L 06312-67

ACC NR: AT6020432

that the electron ion currents emerging from the plasma are equal to the current entering the plasma. The observation of outflowing currents has shown that for sufficiently long plasma-beam interaction length, the current from the end of the plasma consisted solely of ions. The investigation of the frequency distribution of the excited oscillations shows that the ion current arises in situations favoring the production of instabilities. The most favorable conditions for generating beams of ions with energies up to 1 kev are given. The study of excitation frequency change with electron temperature and type of gas used shows that the low frequency oscillations generated in the experiment were near the ion-acoustic frequencies. Further study of the generation of low frequencies is needed. Orig. art. has: 6 figures, 1 table.

SUB CODE: 20/   SUBM DATE: 11Nov65/   ORIG REF: 017/   OTH REF: 003

Card 2/2

L 04311-67   ___ ___   IJP(c)   AT/(UD)

ACC NR: AT6020433   (N)   SOURCE CODE: UR/0000/65/000/000/0036/0043

AUTHOR: Kornilov, Ye. A.; Kovpik, O. F.; Faynberg, Ya. B.; Bolotin, L. I.; Kharchenko, I. F.

ORG: none

TITLE: Time characteristics of high frequency oscillations during the development of instabilities in the plasma-beam system

SOURCE: AN UkrSSR. Vzaimodeystviye puchkov zaryazhennykh chastits s plazmoy (Interaction of charged particle beams with plasma). Kiev, Naukova dumka, 1965, 36-43

TOPIC TAGS: HF oscillator, plasma beam interaction, plasma electron density, critical magnetic field

ABSTRACT: Spectral characteristics and time variations of oscillations excited in a plasma by a traversing electron beam are studied. A 4 mm diameter beam (80 mA) was injected into a plasma in a magnetic field (0-2 koe). Beam energy varied from 2 to 5 kev. The beam-plasma interaction region was 40 cm long and the plasma electron density was 10^{12} cm^{-3}. Variations in the parameters of the experiment led to the conclusion that when conditions favorable to beam instability growth (a brief discussion of these is given based on the literature cited in the bibliography) are established, the excitations occur which have maxima at frequencies corresponding to half-integral multi-

Card 1/2

L 2488-66   EWT(1)/ETC/EPF(n)-2/EWG(m)/EPA(w)-2   IJP(c)   AT
ACCESSION NR: AP5020720   UR/0057/65/035/008/1372/1377

AUTHOR: Kornilov, Ye. A.; Kovpik, O.F.; Faynberg, Ya. B.; Karchenko, I.F.

TITLE: Mechanism of plasma formation during development of beam instability

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1372-1377

TOPIC TAGS: plasma instability, plasma heating, plasma beam interaction, plasma
oscillation, electron beam, magnetic field, air, hydrogen, argon

ABSTRACT: The authors have investigated the production of plasma by a 3-5 mm dia-
meter 10-50 mA beam of 2-5 keV electrons traversing the 40 cm length of a 10 cm
diameter glass tube containing air, argon, or hydrogen at different pressures in
the presence of a 0-2 kOe longitudinal magnetic field. The plasma density was
determined with Langmuir probes, with a 10 kMc/sec interferometer, and by the
detuning of a 3 kMc/sec resonant cavity. Oscillations excited in the plasma were
received with a dipole antenna outside the chamber and were investigated with a
spectral analyzer and with resonance wavemeters. At pressures below a critical
value the plasma density was close to the beam density and oscillations near the
Larmor frequency were observed. When the pressure was increased through the criti-

Card 1/2

L 2488-66
ACCESSION NR: AP5020720

cal value the plasma density increased by two or three orders of magnitude (ionizations of 10% were achieved in argon) and oscillations were observed near the Langmuir frequency, which at the plasma densities reached was higher than the Larmor frequency. The plasma density pulsated over a range of 50% at a frequency between 10 and 100 kc/sec. In the region of instability (which is ascribed to the Cerenkov effect), the electron beam lost nearly all its energy to the plasma. The authors believe that their results together with those of L.D.Smullin and W.D. Getty (Phys. Rev. Letters, 9, 1, 3; 1962; J. Appl. Phys., 34, No. 12, 1963) indicate that with a beam of higher power there can be obtained highly ionized hot plasmas, heated by the kinetic energy of the beam. Orig. art. has: 8 figures.

ASSOCIATION: none

SUBMITTED: 26Oct64   ENCL: 00   SUB CODE: ME

NR REF SOV: 004   OTHER: 005

Card 2/2

where (Fizika plasmy i problemy upravlyayemogo termoyadernogo sinteza, Vol.4. Izd. AN USSR, Kiyev, 1964). It was found that oscillations are excited at integral multiples of half the Larmor frequency and that the width and peak frequency of the spectrum of these oscillations vary periodically at the frequency of ionic sound.

Card 1/2

L 2489-66
ACCESSION NR: AP5020721

The spectrum narrows with increasing pressure and broadens with increasing beam current. When the magnetic field strength is increased beyond a certain value, the oscillations cease to be continuous but come in bursts which follow each other at intervals that decrease with increasing magnetic field strength. Tilting the beam moderately with respect to the direction of the magnetic field so as to introduce a small transverse velocity component increased the amplitude of the oscillations by two orders of magnitude. The reasons for the pulsation of the oscillations at high field strengths, for the increase of the amplitude of the oscillations in the presence of a transverse electron velocity component, and for the periodic variation of the spectrum of the oscillations are still obscure. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 26Oct64   ENCL: 00   SUB CODE: ME

NR REF SOV: 012   OTHER: 007

Card 2/2

KOSMODEM'YANSKIY, L.V.; SHUSHKINA, Ye.N.; KOPYLOV, Ye.P.; KOVRAYSKAYA, N.
L.; LAZARYANTS, E.G.; FARBEROV, M.I.

Use of a synthetic emulsifier with a base of di-tert-butylbenzoic
acid for the synthesis of all-purpose rubbers. Kauch. i rez. 22 no.
11:11-14 N '63.   (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut monomerov dlya sintetichesko-
go kauchuka i Yaroslavskiy tekhnologicheskiy institut.

ALEKSEYEV, Yuriy Vasil'yevich; POPOV, Oleg Andreyevich; GLADKOV, V.A.,
    red.; KOVRAYSKIY, K.Ye., spets. red.; SYCHEVA, V.A., tekhn.
    red.

[Experience in semicontinuous smelting]Opyt poluprerynvoi plav-
ki. Murmansk, Murmanskoe knizhnoe izd-vo, 1962. 23 p.
                                                    (MIRA 15:12)
            (Nickel—Electrometallurgy)

KOVRAYSKIY, V.B., kand. khim. nauk; SVIRIDENKO, F.F., inzh.

Effect of the final process in the conversion of phosphorous pig iron on crazing and cracks in rails. Trudy Ukr. nauch.-issl. inst. met. no.4:155-162 '58.

(MIRA 12:3)

(Steel--Defects)   (Railroads--Rails)

COVERAGE: The collection of articles reviews the work carried on at the Institute of Metals on the technology of blast furnaces, open-hearth furnaces, and rolled stock production. It also deals with problems in metallography, heat treatment of ferrous metals and methods for their study. Particular attention is devoted to the preparation of charges and blast furnace practice with increased gas pressure, open-hearth production with oxygen blast and rolling of light profiles. No personalities are mentioned. References accompany each article.

KOVRAYSKIY, V.B.

Investigating the kinetics of the dephosphorization process in the conversion of high-phosphorus pig irons into steel. Trudy Ukr. nauch.-issl. inst. met. no.6:115-130 '60.   (MIRA 14:3)
(Steel--Metallurgy)

KOVRAYSKIY, V.B.

Effect of slag composition or the equilibrium constant of the reaction $2[P] + 5(FeO) - (P_2O_5) + 5[Fe]$. Sbor. trud. UNIIM no.9:109-124 '64

(MIRA 18:1)

5.3700

78091
SOV/62-00-1-57/57

AUTHORS: Nesmeyanov, A. N., Borisov, A. Ye., Kovredov, A. I.,
             Golubeva, Ye. I.

