L 45793-66
ACC NR: AP6030154

2

resonator mirror burnout were recorded. "The authors wish to thank B. M. Vul and A. P. Shotov for their valuable advice and discussions." Orig. art. has: 5 figures, 3 formulas, and 1 table. [03]

SUB CODE: 20 / SUBM DATE: 25Jun65 / ORIG REF: 003 / OTH REF: 005/ ATD PRESS: 5085

pb

Card 2/2

IVANOV, V.S., gornyy inzh.; MYSINA, L.G., inzh.-geofizik

Seismoacoustic activities of coal seams serving as indices of gas and coal outburst danger. Ugol' Ukr. 6 no.8:14-15 Ag '62. (MIRA 15:11)

(Mine gases)
(Seismometry—Observations)

KONSTANTINOVA, A.G.; MYSINA, L.G.; IVANOV, V.S.

Characteristics of the seismoacoustic processes accompanying sudden ejections of coal and gas during well boring. Izv. AN SSSR. Ser. geofiz. no.11:1676-1683 N '63. (MIRA 16:12)

1. Institut gornogo dela im. A.A.Skochinskogo.

IVANOV, V.S., gornyy inzh.

Study of the relation between the diameter of the charge and the effectiveness of blasting in a layered medium. Vzryv. delo no.53/10:76-89 '63. (MIRA 16:8)

1. Institut gornogo dela im. G.A. TSulukidze AN GruzSSR.
(Blasting)

DEMIDYUK, G.P., kand. tekhn. nauk; IVANOV, V.S., gornyy inzh.

Effect of the shape of the individual charge on the crushing of a hard medium by blasting. Vzryv. delo no.53/10:47-58 '63. (MIRA 16:8)

1. Institut gornogo dela im. A.A. Skochinskogo (for Demidyuk).
2. Institut gornogo dela AN Gruzinskoy SSR (for Ivanov).
(Blasting)

ANTSYFEROV, M.S., kand. fiz.-matem. nauk; IVANOV, V.S., inzh.;
SHEVCHENKO, L.N., inzh.; KAMNEVA, T.N., red.

[PGI geophone and methods for its use in hole prospecting] Geofon PGI i metodika ego primeneniia dlia poiska skvazhiny. Moskva, In-t gornogo dela, 1963. 17 p.
(MIRA 17:8)

KONSTANTINOVA, A.G.; MYSINA, L.G.; IVANOV, V.S.

Analysis of seismoacoustic processes accompanying strong sudden ejections of coal and gas. Izv. AN SSSR. Fiz. zem. no.11:85-89 '65. (MIRA 18:12)

1. Institut gornogo dela imeni A.A. Skochinskogo. Submitted June 26, 1964.

IVANOV, V.S.

L 10425-66 EWT(1)/EWA(h) GW

AM5023902 BOOK EXPLOITATION UR/ 534.647:622

Akademiya nauk SSSR. Institut gornogo dela

The use of seismoacoustic methods in mining (Primeneniye seysmoakusticheskikh metodov v gornom dele) Ed. by M. S. Antsyferov. Moscow, Izd-vo "Nauka," 1964. 186 p. illus. Errata printed on the back cover. 1300 copies printed.

TOPIC TAGS: mining engineering, seismic prospecting, seismic instrument, phonon acoustics, seismoacoustic pulse

PURPOSE AND COVERAGE: This is a collection of articles summarizing the results of work done by the Laboratory of Geophysical Research of the Mining Institute imeni A. A. Skochinskiy and the Scientific Seismoacoustic Station of the Donetskiy Sovnarkhoz. The research was basically conducted at the coal mines of the Donet Basin, where dangerous sudden outbursts of coal and gas occur. The authors give data on the design and manufacture of various seismoacoustic instruments, used in both laboratory and field investigations. Results of these investigations are analyzed, emphasizing their

Card 1/5

importance for the theory of dynamic phenomena in mines and for the prognosis of the danger zones of possible sudden outbursts. The book is of interest to miners and geophysicists concerned with the application of geophysical methods in coal and ore mines.

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SUB CODE: GO, ES, GP/ SUBMITTED: 26Nov64 NO REF SOV: 113

OTHER: 005

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L 22991-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) JD/HW/GS

ACC NR: AT6012394 SOURCE CODE: UR/0000/65/000/000/0221/0228

AUTHOR: Kornilov, I. I. (Doctor of chemical sciences, Professor); Ivanova, V. S.; Markovich, K. F.; Fridman, Z. G.

60
58
B+1

ORG: none

18 18 27

TITLE: Heat resistance of AT3 titanium alloy after standard heat treatment and after mechanothermal heat treatment

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splavov, 6th. Novyye issledovaniya titanovykh splavov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 221-228

TOPIC TAGS: titanium, titanium alloy, aluminum containing alloy, chromium containing alloy, heat resistant alloy, alloy heat treatment, mechanothermal treatment, alloy creep resistance, alloy rupture strength / AT3 alloy

ABSTRACT: The heat resistance of AT3 titanium alloy (2.7% Al, 0.6% Cr, 0.3% Fe, 0.36% Si, 0.01% B) has been tested at 350 and 500C. After standard heat treatment (annealing at 880C followed by air cooling) the structure of the alloy consisted of the α-phase and traces of the β-phase. The creep rate at 350C changed relatively little with a

Card 1/2 UDC: 669.295.001.5

L 22991-66

ACC NR: AT6012394

change in stress. The 10,000 hr rupture strength was 56 kg/mm^2, i.e., about 90% of the tensile strength. Prolonged service at 350C affects neither the structure nor the properties of the alloy. For instance, the elongation dropped from the initial 15% to 13% after 5454 and 5215 hr tests under a respective stress of 15 and 37 kg/mm^2. The high rupture strength, structural stability, high oxidation resistance, and high ductility make AT3 alloy a promising structural material for prolonged operation at 350—450C. At 500C, however, the alloy softens rapidly. The 500 hr rupture strength was only 22 kg/mm^2. Microscopic examination showed that the softening of AT3 alloy at 500C was due to precipitation of Ti_5Si_3 compound (the γ-phase) from the solid solution along the active slip planes. Four cycles of mechanothermal treatment (24 hr at 500C under a stress of 12 kg/mm^2 followed by 24 hr without stress at the same temperature) prolonged the second creep stage at 500C by nearly five times and more than doubled the rupture life. In alloy subjected to MTT and subsequent creep tests, the precipitated γ-phase particles were more uniformly distributed over the grain volume. Orig. art. has: 6 figures and 2 tables. [MS]

SUB CODE: 11, 13/ SUBM DATE: 02Dec65/ ORIG REF: 006/ OTH REF: 002
ATD PRESS: 4238

Card 2/2

IVANOV, V.S., inzhener.

The new DG 1/15 single bucket excavator. Mekh.stroi. 4 no.8:1-3 Ag '47. (MLRA 9:2)

1.Glavstroymekhanizatsiya Minstroydormash.
(Excavating machinery)

IVANOV, V. S.

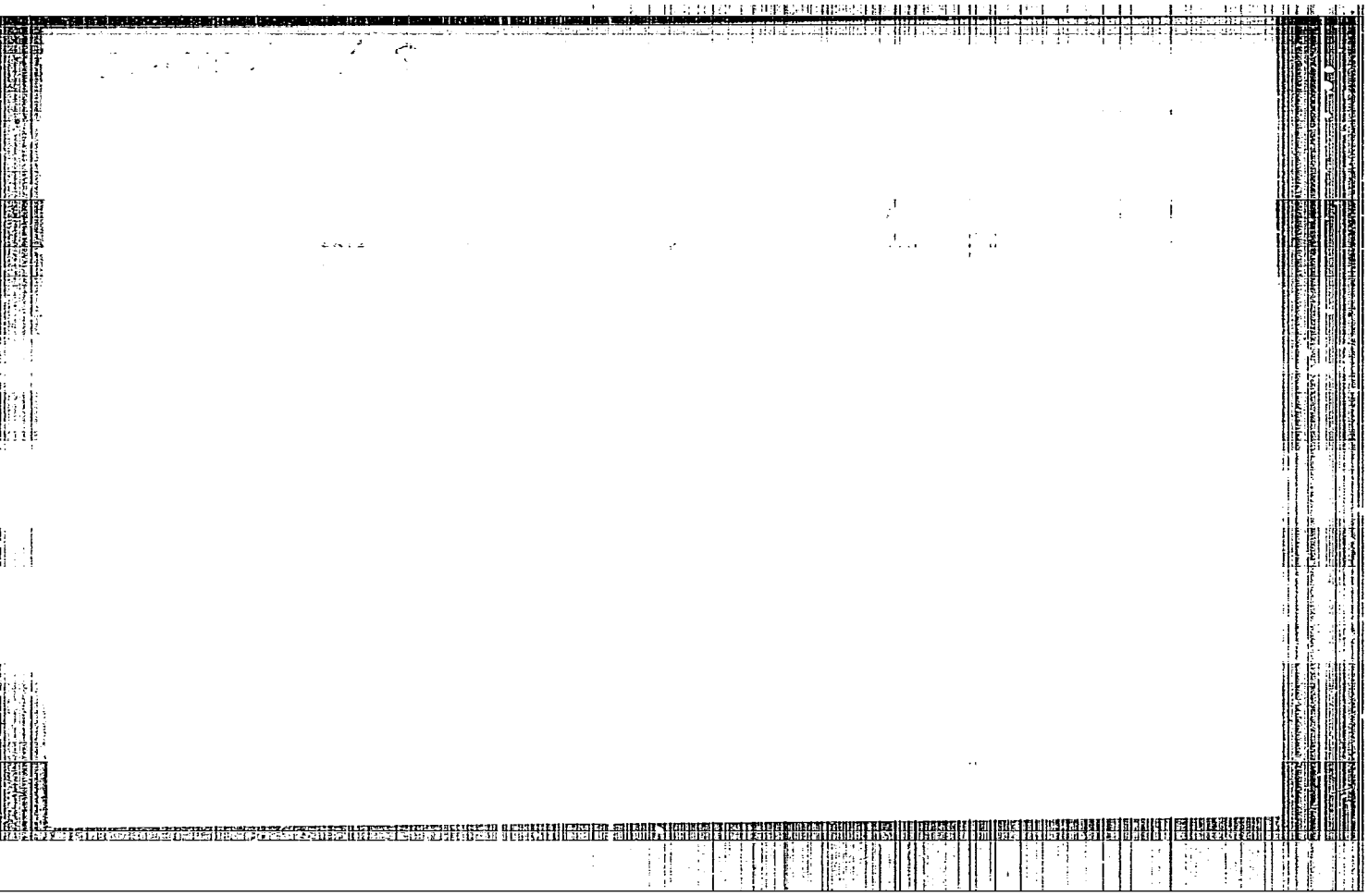
20661 Ivanov, V.S., Berkman, I.L. i Merenkov, A.S. Rezul'taty Kontrol'nykh ispytaniy ekskavatora E-1003. Mekhanizatsiya stroit-va, 1949, No. 6, s. 7-10

SO: LETOPIS ZHURNAL STATEY-Vol. 28, Moskva, 1949

GURVICH, I.G., IVANOV, V.S.

