Some diagrams of half-wave ...

feedback circuit and replaces them by transistors. After a thorough discussion of the properties of this diagram it is pointed out that the joint use of transistors and magnetic amplifiers permits working out amplifier systems satisfying all requirements regarding operational safety, quick response, minimum weight, and size, provided the amplification factors and output power are sufficiently large. There are 6 figures and 4 Soviet-bloc references.

SUBMITTED: March 4, 1960

Legend to Fig. 1: Two variants of magnetic amplifiers.
Legend to Fig. 3: 1) amplifier according to diagram in Fig. 1a.
(See next card for figs.)

Card 3/6

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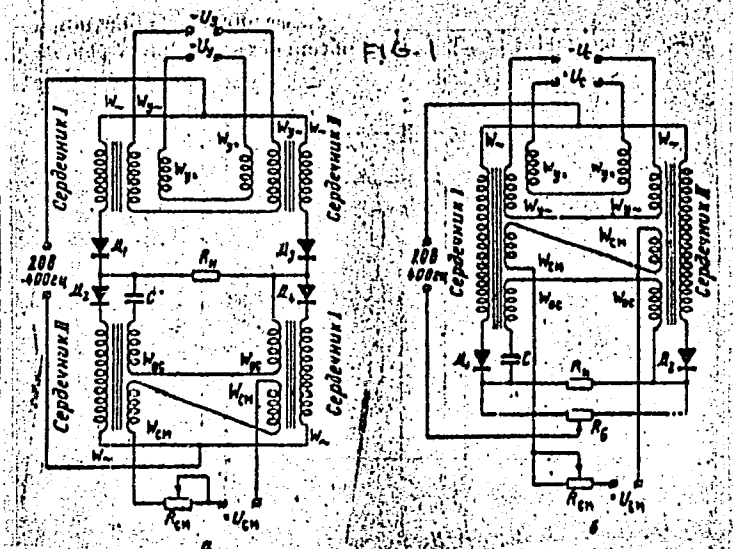
S/103/61/022/002/012/015
B019/B060

Some diagrams of half-wave ....

Fig. 1



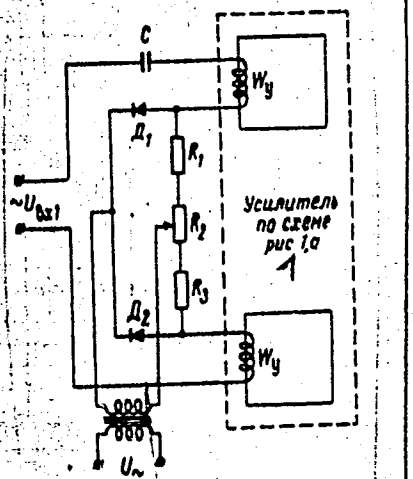


Рис. 3

Card 4/6

S/103/61/022/002/012/015
B019/B060

Some diagrams of half-wave ...

Legend to Fig. 4: High-speed push-pull magnetic power amplifier.

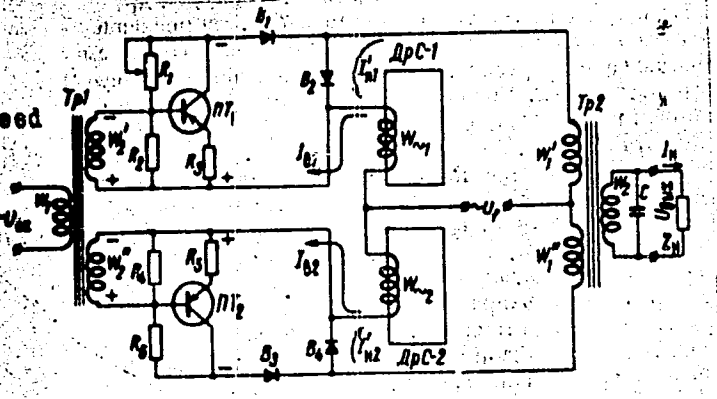
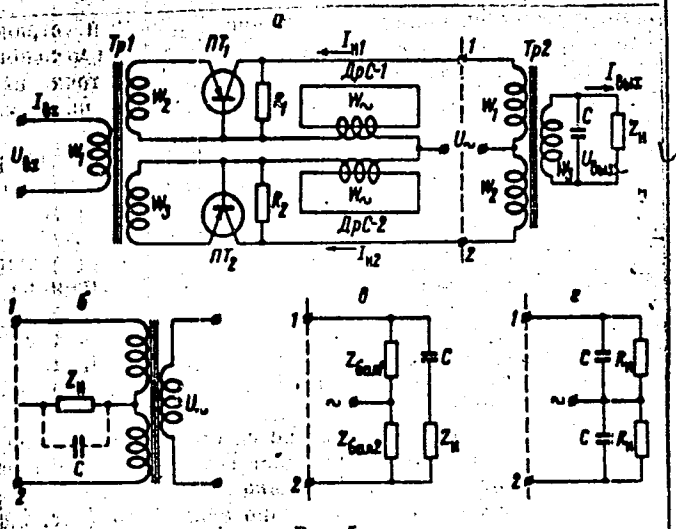


Рис. 4

Card 5/6

Some diagrams of half-wave ...

Legend to Fig. 5: Further development of diagram shown in Fig. 4.



Card 6/6

VASIL'YEV, D.V.; MITROFANOV, B.A.; RABKIN, G.L.; SAMOKHVALOV, G.N.; SEMENKOVICH, A.A.; FATEYEV, A.V.; CHICHERIN, N.I.; NORNEVSKIY, B.I., kand. tekhn. nauk, retsenzent; BEREZIN, S.Ya., nauchn. red.; SACHUK, N.A., red.; KRYAKOVA, D.M., tekhn. red.

[Calculation and design of servo systems] Proektirovanie i raschet sledíashchikh sistem. Leningrad, Izd-vo "Sudostroenie," 1964. 606 p. (MIRA 17:4)

CHICHELIN, Ye.I.

Pay daily attention to the improvement of buildings serving the cultural and everyday needs of young construction workers. Transp. stroi. 11 no.2:10-12 F '61. (MIRA 14:2)

1. Zamestitel' nachal'nika otdela Upravleniya kadrov i uchebnykh zavedeniy Mintransstroya.
(Construction workers)

ALEKSEYEV, A.G.; SIMONENKOV, Ye.A.; CHICHERIN, Yu.G.

Knurling key gaps in toothed clutches. Mashinostroitel' no.12:27-28 D '63. (MIRA 17:1)

CHICHERIN, Yu.G.

Thread-rolling conditions and the strength of rolled taps.
Stan.i instr. 33 no.1:29-30 Ja '62. (MIRA 15:2)
(Screw cutting) (Taps and dies)

CHICHERIN, Yu.G.

Comparative characteristics of ground and rolled taps made of different brands of steel. Stan.i instr. 33 no.8:31-32 Ag '62. (MIRA 15:8)

(Taps and dies—Testing)

CHICHERIN, Yu.G.

Effect of rolling conditions on the precision of screw threads. Mashinostroitel' no.9:34-35 S '62. (MIRA 15:9)
(Metalwork)

L 17447-63

ACCESSION NR: AP3004301 S/0054/63/000/005/0073/0074 45

AUTHORS: Chicherin, Yu. I.; Abrosimov, Yu. V.; Bespalova, L. T.

TITLE: Use of glass wool filters for trapping potassium tetroxide dust

SOURCE: Khimicheskaya promy*shlennost', no. 5, 1963, 73-74

TOPIC TAGS: glass wool filter, potassium, potassium tetroxide, FS-8.5 filter

ABSTRACT: Authors describe a new design of glass wool filter and its behavior when used to trap potassium tetroxide dust. This compound was selected to test the filter on account of its ability to create very severe operating conditions for the filter. Authors state that product losses amount to about 6.5 g per normal cubic meter without the use of this FS-8.5 filter. Use of this filter greatly reduces these losses. Authors then give a detailed description of the construction of this filter. Authors state that their tests showed that these filters can be effectively used for trapping different kinds of industrial dusts, including those with

Card 1/2

L 17447-63
ACCESSION NR: AP3004301

increased coalescence, at a gas temperature up to 300C. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: CH NO REF SOV: 000 OTHER: 000

Card 2/2

CHICHERIN, Yu.I.; ABROSIMOV, Yu.V.; BESPALOVA, L.T.

Use of glass fiber filters for collecting dust of potassium peroxide. Khim. prom. no.5:393-394 My '63. (MIRA 16:8)

MATYTSIN, N.; SKOTNIKOVA, O.; CHICHERINA, A.; LEVINA, L.

Bonus system for hourly workers in the sausage industry.
Mias. ind. SSSR 31 no.4:43-46 '60. (MIRA 14:7)

1. Moskovskiy myasokombinat (for Matytsin, Skotnikova, Chicherina). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut myasnoy promyshlennosti (for Levina).
(Moscow—Meat industry)
(Bonus system)

LEVINA, L.; SKOTNIKOVA, O.; CHICHERINA, A.; STOL'MAKOVA, M.

Standard norms in the meat industry. Sbor. trud 7 no.12:90-94 D '62.
(MIRA 16:2)
(Meat industry—Production standards)

GORBATOV, Vasiliy Matveyevich; CHICHERINA, Aleksandra Nikolayevna; VLASOV, Nikolay Nikolayevich; GALYATKIN, A.I., retsenzent; DROBIN, V.I., retsenzent; KORBUT, L.V., red.

[System of planned preventive maintenance and repair of meat industry equipment] Sistema planovo-preduprediteľnogo remonta oborudovaniia miasnoi promyshlennosti. Izd.2., perer. i dop. Moskva, Pishchevaia promyshlennost', 1965. 82 p. (MIRA 18:9)

38250

9.9130
3.9110

S/169/62/000/005/092/093
D228/D307

AUTHORS: Ol', A. I. and Chicherina, N. D.

TITLE: Some properties of gigantic magnetic field pulsations

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 32, abstract 5G233 (V sb. Probl. Arktiki i Antarktiki, no. 9, L., Morsk. transport, 1961, 85-87)

TEXT: Gigantic pulsations with periods of $\geqslant$125 sec and amplitudes of $\geqslant 4\gamma$ were investigated from the data of the observatories of Tikhaya Bay, Chelyuskin Cape, Dixon Island, Tiksi Bay, and Uelen for 1957-1958. The probability of pulsation genesis is greatest by day and falls almost to nil at night. The mean period of the puslations grows with a station's increasing geomagnetic latitude. This relationship is analogous to that derived by Obayashi (RZh-Geofiz, no. 6, 1960, 6991) for pulsations with shorter periods. The authors reckon that the pulsations examined by them belong to another type than that of Obayashi. The values obtained for the mean periods satisfactorily coincide with those theoretically cal-

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Card 1/2

Some properties of ...

culated on the basis of the magneto-hydrodynamic theory, in the case of the following parameters: an ion density at infinity of $N_s \cong 1/2$, $a/h_o \cong 24$, where a is the earth's radius, and h_o is the homogeneous atmosphere's height. Obayashi's data agree best with the theory if $N_s = 4$ and $a/h_o = 15$. It hence follows that in the exosphere the ionization density distribution has a different character in the inner and the outer regions of space. It is possible that these regions are associated with radiation belts, particularly with the third zone situated at a distance of ~50,000 km from the earth. [Abstracter's note: Complete translation.]

Card 2/2

YANOVSKIY, B.M.; BRYUNELLI, B.Ye.; KOVTUN, A.A.; KUZNETSOV, N.S.; RASPOPOV, O.M.; CHICHERINA, N.D.

Magnetotelluric sounding in the Central Russian Depression. Izv. AN SSSR. Ser. geofiz. no.7:999-1006 Jl '64. (MIRA 17:7)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

L 24142-65 EEC(k)-2/EWA(h)/EWT(1)/EEC(t)/EEC(m)/FCC Pi-4/Po-4/Peb GM
ACCESSION NR: AP4040738 S/0203/64/004/003/0619/0621

AUTHOR: Raspopov, O. M.; Chicherina, N. D.

TITLE: An experiment on recording geomagnetic field variations with a period of less than five seconds

SOURCE: Geomagnetizm i aeronomiya, v. 4, no. 3, 1964, 619-621

TOPIC TAGS: geomagnetic field variation, horizontal field magnetometer, short period geomagnetic variation

ABSTRACT: During 1961-1963 a horizontal-field magnetometer was developed at LGU (Leningrad State University) to measure short-period variations (less than 5 sec) in the geomagnetic field. The instrument was developed on the basis of the magnetometer designed by B. Ye. Bryunelli (S. P. Bakalinskiy, B. Ye. Bryunelli, and N. F. Krotevich. Registratsiya geomagnitnykh pul'satsiy vysokochuvstvitel'nym magnitometrom. Inform. byull. MGG, 1959, no. 7; B. Ye. Bryunelli, Vysokochuvstvitel'nyy H-magnitometr. Elektromagnitnoye zondirovaniye i magnitnotelluricheskiye metody razvedki. Materialy Vsesoyuzn. confer., Aprel' 1961, Izd. LGU, 1963). A first model used single-string suspension with a natural period of 1-2 seconds.

