzhener.

Modernization of soil-working machinery in connection with
T.S.Maltsev's agricultural system. Sel'khoz mashina no.1:10-
12 Ja '55. (MIRA 8:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sel'sko-
khozyaystvennogo mashinostroyeniya.
(Agricultural machinery)

LIKHOYEDENKO, K.I.; PANYUSHKIN, S.N.; ZHIGAREV, I.F.

Working parts of plant hole diggers. Trakt. i sel'khoz mash. no.9:20-24
S '58. (MIRA 11:10)

(Agricultural implements)

L 6462-66 EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t)/EWP(k)/EWP(b)/EWA(c) IJP(c)

ACC NR: AP5025250 JD/HW

SOURCE CODE: UR/0386/65/002/004/0153/0157

AUTHOR: Panyushkin, V. N.; Voronov, F. F.ORG: Institute of Physics of High Pressures, Academy of Sciences SSSR (Institut fiziki vysokikh davleniy Akademii nauk SSSR)TITLE: The Mossbauer effect in metallic tin at pressures up to 110 kbarSOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu (Prilozheniye), v. 2, no. 4, 1965, 153-157

TOPIC TAGS: tin, Mossbauer effect, Mossbauer spectrum, pressure effect, high pressure research

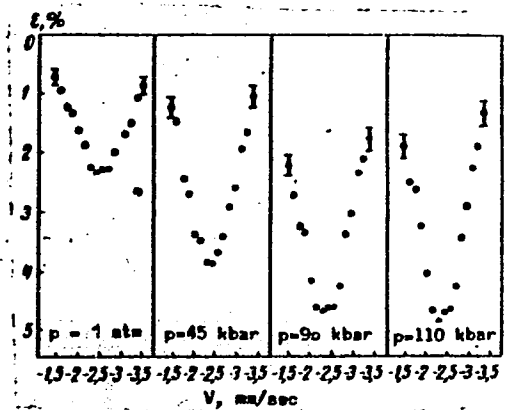
ABSTRACT: The Mossbauer effect was used to study the properties of metallic tin (β -Sn) because its large compressibility gives grounds for hoping to obtain distinctly noticeable pressure effects. In particular, a large increase is expected in the probability of emission of recoilless γ quanta and the isomeric shifts with pressure. A high-pressure chamber resembling chambers with flat anvil and tablet of amorphous boron, similar to that used in work on x-ray structural analysis at high pressure, was employed. A β -Sn source in the form of a foil 20 μ thick, containing $\text{Sn}^{119\text{m}}$, was placed in the pressure chamber. The pressure in the chamber was calibrated against the jumps of the electric resistivity at known polymorphic transitions in bismuth, thallium, and barium. The calibration curve was linear and was linearly extrapolated to 110 kbar. The setup for the observation of the Mossbauer effect was similar to the constant-speed setup described by K. P. Aleshin et al. (PTE no. 4, 43-49, 1964). All the mea-

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Fig. 1. Resonance curves for different pressures.



measurements were made with the source and absorber at room temperature. The resonance curves for each experiment were plotted at pressures of 1 atm and 45, 90, and 100 kbar. Sample resonance curves for different pressures are shown in Fig. 1. The results show that the depth of the resonance increases with increasing pressure, and the half-widths of the resonance curves remain constant. Comparison of the areas of the resonance curves for different pressures with the area of the curve at atmospheric pressure yields the pressure dependence of the probability of recoilless γ -quantum

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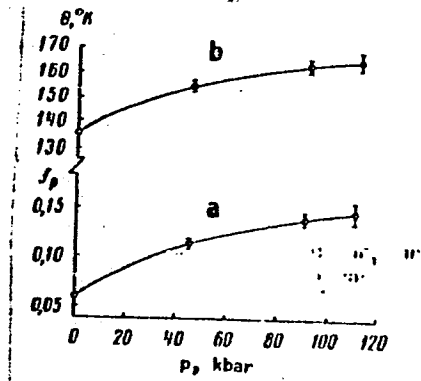


Fig. 2. Dependence on the pressure P : a - of the probability of recoilless 7-quantum emission f_p , b - of the effective Debye temperature θ .

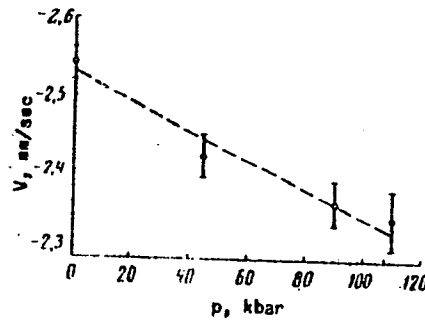


Fig. 3. Pressure dependence of the position of the resonance line of β -Sn relative to the energy of the resonance in SnO_2 .

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emission f_p and the increase of the corresponding effective Debye temperature θ with increasing pressure. These are shown in Fig. 2. The obtained dependence yields an estimate $\gamma = 2.4 \pm 0.3$ for the Gruneisen constant at atmospheric pressure, which agrees well with the value $\gamma = 2.25$ calculated by the Gruneisen formula. Another result of the experimental curves is the shift in the energy of the resonance in β -Sn towards the energy of the resonance in SnO_2 , shown in Fig. 3. Authors thank L. F. Vereshchagin and Ye. N. Yakovlev for support and interest in the work, V. V. Sklyar^{4/5} revskiy, N. N. Filippov^{4/5} and K. P. Alesin^{4/5} for help in constructing the Mossbauer spectrometer, N. N. Delvagin for a useful discussion of the results, and also Yu. T. Babotin and V. A. Guzov for participating in the experiments. Orig. art. has: 3 figures. ^{4/5} ^{4/5}

SUB CODE: GP

SUBM DATE: 09 Jun 65/

ORIG REF: 006/

OTH REF: 006

rw
Cord 4/4

PANYUSHKIN, V.T.; MAL'TSEV, V.S.

Calculating hydrodynamic potentials of aluminum suboxides. Trudy
Inst.met.i cbog. AN Kazakh.SSR 11:79-82 '64.

(MIRA 18:4)

L 31860-65 EPA(s)-2/EWT(m)/EPR/EWP(t)/EWP(b) Ps-4/Pt-10 IJP(c) JD/JG 35
S/0149/64/000/006/0070/0073 34
3B

ACCESSION NR: AP5003365

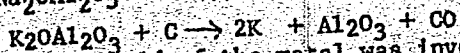
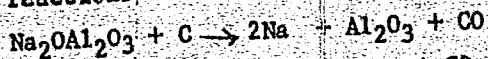
AUTHOR: Mal'tsev, V. S. ; Panyushkin, V. T. ; Isabayev, S. M. ; Ponomarev, V. D.

TITLE: Thermal reduction of sodium and potassium aluminates in a vacuum

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1954, 70-73 27 18

TOPIC TAGS: sodium aluminate, potassium aluminate, thermal reduction, vacuum re-
duction, carbon reduction

ABSTRACT: The object of the work was to study the reduction of sodium and potas-
sium aluminate by carbon in a vacuum and to obtain some data on the mechanism of
the process. The overall reactions are



The effect of temperature on the yield of the metal was investigated: the maximum
yield of sodium (82%) was reached at 1200C, and the maximum yield of potassium
(92-93%), at 1100C. Data from crystal optical analysis and x-ray diffraction
studies led to the following conclusion: in addition to β -alumina, the products

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ACCESSION NR: AP5003365

of thermal reduction of sodium and potassium aluminate contain active low-temperature forms of alumina, θ - Al_2O_3 and γ - Al_2O_3 , both as separate phases and mixed with sodium (potassium) aluminate and δ -alumina. When the aluminates are heated to 1200-1400C, a new phase, λ - Al_2O_3 , is formed whose amount increases with rising temperature and increasing duration of the experiment. Orig. art. has: 1 figure, 1 table and 2 formulas.

ASSOCIATION: Kafedra metallurgii legkikh i redkikh metallov, Kasakhskiy politekhnicheskiy institut (Light and rare metals metallurgy department, Kazakh polytechnic institute)

RECEIVED: 26 Nov 63

ENCL: 00

SUB CODE: MM

NO. OF PAGES: 006

DTIC: 001

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MAL'TSEV, V.S.; PANYUSHKIN, V.T.; ISABAYEV, S.M.; PGNOMAREV, V.P.

Thermal reduction of sodium and potassium aluminates in vacuum.
Izv. vys. ucheb. zav.; svet. met. 7 no.6:76-73 '64.

(MIRA 18:3)

1. Kazakhskiy politekhnicheskii institut, kafedra metallurgii
legkikh i redkikh metallov.

L 34095-66 EWP(e)/EWT(m)/²¹EWP(t)/ETI IJP(c) JD/JG/AT/WH/JH
ACC NR: AP6008802 SOURCE CODE: UR/0360/65/000/003/0046/0054

AUTHOR: Mal'tsev, V. S. ; Arakelyan, O. I. ; Ponomarev, V. D. ; Panyushkin, V. T. ;
Isabayev, S. M.

ORG: none

TITLE: Formation of beta-²¹Al₂O₃²¹ during carbothermic reduction of sodium
aluminate

SOURCE: AN KazSSR. Izvestiya. Seriya khimicheskikh nauk, no. 3, 1965, 46-54

TOPIC TAGS: alumina, aluminate, carbon, chemical reduction

ABSTRACT: The composition of the phases formed during the vacuum carbothermic re-
duction of sodium aluminate and the conditions of formation of β -alumina in the products
of this reduction were studied. The reaction products were analyzed by chemical and
petrographic methods, and in some cases by x-ray structural analysis. The following
optimum conditions of the reduction were found: a reaction temperature of 1200C, holding
for 2 hr at this temperature, residual pressure of 0.4 - 1.0 mm Hg, excess of reductant
(carbon) up to 75% of stoichiometry according to the reaction $\text{Na}_2\text{O} \cdot \text{Al}_2\text{O}_3 + \text{C} \rightarrow 2\text{Na} +$
 $\text{Al}_2\text{O}_3 + \text{CO}$. Practically pure alumina with a small admixture of sodium oxide (up to

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MAL'TSEV, V.S.; ARAKELYAN, O.I.; PONOMAREV, V.D.; PANYUSHKIN, V.T.; ISABAYEV,
S.M.