Electrometric amplifier with 100% feedback. Zav.lab. 21 no.3: 365-366 '55. (MLRA 8:6)

1. Dagestanskiy filial Akademii nauk SSSR.
(Amplifiers, Electron-tube)



IVANOV, V.S., inzhener.

Production of excavators and cranes used in construction during the 40 years of the Soviet regime. Stroi.i dor.mashinostr. 2 no.10:19-22 O '57. (MIRA 10:11)
(Excavating machinery) (Cranes, derricks, etc.)

IVANOV, V.S. (Leningrad)

Static problem of an elastic circular cylindrical shell having an initial bend. Prikl.mat. i mekh. 22 no.5:687-690 S-O '58. (MIRA 11:11)

(Elastic plates and shells)

IVANOV V. S.

127-58-1-9/28

AUTHORS: Karbelashvili, O.D., Candidate of Technical Sciences, and Ivanov, V.S., Mining Engineer

TITLE: Improvement of Drilling and Blasting Work in the Mining of Thin Veins (Usovershenstvovaniye buro-vzryvnykh rabot pri razrabotke tonkikh zhil)

PERIODICAL: Gornyy Zhurnal, 1958, Nr 1, pp 35-37 (USSR)

ABSTRACT: Between 1954 and 1956, the authors carried out experiments to find the optimum parameters of drilling and blasting operations in the mines of the Kutaisskiy litoponnyy zavod (Kutaisi Lithopone Plant). The barite veins mined varied from a few cm to 0.6 m thick and had a hardness of 4 to 5, according to Professor Protod'yakonov's classification. The drilling was performed with RP-17 drilling machines under 5 atm pressure of compressed air. Blasting was performed with ammonite #6 in 18, 20, 22 and 27 mm diameter cartridges. Results of the experiments are presented in two tables, and the conclusion is drawn that explosive cartridges with a diameter not exceeding 22 mm should be used to reduce the consumption of explosives and the content of impurities in

Card 1/2

Improvement of Drilling and Blasting Work in the Mining of Thin Veins

the ore. This will also increase drilling efficiency and reduce the consumption of drilling steel and hard alloys. The article contains 2 tables.

ASSOCIATION: Institut metallurgii i gornogo dela AN Gruz SSR (Institute of Metal and Mining of the AS Georgian SSR)

AVAILABLE: Library of Congress

Card 2/2 1. Mining engineering-USSR 2. Explosives-Applications
3. Drilling machines-Applications 4. Drilling machines-Equipment

IVANOV, V.S., inzh.

Development of the production of excavators and automotive cranes.
Stroi. i dor. mashinostr. 3 no. 6:11-14 Je '58. (MIRA 11:7)
(Excavating machinery)
(Cranes, derricks, etc.)

BARSUKOV, F.A., inzh.; IVANOV, V.S., inzh.

Safety of underground blasting operations. Bezop.truda v prom. 3 no.12:11-13 D '59. (MIRA 13:4)
(Blasting--Safety measures)

IVANOV, V.S.

Testing small, high-capacity cyclone launders. Prom. vent. no.9:63-68 '60. (MIRA 16:11)

ANTSYFEROV, Mikhail Sergeyevich; KONSTANTINOVA, Aleksandra Georgiyevna; PEREVERZEV, Leonid Borisovich. Prinimal uchastiye IVANOV, V.S. SKOCHINSKIY, A.A., akademik, otv.red.; GRIGOR'YEV, Ye.N., red. izd-va; SIMKINA, G.S., tekhn.red.

[Seismoacoustic investigations in coal mines] Seismoakusticheskie issledovaniia v ugol'nykh shakhtakh. Moskva, Izd-vo Akad.nauk SSSR, 1960. 103 p. (MIRA 13:11)
(Coal mines and mining--Accidents) (Seismometry)

VOLKOV, D.P.; CHANGLI, I.I., inzh., kand.ekonom.nauk, red.; IVANOV, V.S., inzh., retsenzent; DANILOV, L.N., red.izd-va; SMIRNOVA, G.V., tekhn.red.

[Earthmoving machinery] Mashiny dlia zemlianykh rabot. Red.I.I. Changli. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 111 p. (MIRA 13:7)
(Earthmoving machinery)

IVANOV, V.S.

Study of the effect of the diameter of an elongated charge on the result of blasting with low values of the line of least resistance. Nauch. soob. IGD 12:107-118 '61. (MIRA 15:9)
(Blasting)

36737

24.2160
10.1410

S/147/62/000/001/009/015
E191/E135

AUTHOR: Ivanov, V.S.

TITLE: On the relationship between the total pressure recovery coefficient σ and the velocity coefficient φ in the supersonic portion of a Laval nozzle with full or partial expansion of the gas in the nozzle

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, no.1, 1962, 75-81

TEXT: The rate of flow of a gas through a supersonic nozzle depends on the area of the critical cross-section and the gas properties there. The supersonic portion affects only the pressure and velocity at the nozzle exit. In the flow of gas through the supersonic nozzle with over-expansion, uniform static pressure (for example, the pressure of the medium into which the flow emerges) is established at different cross-sections along the length of the supersonic portion. Both with full and partial expansion of gas in a supersonic nozzle, the condition that the

Card 1/3

rate of flow does not depend on the magnitude of the losses in the divergent part permits establishing a relationship between the pressures at the nozzle exit in both the absence and the presence of losses in the supersonic portion and, more generally, the relation between the pressure recovery coefficient and the velocity coefficient. In the analysis it is assumed that the jet restriction coefficient both at the nozzle exit and in the critical cross-section is unity, whether or not there are losses in the supersonic portion. A simple derivation yields the desired relationship. This is plotted in several families of curves for three values of the adiabatic exponent, with either the exit Mach number or the area ratio (exit area to critical area) as parameters. The ratio of exit pressures in a Laval nozzle in the presence and absence of losses in the supersonic portion for either full or partial expansion of the gas is derived. The same relationships for a Laval nozzle are also derived in a different way by using the momentum equation. There are 7 figures.

Card 2/3

S/147/62/000/001/009/015
On the relationship between the ... E191/E135

ASSOCIATION: Kafedra georeticheskoy mekhaniki i gidroaero-
mekhaniki, Kazanskiy gosudarstvennyy universitet
(Department of Theoretical Mechanics and
Hydroaeromechanics, Kazan' State University)

SUBMITTED: May 11, 1961

Card 3/3

LINDORF, L.S.; FUFURIN, P.N.; ULITSKIY, M.S.; USTINOV, P.I.; ZEYLIDZON, Ye.D.; MININ, G.P.; KOTS, A.Ya.; KHAVIN, N.Z.; MURAVLEVA, N.V.; LIBERMAN, A.Ya.; BARANOV, B.M.; ZVENIGORODSKIY, I.S.; IVANOV, V.S.; IOFFE, F.Ye.; BURLAKOV, B.M.; MIRENBURG, L.A.; FAYERMAN, A.L., red.; BORUNOV, N.I., tekhn. red.

[Study manual on the technical operation of electric networks and power plants; electrical section of electric power plants and electric power distribution networks]Posobie dlia izucheniia pravil tekhnicheskoi ekspluatatsii elektricheskikh stantsii i setei; elektricheskaia chast' elektrostantsii i elektricheskie seti. Moskva, Gosenergoizdat, 1962. 558 p. (MIRA 15:8)

(Electric power plants--Handbooks, manuals, etc.)
(Electric power distribution--Handbooks, manuals, etc.)

BARON, L.I., prof., doktor tekhn.nauk; IVANOV, V.S., gornyy inzhener

Laboratory studies of the breaking of a medium in detonating charges having different diameters. Vzryv. delo no.50/7:63-70 '62. (MIRA 15:9)

1. Institut gornogo dela imeni A.A. Skochinskogo.
(Blasting--Models)

ACCESSION NR: AR4042228 S/0124/64/000/006/B054/B054

SOURCE: Ref. zh. Mekhanika, Abs. 6B330

AUTHOR: Ivanov, V. S.

TITLE: Calculation of coefficient of contraction of stream, flowing from an infinite frustum of a cone

CITED SOURCE: Sb. Itog Nauchn. konferentsiya Kazansk. un-ta za 1962 g. Sekts. matem. n. Kazan', Kazansk, un-t, 1963, 185-188

TOPIC TAGS: cone, infinite frustum, stream outflow, Poisson equation

TRANSLATION: Considers axisymmetric jet problem of outflow of a stream of ideal fluid from an infinite frustum of a cone. Author applies the Garabedian method (P. R. Garabedian, Pacif. J. Math., 1956, 6, No 4, 611 - 634 - Journal of Abstracts, Mechanics, 1962, 2B389). Solution of equation for stream function Ψ, generalized

Card 1/2

ACCESSION NR: AR4042228

for a space of $\epsilon+2$ measurements

$$\Delta\Psi-\frac{\varepsilon}{y}\Psi_y=0$$

on the condition of constancy of pressure on the free surface

$$\frac{1}{y^2}\frac{\partial\Psi}{\partial n}=1$$

is sought in the form

$$\Psi(x, y; \varepsilon)=y^{\varepsilon}\left|U_0(x, y)+\varepsilon U_1(x, y)+\varepsilon^2 U_2(x, y)+\ldots\right|$$

Author arrives at a recurrent system of Poisson's equation for U_j, where $j = 0, 1, 2,\ldots$ When the generatrix of the cone forms with the axis of symmetry an angle equal to $\pi/4$, there is obtained in the first approximation (at $\epsilon = 1$) for the compressibility factor of the stream the value of $c_c = 0.68956$.

SUB CODE: MA ENCL: 00

Card 2/2

ACCESSION NR: AP4009649 S/0147/63/000/004/0103/0111

AUTHOR: Ivanov, V. S.

TITLE: Center line configuration of an axisymmetric jet fanning out in a wash flow

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 4, 1963, 103-111

TOPIC TAGS: free jet flow, turbulent jet flow, submerged jet flow, axisymmetric jet flow, jet flow center line, jet center line contour, wash flow, hydrodynamics

ABSTRACT: The author considers a free, turbulent, fanning-out jet of incompressible liquid, submerged in a wash flow of incompressible liquid of different density. He employs the principle of conservation of jet momentum in the direction of a tangent to its center line. Effect of reverse overflow in stagnant zones is ignored. Curvature of flow lines at cross-sections normal to the center line is assumed as coincident to the curvature of the jet's center line. Practical application of evolved formulas will require experimental verification of the coefficient of normal force, an experimentally determinable constant with magnitude on the order of unity. It is also shown that the effect of surface curvature of a free fanning-out jet of ideal liquid in the meridional plane can be ignored in approximate calculations for a narrow jet. Orig. art. has: 3 graphs, 18 formulas.