Card 1/3

L 24142-65
ACCESSION NR: AP4040718

A later modification used metallic tension wires. In 1963 the latest form employed quartz tension wires. This instrument has high operating stability and a small temperature coefficient (V.N. Bobrov, Universal'nyy vysokostabil'nyy chuvstvitel'nyy element s nulevym temperaturnym koeffitsientom dlya magnitometrov, variometrov i mikrovariometrov, registriruyushchikh lyubuyu komponentu zemnogo magnitnogo polya. Voprosy zemnogo magnetizma. Tr. IZMIRAN, 1963, no. 18, 28). The characteristics are: scale divisions of 30 gammas/mm, a period of torsional oscillation of 0.3 sec, and a magnetic moment of 4 CGSM units. The small size of the magnetic system yields parasitic mechanical oscillations much smaller than in previous designs. They are on the order of 0.1-0.15 sec. The instrument permits recording of fluctuations with periods as low as 0.15-0.2 sec, but this possibility has not been reached in practice. Because of its sensitivity, the noise level is on the same order as the amplitude of the desired signal in this range (0.02-0.4 gammas). Periods greater than 0.3 sec, however, can be recorded much more readily, with acceptable accuracy. With a filter system, precision may lie within the limits of 0.005-0.006 gammas. Orig. art. has: 2 figures.

Card 2/3

L 24142-65

ACCESSION NR: AP4040718

ASSOCIATION: Leningradskiy Gosudarstvennyy universitet, Kafedra fiziki Zemli (Leningrad State University, Department of Earth Physics)

SUBMITTED: 29Nov63 ENCL: 00 SUB CODE: ES

NO REF SOV: 008 OTHER: 000

Card 3/3

BRYUNETTI, B.Ye.; KOVTUN, A.A.; KUZNETSOV, N.S.; RASPOPOV, O.M.; CHICHERINA, N.D.; YANOVSKIY, B.M.

Studying the structure of the Central Russian Depression by the magnetotelluric method. Uch. zap. LGU no.324:3-16 '64
(MIRA 18:4)

GEL'PERIN, N.I.; PEBALK, V.L.; CHICHERINA, T.G.

Packed pulse columns for extraction. Khim. prom. no.2:111-115 F '63. (MIRA 16:7)

(Packed towers) (Extraction(Chemistry))
(Mass transfer)

GEL'PERIN, N.I.; PEBALK, V.L.; ZAMYSHLYAYEV, V.G.; CHICHERINA, T.G.

Cylindrical mixer-sedimentation extractor. Zhur.VKHO 10 no.4:462-463 '65. (MIRA 18:11)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii imeni M.V.Lomonosova.

GEL'PERIN, N.I., doktor tekhn.nauk; PEBAIK, V.L., kand.tekhn.nauk; CHICHERINA, T.G., kand.tekhn.nauk; SHASHKOVA, M.N., inzh.

Horizontal multistage atomizing extractor. Khim. i neft. mashinostr. no.9:1-3 S '65. (MIRA 18:10)

L 5477-65 EPF(c)/EPR/EWT(m)/EWP(i)/EWP(b)/T/EWA(d)/EWP(w)/EWP(t) Ps-4
IJP(c) JD/WB

ACCESSION NR: AR5014031 UR/0277/65/000/003/0013/0013
666.715:620.194.8

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidroprivod. Otdel'nyy vypusk, Abs. 3.48.95

AUTHOR: Vedenkin, S.G.; Sarycheva, G.S.; Komissarova, V.S.; Chicherina, Ye.A.

TITLE: Corrosion fatigue strength of aluminum alloys

CITED SOURCE: Sb. Korrozion. ustalost' metallov. L'vov, Kamenyar, 1964, 194-202

TOPIC TAGS: aluminum alloy, alloy fatigue strength, alloy corrosion, shot peening method, sodium chloride, alloy hardening

TRANSLATION: The author presents the results of attempts to define the fatigue strength of a number of aluminum alloys by alternate or total submersion of the sample in 0.001 or 3% sodium chloride. The fatigue strength of the tested alloys decreased by 40 to 60% in 3% NaCl solution, when compared to tests in the atmosphere, the reduction being much less in the 0.001% solution. Shot peening improved the fatigue and corrosion fatigue strengths of the alloys and represents an effective method of hardening aluminum alloys. Three tables.

Card 1/1

SUB CODE: MM ENCL: 00

CHICHERNIKOV, V. I., and VOLKOV, D.I. (Moscow)

"Magnetic Properties of Alloys Over the Curie Temperature," a paper submitted at the International Conference on Physics of Magnetic Phenomena, Sverdlovsk, 23-31 May 56

ACC NR: AP6019111 SOURCE CODE: UR/0016/65/000/011/0006/0009

AUTHOR: Mukhamedov, S. M.; Chichenina, Z.M.; Aleynikova, A.F.

ORG: Uzbek Institute of Regional Medicine, AMN SSSR (Uzbekskiy institut krayevoy meditsiny AMN SSSR); Uzbek Republic Sanitary-Epidemiological Station (Uzbekskaya respublikanskaya sanitarno-epidemiologicheskaya stantsiya

TITLE: Characteristics of Brucella strains isolated from humans and animals in Uzbekistan

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 11, 1965, 6-9

TOPIC TAGS: brucellosis, bacteria, bacteriology

ABSTRACT: Study of Brucella cultures isolated from cattle, sheep, and goats and from humans showed that 100 out of 161 were typical representatives of Br. melitensis (62.1%) while 31 were typical Br. abortus (19.1%). Atypical properties were noted in 19 cultures of Br. melitensis (11.1%) while 11 cultures were typed Br. abortus (6.7%). The Br. melitensis strains isolated from the sheep and goats were generally typical representatives of this species of Brucella. Of the cultures isolated from cattle, 14.6% of the Br. melitensis strains and 13.4% of the Br. abortus strains were atypical. Among the Br. melitensis cultures isolated from sick people, 11.2% were atypical. These were obtained from individuals handling cattle on farms where brucellosis was prevalent. Orig. art. has: 2 tables. [JPRS]

SUB CODE: 06/ SUBM DATE: 16Jun64/ ORIG REF: 004/

UDC: 576.851.42.01 (575.1)

Card 1/1

CHICHERNIKOV, V.I.

Paramagnetic susceptibility of Ni - Ag and Ni - W alloys. Vest.Mosk.un. Ser.mat.,mekh.,astron.,fiz.,khim. 13 no.4:143-146 '58.
(MIRA 12:4)

1. Kafedra magnetizma Moskovskogo universiteta.
(Nickel-silver alloys--Magnetic properties)
(Nickel-tungsten alloys--Magnetic properties)

CHICHERNIKOV, V. I., VOL'KENSHTEYN, N. V., and BELOV, K. P.,

"Magnetic and electric properties of rare-earth metals and their alloys."

report presented at the Conf. on New Trends in the Study and Applications of Rare Earth Metals, Moscow, 18-20 Mar 63

CHICHEROV, L.G.

SHISHCHENKO, R.I.; KAS'YANOV, V.M., kandidat tekhnicheskikh nauk, dotsent, retsenzent; CHICHEROV, L.G., inzhener, retsenzent.

[Petroleum producing machinery and mechanisms] Neftepromyslovye ekspluatatsionnye mashiny i mekhanizmy. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954. 343 p. (MLRA 7:8)
(Petroleum industry--Equipment and supplies)

CHICHEROV, L. G.

AID P - 3818

Subject : USSR/Mining

Card 1/2 Pub. 78 - 6/25

Authors : Kazak, A. S., I. I. Rosin and L. G. Chicherov

Title : Some results of tests with hydraulic rodless piston pumps

Periodical : Neft. khoz., v. 33, #11, 34-38, N 1955

Abstract : The author describes tests with the rodless hydraulic pumping equipment operated in well shafts by circulation of oil under pressure from a high-duty pump at the surface. This pumping system consists of a hydraulic power unit on the surface, a hydraulically-actuated piston pump suspended below the fluid level in the well, and a high-pressure hydraulic transmission tubing connection between the power unit on the surface and the submerged well pump. Advantages of such pumping system are: higher efficiency through the elimination of the inefficient sucker rod connection, especially in deep wells, and a more convenient pumping operation,

Neft. khoz., v. 33, #11, 34-38, N 1955 AID P - 3818

Card 2/2 Pub. 78 - 6/25

especially in crooked and deflected holes. The present rodless hydraulic pumping units proved to be not quite satisfactory and therefore better construction, more solid parts, and better design are necessary. Diagrams, charts.

Institution : Test Construction Bureau (OKB)

Submitted : No date

Chicherov, L.G.

93-6-8/20

AUTHOR: Nikulichev, Ye. P. and Chicherov, L.G.

TITLE: Standard Series of Submersible Centrifugal Electric Pumps (Normal'nyy ryad pogruzhnykh tsentrobezhnykh elektronasosov)

PERIODICAL: Neftyanoye khozyaystvo, 1957, Nr 6, pp. 27-32 (USSR)

ABSTRACT: Oil well exploitation by means of rodless submersible electric pumps results in higher yields, longer runs without repairs, and lower cost of production. The superiority of these pumps over rod pumps has been experimentally established at the Petroleum Production Administration of the Oktyabr'skiy Petroleum Industry (NPU Oktyabr'neft) belonging to the State All-Union Association of the Groznyy Oil and Gas Industry (ob"yedineniye Groznefť) and at the Petroleum Production Administration of the Ordzhonikidze Petroleum Industry (NPU Ordzhonikidzeneft') subordinate to the Ministry of the Petroleum Industry of the Azerbaydzhan SSR, also at the TsNIITEneft' Institute, and at the Special Design Bureau for ram pumps (OKB po besshtangovym nasosam). At present the limited number of standard type (5-6) submersible electric pumps does not satisfy oil field demand and in order to solve this problem the OKB for rodless pumps has prepared specifications for a standard series of submersible electric pumps. Fig. 1 shows the method by which the dimensions of submersible pumps and electric motors were determined for wells with casing strings of 5 3/4",

Card 1/

Standard Series of Submersible Centrifugal Electric Pumps (cont)

6 5/8", and 8 5/8" and minimum inside diameters of 122, 144, and 194 mm. respectively. For wells with a 7" casing string, the same pumps as for 5 3/4 and 6 5/8" casing strings were recommended, and for wells with casing string of more than 8 5/8" any pump of the new standard series will do. Table 1 gives the diameters of the pumps and submersible electric motors. The efficiency of the pumps was calculated with the aid of OKB formulas derived by experiments and verified by testing the stages of small dimension pumps. It was established that the full efficiency of a submersible pump varies from 40 to 60 per cent depending on the dimension and delivery of the pump (Table 2). The approximate maximum motor capacity for wells with 5", 6", and 8" casing strings was established as 40,100, and 190 kw., respectively. The length of a pump or motor was established as 7 m. The maximum head of a pump was calculated from data on a duplex or triplex pump powered by one electric motor. The possibility of coupling pumps was tested using the EN-70-1500 and EN-40-1000 pumps. The main parameters of pumps for wells with 5", 6", and 8" casing strings were established on the basis of the above calculations. Some of these parameters are given in Table 2. Determination of pump delivery and head made it possible to present graphically the ranges of application for electric pumps (Figs. 2, 3, 4). These charts show by means of A.N. Adonin curves the application ranges of rod and electric pumps for wells with

Standard Series of Submersible Centrifugal Electric Pumps (cont) 93-6-8/20

various casing strings. Calculations for the boundary curve took into account the use of a SKN-10-3012 (5N K-7) pump jack. On the basis of all the data it was decided to approve 15 types of pumps differing in delivery and permissible cross section. Each type is classified according to volume delivery (Table 3). For example, pumps for wells with a 5" casing string will deliver 20-200 cu. m. of fluid per day and so on. The pumps differ in head by 100-350 m. All 105 standard specification pumps are based on 15 types of stages. The housing for all standard specification comes in three diameters, 92, 114, and 150 mm. Housing of 92 and 114 mm in diameter is divided by length into four sizes and housing with a diameter of 150 mm. comes in seven sizes, three of them of the same size as the housing of 92 and 114 mm. in diameter. This makes it possible to standardize other pump parts (shafts, packers). This standardization should reduce the cost of pump production and individual pumps, as well as facilitate pump use and repair. Furthermore, this will make possible the designing of new standard specification pumps required by oil fields. There are three tables and four figures.

AVAILABLE: Library of Congress

Card 3/3

ALIVERDIZADE, K.S.; DANIYELYAN, A.A.; DOKUMENTOV, V.I.; IBATULOV, A.K.; PAKHLAVUNI, V.O. [deceased]; CHICHEROV, L.G.; YURKEVSKIY, S.V.; GOR'KOVA, A.A., vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Calculations and designs for equipment for the exploitation of oil wells] Raschet i konstruirovanie oborudovaniia dlia ekspluatatsii neftianykh skvazhin. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 560 p. (MIRA 12:6)
(Oil wells--Equipment and supplies)

11(4)

PHASE I BOOK EXPLOITATION SOV/2476

Aliverdizade, K.S., A.A. Daniyelyan, V. I. Dokumentov, A.K. Ibatulov, V.O. Pakhlavuni (Deceased), L.G. Chicherov, and S.V. Yurkevskiy

Raschet i konstruirovaniye oborudovaniya dlya ekspluatatsii neftyanykh skvazhin (Design and Construction of Equipment for Oil Well Exploitation) Moscow, Gostoptekhizdat, 1959. 652 p. Errata slip inserted. 3,500 copies printed.

Exec. Ed.: A.A. Gor'kova; Tech. Ed.: E.A. Mukhina.