Formation of β -Al₂O₃ in the process of carbothermal reduction
of sodium aluminate. *zv. AN Kazakh.SSR.Ser.khim.nauk* 15
no.3:46-54 JI-Ag '65.

(MIRA 18:11)

1. Submitted December 21, 1964.

MAL'TSEV, V.S.; PANYUSHKIN, V.T.; PONOMAREV, V.D.

Investigating the reducibility of alkali aluminates in vacuum.
Trudy Inst. met. i obog. AN Kazakh. SSR 12:125-130 '65.

(MIRA 18:10)

ISABAYEV, S.M.; PANYUSHEIN, V.T.; MAL'TSEV, V.S.; BUKETOV, Ye.A.

Aluminothermic reduction of sodium aluminate in vacuum. Trudy Inst.
met. i obog. AN Kazakh. SSR 12:131-135 '65.

(MIRA 18:10)

MAL'TSEV, V.S.; PONOMAREV, V.D.; FANYUKHIN, V.T.; ISABAYEV, S.M.

Data on the mechanism of thermal decomposition and reduction of
sodium and potassium hydroaluminates. Trudy Inst. met. i obog.
AN Kazakh. SSR 12:136-142 '65. (MIRA 18:10)

PONOMAREV, V.D., akademik; PANYUSHKIN, V.T., kand.tekhn.nauk; MAL'TSEV, V.S.,
kand.tekhn.nauk

Mechanism of physical and chemical conversions during carbothermic
reduction of artificial nepheline. Vest. AN Kazakh. SSR 21 no.7:32-35
Jl '65. (MIRA 13:8)

1. Akademiya nauk Kazakhskoy SSR (for Ponomarev).

PANYUSHKIN, Ye., starshiy nauchnyy sotrudnik

Orenburg combine operators introduce improvements in harvesting machinery. Nauka i pered.op.v sel'khoz. 9 no.8:7-10
Ag '59. (MIRA 12:12)

1. Orenburgskaya oblastnaya sel'skokhozyaystvennaya opytная stantsiya.
(Combines(Agricultural machinery))

PANYUSHKIN, Ye.

Grain from three reapers into one windrow. Tekh.v sel'khoz. 21
no.8:67-70 Ag '61. (MIRA 14:7)

1. Orenburgskaya sel'skokhozyaystvennaya opytnaya stantsiya.
(Grain—Harvesting)

PANYUSHKIN, Ye.P.

Automatic control of the operation of air turboblowers. Gidroliz. i
lesokhim.prom. 14 no.4:25 '61. (MIRA 14:5)

1. Saratovskiy gidroliznyy zavod.
(Saratov--Hydrolysis)
(Turboblowers)

1ST AND 2ND CODES

PROCESSES AND PROPERTIES INDEX

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Synthesis of olefinic and paraffinic hydrocarbons of iso structure with a quaternary carbon atom. I. Reaction between the hydrobromides of isoprene and 1,1,3-trimethylbutadiene and cyclohexylmagnesium chloride. R. Ya. Levina, A. M. Panyushkina, N. A. Shcheglova, N. A. Smirnova, K. D. Shcherbakova and N. I. Shur. *J. Gen. Chem. (U. S. S. R.)* 11, 411-22(1941).—The action of the hydrobromide of isoprene on $C_6H_{11}MgCl$ yielded 2-methyl-4-cyclohexyl-2-butene (γ,γ -dimethylallylcyclohexane), b_p 101-2°, n_D^{20} 1.4770, d_4^{20} 0.8550, M_R 99.65. The captl. procedure for the prepn. of 1,1,3-trimethylbutadiene (I) from mesityl oxide and $MeMgI$ is described. By slowly decomp. the reaction mixt. dild. with HOAc the chief product is the dimer of I, b_p 95-96°, n_D^{20} 1.4560, d_4^{20} 0.8237, M_R 94.68. The product of the reaction between the hydrobromide of I and $C_6H_{11}MgBr$ is 2,4-dimethyl-4-cyclohexyl-2-pentene. B. Z. Kamich

A.S.T.M. METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

COMMON ELEMENTS

1ST AND 2ND CODES

GHIGAREV, G.A.; PANYUSHKINA, A.M.; KAYUDIN, I.A.; SAZONIK, Kh.V.; YUREVICH,
I.A.

Field tests of dieldrin against the Colorado beetle. Zashch. rast.
ot vred. i bol. 7 no.3:53-54 Mr '62. (MIRA 15:11)
(Potato beetle--Extermination) (Dieldrin)

PANYUSHKINA, Ye.G.

KORBOCHKIN, I.Yu., inzh.; PROTSKIY, N.Ye., inzh.; ~~PANYUSHKINA, Ye.G., inzh.~~

Increasing the strength of calibers used in pipe cold rolling mills
at the Nikopol' Southern Pipe Plant. Biul. TSNII GIM no.1:20-24 '58.
(Nikopol'—Rolling mills) (MIRA 11:5)

PROTSKIY, N.Ye., inzh.; PANYUSHKINA, Ye.G., inzh.

Increasing the durability of rolls on the 400 automatic mill.
Met. 1 gornorud. prom. no.2:29-36 Mr-Ap '62. (MIRA 15:11)

1. Nikopcl'skiy yuzhnotrubby zavod.
(Rolls (Iron mills))

SADOKOV, G.M.; NOSKO, V.S.; PROTSKIY, N.Ye.; PANYUSHKINA, Ye.G.

Durability of extruding ring dies on mechanical extrusion
presses. Met. i gornorud. prom. no.6:67-68 N-D '65.

(MIRA 18:12)

LIKHTENSHTEYN, V.A.; SULEYMANOVA, A.G.; PANYUSHNO, D.G.

Some clinical and diagnostic problems in neurobrucellosis.
Zhur. nevr. i psikh. 61 no.7:1000-1004 '61. (MIRA 15:6)

1. Klinika nervnykh bolesney Dagestanskogo meditsinskogo
instituta i Dagestanskoy Respublikanskoy klinicheskoy
bol'nitsy.

(BRUCELOSIS)
(NERVOUS SYSTEM--DISEASES)

PANYUTIN, A. G.

Osnovy stroitel'nogo delo (Fundamentals Of Building) izd. 4., perer.
Moskva, Gos. izd-vo lit. po Stroitel'stvu i Arkhitekture, 1954.

326 p. illus., diags., plans, tables.

N/5
661.6
.P2
1954

PANYUTIN, A.G., professor, doktor tekhnicheskikh nauk; SERK, L.A., doktor tekhnicheskikh nauk, professor, retsenzent; TREPENENKOV, R.I., kandidat tekhnicheskikh nauk, dotsent, nauchnyy redaktor; ROSTOVTSOVA, M.P., redaktor; PERSON, M.N., tekhnicheskiiy redaktor

[Fundamentals of building] Osnovy stroitel'nogo dela. Izd. 4-e, perer. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954.
326 p. (MLRA 7:10)

(Building)

PREDTECHENSKIY, B.M., dotsent, kandidat tekhnicheskikh nauk.

"Principles of construction engineering." A.G.Paniutin. Reviewed by
V.M.Predtechenskii. Stroi.prom.33 no.2:47-48 P. 199. (MLRA 8:4)
(Building) (Paniutin, A.G.)

PANYUTIN, A.G., doktor tekhn. nauk, prof.

Research work at the Faculty of Building Materials of the
Gorkiy Civil Engineering Institute. Trudy GISI no.47:3-6 '64.
(MIRA 18:11)

PANYUTIN, Aleksey Georgiyevich, prof., doktor tekhn.nauk; PECHURO, S.S.,
nauchnyy red.; SHPAYER, A.L., red.izd-va; STEPANOVA, E.S.,
tekhn.red.

[Using gypsum as wall material in constructing buildings of
few stories] Stroitel'nyi gips v stenovykh konstruktsiakh
maloetazhnykh zdanii. Moskva, Gos.izd-vo lit-ry po stroit.,
arkhit. i stroit.materialam, 1959. 134 p. (MIRA 13:1)
(Gypsum) (Walls)

PANYUTIN, G.

Long-distance relay swimming. Voen.znan. zl no.6:24 Ja '56.
(MLRA 9:10)

(Swimming)

PANJUTIN, G. K.

Gumbrino-ISKhaltubskaja zheleznaja doroga. [Gumbrino-ISKhaltuba railway].
Tiflis, 1935, 13p. illus. (Polnomochnyyi Karavaniashchaya SSSR pri Soverkhone
ZSFSR).

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress
Reference Department, Washington, 1952, Unclassified.

PANYUTIN, K., inzh.

Preparing automobiles for a long travel. Za rul. 14 no.3:17 Js '56.
(MIRA 11:2)

1. Predsedatel' tekhnicheskoy komissii seksii avtomototurizma
TSentral'nogo moskovskogo avtomotokluba.
(Automobiles--Maintenance and repair)

PANYUTIN, K.

An automobile trip from Ul'ianovsk to Yalta. Za rul. 15 no.5:insert
p.7-11 My '57. (MIRA 10:6)

(Automobiles--Touring)

PARVUTIN, E., inghener.

