PAL'CHEVSKIY, Ye.I., professor (L'vov)

In memory of Professor V.F.Novitskii. Arkh.pat. 18 no.6:140 '56. (MLRA 9:12)

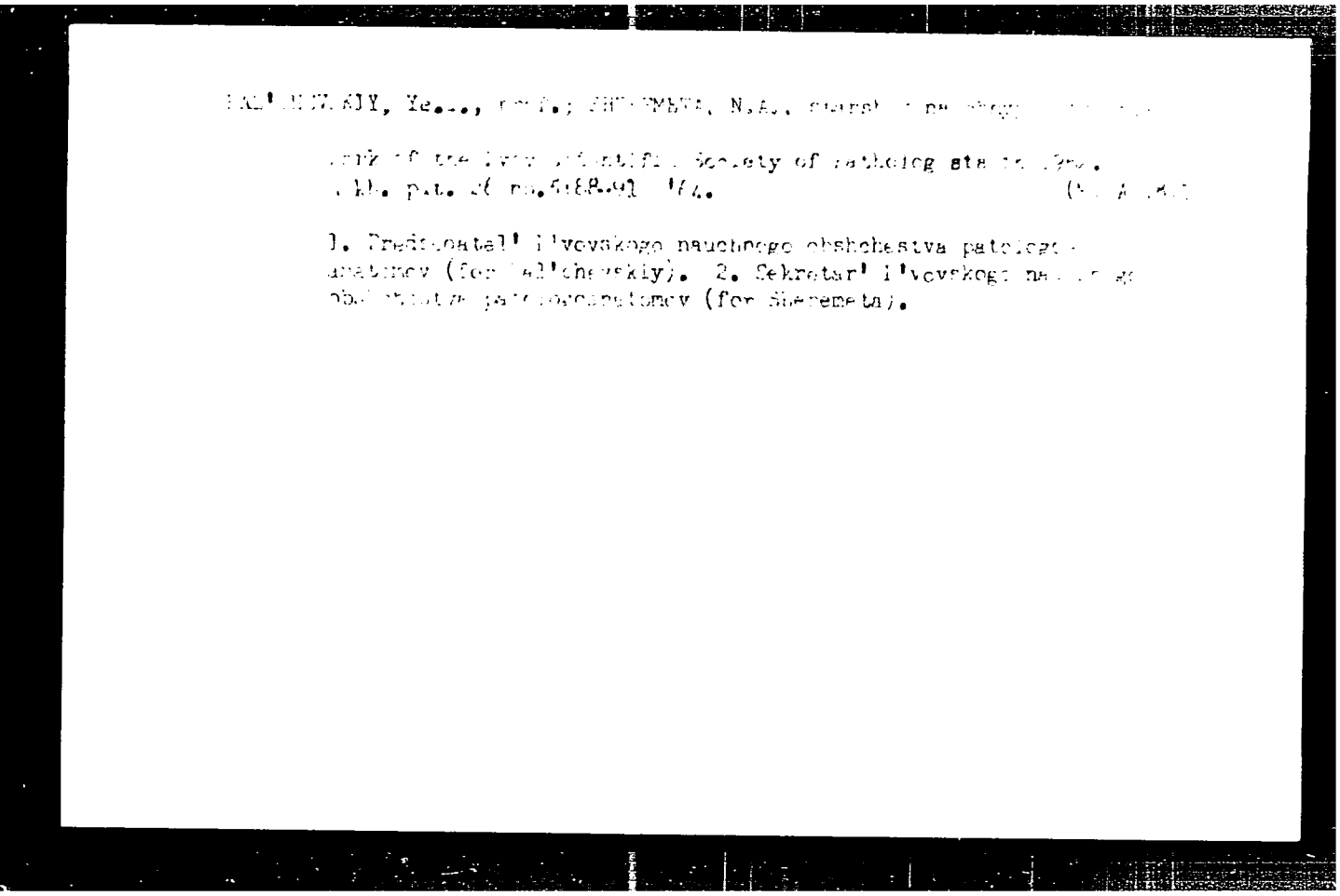
(NOVITSKII, VITOL'D, 1878-1941)

Pal'chevskiy, Ye.I.

LYUBOMUDROV, A.P. (L'vov, ul.Fizkul'turnaya, d.24), PAL'CHEVSKIY, Ye.I. PANOV, V.I., PLASTUNOV, M.B., FRAYFEL'D, E.L.

Angioarchitectonics of the kidney following disease and its clinical significance. Nov.khir.arkh. no.2:3-8 Mr-Ap '58 (MIRA 11:6)

1. Kafedra anatomii (zav. - prof. A.P. Lyubomudrov), kafedra patologicheskoy anatomii (zav. prof. Ye.I. Pal'chevskiy) i klinika urologii (zav. - dots. M.B. Plastunov) L'vovskogo meditsinskogo instituta.
(KIDNEYS--BLOOD SUPPLY)



SHPERLING, I.D., kand. med. nauk (L'vov); PAL'CHEVSKIY, Ye.I., prof. nauchnyy rukovoditel'.

Characteristics of odontogenic purulent and septic diseases. Stomatologiia 42 no.3:59-64 My-Je'63 (MIRA 17:1)

PAL'CHEVSKIY, Ye.I., prof.; SHEREMETA, N.A., kand. med. nauk

Work of the Lvov Province Society of Pathoanatomists in 1955-1956. Arkh.pat. 21 no.1:83-84 '59. (MIRA 12:1)

1. Predsedatel' L'vovskogo oblastnogo obshchestva patologoanatomov (for Pal'chevskiy). 2. Sekretar' L'vovskogo oblastnogo obshchestva patologoanatomov (for Sheremeta).
(LVOV PROVINCE--PATHOANATOMICAL SOCIETIES)

PAL'CHEVSKIY, Ye.I.; ROZHDESTVENSKIY, L.M.

Clinical aspects and pathological anatomy of tumorous formations of the sacral region. Vop.neirokhir. 20 no.6:48-50 N-D '56. (MLRA 10:2)

1. Iz kafedry patologicheskoy anatomii i nervnykh bolezney L'vovskogo meditsinskogo instituta.

(SPINE, neoplasms, sacral, case report (Rus))

BERLOV, G. A. (L'vov); SMOL'YANIKOV, A. V., prof., nauchnyy rukovoditel';
PAL'CHEVSKIY, Ye. I., prof., nauchnyy rukovoditel'

Changes in the perivascular connective tissue of the hypertrophied heart. Arkh. pat. no.7:41-46 '61. (MIRA 15:4)

(HEART—DISEASES)

PAL'CHIK, D.A.;MASLOV, O.K. (Blagoveshchensk)

Use of controlled hypotension in treating late pregnancy toxicosis during labor. Zdrav. Turk. 7 no.11:5-8 N'63
(MIRA 17:3)

PAL'CHIK, D. A.

PAL'CHIK, D. A.: "Changes in the permeability of vascular tissue in late pregnancy toxicoses" (Clinical-experimental data). Ashkhabad, 1955. Turkmen State Medical inst imeni I. V. Stalin. (Dissertations for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya letopis', No. 52, 24 December, 1955. Moscow.

MARKEVICH, S.V.; PAL'CHIK, M.V.

Effect of the energy of quanta of x-irradiation on the oxidation of iron in solution and the optical activity of glucose. Dokl. AN BSSR 5 no. 2:65-69 F '61. (MIRA 14:2)

1. Institut fiziko-organicheskoy khimii AN BSSR. Predstavleno akademikom AN BSSR B.I. Stepanovym.
(X rays) (Glucose—Optical properties) (Iron)

8

GORCHAROV, I.A.; YEM, A.P.; KONOVALOV, V.S.; LAPITSKIY, V.I.; MARAKHOVSKIY, I.S.; FILONOV, V.A.; KHITRIK, S.I.; YAITSKIY, A.K.; Prinimali uchastiye: RABINOVICH, A.S.; DUZENKO, G.T.; PAL'CHIK, N.V.; VAYNSHTOK, M.I.; KONSTANTINOVA, P.L.

Determination of an efficient composition of silicochromium and its use for alloying 14KhGS steel. Stal' 22 no.7:615-616 Jl '62. (MIRA 15:7)

(Silicon-chromium alloys)
(Steel—Metallurgy)

KSENZUK, F.A., inzh.; LOLA, V.N., inzh.; PAL'CHIK, N.V., inzh.

Investigating the heating and rolling of electrical steel slabs. Stal' 20 no.8:738-739 Ag '60. (MIRA 13:7)

1. Zavod "Zaporozh'stal'."
(Rolling(Metalwork))

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

15

ca

Effect of chloropicrin on Elateridae and Nicotiana rustica. P. A. Pal'chik. *Tabachnaya Prom. U. S. S. R.* 1930, No. 6, 10-18.—Fumigation with 800 kg. of CCl_3NO_2 over one hectar killed 100% of Elateridae and had a destructive effect on weeds. The crop of *Nicotiana rustica* was increased by 30-40% through this treatment, although the original growth was slightly retarded.

A. A. Borkhitiash

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SLOBODYANIK, Ignat Yakovlevich [Slobodianyk, I.IA.], kand.tekhn.nauk; PASHKOV, Igor' Aleksandrovich [Pashkov, I.O.], kand.tekhn.nauk; CHUPRUNENKO, Yekaterina Vasil'yevna [Chuprunenko, IE.V.], kand. tekhn.nauk; CHERKASOV, Nikolay Antonovich [Cherkasov, M.A.], kand. tekhn.nauk; LYSINA, Nina Borisovna, inzh.; RUBINOVICH, Esfir' Abramovna, inzh.; PAL'CHIK, Petr Karpovich, inzh.; LITVINENKO, Melan'ya Dmitriyevna, inzh.; SVARICHEVSKIY, Lyubomir Vladimirovich [Svorycheve'kyi, L.V.], inzh.; OSOVSKAYA, I. [Osova'ka, I.], red.; ZELENKOVA, Ye. [Zelenkova, IE.], tekhn.red.

[Local binding materials based on new raw materials of the Ukraine] Mistsevi v'iazhuchi na novii syrovyni Ukrainy. Za zahal'noiu red. I.IA.Slobodianyka. Kyiv, Derzh.vyd-vo lit-ry z budivnytstva i arkhit.URSR, 1960. 115 p. (MIRA 13:10)
(Ukraine--Binding materials)

S/020/6[illegible]136:006,0[illegible]
B103/B203

53700 2209, 1164, 1273

AUTHOR: Shchukovskaya, L. L., Pal'chik, R. I., and Petrov A. D., Corresponding Member AS USSR

TITLE: Synthesis and reactions of acetylene silicon hydrocarbons

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 6, [illegible] 1364-[illegible]

TEXT: The authors continued their studies of the synthesis of acetylene silicon hydrocarbons (Ref. 1). From triethyl silyl acetylene $(C_2H_5)_3SiC \equiv CH$ they easily obtained the organomagnesium compound $(C_2H_5)_3Si \equiv CMgBr$ which can react with carbonyl compounds. In the present study, the authors proceeded according to the enclosed scheme. They synthetized alkyl- and alkyl-aryl-silyl monoacetylene hydrocarbons of the type $-Si- C \equiv CH$, further some derivatives of the type $-Si- C \equiv C-X$ (where X = Br, COOH, and others), of the disubstituted monoacetylene hydrocarbons of the type $-Si- C \equiv C- Si-$ (forming in small amounts

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Synthesis and reactions of... B103, B203

in the syntheses mentioned), as well as bialky. di[illegible] silanes [illegible] type $R_2Si — (C \equiv CH)_2$. The medium used for the synthesis [illegible] 12 (Table 1) was dry tetrahydrofuran, nos. 6-9 were produced [illegible] ether. The authors noticed the reduced value of the C≡C vibration [illegible] the vibration spectra of monosubstituted silyl acetylenes which contained a triple bond in the α-position. According to their opinion, this effect is comparable to a similar reduction in vinyl silanes (Ref. 2). This effect is much less distinct in the spectra of di-substituted silyl acetylenes (Ref. 3). In the infrared spectrum of the acid [illegible] the stretching vibrations of the hydroxyl correspond [illegible] and 2508 cm^{-1}. The position of these bands characterized the strength of the hydrogen bonds and justifies the statement saying that this acid is somewhat stronger than saturated aliphatic acids (but weaker than diacetyl acids). This conclusion was confirmed by a comparison of the dissociation constants of triethyl silyl ethinyl carboxylic acid and acetic acid. The authors thank A. N. Lazarev for taking an interpreting the spectra. There are 1 table and 4 references: 3 Soviet-bloc.

Card 2/4

SHCHUKOVSKAYA, L.L.; PAL'CHIK, R.I.