PURPOSE: This book is intended for engineers and technicians of oilfields, machine-building and repair plants, and scientific research institutes. It may also be useful to students of petroleum vuzes and departments.

COVERAGE: The authors discuss calculation and design principles of equipment used in oil well operation. In some instances the design of production equipment is also discussed. No personalities are mentioned. There are 66 references, all Soviet.

Card 1/4

TABLE OF CONTENTS:

Design and Construction of Equipment (Cont.) SOV/2476

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Design and Construction of Equipment (Cont.) SOV/2476

AVAILABLE: Library of Congress

Card 4/4

TM/gmp
10-23-59

ABRAMOV, M.A.; ALIVERDIZADE, K.S.; AMIROV, Ye.M.; ARENSON, R.I.; ARSEN'YEV, S.I.; BAGDASAROV, R.M.; BAGDASAROV, G.A.; BADAMYANTS, A.A.; DANIYELYAN, G.N.; DZHAPAROV, A.A.; KAZAK, A.S.; KERCHENSKIY, M.M.; KONYUKHOV, S.I.; KRASNOBAYEV, A.V.; KURKOVSKIY, A.I.; LALAZAROV, G.S.; LARIONOV, Ye.P.; LISTENGARTEN, M.Ye.; LIVSHITS, B.L.; LISIKYAN, K.A.; LOGINOVSKIY, V.I.; LYSENKOVSKIY, P.S.; MOLCHANOV, G.V.; MAYDEL'MAN, N.M.; OKHON'KO, S.K.; ROMANIKHIN, V.A.; ROSIN, I.I.; RUSTAMOV, E.M.; SARKISOV, R.T.; SKRYPNIK, P.I.; SOBOLEV, N.A.; TARATUTA, R.N.; TVOROGOVA, L.M.; TER-GRIGORYAN, A.I.; USACHEV, V.I.; FAYN, B.P.; CHICHEROV, L.G.; SHAPIRO, Z.L.; SHEVCHUK, Yu.I.; TSUDIK, A.A.; ABUGOV, P.M., red.; MARTYNOVA, M.P., vedushchiy red.; DANIYELYAN, A.A.; TROFIMOV, A.V., tekhn.red.

[Oil field equipment; in six volumes] Neftianoe oborudovanie; v shesti tomakh. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.3. [Petroleum production equipment] Oborudovanie i instrument dlia dobychi nefti. 1960. 183 p.
(MIRA 13:4)

(Oil fields--Equipment and supplies)

ROSIN, I.I., KAZAK, A.S., CHICHEROV, L.G.

Use of hydraulic piston pumps in 1958-1959. Neft. khoz. 38 no.6:24-27 Je '60. (MIRA 13:7)
(Oil well pumps)

CHICHEROV N.N.

KRYMSKIY, V.A., insh.; CHICHEROV, N.N., insh.

New clamping chucks. Mashinostroitel' no.9:29-30 S '57. (MLRA 10:9)
(Chucks)

CHICHENOV, P.P.

Determination of an economic value of the power of auxiliary reserve in electric power plants. Izv. SO AN SSSR no.10:24-33 '63. (MIRA 17:11)

1. Tomskiy politekhnicheskiy institut.

CHICHEROV, V. I.

Folklore

Depraved views of N. IA. Marr and his followers in the field of folklore. Sov. etn. No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

1. CHICHEROV, V. I.

2. USSR (600)

4. Epic Poetry

7. Problems of the theory of the epos and contemporary investigations of the Narty legends of the Ossets. Izv. AN SSSR. Otd.lit. i iaz. 11 No. 5, 1952.

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

CHICHEROV, V. I., Prof.

Folk Literature

Problems of studying creative works of the peoples of the U.S.S.R., Vest. AN SSSR 22, No. 12, 1952.

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

CHICHEROV, V. I.

Folk Literature

Outline of Russian folk poetry of the Soviet era. Reviewed by V. I. Chicherov. Sov. kniga No. 2, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

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Problems of the study of epic poetry of the Soviet nations. I. Tr. from the Russian. p. 219.
CESKOSLOVENSKA ETHNOGRAFIE. Praha.
Vol. 3, no. 3, 1955

SOURCE: Monthly List of East European Accessions (EEAL), LC, Vol. 5, No. 3, March 1956

CHICHEROV, V.

GEOGRAPHY & GEOLOGY

PERIODICAL: CESKY LID. Vol. 42, no. 5, 1955

CHICHEROV, V. The struggle of the Soviet science of folklore against remnants of the liberalistic burgeouis theories. Tr. from Russian (Conclusion) p. 201.

Monthly List of East European Accessions(EEAI) LC, Vol. 8, No. 2, Feb. 1959, Unclass.

DUSHKOV, I.I.; MOLCHANOV, V.A.; TEL'KOVSKIY, V.G.; CHICHEROV, V.M.

Some angular relationships in cathode sputtering. Zhur.tekh.fiz. 31 no.8:1012 Ag '61. (MIRA 14:8)
(Sputtering (Physics))

S/020/61/137/001/010/021
B104/B209

AUTHORS: Molchanov, V. A., Tel'kovskiy, V. G., and Chicherov, V. M.

TITLE: Anisotropy of cathode sputtering of single crystals

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 1, 1961, 58-59

TEXT: This article presents the results of measurements concerning the dependence of the sputtering coefficient of the (100) face of nickel and copper single crystals on the angle of incidence of ions. The experimental setup has been described in an earlier paper (Ref. 3: V. A. Molchanov, V. G. Tel'kovskiy, Vestn. Moskovsk. univ., v. 1 (1956)). Sputtering was done with singly-ionized 27-kev argon ions; current density was 1-2 ma/cm^2. The single crystals were polished and then annealed for some time in a vacuum furnace at about 800°C. After this, they were slowly cooled down to room temperature, and their surfaces were chemically etched. Surface condition and orientation of the crystals were examined by X-ray structural analysis. The sputtering coefficients (atoms/ion) are plotted versus the angle of incidence in Figs. 1 and 2. Curve 1 in Fig. 2 was taken at a Cu single crystal, curve 2 in Fig. 2 at polycrystalline copper.

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The results of analogous measurements with a nickel single crystal are shown in Fig. 3. The results found with these two single crystals are very complicated. The position of the minima is the same for both single crystals and corresponds to the angles of incidence of the ion beam, which coincide with the crystallographic axes (100), (111), and (112). The authors note the non-monotonic dependence of secondary-electron emission on the angle of incidence which differs for copper by more than twice the amount at an angle of incidence of 36° and 48°. The single crystals used in the experiments described here were grown at the Institut kristallografii AN SSSR (Institute of Crystallography AS USSR) under the supervision of V. A. Timofeyeva, who is thanked by the authors. Moreover, the authors thank Ye. V. Kolontsova, I. V. Telegina, and N. A. Khatanova for having determined the orientation of the single crystals, as well as I. I. Dushkov for assistance. There are 3 figures and 4 references: 3 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics of Moscow State University imeni M. V. Lomonosov)

Anisotropy of cathode...

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B104/B209

PRESENTED: December 17, 1960, by L. A. Artsimovich, Academician

SUBMITTED: December 10, 1960

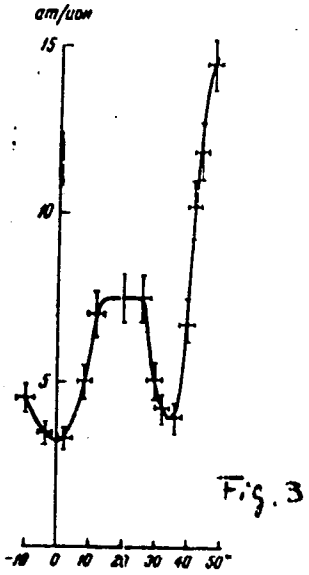

Fig. 3

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24,7200

AUTHOR: Molchanov, V. A., Tel'kovskiy, V. G., and Chicherov, V. M.

TITLE: Angular distribution of sputtered particles in irradiation of a single crystal by an ion beam

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 4, 1961, 824 - 825

TEXT: The experiments reported here were made with an experimental arrangement described in one of the authors' previous papers (Vestn. Mosk. univ., no. 1, (1961)) and schematically shown in Fig. 1. The ion beam 1 passes a diaphragm 2 and hits the crystal 3. As a collector served the base of the X-ray film which was attached either to a plane (4a) or a curved (4σ) copper plate. Fig. 2 shows a photograph of the deposits on the collector, obtained in the irradiation of the (100) plane of a copper single crystal with an argon beam of the energy of 27 kev. The four symmetric patterns correspond to the crystallographic axes [110], and the fifth in the center to the [100] axis. The arrows give the directions in which the deposits were photometrically determined. Figs. 3 and 4 show the results. The different curves correspond

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to different R, d (d = diameter of the ionic beam on the crystal), and angles of incidence α of the ionic beam. As can be seen, a considerable part of the atoms leaving the target lie within narrow cones whose axes coincide with the crystallographic principal axes of the target. The angular half-width is 20°. The authors state that the "intensity" of the Wehner patterns greatly depends on the angles between the crystallographic principal axes and the sectional plane of the crystal. If the sectional plane of the crystal is none of the crystallographic principal planes, then the more intensive patterns lie in the directions forming smaller angles with the normal of the sectional plane. The authors thank I. A. Shakh-Melikova for assistance in the experiments. There are 4 figures and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc. The 2 references to English-language publications read as follows: G. K. Wehner, Phys. Rev., 102, 690 (1956); G. K. Wehner, G. S. Anderson, J. Appl. Phys., 31, 2305 (1960).

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Angular distributions ...

ASSOCIATION: Nauchno-issledovatel'skiy institut yadernoy fiziki Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Scientific Research Institute of Nuclear Physics of Moscow State University imeni M. V. Lomonosov)

PRESENTED: March 4, 1961, by L. A. Artsimovich, Academician

SUBMITTED: February 28, 1961

Card 3/6

EWT(l)/EWT(m)/EWP(t)/ETI IJP(c) AT/JD
ACC NR: AP6033553 SOURCE CODE: UR/0181/66/008/010/2939/2944

AUTHOR: Yevdokimov, I. N.; Molchanov, V. A.; Odintsov, D. D.; Chicherov, V. N.

ORG: Moscow State University im. M. V. Lomonosov (Moskovskiy gosudarstvennyy universitet)

TITLE: Effect of thermal fluctuations in a crystal lattice on the coefficient of ion-electron emission

SOURCE: Fizika tverdogo tela, v. 8, no. 10, 1966, 2934-2944

TOPIC TAGS: crystal, crystal lattic, ion emission, electron emission, monocrystal, polycrystal, copper

ABSTRACT: The dependence of the coefficient of ion-electron emission γ on the angle of incidence ϕ of ions on a target at 200 and 900C was investigated for various orientations of a copper monocrystal and for a polycrystal copper target under bombardment by $^{20}Ne^+$, $^{40}A^+$, $^{84}Kr^+$ ions with an energy of 30 kev. The polycrystal target was found to have an almost constant value at different target temperatures (at the same angle of ion incidence on the target). An increase in monocrystal target temperature results in a smoothing out of anisotropy in the coefficient of emission. Furthermore, the change in the form

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ACC NR: AP6033553

of the curve is different for different orientations of the target. The authors show that the results obtained are accurately described by the transparency model. The authors thank Ye. S. Mashkov for his assistance in conducting the experiments and for discussing the results obtained, and Yu. V. Martynenko for his discussion of the results. Orig. art. has: 2 figures. [Author's abstract]

SUB CODE: 20/ SUBM DATE: 23Feb66/ ORIG REF: 003/ OTH REF: 005

AP6018731 SOURCE CODE: UR/0057/66/036/006/1055/1057

AUTHOR: Chicherov,V.M.

ORG: none

TITLE: Density distribution of hydrogen in a coaxial plasma gun before application of high voltage to the electrodes

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6, 1966, 1055-1057

TOPIC TAGS: plasma gun, hydrogen, gas diffusion, charge exchange, GAS DENSITY

ABSTRACT: The density distribution of hydrogen within a coaxial plasma gun has been measured at different times following admission of the gas, with the aid of beams of 4 to 10 keV H^+ and He^+ ions, using a technique described elsewhere by O.V.Kozlov, et al. (Diagnostika plazmy puchkami atomov i ionov. V sb. "Diagnostika plazmy", Cosatomizdat, 1963). The measurements were undertaken in the hope of improving our understanding of the dependence of the properties of plasma bursts from coaxial plasma guns on the delay time between admission of the gas and application of the potential. The diameters of the plasma gun electrodes were 3 and 7.5 cm. Approximately 0.2 cm^3 of hydrogen was admitted to the evacuated plasma gun for each measurement and the density of the hydrogen was determined at a selected position along the gun from the attenuation of the ion beam was due mainly to charge exchange collisions. From 125

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ACC NR: AP6018731

to 150 microsec after the gas valve was opened the mean hydrogen density within a centimeter or two of the point of admission was a few times 10^{15} atom/cm^3. Thereafter the gas expanded along the gun with thermal velocities and streamed out the end of the gun (4 cm from the point of gas admission), forming a gas cushion with an effective thickness of the order of 10^{16} atom/cm^2. The number of high energy protons in the plasma burst can be drastically reduced by charge exchange collisions while the plasma traverses this cushion of neutral hydrogen. The author thanks E.N.Braverman for constructing the apparatus, N.G.Koval'skiy for valuable discussions and advice, and S.N.Zbonkov for assistance with the work. Orig. art. has: 2 figures.