Results of operating Moskitch-402 automobiles. Aviatransp
no. 6-22-24 Je '57. (S) (C) (U)

1. Predsedatel' tekhnicheskoy komissii sektsii aviatransp
Central'nogo moskovskogo aviatranspokluba Dobrovol'nogo pomoshchestva
soderzhatiya armii, aviatsii i flotu SSSR.
(Automobiles--Testing)

1. PANYUTIN, K.
PANYUTIN, K., inzh.

~~The kind of car we need. Za rul. no.12:10 D '57. (MIRA 11:1)~~

1. Predsedatel' tekhnicheskoy komissii seksii avtomototurizma
Moskovskogo avtomotokluba Dobrovol'nogo obshchestva sodeystviya
armii, aviatsii i flotu.
(Automobiles)

PANYUTIN, K., inzh.

Basic operational adjustments. Za rul. 17 no.8:17-18
Ag '59. (MIRA 12:12)
(Automobiles--Maintenance and repair)

PANIUTIN, K. A.

A textbook for drivers of automobiles with gas generators. Moskva, Sel'khozgiz, 1943.
204 p.

Cyr.4 TL22

PANYUTIN, K.A.

OSEPCHUGOV, V.V., inzhener, redaktor; PANYUTIN, K.A., inzhener
retsenzent; EROKSH, V.V., inzhener, redaktor; MODEL', B.I.,
tekhnicheskii redaktor.

[Three-axle motor vehicles; IAZ-210, IAZ-210 A, IAZ-210G
IAZ-210D, IAZ-210E; maintenance instructions] Trekhosnye
avtomobili IAZ-210, IAZ-210A, IAZ-210G, IAZ-210D, IAZ-
210E; instruktsiia po ukhodu. Moskva, Gos. nauchno-tekhn. izd-
vo mashinostroit. lit-ry, 1952. 257 p. [Microfilm] (MLRA 7:12)

1. Russia (1923- U.S.S.R.) Ministerstvo avtomobil'noy i
traktornykh promyshlennosti.
(Motor trucks)

PANYUTIN, K. A.

Panyutin, K. A.

"The Driver of a Lumber
Hauling Vehicle"

Moscow Forestry Engineering
Institute

PANYUTIN, K. A.

PANYUTIN, K. A.

Useful advices to automobile drivers. Za rul. 14 no. 1 inart 6-9 56.
Aut. obles-- in d weather operation.

PANYUTIN, K., inzh.

Improving the Moskvich-402 automobiles. Avt.transp. 35 no.9:21
S '57. (MIRA 10:10)

1.Predsedatel' tekhnicheskoy komissii seksii avtoturizma
TSentral'nogo Moskovskogo avtomotokluba Dobrovol'nogo obshchestva
sodeystviya armii, aviatsii i flotu.
(Automobiles)

KAMENEVA, S.P.; PANYUTIN, K.K.

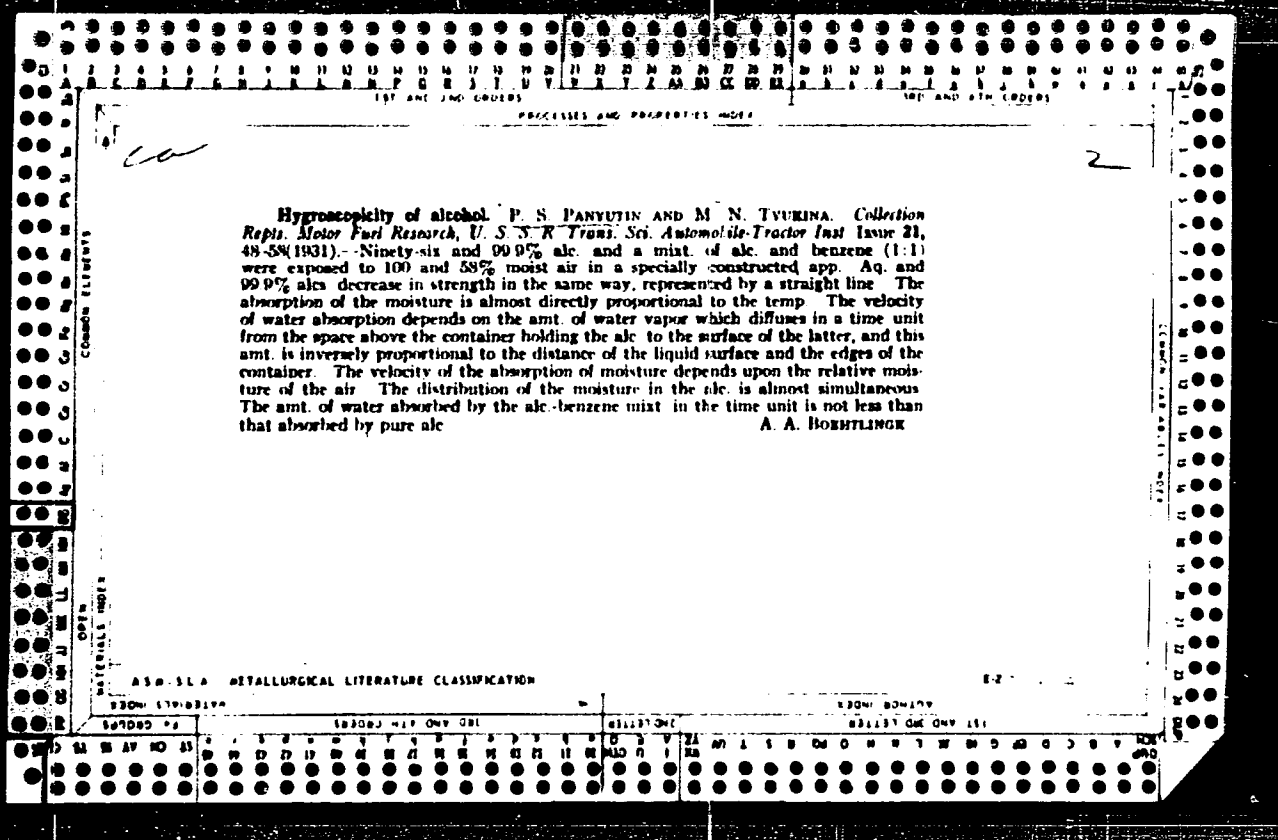
Migration of some bat species. Okhr. prir. i ozel. no.3:
117-119 '60. (MIRA 16:12)

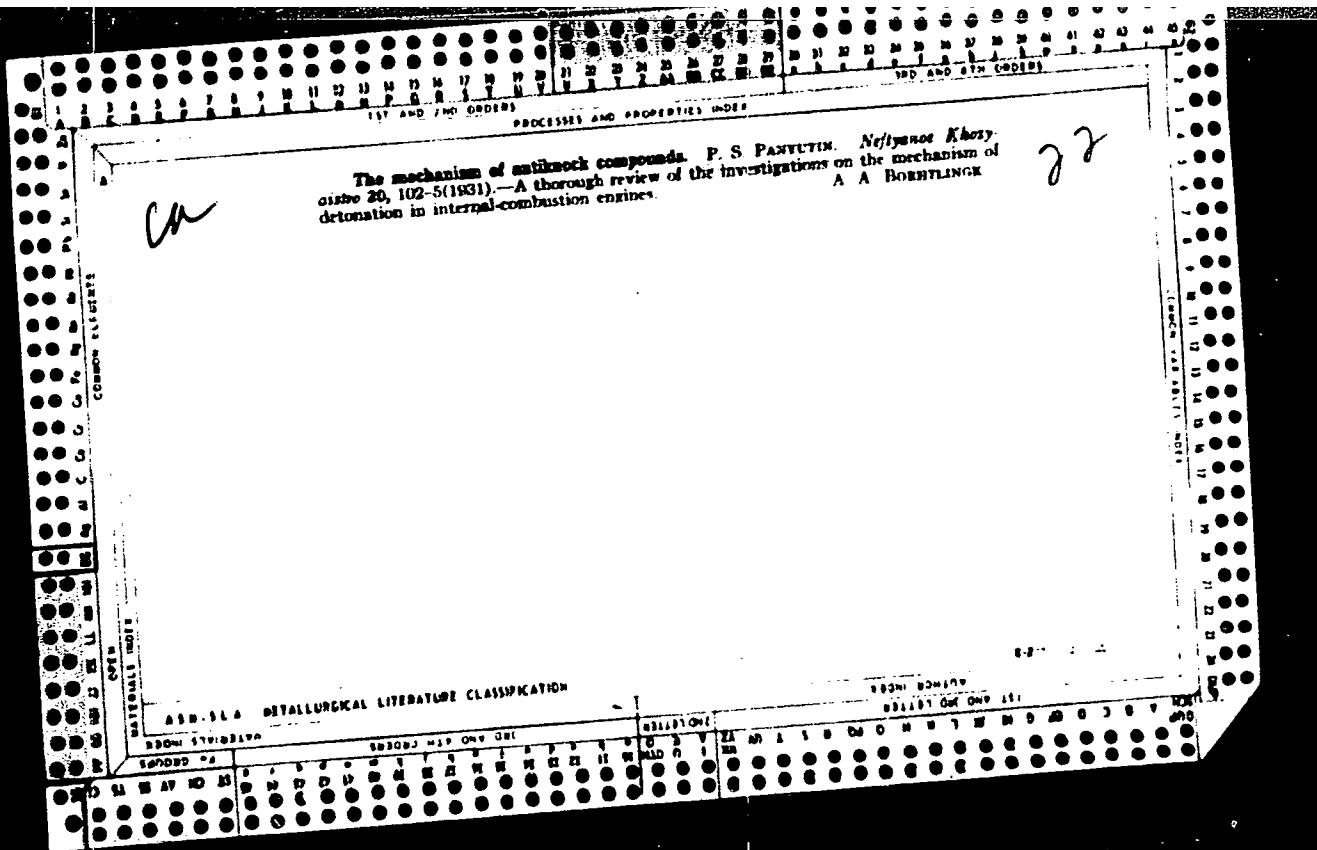
1. Chleny Vserossiyskogo obshchestva sodeystviya okhrane prirody
i ozeleneniyu naseleennykh punktov.