Synthesis of trimethylsiloxyacetylene. Izv. AN SSSR. Ser. khim. no.8:1556 Ag '64. (MIRA 17:9)

1. Institut khimii silikatov im. I.V. Grebenshchikova AN SSSR.

ZHDANOV, S.P.; PAL'CHIK, R.I.

Adsorption dehydration of alcohols by means of synthetic zeolites of the NaX type. Zhur. fiz. khim. [illegible] no.2 466-467 F '65.
(MIRA 18:4)

1. Institut khimii silikatov imeni Grebenshchikova AN SSSR.

L 25271-65 EWT(m)/EPF(c)/EWP(j)/T Pc-4/Pr-4 RM

ACCESSION NR: AP5001602 S/0062/64/000/012/2228/2230 21 19 3

AUTHOR: Shchukovskaya, L. L.; Pal'chik, R. I.

TITLE: Synthesis of trialkylsilylalkoxyacetylenes and alpha-bromo-beta-trialkylsilylvinyl ethers

SOURCE: AN SSSR. Ozvestiya. Seriya khimicheskaya, no. 12, 1964, 2228-2230

TOPIC TAGS: trialkylsilylalkoxyacetylene, silylalkoxyacetylene derivative, alkylsilylvinyl ether, synthesis, acetylenic silane derivative

ABSTRACT: A new class of compounds, exemplified by trimethylsilylethoxyacetylene, trimethylsilylbutoxyacetylene and triethylsilylethoxyacetylene was synthesized by the following reaction under mild conditions:

$$R_3SiX + BrMgC \equiv C\text{-}OR' \longrightarrow R_3SiC \equiv C\text{-}OR' + MgBrX$$

The corresponding halovinyl ethers $R_3SiCh\text{-}CX\text{-}OR'$ were obtained by reaction of the above Grignard complex with 20% NH_4Cl solution. These -bromo- -trialkylsilylvinyl ethers were hydrolysed, by dropwise addition to ice water, to the cor-

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L 25271-65

ACCESSION NR: AP5001602

2

responding trialkylsilylacetates. Under the hydrolysis conditions $(CH_3)_3SiCH_2COOC_2H_5$ and $(CH_3)_3SiCH_2COOC_4H_9$ underwent rupture of the Si-C bond: $2(CH_3)_3SiCH_2COOR' \xrightarrow{2HOH} [(CH_3)_3Si]_2O + 2CH_3COOR$. Physical properties and IR spectral data were obtained for the compounds. "Spectra were obtained and interpreted by A. N. Lazarov." Orig. art. has: 1 table and 3 equations.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of Silicate Chemistry Academy of Sciences SSSR)

SUBMITTED: 04May64 ENCL: 00 SUB CODE: OC, GC

NR REF SOV: 002 OTHER: 000

Card 2/2

L 39437-65 EPF(c)/EPR/EWP(j)/EWT(m) Pc-4/Pr-4/Ps-4 RPL RM/WW

ACCESSION NR: AP5005894 S/0020/65/160/003/0621/0624

AUTHORS: Shchukovskaya, L. L.; Pal'chik, R. I.; Petrov, A. D. (Corresponding member AN SSSR) (Deceased)

TITLE: The order of adding trialkysilanes to unsaturated alcohols

SOURCE: AN SSSR. Doklady, v. 160, no. 3, 1965, 621-624

TOPIC TAGS: silane, alcohol, IR spectrum

ABSTRACT: The authors have demonstrated that trialkysilanes may be added to dimethylethynyl carbonyl and methyltrifluoromethylethynyl carbonyl in two directions according to the following scheme:

$$CH_2CHOHC{\equiv}CH + HSiR_3 \xrightarrow{H_2PtCl_6} \begin{cases} \rightarrow CH_2CHOHC(CH_3)=CHSiR_3 & (I) \\ \rightarrow CH_2CHOHCH{=}CHSiR_3 & (II) \end{cases}$$

The IR spectra are given for the two pairs of alcohol isomers corresponding to these two directions. In each pair, both isomers are identified by bands of valence oscillations of CH in the groups $C{=}CH_2$ or $CH{=}CH$. In the latter case the band of CH=CH at about 3000 cm^{-1} proves to be on the slope of the bands of the

Card 1/2

L 39437-65

ACCESSION NR: AP5005894

groups CH_3 and C_2H_5. The frequency of the bands of associated hydroxides (higher in the tertiary alcohols than in the secondary) is shifted toward the long waves in isomers containing the OH in the γ-position toward silicon. This shift is greater than in isomers with OH in the β-position. The position of C=C-oscillation in spectra of the isomers changes from 1620-1630 cm^{-1} for the groups CH=CH to 1600 cm^{-1} in the groups $C=CH_2$. The structure of the adducts obtained was verified by reverse synthesis. The various syntheses and products are described briefly, with summaries of their IR spectra, properties, and dimensions. Orig. art. has: 2 figures.

ASSOCIATION: Institut khimii silikatov im. I. V. Grebenshchikova Akademii nauk SSSR (Institute of the Chemistry of Silicates, Academy of Sciences SSSR)

SUBMITTED: 21May64 ENCL: 00 SUB CODE: OC

NO REF SOV: 004 OTHER: 001

Card 2/2

L 4288-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5024004 UR/0020/65/164/002/0357/0360

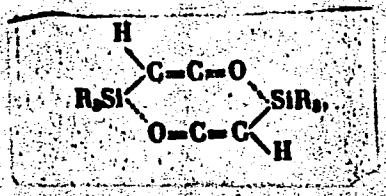
AUTHOR: Shchukovskaya, L. L.; Pal'chik, R. I.; Lazarev, A. N.

TITLE: Synthesis and reactions of trimethylsilylketene-trimethylsiloxyacetylene

SOURCE: AN SSSR. Doklady, v. 164, no. 2, 1965, 357-360

TOPIC TAGS: organosilicon compound, chemical bonding, conjugate bond system

ABSTRACT: Trimethylsilylalkoxyacetylenes decompose at 120 - 130C to yield the corresponding olefin and trimethylsilylketene $(CH_3)_3SiCH=C=O$. The NMR and IR spectra of the product indicate that the ketene formed partially isomerizes into the corresponding acetylene, probably via an intermediate complex with a pentacovalent silicon, e. g.,



Card 1/4

i.e., the following tautomeric equilibrium exists:

$$R_3SiHC{=}C{=}O \rightleftarrows HC{\equiv}C{-}OSiR_3$$
(I) (II)

IR spectra of the equilibrium mixture $(CH_3)_3SiCH{=}C{=}O \rightleftarrows (CH_3)SiO{-}C{\equiv}CH$ were recorded, and the conjugation of the Si-O and C≡C bonds was deduced (see Fig. 1 of the Enclosure). In the additions reactions studied, the compound reacted in the ketene form as follows:

$(CH_3)_3SiCH{=}C{=}O$ →
- H_2O → $(CH_3)_3SiCH_2COOH$
- ROH → $(CH_3)_3SiCH_2COOR$
- Br_2 → $(CH_3)_3SiCHBrCOBr$
- R_3SiOH → $(CH_3)_3SiCH_2COOSiR_3$
- $PhNH_2$ → $(CH_3)_3SiCH_2CONHPh$

L 4285-66
ACCESSION NR: AP5024004

6

"The authors thank A. S. Khachaturov for taking the NMR spectra." Orig. art. has: 2 figures and 1 table. 44,55

ASSOCIATION: Institut khimii silikatov im. I. V. Grebeshchikova Akademii nauk SSSR (Institute of Silicate Chemistry, Academy of Sciences, SSSR) 44,55

SUBMITTED: 16Feb65 ENCL: 01 SUB CODE: OC, GC

NO REF SOV: 005 OTHER: 004

Card 3/4

L 4288-66

ACCESSION NR: AP5024004 ENCLOSURE: 01

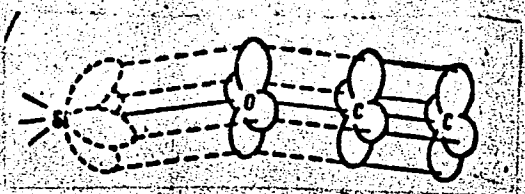


Figure 1. Conjugation of Si-O and C=C bonds (schematic representation).

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SHCHUKOVSKAYA, L.I., PAL'CHIK, R.I.

Order of addition of trialkylsilanes to propargyl alcohol. Zhur. ob. khim. 35 no.6:1122 Je '65. (MIRA 18:6)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR.

SHCHUKOVSKAYA, L.L.; PAL'CHIK, R.I.

Synthesis of trialkylsilylalkoxyacetylenes and α-bromo-β-trialkylsilylvinyl ethers. Izv. AN SSSR Ser. khim. no.12:2228-2230 D '64 (MIRA 18:1)

1. Institut khimii silikatov imeni I.V. Grebenshchikova AN SSSR.

KUPORITSKIY, S.; PAL'CHIK, V.

Youth helps agriculture. NTO 3 n.2:54-55 F '61. (MIRA 14:3)

1. Zamestitel' predsedatelya Moldavskogo respublikanskogo praveleniya Nauchno-tekhnicheskogo obshchestva sel'skogo i lesnogo khozyaystva Kishinev (for Kuporitskiy). 2. Predsedatel' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva sel'skokhozyaystvennogo instituta imeni M.V. Frunze, Kishinev (for Pal'chik).
(Moldavia—Farm mechanization)

PERLI, S. B.; EDEL'MAN, I. Ye.; PAL'CHIK, Yu. R.

Breaking in an electrostatic filter for automatic shaft kilns.
TSement 29 no.2:18-19 Mr-Ap '63. (MIRA 16:4)

1. Yuzhgiprotsement.

(Dust collectors) (Cement plants)

ACCESSION NR: AT4001237 S/3031/63/000/035/0101/0107

AUTHORS: Belyayev, A. I.; Firsanova, L. A.; Vol'fson, G. Ye.; Lazarev, G. I.; Pal'chikov, A. I.

TITLE: Obtaining ultrapure aluminum by distillation through subfluoride in a pilot unit

SOURCE: Gosudarstvenny*y institut tsvetny*kh metallov. Sbornik nauchny*kh trudov. Moscow, no. 35, 1963, 101-107

TOPIC TAGS: ultrapure aluminum, ultrapure aluminum production, ultrahigh purity metal, ultrahigh purity metal production, ultrahigh purity aluminum, ultrahigh purity aluminum production

ABSTRACT: Apparatus for the production of ultrapure aluminum by distillation via the hypofluoride, developed at the Institut tsvetny*kh metallov im. M. I. Kalinina (Institute of Nonferrous Metals) by A. I. Belyayev and L. A. Firsanova (Trudy Mintsvetmet-zoloto im. M. I. Kalinina, no. 33, 1960) is described briefly. In this method the purified aluminum is brought in contact with vapor-

Card 1/2

ACCESSION NR: AT4001237

ized aluminum fluoride at 1050° and residual pressure 10^{-1}--10^{-2} mm Hg. The produced aluminum hypofluoride is decomposed into pure aluminum and aluminum fluoride which is returned to the cycle. During the course of the trials of the aluminum distillation technology, conditions were found under which large aluminum ingots of specified shape can be produced in the condenser, with simultaneous production of the return condensate (Al + AlF_3 with small amount of disperse aluminum). Tests with the pilot plant have shown the possibility of producing by this method superpure aluminum (99.999%) in amounts up to 1 kg a day. The aluminum obtained in the pilot plant was found suitable for production of semiconductor rectifiers, since the siluminum produced from it has less than 0.0001% Fe, 0.0006% Mg, and 0.0001% Cu. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Gosudarstvenny*y institut tsvetny*kh metallov (State Institute of Nonferrous Metals)

Card 2/12

ACCESSION NR: AP[illegible]011207

AUTHOR: [illegible]

TITLE: Conditions for obtaining hi[illegible] by zone [illegible]

SOURCE: Tsvet[illegible] metally, no. 1, 19[illegible], [illegible]

TOPIC TAGS: aluminum, aluminum refining, zo[illegible] refining, high purity al[illegible] zone refining

ABSTRACT: Experiments were conducted on four gr[illegible] of aluminum: [illegible] [illegible]Fe; 0.00[illegible] Si; 0.00[illegible]% Cu -- total impurities < [illegible]; [illegible] (0.00[illegible] [illegible] 0.00[illegible]% Si; 0.00[illegible]% Cu -- total impurities < [illegible] (0.0016-0.002[illegible]% Fe; 0.0015-0.001[illegible]% Si; 0.000[illegible] Cu); [illegible] by the [illegible] fluoride distillation method. [illegible] spectral analysis, and overall estimation of [illegible] electrical resistance of the aluminum at the temperature of liquid [illegible] [illegible] high-purity aluminum can be obtained by zone refining, [illegible] [illegible] heating is better than induction heating when working with [illegible]

[illegible] 1/2

PAL'CHIKOV, D. A.