SUB CODE: 20 / SUBM DATE: 27Aug65 / ORIG. REF: 004 / OTH REF: 002 /

Card 2/2 hs

SERYY, Igor' Sergeyevich; CHICHEV, Yu.I., red.

[Measuring gauges and instruments in repair shops] Izmeritel'nyi instrument i pribory v remontnoi masterskoi. Moskva, Kolos, 1964. 83 p. (MIRA 17:12)

NOVOBRANTSEV, F.K., kand. tekhn. nauk; CHICHEV, Yu.I., red.;
OKOLELOVA, Z.P., tekhn. red.

[Mechanization on swine farms] Mekhanizatsiia na svinovodcheskikh fermakh. Moskva, Sel'khozizdat, 1963. 142 p.
(MIRA 17:3)

GOL'TSOV, A.A.; DUDOROV, I.T.; KOLOMIYETS, A.A.; RAZLUKINA, M.L.; KURZINA, I.A., red.; CHICHEV, Yu.I., red.

[Vegetable farming in a mechanized vegetable-gardening brigade; experience with A.L.Karputtseva's brigade ("Bolshevik" State Farm in Moscow Province)] Vozdelyvanie ovoshchei v mekhanizirovannoi ovoshchevodcheskoi brigade; opyt brigady A.L.Karputtsevoi (sovkhoz "Bol'shevik" Moskovskoi oblasti) Moskva, Kolos, 1965. 134 p. (MIRA 18:7)

KALINOVSKIY, N.F.; LEVITANUS, A.D.; KHODULIN, Yu.A.; CHICHEV, Yu.I., red.; GREBTSOV, P.P., red.

[DT-20 tractor] Traktor DT-20. Moskva, Kolos, 1965. 254 p. (MIRA 18:8)

ARTEM'YEV, Yu.N.; VOLGIN, I.V.; GAL'PERIN, A.S.; DYADYUSHKO, V.P.; KAPLUN, I.B.; LAVRISHCHEV, V.N.; NEFEDOV, B.B.; TEL'POV, A.S.; CHICHEV, Yu.I., red.

[Control of technical conditions of tractor parts in repairing; a handbook. Traktors DT-54, DT-54A, T-75, "Belarus'," T-40, T-28, DT-14, DT-14A, DT-14B, DT-20, self-propelled chassis DVSSh-16 and T-16] Kontrol' tekhnicheskogo sostoianiia traktornykh detalei pri remonte; spravochnik. Traktory DT-54, DT-54A, T-75, "Belarus'," T-40, T-28, DT-14, DT-14A, DT-14B, DT-20, samokhodnye shassi DVSSh-16 i T-16. Moskva, Kolos, 1965. 471 p. (MIRA 18:4)

SOV/115-59-5-5/27

28(2)
AUTHOR: Chicherova, A.S.

TITLE: Measuring Inner Cones with Universal Instruments

PERIODICAL: Izmeritel'naya Tekhnika, 1959, Nr 5, pp 7-8 (USSR)

ABSTRACT: To gage finite openings indicating internal measuring instruments NI of the "Kalibr" plant are used in connection with rod-operated instruments to measure depth. The same principle was applied in the construction of the instruments PK-32 and PK-33 of "LIZ" Plant. In both cases there are two potential sources of error in regard to the diameter; one lies in the tilting of the instrument, the other one in the rounding of the tracers. The size of the error is given in the equation (1). The error which results for "Kalibr" is shown in table 1. Table 2 and 3 show error of "LIZ" instruments. Fig.2 illustrates error in rounding. Fig.3 shows origin of error caused by tilting. Fig.4 shows trigonometrical dependency for formula G. (2). Equation (3) yields actual diameter of steep cones measured according to the "LIZ" method. There are 4 diagrams and 3 tables.

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OS'KIN, Aleksandr Ivanovich; KRYUKOV, V.L., red.; CHICHEVA, L.I., red.; TRUKHINA, O.N., tekhn. red.

[Over-all mechanization of rice cultivation] Kompleksnaia mekhanizatsiia vozdelyvaniia risa. Moskva, Izd-vo sel'khoz.litry, zhurnalov i plakatov, 1961. 111 p. (MIRA 14:11)
(Rice) (Farm mechanization)

YERMOKHIN, Georgiy Ivanovich; FILATOV, Leonid Sergeyevich; CHICHEVA, L.I., red.; PEVZNER, V.I., tekhn. red.

[Small-scale mechanization in agriculture]Malaia mekhanizatsiia v sel'skom khoziaistve. Moskva, Sel'khozizdat, 1962. 132 p. (MIRA 16:3)

(Agricultural machinery)

KOVAL', I.A.; VAKHTEL', V.Yu.; YEREMENKO, B.S.; CHICHEVA, L.I., red.; SOKOLOVA, N.N., tekhn. red.

[Standardized diesel engine for tractors and combines]Unifitsirovannyi dizel' dlia traktorov i kombainov. Moskva, Sel'khozizdat, 1962. 222 p. (MIRA 16:2)
(Tractors--Engines)
(Combines (Agricultural machinery))--Engines)

VALUYEV, V.V.; MAKSUTOV, R.N.; MATYUTO, N.A.; YAKERSON, S.A.; CHICHEVA, L.I., red.; OKOLELOVA, Z.P., tekhn.red.

[Mechanization of the preparation and placement in soil of peat fertilizers] Mekhanizatsiia zagotovki i vneseniia v pochvu torfianykh udobrenii. Moskva, Sel'khozizdat, 1963. 101 p. (MIRA 17:1)

SHEVCHENKO, Stepan Ivanovich; CHICHEVA, L.I., red.; SOKOLOVA, N.N., tekhn. red.

[Mechanization of straw harvesting] Mekhanizatsiia uborki solomy. Moskva, Sel'khozizdat, 1963. 111 p. (MIRA 16:6)
(Straw--Harvesting)

BARILL, A.V.; MESHCHERYAKOV, V.A.; CHICHEVA, L.I., red.; BELOVA, N.N., tekhn. red.

[Wide-range reaping units] Shirokozakhvatnye zhatvennye agregaty. Moskva, Sel'khozizdat, 1963. 190 p. (MIRA 16:9)
(Grain--Harvesting) (Mowing machines)

VERBUK, R.M.; GAYDUCHENKO, N.P.; KRIVOKOBYL'SKIY, V.F.; POLYAKOV, M.L.; CHICHEVA, L.I., red.; TRUKHINA, O.N., tekhn. red.; OKOLEL[redacted], tekhn. red.

[Dismantling, assembly and repair of SMD engines] Razrabotka, sborka i remont dvigatelei SMD. Moskva, Sel'khozizdat, 1963. 174 p. (MIRA 16:9)
(Diesel engines—Maintenance and repair)

VODOLAZHCHENKO, Yu.T.; BELOUS, D.A.; GOLUBCHIK, S.F.; LINCHEVSKIY, V.V.; PERETRUTOV, V.L.; YAKIMENKO, I.A.; CHICHEVA, L.I., red.;

[Dismantling and assembling the DT-20 tractor] Razborka i sborka traktora DT-20. Moskva, "Kolos," 1964. 174 p. (MIRA 17:8)

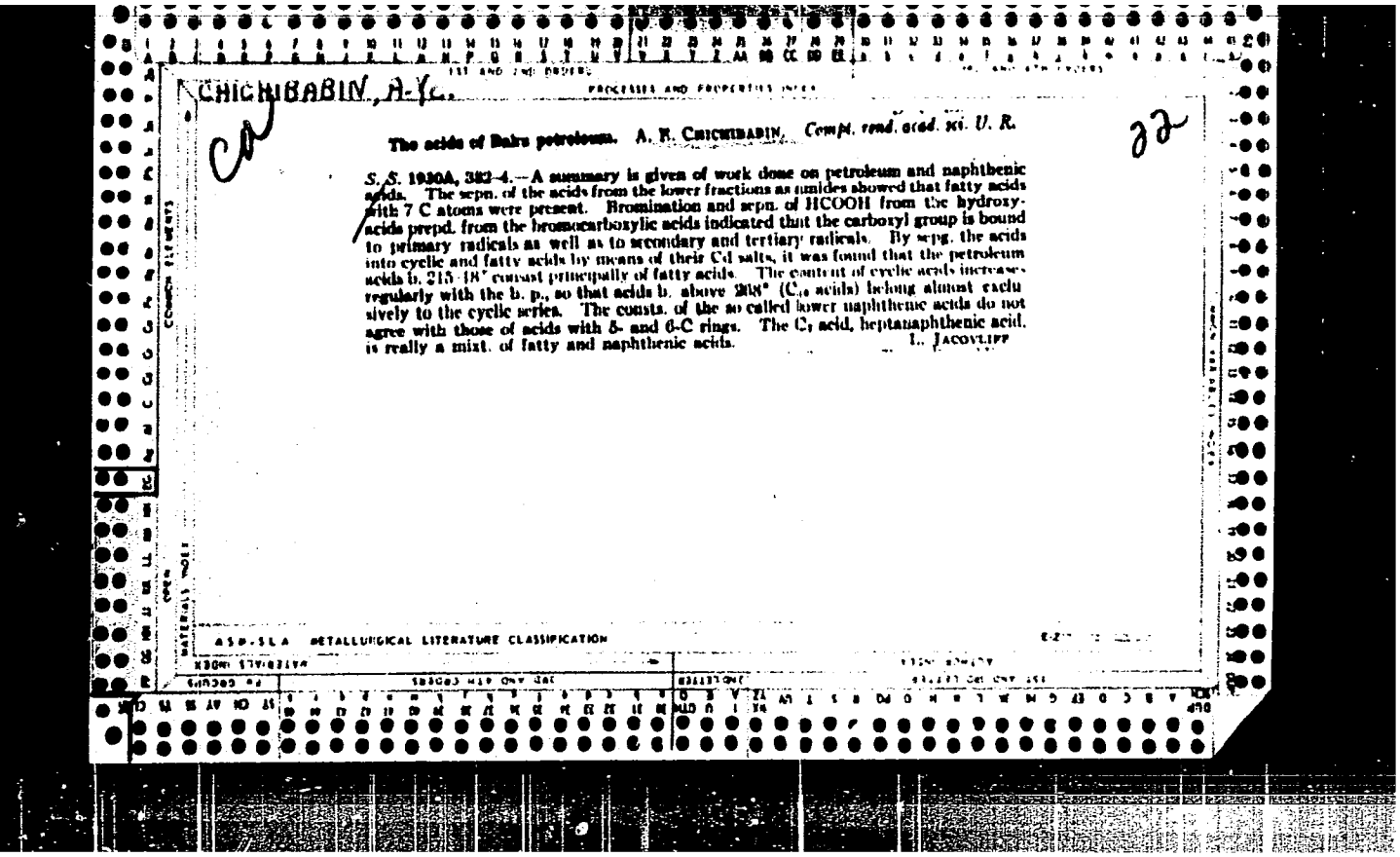
GORYACHKIN, Vasiliy Prokhorovich, akademik (1868-1935);
LUCHINSKIY, N.D., prof., doktor sel'khoz. nauk, red.;
CHICHEVA, L.I., red.; CHICHEV,Yu.I.,red.

[Collected works in three volumes] Sobranie sochinenii v trekh tomakh. Moskva, Kolos, 1965. 3 v. (MIRA 18:7)

1. Vsesoyuznaya akademiya sel'skokhozyaystvennykh nauk imeni V.I.Lenina (for Luchinskiy).

LITVINOV, M.A., kand. tekhn. nauk; YANISHEVSKIY, F.V., kand. sel'-khoz. nauk; TIKHONCHUK, Yu.N., kand. ekon. nauk; CHERNIKOV, B.P., inzh.; BOGDANOV, V.M., inzh.; CHICHEVA, L.I., red.