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CA

Autoxidation of unsaturated hydrocarbons. P. Panyk, L. Hindin and O. Vasil'eva. *Compt. rend. acad. sci. U. R. S. S. [N. S.]*, 2, 183-6(1936) (in German).—To 2-5 ml. of the substance to be tested, e. g., benzene, add exactly 25 ml. of 4% KI in EtOH and 0.5 ml. of pure, concd. H₂SO₄. Allow the mixt. to stand 4 hrs. in the dark in a stoppered bottle. At the same time start a blank expt. with the same quantities of reagents and 5 ml. of distd. benzene which is known to contain no unsatd. compds. After the specified time has elapsed, titrate the I₂ in the blank test with Na₂S₂O₃. In the main expt. titrate the excess KI after oxidation with ferric alum soln. To accomplish this, ext. the soln. in the main test with two 50-ml. portions of water. Dil. the aq. ext. to exactly 250 ml. and take a 50-ml. aliquot. Transfer this to a 200-ml. round-bottomed flask carrying a glass stopper which is fitted with a glass delivery tube. Add 5 ml. of 25% H₂SO₄, 2 g. of ferric alum and 2-3 pieces of calcite. Slowly heat the contents of the flask and pass the escaping gas into 100 ml. of 10% KI soln. which is kept cold with ice. Finally titrate the I₂ in the receiver with Na₂S₂O₃ in exactly the same way, treat 25 ml. of the KI soln. with ferric alum and det. I which would be used up by 100 g. of substance analyzed, can be obtained by the formula, peroxide no. = $[a - 5(b - c) - e] / 7.100 / n.d.$, where a = ml. Na₂S₂O₃ required for titrating the I₂ originally present in the KI soln., b = ml. Na₂S₂O₃ required in titrating the distd. I₂, c = ml. Na₂S₂O₃ required in the blank, T = titer of the Na₂S₂O₃ in terms of I, n = ml. of sample taken and d , its d. If it is desired to express the peroxide no. in terms of gram.-equiv. of active O, as is usual, then the titer of the soln. should be in terms of O. W. T. H.





1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

190 AND 4TH ORDERS

W

Physicochemical properties of cracked gasoline. P. S. FANSTUEN AND A. S. INIMOV. *Collection Repts. Mater. Prod. Research, U. S. S. R. Trans. Sci. Automobile Tractor Inst.* Issue 21, 3 19(1931). Cracked and straight run gasolines from Casanov and Bakov and their mixts were investigated. The vapor tension was det'd by the Sorel method (cf. S. Lewis, C. A. 16, 1937, 20, 2572). Ringel distn. charts and the chem. compn. are given. The dynamical volatility measured in a Zenith carburetor is given and the app. used is described in detail. The volatility of gasoline and Cells is also discussed.

A. A. BORTLICK

COMPOSITE

MATERIALS INDEX

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Mercury and thiocyanate numbers of cracked gasoline. P. S. PANYUTIN AND N. V. MILOVIDOVA. *Collection Repts. Mater. Res. U. S. S. R. Trans. Sci. Automobile-Transport Inst. Issue 21, 33-44(1931)*. The following cracked gasolines were investigated: (1) Baku gasoline from the Winkler-Koch cracking unit of 0.745 sp. gr., initial b. p. 67°, end pt. 181° and 11% over at 100°. (2) Groumou gasoline from the Winkler-Koch cracking unit of 0.740 sp. gr., initial b. p. 85°, end pt. 223° and 7% over at 100°. (3) Petrograd vapor-phase cracked gasoline of 0.804 sp. gr., initial b. p. 65°, end pt. 192° and 40% over at 100°. All gasolines were distilled into five fractions: (a) boiling below 60°, (b) 60-95°, (c) 95-122°, (d) 122-150° and (e) 150-200°. These fractions were treated with Hg acetate according to Tausz (slightly modified method) and with thiocyanate according to Kaulmann. The I nos. of the fractions were dist. after and before the above treatments. The I nos. of untreated gasolines were for (1) (b) 86, (c) 95, (d) 80 and (e) 73; for (2) (a) 239, (b) 113, (c) 85, (d) 84 and (e) 68. Hg acetate removed from (1) (b) 76%, (c) 67%, (d) 49%, (e) 53%; from (2) (a) 100%, (b) 75%, (c) 80%, (d) 82%, (e) 75% of olefins. The thiocyanate nos. were for (1) (b) 63, (c) 48, (d) 40, (e) 32 and for (2) (a) 67, (c) 40, (d) 29, (e) 23. It appears that the thiocyanate acts somewhat differently than Hg acetate on the olefins present in cracked gasoline. Repts. are described in detail and tables and diagrams are given.

A. A. BOKHTELOVA

METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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✓
FANYUTIN, P. S.

Heterogeneity of alcohol. P. S. FANYUTIN AND M. N. TYUKINA. *Collection Repts. Motor Fuel Research, U. S. S. R. Trans. Sci. Automobile-Tractor Inst.* issue 21, 48-53(1931).—Ninety-six and 99.9% alc. and a mixt. of alc. and benzene (1:1) were exposed to 100 and 58% moist air in a specially constructed app. Aq. and 99.9% alcs. decrease in strength in the same way, represented by a straight line. The absorption of the moisture is almost directly proportional to the temp. The velocity of water absorption depends on the amt. of water vapor which diffuses in a time unit from the space above the container holding the alc. to the surface of the latter, and this amt. is inversely proportional to the distance of the liquid surface and the edges of the container. The velocity of the absorption of moisture depends upon the relative moisture of the air. The distribution of the moisture in the alc. is almost simultaneous. The amt. of water absorbed by the alc.-benzene mixt. in the time unit is not less than that absorbed by pure alc. A. A. BOEHLINGER

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PROCESSES AND PROPERTIES INDEX

ca

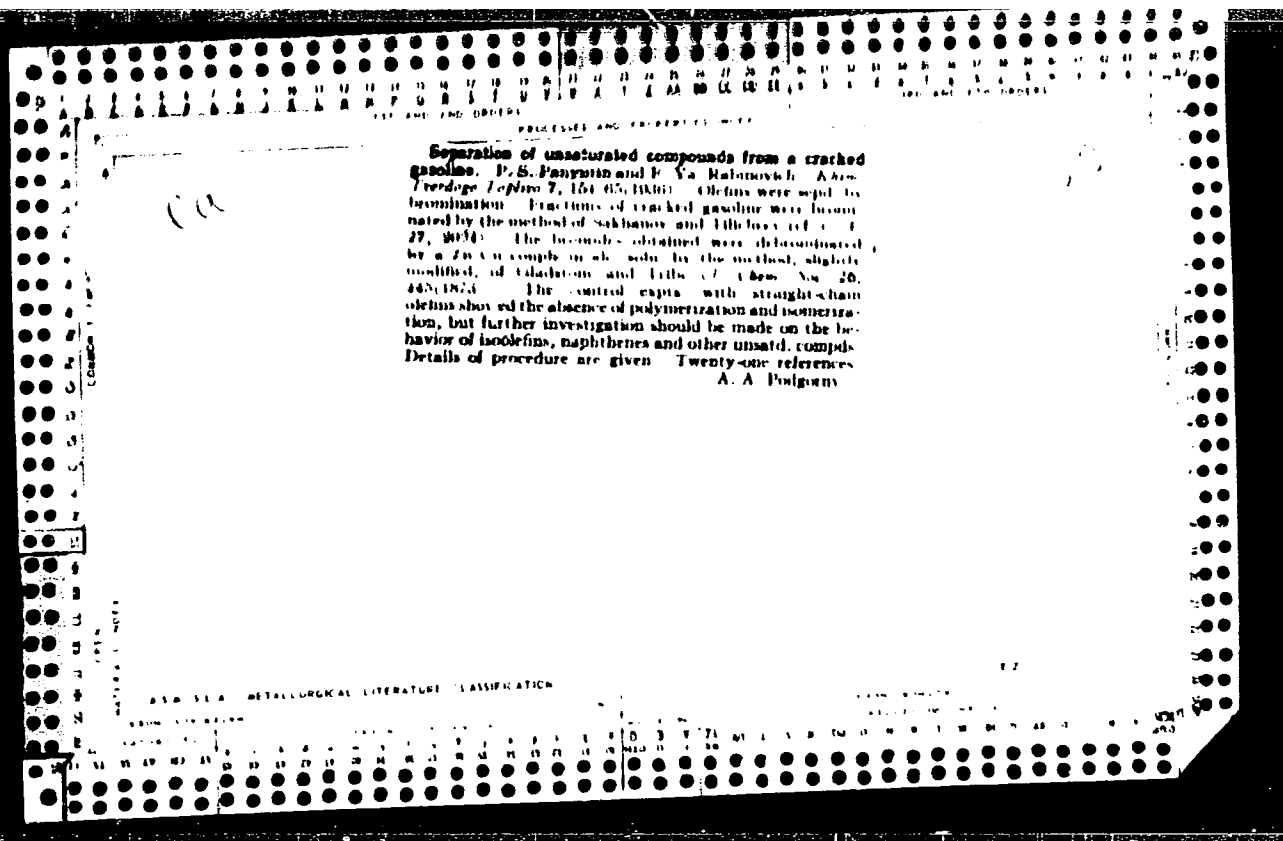
Chemical composition of the Surakhanak gasoline. P. S. Panyutin and E. N. Firsanova. *Khim. Tverdogo Topliva* 6, 811-14 (1935). - By catalytic dehydrogenation with Pt-impregnated coal, it was found that most of the Surakhanak gasoline (octane value 74-78) consists of Surakhanak gasoline (20.8), cyclohexane (9.3), dimethylmethylocyclohexane (20.8), cyclohexane (6.6), dimethylcyclohexane (7.9), methylcyclopentane (5.1), trimethylcyclopentane (5.0), ethylcyclopentane (1.6%), methylcyclopentane (2.1) and propylcyclopentane (1.6%). *m*-C₆H₄Me₂ were sepd. from the fraction b. 118-34°, but the sepn. of pure *o*-C₆H₄Me₂ was not successful. The sepn. of the tertiary hydrocarbons is possible only with a large excess of SbCl₅ (3 mols. of SbCl₅ per mol. of the reacting hydrocarbon), and with large losses of product. The presence of *n*-C₇H₁₆ and 2,2-dimethylpentane in the Surakhanak gasoline is very probable, but not that of *n*-C₈H₁₈. A description of the lab. rectifying column and details of analyses are given. Eighteen references.