Card 1/2

ACCESSION NR: AP4009649

ASSOCIATION: none

SUBMITTED: 24Apr63 DATE ACQ: 12Feb64 ENCL: 00

SUB CODE: AI, PR NO REF SOV: 002 OTHER: 000

Card 2/2

GAYKO, E.I., gornyy inzh.; IVANOV, V.S., gornyy inzh.

Studying by the method of seismic accoustics the effect of the protective mining of overlying and underlying coal seams. Ugol' 39 no.6:62-65 Je'64 (MIRA 17:7)

1. Trest Ordzhonikidzeugol'.

L 00578-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACCESSION NR: AR5019363 UR/0124/65/000/007/B059/B059

SOURCE: Ref. zh. Mekhanika, Abs. 7B424

AUTHOR: Ivanov, V. S.

TITLE: Calculation of drag coefficient for a cone streamlined by a burbling flow after the Kirchhoff model

CITED SOURCE: Sb. itog. Nauchn. konferentsiya Kazansk. un-ta za 1963 g. Sekts. matem., kibernet. i teoriya veroyatn., mekhan. Kazan', 1964, 109-111

TOPIC TAGS: cone drag coefficient, ideal incompressible fluid, zero gravity fluid, axisymmetric problem/Kirchhoff flow model, Garabed'yan method

TRANSLATION: The Garabed'yan method is used to solve an axisymmetric problem concerning a jet flow of an ideal incompressible fluid with zero gravity around a cone. The stream function χ satisfies the equation

$$\frac{\partial^2\psi}{\partial x^2}+\frac{\partial^2\psi}{\partial y^2}-\frac{\varepsilon}{y}\frac{\partial\psi}{\partial y}=0$$

where $\chi = 0$ along the solid wall, $(1/y\ell)\,(d\chi/dn)=1$ along the free surface. Parameter ℓ

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L 00578-66

ACCESSION NR: AR5019363

equals zero for a plane flow, while for an axisymmetric flow it equals 1. Drag coefficient $C_x(\epsilon)$ is approximated by a square trinomial of ϵ. Values $C_x(-1)$, $C_x(0)$, and $C'_x(0)$ are used in defining coefficients of the square trinomial. It is established that $C_x(-1)=1$. Magnitude $C'_x(0)$ is determined from the solution to the plane problem. Its definition represents the basic difficulty in solving the problem. Following the Garabed'yan approach, the author engages in lengthy calculations to find $C'_x(0)$ for the case in which the cone's generatrix forms a $\pi/4$ angle with the axis of symmetry. M. I. Gurevich

SUB CODE: ME ENCL: 00

Card 2/2

MILOV, A.P.; PECHERSKIY, D.M.; IVANOV, V.S.

Geological characteristics and magnetic properties of the Velitkenayskiy granitoid massif. Trudy SVKNII no.9 170-180 '64. (MIRA 18:9)

IVANOV, V.S., inzh.-kapitan 3-go ranga; ANTONOV, N.G., inzh.-kapitan 3-go ranga

Overloading of ship nuclear reactors. Mor. sbor. 48 no.12:62-68 D '64. (MIRA 18:2)

L 1393-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(1)

ACCESSION NR: AP5021723 UR/0373/65/000/004/0171/0176

AUTHOR: Ivanov, V. S. (Kazan)

TITLE: Contraction coefficient of a jet emanating from an infinite conical funnel

SOURCE: AN SSSR. Izvestiya. Mekhanika, no. 4, 1965, 171-176

TOPIC TAGS: ideal flow, ideal fluid, free jet, approximation method, complex variable

ABSTRACT: The method of P. R. Garabedian (Calculation of axially symmetric cavities and jets. Pacific Journal of Mathematics, 1956, vol. 6, No. 4) is used to study the flow of an axisymmetric jet from an infinite conical funnel. The liquid is assumed to be ideal and irrotational. The various coordinates of the problem are shown in Fig. 1 on the Enclosure where Γ_1 is the solid boundary and Γ_2 is the free surface. The Garabedian method consists of determining the contraction coefficient in an $\xi + 2$ dimensional space by

$$K(s) = X^{1+s}(s) / Y^{1+s}(s),$$

For the present problem the two velocity components are expressed by

Card 1/3

$$v_x = \frac{1}{y^2}\frac{\partial \psi}{\partial y}, \qquad v_y = -\frac{1}{y^2}\frac{\partial \psi}{\partial x}$$

where the stream function is calculated to be

$$\psi'(x, y; \varepsilon) = \frac{X^{1+\varepsilon}}{1+\varepsilon}\frac{J(\theta')}{J(1/2\pi + \theta')}, \qquad J(\theta') = \int_{1/2\pi}^{\theta'} \cos^{\varepsilon}(\theta_0 - \theta')\, d\theta' .$$

Up to a first approximation the ratio X/Y is calculated in the limit of $\varepsilon = -1$ and $\varepsilon = \infty$, and the contraction coefficient in the limit of $\varepsilon = 0$. Using the complex plane, the value of K(0) is given by 0.74671. To determine X/Y as a three-term quadratic, the next step is to calculate the derivative $\partial Y/\partial \varepsilon$. Once more, using the complex plane, this yields $\frac{\partial Y}{\partial \varepsilon} = -0.31021$, and the expression for the ratio X/Y becomes $\frac{X}{Y} = K(0) - 2K^2(0)\frac{\partial Y}{\partial \varepsilon}\delta + \left[1 - K(0) + 2K^2(0)\frac{\partial Y}{\partial \varepsilon}\right]\delta^2, \left(\delta = \frac{\varepsilon}{\varepsilon+2}\right)$.

For the axisymmetric case, where $\varepsilon = 1$, this ratio becomes 0.85173. "In conclusion the author expresses his gratitude to his colleague Kh. Valishova at the computer center of Kazan University for doing the numerical calculations on the computer." Orig. art. has: 34 equations and 2 figures.

ASSOCIATION: none

SUBMITTED: 17Apr63 ENCL: 01 SUB CODE: ME

Card 2/3 NO REF SOV: 001 OTHER: 001

L 1393-66
ACCESSION NR: AP5021723

ENCLOSURE: 01

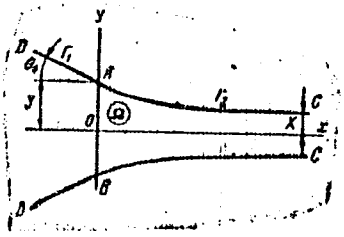

Fig. 1.

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L 1420-66 EWT(1)/EWA(h)
ACCESSION NR: AP5021350

UR/0120/65/000/004/0145/0148
621.378.325

AUTHOR: Kopylovskiy, B. D.; Ivanov, V. S.

TITLE: Pulse circuits for driving semiconductor lasers

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 145-148

TOPIC TAGS: pulse generator, transistorized generator, pulsed illumination

ABSTRACT: A transistorized pulse generator used for driving semiconductor lasers which require threshold currents for stimulated emission of the order of 10—30 amp is described. The schematic of a pulse generator satisfying these requirements is shown in Fig. 1 of Enclosure. It consists of a blocking oscillator circuit with the output-frequency repetition rate variable from 50 to 400 cps, an emitter follower stage, and a parallel combination of four P602 power transistors operating in the common collector mode. The generator is capable of delivering a 17-amp pulse into a 1.0 ohm load. Pulse rise time is 0.1 μsec; fall time is 0.5 μsec; pulse duration is 3 μsec. An auxiliary circuit for measuring the generated currents is included. It consists of a pulse transformer connected in series with the load. The secondary winding of the transformer is shunted by 91 ohms. A sharply defined dependence of

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L 1420-66
ACCESSION NR: AP5021350

the load current on the load impedance for constant outputs makes it possible to measure the load impedances and, indirectly, the efficiencies of the optical generators. Another pulse generator capable of delivering 150-amp pulses to a 0.3-ohm load with a pulse rise time of 5×10^{-8} sec is reported but not described. [BD]
Orig. art. has: 7 figures and 2 formulas.

ASSOCIATION: Fizicheskiy institut AN SSSR, Moscow (Physics Institute, AN SSSR)

SUBMITTED: 26May64 ENCL: 01 SUB CODE: EC

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4097

Card 2/3

L 1420-66
ACCESSION NR: AP5021350

ENCLOSURE: 01

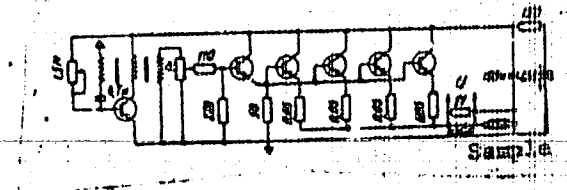


Fig. 1. Pulse generator

Card 3/3 DP

7

Catalytic transformation of alcohols into hydrocarbons of divinyl series. XIX. 1,3-Hexadiene in products of transformation of mixtures of ethyl and butyl alcohols. Yu. A. Gorin, N. G. Belen'kaya, V. S. Ivanov, and A. P. Kavrun-enko (State Univ., Leningrad). Zhur. Obshchei Khim. 25, 1330-4(1955); cf. C.A. 41, 2689f; 50, 1074.—Passage of 1:1 and 1:2 mixts. of EtOH and BuOH at 380° over the Lebedev catalyst (C.A. 28, 3020) gave 2,4-hexadiene and 1,3-hexadiene in a 3:1 ratio. The latter was identified by phys. consts., its tetrabromide, and by hydrogenation. The conjugation was proved by formation of polymeric sulfones with SO_2 and formation of adducts with maleic anhydride and naphthoquinone. The presence of 1,3-hexene is shown by the formation of C_6H_{10} hydrocarbons among the products of the butadiene process devised by Lebedev.