TITLE: Letter to the Editor. Reaction of Free Radicals With
             Organomercury Compounds

PERIODICAL: Izvestiya Akademii nauk SSSR, otdeleniye khimicheskikh
             nauk, 1960, Nr 1, p 148 (USSR)

ABSTRACT: The authors report that compounds RHgR' react with CCl_4
             in the presence of benzoyl peroxide to form compounds
             shown in Table B. There are 1 table; and 2 references,
             1 U.S. and 1 Soviet. The U.S. reference is: M. S. Kh
             Kharasch, R. Marner, J. Am. Chem. Soc., 48, 3130 (1926).

ASSOCIATION: Institute of Element-Organic Compounds, Academy of
             Sciences, USSR (Institut elementarnoorganicheskikh
             soyedineniy Akademii nauk SSSR)

SUBMITTED: October 29, 1959

Card 1/3

Letter to the Editor. Reaction of Free
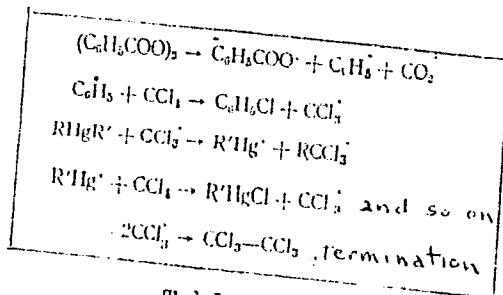Radicals With Organomercury Compounds

78091
SOV/62-60-1-57/57

$$(C_6H_5COO)_2 \rightarrow C_6H_5COO \cdot + C_6H_5 + CO_2$$
$$C_6H_5 + CCl_4 \rightarrow C_6H_5Cl + CCl_3$$
$$RHgR' + CCl_3 \rightarrow R'Hg \cdot + RCCl_3$$
$$R'Hg \cdot + CCl_4 \rightarrow R'HgCl + CCl_3 \text{ and so on}$$
$$2CCl_3 \rightarrow CCl_3-CCl_3 \text{ termination}$$

Table A

Card 2/3

Letter to the Editor. Reaction of Free
Radicals With Organomercury Compounds

78091
SOV/62-60-1-37/37

(a)	(b)	(c)
$C_6H_5HgC_2H_5$	(d)	$C_6H_5HgCl(87\%)+C_6H_5CCl_3$
$C_6H_5CH_2HgC_4H_9$	(d)	$C_6H_5CH_2HgCl(73\%)+C_4H_9CCl_3(58\%)$
$C_6H_5HgC_4H_9$	(d)	$C_4H_9HgCl(76\%)+C_6H_5CCl_3(72\%)$
$C_6H_5HgC_6H_{11}$	(e) 59—61°	$C_6H_{11}HgCl(83\%)+C_6H_5CCl_3(43\%)$
$C_6H_5HgCH_2C_6H_5$	(d)	$C_6H_5CH_2HgCl(73\%)+C_6H_5CCl_3(33\%)$
$C_6H_5HgC_6H_4CH_3$-p	(e) 167—192°	$C_6H_5HgCl(88\%)+p$-$CH_3C_6H_4CCl_3(82\%)$
p-$CH_3C_6H_4HgC_6H_4CH_3$-o	(e) 159—189°	o-$CH_3C_6H_4HgCl(57\%)+o$-$CH_3C_6H_4CCl_3(40\%)+$ $+p$-$CH_3C_6H_4HgCl(43\%)+p$-$CH_3C_6H_4CCl_3(60\%)$
$C_6H_5HgC_{10}H_7$-α	(e) 165—195°	$C_6H_5HgCl(73\%)+1$-$C_{10}H_7CCl_3(73\%)$

Key to Table B. (a) starting compounds; (b) constants;
(c) products of reaction (yield %); (d) oil; (e) mp.

Card 3/3

27487
S/062/61/000/009/002/014
B117/B101

5.3200

AUTHORS: Nesmeyanov, A. N., Borisov, A. Ye., Golubeva, Ye. I., and
               Kovredov, A. I.

TITLE: Reaction of free radicals with unsymmetric organic mercury
               compounds

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
               nauk, no. 9, 1961, 1582-1589

TEXT: The authors studied the interaction of free radicals with a
number of asymmetric saturated organo-mercury compounds with a view to
elucidating the order in which radicals are split off by a radical reagent
and establishing a sequence of radicals. The benzoyl peroxide initiated
reaction of carbon tetrachloride with saturated organo-mercury compounds,
discovered by A. Ye. Borisov (Ref. 8: Izv. AN SSSR. Otd. khim. n. 1951,
524) was used as example for this study. The mercury compounds used were
of the type RHgR' listed in the table. They were prepared either
(compounds 11, 12, 13, and 14) by the method developed by R. Kh.
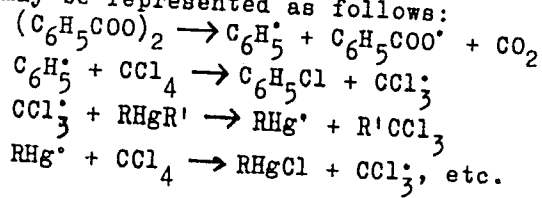Freydlina, K. A. Kocheshkov, and A. N. Nesmeyanov (Ref. 9: Zh. obshch.

Card 1/7

Reaction of free radicals ...

27487
S/062/61/000/009/002/014
B117/B101

khimii, 5, 1171 (1935)) or by means of the Grignard reaction. It was observed that in the reaction $RHgR' + CCl_4 \rightarrow RHgCl + R'CCl_3$ the free radical $CCl_3^{\cdot}$ always combines in higher yield with a radical further left in the following sequence than with one further right:

$2,4,6-(CH_3)_3C_6H_2$, $\alpha-C_{10}H_7$, $p-CH_3C_6H_4$, $o-CH_3C_6H_4$, $m-CH_3C_6H_4$, C_6H_5, C_2H_5, C_4H_9, $C_6H_5CH_2$, C_6H_{11}. If the radicals are further apart in this sequence, the reaction is frequently nearly quantitative. For a chain reaction with radical mechanism the order found shows a certain similarity to the sequence set up by M. S. Kharasch (J. Amer. Chem. Soc., 48, 3130 (1926); ibid., 54, 674 (1932)) for the heterolytic reaction. The course of the chain reaction may be represented as follows:

$$(C_6H_5COO)_2 \rightarrow C_6H_5^{\cdot} + C_6H_5COO^{\cdot} + CO_2$$
$$C_6H_5^{\cdot} + CCl_4 \rightarrow C_6H_5Cl + CCl_3^{\cdot}$$
$$CCl_3^{\cdot} + RHgR' \rightarrow RHg^{\cdot} + R'CCl_3$$
$$RHg^{\cdot} + CCl_4 \rightarrow RHgCl + CCl_3^{\cdot}, \text{ etc.}$$

Card 2/

Reaction of free radicals ...

The course of the reaction is therefore determined by

$$RHgR' + CCl_3^{\cdot} \rightarrow R'CCl_3 + RHg^{\cdot}$$

since in the further course of the reaction the RHg radical only participates the regeneration of the chloromethyl radical. The sequence established on the basis of decreasing proton affinity of the radicals corresponds to one based on decreasing affinity of the radicals towards the free radical CCl_3. There are 1 table and 14 references: 5 Soviet-bloc and 9 non-Soviet-bloc. The two most recent references to English-language publications read as follows: R. E. Dessy, G. F. Reynolds, Jin Young-Kim, J. Amer. Chem. Soc. 81, 2683 (1959); S. Winstein, T. G. Traylor, J. Amer. Chem. Soc. 77, 3741 (1955).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: March 11, 1961

Card 3/

ZAKHARKIN, L.I.; KOVREDOV, A.I.

Synthesis of pentamethylene-and hexamethylenediboric acids.
Izv. AN SSSR Otd.khim.nauk no.2:357-358 F '62.

(MIRA 15:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
Boric acid)

33987
S/062/62/000/002/012/013
B117/B138

//.2223
//.2211

AUTHORS: Zakharkin, L. I., and Kovredov, A. I.