[Mechanization of the placement of mineral fertilizers] Mekhanizatsiia vneseniia mineral'nykh udobrenii. Moskva, Kolos, 1965. 173 p. (MIRA 18:5)



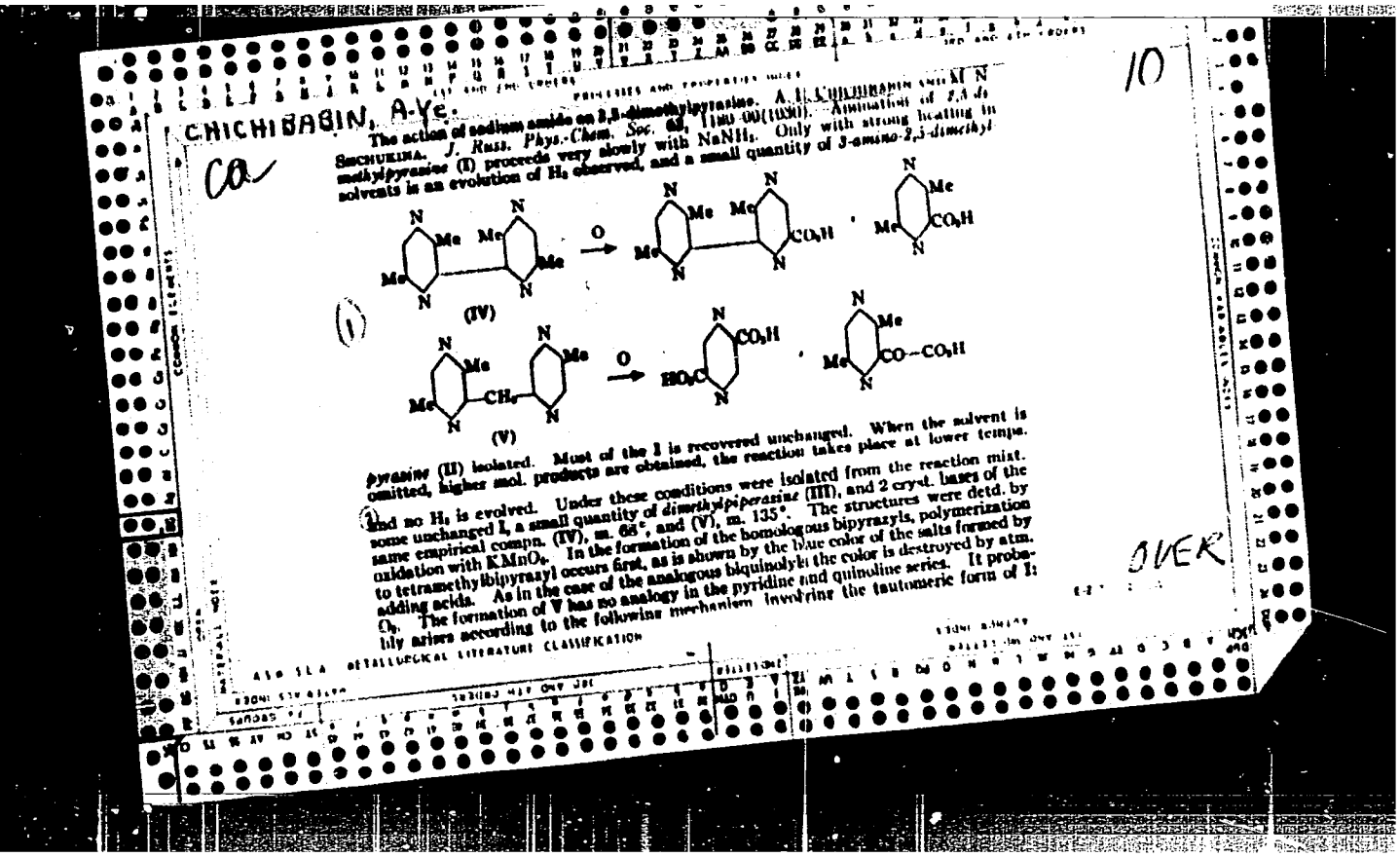
CHICHIBABIN, A. Ye.

32

The acids of Baku petroleum. A. E. CHICHIBABIN. *Compt. rend. acad. sci. U. R.*

S. S. **1930A**, 382–4.—A summary is given of work done on petroleum and naphthenic acids. The sepn. of the acids from the lower fractions as amides showed that fatty acids with 7 C atoms were present. Bromination and sepn. of HCOOH from the hydroxy-acids prepd. from the bromocarboxylic acids indicated that the carboxyl group is bound to primary radicals as well as to secondary and tertiary radicals. By sepg. the acids into cyclic and fatty acids by means of their Cd salts, it was found that the petroleum acids b. 215–18° consist principally of fatty acids. The content of cyclic acids increases regularly with the b. p., so that acids b. above 308° (C_{14} acids) belong almost exclusively to the cyclic series. The consts. of the so called lower naphthenic acids do not agree with those of acids with 5- and 6-C rings. The C_7 acid, heptanaphthenic acid, is really a mixt. of fatty and naphthenic acids.

L. JACOVLEFF



CHICHIBABIN, A.Ye.

Ca

10

The action of sodium amide on 2,5-dimethylpyrazine. A. I. Chichibabin and N. Shchukina. *J. Russ. Phys.-Chem. Soc.* 62, 1181-90(1930). Amination of 2,5-dimethylpyrazine (I) proceeds very slowly with $NaNH_2$. Only with strong heating in solvents is an evolution of H_2 observed, and a small quantity of *3-amino-2,5-dimethyl*

(IV)

(V)

pyrazine (II) isolated. Most of the I is recovered unchanged. When the solvent is omitted, higher mol. products are obtained, the reaction takes place at lower temps. and no H_2 is evolved. Under these conditions were isolated from the reaction mixt. some unchanged I, a small quantity of *dimethylpiperazine* (III), and 2 cryst. bases of the same empirical compn. (IV), m. 68°, and (V), m. 135°. The structures were detd. by oxidation with $KMnO_4$. In the formation of the homologous bipyrazyls, polymerization to tetramethylbipyrazyl occurs first, as is shown by the blue color of the salts formed by adding acids. As in the case of the analogous biquinolyls the color is destroyed by atm. O_2. The formation of V has no analogy in the pyridine and quinoline series. It probably arises according to the following mechanism involving the tautomeric form of I:

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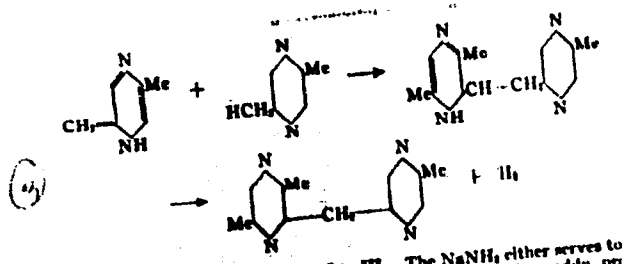
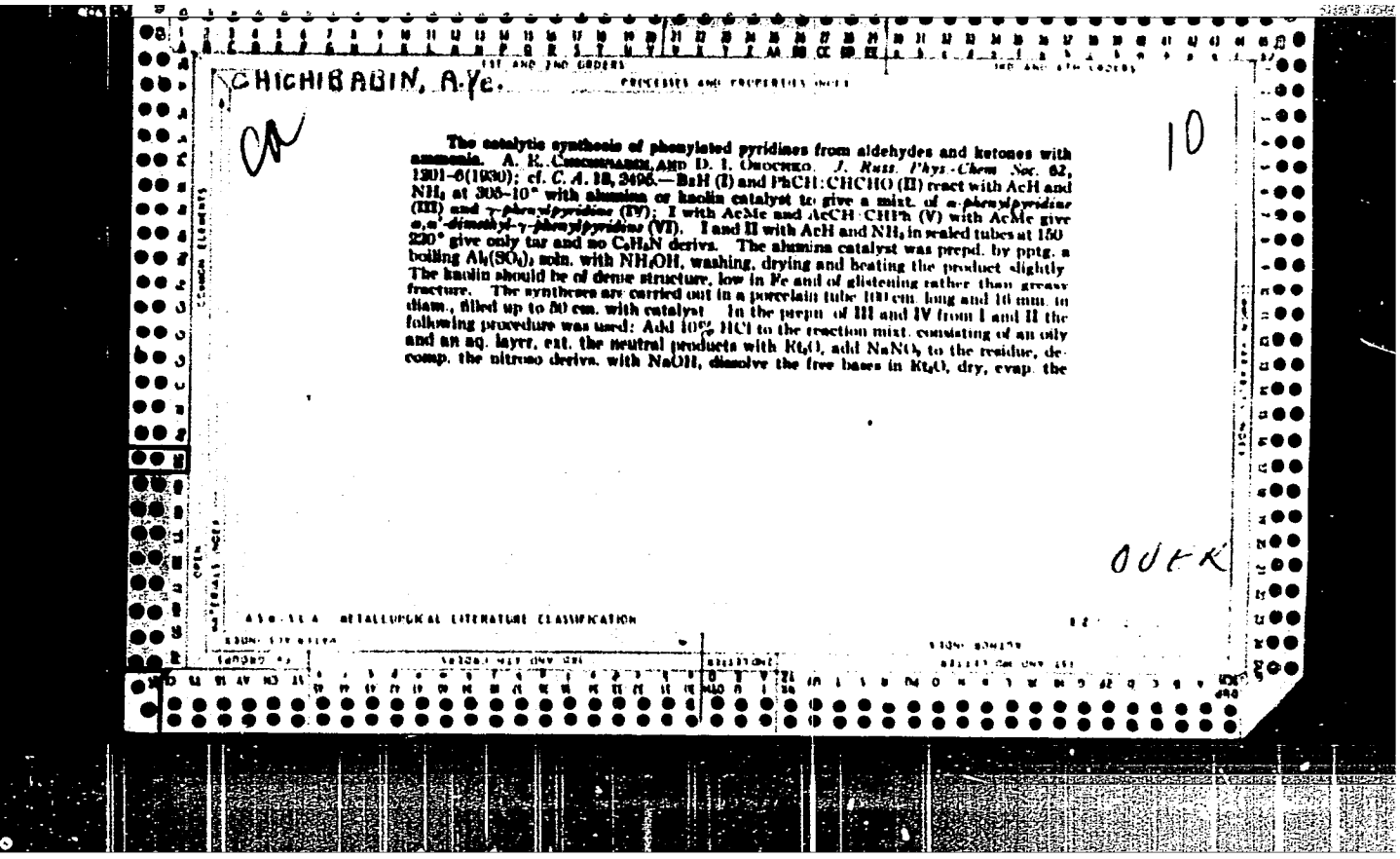


Some of the H_2 evidently goes to reduce I to III. The $NaNH_2$ either serves to produce the tautomer of I or else brings about the formation of intermediary addn. products to the pyrazine nucleus. In solvents, *e. g.*, xylene, above 145°, II was obtained in 10% yield and I was recovered to the extent of 80%. II, recrystd. from PhH, formed colorless needles, m. 111°, b_{10} 119°, sol. in H_2O, EtOH, Et_2O, $CHCl_3$, PhH and PhMe. Bz deriv., m. 109°. In 1 expt. without solvent, 20 g. I and 14.5 g. $NaNH_2$ gave after Et_2O extn. of the reaction products (4 hrs. on the H_2O bath) a red oil. This was fractionated, giving a low-boiling fraction consisting of I and II, and 8 g. of a mixt. of IV and V, b_{10} 160–75°. Further fractionation and crystn. from EtOH gave IV, sol. in EtOH, and V, sol. only in boiling EtOH. IV was recryst. from petr. ether as colorless needles, m. 67.5–68.5°, b_{10} 167°, easily sol. in H_2O, EtOH, Et_2O, PhH, and $CHCl_3$, difficultly sol. in cold petr. ether. The aq. soln. is alk. to litmus. The soln. in strong HCl or H_2SO_4 is bright red. The $HgCl_2$ compd. was obtained as yellow prisms, m. 184° (decompn.). V crystd. from EtOH in long, colorless needles, m. 135°, b_{10} 156–7°. It dissolves less easily in cold H_2O, EtOH, Et_2O, PhH and ligroin than IV, but is easily sol. in $CHCl_3$. V gives no color with acids, and is neutral to litmus. The $HgCl_2$ compd. m. 224° (decompn.), and the $AgNO_3$ compd. m. 253° (decompn.).

LEWIS W. BUTZ



CHICHIBABIN, A.Ye.

10

The catalytic synthesis of phenylated pyridines from aldehydes and ketones with ammonia. A. E. Chichibabin and D. I. Oparina. *J. Russ. Phys.-Chem. Soc.* 62, 1901–6(1930); cf. *C. A.* 18, 2495.—BzH (I) and PhCH:CHCHO (II) react with AcH and NH_3 at 305–10° with alumina or kaolin catalyst to give a mixt. of *α-phenylpyridine* (III) and *γ-phenylpyridine* (IV); I with AcMe and AcCH:CHPh (V) with AcMe give *α,α'-dimethyl-γ-phenylpyridine* (VI). I and II with AcH and NH_3 in sealed tubes at 150–220° give only tar and no C_5H_5N derivs. The alumina catalyst was prepd. by pptg. a boiling $Al_2(SO_4)_3$ soln. with NH_4OH, washing, drying and heating the product slightly. The kaolin should be of dense structure, low in Fe and of glistening rather than greasy fracture. The syntheses are carried out in a porcelain tube 100 cm. long and 10 mm. in diam., filled up to 50 cm. with catalyst. In the prepn. of III and IV from I and II the following procedure was used: Add 10% HCl to the reaction mixt. consisting of an oily and an aq. layer, ext. the neutral products with Et_2O, add $NaNO_2$ to the residue, decomp. the nitroso derivs. with NaOH, dissolve the free bases in Et_2O, dry, evap. the