C. M. Kosolapoff

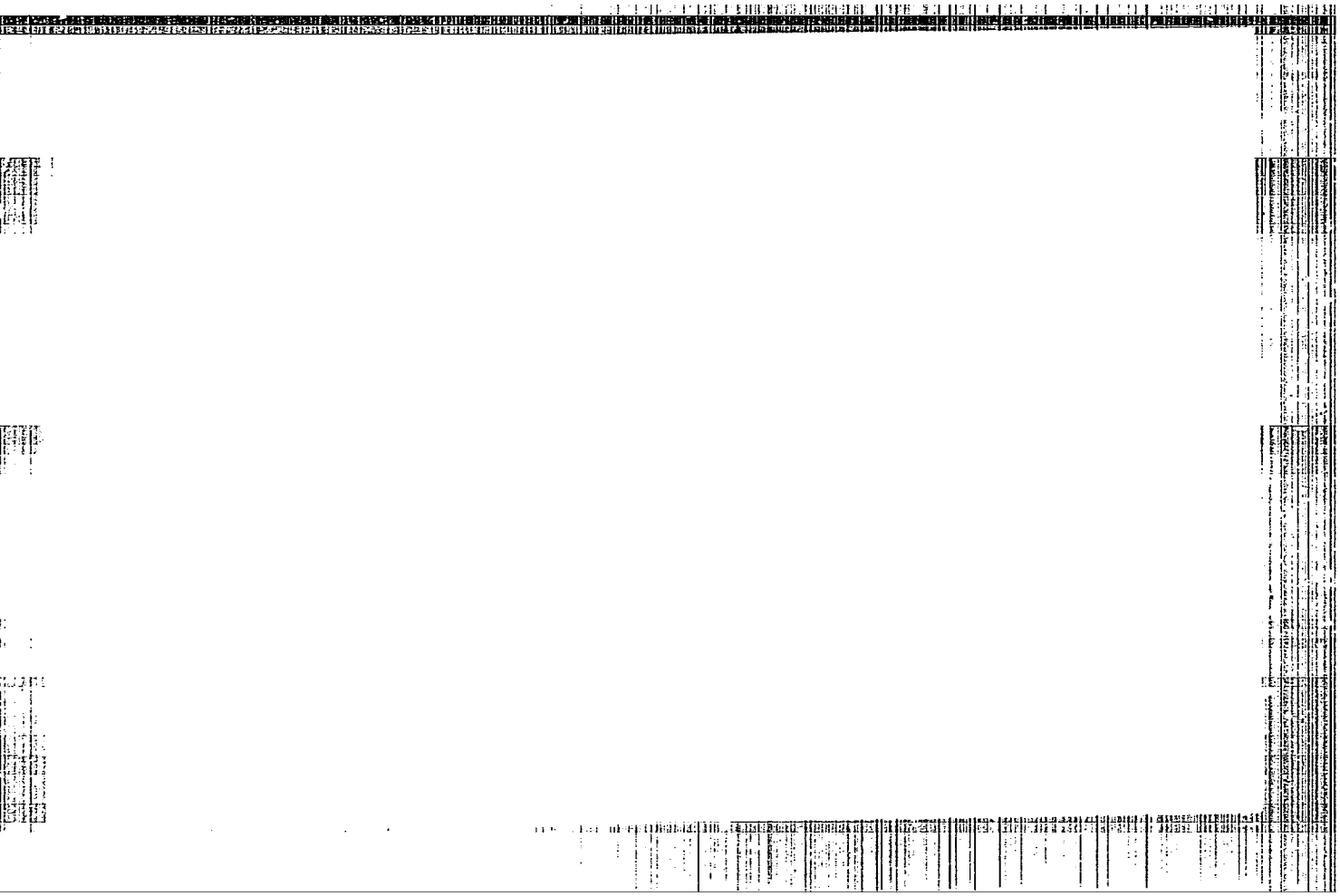
CH

AMIRKHANOV, Kh.I.; BRANDT, S.B.; BARTNITSKIY, Ye.N.; ANOKHINA, L.K.; IVANOV, V.S.

Diffusion of the radiogenic argon in micas. Trudy Geol.inst. Dag.fil. AN SSSR 1:188-193 '57. (MIRA 14:9)
(Diffusion) (Argon) (Mica)

AMIRKHANOV, Kh.I.; BRANDT, S.B.; BARTNITSKIY, Ye.N.; GURVICH, V.S.; GASANOV, S.A.; IVANOV, V.S.

Thermal stability of radiogenic argon in the dispersion micas. Trudy Geol.inst.Dag.fil. AN SSSR 1:194-199 '57. (MIRA 14:9)
(Argon) (Mica)



APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000619210002-0"

IVANOV, V.S.

AUTHORS: Sinayskiy, G. M., Ratner, T. V., Makarova, V. P., 79-11-4/56
Gorin, Yu. A., Ivanov, V. S., Alferova, L. V.

TITLE: An Investigation of the Composition of the Hydrocarbons C_6 - the By-Products of the Catalytic Synthesis of Divinyl From Alcohol (Izucheniye sostava uglevodorodov C_6 - pobochnykh produktov kataliticheskogo sinteza divinila iz spirta).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 2927-2931 (USSR).

ABSTRACT: The investigation of ethyl alcohol in divinyl over a catalyst represents a complicated catalytic process which is accompanied by a considerable amount of side reactions. In spite of the informative papers by S. V. Lebedev and Ya. A. Gorin in the field of the catalytic formation of the combined dienes (C_nH_{2n-2}) from alcohols, their binary mixtures, and the mixtures of the alcohols with aldehydes and ketones with regard to the by-products, their composition is by far not sufficiently investigated. Of the insufficiently investigated by-products obtained on rectification of hydrocarbons the so-called hexylene-hexadiene fraction (boiling point 60-90°C) is the object of the authors' investigation. On further rectification the following were obtained beside other by-products. 1) hexadiene-1,3. 2) 3-

Card 1/2

An Investigation of the Composition of the Hydrocarbons C_6 - the By-Products of the Catalytic Synthesis of Divinyl From Alcohol. 79-11-4/56

methylpentadiene 1,3. 3) cyclohexadiene-1,3. Thus the presence of the combined dienes. 1) hexadiene-1,3. 2) 3-methylpentadiene-1,3 and 3) cyclohexadiene-1,3 was determined in the hexylene-hexadiene fraction of the hydrocarbons, the by-products of the catalytic synthesis of divinyl from alcohol according to Lebedev, and the way of their formation was partially suggested.
There are 19 references, 9 of which are Slavic.

ASSOCIATION: The Laboratory of the Factory SK and the Leningrad State University (Laboratoriya zavoda SK i Leningradskiy gosudarstvennyy universitet).

SUBMITTED: November 23, 1956.

AVAILABLE: Library of Congress.

1. Divinyl-Synthesis 2. Diene syntheses 3. Ethanol-Catalysis
4. Hydrocarbons-Analysis

Card 2/2

IVANOV, V. S.

AUTHORS: Gorin, Yu. A., Ivanov, V. S., Tereshenkova, V. K. 54-1-13/17

TITLE: **Study of the Reaction of the Formation of Croton Aldehyde From Acetaldehyde** (Izucheniye reaktsii obrazovaniya krotonovogo al'degida iz uksusnogo)

PERIODICAL: Vestnik Leningradskogo Universiteta Seriya Fiziki i Khimii (Nr 1), 1958, Nr 4,

ABSTRACT: The development of a simple method of obtained croton aldehyde is of practical importance for the synthesis of important products. It is formed as an intermediate product during the process of the synthesis of divinyl from alcohol by the method developed by S. V. Lebedev (refs. 1 and 2), and in the catalytical production of divinyl from the mixture ethyl alcohol - acetaldehyde (ref. 3). According to data published (refs. 4 and 5) the croton aldehyde is obtained from acetaldehyde in two stages. According to M. Ya. Kagan, G. D. Lyubarskiy and S. F. Fedorov (ref. 5) the yield of croton aldehyde attained 64% of the initial substance. It may also be obtained as paraldehyde in the presence of sulphuric acid with a yield of 43 % (ref. 6). It may also be formed in a

Card 1/3

single stage from the gaseous phase under the action of solid catalyzers at increased temperature (refs. 7 - 13). As further initial substances for the production of Croton aldehydes by the catalytic method from the gaseous phase butanediol - 1 (250° ni - catalyzer, yield 50%) (ref. 14), transbutanediol - 1,4 (yield 20%) (ref. 15), erythrol (refs. 16 and 17) are mentioned. These methods have, however, no practical importance. In order to find out the possibilities of obtaining Croton aldehyde immediately from acetaldehyde with a high yield the authors carried out an approximative thermodynamical calculation of the forming reaction of croton aldehyde. As no exact thermodynamical characteristics are available for the majority of organic compounds, the free energies of the formation of aldehydes were calculated according to the method developed by V. B. Fal'kovskiy (ref. 18). Similar results were obtained also when calculating according to the data supplied by Bremner - Toman (ref. 19). The values of free energies were taken from the tables (ref. 20). Calculation was carried out for the gaseous state at: 298, 500, 700 and 900°K. The equilibrium constant of the reaction (K_p) was calculated according to the equation $RT\ln K_p = -$ [illegible] (table 1)

Study of the Reaction of the Formation of Croton Aldehyde From Acetaldehyde 54-1-13/17

The approximated thermodynamical calculation showed that the increase of reaction temperature and a less diluted acetaldehyde must promote the formation of croton aldehyde. A still greater increase of temperature and a still lesser degree of dilution with water caused the forming of still stronger condensation products of the acetaldehyde. Compared to these products, croton aldehyde must be considered as an intermediate product. Calculations carried out are confirmed by experiments. There are 5 tables and 22 references, 9 of which are Slavic.

SUBMITTED: October 25, 1957

AVAILABLE: Library of Congress

1. Acetaldehyde 2. Aldehyde croton-Analysis

Card 3/3

AUTHORS: Stolyarov, K. P., Ivanov, V. S. 75-13-2-17/27

TITLE: Photometric Determination of Crotonaldehyde in the Ultraviolet Spectrum Range
(Fotometricheskoye opredeleniye krotonovogo al'degida v ul'trafioletovoy oblasti spektra)

PERIODICAL: Zhurnal Analiticheskoy Khimii, 1958, Vol. 13, Nr 2, pp. 246-249 (USSR)

ABSTRACT: As present a satisfying quantitative determination method for crotonaldehyde in presence of other organic compounds, as for instance acetaldehyde, acetone, acetylene, acetic acid, does not exist as yet. Crotonaldehyde, however, is found in the mixture of compounds of this kind in the reaction products of some organic syntheses, e.g. in the industry of synthetic rubber. The methods for the determination of crotonaldehyde, described in publications (refs 1,2) are based upon the reactions of functional groups, which, however, are not specific for crotonaldehyde and therefore cannot be used for the determination in the presence of other unsaturated or of other carbonyl compounds. In this paper the authors try to work out a quantitative determination method, which is specific for crotonaldehyde. Such a method is the photometric

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determination in the ultraviolet range of the spectrum. Solutions of crotonaldehyde with admixtures of various quantities of acetaldehyde, acetic acid, acetone, and acetylene in aqueous and anhydrous media were examined. From a composition of the absorption curves of all these compounds in the ultraviolet range can be seen, that at 265 mμ only crotonaldehyde has an absorption band. This fact permits its photometric determination without precedent separation of the above mentioned organic compounds. First crotonaldehyde was determined besides acetic acid, acetaldehyde, acetone, and acetylene in aqueous solutions. Aqueous solutions of crotonaldehyde obey Beer is law in a concentration range of from 0.1-12.8 per cent by volume. Therefore in this interval the spectrophotometric determination is possible. Also the influence of the admixed compounds and their maximum concentrations, at which the quantitative photometric determination of the crotonaldehyde is still possible, were investigated and are given in the work. In case of

simultaneous presence of all mentioned components the maximum permissible percentage of the separate admixtures is, in case of the highest examined concentration of crotonaldehyde (12,8 per cent by volume, for acetaldehyde and acetic acid 2 percent by volume each and for acetone 1 percent by volume. Acetylene, even in high excess quantity does not disturb the determination of crotonaldehyde.