TITLE: Addition of diborane to isoprene and synthesis of β-methyl
             tetramethylene diboric acid

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye khimicheskikh
             nauk, no. 2, 1962, 362 - 363

TEXT: The investigation started in Ref. 1 (Zh. obshch. khimii $\underline{32}$ (in print)
(1962)) was continued as follows: β-methyl tetramethylene diboric acid was
synthesized on the base of diborane and isoprene. All the reactions were
performed in pure nitrogen atmosphere. Diborane and isoprene readily react
in tetrahydrofuran at room temperature. The product is bis-1,4-(1-boro-2-
methyl cyclopentyl)-2-methyl butane $C_{15}H_{30}B_2$ (I) (boiling point 88°C

(0.2 mm Hg); yield 64.7%). By heating (I) with boro trichloride (200°C,
20 hr) and by distillation, 1,4-bis-(dichloro boro)-2-methyl butane
$C_5H_{10}B_2Cl_4$ (II) was obtained (boiling point 36°C (0.7 mm Hg); yield 80%).
The hydrolysis of (II) yielded β-methyl tetramethylene diboric acid

Card 1/2

Addition of diborane to...

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S/062/62/000/002/012/013
B117/B138

$C_5H_{14}B_2O_4$ (III) (melting point 132 - 133°C; yield 90%), which was stored in a sealed capillary in nitrogen. The structure of (III) was confirmed by its oxidation with alkaline hydrogen peroxide; the products were 2-methyl butanediol-1,4 (boiling point 115 - 117°C (10.5 mm Hg); yield 72.6%) and bis-phenyl uretane (melting point 96 - 97°C). There are 4 references: 1 Soviet and 3 non-Soviet. The two references to English-language publications read as follows: B. Wejcik, H. Adkins, J. Amer. Chem. Soc. 54, 4389 (1932); A. Shepard, J. R. Johnson. J. Amer. Chem. Soc. 383, 168 (1911).

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Elemental Organic Compounds of the Academy of Sciences USSR)

SUBMITTED: July 29, 1961

Card 2/2

ZAKHARKIN, L.I.; KOVREDOV, A.I.

Syntehesis of trimethyleneboronic acid and alkyldiboronic acid esters and the refractions of some bonds in organoboron compounds. Izv.AN SSSR.Otd.khim.nauk no.9:1564-1571 S '62.   (MIRA 15:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.
   (Boronic acid)   (Boron organic compounds)

L 19488-65
ACCESSION NR: AP5002069

ACCESSION NR: AP4010038   S/0062/64/000/001/0050/0054

AUTHOR: Kovredov, A. I.; Zakharkin, L. I.

TITLE: Synthesis of 1-chloroborcycloalkanes

SOURCE: AN SSSR. Izvestiya. Ser. khim., no. 1, 1964, 50-54

TOPIC TAGS: 1-chloroborcycloalkane, synthesis, tetraalkyldiborane catalyst, bis-alpha. omega-(1-borcycloalkyl)alkane, boralkane cyclization, 1.5-dichloro-1.5-diborocyclooctane, bis-alpha,omega-(dichlorobor)alkane

ABSTRACT: 1-chloroborcyclopentane, 1-chloroborcyclohexane and 1-chlorobor-cycloheptane may be synthesized by reacting the appropriate bis-alpha, omega-(1-borcyclo-alkyl)alkane with a 1:1 molar ratio of BCl_3 at 140C in the presence of a catalytic amount of tetraalkyldiborane to form a polymer which depolymerizes on heating in vacuum. On heating $Cl_2B(CH_2)_n BCl_2$, where n=4, 5, or 6, to 200-250C, BCl_3 is liberated and the alkane is cyclized to form the corresponding 1-chloroborcycloalkane. Similar treatment of $Cl_2B(CH_2)_3BCl_2$ results in BCl_3

Cord1/2

ACCESSION NR: AP4010038

evolution and the formation of 1,5-dichloro-1,5-diborocyclooctane. Bis-alpha, omega-(1-borcycloalkyl)alkanes, when heated with 1:4 molar ratio of BCl_3 to 140C in the presence of a catalytic amount of tetraalkyldiborane, are converted to the corresponding bis-alpha,omega-(dichlorobor)alkanes. Orig. art. has: 6 equations.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR (Institute of Metallo-organic Compounds Academy of Sciences SSSR)

SUBMITTED: 29Aug63   DATE ACQ: 14Feb64   ENCL: 00

SUB CODE: CH   NO REF SOV: 003   OTHER: 000

Card 2/2

ACCESSION NR: AP4019021   S/0062/64/000/002/0393/0393

AUTHOR: Zakharkin, L. I.; Kovredov, A. I.

TITLE: Synthesis of ethane-1,1- and ethane-1,2-diboric acids from acetylene and diborane

SOURCE: AN SSSR. Izv. Seriya khimicheskaya, no. 2, 1964, 393

TOPIC TAGS: ethane diboric acid, diborane, dichloro boroethane, boron chloride, diborane polymer, diboric acid acetylene

ABSTRACT: The authors report the preparation of the above acids by the interaction of acetylene and diborane dissolved in ether or tetrahydrofuran forming a polymer $(C_2H_4B_2)_x$ which, when heated with BCl_3 to 180-200C, produces a good yield of two bis-(dichloroboro)ethanes in an approximate proportion of 1:1. , namely bis-1,1-(dichloroboro)ethane and bis-1,2-(dichloroboro)ethane. Hydrolysis of the above produced corresponding ethanediboric acids. Their characteristics are given. Orig. art. has: no figures, 2 formulas, no tables.

Card 1/2

ACCESSION NR: AP4019021

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR
(Institute of Elementoorganic Compounds, AN SSSR)

SUBMITTED: 29Nov63   DATE ACQ: 27Mar64   ENCL: 00

SUB CODE: OC   NO REF SOV: 001   OTHER: 001

Card   2/2

AKHMANOV, S.A.; KOVRIGIN, A.I.; STRUKOV, M.M.; KHOKHLOV, R.V.

Frequency dependence of the threshold of light breakdown in air.
Pis'. v red. Zhur. eksper. i teor. fiz. 1 no.1:42-47 Ap '65.
(MIRA 18:9)

1. Moskovskiy gosudarstvennyy universitet.

AKHMANOV, S.A.; KOVRIGIN, A.I.; KULAKOVA, N.K.

Effect of the finite aperture of a light beam on the course
of nonlinear phenomena in an anisotropic medium. Zhur. eksp.
i teor. fiz. 48 no.6:1545-1553 Je '65.

(MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet.

KOVREDOV, V.T.

Reorganize the control of susliks. Zashch. rast. ot vred. i bol.
3 no.1:7-8 Ja-F '58.

(MIRA 11:3)

1. Nachal'nik proizvodstvennogo uchastka Aktyubinskoy ekspeditsii.
   (Susliks)

18.8200   2808   .

26390
S/032/61/027/008/015/020
B103/B203

AUTHORS: Kovrev, G. S., and Kirillov, P. G.

TITLE: Method of determining the strength properties of metals at high temperatures

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 8, 1961. 1018 - 1021

TEXT: The authors developed methods of testing the elongation of metal specimens (tungsten) at high temperatures and deformation rates. When the deformation was accelerated from 555 to 3500 %/sec, the plastic strain of tungsten specimens was found to remain constant for the same temperature and degree of deformation. Besides, the plastic strain of specimens heated to 1500°C was shown to rise by 25 - 30 % at a rate of 3500 %/sec, as compared with 555 %/sec. The effect of the deformation rate on the deformation resistance is not yet known for many alloys and metals, including tungsten. Tungsten differs from most metals and alloys by its friability. Its initial structure, grains with equally long axes, changes in deformation since the grains are lengthened. The resulting texture leads to higher plasticity and strength. This texture disappears, however. on heating
Card 1/6

Method of determining the strength...

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S/032/61/027/008/015/020
B103/B203

above recrystallization temperature, and the metal becomes friable again.
The authors describe their quick tensile tests of tungsten specimens (also
applicable to other metals) at over 1000°C. Such tests are rendered
difficult by the necessity of holders resisting such temperatures. If the
holders are to be kept distant from the heating zone, long specimens would
be required. Water-cooled holders create a high temperature gradient along
the specimen. In the authors' methods, the maximum test temperature is not
limited by the resistance of holders but by the furnace construction. The
protective gas produced by heating prevents oxidation of specimens. Tests
were made on a chain draw bench with four slide speeds to simulate real
conditions as closely as possible (deformation rate of tungsten in rolling
is 500 - 1500 %/sec). The authors used 0.222 and 1.4 m/sec. At a
calculated specimen length of 40 mm, this corresponds to deformation rates
of 555 and 3500 %/sec. Specimens were produced from rods by rotary
forging at 1400 - 1100°C, and contained 0.001 % Ni; 0.01 % SiO_2; 0.005 % CaO
and 0.029% Mo; the rest was W. The holders were made of hardened У7(U7)
steel. Fig. 2 shows a diagram of the apparatus. The specimen 1 in a quartz
tube 2 was heated in an electric circular furnace 3 with a silicon carbide
Card 2/6

Method of determining the strength...