"Steam treatment for paraphlebitis," In symposiums Nauch.-prakt. zabot. vopren-vet. sl uzby, Moscow, 1948, p. 14-18

SO: U-3850, 16 June 1953, (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

KRICHKO, A.A.; MALYAVINSKIY, L.V.; [illegible], A.I.; PAL'CHIKOV, G.F.; SKOVRONEK, B.K.; STEPU[illegible], S.I.

Obtaining dearomatized catalytic-cracking gas oil and [illegible] for it. Neftepер. i neftekhim. no.3:12-14 '65. (MIRA 18:3)

1. Institut goryuchikh iskopayemykh, Groznefteknauchnyy i Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i proizvodstvu iskusstvennogo zhidkogo topliva.

KRICHKO, A.A.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; TITOVA, T.A.; Prinimali uchastiye: CHERKASOVA, V.F.; RAVIKOVICH, T.M.

Hydrogenation of aromatized petroleum crude without catalysts for obtaining naphthalene and other products. Neftepер. i neftekhim. no.9:30-33 '63. (MIRA 17:8)

1. Groznenskiy kreking-zavod, Groznenskoye upravleniye neftepererabatyvayushchey i neftekhimicheskoy promyshlennosti i Institut goryuchikh iskopayemykh.

L 10531-66 EWT(m)/T WE

ACC NR: AP6003167 SOURCE CODE: UR/0318/64/000/012/0015/0020

AUTHOR: Krichko, A. A.; Lozovoy, A. V.; Mezhlumova, A. I.; Muselevich, D. L.; Pal'chikov, G. P.; Skvortsov, D. V.

ORG: IGI/Administration of Petroleum Conversion and Chemical Industry, Groznyy (Upravleniye n/pererabatyvayushchey i khimicheskoy promyshlennosti); Groznyy Cracking Plant, Groznyy (Groznenskiy krekking-zavod)

TITLE: Hydrogenation of petroleum products in a fluidized solids catalyst layer

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1964, 15-20

TOPIC TAGS: hydrogenation, catalysis, naphthalene, petroleum refining

ABSTRACT: Aromatized fractions with 83-91% aromatics and an average molecular weight of 165.5-169.0 (boiling range 200-300°) were extracted with aqueous pyridine from a catalytic cracking gas oil and subjected to hydrogenation on an Al-Co-Mo oxides catalyst in a fluidized bed. The optimum conditions for the production of naphthalene by this process comprised 20 atm pressure, ~550° temperature, hourly space velocity of 0.8-0.9 kg/l.hr, and a supply of hydrogenating gas (80% H_2 and 20% CH_4) amounting to 1-1.5 m^3/kg raw material. Under these conditions, a 50% conversion of the raw material to products boiling below 230° was obtained and the yield of naphthalene was 12-14% by weight in a single hydrogenation stage. The authors are grateful to V. S. Al'tshuler and G. P. Sechenov for their help in this work. Orig. art. has: 3 figures, 3 formulas, and 3 tables. [JPRS]

SUB CODE: 21, 07 / SUBM DATE: none / ORIG REF: 005 / OTH REF: 006

Card 1/1 UDC: 665.581

L 30247-66 EWI(m)/T WE

ACC NR: AP6013820 (A) SOURCE CODE: UR/0318/65/000/012/0003/0005

AUTHOR: Pal'chikov, G. F.; Mezhlumova, A. I.; Kaganer, G. S.; Stepuro, S. I.; Krichko, A. A.; Titova, T. A.

ORG: Grozneftekhimzavody Association (Ob"yedineniye Grozneftekhimzavody); Institute of Mineral Fuels, AN SSSR (Institut goryuchikh iskopayemykh, AN SSSR)

TITLE: Processing of catalytic gas oils by extraction with pyridine and hydrogenation

SOURCE: Neftepererabotka i neftekhimiya, no. 12, 1965, 3-5

TOPIC TAGS: pyridine, solvent extraction, gas oil fraction, hydrogenation, naphthalene, petroleum product, gasoline

ABSTRACT: The paper describes the results of an extractive separation of catalytic gas oils from low-sulfur and sulfur feed stock by means of wet pyridine and the results of the hydrogenation of the extracts. The extractive separation of the gas oils was carried out in a continuous unit with a vertical countercurrent extractor provided with a pulsed packing of perforated metal discs. The output of the unit was 1 liter/ /hr. The degree of separation of aromatic hydrocarbons from gas oil was 70-75%; for bicyclic hydrocarbons, 95%. The extract from the low-sulfur gas oil was used directly as the feed stock for the hydrogenation. It is concluded that catalytic gas oils produced by refineries in the southern and eastern regions of the Soviet Union can be

UDC: 665.5.521.4.66.061.5

Card 1/2

L 30247-66
ACC NR: AP6013820

used to obtain naphthalene (10-13% yield), high-quality diesel oil (53-66% yield), and a stock (18% yield) for the production of carbon black and aromatized gasoline. N. F. Danil'chenko and I. L. Tsitron participated in the study. Orig. art. has: 2 tables.

SUB CODE: 11,07/ SUBM DATE: None / ORIG REF: 004

Card 2/2 CC

S/065/61/000/004/005/011
E194/E284

AUTHOR: Pal'chikov, G. F.

TITLE: The Production of Paraffin Wax from Paraffinic Distillates by Extraction with Aqueous Pyridine

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No. 4, pp. 31-35

TEXT: In the older refineries wax is separated from medium viscosity distillate lubricating oils by filtration at reduced temperature. In modern refineries the oils are de-waxed with selective solvents the action of which mainly depends on reduced sollubility of solid hydrocarbons at low temperatures. Capital expenditure on refrigerating plant is high and so are running costs, particularly when producing soft paraffin waxes. Therefore, new methods have been developed for producing soft paraffin waxes using crystalline carbamide in combination with organic solvents. There are difficulties in this process too. Isoparaffinic hydrocarbons have a number of potential applications but little has been published on methods of producing them from light and medium distillates. It is, therefore, of considerable interest to develop methods of producing low melting point soft paraffin waxes

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The Production of Paraffin Wax from Paraffinic Distillates by Extraction with Aqueous Pyridine

and also isoparaffin from distillate fractions. This article describes tests on the production of soft and liquid paraffins by means of aqueous pyridine. It was shown that pyridine containing from 2.5 to 5% of water is a poor solvent of paraffinic hydrocarbons, not only at negative temperatures but at moderately low positive temperatures. When aqueous pyridine is mixed with paraffinic feed at room temperatures two clearly defined layers are formed, one the raffinate containing paraffinic hydrocarbons of normal and isostructure and an extract layer including the remainder of the feeds. On the basis of laboratory work paraffin wax was separated from the distillate feed by an extraction process on the pilot plant of the duosol process at the Groznenskiy neftemaslozavod (Groznyy oil refinery). Six of the available heat extraction sections were used and the plant process is briefly described. The pyridine was regenerated from the extract solution in an evaporator heated with low pressure steam. The tests were made on two kinds of feed, filtrate boiling in the

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range of 270 to 470°C produced by separating solid paraffin wax from cooled paraffinic distillate and on a fraction with a boiling range of 270-350°C prepared by distillation at atmospheric pressure of the filtrate which contained a considerable amount of low melting point and isoparaffinic hydrocarbons. The solvent to feed ratio was 2.39:1, the extraction temperature was 21-22°C, the extraction pressure ranged from 5 to 4 atmospheres, and the percolation temperature was 25-30°C. During the extraction process the water contained in the pyridine is mainly concentrated in the extract phase, the solvent raffinate phase containing only negligible amounts of water. During the extraction process because of the differing solubility of hydrocarbons are redistributed between the raffinate and extract phases so that whereas at the first stage of extraction the aromatic hydrocarbons form 18.7% weight by the sixth stage of extraction they form only 2.24% weight. The properties of the paraffin wax and de-waxed product produced on the pilot plant were as follows:

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Property	Wax	De-waxed product
Density	0.813	0.886
Boiling range °C		
lower	283	-
upper	345	-
Setting point °C	+11	-1
Kinematic viscosity 50°C centistokes	4.06	-
Aromatic hydrocarbon content %	2.03	-
Refractive index	1.4500	1.486

The refined paraffins contained no aromatic or naphthenic hydrocarbons and paraffins produced in this way could be used as raw material in the manufacture of synthetic fatty acids which are used in various branches of industry. There are 1 figure, 3 tables and 4 Soviet references.

ASSOCIATION: Sovnarkhoz ChIASR
Card 4/4

PAL'CHIKOV, G.F.; IGONIN, P.G.; PASHENKO, M.A.

Crude for obtaining synthetic naphtehenic acids. Trudy GrozNII no. 15:294-297 '63. (MIRA 17:5)

PAL'CHIKOV, G.F.

Use of pyridine for obtaining low-melting paraffins. Azerb.khim.zhur. no.4:53-61 '63. (MIRA 17:2)

KRICHKO, A.A.; LOZOVOY, A.V.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; RAVIKOVICH, T.M.; TITOVA, T.A.; CHERKASOVA, V.F.; Prinimali uchastiye: MUSELEVICH, D.L.; SOVETOVA, L.S.; TSITRON, I.L.

Obtaining naphthalene from straight-run fractions of the Anastasiyevska petroleum. Nefteper. i neftekhim. no.10:3-8 '63. (MIRA 17:2)

1. Institut goryuchikh iskopayemykh AN SSSR, Groznenskiy krekingzavod i Upravleniye neftepererabatyvayushchey i neftekhimicheskoy promyshlennosti.

DEMBOVSKAYA, Ye.A.; KONYASHINA, R.A.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.

Analyzing the chemical composition of the extract of gas oils from catalytic cracking. Khim. i tekh.topl. i masel 10 no.11: 16-19 N '65.

(MIRA 19:1)

1. Institut goryuchikh iskopayemykh, Moskva.

KRICHKO, A.A.; [illegible]

Production of [illegible] catalytic cracking. [illegible] 10-12. [illegible]

1. Institut [illegible] "Groznefteavtomatika".

KRICHKO, A.A.; LOZOVOY, A.V.; MEZHLUMOVA, A.I.; MUSELEVICH, D.L.; PAL'CHIKOV, G.F.; SKVORTSOV, D.V.

Hydrogenation of petroleum products in the fluidized bed of a catalyst. Nefteper. i neftekhim. no.12:15-20 '64. (MIRA 18:2)

1. Institut goryuchikh iskopayemykh AN SSSR, Upravleniye neftepererabatyvayushchey i khimicheskoy promyshlennosti, g. Groznyy, i Groznenskiy kreking-zavod.

PAL'CHIKOV, G.F.

Preparation of specimens of methane hydrocarbons by pilot plant extraction with aqueous piridine. Azerb. khim. zhur. no 3:29-35 '64. (MIRA 18:5)

SOV/65-59-4-8/14

AUTHORS: Minasyan, T.S., Pal'chikov, G.F., Bolotov, L.T., Ovsyannikov, P.V., Shumovskiy, V.G., Afanasenko, M.M., Rusakov, A.P. and Karpenko, T.G.

TITLE: Investigations in the Groznyy Plants on the Catalytic Purification of Middle Distillates Obtained During Thermo-Cracking Processes (Iz opyta raboty groznenskikh zavodov po kataliticheskoy ochistke srednikh distillyatov termicheskogo krekinga)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1959, Nr 4, pp 44-48 (USSR)

ABSTRACT: The octane numbers of gasolines can be improved by catalytic cracking of the kerosine-gas-oil fractions, obtained during fractional distillation. This, however, seems unsatisfactory because these fractions are high quality starting materials for jet and diesel fuels etc. The middle fractions, obtained during thermal cracking, used as diesel fuels, contain a high quantity of unsaturated hydrocarbons and have a low cetane number. The quality of diesel fuels can be improved by using aluminium silicate catalysts and enriched secondary distillates. In this way, the consumption of unsaturated

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Investigations in the Grozmyy Plants on the Catalytic Purification of Middle Distillates Obtained During Thermo-Cracking Processes

compounds is decreased and the cetane number of the diesel fuels increased, whilst maintaining the standards required by GOST for diesel fuels. Tests were carried out on substances obtained after second distillation of the broad fraction and also by using mixtures of these substances and the kerosine fraction obtained during thermal cracking. The properties of the tested materials are given in table 1 and the process conditions in table 2. Some high octane gasoline was obtained during this process. This was purified, washed and reacted with an 18 to 20% NaOH solution. After stabilisation it was purified again, treated with a 15 to 18% NaOH solution and washed. The stabilised pure gasoline had an octane number of 76. A catalyst of decreased activity (29 to 30) was used during the enriching process. The properties of the aluminium silicate catalysts are given (table 3). Table 4 gives the hydrocarbon composition of the gas. The catalytic cracking of middle fractions can

Investigations in the Grozhyy Plants on the Catalytic Purification of Middle Distillates Obtained During Thermo-Cracking Processes

be carried out on existing cracking plants and it is pointed out that the deposition of coke does not exceed the allowed limits. There are 4 tables.