The author investigated also conditions for the spectrophotometric determination of crotonaldehyde in acetaldehyde, acetone, and acetic acid as solvents. The optical density of the solutions of crotonaldehyde in acetaldehyde and acetone practically is the same and depends within a wide range linearly on the concentration of the crotonaldehyde. This allows the determination of crotonaldehyde in these both non-aqueous solvents. The presence of acetic acid in acetaldehyde or in acetone much reduces the results of the determination, the used solvents therefore must be free from acetic acid. Acetylene does not disturb the determination.

Photometric Determination of Cretonaldehyde in the Ultraviolet Spectrum Range 75-13-2-17/27

There are 3 figures, 3 tables, and 15 references, 6 of which are Soviet

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: October 30, 1956

1. Acetaldehyde--Analysis 2. Crotonaldehyde--Determination
3. Photometry 4. Ultraviolet spectrum

Card 4/4

GORI[illegible], Yu.A.; IVANOV, V.S.; TERESHENKOVA, V.K.

Formation of croton aldehyde from acetaldehyde [with summary in English]. Vest.LGU 13, no.4:134-140 '58. (MIRA 11:4)
(Acetaldehyde) (Crotonaldehyde)

IVANOV, V. S.

79-1-36/63

AUTHORS: Gorin, Yu. A. ; Ivanov, V. S. , Bogdanova, Ye. S. , Pyayvinen, E. A.

TITLE: Dienic Hydrocarbons From Unsaturated Alcohols (Diyenovyye uglevodorody iz nepredel'nykh spirtov) I. The Catalytic Dehydration of Crotyl Alcohol to Dinvinyl (I. Kataliticheskaya degidratatsiya krotilovogo spirta v divinil)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol.28, Nr 1, pp.169-176(USSR)

ABSTRACT: The subject of the present paper was the dehydration of crotyl alcohol according to S. V. Lebedev. The authors used various components of a catalyst which permitted to model the process in its last stage, the formation of divinyl from crotyl alcohol by dehydration. Moreover, it was their task to perform the reactions under different conditions and with the best contact action of catalysts which might supposedly lead to high yields. First of all it was of practical interest to calculate the dehydration of crotyl alcohol thermodynamically, as nothing was hitherto known on it with regard to free energy, entropy, modification of the heat capacity by temperature. For this reason the calculations were only made approximately, based on

Card 1/2

79-1-36/63

Dienic Hydrocarbons From Unsaturated Alcohols. I. The Catalytic Dehydration of Crotyl Alcohol to Divinyl

the additive thermodynamic functions for organic molecules. The authors calculated the equilibrium constants of the dehydration reaction of crotyl alcohol in divinyl and according to them also the yield of reaction products in a temperature range of 300 - 890°K. From the approximate thermodynamic calculation follows that there exists not thermodynamic limitations for the given reaction. At a higher temperature the yield of divinyl increases. The best dehydration results were obtained with Lebedev's catalyst - B_2. In the liquid products of the catalysis over this catalyst the authors found a methylvinylcarbinol which is produced by the isomerization of crotyl alcohol. The investigation results correspond to the conceptions existing on the formation scheme of divinyl from ethyl alcohol according to Lebedev's method, according to which this alcohol is an intermediate product of this process. There are 3 tables, and 22 references, 6 of which are Slavic.

ASSOCIATION: Leningrad State University (Leningradskiy gosudarstvennyy universitet)

SUBMITTED: December 30, 1956
AVAILABLE: Library of Congress
Card 2/2

1. Chemistry 2. Hydrocarbons 3. Alcohols 4. Dehydration

SOV/79-28-6-1/63

AUTHORS: Gorin, Yu. A., Ivanov, V. S., Khromnikova, Ye. K.

TITLE: Diene-Hydrocarbons of Unsaturated Alcohols (Diyenovyye uglevodorody iz nepredel'nykh spirtov) II. The Catalytic Dehydration of Tiglic Alcohol and of 2-Ethylhexene-2-ol-1 in Diene-Hydrocarbons (II. Kataliticheskaya degidratatsiya tiglinovogo spirta i 2-etilgeksen-2-ola-1 v diyenovyye uglevodorody)

PERIDICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 6, pp. 1421-1426 (USSR)

ABSTRACT: Already earlier the authors found (Ref 1) that the use of the components of the catalyst according to S. V. Lebedev (B_2) and of the phosphate catalyst makes possible the synthesis of the divinyl of crotyl alcohol in a goodyield. It was of interest to investigate, whether these catalysts could also be used in the dehydration of other α,β-unsaturated alcohols in order to obtain hydrocarbons consisting of a system of double bonds. The catalytic dehydration of tiglic alcohol to isoprene by means of the above mentioned catalysts was investigated. The phosphate catalyst is already

Diene-Hydrocarbons of Unsaturated Alcohols. II. The Catalytic Dehydration of Tiglic Alcohol and of 2-Ethylhexene-2-ol-1 in Diene-Hydrocarbons

used in the industrial synthesis of the divinyl of butylene-glycol-1,3. The isoprene yield with the above mentioned catalysts is 67 %, calculated for the tiglic alcohol. The catalytic dehydration of 2-ethylhexene-2-ol-1 was investigated the same way. The yield of hydrocarbons (calculated for C_8H_{14}) for either catalyst was also very good. The hydrocarbons C_8H_{14} obtained by means of the one or the other are identical and mainly consist of 2-ethylhexadiene-1,3 which has to be regarded as initial product in the hydration. As the catalytic dehydration of crotyl alcohol and of the α,β-unsaturated alcohols having an alkyl group in the α-position, obviously takes the same course under the formation of bound dienes, the assumption by Ostromyslenskiy, that in the intermediate stage of the reaction compounds with an allene group can occur, must be regarded as unfounded, as the authors maintain. There are 2 tables and 29 references, 12 of which are Soviet.

SOV/79-28-6-1/63

Diene-Hydrocarbons of Unsaturated Alcohols. II. The Catalytic Dehydration of Tiglic Alcohol and of 2-Ethylhexene-2-ol-1 in Diene-Hydrocarbons

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: May 20, 1957

1. Alcohols--Dehydration

Card 3/3

5 (3)

AUTHORS: Gorin, Yu. A., Ivanov, V. S., Pushnova, T. G., Zlatogurskaya, V. V.

SOV/79-29-4-13/77

TITLE: Diene Hydrocarbons From Unsaturated Alcohols (Diyenovyye uglevodorody iz nepredel'nykh spirtov). III.Catalytic Cleavage of Allyl Carbinol (III.Kataliticheskoye razlozheniye allilkarbinola)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 4, pp 1104 - 1108 (USSR)

ABSTRACT: On the strength of previous investigations of the authors (Ref 9) and other chemists (Refs 1-8) it is shown in the present paper that under conditions under which an α, β-unsaturated alcohol (crotyl alcohol) readily splits off water and yielding divinyl with 85-88 mole%, the allyl carbinol primarily undergoes cleavage, thus yielding propylene and formaldehyde. The authors investigated the process of the catalytic transformation of allyl carbinol on some dehydrating components of the catalyst of S. V. Lebedev at 350° as well as on the silicagel-tantalum catalyst at 370°. Under these conditions divinyl is formed from allyl carbinol in small quantities only. It was found that on the dehydrating components of the cata-

Card 1/2

Diene Hydrocarbons From Unsaturated Alcohols. III.Cata- SOV/79-29-4-13/77
lytic Cleavage of Allyl Carbinol

lysts B and B_2 of Lebedev chiefly a cleavage of the allyl carbinol takes place to give propylene and formaldehyde. The data obtained do not support the assumption that the formation of divinyl via the allyl carbinol is possible in the process of Lebedev. In order to complete the above-mentioned data it must be said that the transformation of butanediol-1.3 on the dehydrating component of the catalyst of Lebedev takes place under the formation of a considerable quantity of propylene (Ref 15). In the liquid cleavage products of butanediol -1.3 on the Lebedev catalyst methyl alcohol was found (Ref 16). Comparing the data obtained by Lebedev and those of the present paper it may be assumed that butanediol -1.3 splits off in the beginning one molecule of water and is converted to allyl carbinol which is cleft under the influence of the dehydrating component to give propylene and formaldehyde. The latter is reduced to methyl alcohol (Scheme). There are 1 table and 26 references, 17 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)
SUBMITTED: February 10, 1958
Card 2/2

IVANOV, V.S.; AFANS'YEV, I.D.

Diene hydrocarbons from unsaturated alcohols. Part 4: Catalytic dehydration of 2-methyl-2-penten-1-ol. Zhur. ob. khim. no.11:3826-3831 N'60. (MIRA 13:11)

1. Leningradskiy gosudarstvennyy universitet.
(Pentenol)

Ivanov, V.S.

82076

S/190/60/002/01/04/021
B004/B061

5.3830A

AUTHORS: Ivanov, V. S., Sokolova, M. A., Averyanov, S. V., Yevdokimov, V. F., Gurlyand, I. S

TITLE: Radiation Polymerization of Isoprene. I

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2, No. 1, pp. 35-37

TEXT: The aim of this work was to obtain data on the action of the conditions of irradiation with gamma rays of Co^{60} on the polymerization of isoprene. Pure isoprene was irradiated in glass ampoules in an experiment in the apparatus ГУТ-400 (GUT-400, 143 gram equivalent of radium), in further tests in the apparatus К-1400 (K-1400, 1400 gram equivalent of radium) at room temperature in a nitrogen atmosphere. The molecular weight of the polymers was determined viscometrically, and the microstructure (containing 1,2-, 3,4-, and 1,4-bonds) by infrared spectra (taken with a ИКС-6 (IKS-6) spectrometer). The results are given in a Table. One polymer was obtained by the action of

Card 1/2

Radiation Polymerization of Isoprene. I. S/190/60/002/01/01/021
B004/B061
82076 82076

gamma rays of Co^{60} whose yield is directly proportional to the radiation dose, with small fluctuations of the radiation intensity. The microstructure of the polymer in the temperature range 40 - 20°C is independent of the dose and intensity of radiation, and of the presence of a sensitizer (5 mole% CCl_4). The average molecular weight of the polymer rises when the radiation intensity is decreased. The authors thank G. S. Denisov for advice and help in taking the infrared spectra. There are 1 table and 4 references. 4 US

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: July 7, 1959

Card 2/2

IVANOV, V.S.; TSVETKOV, V.F.