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S/032/61/027/008/015/020
B103/B203

heating. The projection 4 prevented the specimen from gliding in the tube. The platinum - platinum - rhodium thermocouple 5 indicated the specimen temperature. After reaching the temperature required, the quartz tube in the furnace was turned through 180°, and the specimen dropped from the tube through the funnel 6 into holder 7. The slide 8 was quickly coupled to the moving chain 9, and the specimen was ruptured. The specimen temperature was recorded during its stay in the holders on an oscilloscope by means of the optical head 10 (consisting of focusing lens and photoresistor with small time constant). The optical head was calibrated before the test, and a calibration diagram plotted in the coordinates "deviation of the ray in mm - temperature in °C". The sine curve of the a-c voltage of a 3Γ-10(ZG-10) sound generator was simultaneously recorded on the chart. The stress was recorded by the measuring box 11 fed from an $\ni T$-4(ET-4) four-channel amplifier. The measuring box was calibrated on the bench by means of a spring dynamometer with pointer. The oscillograms were evaluated as follows: 1) The point corresponding to the beginning plastic deformation was determined on the oscillograms considering the known slide speed and the sine curve recorded (see above). 2) The specimen diameter was measured after rupture in the area of steady necking. The specimen volume was divided by the area corresponding to the diameter measured. Thus, the

Card 3/6

Method of determining the strength...

26390
S/052/61/027/008/015/020
B103/B203

authors determined the length of the calculated part at the moment of maximum uniform deformation. 3) From the beginning of plastic deformation, the authors calculated, from the number of periods, the time during which the absolute elongation of the specimen proceeded which corresponded to maximum uniform deformation of the specimen. The stresses in this section were calculated by dividing the load at the given instant by the area of the specimen cross section at the same instant (this area was determined from the condition of constancy of the specimen volume during deformation). 4) In the section corresponding to localized deformation, the cross-sectional area was determined graphically. The authors explain their results, mentioned at the beginning, as follows: At $1200^{\circ}C$ and $1350^{\circ}C$, no effect of the deformation rate on the plastic strain was found. At these temperatures, the rate of recrystallization of specimens with the corresponding content of admixtures is much lower than the deformation rate. Therefore, the strength is not changed by recrystallization on transition from one rate to another. At $1500^{\circ}C$, however, recrystallization becomes much more intensive. Since recrystallization reduces the plastic strain, the character of the curve depends on the interrelation between the deformation rate creating a strength-increasing tungsten texture and the recrystallization rate at

Card 4/6

Method of determining the strength...

26390
S/032/61/027/005/015/020
B103/B203

which the deformation texture is more or less replaced by equiaxial grains, which also reduces the mentioned stresses themselves. This is confirmed by an increase in relative elongation and relative transverse contraction of specimens deformed at 1500°C at a rate of 3500 %/sec. There are 5 figures and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: P. M. Cook, Proc. conference on the properties of materials, Session 3, paper 2, London, May (1957); A. Nadai, M. Manjon. High-speed tension tests at elevated Temperatures, Parts I,II -Proceed. ASTM, v. 40 (1941); B. L. Mordike, The J. of the Inst. of Metals., v. 88, No. 6, p 272 -275 (1960).

ASSOCIATION: Krasnoyarskiy institut tsvetnykh metallov im. M. I. Kalinina
                (Krasnoyarsk Institute of Nonferrous Metals imeni M. I.
                Kalinin)

Card 5/6

ACCESSION NR: AT4001242   S/3031/63/000/035/0324/0331

AUTHOR: Kovrev, G. S.

TITLE: Effect of temperature and rate of deformation on mechanical
properties of tungsten

SOURCE: Gosudarstvenny*y institut tsvetny*kh metallov. Sbornik
nauchny*kh trudov. Moscow, no. 35, 1963, 324-331

TOPIC TAGS: tungsten, tungsten mechanical property, strain rate,
tungsten high temperature tensile test, tungsten high temperature
strength, tungsten high temperature ductility

ABSTRACT: A procedure is developed for performing mechanical tests
on tungsten specimens at temperatures above 1000°C, to permit an
investigation of the influence of the temperature and deformation
rate on the resistance of tungsten to various types of deformation
(compression, tension, bending, torsion) at high temperatures, with

Card 1/2

ACCESSION NR: AT4001242

an aim at improving the technology of manufacturing plates and sheets of tungsten. It was found that at different degrees of deformation the duration of the deformation affects the plastic tension stress only near the recrystallization temperature (1500C). An investigation of the microstructure of samples tested at different temperatures has shown that with rising temperature the band structure is gradually replaced by recrystallized structure. The relative elongation of specimens tested at 1500C increases with increasing deformation rate, amounts to 18% in static tests, and reaches 35% in dynamic tests. Orig. art. has: 10 figures.

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

SUBMITTED: 00   DATE ACQ: 17Oct63   ENCL: 00

SUB CODE: ML, MA   NO REF SOV: 002

                                                               OTHER: 001

Card 2/2

ACCESSION NR: AT4001242

S/3031/63/000/035/0324/0331

AUTHOR: Kovrev, G. S.

TITLE: Effect of temperature and rate of deformation on mechanical properties of tungsten

SOURCE: Gosudarstvenny*y institut tsvetny*kh metallov. Sbornik nauchny*kh trudov. Moscow, no. 35, 1963, 324-331

TOPIC TAGS: tungsten, tungsten mechanical property, strain rate, tungsten high temperature tensile test, tungsten high temperature strength, tungsten high temperature ductility

ABSTRACT: A procedure is developed for performing mechanical tests on tungsten specimens at temperatures above 1000°C, to permit an investigation of the influence of the temperature and deformation rate on the resistance of tungsten to various types of deformation (compression, tension, bending, torsion) at high temperatures, with

Card 1/2

ACCESSION NR: AT4001242

an aim at improving the technology of manufacturing plates and sheets of tungsten. It was found that at different degrees of deformation the duration of the deformation affects the plastic tension stress only near the recrystallization temperature (1500C). An investigation of the microstructure of samples tested at different temperatures has shown that with rising temperature the band structure is gradually replaced by recrystallized structure. The relative elongation of specimens tested at 1500C increases with increasing deformation rate, amounts to 18% in static tests, and reaches 35% in dynamic tests. Orig. art. has: 10 figures.

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

SUBMITTED: 00   DATE ACQ: 17Oct63   ENCL: 00

SUB CODE: ML, MA   NO REF SOV: 002

                                        OTHER: 001

Card 2/2

KOVREVA, T. S., YARTSEVA, A. M. and BILIBIN, A. F.

"Use of biomycin in treating infectious diseases," appears in TABCON of "Biomycin (Experimental Study and Clinical use of Biomycin), edited by A. F. Bilibin, Moscow 1954.

SO: Translation-417, 21 Jun 1955.

FARBER, N.A.; SINAYKO, G.A.; KOVREVA, T.S.; MIDRO, O.S.; ANDREYEVA, N.A.

Evaluation of the therapeutic action of dioron in Botkin's disease. Sov. med. 28 no.10:127-131 O '65.   (MIRA 18:11)

1. Klinicheskiy otdel (zav.- dotsent Ye.S. Ketiladze, nauchnyy rukovoditel' - prof. A.F. Bilibin) Instituta virusologii imeni Ivanovskogo (dir.- prof. V.M. Zhlanov) AMN SSSR i Moskovskaya gorodskaya klinicheskaya infektsionnaya bol'nitsa No.82 (glavnyy vrach - kand. med. nauk A.V. Yeremyan), Moskva.

YABLONSKAYA, V.A.; KOVREVA, T.S.; YEREMENKO, A.V.

Epidemiology of typhus. Report No. 1: Data on the serodiagnosis of typhus. Vop. virus. 5 no. 2:237-240 My-S '60.
(MIRA 14:4)

1. Institut epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR, 2-ya Gorodskaya klinicheskaya bol'nitsa, imeni S.P. Botkina, Moskva.