A. A. Podgorny

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

COMMON ELEMENTS



27

10

PROCESSED AND REPRODUCED FROM THE ORIGINAL SOURCE

Determination of ash in lubricating oils P. S. Panyu-
 on and V. N. Tishkova. *Nefyanovskaya* 1930: 26-28.

Thirty cc. of the oil is dehydrated, fired from
 the flask, admixts. and put in a weighed Winertz flask. The
 flask is then weighed with the oil and connected with a
 reflux condenser provided with an adaptor (10 cc.) and
 the system is connected to a vacuum pump. The low-
 boiling fraction is distilled at 1.5-5 mm. until 70-80%
 depending on the kind of oil of the distillate is collected
 in the adaptor. The ash detn. is then carried out in two
 ways: (1) The flask is weighed and, after warming, 2-3 g.
 of the residue is transferred to a weighed porcelain dish
 (20-25 cc.), cooled and weighed with the dish. The
 detn. is then continued in the usual manner and the per-
 centage of ash is calculated from ash = $(ab/d)/100$, where a
 is the wt. of the ash in g., b that of the residue, that of the
 sample and d that of the residue transferred to the dish.
 (2) The residue in the flask is dissolved in 5cc. CaH_2 and
 transferred to the porcelain dish. The flask is washed with
 5-cc. portions of CaH_2 . The contents of the dish are
 then evaporated, ignited, weighed and the percentage of ash
 is detd. from ash = $(a/b)/100$, where b is the wt. of the
 sample. A. A. Podgorny.

MATERIALS NOTE

ASB-31.A METALLURGICAL LITERATURE CLASSIFICATION

ASB-31.A	ASB-31.B	ASB-31.C	ASB-31.D	ASB-31.E	ASB-31.F	ASB-31.G	ASB-31.H	ASB-31.I	ASB-31.J	ASB-31.K	ASB-31.L	ASB-31.M	ASB-31.N	ASB-31.O	ASB-31.P	ASB-31.Q	ASB-31.R	ASB-31.S	ASB-31.T	ASB-31.U	ASB-31.V	ASB-31.W	ASB-31.X	ASB-31.Y	ASB-31.Z
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21

Composition and structure of organic compounds as a key to their use as a motor fuel. P. S. Panyutin. *Trudy Sessii Akad. Nauk Org. Khim.* (U. S. S. R.) 1959, 289-318. Published data on the detonation resistance of individual hydrocarbons are used in an attempt to correlate knock with chem. constitution. For paraffin hydrocarbons the relationship becomes more apparent if the isomers be regarded as substituted deriva. of the *n*-paraffins of the same chain length. The presence of "free" CH₃ groups, i. e., those positioned between two other CH₃ groups, reduces the knock resistance (as measured by its aniline equivalent). This is thought to be due to their high resistance to oxidation during the period preceding the formation of flame in the cylinder. Tertiary C atoms increase knock resistance, e. g., 3-methylpentane has an aniline equiv. 7 points higher than that of *n*-pentane, while the introduction of an addnl. "free" CH₃ group produces a 7-point decrease, as in *n*-hexane. Olefins having the double bond near the end of the chain have a knock resistance similar to that of paraffins. Although the quant. value of the increment for a double bond is not known, an attempt is made to apply the above rules to certain classes of olefins such as homologs of pentene, cyclic olefins and diolefins. Some of the diolefins have an exceptionally high knock resistance, but only a low allowable boost

ratio, in contrast to naphthenes. Aromatics, owing to the compactness of their mol. and absence of CH₃ radicals, have a high knock resistance. Isomerization of aromatics affects knock resistance chiefly when it occurs in the nucleus. The inhibiting action of the ring on CH₃ groups in alkylated aromatics extends as far as the third C atom in the chain.
H. C. Metzner

AS 35-31A METALLURGICAL LITERATURE CLASSIFICATION

CA DETERMINATION OF THE SPECIFIC GRAVITY OF OILS BY THE METHOD OF 22
 A "SUSPENDED DROP". P.S. Panyatin and B.N. Tishkova. Neftyanoe Khoz.
 1936, No. 8, 55-6.- Alc.- H₂O solns. of various densities are prepd., and
 a drop of oil under onvigation is placed on each of the alc. solns. until
 the drop of oil stays on the surface of one and sinks slightly on the other
 soln. Then to the lighter soln. so much of the heavier alc. soln. is added
 that the drop of oil remains on suspension. The expts. are carried out at
 20°. The sp. gr. of the final alc. solns. and therefore of the oil is detd.
 from $\frac{a(b-cd)}{a(c+cg)}$, where a is the amt. of the first mixt. used on
 the titration, b the amt of the second, c the sp. gr. of the first and g that
 of the second mixt. A conversion homogram is given. A.A. Bochtlingk

ASH-SLA METALLURGICAL LITERATURE CLASSIFICATION
 1936M STVIBDZM
 1936M WIP ONV OIL
 1936M WIP ONV OIL

PROCESSING AND PROPERTY INDEX

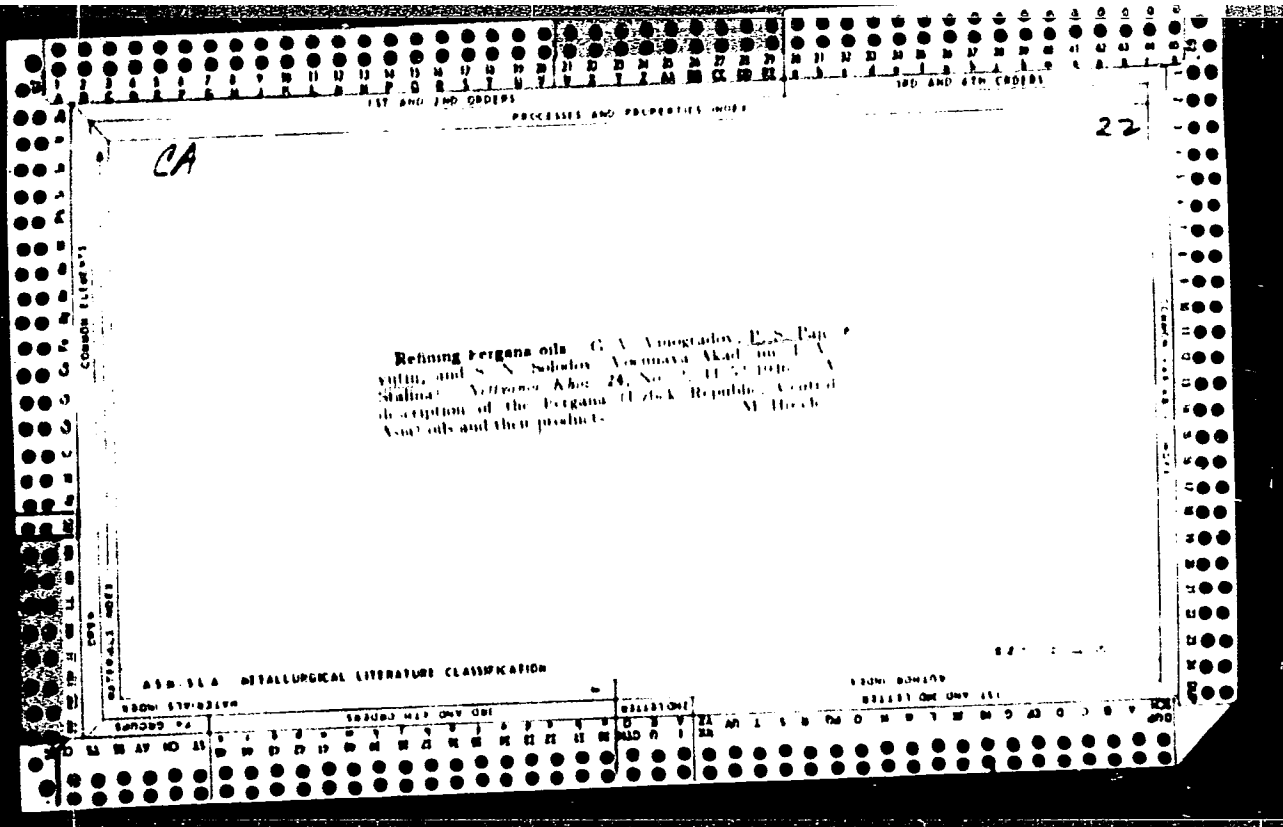
7

ca

Research on autoxidation of unsaturated hydrocarbons.
1. Determination of peroxides in the presence of un-
saturated compounds. P. S. Panyutin and I. G. Gindin.
Bull. acad. sci. U. R. S. S., Classe sci. math. nat., Ser.
chim. 1939, 841-83 (in English, 853-4).—The method
 depends upon treatment of the sample with 4% KI in
 alk. in the presence of H₂SO₄. The excess KI is extd.
 with water, oxidized by ferric alum soln. The liberated
 I₂ is absorbed in KI soln. and titrated with Na₂S₂O₃.
 The method is suitable for detg. peroxide in gasoline.
 J. G. Tolpin
 Seventeen references.