DRONIN, A.P.; ZAMANOV, V.V.; KRICHKO, A.A.; LOZOVOY, A.V.; MAKAR'YEV, S.V.; MEZHLUMOVA, A.I.; PAL'CHIKOV, G.F.; STEPURO, S.I.

Combined arrangement for the use of thermal-cracking kerosine. Khim. i tekh. topl. i masel 9 no.6:18-24 Je'64 (MIRA 17:7)

1. Giprogrozneft' , Institut goryuchikh iskopayemykh AN SSSR i Groznefteklimzavody.

PAL'CHIKOV, G.F.; MEZHLUMOVA, A.I.; KRICHKO, A.A.; KAGANER, G.S.; STEPURO, S.I.; BROVENKO, A.V.

Extraction of aromatic hydrocarbons with aqueous pyridine from intermediate petroleum fractions and catalytic gas oils. Khim.i tekh.topl. i masel 7 no.11:19-25 N '62. (MIRA 15:12)

1. Sovet narodnogo khozyzystva Checkeno-Ingushskoy ASSR.
(Hydrocarbons) (Pyridine) (Petroleum products)

S/065/62/000/011/001/006
E075/E436

AUTHORS: Pal'chikov, G.F., Mezhlumova, A.I., Krichko, A.A., Kaganer, G.S., Stepuro, S.I., Brovenko, A.V.

TITLE: Extraction of aromatic hydrocarbons from middle petroleum fractions and catalytic gas oils with aqueous pyridine

PERIODICAL: Khimiya i tekhnologiya topliv i masel, no.11, 1962, 19-25

TEXT: Following the laboratory work reported previously (Khim. i tekhnol. topliv i masel, no.4, 1961) trial batches of aromatic extracts (400 to 500 kg) were obtained on a pilot plant scale from a catalytic gas oil and kerosene - gas oil fractions from Anastasiyevka crude. The extraction was carried out using aqueous solution of technical pyridine (boiling point range 114 to 134°C). The feed saturated with pyridine vapour meets the pyridine solution in the extractor. Countercurrent extraction takes place, the raffinate and the extract solutions leaving the opposite ends of the extractor. For the extraction of the kerosene - gas oil fraction the raffinate contained 30% by

volume of pyridine (water free) and the extract solution - 80.7% pyridine, 10% water and 9.3% extract. The extraction was conducted at 15°C. The extract constituted 32 to 35% of the feed and contained about 80% aromatic hydrocarbons. The extract with 50% of the aromatic hydrocarbons was obtained with the yield of 70%. The extracts were subjected to high temperature hydrogenation. For the extract from the catalytic gas oils the yield of naphthalene obtained by the hydrogenation was 30%. For the kerosene - gas oil fraction about 20% yield of naphthalene was obtained and 40% of a solvent containing 95% of aromatic hydrocarbons. There are 1 figure and 7 tables.

ASSOCIATION: SNKh Checheno-Ingushsk. ASSR

S/081/61/000/021/070/094
B138/B101

AUTHORS: Bolotov, L. T., Shumovskiy, V. G., Ovsyannikov, P. V., Pal'chikov, G. F., Minasyan, T. S., Afanasenko, M. M., Rusakov, A. P., Burlakov, A. G., Karpenko, T. G.

TITLE: Pilot run for the commercial processing of a secondary raw material on a catalytic cracking unit

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 401 - 402, abstract 21M82 ([Tr.] Groznensk. neft. in-t. sb. 23, 1960, 97 - 105)

TEXT: With the aim of increasing supplies of quality high-speed diesel fuels, experiments have been conducted, in commercial conditions, for the refining of the medium fractions of the thermal cracking process by redistribution of the hydrogen on the aluminosilicate catalyst. The characteristics of the starting material and of the end product are enumerated. It is said that it would be possible to use this method for the production of the components of high-octane automobile gasolines and low pour-point high-speed diesel fuels. Data are given for the production

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PAL'CHIKO, G.F.

MINASYAN, T.S.; PAL'CHIKOV, G.F.; SEROV, V.V.; BOLOTOV, L.T.; OVSYANNIKOV, P.V.; RUSAKOV, A.P.

Means for increasing raw material resources for the production of diesel fuels. Azerb. neft.khoz. 36 no.9:33-36 S '57.

(Diesel fuels) (MIRA 11:2)

S/081/61/000/02[illegible]/068/094
B138/B[illegible]

AUTHORS: Bashilov, A. A., Pal'chikov, G. F., Zhukov, I. S., Minasyan, T. S., Rusakov, A. P.

TITLE: Separate production of gasoline and kerosene distillates in thermal cracking plant

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1961, 401, abstract 21M76 ([Tr.] Groznensk. neft. in-t, sb. 24, 1960, 3-7)

TEXT: On the basis of work carried out in the thermal cracking units of the Groznyy Cracking Plant, a modification has been developed and the partial reconstruction of the units is proposed. To permit the separate production of automobile gasoline and tractor kerosene on a unit with one rectification column, it is suggested that the rectifying unit should be changed and a stripping tower, a cooler for the kerosene fraction, and pump and cooler for the circulating reflux introduced. The processing cycle remains unchanged for the furnace, evaporator and supplementary evaporator. The reconstruction proposed would be highly beneficial economically. [Abstracter's note: Complete translation.]

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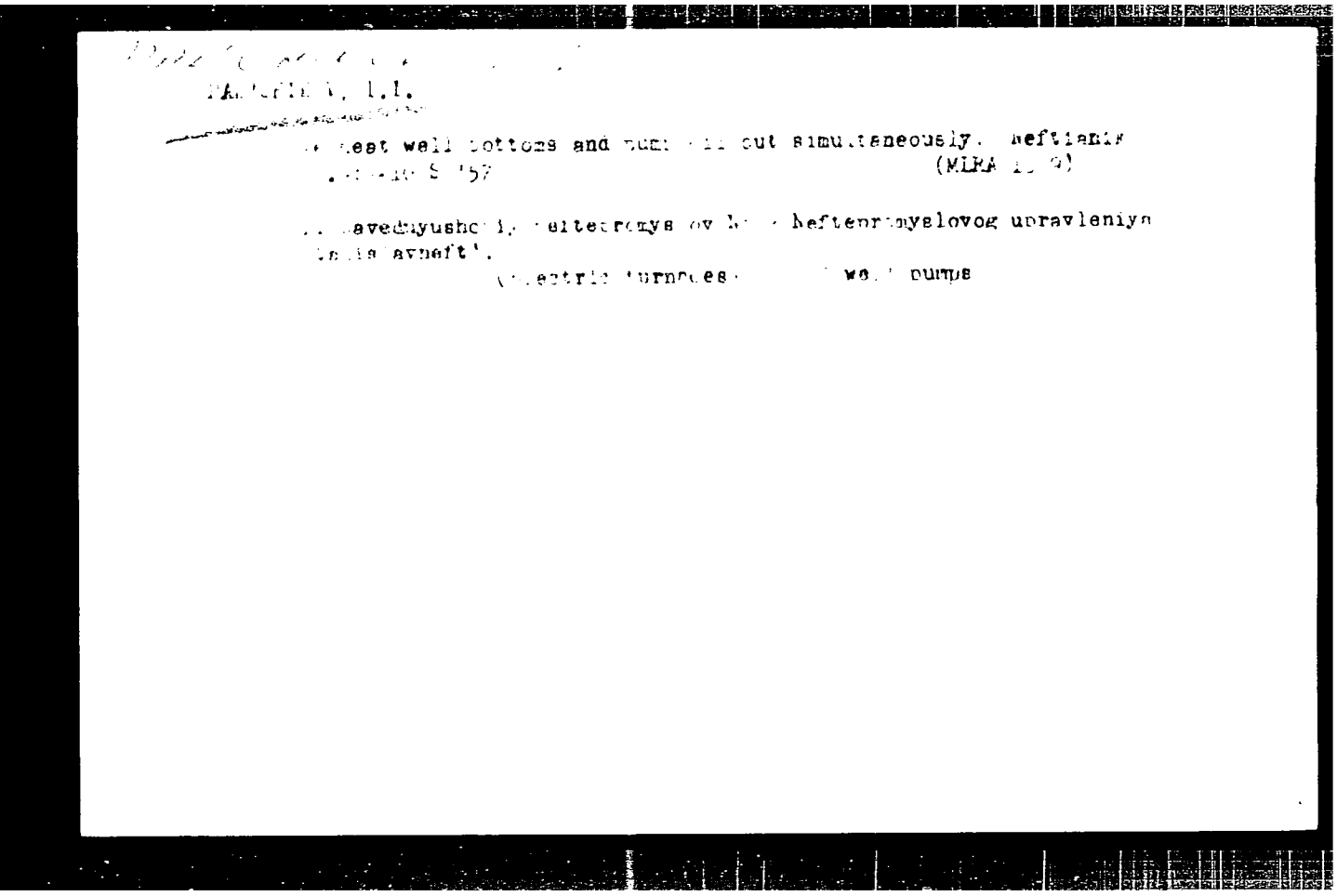
PAL'CHIKOV, G.F.

Preparation of paraffins from paraffin distillates by extraction with agueous pyridine. Khim.i tekh.topl.i masel 6 no.4:31-35 Ap '61. (MIRA 14:3)

1. Sovanrkhoz Checheno-Ingushskoy Avtonomnoy Sotsialisticheskoy Respubliki.

(Paraffins) (Pyridine)

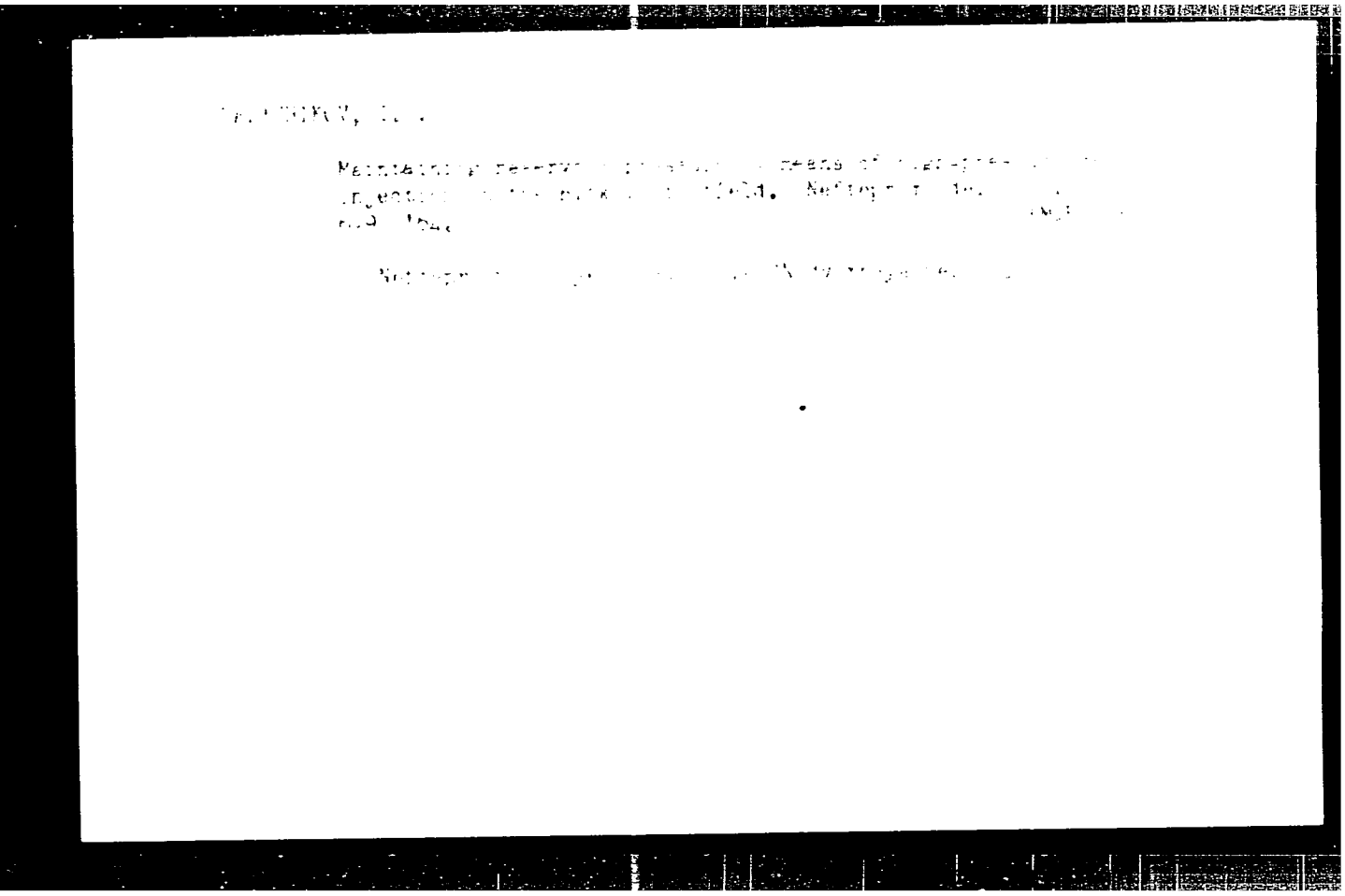


[illegible] I.I.