Influence of paraldehyde on the photometric determination of crotonaldehyde. Zhur.anal.khim. 15 no.2:245-247 Mr-Ap '60. (MIRA 13:7)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova.
(Paraldehyde) (Crotonaldehyde)

IVANOV, V.S.; TERESHENKOVA, V.K.

Catalytic formation of crotonaldehyde. Part 2: Condensation of acetaldehyde over beryllium and calcium phosphates. Vest. LGU 15 no.16:134-139 '60. (MIRA 13:8)

(Acetaldehyde) (Crotonaldehyde)

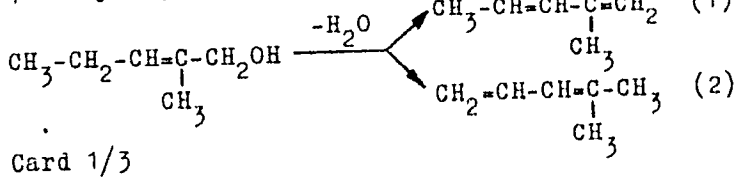
S/079/60/030/011/022/026
B001/B055

AUTHORS: Ivanov, V. S. and Afanas'yev, I. D.

TITLE: Diolefins From Unsaturated Alcohols. IV. Catalytic Dehydration of 2-Methyl 2-Penten-1-ol

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, No. 11, pp. 3826-3831

TEXT: 2-Methyl 2-penten-1-ol, among other alcohols, is used as initial compound in the catalytic dehydration treated in Refs. 1 and 2, but is described insufficiently in the chemical literature (Refs. 3-5). Data concerning its dehydration have not been published at all. It was to be expected that the dehydration of this compound would lead to conjugated diolefins of the composition C_6H_{10}, i.e. 2-methyl 1,3-pentadiene (1) and 4-methyl 1,3-pentadiene (2):



Card 1/3

Diolefins From Unsaturated Alcohols.
IV. Catalytic Dehydration of 2-Methyl
2-Penten-1-ol

S/079/60/030/011/022/026
B001/B055

As dehydration catalysts for this reaction the authors used phosphate catalysts, i.e. type Ф (F), the catalyst used in the synthetic rubber industry for the preparation of divinyl from 1,3-butanediol (Ref. 17), and one of the dehydrating components of $Б_2$ (B_2), the catalyst by S. V. Lebedev (Ref. 1). 2-Methyl 1,3-pentadiene was obtained as main dehydration product of 2-methyl 2-penten-1-ol. When the dehydrating component B_2 was used as catalyst, an olefin (C_6H_{12}) having the same carbon skeleton as the diolefin formed besides the latter. The formation of an olefin may be explained by the transformations characteristic of Lebedev's catalyst. A comparison of the results obtained in this work and those obtained in transformation reactions of n-propyl alcohol under S. V. Lebedev's reaction conditions confirm an assumption by Yu. A. Gorin. The latter assumed that this transformation involves the intermediate formation of 2-methyl 2-penten-1-ol. The study of the catalytic dehydration of 2-methyl 2-penten-1-ol and previous experimental data concerning the dehydration of α,β-unsaturated alcohols show that the scheme proposed by Ostromyslenskiy,

Card 2/3

Diolefins From Unsaturated Alcohols.
IV. Catalytic Dehydration of 2-Methyl
2-Penten-1-ol

according to which the dehydration proceeds via an allene compound as intermediate, is not in agreement with the facts. Besides, this scheme is impossible from the structural viewpoint in the case of α-alkyl substituted alcohols. This paper was read at the All-Union Conference on Organic Catalysis held in Moscow on November 18, 1959. There are 2 tables and 22 references: 13 Soviet, 3 US, 2 British, 3 German, and 1 Belgian.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: October 27, 1959

Card 3/3

IVANOV, V.S.; MAKSIMOVA, N.M.

Reversibility of the reaction of crotonization over the S.V.Letedev catalyst. Vest LGU 16 no.22:151-153 '61. (MIRA 14:11)
(Crotonaldehyde) (Acetaldehyde) (Catalysts)

IVANOV, V.S.; MAKSIMOVA, N.M.

Reversal of the crotonization of acetaldehyde over S.V.Lebedev's catalyst. Zhur.ob.khim. 30 no.10:3171-3174 O '61. (MIRA 14:4)

1. Leningradskiy gosudarstvennyy universitet.
(Acetaldehyde) (Crotonaldehyde)

IVANOV, V.S.; YERMOLAYEVA, A.D.; SYROMYATNIKOV, K.A.

Device for the automatic determination of the carbamide content in a solvent. Khim.i tekh.topl.i masel 7 no.9:46-50 S '62. (MIRA 15:8)

1. Leningradskiy filial Spetsial'nogo konstruktorskogo byuro avtomatizatsii neftepererabotki i neftekhimii.
(Urea) (Paraffin wax)

S/081/63/000/004/014/051
B166/B186

AUTHORS: Gorin, Yu. A., Ivanov, V. S.

TITLE: Explanation of the reaction of the formation of certain by-products in the process of catalytic divinyl synthesis by S. V. Lebedev's method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 221, abstract 4Zh62 (In collection: Kataliz v vyssh. shkole. Tr. I Mezhvuz. soveshchaniya. no. 1, part 2. M., Mosk. un-t, 1962, 258-274)

TEXT: The authors present diagrams for the formation of CH_3OH, allyl carbinol, hexadiene-1,3,3-methylpentadi-1,3-ene and cyclohexadi-1,3-ene, which are obtained as by-products from the contact synthesis of divinyl from C_2H_5OH by the method of S. V. Lebedev. [Abstracter's note: Complete translation.]

Card 1/1

S/190/63/005/004/020/020
B101/B220

AUTHORS: Ivanov, V. S., Sukhikh, T. A., Breger, A. Kh., Osipov, V. B., Gol'din, V. A.

TITLE: Radiation polymerization of maleic N-phenyl maleinimide in solid state

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 4, 1963, 628

TEXT: Maleic N-phenylimide, m.p. 89 - 90°C, was polymerized by Co^{60} gamma irradiation. The irradiation yield was ~1000 molecules per 100 ev. At 87.5°C, 0.65 Mr/hr and a dose of 2.2 Mr, 32.5 % of polymer was obtained. At 20°C this yield decreased to 4.5 - 6.5 %. More complete polymerization (79.5 %) was achieved by further heating to 100°C of the ampoules that had been irradiated at 82°C. With 2 - 5 Mr light yellow crystalline powders were obtained, with 10 Mr brown amorphous substances. Dependent on the conditions of production, the polymers are heat-resistant up to 250 - 330°C, soluble in dimethyl formamide and CS_2, insoluble in H_2O, acetone, CCl_4, benzene, toluene, heptane and cyclohexane. The IR spectra of the polymers showed bands of the phenyl ring, the carbonyl group and the C-N bond.

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S/190/63/005/004/020/020
B101/B220

Radiation polymerization of ...

From a comparison of the IR spectra of monomer and polymer it was concluded that in the course of polymerization the C=C bonds are opened.

SUBMITTED: July 26, 1962

Card 2/2

AUTHORS: Ivanov, V. S.; Medvedev, Yu. V.; Vasilenko, [illegible]; [illegible]
Osipov, V. B.; Gol'din, V. A.

TITLE: Studies in radiation polymerization. 2. The radiation polymerization of piperylene

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 8, 1963, 1255-1262

TOPIC TAGS: radiation polymerization, piperylene, radiolysis, Co^{60}, carbon tetrachloride, argon, krypton

ABSTRACT: Samples of piperylene monomer were placed in sealed glass ampules in an atmosphere of nitrogen, argon, or krypton, and subjected to gamma-irradiation by means of a Co^{60} installation. Following absorption of doses from 1 to 160 Mr, the ampules were opened, the gases subjected to chromatographic study. The obtained polymer was analyzed for viscosity and degree of unsaturation, and was studied by infrared spectroscopy. The gaseous products of radiolysis contained hydrogen, methane, ethylene, acetylene, divinyl and 96.5% piperylene. The degree of unsaturation of the polymer amounted to 84 and 37% for samples receiving 60 and 160 Mr respectively. It was found that the yield of the polymer increased with the

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irradiation dose and that the presence of nitrogen, argon, and krypton exerted a sensitizing effect on radiation polymerization. Infrared spectroscopy revealed that the structure of the polypiperylene consisted mainly of 1,4-trans chains, 1,2-trans chains, or of their combination, while the amount of cis-configurations had decreased trifold. It is concluded that in radiolysis the main line of cleavage of the piperylene molecule consists in the severance of the single bond between the fourth and fifth carbon atoms. The authors are deeply grateful to N. I. Leonova for assistance in infrared spectroscopy. Orig. art. has: 1 table, 2 charts, and 14 formulas.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet fiziko-khimicheskiy institut im. L. Ya. Karpova (Leningrad State University, Physical-Chemical Institute)

SUBMITTED: 12Feb62 DATE ACQ: 28Aug63 ENCL: 00
SUB CODE: CH NO REF SOV: 008 OTHER: 023

IVANOV, V.S.; MEDVEDEV, Yu.V.; VASILENKO, V.F.; BREGER, A.Kh.; OSIPOV, V.B.; GOL'DIN, V.A.

Studies in radiation polymerization. Part 2: Radiation polymerization of piperylene. Vysokom.soed. 5 no.8:1255-1262 Ag '63. (MIRA 16:9)

1. Leningradskiy gosudarstvennyy universitet i Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Piperylene) (Polymerization) (Radiation)

IVANOV, V.S. (Leningrad); PLAKHOV, D.D. (Leningrad)

Vibrations of a circular ring carrying a concentrated mass. (MIRA 16:10)
Inzh. zhur. 3 no.3:482-489 '63.

(Elastic plates and shells--Vibration)

L 38539-66 EWT(m)/EWP(t)/ETI IJP(c) WW/JD/JG/GD

ACC NR: AT6014758 SOURCE CODE: UR/0000/65/000/000/0101/0109

AUTHORS: Karasik, V. R.; Kurganov, G. B.; Yershov, V. G.; Shabalin, I. Yu.; Kopylovskiy, B. D.; Ivanov, V. S.