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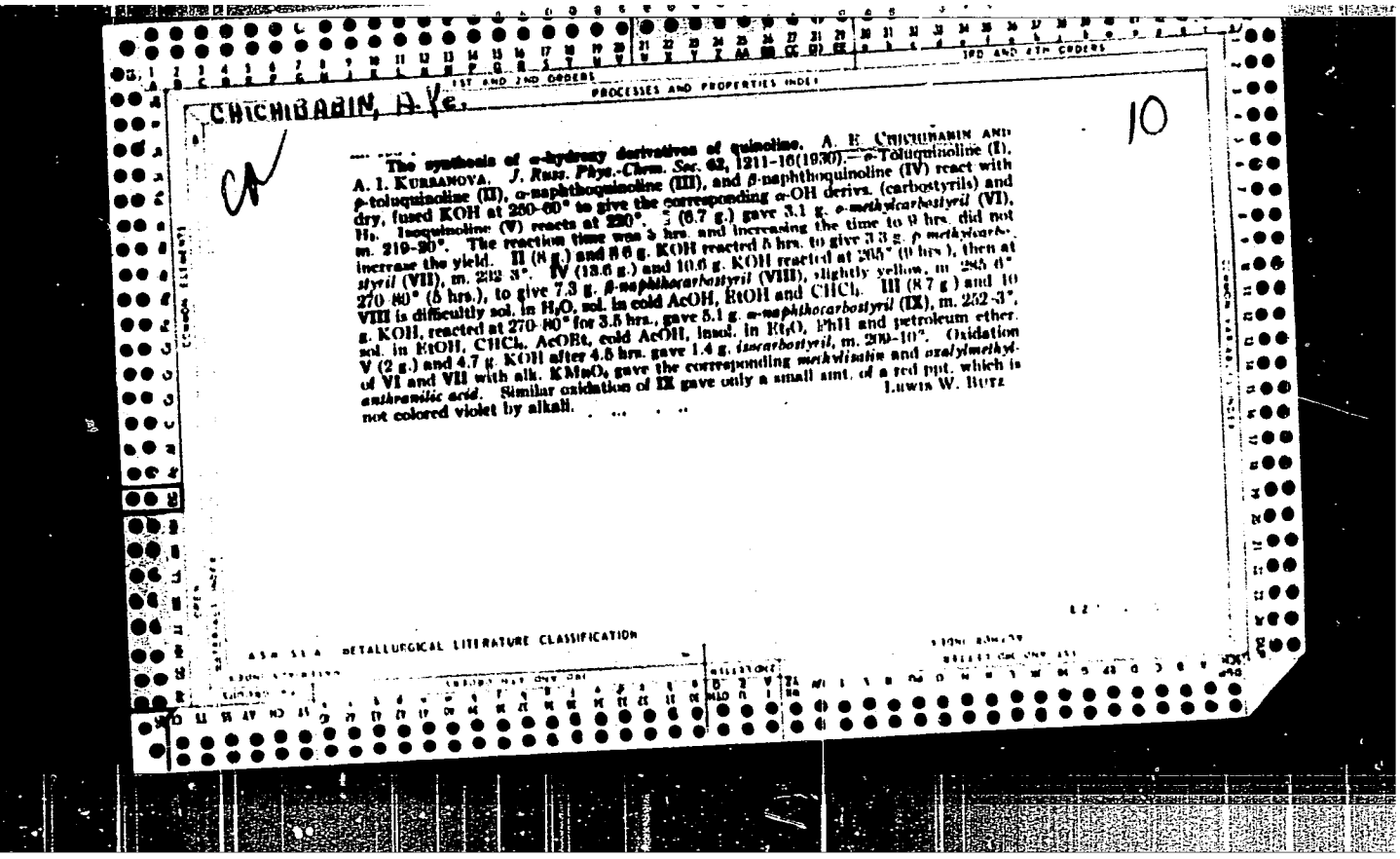
Et_2O and fractionate. Fraction A, b. 270-80°, yielded some IV by spontaneous crystn. which was recrystd. twice from petr. ether. The combined mother liquors were evapd. to remove the solvent and again fractionally distd. The distillate was dissolved in EtOH, from which III and IV were isolated as picrates, and recrystd. from boiling AcMe. Fraction B, b. 285-340°, yielded a small quantity of IV isolated through the picrate. The yield of III from I was 3.5%; from II, 1%; of IV from I, 11%; from II, 10%. The procedure for the prepn. of VI follows: The reaction mixt. was acidified with 15% HCl, the neutral products were extd. with Et_2O, and the residue was cooled for 2 hrs. Sepn. of crystals and a viscous oil followed. The crystals are sol. in EtOH and AcMe, insol. in PhH and Et_2O. Upon addn. of AcOEt to the EtOH soln. to slight turbidity the HCl salt of VI was obtained and recrystd. from boiling H_2O. The acid mother liquors were made alk. and extd. with Et_2O. After drying and evapg. the Et_2O, the free base was fractionated. The fraction b. 280-95° was treated with 15% HCl in EtOH, and AcOEt added. Recovery of VI from the combined HCl salts with recrystn. from petr. ether gave a product m. 62-63.5°. The yield of VI from I was 13%; from V, 15.5%.

Lewis W. Butz



CHICHIBABIN, A.Ye.

10

PROCESSES AND PROPERTIES INDEX

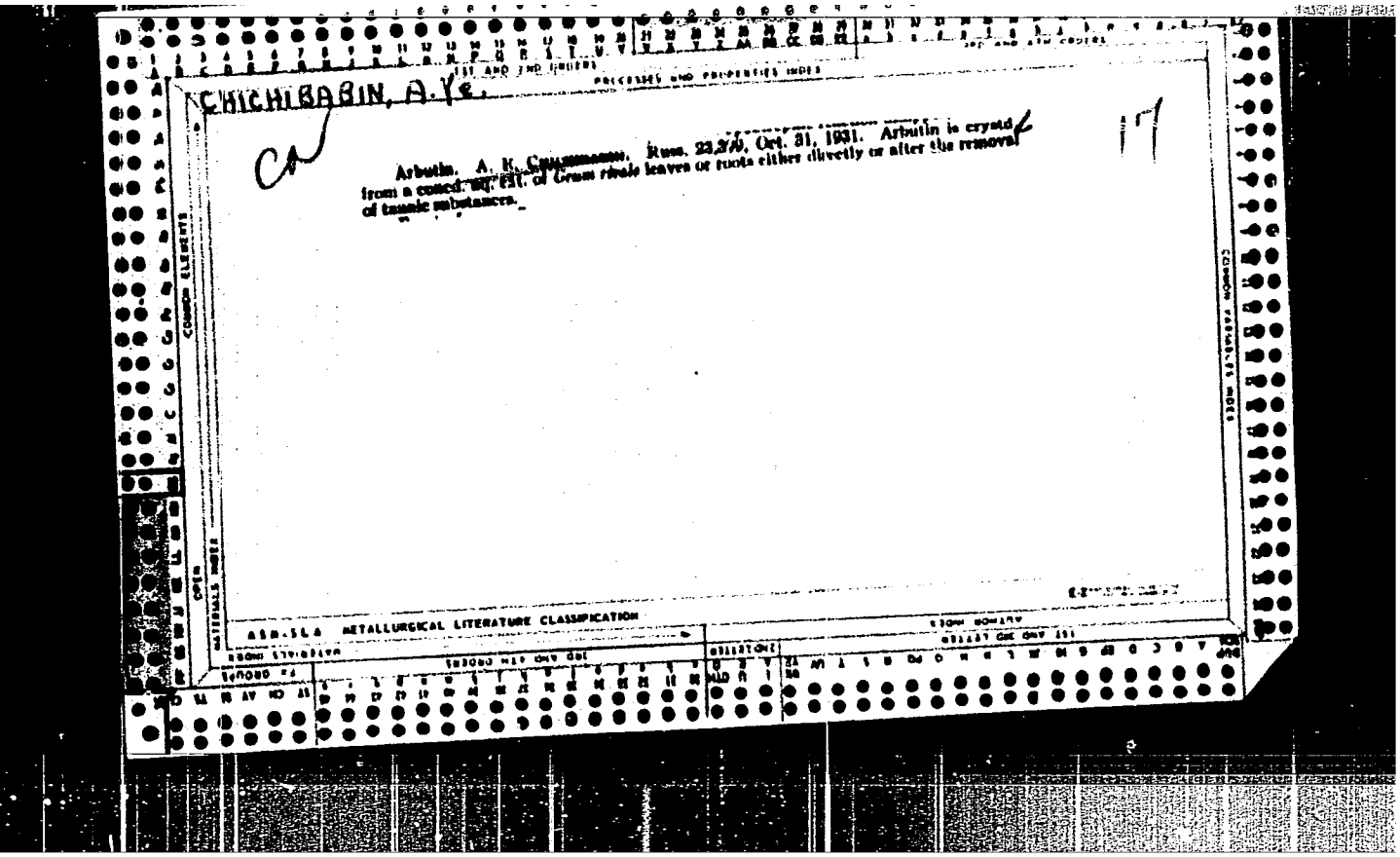
1ST AND 2ND ORDERS

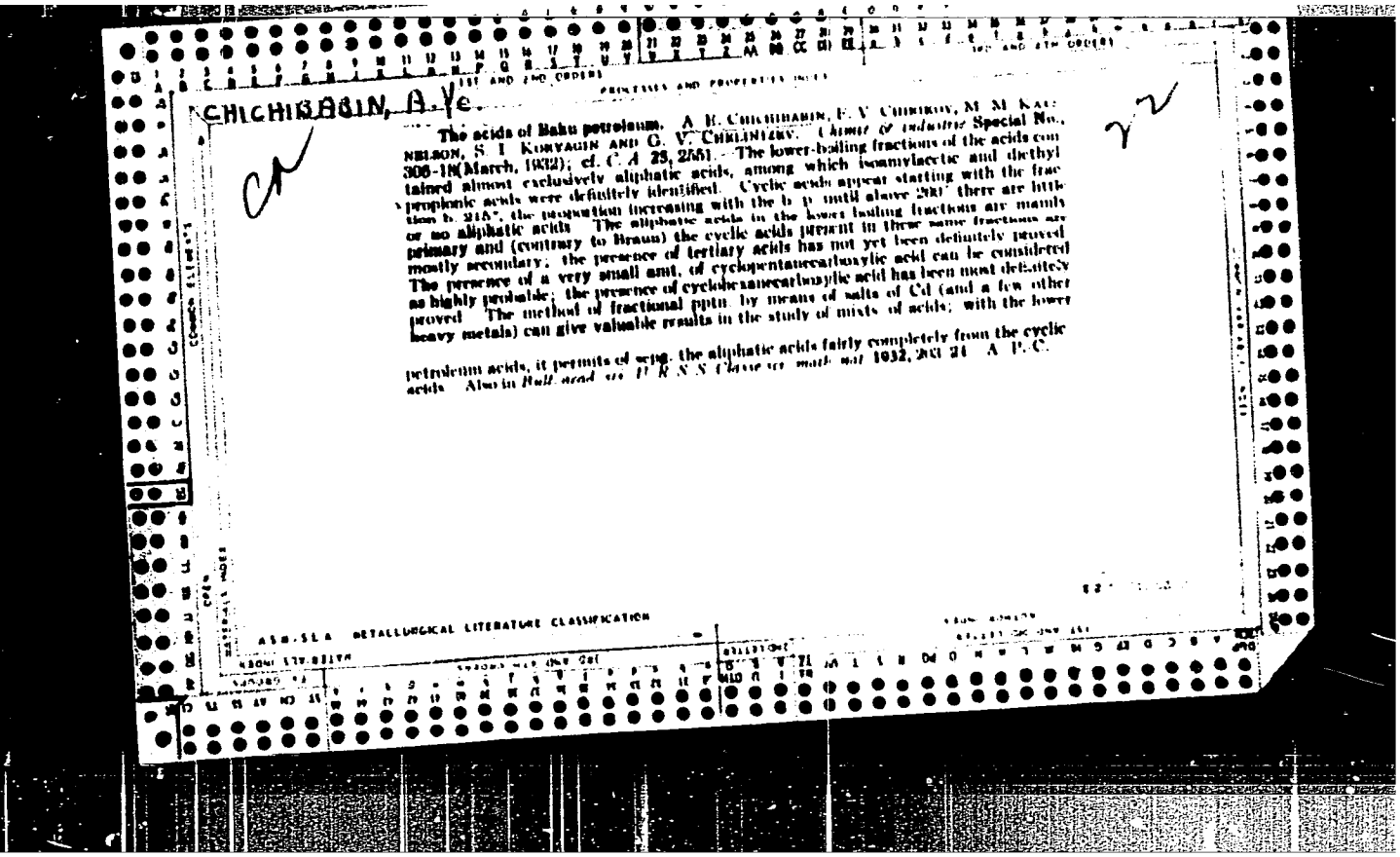
3RD AND 4TH ORDERS

The synthesis of α-hydroxy derivatives of quinoline. A. E. CHICHIBABIN AND A. I. KURSANOVA. *J. Russ. Phys.-Chem. Soc.* 62, 1211-16(1930).—α-Toluquinoline (I), β-toluquinoline (II), α-naphthoquinoline (III), and β-naphthoquinoline (IV) react with dry, fused KOH at 250-60° to give the corresponding α-OH derivs. (carbostyrils) and H₂. Isoquinoline (V) reacts at 220°. I (6.7 g.) gave 3.1 g. *α-methylcarbostyril* (VI), m. 219-20°. The reaction time was 3 hrs. and increasing the time to 9 hrs. did not increase the yield. II (8 g.) and 8.6 g. KOH reacted 5 hrs. to give 3.3 g. *β-methylcarbostyril* (VII), m. 232 3°. IV (13.6 g.) and 10.6 g. KOH reacted at 265° (9 hrs.), then at 270-80° (5 hrs.), to give 7.3 g. *β-naphthocarbostyril* (VIII), slightly yellow, m. 285.6°. VIII is difficultly sol. in H₂O, sol. in cold AcOH, EtOH and CHCl₃. III (8.7 g.) and 10 g. KOH, reacted at 270-80° for 3.5 hrs., gave 5.1 g. *α-naphthocarbostyril* (IX), m. 252-3°, sol. in EtOH, CHCl₃, AcOEt, cold AcOH, insol. in Et₂O, PhH and petroleum ether. V (2 g.) and 4.7 g. KOH after 4.5 hrs. gave 1.4 g. *isocarbostyril*, m. 209-10°. Oxidation of VI and VII with alk. KMnO₄ gave the corresponding *methylisatin* and *oxalylmethylanthranilic acid*. Similar oxidation of IX gave only a small amt. of a red ppt. which is not colored violet by alkali.