[illegible]eet well bottoms and num[illegible] cut simultaneously. Neftianik [illegible] S '57 (MLRA 10:9)

[illegible]avedmyushch[illegible] elektrosnya ov[illegible] neftenromyslovog upravleniya [illegible] Anneft'.

[illegible]lectric turnoles [illegible] well pumps



PAL'CHIKOV, I.I.; DRABINA, Ya.M.

Reservoir pressure maintenance by gas injection in the Bitkov field. Neft. khoz. 39 no.2:36-41 F '61. (MIRA 17:2)

PAL'CHIKOV, I.I.; [illegible], Ya.M.

Possibility of maintaining [illegible] pressure in the Bitkov field by letting gas flow naturally into the oil layer. Nauch.-tekh. sbor. po dob. nefti no.13:10-18 '61. (MIRA 16:7)

1. Neftepromyslovoye upravleniye Nadvornyanneft'.
(Bitkov Region—Oil fields—Production methods)

PAL'CHIKOV, L.M., inzh.

Research on the weakening of coal seams in rock massifs in order to increase the efficiency of hydraulic mining. Trudy VNIIGidrouglia no.1:14-24 '62. (MIRA 16:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut dobychi uglya gidravlicheskim sposobom.

PAL'CHIKOV, O.A.

Synthetic diamonds are our best helpers. Mashinostroitel' no.7:
31 Jl '65. (MIRA 18:7)

BABUSHKIN, A.A.; PAL'CHIKOV, O.A.

Butt welding of wire in patenting furnaces. Metallurg no.9:29-30 S '56.
(MLRA 9:10)

1.Master patentirovochnogo otdeleniya Odesskogo kanatnogo zavoda (for Babushkin). 2.Master Otdeleniya tekhnicheskogo kontrolya Odesskogo kanatnogo zavoda (for Pal'chikov).
(Wire--Welding) (Annealing furnaces)

PAL'CHIKOV, O.A.

Transfer of an automatic wire meshing machine to handle the production of several drawbenches. Metallurg 10 no.12:36-37 D '65. (MIRA 18:12)

1. Odesskiy staleprokatnyy zavod kommunisticheskogo truda.

PALCHKOV, V.A.; ZHDANOV, Yu.A.; DOROFEYENKO, G.N.

Synthesis of a stable radical from 2,4,6-triphenyl pyrylium salts.
Zhur. org. khim. 1 no.6:1171 Je '65. (MIRA 18:7)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

ZHDANOV, Yu.A.; DOROFEYENKO, G.N.; PALCHKOV, V.A.

Perchloric acid and its compounds as catalysts in organic synthesis. Part 23: Salts of 2-alkyl[3,4: 5,6] bis(indeno)pyrylium. Zhur. ob. khim. 35 no.5:827-831 My '65. (MIRA 18:6)

1. Rostovskiy-na-Donu gosudarstvennyy universitet.

ZHDANOV, Yu.A.; D[illegible]YENKO, G.I.; [illegible], V.A.; SAFAROVAN, G.I.

Condensation of 2-methyl-[illegible]-5,6,7,8-tetrahydroisochromylium perchlorate with aromatic hydrocarbons. Dokl. AN SSSR 151 no. 1 [illegible] 18 Mar 63. MIRA 17:5)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavleno akademikom [illegible].

L 4237-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) OS
ACCESSION NR: AT5007979 S/0000/64/000/000/1065/1072

AUTHOR: Abramyan, Ye. A.; Bender, I. Ye.; Bondarenko, L. N.; Budker, G. I.; Glagolev, G. B.; Kadymov, A. Kh.; Neshkov, I. N.; Naumov, A. A.; Pal'chikov, V. Ye.; Panasyuk, V. S.; Popov, S. G.; Protopopov, I. Ya.; Rodionov, Yu. I.; Samoylov, I. M.; Skrinskiy, A. N.; Yudin, L. I.; Kon'kov, N. G.; Mostovoy, Yu. A.; Nezhevenko, O. A.; Ostreyko, G. N.; Petrov, V. V.; Sokolov, A. A.; Timoshin, I. Ya.

TITLE: Work on the strong-current accelerators of the Nuclear Physics Institute, SO AN SSSR. (I) Strong-current pulse accelerators with spiral storage of the electrons. (II) Strong-current accelerators with one-revolution capture of the injected electrons

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 1065-1072

TOPIC TAGS: high energy accelerator, electron accelerator, electron beam, betatron, plasma

ABSTRACT: The work on developing strong-current electron ring accelerators was begun in 1965 by the authors at the Nuclear Physics Institute, Siberian Department, Academy of Sciences SSSR, with the object of studying the possibility of

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L 4237-66
ACCESSION NR: AT5007979

forming relativistic stabilized beams. In the laboratories of the Institute experimental studies were carried out on the four methods for obtaining large ring currents of relativistic electrons: (1) spiral method of storing the electrons in installations of the betatron type with subsequent betatron synchrotron acceleration (Budker G. I. CERN Symposium 1, 68 (1956); (2) obtaining of limiting electron currents by means of the injection of electrons from a strong-current linear accelerator into a ring chamber of large aperture with subsequent synchrotron acceleration; (3) storage of electrons in tracks (parking orbits) with constant magnetic field by means of the multiple injection of electrons from another less strong-current accelerator; this method is utilized for the storage of electrons and positrons in experiments with colliding beams (expounded in detail by G. I. Budker in the present collection, p. 274); (4) obtaining of large electron currents by means of the acceleration of electrons by a ring plasma. The present report discusses the first two methods under the following topics: (I) pulsed iron-less betatron with preliminary charge storage (B-2 device); strong-current pulsed synchrotron B-2S; pulsed strong-current betatron with spiral storage (B-3 device). (II) iron-less one-turn strong-current synchrotron (BSB); strong-current pulsed synchrotron B-3M. Orig. art. has: 7 figures.

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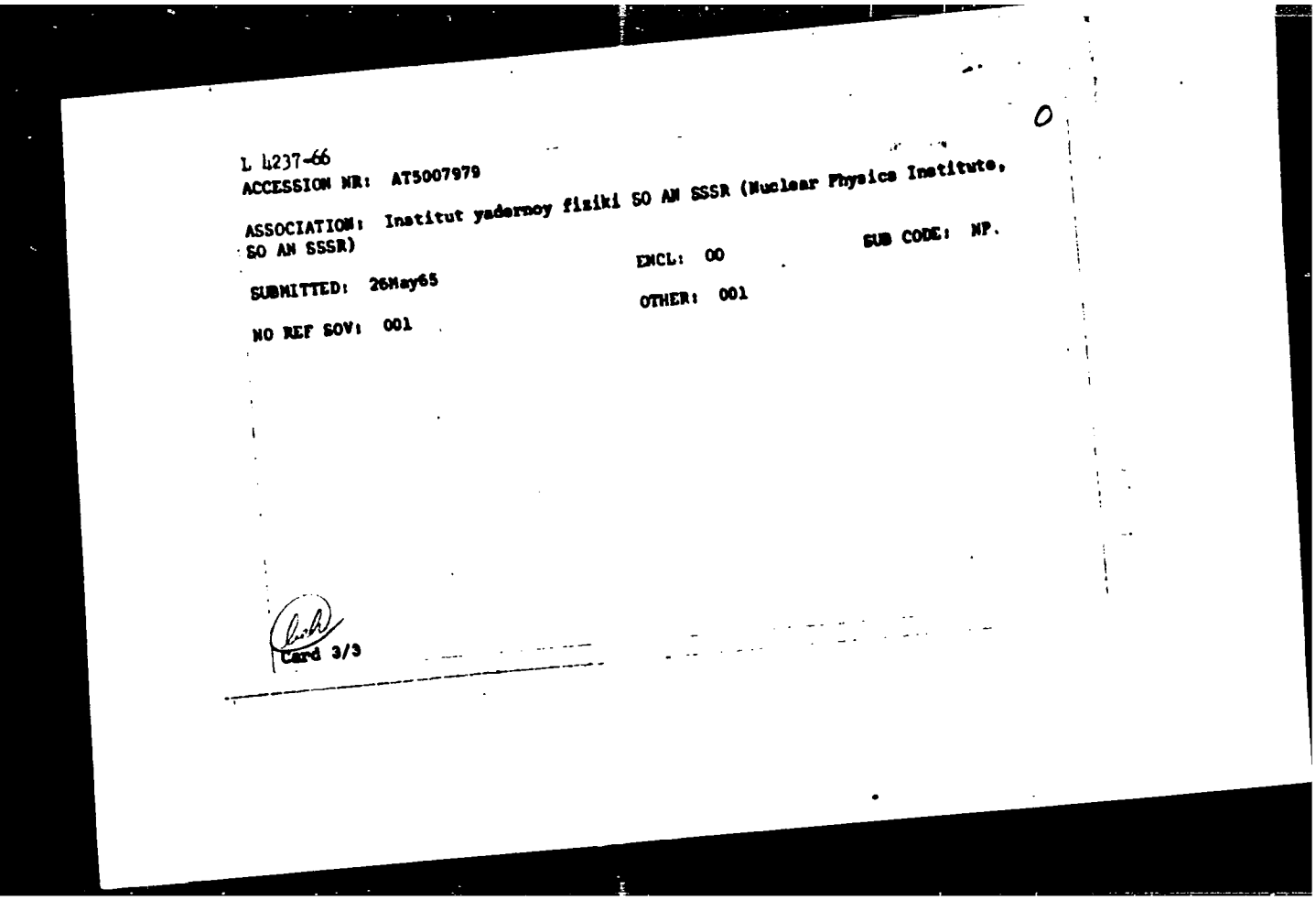

L 4237-66
ACCESSION NR: AT5007979

ASSOCIATION: Institut yadernoy fiziki SO AN SSSR (Nuclear Physics Institute, SO AN SSSR)

SUBMITTED: 26May65 ENCL: 00 SUB CODE: NP.

NO REF SOV: 001 OTHER: 001

Card 3/3

L 11420-67 EWT(1) IJP(c)
ACC NR: AP6031268 SOURCE CODE: UR/0057/66/036/009/1649/1651

AUTHOR: Volosov,V.I.; Pal'chikov,V.Ye.; Tsel'nik,P.A.

ORG: none

TITLE: On a method of injecting charged particles into a magnetic mirror system

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 9, 1966, 1649-1651

TOPIC TAGS: magnetic mirror machine, charged particle, electron trapping, magnetic trapping, plasma confinement

ABSTRACT: L.A.Artsimovich (Upravlyayemyye termoyadernyye reaktsii, str. 385.Fizmatgiz, M.,1961) has shown that charged particles can be injected into a magnetic mirror machine by projecting them in the region of the mirror at a small angle to the plane normal to the magnetic field during establishment of the mirror field. The present authors show that it is possible similarly to inject charged particles from behind the mirror, provided the strength of the magnetic field at the injection point is kept proportional to that of the mirror field during establishment of the latter. To test the method, 100 keV electrons were injected into a 40 cm diameter 150 cm long magnetic mirror system with a mirror ratio of 2.5. The injector consisted of a ring-shaped electron gun mounted on the axis of the system, which produced a conical beam of electrons making an angle of 20° with the plane normal to the axis, i.e., having a vertex angle of 140°. The magnetic field at the electron gun was kept proportional

UDC: 533.9

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to the mirror field during the rise of the latter with the aid of a special pulsed solenoid mounted within the chamber. With a beam spread of 10^{o}, some 10% of the injected electrons were trapped between the mirrors. The lifetime of the trapped electrons within the trap was from 0.01 to 0.1 sec and was limited only by scattering on the residual gas. There was observed an increase in the fraction of the injected electrons that were trapped with increasing injection current. This increase is in accord with the theory and is due to space charge effects. At very high injection currents, however, the oscillations reported by G.I.Budker, S.S.Moiseyev, and the present authors (Plasma Physics and Controlled Nuclear Fusion Research (Conference proceedings, Culham, 6-10 Sept., 1965), II, 245, IAEA, Vienna, 1965) limit the density of the trapped particles. The authors thank A.P.Yershov and A.A.Zabrodov for assistance with the experiments. Orig. art. has:4 formulas and 1 figure.