(TYPHUS FEVER)

ACC NR: AT6028945

SOURCE CODE: UR/0000/66/000/000/0324/0331

AUTHOR: Kovrevskiy, A. P. (Candidate of technical sciences)

ORG: none

TITLE: The damping effect of a fluid flow on pipeline vibration

SOURCE: Dinamika mashin (Dynamics of machinery); sbornik statey. Moscow, Izd-vo Mashinostroyeniye, 1966, 324-331

TOPIC TAGS: pipeline vibration, pipeline vibration damping, vibration damping, Coriolis force, friction force, FLUID FLOW, PIPE FLOW

ABSTRACT: An investigation of vibration in pipelines containing a flowing ideal fluid is described. The damping effect of the Coriolis forces produced during pipeline vibration is discussed. The friction forces within the fluid as well as friction of the fluid against the pipe's walls were not considered in the investigation. The following conclusions were reached: 2) A pipeline with angle brackets containing a flowing fluid is a dissipating system. In relation to vibration disturbances, it is more stable than a pipeline with both ends attached. b) The vibration damping is caused by the effect of Coriolis forces. When the fluid flow is increased, the damping increases to such an extent that the natural vibrations of the system become impossible, and the system is only capable of aperiodic motion. c) The logorithmic

Card   1/2

ACC NR: AT6028945

decrement increased in proportion to the fluid flow. Orig. art. has: 3 figures and 20 formulas.

SUB CODE: 21/ SUBM DATE: 21Apr66/ ORIG REF: 002/ OTH REF: 001

Card 2/2

'ACCESSION NR: AP4040969   S/0147/64/000/002/0027/0033

AUTHOR: Kovrevskiy, A. P.

TITLE: Oscillations of an anisotropic plate under a movable continuously distributed load

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 2, 1964, 27-33

TOPIC TAGS: plate, anisotropic plate, uniform load, sandwich plate, plate oscillation, movable load, continuously distributed load, elastic body, orthotropic plate

ABSTRACT: The problem of the oscillations of elastic bodies as a mass flow moves over their surface is encountered in the study of various radiator systems and also when considering the oscillations of certain other bodies having a cooling liquid between the walls. In the present article, the author has investigated the free oscillations of ortho- tropic plates supporting a mass flow, uniformly distributed over the surface. Frictional forces between the flow and the plate are assumed to be absent. The flow trajectory re- peats the flexional form of the plate oscillations. Design-wise, this arrangement may be realized by passing a flow or stream of liquid between the layers of a sandwich plate with a corrugated filler. In a certain frequency range, the sandwich plate may be replaced by a

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ACCESSION NR: AP4040969

single-layer orthotropic plate, equivalent to it in the sense of flexional rigidity; however, the problems involved in a reduction of this sort are not taken up in the present paper. This article represents an extension of the well-known problem of free oscillations of pipelines to the oscillations of plates. On the basis of his investigations, the author has concluded that: 1. The effect of the mass flow on the dimensionless eigenfrequencies of the plate is determined by two parameters μ and k. Since k depends on the ratio of the masses of the liquid and plate (i.e., is an invariable factor for a given structural design), all further conclusions must pertain only to the variation of the parameter μ. 2. The eigenfrequency of plates which do not have free edges in a direction transverse to the flow decreases as the parameter μ increases. With respect to plates with a free edge it should be noted that experiments studying the free oscillations of pipelines have established that the eigenfrequencies of cantilever pipelines do not change (within the accuracy limits of the experiment) when the velocity of the liquid flowing in them is increased, despite the theoretically predicted fall in eigenfrequency. Thus, for plates also (that is, those having a free edge), no perceptible change in eigenfrequency as the flow rate is increased should be expected. In any event, the author admits that this conclusion requires experimental confirmation. 3. The mass flow exerts a damping action on the oscillations of

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ACCESSION NR: AP4040969

plates having a free edge in a direction transverse to the flow. The damping value increases with the parameter μ. Having attained a certain value of μ, the damping increases to such a degree that free oscillations become impossible (the frequency becomes zero). As experiments with cantilever-fixed pipelines have demonstrated, the transition from periodic movement of the tube to aperiodic (movement at zero frequency), as the flow rate is increased occurs while the eigenfrequency of the system oscillations remains unchanged. The author notes that an analogous phenomenon occurs in plates. If there is no free edge in the plate, there is no damping of the oscillations. 4. A constant mass flow can result in a plate stability loss. Using the terminology of V. V. Bolatin (V. V. Bolotin. Nekonservativny*ye zadachi teorii uprugoy ustoychivosti. Fizmatgiz, 1961), this type of stability loss for plates with a free edge is of the "oscillatory" class. In other plates a stability loss of the "static" type takes place. The boundaries of the stability regions are established by applying the Gurvitz method to the characteristic equation having the form:

$$C_{11}C_{22}r^4 + (C_{22}B_{11} + C_{11}B_{22})r^3 + (C_{22}A_{11} + C_{11}A_{22} + B_{22}B_{11} - B_{12}B_{21})r^2 +$$
$$+ (A_{11}B_{22} + A_{22}B_{11} - A_{12}B_{21} - A_{21}B_{12})r + A_{11}A_{22} - A_{12}A_{21} = 0. \quad (1)$$

Orig. art. has: 22 formulas, 3 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 30Nov63   ENCL: 00

SUB CODE: AS   NO REF SOV: 005   OTHER: 001

Card 3/3

KOVREVSKIY, A.P., inzh.

Experimental and theoretical investigation of the natural
oscillation of pipes containing a flowing fluid. Izv.vys.ucheb.
zav.; energ. 7 no. 4:89-94 Ap '64.   (MIRA 17:5)

1. Filial Instituta mekhaniki AN UkrSSSR. Predstavlena
uchenym sovetom laboratorii gidravlicheskikh mashin.

KOVREVSKIY, A.P.

Vibration of sandwich plates with a rigid orthotropic filler. Trudy
Lab.gidr.mash.AN USSR no.11:40-48 '64.

(MIRA 17:10)

KOVRIGA V.V.

GUL', V.Ye.; KRUTETSKAYA, G.P.; KOVRIGA, V.V.

Investigating the mechanism of the rupture of vulcanizates. Kauch.
i rez. 16 no.12:1-7 D '57. (MIRA 11:3)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V.
Lomonosova.
(Rubber—Testing) (Deformations (Mechanics))

KOVRIGA V.V.

S/ 90/60/002/0: :/004/027
B004/B060

AUTHORS: Gul', V. Ye., Kovriga, V. V., Yeremina, Ye. G.

TITLE: Study of the Characteristics of Stability of Polymers at
                High Rates of Deformation

PERIODICAL: Vysokomolekulyarnyye soyedineniya 1960. Vol. 2. No. 11.
                pp. 1616 - 1619

TEXT: The authors wanted to subject polymers to mechanical tests under
conditions giving rise to anomalies in comparison to the normal behavior
of solid bodies. For this purpose they worked out a dynamometer permitting
deformation rates of from 470,000 to 2.700,000 mm/min; the temperature of
the dynamometer was kept constant by a thermostat. The curve "stress as a
function of time" was recorded by means of an MПО-2 (MPO-2) loop
oscilloscope. The test temperatures ranged between -20° and 100°C.
Specimens of nonfilled CKH-26 (SKN-26) rubber, polyethylene (molecular
weight 18,000 - 25,000) and polyamide were examined. The curves obtained
were reconstructed into "deformation as a function of stress" and the
following was determined from them: 1) breaking stress σ_b, 2) the relative
Card 1/3

Study of the Characteristics of Stability of   S/190/60/002/011/004/027
Polymers at High Rates of Deformation   B004/B060

prolongation on rupture, 3) time of rupture τ_b and 4) the deformation work
(calculated from the area of the curve "deformation as a function of
stress"). Anomalies were observed at deformation rates between 470.000 and
2,700.000 mm/min. The nonmonotonic change of σ_b, of the relative prolonga-
tion, and of τ_b had a likewise nonmonotonic change of the deformation work
as a result. Maxima between $0 - 20^\circ C$ and minima between 20° and $+100^\circ C$
were observed with the SKN-26 vulcanizate. With rising temperature the
deformation curves shifted toward higher temperatures. A comparison of
polymers based on measurements made at different temperatures, may lead to
the wrong conclusions due to intersection of these curves. As contrasting
therewith, an almost constant value of $(2.7 \pm 0.1).10^4$ for polyethylene, and
of $(4.0 \pm 0.1).10^4$ for polyamide was found for the ratio σ_m/τ_b, where σ_m is
the mean value of stress. For SKN, however, the ratio fluctuated between
3.10^3 and 4.10^3. There are 3 figures, 1 table. and 1 Soviet reference.