Lewis W. Butz

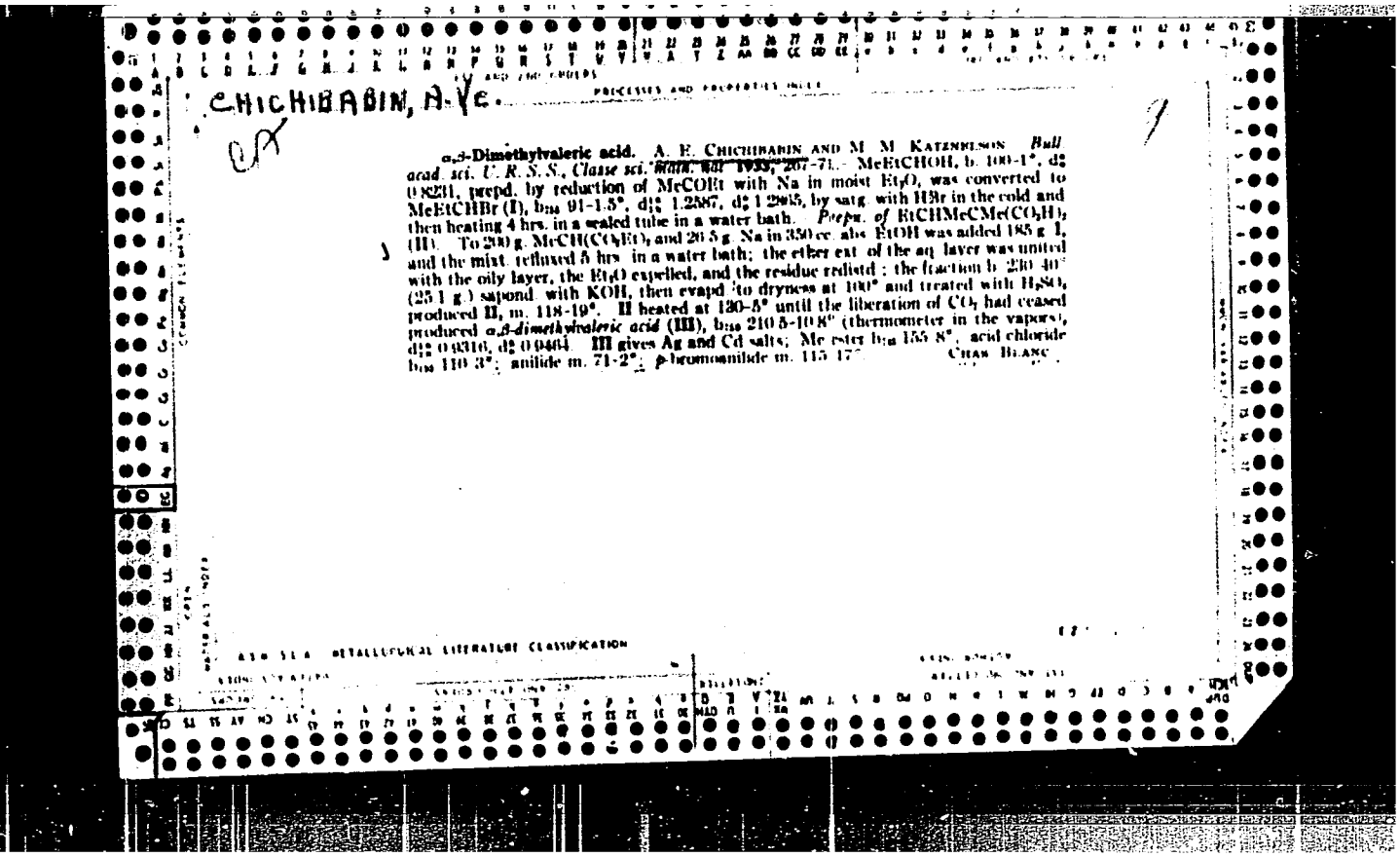
A 5 8 S 1 A METALLURGICAL LITERATURE CLASSIFICATION





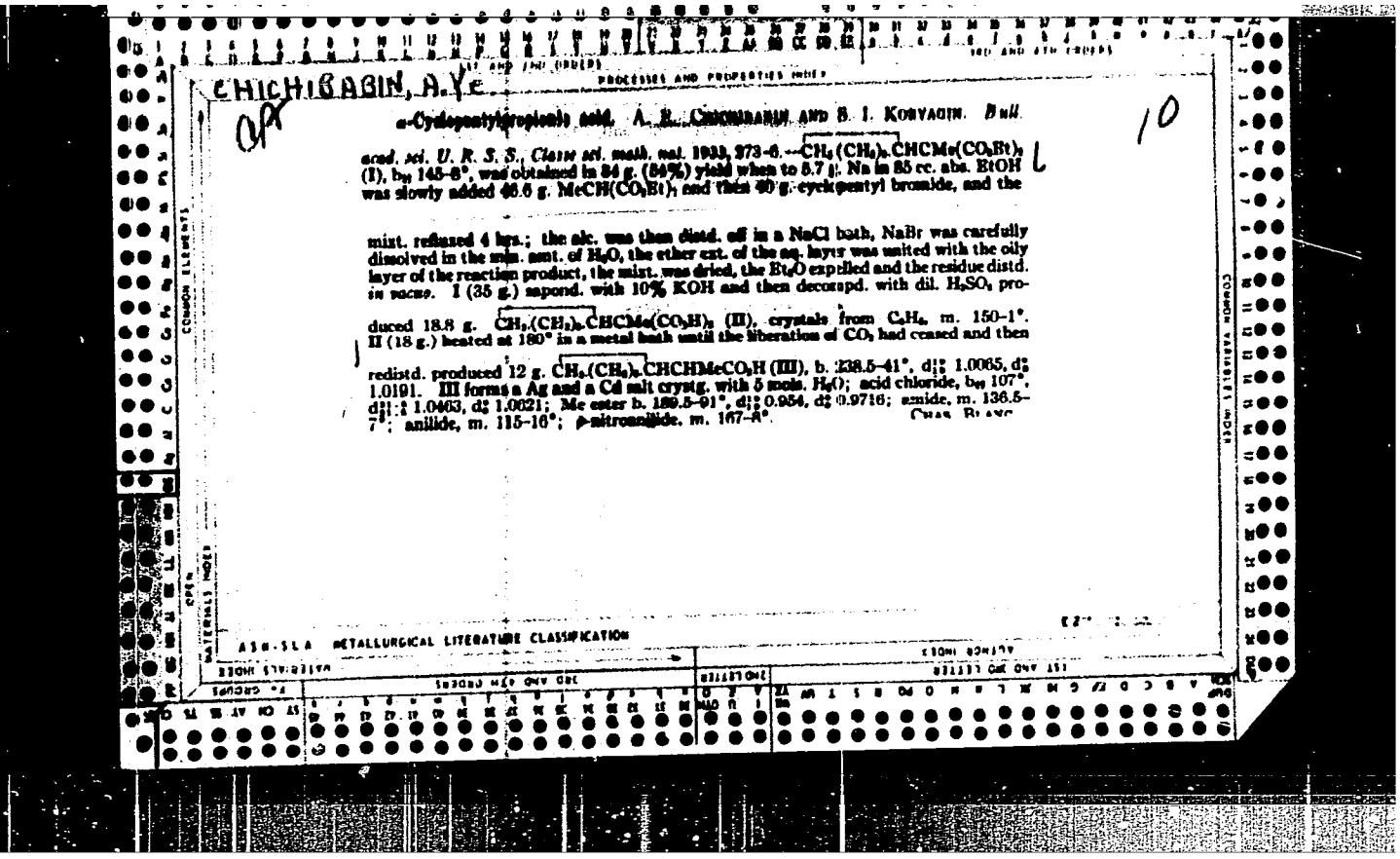
CHICHIBABIN, A. Ye.

The acids of Baku petroleum. A. E. Chichibabin, F. V. Chirikov, M. M. Kaz-
NELSON, S. I. Kontagin and G. V. Chelintzev. *Chimie & industrie* Special No.,
308-18(March, 1932); cf. *C. A.* 25, 2551. The lower-boiling fractions of the acids con-
tained almost exclusively aliphatic acids, among which isovalerianic and diethyl
propionic acids were definitely identified. Cyclic acids appear starting with the frac-
tion b. 215°, the proportion increasing with the b. p. until above 280° there are little
or no aliphatic acids. The aliphatic acids in the lower boiling fractions are mainly
primary and (contrary to Braun) the cyclic acids present in these same fractions are
mostly secondary; the presence of tertiary acids has not yet been definitely proved.
The presence of a very small amt. of cyclopentanecarboxylic acid has been most definitely
established; the presence of cyclohexanecarboxylic acid can be considered
as highly probable; the presence of cycloheptanecarboxylic acid can be considered
proved. The method of fractional ppn. by means of salts of Cd (and a few other
heavy metals) can give valuable results in the study of mixts. of acids; with the lower
petroleum acids, it permits of sepg. the aliphatic acids fairly completely from the cyclic
acids. Also in *Bull. acad. sc. U. R. S. S. Classe sc. math. nat.* 1932, 261-71. A. P.-C.



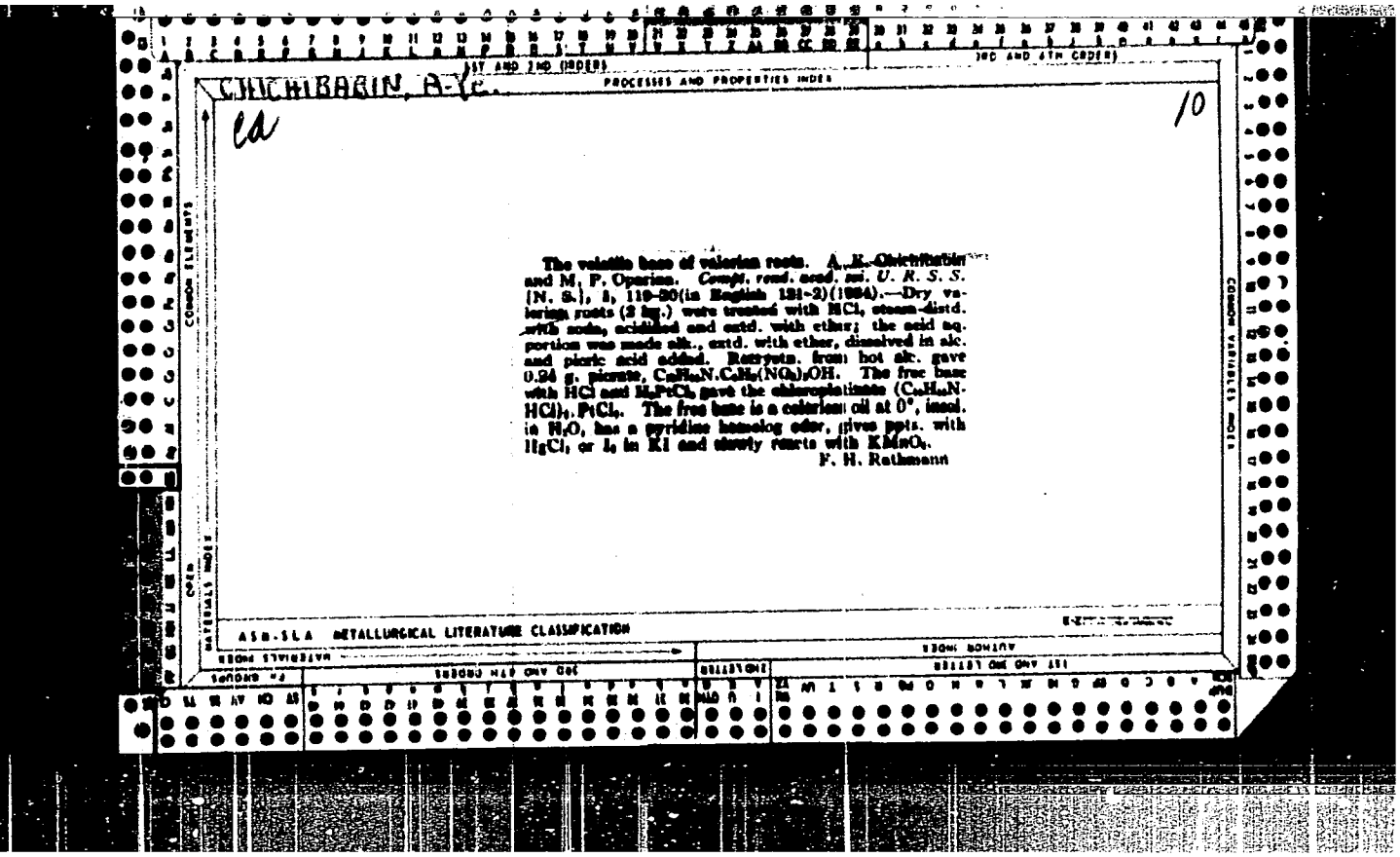
CHICHIBABIN, A. Ye.