SUB CODE: 20 SUBM DATE: 08Oct65 ORIG. REF: 001 OTH REF: 001

9(3) SOV/20-123-5-15/60

AUTHORS: Podgornyy, I. M., Koval'skiy, N. G., Pal'chikov, V. Ye.

TITLE: High Power Pulse Discharge Electrons Generating Hard X-Radiation (Elektrony vyzyvayushchiye zhestkoye rentgenovskoye izlucheniye moshchnykh impul'snykh razryadov)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr [illegible], pp. 821-[illegible] (USSR)

ABSTRACT: The present paper reports on the energy of electrons generating hard x-radiation. The discharge was produced in a porcelain chamber of 175 mm diameter and 1000 mm height. The discharge battery consisted of a condenser battery of 36 μF capacity. The experiments were carried out in hydrogen at an initial pressure of 6.10^{-2} torr which corresponds to the maximum yield of hard X-ray quanta. The presence of X-ray pulses was controlled by a scintillation recording system with pulse oscillograph. This apparatus is described in short. In order to find the dispersion curve of the spectrograph, the electron trajectories had to be constructed graphically. It is not difficult to find the maximum value of the energy which had to be acquired by the electrons when moving along the discharge axis. The experimental data available proved

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High Power Pulse Discharge Electrons Generating Hard X-Radiation

that the maximum energy of the electrons amounts to 300 kev. A beam of 100 kev electrons was used for the control of the calculated electron trajectories. Thus, the following facts were proved by direct experiments: The electrons which cause the hard X-radiation in a powerful pulse discharge in hydrogen are accelerated along the axis of the discharge chamber. The recorded maximum energy of the electrons amounted to 300±20 kev which agrees well with the results obtained by measurements of the maximum energy of the X-ray spectrum. There are 1 figure and 4 Soviet references.

PRESENTED: July 31, 1958, by L. A. Artsimovich, Academician

SUBMITTED: July 25, 1958

Card 2/2

L 36408-66 EWT(1)/T IJP(c) AT

ACC NR: AP6022021 SOURCE CODE: UR/0120/66/000/003/0169/0172

AUTHOR: Volosov, V. I.; Pal'chikov, V. Ye.; Tsel'nik, F. A.

ORG: Institute of Nuclear Physics, SO AN SSSR, Novosibirsk (Institut yadernoy fiziki SO AN SSSR)

TITLE: Cathode with pulsed heating of its emitting surface

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 169-172

TOPIC TAGS: electron tube cathode, electron accelerator, electron emission

ABSTRACT: A theoretical and experimental study is reported of an additional pulsed heating of a hot cathode up to near-melting temperature which essentially increases the emission-current density. As both the size of the highest-temperature region and the quantity of evaporating cathode material are small (the duty factor is assumed to be low), a much longer cathode life can be expected. The cathode is preheated to 2000—2500K. A formula for final temperature is derived from an equation describing the ionization loss of the electron energy. An experimental verification included a 2-cm diameter tantalum cathode run at 2300—2400K and additionally pulse-heated up to a current density of 40—70 amp/cm^2; pressure, 10^{-5} torr; pulse duration, 2 μsec. "The authors wish to thank G. I. Budker for discussing the results and K. P. Veselkov for building the laboratory outfit." Orig. art. has: 3 figures, 12 formulas, and 2 tables. [03]

SUB CODE: 20,09 / SUBM DATE: 26Apr65 / OTH REF: 001/ ATD PRESS: 5039

UDC: 621.385.73

Card 1/1

ANDRUSHCHENKO, A.G.; BEREZKINA, O.A.; KUZ'MINA, V.I.; OZEROVA, G.M.; PAL'CHIKOVA, A.P.; TSARIN, A.P.; TIMOFEYEV, L.N.; NIKITIN, G.A., krayeved; GARMASH, P.Ye., red.; FISENKO, A.T., tekhn. red.

[Alupka; an excursion sketch, its nature, history, sanatoriums, the palace-museum, its park, and an information directory] Alupka; ekskursionnyi ocherk: priroda, istoriia, zdravnitsy, dvorets-muzei, park, spravochnye svedeniia. Simferopol', Krymizdat, 1963. 78 p. (MIRA 16:10)

1. Nauchnyye sotrudniki Alupkinskogo dvortsa - muzeya (for all except Fisenko, Garmash).
(Alupka--Guidebooks)

ANDRUSHCHENKO, A.G., nauchnyy sotrudnik; BEREZKINA, O.A., nauchnyy sotrudnik; KUZ'MINA, V.I., nauchnyy sotrudnik; OZEROVA, G.M., nauchnyy sotrudnik; PAL'CHIKOVA, A.P., nauchnyy sotrudnik; TSARIN, A.P., nauchnyy sotrudnik; TIMOFEYEV, L.N., nauchnyy sotrudnik; NIKITIN, G.A., krayeved; CHEREPANOV, B., red.; ISUPOVA, N., tekhn.red.

[Alupka; a sketch for excursionists] Alupka; ekskursionnyi ocherk. Simferopol', Krymizdat, 1961. 84 p. (MIRA 14:7)

1. Alupkinskiy dvorets-muzey (for all except Cherepanov, Isupova).
(Alupka—Description)

PAL'CHIKOVA, R.P.

Results of the treatment of malignant neoplasms with a benzotef preparation. Vrach.delo no.12:117-118 D '62. (MIRA 15:12)

1. Kafedra gospital'noy terapii (zav. - dotsent M.P.Kozlovskaya) lechebnogo fakul'teta Khar'kovskogo meditsinskogo instituta i 27-ya gorodskaya klinicheskaya bol'nitsa.
(CANCER) (DRUGS)

KRISHEVSKIY, M.; PALCHINSKIY, B.; SUPRUN, A.P. [translator]

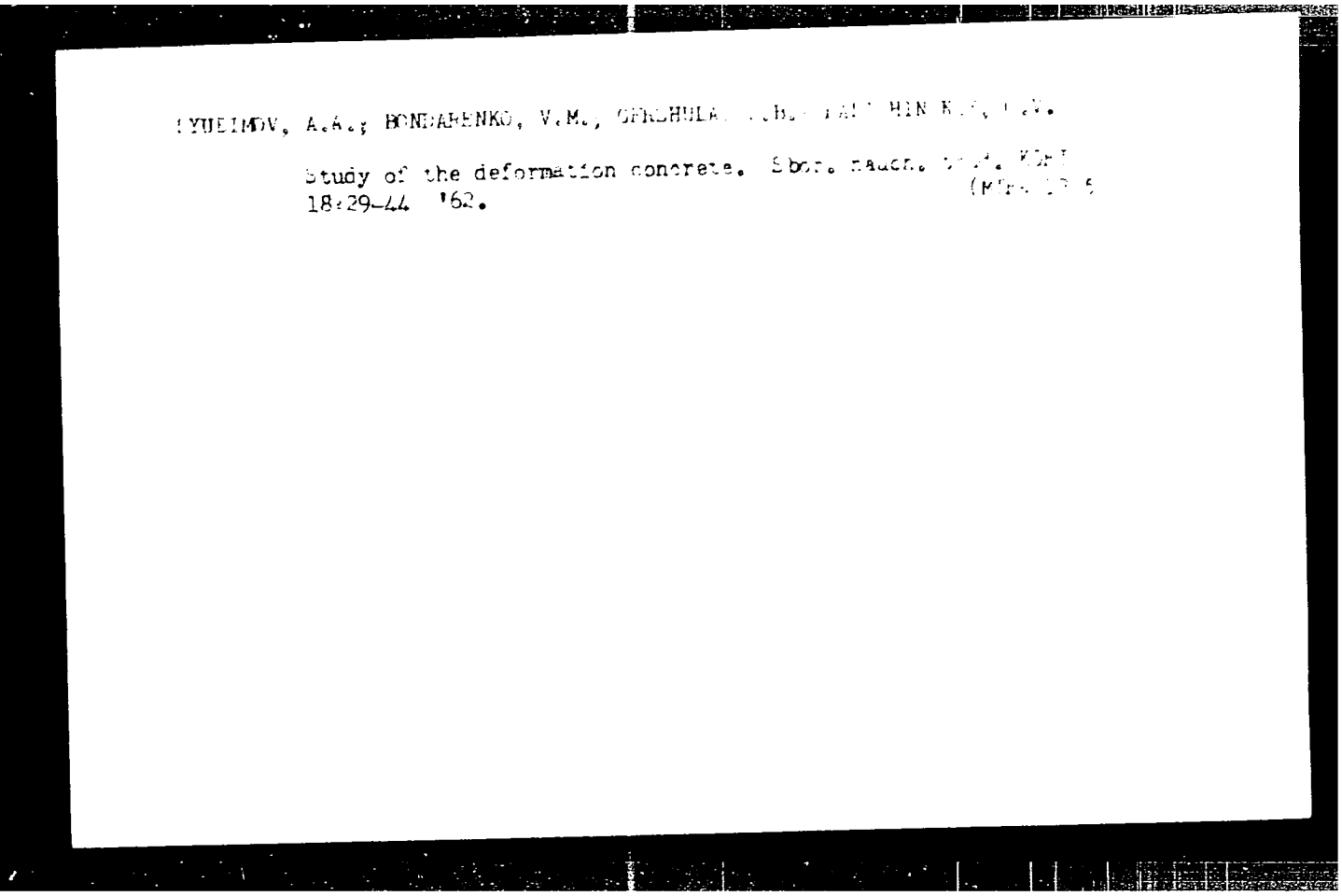
Viscosimetry of polymer solutions. Part 1: Capillary viscometer with electronic recording of flow time. Vysokom.soed. 3 no.6:936-942 Je '61. (MIRA 14:6)

1. Politekhnicheskiy institut, Lods'.
(Viscosimeter) (Polymers)

FRAYFEL'D, S.Ye., professor; PAL'CHINSKIY, O.V., inzh.

Practical methods for designing reinforced concrete construction elements taking into account rheological properties of materials. Sbor.trud.IUZHNII no.3:3-63 '59. (MIRA 13:7)

(Strains and stresses)
(Rheology)



YUDIMOV, A.A.; BONDARENKO, V.M.; GERSHUL[illegible]

Study of the deformation concrete. Sbor. nauch. [illegible] KIIT (MIRA [illegible]
18:29-44 '62.

PALCHINSKIY, G.V.

report presented at the 1st All-Union Congress of Theoretical and Applied Mechanics, Moscow, 27 Jan - 3 Feb '60.

201. B. Ia. Mikhailov (Moscow): An experimental study of the load carrying capacity of thin-walled nickel tubes subjected to various combinations of tension, torsion, and internal pressure.

202. S. G. Mikhlin (Leningrad): Variational methods in the theory of elasticity.

203. A. A. Movchan (Moscow): The stability of motions of solids — Lagrange's theorem for solids and its inversion.

204. A. A. Movchan (Moscow): Axisymmetric supersonic flutter of a circular cylindrical shell.

205. [illegible] (Leningrad): On the uniqueness of the solution of the problem of large deflections of a circular plate under rotationally symmetric loading.

206. [illegible] (Tbilisi): The determination of the deformation of trusses without diagonals.

207. Kh. M. Mushtari, I. G. Teregulov (Kazan): A theory of moderately thick plates and shells.

208. A. G. Nazarov (Erevan): Some problems in the theory of seismic stability.

209. [illegible] (Tallin): Vibrations of an elastic circular cylindrical shell under concentrated impact loading.

210. [illegible] Nigul (Tallin): More accurate equations of motion for circular cylindrical shells.

211. V. A. Nikitin (Leningrad): Approximate treatment of cylindrical shells under concentrated loads.

212. [illegible] Nikiforov (Moscow): Redistribution of reactions at the edge of a simply supported rectangular plate under gradually increasing loading.

213. W. Nowacki (Warsaw): Some dynamical problems of thermoelasticity.

214. [illegible] Noskov (Moscow): Investigation of the viscous behavior of elastic, visco-plastic materials in vibrations.

215. [illegible] Pridalman, I. A. [illegible] (Odessa): Problems of the non-linear theory of elasticity.

216. [illegible] (Moscow): [illegible] variational method to the design [illegible] structures.

217. [illegible] (Leningrad): Complete computation of a wave field in homogeneous elastic media with parallel plane boundaries.

218. [illegible] (Nagoia): The method of electroplating and its applications.

219. W. Olszak (Warsaw): Two-dimensional problems in the theory of plasticity of non-homogeneous and anisotropic media.

220. [illegible] (Moscow): The state of stress in a deformed curved bar.

221. V. Ia. Pavilainen (Leningrad): A membrane theory for a toroidal shell.

222. V. P. Pavlov (Moscow): Creep, elastic properties and anisotropy of plastic lubricants.

223. G. V. Palchinskii (Kharkov): A practical method of designing reinforced concrete structures with reference to creep.