METALLURGICAL LITERATURE CLASSIFICATION

1900: 1111111111	1900: 1111111111	1900: 1111111111	1900: 1111111111
1900: 1111111111	1900: 1111111111	1900: 1111111111	1900: 1111111111



TIKHOMIROV, V.V.; PANYUTINA, L.B.

Losses to science. Izv. AN SSSR. Ser.geol. 29 no.0111-113
Je '64. (MIRA 18:2)

TIKHOMIROV, V.V.; PANYUTINA, L.B.

Losses to science. Izv. AN SSSR Ser. geol. 30 no.1:139-144
Ja '65 (MIRA 18:2)

1. Geologicheskii institut AN SSSR, Moskva.

TIKHOMIROVA, V.V.; PANYUTINA, L.B.

Losses to science. Izv. AN SSSR. Ser. geol. 3. no. 1: 131-137
Jl '65. (MIRA 18:)

1. Geologicheskiy institut AN SSSR, Moskva.

PETUKHOVA, N.; PERSHIN, A.A.; PANYUTOV, M.G.; MALOVA, I.

Information and news. Veterinariia 38 no.2:95-96 P 161.

(MIRA 18:1)

TIKHOMIROV, V. V.; PANYUTINA, L. B.

Losses to science. Izv. AN SSSR. Ser. geol. 29 no. 1:112-114
Ja '64. (MIRA 17:5)

PANZ, M.

A new type of gas generator for the production of fuel gas from low-priced coal.
p. 215

PROBLEMY PROJEKTOWE HUTNICTWA. (Biuro Projektow Przemyslu Hutniczego, Biuro
Projektow Przemyslu Stalowego i Biuro Projektow Przemyslu Metalowego) Clivice,
Poland, Vol. 6, no. 7, 1958

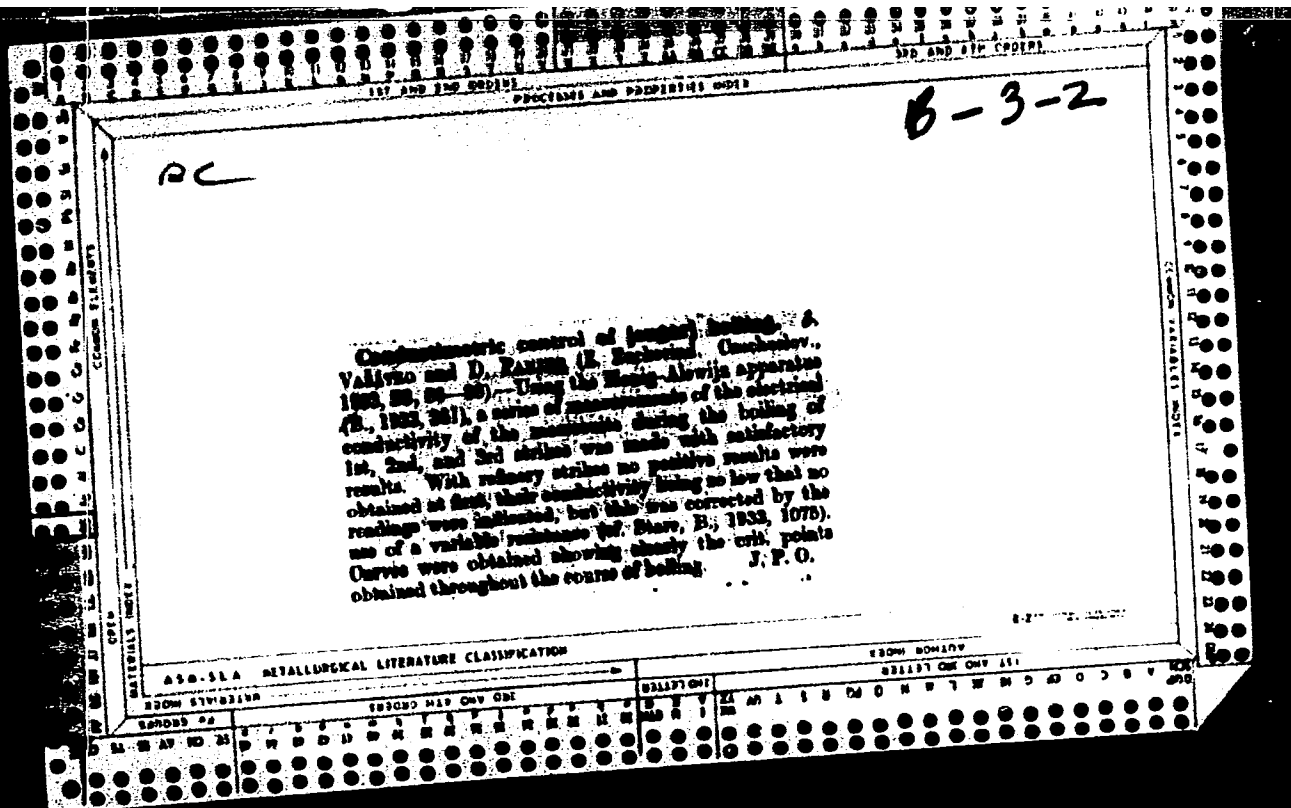
Monthly list of East European Accession (EEAI) LC., Vol. 9, No. 1, Jan 1960

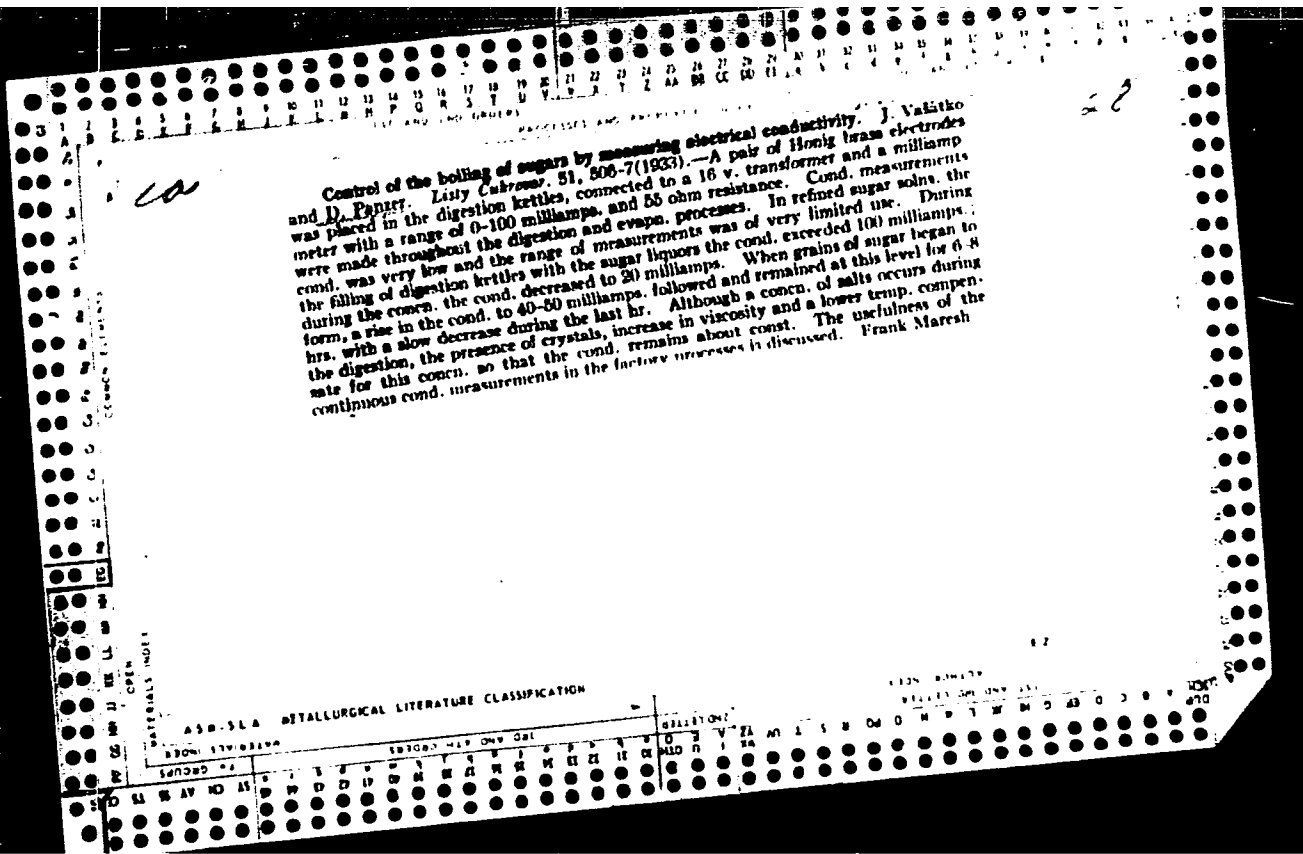
Uncl.