Card 2/3

Study of the Characteristics of Stability of   S/190/60/002/011/004/027
Polymers at High Rates of Deformation   B004/B060

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
               M. V. Lomonosova (Moscow Institute of Fine Chemical
               Technology imeni M. V. Lomonosov)

SUBMITTED: April 7, 1960

Card 3/3

S/020/60/133/006/010/016
B004/B064

AUTHORS: Gul', V. Ye., Kovriga, V. V. and Kamenskiy, A. N.

TITLE: Study of the Spontaneous Contraction of Polymers With
                 Fully Developed Spatial Structure in the Course of Tearing

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 133, No. 6,
                 pp. 1364-1367

TEXT: The authors wanted to determine the relaxation properties of
samples subject to tearing on the basis of the velocity of their
spontaneous contraction. The tearing of non-filled vulcanizates from
$CKH-18$ (SKN-18), $CKH-26$ (SKN-26), and $CKH-40$ (SKN-40) rubber with
different percentage of nitrile groups, but the same degree of interlacing
was studied with a time-lapse camera $CKC-1$ (SKS-1). Two kinds of
samples were used: Samples No. 1 had the dimensions $60 \times 50 \times 1$ mm, and
had a 1 or 2.5 mm deep groove on the longer side. Samples No. 2 were
small stripes ($60 \times 10 \times 1$ mm). In samples No. 1 the rate of contraction
was measured of the rest being torn only at the end of the experiment,
whereas in samples No. 2 the entire sample was torn after a certain

Card 1/3

Study of the Spontaneous Contraction of
Polymers With Fully Developed Spatial Structure
in the Course of Tearing

S/020/60/133/006/010/016
B004/B064

expansion had been reached, and the contraction of the line of tear was measured. Fig. 1 shows the rate $v_{s.c.}$ of spontaneous contraction as a function of time at a deformation rate 100 mm/min. v_0 was obtained as characteristic value for the relaxation properties of the material by extrapolating for $t = 0$. Fig. 2 shows values of v_0 as a function of the rate of deformation v_{def}. v_0 increases less and less with increasing v_{def}. Fig. 3 shows v_0 as a function of the expansion ε. The groove at the edge of samples No. 1 leads to a steep rise of v_0. Table 1 gives the values of v_0 at $v_{def} = 500$ mm/min, $t_{def} = 0.2$ min, as well as the ratio γ of the additional orientation of the material. $\gamma = \varepsilon_p/\varepsilon$ (ε_p = expansion of sample No. 2 until tearing, ε = expansion of sample No. 1 with equal $v_{s.c.}$). $v_{s.c.}$ increases with rising polarity (higher number of nitrile groups), whereas γ decreases. There are 3 figures, 1 table, and 2 Soviet references.

Card 2/3

Study of the Spontaneous Contraction of   S/020/60/133/006/010/016
Polymers With Fully Developed Spatial Structure   B004/B064
in the Course of Tearing

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii im.
               M. V. Lomonosova (Moscow Institute of Fine Chemical
               Engineering imeni M. V. Lomonosov)

PRESENTED: April 6, 1960, by V. A. Kargin, Academician

SUBMITTED: March 21, 1960

Card 3/3

GUL', V.Ye.; KOVRIGA, V.V.; VASSERMAN, A.M.

Effect of supermolecular structure on the strength of polypropylene.
Dokl. AN SSSR 146 no.3:656-658 S '62.   (MIRA 15:10)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii im. M.V.Lomonosova
i Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti. Predstavleno akademikom. R.A.Karginym.
                          (Propene)

L 03033-67   ENP(j)/EWT(m)/T   IJP(c)   RM

ACC NR: AP6023065   (A)   SOURCE CODE: UR/0191/66/000/004/0038/0040

AUTHOR: Antonov, S. N.; Gurman, I. M.; Kovriga, V. V.; Lushcheykin, G. A.   37

ORG: none   36
                                                                                   B
TITLE: Electric properties of epoxy resins of different molecular weight

SOURCE: Plasticheskiye massy, no. 4, 1966, 38-40

TOPIC TAGS: epoxy plastic, dielectric property, dielectric loss, molecular weight

ABSTRACT: The authors studied the effect of molecular weight, temperature, and time
of curing on the angle of dielectric losses (tg δ), dielectric/permeability (ϵ), and
specific electric volume resistivity (ρ_v) of epoxy resins ED-5, ED-6, and ED-L (see
Table 1), obtained by condensation of diphenylolpropane and epichlorohydrin. Dielectric
properties of the noncured resins improved with an increase in molecular weight and
as their curves of tg δ = f(t) and ϵ = f(t) shifted toward higher temperatures. The
values of dielectric properties of pured resins decreased with an increase in molecu-
lar weight. The curing conditions of the epoxy resins affected tg δ more than ϵ or ρ_v.
Orig. art. has: 5 fig. and 1 table.

Card 1/2   UDC: 678.643'42'5.01 : 537.226
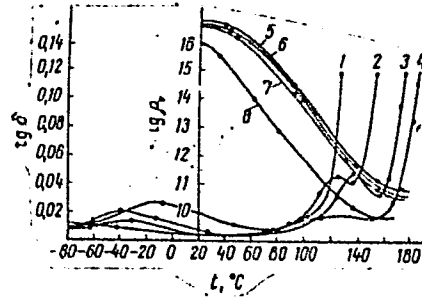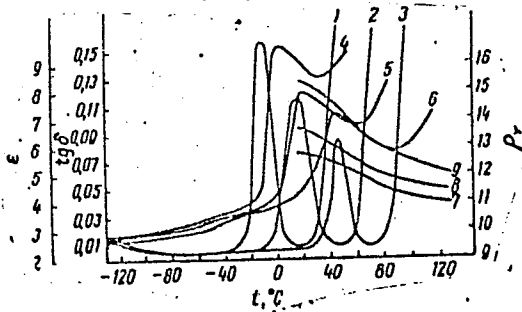
L 03033-67

ACC NR: AP6023065

Figure 1. Dependence of tg δ (1-3), ε (4-6), and ρ_v (7-9) of the noncured resins on temperature; 1, 4, 7-ED-5 resin; 2, 5, 8-ED-6 resin; 3, 6, 9-ED-L resin

Figure 2. Dependence of tg δ and ρ_v of the cured resins on curing temperature; tg δ : 1-ED-5; 2-ED-L; 3-ED-6; 4-ED-5; ρ_v : 5-ED-5; 6-ED-6; 7-ED-L; 8-ED-5; 1 and 8 were cured by diethylenetriamine and 2, 3, 4, 5, 6, and 7 by maleic anhydride

Table 1. Characteristics of epoxy resins

Resin	Concn., %	Mol. weight	Melting temp., C
ED-5	20.6	350-400	-8-0
ED-6	16.3	450-550	8-15
ED-L	9.3	800-1000	40-60

SUB CODE: 20,11/ SUBM DATE: none/ ORIG REF: 005/ OTH REF: 002

Card 2/2

KOVRIGA, V.V.

Apparatus for plotting the stress-deformation curve in one-dimensional stretching at a velocity of 25-30 m/sec within a wide temperature range.

Report presented at the 13th Conference on High-molecular compounds, Moscow, 8-11 Oct 62

GUL', V.Ye., KOVRIGA, V.V., VASSERMAN, A.M.

Effect of supermolecular structures on the strength of polypropylene.

Report to be presented at the 13th Conference on high-molecular compounds
Moscow, 8-11 Oct 62

L 06343-67   EWP(j)/EWT(m)   IJP(c)   RM/WW

ACC NR: AP6030325   (A, N)   SOURCE CODE: UR/0153/66/009/003/0486/0490

AUTHOR: Gul', V. Ye.; Kovriga, V. V.; Rogovaya, E. M.; Gromova, N. P.