224. Ia. G. Panovko (Riga): The problem of structural damping.

225. P. I. Perlin (Moscow): An approximate method for solving elastic-plastic problems.

226. P. I. Perlin, L. A. Shofman (Moscow): Application of the theory of rigid, plastic solids to problems of metal forming.

227. A. V. Pogorelov (Kiev): On the axisymmetric problems of the theory of elasticity.

228. D. S. Polshin (Moscow): A method for studying the plane field of relative volume strains in soils.

229. G. Ia. Popov (Novosibirsk): The application of some new methods of the theory of integral equations to the solution of contact problems of the theory of elasticity.

230. V. A. Postnov (Leningrad): Free and forced vibrations of frames taking into account shear deformations and energy dissipation.

231. V. S. Poturaev (Dnepropetrovsk): Investigation and calculation of internal friction in elastic members of vibrating machines.

232. W. Prager (Providence): An elementary discussion of definitions of stress rate.

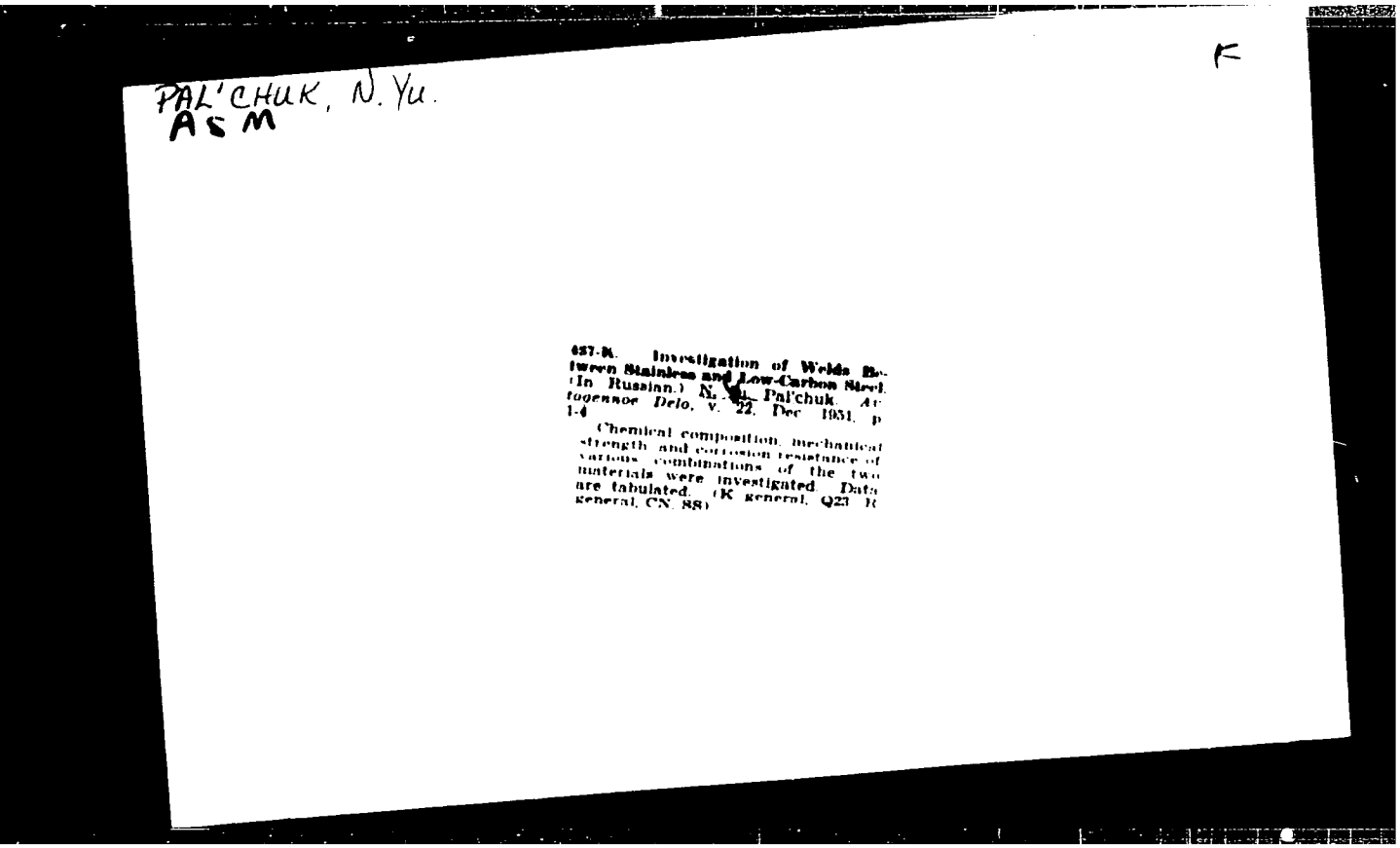
233. N. I. Prigorovskii (Moscow): Photoelastic investigation of stresses in three-dimensional layered models.

PAL'CHUK, Nikolay Trofimovich; LYUBOVSKIY,A., redaktor; ZELENKOVA,Ye., tekhnicheskiy redaktor

[Designing and installing water and steam heating systems with heating concrete panels; provisional instructions] Proektirovanie i montazh vodianykh i parovykh sistem otopleniia s greiushchimi betonnymi paneliami; vremennye ukazaniia. Izd. 2-oe, perer. i dop. Kiev, Gos.izd-vo lit-ry po stroitel'stvu i arkhitekture USSR, 1955. 43 p. (MLRA 9:3)

1. Akademiya arkhitektury URSR, Kiyev. Institut budivel'noi tekhniki.

(Radiant heating)



PAL'CHUK, N. Yu.
ASM

K

657-K. Investigation of Welds Be-
tween Stainless and Low-Carbon Steel.
(In Russian.) N. Yu. Pal'chuk. Av-
togennoe Delo, v. 22, Dec 1951, p
1-4

Chemical composition, mechanical
strength and corrosion resistance of
various combinations of the two
materials were investigated. Data
are tabulated. (K general, Q23 R
general, CN 88)

PAL'CHUK, N. YU.

USSR/Engineering - Welding, Processes Dec 51

"Investigation of the Welded Joints Between Stainless and Low-Carbon Steels," N. Yu. Pal'chuk, Engr, Welding Lab, MVTU imeni Bauman

"Avtogen Delo" No 12, pp 1-4

Conducted investigation to det intercryst corrosion resistance of welded metal and base stainless metal at point of welding to latter parts made of low-carbon steel. Discusses general corrosion in pairs of

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USSR/Engineering - Welding, Processes (Contd) Dec 51

certain chem products, formed in welding process, and mech properties of weld metal.

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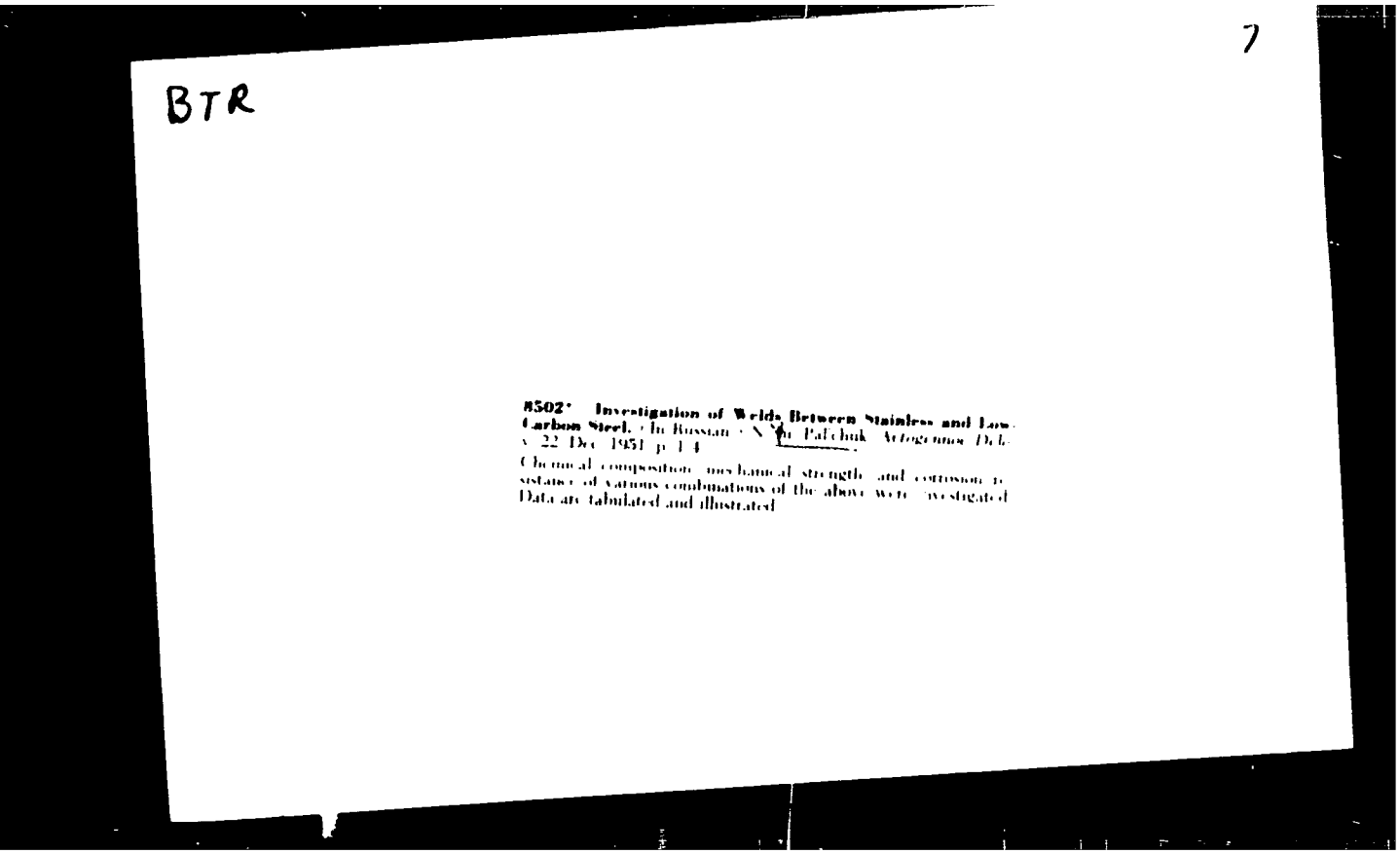
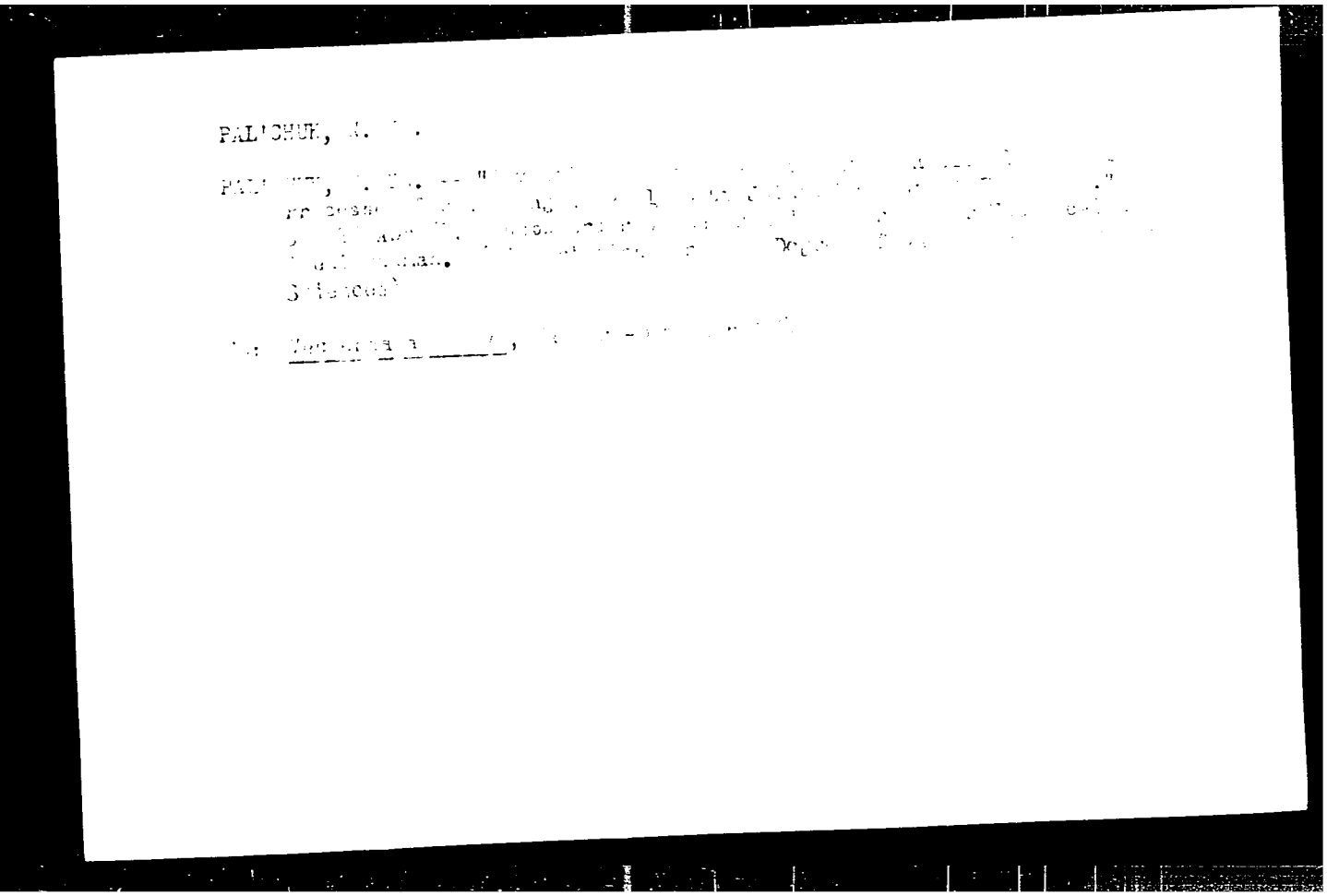


BTR

7

8502* **Investigation of Welds Between Stainless and Low-Carbon Steel.** (In Russian.) N. Yu. Palchuk. *Avtogennoe Delo*, v. 22 Dec. 1951, p. 1-4

Chemical composition, mechanical strength, and corrosion resistance of various combinations of the above were investigated. Data are tabulated and illustrated.