ORG: none

TITLE: Superconducting solenoids of niobium alloys with zirconium

SOURCE: Soveshchaniye po metallovedeniyu i metallofiziko sverkhprovodnikov. 1st, 1964. Metallovedeniye i metallofizika sverkhprovodnikov (Metallography and physics of metals in superconductors); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 101-109

TOPIC TAGS: superconductivity, superconducting alloy, niobium alloy, zirconim containing alloy, solenoid / S-60 solenoid, S-50 solenoid, B-3 solenoid, B-solenoid

ABSTRACT: Superconducting solenoids for creating high magnetic fields are discussed. A brief historical review is presented of the development of superconducting solenoids and of the use of niobium-zirconium alloys. Three equivalent circuits for a superconducting solenoid connected with a power supply are presented and discussed. Some of the physical problems of superconducting niobium-zirconium alloy solenoids and the means of overcoming them are given. The construction and properties of four superconducting solenoids (S-60, S-50, B-3, and B-1) are described. The solenoids are wound with 0.25-mm diameter wire of 75% Nb—25% Zr alloy which is

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ACC NR: AT6014758 /0

electrolytically coated with a 20 μ thick layer of copper. The fields attainable with these solenoids range up to 46 koe. Two of the solenoids (S-50 and B-1) were used together to produce a field of 51½ koe. The schematic for a 6-V transistorized power supply, which is current-regulated in the range 0.2—75 a, is given. The authors thank B. M. Vul, corresponding member AN SSSR, for valuable advice; Ye. N. Savitskiy, V. V. Baron, M. B. Golant, I. A. Baranov, and R. S. Shmulovich for supplying the wire for fabricating the solenoids; G. T. Nikitina, V. I. Sarychev, G. I. Agapov, and I. A. Bocharov for help in the work. Orig. art. has: 4 equations, 3 tables, and 3 diagrams.

SUB CODE: 20/ SUBM DATE: 23Dec65/ ORIG REF: 004/ OTH REF: 011

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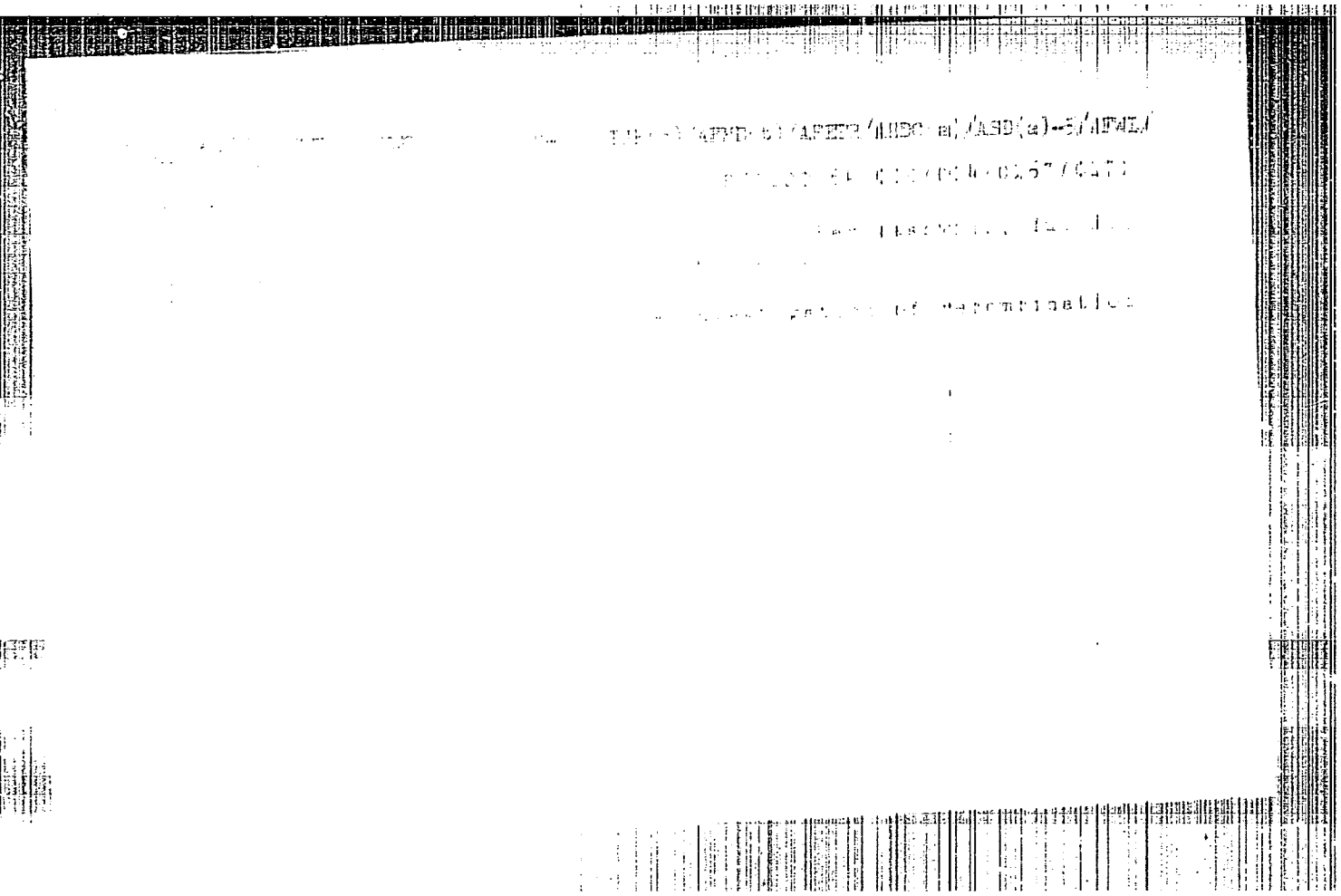
IVANOV, V.S.; MEDVEDEV, Yu.V.; KHOU GUY [Hou Kuei]; TARAN, A.A.

Radiolysis of some conjugated dienes. Zhur. ob. khim. 34 no.11: 3853 N '64 (MIRA 18:1)

1. Leningradskiy gosudarstvennyy universitet.



9 figures and 2 formulas.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute, AS USSR)

ACCESSION NR: AP4037271 S/0190/64/006/005/0782/0786

AUTHORS: Ivanov, V. S.; Sukhikh, T. A.; Medvedev, Yu. V.; Breger, A. Kh.; Osipov, V. B.; Gol'din, V. A.

TITLE: Studies in radiation polymerization. 3. Radiation polymerization of piperylene in channel complexes of urea

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 6, no. 5, 1964, 782-786

TOPIC TAGS: piperylene polymerization, urea clathrate complex, endocytic clathrate component, channel polymerization, tube structure, trans piperylene polymer

ABSTRACT: Urea clathrate complexes with piperylene as endocytic component were prepared by mixing 1 gm urea with 0.001— 0.1 ml methanol, cooling in a glass ampule to -78C, and adding 1-3.7 moles of cooled piperylene per mole of urea. The polymerization of piperylene was achieved by γ-irradiation with Co^{60}. Parallel studies on block-polymerization of piperylene were conducted at -78C with irradiation doses of 30 Mrad. After 2 to 6 weeks at -78 to -45C, the residual piperylene monomer was removed by means of a vacuum pump. The urea was then dissolved in 10% acetone, leaving polymers whose specific viscosity, degree of unsaturation, and

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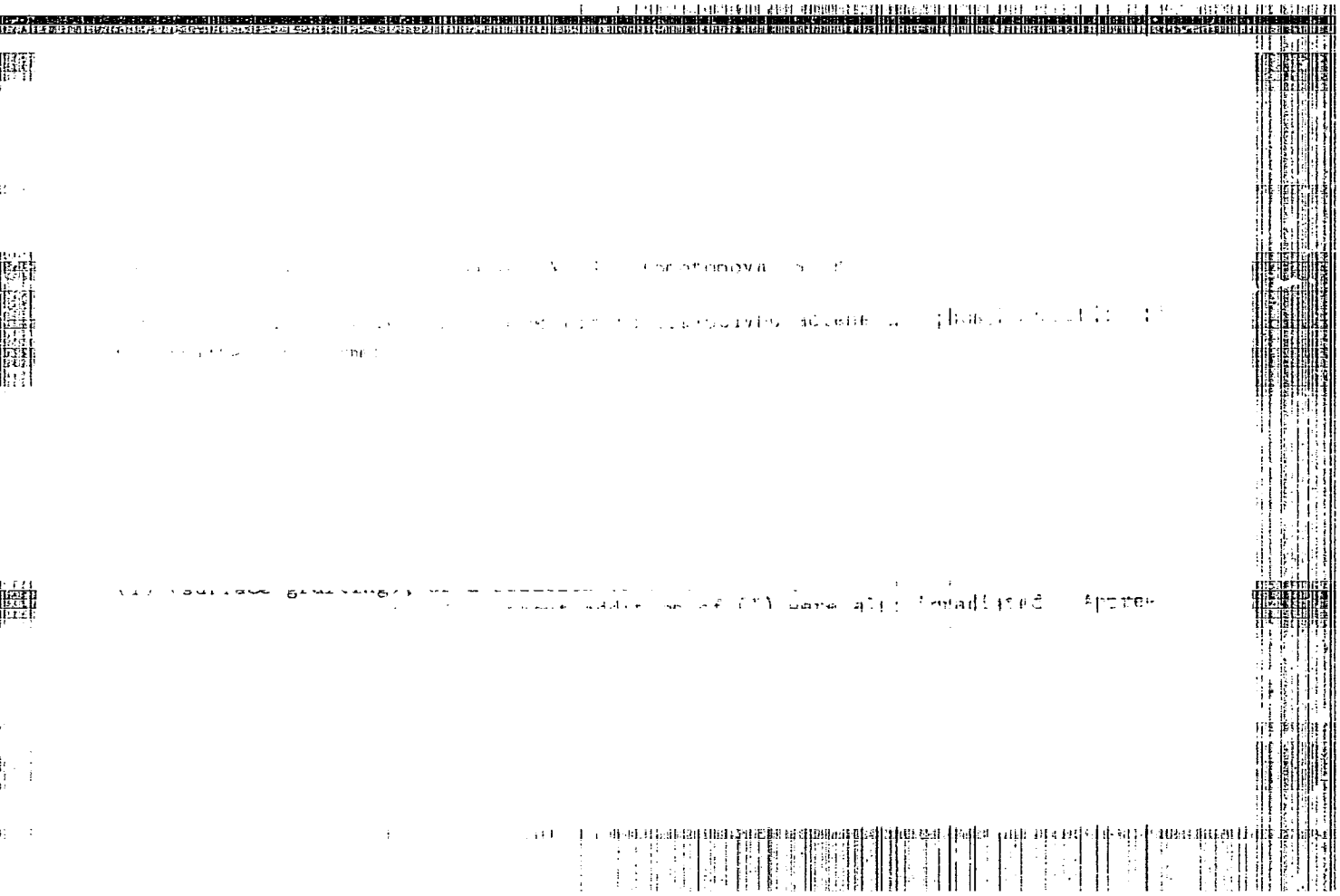