ORG: Department of Polymer Chemistry and Technology, Moscow Technological Institute of the Meat and Dairy Industry (Kafedra khimii i tekhnologii polimerov, Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy promyshlennosti)

TITLE: Study of the effect of supermolecular structures of isotactic polypropylene on its mechanical properties

SOURCE: IVUZ. Khimiya i khimicheskaya tekhnologiya, v. 9, no. 3, 1966, 486-490

TOPIC TAGS: polypropylene plastic, polymer structure, mechanical property

ABSTRACT: The authors continue their study of the relationship between the crystal structure and mechanical properties of polypropylene by considering the relationship between the strength characteristics (breaking stress and elongation at rupture) and the size of spheroidal aggregates in films of isotactic polypropylene. The dynamic degree of crystallinity of the films was determined from NMR data, and found to remain unaffected by the formation of spherulites of various sizes. The strength characteristics decrease substantially with increasing spherulite size. In the presence of spherulites ≥ 165 μ in size, brittle failure of the material takes place under the deformation conditions employed. Failure along the spherulite boundaries and in the spherulites themselves is equally probable. The causes of change in the character of

Card 1/2   UDC: 541.6

L 06343-67

ACC NR: AP6030325

the stress-strain   relationship for films with various spherulite sizes are ana-
lyzed. Authors express their thanks to I. Ya. Slonim for his assistance in the re-
cording of NMR spectra. Orig. art. has: 6 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 02Jun64/ ORIG REF: 004

Card   2/2 mRf

KOVRIGIN A A

FINKEL', V.M.;KOVRIGIN, A.A.

Transportable X-ray equipment for determining principal stresses
in rails. Zav.lab.21 no.9:1137 '55.

(MLRA 9:1)

1.Kuznetskiy metallurgicheskiy kombinat imeni I.V.Stalina.
(X rays--Industrial applications) (Railroads--Rails)

KOVRIGIN, A.A.

Using X-ray structure analysis at the Kuznetsk Metallurgical Combine.
Zav. lab. 24 no.5:653-654 '58.
(MIRA 11:6)

1. TSentral'naya laboratoriya Kuznetskogo metallurgicheskogo kombinata.

(X-rays—Industrial applications)

L 8479-66

ACC NR: AP5028494

SOURCE CODE: UR/0286/65/000/020/0067/0067

AUTHORS: Kondrat'yev, A. V.; Kovrigin, A. A.; Shevchenko, L. Ya.

ORG: none

TITLE: A precision unit for linear geodetic measurements. Class 42, No. 175662
/announced by Moscow Institute of Engineers of Geodesy, Aerophotography, and
Cartography (Moskovskiy institut inzhenerov geodezii, aerofotos"yemki i
kartografii)/

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 67

TOPIC TAGS: geodesy, surveying instrument, measuring apparatus, GEODETIC
INSTRUMENT

ABSTRACT: This Author Certificate presents a precision unit for linear geodetic
measurements. The unit contains a sheave supporting a loaded thread, and two
lateral flanges. A precision ball bearing is mounted in each of these flanges
coaxially with the sheave (see Fig. 1). To increase the sensitivity of the unit,
other ball bearings are pressed into the sheave coaxially with the precision bear-
ing. A knife is mounted inside the second bearings, with its supports pressed
into the precision bearings. A space in the knife blade is filled with a

Card 1/2

UDC: 528.5--187.4

Kovrigin, A.B., and Belopolskaya, A. R.

Segmentation of complex sentences (German)
Vypusk 2, Moscow, 1961, 10 p

Paper read at the Moscow Conference on information processing, machine translation, and automatic text reading, January, 1961.

ACCESSION NR: AT4008632   S/3040/63/000/002/0105/0115

AUTHORS: Baluyev, A. N.; Bratchikov, I. L.; Balina, G. I.; Igolkin,
V. N.; Kovrigin, A. B.; Marty*nenko, B. K.; Poroshin, B. S.; Surin,
S. S.

TITLE: Compiling routine for an electronic digital computer using
input language ALGOL

TOPIC TAGS: digital computer, digital computer compiler, ALGOL
computer language, computer language, complex algorithm, computer
programming, machine language, binary code computer, computer input
language, ALGOL .

ABSTRACT: The input language and the algorithm of the programming

Card 1/2

ACCESSION NR: AT4008632

program developed in the Computation Center of Leningradskiy Uni-
versitet (Leningrad University), which is an abbreviated and modified
variant of ALGOL-60, is described. The language differs from ALGOL
in that the program as a whole constitutes one block and there are
no descriptions of types; a separate class of identifiers is used
for each class. The operators (particularly the procedure operators)
and the description of the procedures are simplified and standardized.
The input language itself and the operating principles of the pro-
gramming program are described in detail and the algorithm for solv-
ing a system of linear algebraic equations of 50th order by the
Gauss method, with choice of the principal element, is used as an
example. Orig. art. has: 28 formulas.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet (Leningrad
State University)

SUBMITTED: 15May62   DATE ACQ: 23Jan64   ENCL: 00

SUB CODE: CP   NO REF SOV: 002   OTHER: 000

Card 2/2

KOVRIGIN, A.B.

Formulation of a motorbus traffic schedule using the "Ural-1" computer. Vych. tekh. i vop. prog. no.3:97-104 '64.

(MIRA 18:3)

AKHMANOV, S.A.; KOVRIGIN, A.I.; KHOKHLOV, R.V.; CHUNAYEV, O.N.

Length of coherent interaction of light waves in a nonlinear
medium. Zhur. eksp. i teor. fiz. 45 no.5:1336-1343 N '63.
(MIRA 17:1)

1. Moskovskiy gosudarstvennyy universitet.

KOVRIGIN, A. I.

USSR/General and Specialized Zoology. Insects. Biology   P
        and Zoology

Abs Jour : Ref Zhur - Biol., No 11, 1958, No 49500

Author   : Kovrigin A.I.
Inst   : Gorno-Altayskiy State Pedagogical Institute.
Title   : The Ecology of Bugs of the Genus Eruydema Lap.

Orig Pub : Uch.zap. Gorno-Altayskiy gos. ped. in-t, 1956,
           vyp. 1, 147-167

Abstract : The study of the bugs of the genus Eurydema was
           carried out in the Transcarpathian region in
           1949-1953. The importance of wild plants of
           themustard family and other weeds on virgin soils
           and waste lands for feeding the bugs during the
           active phases of their life was determined. Data
           about the feeding connections of the rape, cab-
           bage and decorated bugs bear testimony to the
           fact that the genus as a whole is polyphagous.
           Preferring the cultivated mustard plants to the
Card   : 1/2

L 24203-66   FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(h)   IJP(c)   WG

ACC NR: AP6014614   SOURCE CODE: UR/0386/66/003/009/0372/0378

AUTHOR: Akhmanov, S. A.; Kovrigin, A. I.; Kolosov, V. A.; Piskarskas, A. S.; Fadeyev, V. V.; Khokhlov, R. V.

ORG: Physics Department of the Moscow State University (Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta)

TITLE: Tunable parametric light generator with KDP crystal

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 9, 1966, 372-378

TOPIC TAGS: laser r and d, parametric converter, parametric amplifier, frequency controal

ABSTRACT: The authors present in this communication the results of an experimental investigation that has led to the construction of a continuously tunable parametric generator of coherent light waves in the region of $\lambda \simeq 1 \mu$, using a KDP crystal. Continuous tuning of the wavelength was effected mechanically in a band from 9575 to 11775 Å, and the oscillation power reached several kilowatts. The frequency is tuned by rotating a nonlinear crystal in an optical resonator (Fig. 1). Such a scheme has made it possible not only to construct a generator with larger bandwidth than hitherto, but also to attain better reproducibility of the generated frequencies. The pump produced coherent oscillations at 0.53 λ (second harmonic of laser with Nd^{3+}), the maximum pump power in the unfocused beam reached 30--35 Mw/cm^2, the pump pulse duration was 25×10^{-9} sec, and the beam divergence was $\sim 7'$--8', with the

Card 1/2

L 24203-66
ACC NR: AP6014614

Fig. 1. Block diagram of the experi-
mental setup: M_1, M_2 -- mirrors of para-
metric generator, F_1, F_2 -- filters, P --
plane-parallel plate, 1 -- pump generator,
2 -- meter, 3 -- spectrograph.
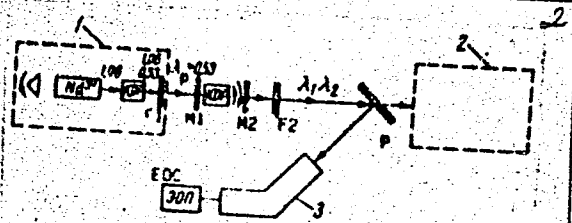
length of the KDP crystal 3 cm. The theory of the parametric generator is discussed
in detail. Tests have shown the degenerate parametric oscillations ($\lambda_1 = \lambda_2 = 1.06$
μ) to occur at a pump power $P_p \geq 8$--10 Mw/cm^2 (inside the resonator). With in-
creasing deviation from the degenerate mode, the threshold pump power increased.
Self-escitation was manifested by the appearance of an intense signal which exceeded
the indicator background by a factor of at least 10^5; the produced radiation had
good directivity and its divergence angle did not exceed 1.5'. At $P_p \simeq 30$--35 Mw/cm^2
the power of the parametric oscillations reached 5 kw. Tuning curves of the para-
metric light generator are presented and agree essentially with the presently ac-
cepted theory. The limiting tuning range is found to be determined only by the posi-
tion of the absorption bands; estimates show that it should be not smaller than 4000
Å. The authors thank N. K. Podsot-skaya for help with the measurements and I. V.
Nizhegorodova for help with the data reduction. Orig. art. has: 3 figures and 3
formulas.