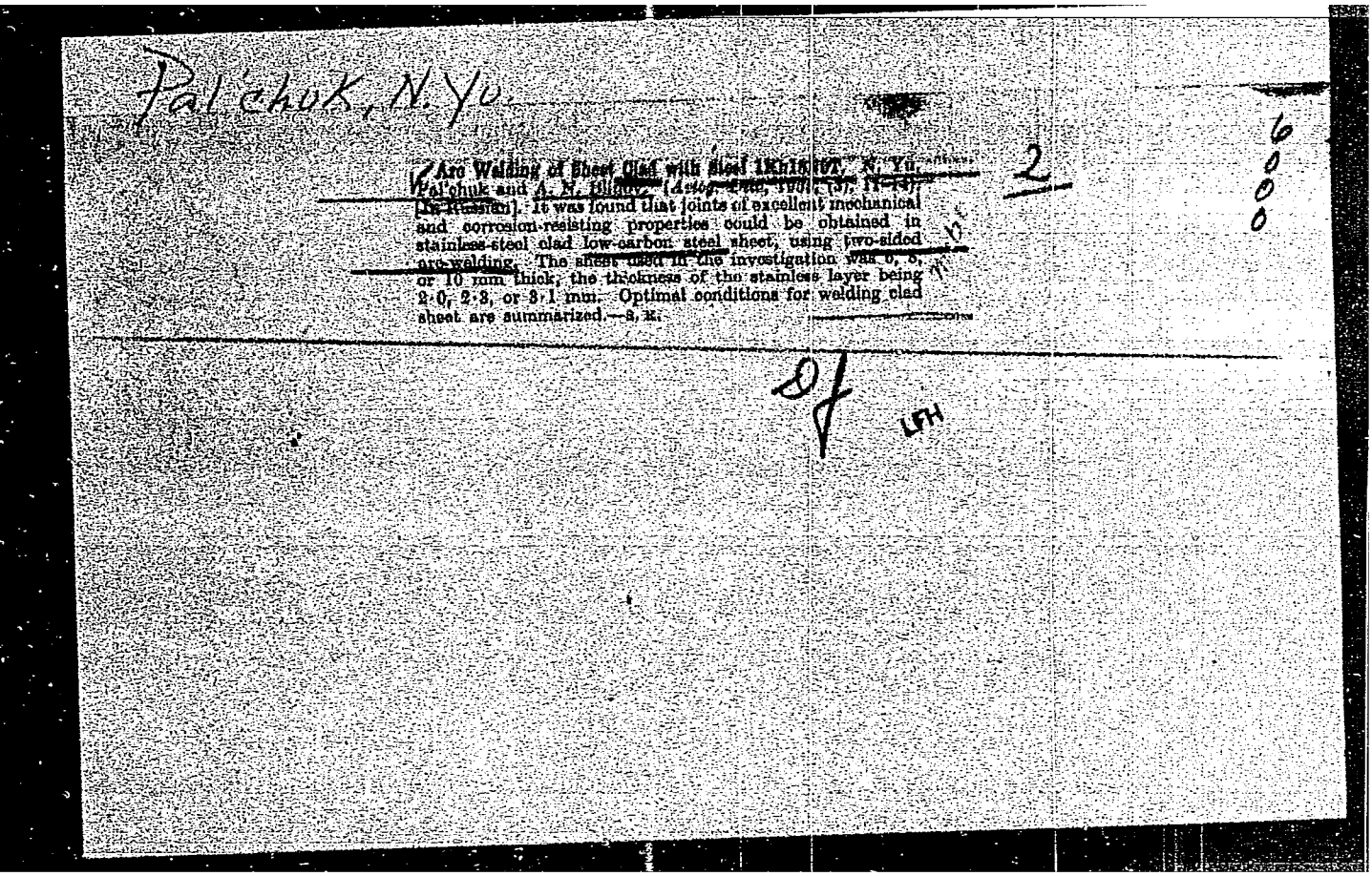
PAL'CHUK, A.

PAL'CHUK, N. YE., ENG.; MAKAROV, N. I., ENG.; MAKEYEV, M. G., ENG.; BRODOV.SH, N. V., ENG.; LIBER, M. I., ENG.

Electric Welding

Welding with electrode cluster. Avtog. delo, 23, No. 6, 1952.

9. Monthly List of Russian Accessions, Library of Congress, October 1952. Unclassified.



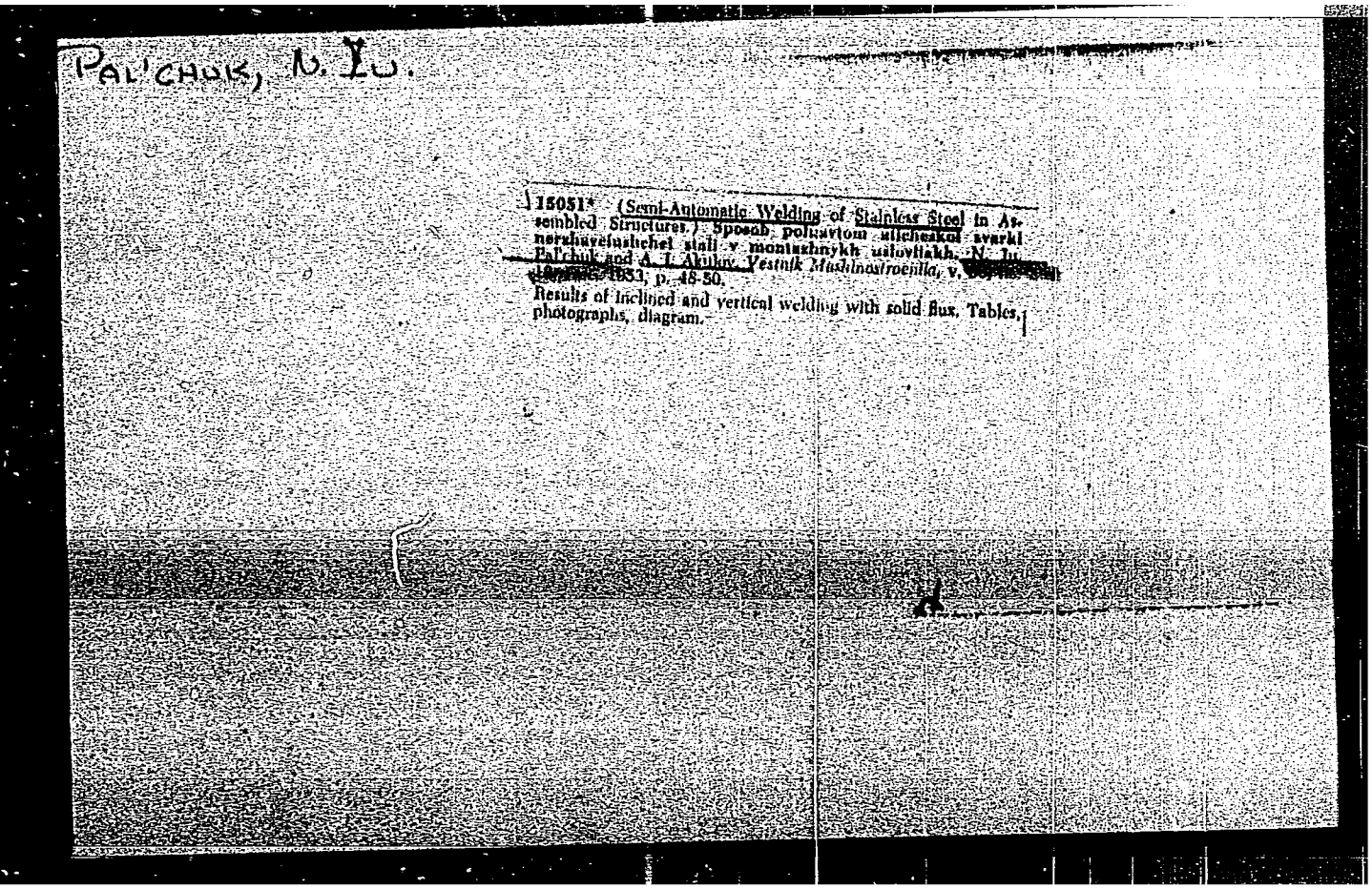
Pal'chuk, N. Yu.

Arc Welding of Sheet Clad with steel 1Kh18N9T. N. Yu. Pal'chuk and A. N. [illegible] (Avtog. delo, 1961, (5), 11-14) [In Russian]. It was found that joints of excellent mechanical and corrosion-resisting properties could be obtained in stainless-steel clad low-carbon steel sheet, using two-sided arc welding. The sheets used in the investigation was 6, 8, or 10 mm thick, the thickness of the stainless layer being 2.0, 2.3, or 3.1 mm. Optimal conditions for welding clad sheet are summarized.—S. K.

2

6 0 0 0

LFH



PAL'CHUK, N. Yu.

15051* (Semi-Automatic Welding of Stainless Steel in Assembled Structures.) Sposob polu'avtom. slicheskoi svarki nerzhaveiushchei stali v montazhnykh uzlovlakh. N. Yu. Pal'chuk and A. I. Akulov. *Vestnik Mashinostroeniia*, v. [illegible], 1953, p. 48-50.

Results of inclined and vertical welding with solid flux. Tables, photographs, diagram.

PAL'CHUK, N. Yu.

USSR

Effect of time and temperature on the intercrystalline corrosion of welds in 18-8 steels. N. Yu. Pal'chuk (Welding Lab., Ramzin Higher Tech. [illegible]). *Avtomat. Svarka Akad. Nauk Ukr. S.S.R.* 6, No. [illegible], [illegible](1953). —Welds in 18-8 steels are most susceptible to intercryst. corrosion from 650 to 780° regardless of C content or microstructure. Tests at 750° show a slight decrease in the crit. time as C is increased from 0.[illegible]% (about one min.) to 0.18% (less than 10 sec.). Time-temp. curves of resistance to corrosion are included. J. R. Beiersman

1. PAL'CHUK, N.Yu; BLINOV. A.N.

2. USSR (600)

4. Electric Welding

7. Arc welding of two-layer sheets coated with steel IKHL8N9T, N.Ya Pal'chuk, Engr. A.N. Blinov, Avtog.delo 24 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

PAL'CHUK, N.Yu., kandidat tekhnicheskikh nauk.

Welding one-sided joints of two-layer sheets with a cover of "1Kh18N9T" steel. Vest.mash. 33 no.7:63-66 Jl '53. (MLRA 6:8)

1. Svarochnaya laboratoriya Moskovskogo vysshego tekhnicheskogo uchilishcha im. Baumana. (Electric welding)

PAL'CHUK, N.Yu., kandidat tekhnicheskikh nauk; AKULOV, A.I., kandidat tekhnicheskikh nauk.

Method of semiautomatic welding of stainless steel, which is in a process of assembly. Vest. mash. 33 no.12:48-50 D '53. (MLRA 6:12)
(Welding) (Steel, Stainless)