PANZER, ADOLF

Electrostatic filter for purification of gases. Vladimír
Píech, Václav Janáček, and Adolf Panzer. Čech. 85, 624,
June 16, 1957. L. J. Urbánek

JK JJ S-





The electrical conductivity as a measure of the over- saturation of sugar liquors. I. The Homig principle
Domink Pangra. Listy Cukrovar. 58, 361-3, 365-401 (1909). In a sugar factory at Litovk P. followed the elec. cond. of juices during satn. and detd. simultaneously the temp., dry matter, quotient, sulfate ash, oversatn., etc., during the season. II. What lawlessness determines the conductivity of factory juices? In correlation curves, a definite relation existed between the elec. cond. and the state of boiling. This relation was not disturbed by which ranged from 0.7 to 08.0 and the quantity of concn. of the crystal sugar. III. Laboratory experiments with sugar solutions: The method and apparatus. Careful detns. repeated in the lab. substantiated the preceding observations made in the factory. IV. Laboratory measurements of the conductivity of sugar solutions. More than 300 detns. of cond. made upon sugar solns. at 50-100° and for quotients ranging from 65 to 99% show that the cond. remained relatively const. for a fixed satn. over this wide range of temp. and purity. Only at the extreme limits of the preceding ranges of temp. and purity did the cond. rise abruptly. V. Laboratory experiments with artificial sugar solutions. The cond. of sugar crystals the cond. of the solns. decreased almost linearly in the form of a power function. In the range 30-60% const. level or a slight rise in the cond. under identical circumstances and in the same range. P. concludes that in factory operations the decrease in cond. produced by the appearance of crystals is compensated by (1) an increase

in the concn. of electrolytes in soln., (2) a fall in the quotient and (3) by the appearance of new crystals. VI The extent of the dependability of the Homig principle. In a 3-dimensional phase diagram P. plotted the cond. against temps. and quotients for a const. satn. In most of the regions the cond. values formed a flat surface, which rose abruptly for quotients greater than 99. Such abrupt secondary influences encountered in the measurements, but within wide limits the Homig principle was verified by lab. detns.
 Frank Mareš

ABR 33A - METALLURGICAL LITERATURE CLASSIFICATION

PAOLAZZO, Iosif

Y0 is transmitted by 73 stations. Radio no. 10:22 0 '62.
(MIRA 15:10)

1. Glavnyy zamestitel' sekretarya Federatsii radiosporta
Rumynskoy Narodnoy Respubliki.

(Radio operators) (Amateur radio stations)

PAOLO, Filippi (Janov)

Adenovirus infections in otolinolaryngology. Cesk. otolaryng. 11
no.2:96-103 in '62.
(~~OTOLINOLARYNGOLOGY~~) (ADENOVIRUS INFECTIONS)

PAP, A.; NAGY, C.; ELEFTERESCU, M.

Contribution to the thorough study of pneumatic mining installations. p. 569

STUDDI SI CERCETARI DE ENERGETICA. Bucuresti, Rumania. Vol. 7, no. 4, 1957

Monthly List of East European Accession. (EEAI) LC, Vol. 8, no. 9, ^{Sept.} 1959
Uncl.

DUMITRESCU, Adrian; PAP, Alexandru

Contributions for determining a general analytic method for the
prognosis of power consumption in the petroleum production industry.
Rev electrotechm energet 6 no.1:207-233 '61.

(Rumania—Petroleum) (Mining engineering)
(Atomic energy)

MIGLESCU, Teodor; PAP, Alexandru

On the possibility of using computing machines for determination of the power balance of optimum prospects. Studii cerc energet A 12 no.4:677-686 '62.

MICLESCU, Teodor; PAP, Alexandru

Application fo some modern methods of calculation for deter-
mining prospective power balances. Rev electrotechn energet
9 no.1:59-72 '64

PAP, A.G. (Kiyev)

Prevention in the principle of hospital activity. Sov.zdrav. 18
no.10:29-33 '59. (MIRA 13:2)
(HOSPITALS)
(PREVENTIVE MEDICINE)

PAP.A.β.

[Work practice of the hospital No.4 of the Oktyabr'skiy District of Kiev in Dispensary work to workers and employees of industrial enterprises and the residents of medical districts] Opyt raboty Chetvertoy bol'nitsy Oktyabr'skogo raiona g.Kieva po dispanserizatsii rabochikh i sluzhashchikh promyshlennykh predpriatii i naseleniia vrachebnykh uchastkov, Kiev, Gos.med.izd-vo USSR, 1956.116 p.
(KIEV--DISPENSARIES) (MIRA 10:2)

LUR'YE, Aleksandr Yudimovich, prof., vrach (1897-1958); MAKARCHENKO, A.F., prof., otv. red.; YEVDOKIMOV, A.I., kand. med. nauk, red.; KALINICHENKO, T.Ya., kand. med. nauk, red.; KRUPKO, Yu.A., kand. med. nauk, red.; LOGUNOVA, A.G., kand. med. nauk, red.; PAP, A.G., kand. med. nauk, spets. red.; PANCHENKO, N.I., kand. med. nauk, red.; SAVITSKIY, V.N., doktor med. nauk, prof., red.; SVESHNIKOVA, N.V., kand. med. nauk, red.; TEL'NOVA, R.I., kand. med. nauk, red.; TIMOSHENKO, L.V., kand. med. nauk, spets. red.; YANKELEVICH, Ye.Ya., prof., red.; YANKOVSKAYA, Z.B., red. izd-va; MATVEYCHUK, A.A., tekhn. red.

[Selected works] Izbrannye trudy. Kiev, Izd-vo Akad. nauk USSR.
1960. 425 p. (MIRA 14:7)

1. Chlen-korrespondent Akademii nauk USSR (for Lur'ye, Makarchenko)
(GYNECOLOGY)

NIKOLAYEV, A.P., otv. red.; SHKOL'NIK, B.I., kand. med. nauk, red.;
BAKSHEYEV, N.S., prof., red.; VINOGRADOVA, S.P., prof., red.;
GRISHCHENKO, I.I., prof., red.; KORNILOVA, A.I., kand. med.
nauk, red.; KONSTANTINOV, V.A., prof., red.; MEDYANIK, R.V.,
red.; PAP, A.G., kand. med. nauk, red.; PETERBURGSKIY, F.Ye.,
prof., red.; SAVITSKIY, V.N., prof., red.; STEPANKOVSKAYA,
G.S., kand. med. nauk, red.; TIMOSHENKO, L.V., dots., red.;
YANKELEVICH, Ye.Ya., prof., red.

[Transactions of the Third Congress of Obstetricians and
Gynecologists of the Ukrainian S.S.R.] Trudy III s'ezda
akusherov-ginekologov Ukrainskoi SSR. Kiev, Gosmedizdat,
1962. 370 p. (MIRA 17:5)

1. S'yezd akusherov-ginekologov Ukrainskoy SSR. 3d, Kharkov,
1961. 2. Deystvitel'nyy chlen AMN SSSR (for Nikolayev).

BIRKOVSKIY, Yu.Ye., red.; GRIGORASHCHENKO, A.Ye., red.; GRISHCHENKO,
I.I., red.; GUTMAN, L.B., red.; KOROVITSKIY, L.K., red.;
MEL'NIK, M.N., red.; PAVLOV, A.V., red.; PAF, A.G., red.;
CHIRKOVA, L.A., red.

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in Kiev, December 21 - 23, 1962, and in Odessa, April
25 - 27, 1963] Toksoplazmoz; trudy nauchnykh konferentsii,
sostoiavshikhsia v g. Kieve 21-23 dekabria 1962 g. i v
g. Odesse 25-27 apreilia 1963 g. Pod red. M.N.Mel'nika i
A.G.Pap. Kiev, (MIRA 18-19)

1. Ukrainskiy nauchno-issledovatel'skiy institut okhrany
materinstva i detsiva im. P.M.Burkha.

PAP, A.G., kand.med.nauk; SHKOL'NIK, B.I., kand.med.nauk

Prophylactic checkup of women. *Zdorov'e* 9 no.3:12-13 Mr '63.

(MIRA 1085)

(WOMEN—HEALTH AND HYGIENE)

PAP, A.G., kand. med. nauk; SAMOYLOV, A.P.

Toxoplasmosis in hemorrhages during pregnancy and labor.
Akush. i gin. 39 no.3:62-64 My-Je'63 (MIRA 17:2)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta okhrany
materinstva i detstva imeni Prof. P.M. Buyko (direktor A.G. Pap).

MEDYANIK, R.V., otv. red.; PAF, A.G., zam. otv. red.; KHOKHOL,
Ye.N., red. [deceased]; LUK'YANOVA, Ye.M., red.;
ANDROSHCHUK, A.A., red.; KOL'NER, R.Yu., red.

[Pneumonia in young children] Pnevmonia u detei rannogo
vozrasta. Kiev, Zdorov'ia, 1965. 229 p. (MIRA 18:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut okhrany
materinstva i detstva.