α,β-Dimethylvaleric acid. A. E. Chichibabin and M. M. Katznelson. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat.* 1935, 267-71. MeEtCHOH, b. 100-1°, d_4^{20} 0.8231, prepd. by reduction of MeCOEt with Na in moist Et_2O, was converted to MeEtCHBr (I), b_{30} 91-1.5°, d_4^{15} 1.2887, d_4^{20} 1.2805, by satg. with HBr in the cold and then heating 4 hrs. in a sealed tube in a water bath. *Prepn. of* EtCHMeCMe(CO_2H)$_2$ (II). To 230 g. MeCH(CO_2Et)$_2$ and 26.5 g. Na in 350 cc. abs. EtOH was added 185 g. I, and the mixt. refluxed 5 hrs. in a water bath; the ether ext. of the aq. layer was united with the oily layer, the Et_2O expelled, and the residue refluxed; the fraction b_{20} 230-40° (25.1 g.) sapond. with KOH, then evapd. to dryness at 100° and treated with H_2SO_4; produced II, m. 118-19°. II heated at 130-5° until the liberation of CO_2 had ceased produced *α,β-dimethylvaleric acid* (III), b_{30} 210.5-10.8° (thermometer in the vapors), d_4^{20} 0.9316, d_4^{25} 0.9404. III gives Ag and Cd salts; Me ester b_{30} 155.8°; acid chloride b_{30} 110.3°; anilide m. 71-2°; *p*-bromoanilide m. 115-17°. Chas. Blanc.



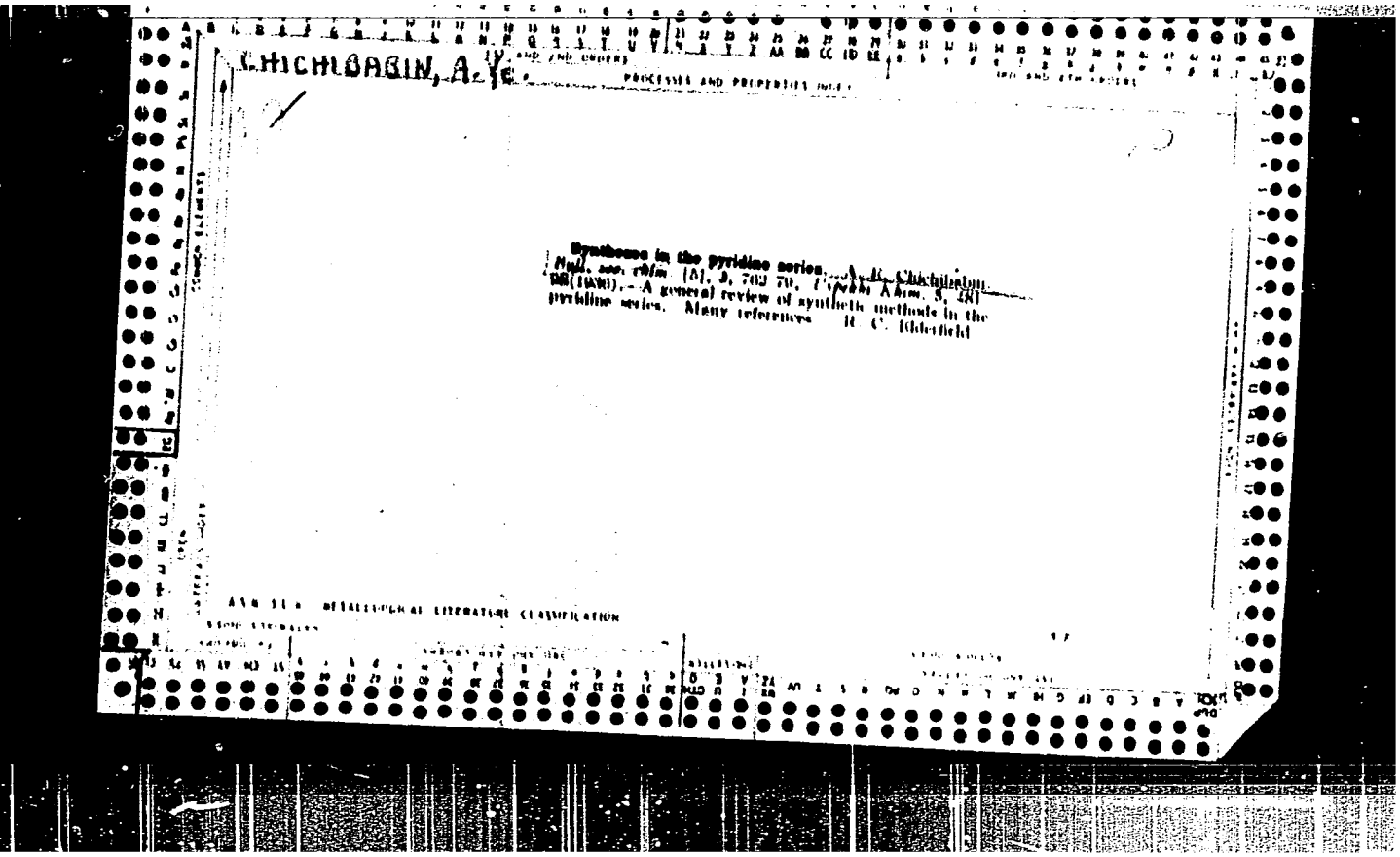
CHICHIBABIN, A.YE.

α-Cyclopentylpropionic acid. A. E. Chichibabin and B. I. Kobyagin. *Bull. acad. sci. U. R. S. S., Classe sci. math. nat.* 1935, 373–6.—$CH_2(CH_2)_3CHCMe(CO_2Et)_2$ (I), b_{10} 145–8°, was obtained in 84 g. (84%) yield when to 5.7 g. Na in 85 cc. abs. EtOH was slowly added 46.6 g. $MeCH(CO_2Et)_2$ and then 40 g. cyclopentyl bromide, and the mixt. refluxed 4 hrs.; the alc. was then distd. off in a NaCl bath, NaBr was carefully dissolved in the min. amt. of H_2O, the ether ext. of the aq. layer was united with the oily layer of the reaction product, the mixt. was dried, the Et_2O expelled and the residue distd. *in vacuo*. I (35 g.) saponf. with 10% KOH and then decompd. with dil. H_2SO_4 produced 18.8 g. $CH_2(CH_2)_3CHCMe(CO_2H)_2$ (II), crystals from C_6H_6, m. 150–1°. II (18 g.) heated at 180° in a metal bath until the liberation of CO_2 had ceased and then redistd. produced 12 g. $CH_2(CH_2)_3CHCHMeCO_2H$ (III), b. 238.5–41°, d_4^{15} 1.0065, d_4^{20} 1.0191. III forms a Ag and a Cd salt crystg. with 5 mols. H_2O; acid chloride, b_{10} 107°, $d_4^{15.5}$ 1.0463, d_4^{20} 1.0021; Me ester b. 189.5–91°, d_4^{15} 0.954, d_4^{20} 0.9716; amide, m. 136.5–7°; anilide, m. 115–16°; *p*-nitroanilide, m. 167–8°.



The volatile base of valerian roots. A. E. Chichibabin and M. P. Operina. *Compt. rend. acad. sci. U. R. S. S.* [N. S.], 1, 119-20(in English 121-2)(1934).—Dry valerian roots (2 kg.) were treated with HCl, steam-distd. with soda, acidified and extd. with ether; the acid aq. portion was made alk., extd. with ether, dissolved in alc. and picric acid added. Recrysts. from hot alc. gave 0.94 g. picrate, $C_5H_5N.C_6H_2(NO_2)_3OH$. The free base with HCl and H_2PtCl_6 gave the chloroplatinate $(C_5H_5N\cdot HCl)_2.PtCl_4$. The free base is a colorless oil at 0°, insol. in H_2O, has a pyridine homolog odor, gives ppts. with $HgCl_2$ or I_2 in KI and slowly reacts with $KMnO_4$.

F. H. Rathmann



CHICHIBABIN, A.Ye.; SERGEYEV, P.G., professor, redaktor; LIBERMAN, A.L., redaktor; ROMM, R.S., redaktor; LUR'YE, M.S., tekhnicheskiy redaktor

[Basic principles of organic chemistry] Osnovnye nachala organicheskoi khimii. Izd. 6., (stereotipnoe). Pod red. P.G.Sergeeva, Moskva, Gos. nauchno-tekhn. izd-vo khim. lit-ry. Vol. 1. 1954. 795 p.
(Chemistry, Organic) (MLRA 7:10)

Chichibabin, Aleksey Yevgen'yevich

CHICHIBABIN, Aleksey Yevgen'yevich; SERGEYEV, P.G., red. [deceased]; LIBERMAN, A.L., red.; ROOM, R.S., red.; LUR'YE, M.S., tekhn.red.

[Elements of organic chemistry] Osnovnye nachala organicheskoi khimii. Izd. 5-oe, perer. i dop. Pod red. P.G.Sergeyeva. Moskva, Gos.nauchno-tekhn.izd-vo khim. lit-ry. Vol.2. 1957. 767 p. (MIRA 11:2)
(Chemistry, Organic)

Comments A-116, 966

CHICHIBABIN, Aleksey Yevgen'yevich. Prinimali uchastiye: REUTOV, O.A.; KITAYGORODSKIY, A.I., prof.; LIBERMAN, A.L., doktor khim. nauk; BAGDASAR'YAN, Kh.S., doktor khim. nauk; PLATE, N.A., kand. khim. nauk; KOLOSOV, M.N., kand. khim. nauk; BOTVINIK, M.M., doktor khim. nauk; STEPANOV, V.M., kand. khim. nauk; MEL'NIKOV, N.N., prof.; DEREVITSKAYA, V.A., doktor khim. nauk; LIBERMAN, A.L., red.; SERGEYEV, P.G. [deceased]; ROMM, R.S., red.; SHPAK, Ye.G., tekhn. red.

[Basic principles of organic chemistry] Osnovnye nachala organicheskoi khimii. Izd.7. Pod red. P.G.Sergeeva i A.L. Libermana. Moskva, Goskhimizdat. Vol.1. 1963. 910 p. (MIRA 16:10)

1. Chlen-korrespondent AN SSSR (for Reutov).
(Chemistry, Organic)

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"To imporve the system of commodity accounts, to boost their control value," Bukhgalter, uchet, 1948, No. 12, p. 28-31

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

TARNOVSKIY, I.Ya.; ODINOKOV, Yu.I.; CHICHIGIN, V.A.; SYCHKOV, B.D.

Torque distribution between the rolls of a rolling mill. Stal' 23 no.12: 1099-1102 D '63. (MIRA 17:2)

TARNOVSKIY, I.Ya.; POZDEYEV, A.A.; ODINOKOV, Yu.I.; POPOV, V.M.; CHICHIGIN, V.A.

Increase in metal width and the corresponding speeds of horizontal and vertical rolls on universal blooming mills. Izv. vys. ucheb. zav.; chern. met. 6 no.9:103-109 '63. (MIRA 16:11)

1. Ural'skiy politekhnicheskiy institut.

CHICHIGIN, Vasiliy Grigor'yevich; PAZEL'SKIY, S.V., redaktor; SHIKIN, S.T., tekhnicheskiy redaktor

[Methodology of teaching trigonometry; manual for teachers in the secondary schools] Metodika prepodavaniia trigonometrii; posobie dlia uchitelei srednikh shkol. Moskva, Gos. uchebno-pedagog. izd-vo Ministerstva prosveshcheniia RSFSR, 1954. 337 p. (MLRA 8:7)
(Trigonometry--Study and teaching)

TARNOVSKIY, I. Ya., doktor tekhn.nauk; ODINOKOV, Yu.I., inzh.; CHICHIGIN, V.A., inzh.

Rolling forces of the 1150 slab mill. Izv.vys.ucheb.zav.;mashinostr.no. 1:145-156 '63. (MIRA 16:5)

1. Ural'skiy politekhnicheskiy institut.
(Rolling (Metalwork))

4.

L 57523-65 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(k)/EWP(h)/EWP(t)/EWP(b)/EWP(l)/EWA(c) Pf-4 JD/HW

ACCESSION NR: AR5013007 UR/0137/65/000/004/D009/D010
621.771.001

SOURCE: Ref. sh. Metallurgiya, Abs. 4D60

AUTHOR: Tarnovskiy, I. Ya.; Odinokov, Yu. I.; Antonov, S. P.; Pondeyev, A. A.; Uziyenko, A. N.; Kustobayev, G. G.; Chichigin, V. A.; Ryabchikov, F. D.; Sychkov, B. D.

TITLE: Conditions for rolling large ingots on a slab mill

CITED SOURCE: Tr. Ural'skogo n.-i. in-ta chern. met, v. 3, 1964, 167-181

TOPIC TAGS: metal rolling, slab mill, rolling mill

TRANSLATION: The 1150 slab mill for rolling heavy UNS-217 ingots was studied. It was found that the degree of reduction could be increased while the number of passes was reduced. Optimally stable conditions for rolling heavy ingots in 23-25 passes were developed and introduced into industry. It was found that the most difficult conditions (rolling in 21 passes) leave a reserve for holding conditions. Further improvement is limited by the power of stand motors and strength of stand

Card 1/2