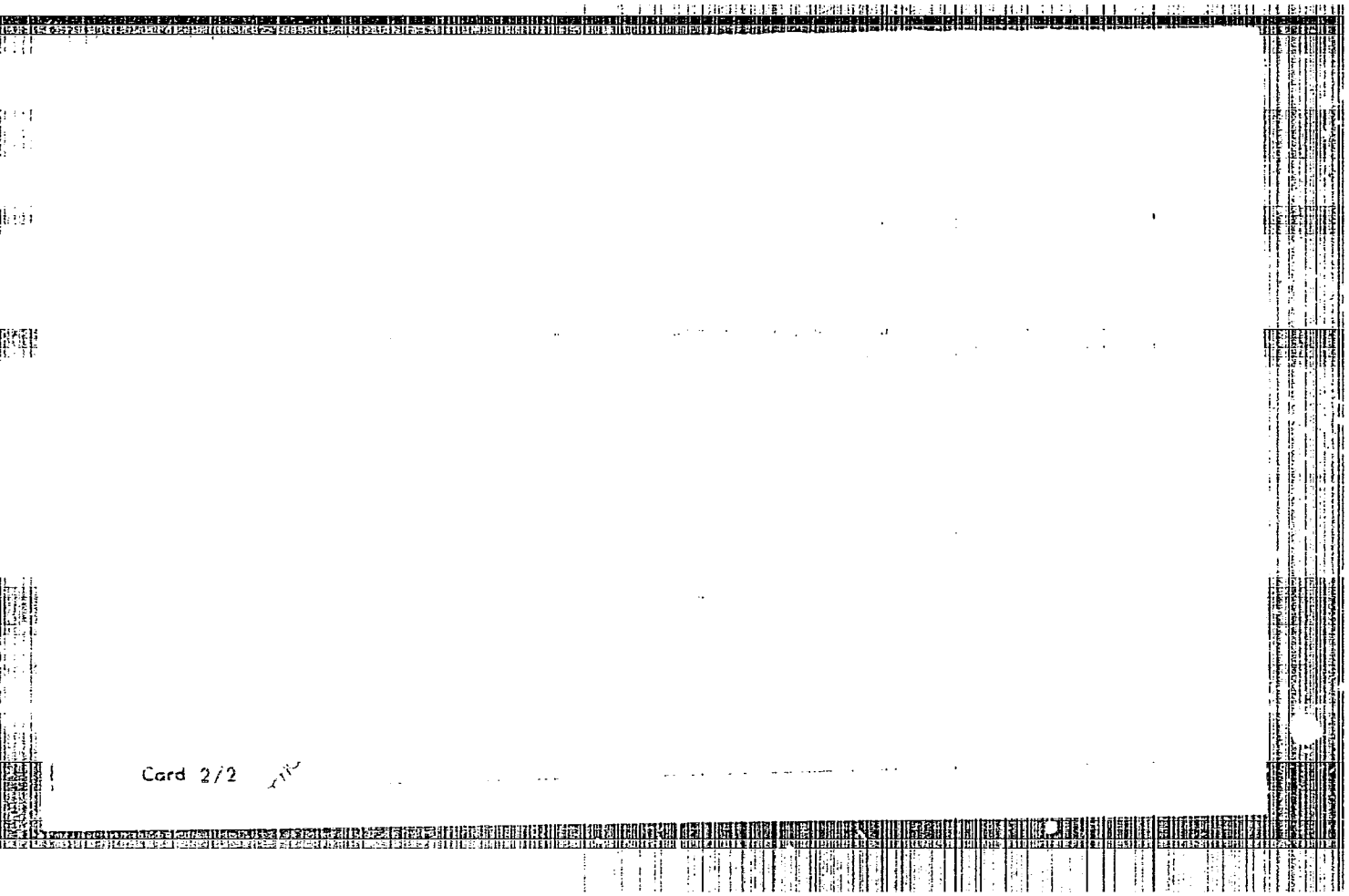

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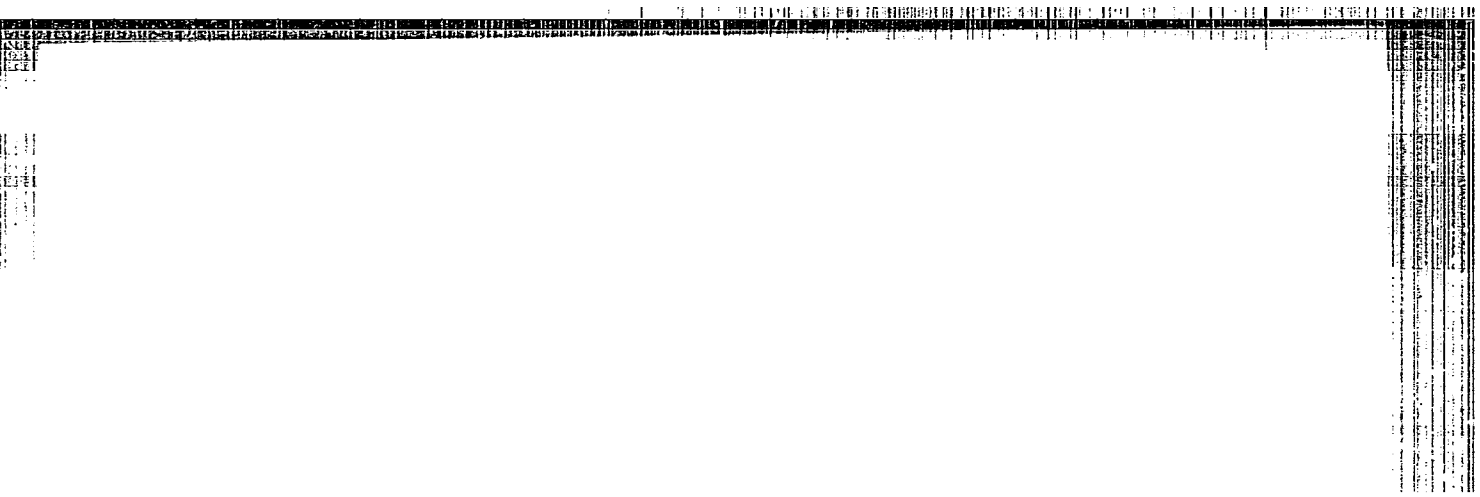

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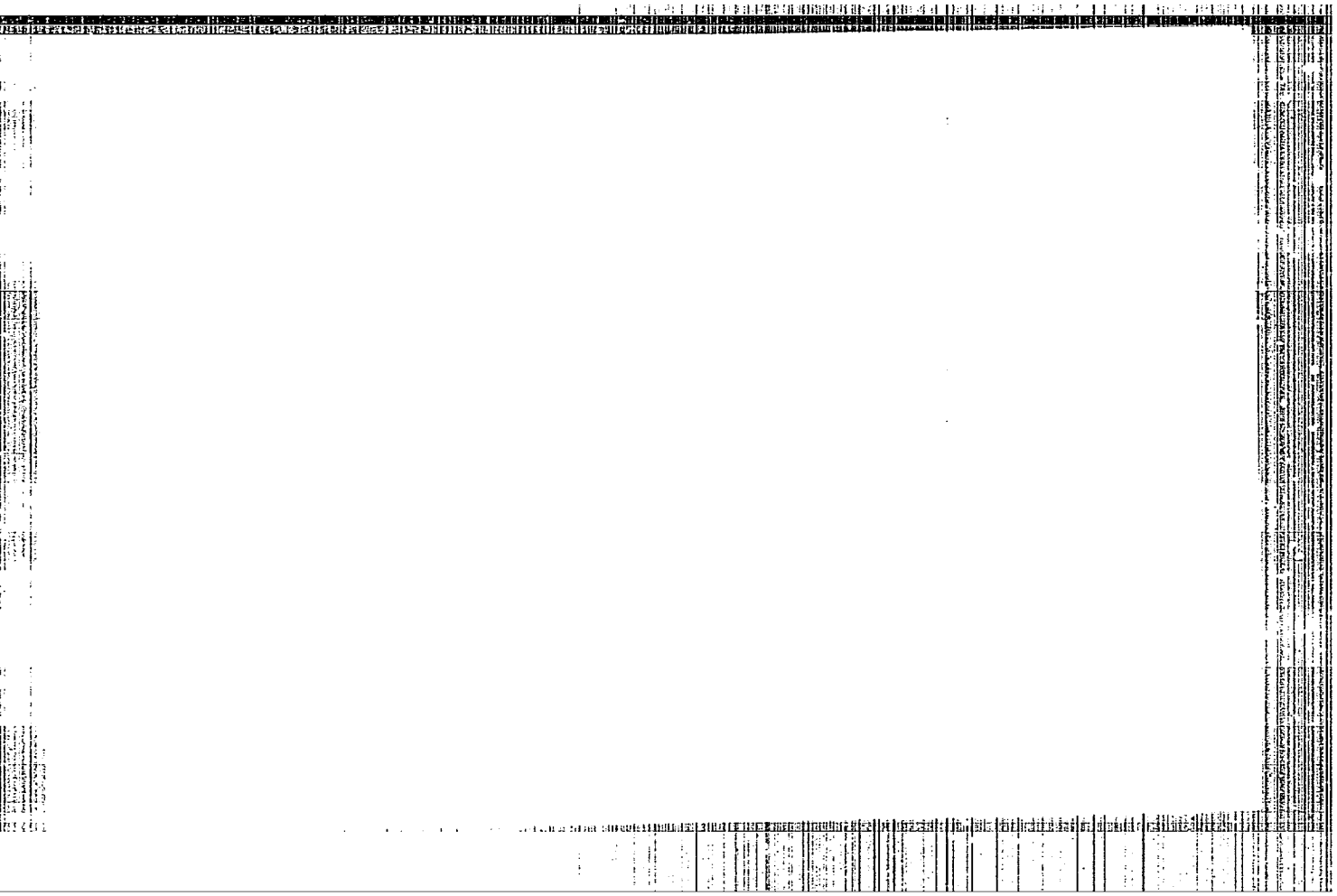
showed, besides absorption bands [illegible] at 1725 cm^{-1} corresponding to a carbonyl group and a band at 1130 cm^{-1} corresponding

forming the experiments on γ-irradiation [illegible] Orig. art. has: 3 tables and 2 figures.

SUB CODE: OC, MI



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