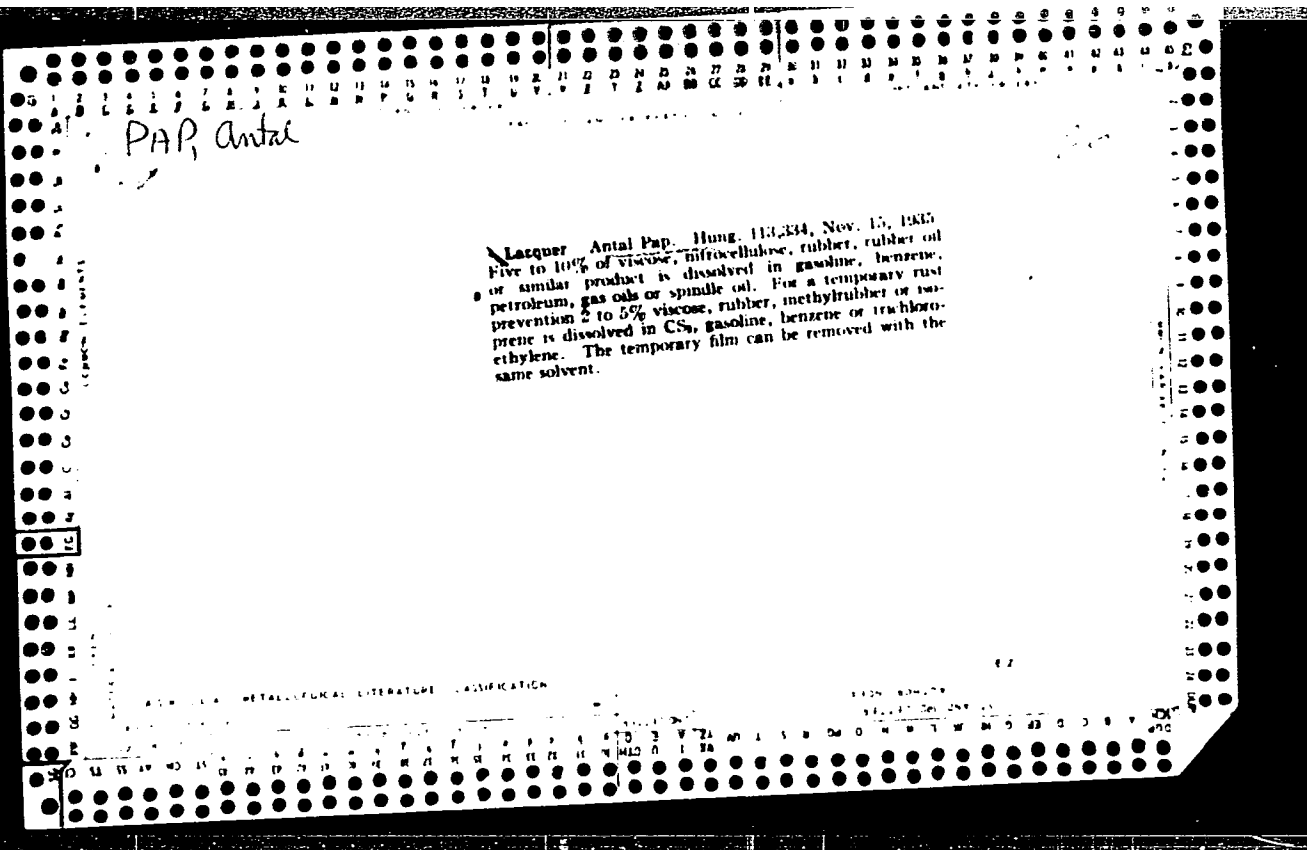
PAP, Aleksandr Germanovich, karm. med. nauk; KUCHER, N.V., red.; GITSHEYN,
A.D., tekhn. red.

[Prevention of gynecological diseases and cancer of the female
generative organs] Profilaktika ginekologicheskikh zabolevani i
raka zhenskikh polovykh organov. Kiev, Gos. med. izd-vo USSR,
1960. 100 p. (MIRA 14:7)

1. Zamestitel' nachal'nika upravleniya lechprofpomoshchi Minister-
stva zdravookhraneniya USSR (for Kucher)
(WOMEN—DISEASES) (GENERATIVE ORGANS, FEMALE—CANCER)

PAP, Aleksandr Germanovich; SHKOL'NIK, Boris Iosifovich;
SOL'SKIY, Yakov Porfir'yevich; STEPANKOVSKAYA, G.K.,
red.

[Hygiene of the woman] Gigiena zhenshchiny. Kiev,
Zdorov'ia, 1964. 175 p. (MIRA 18:1)



SOV/137-58-10-20711

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 53 (USSR)

AUTHORS: Pap, A.M., Sorokin, I.P.

TITLE: Extraction of Gold From Pyrite at the Malyy At-Uryakh River Placer (Iz vlecheniye zolota iz pirita rossypi r. Malyy At-Uryakh)

PERIODICAL: Tr. Vses. Magadansk. n.-i. in-ta—I M-va tsvetn. metallurgii SSSR, 1956, division 4, Nr 13, 10 pp

ABSTRACT: Preliminary investigations are conducted showing the pyrite at the Malyy At-Uryakh River placer to be auriferous. The Au can be recovered by comminution followed by amalgamation and cyanidation. Bibliography: 7 references.

V.S.

1. Gold ores--Processing
2. Gold--Separation

Card 1/1

PAP, A. M.

137-1958-1-99

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 16 (USSR)

AUTHORS: Pap, A. M., Sorokin, I. P.

TITLE: Secondary Minerals in Placers and the Possibilities of Extracting Them (Mineraly-sputniki v rosspyakh i vozmozhnosti ikh izvlecheniya)

PERIODICAL: Kolyma, 1957, Nr 2, pp 12-16

ABSTRACT: A description of the occurrence of certain accessory minerals (cassiterite, scheelite, pyrite, wolframites) in gold and tin placers is presented on the basis of data obtained from the study of concentrate samples. The possibility of their recovery is defined.

A. Sh.

1. Ores--Separation 2. Mining industry--USSR

Card 1/1

Pap. A. M.

137-1958-2-2253

Translation from Referativnyy zhurnal Metallurgiya, 1958, Nr 2, p 6 (USSR)

AUTHOR Pap. A. M.

TITLE Rare and Dispersed Elements in Some Minerals From Placer Deposits (Redkiye i rasseyannyye elementy v nekotorykh mineralakh rossyynykh mestorozhdeniy)

PERIODICAL Kolyma, 1957. Nr 6. pp 35-36

ABSTRACT. Studies were made at the VNII-1 (All-Union Scientific Research Institute Nr 1) of the mineralogical make-up of ore-slime samples taken during the washing of sands from different placers of the northeastern USSR. The studies indicated that some of the samples contained more of such minerals as cassiterite, scheelite, wolframite, and ilmenite than did others. In these minerals were discovered the following rare and dispersed elements: in cassiterite Ga, V, In and others; in scheelite: Ga, Ge, and In; in magnetite Ga, V, Ge, and Ti; in ilmenite, Ge, Ga, and V; in pyrite In. The content of rare and dispersed elements in the associated minerals Au and Sn from the placers was found upon analysis to be low or nonexistent

A. Sh.

Card 1/1

1. Mining--USSR 2. Ores--Washing--Processes

3(7)

AUTHOR:

Pap, A. M.

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TITLE:

Basic Rocks of the Crystalline Basement of the Belorussian-Lithuanian Massif (Osnovnyye porody kristallicheskogo fundamenta Belorussko-Litovskogo massiva)

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ABSTRACT:

Peculiar dark deep-seated rocks of a basic composition were found among the Upper Cretaceous- and Upper Eocambrian sediments in the Iv'yevskiy rayon, region of Grodno by means of boring (Ref 4). They can be counted among the oldest magmatic formations which are known in the region of the massif mentioned in the title. Geophysical investigations (Refs 2,3) proved increased magnetic properties of these rocks. They are the reason of magnetic and gravitation anomalies of the district of Iv'ye. These anomalies form several strata in the region of the mentioned massif. The rocks were described first in short by Yu. Ir. Polovinkina who referred to them as gabbro or gabbro-norites - this is their name in the publications as well. The author investigated the cores handed over to him by A. S. Makhnach. The results are the object of this paper.

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The rocks were found in a depth of 134.5 and 254.0 m in the villages of Morino and Zubkovichi and bored to a depth of 170.2, 288.8 m respectively. They are dark grey, almost black, to a great extent altered in gneiss, especially in the upper part. The rocks have a schistous middle-sized granular structure which is caused by a plane-parallel position of the biotite flakes on a general background of the allotriomorphic-granular rock mass. The total mineral composition in the most recent varieties (e.g. of a depth of 287.0 m, village of Zubkovichi) is the following linear percents: plagioclase 52.6, pyroxene 9.8, hornblende - only single grains, biotite 13.1, quartz 5.4, ore minerals 8.6, calcite, serizite, and chlorite 6.9%. Apatite, rutile, and zirconium, a mineral of the serpentine-antogorite group, zoisite and muscovite, finally quartz and microcline exist in single grains. The properties of the enumerated minerals are described. Table 1 gives the chemical analysis. The comparison of the numerical characteristics of the investigated rocks with the normative compositions according to Deli shows above all that they belong to the basite group. Facial changes occur with decreasing depth which are related to

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a secondary change. The individual structural-textural peculiarities of the rocks were probably obtained in the course of the evolution so that its single parts are connected by the common origin. The rocks contain much iron. An intensive sodium separation from the feldspars occurs in the course of the transformation. Potassium is in contrast to this accumulated in the rocks of the loam-mica part. The rocks are to be counted among gabbro and partly to the gabbro-norites. The intensive alteration to gneiss gives the rocks an ortho-amphibolic shape. The alteration to gneiss decreasing with the depth speaks on the one hand in favor of a partial assimilation of the basic part of the old gneiss mass which was the frame of the concerning plutonium, on the other hand it proves an intensive degree of dynamorphism of the rocks which were involved into the rock formation. These oldest magmatic formations of this region are assumed to belong to the early (lower Archaic?) formation stage of the tectonic-magmatic mobile zone. The magmatic bodies detected by the boreholes of the two mentioned villages are assumed to be equal. There are 1 table and 4 Soviet references.

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