[02]

SUB CODE: 20/   SUBM DATE: 17Mar66/   ORIG REF: 006/   OTH REF: 006/ ATD PRESS

Card 2/2   RLG

4245

L 26244-66   EEC(k)-2/EWA(h)/EWP(k)/EWT(l)/EWT(m)/FBD/T/EWP(e)   IJP(c)   WG/WH

ACC NR: AP6014020

SOURCE CODE: UR/0056/66/050/004/0829/0843

AUTHOR: Akhmanov, S. A.; Kovrigin, A. I.; Chirkin, A. S.; Chunayev, O. N.

ORG: Moscow State University (Moskovskiy gosudarstvennyy universitet)

TITLE: Statistical effects associated with the generation of optical harmonics

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50, no. 4, 1966, 829-843

TOPIC TAGS: laser, nonlinear optics, second harmonic, ruby laser

ABSTRACT: Results of an experimental and theoretical investigation of statistical effects appearing during generation of the second harmonic in optically transparent crystals are presented. It is established experimentally that under real conditions the correlation coefficient between the power of the second harmonic P_2 and the square of the power of the fundamental radiation emitted by a solid state laser, P_1, differs from unity and that the proportionality factor K in the equation, $P_2 = KP_1^2$, is a random quantity. In order to explain these effects in the approximation of the field of fundamental radiation, a theory of generation of optical harmonics in the field of randomly modulated waves is developed which takes into account spatial as well as temporal incoherence of the fundamental radiation. The spatial dimensions characterizing the generation of optical harmonics by a bound, randomly modulated beam in an anisotropic medium are determined. It was found that the main

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L 26244-66   3

ACC NR: AP6014020

sources of excess fluctuations of the second harmonic power are fluctuations of mode phases, mode number, and angular divergence of the fundamental radiation, generation of the optical harmonics being attained by means of ruby or neodymium glass lasers. Experiments on the generation of optical harmonics and mixing of frequencies by means of non-laser light sources are briefly discussed. It is noted that in this case spatial incoherence effects are important. Orig. art. has:
2 figures, 3 tables, and 47 formulas.   [CS]

SUB CODE: 20/ SUBM DATE: 15May65/ ORIG REF: 015/ OTH REF: 010/ ATD PRESS:
                                                                                4244

Card 2/2

L 8323-66   EWT(l)/EWA(h)

ACC NR: AP5026099   SOURCE CODE: UR/0386/65/002/005/0223/0227

AUTHOR: Akhmanov, S. A.; Kovrigin, A. I.; Piskarskas, A. S.; Khokhlov, R. V.

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

TITLE: Generation of ultraviolet radiation by using cascade frequency conversion

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 2, no. 5, 1965, 223-227

TOPIC TAGS: nonlinear optics, laser, frequency conversion, harmonic generation, second harmonic, UV radiation, crystal, Raman scattering

ABSTRACT: Experiments are described in which coherent monochromatic radiation was generated in the frequency range between 0.53 and 0.26 μ. The power output of the ultraviolet radiation attained by cascade frequency conversion of the unfocused radiation in two successive KDP or ADP crystals was not less than 3 Mw. The experimental arrangement used is shown in Fig. 1. A beam from a Q-switched neodymium laser ($\lambda_1 = 1.06$ μ) with a power output P_1 was incident on a 3-cm-long KDP crystal. The power of the second harmonic ($\lambda_2 = 0.53$ μ) P_2 from the first KDP crystal was sufficient to produce the fourth harmonic ($\lambda_4 = 0.26$ μ) by doubling the frequency of the second harmonic, or the third harmonic ($\lambda_3 = 0.35$ μ) by mixing the fundamental and the second harmonic in the second KDP crystal. A whole series of discrete spec-

Cord 1/3
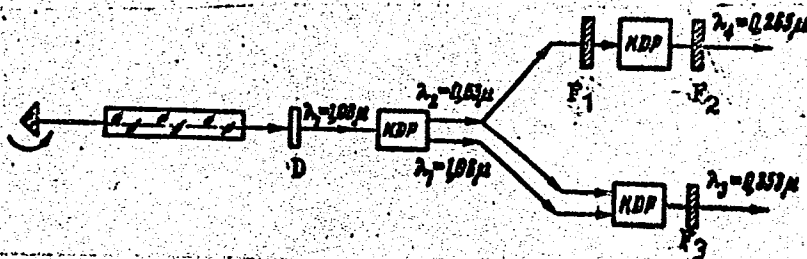
L 8323-66

ACC NR: AP5026099

Fig. 1. Experimental setup

D - Discriminator; F_1, F_2, F_3 - filters.

tral lines was also generated by stimulated Raman scattering of the fundamental or the second harmonic. The line intensity of stimulated Raman scattering was 5—10% of the intensity of the fundamental radiation. The efficiency of the frequency

Card 2/3

L 8323-66
ACC NR: AP5026099

Table 1.

	P_1	P_3	P_4	θ_0*	Interaction employed
Fourth harmonic generation	150 MW/cm²	-	3 MW/cm²	77°	$\gamma_0(2\omega) + \gamma_0(2\omega) \rightarrow \gamma_e(4\omega)$
Third harmonic generation	150 MW/cm²	8 MW/cm²	-	49°	$\gamma_0(\omega) + \gamma_0(2\omega) \rightarrow \gamma_e(3\omega)$
				58°	$\gamma_e(\omega) + \gamma_0(2\omega) \rightarrow \gamma_e(3\omega)$

*θ_0 is the angle between the optical axis and the index matching direction for the interactions listed in the last column.

doubling P_2/P_1 was about 30—35% and that of the P_4/P_2, 10%. Some of the important results are summarized in Table 1. Orig. art. has: 1 figure and 1 table.   [CS]

SUB CODE: 20/ SUBM DATE: 08Jul65/ ORIG REF: 004/ OTH REF: 004/ ATD PRESS:4/49

Card 3/3

L 7690-66   EWA(k)/FBD/EWT(1)/EEC(k)-2/T/EWP(k)/EWA(m)-2/EWA(h)   SCTB/IJP(o)   WG

ACC NR: AP5027987   SOURCE CODE: UR/0386/65/002/007/0300/0305

AUTHOR: Akhmanov, S. A.; Kovrigin, A. I.; Piskarskas, A. S.; Fadeyev, V. V.; Khokh-
lov, R. V.

ORG: Physics Faculty of the Moscow State University (Fizicheskiy fakul'tet Moskovsko-
go gosudarstvennogo universiteta)

TITLE: Observation of parametric amplification in the optical range

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu.
(Prilozheniye), v. 2, no. 7, 1965, 300-305

TOPIC TAGS: parametric amplifier, laser, laser amplifier, optical pumping

ABSTRACT: The authors report the results of an experiment in which they observed
parametric amplification of an optical signal with wavelength λ_s = 1.06 μ by its
second harmonic at λ_p = 0.53 μ. The feasibility of such an effect in the optical band
and its theory were detailed earlier (ZhETF v. 43, 351, 1962). The experimental setup
is shown in Fig. 1.   A beam from a neodymium-glass laser   was   fed   into   a
KDP   frequency modulator producing the second harmonic (KDP-I crystal ℓ = 3 cm long),
and served simultaneously as the signal beam. At the output of the frequency modula-
tor, the power ratio of the second harmonic (P_2) to the radiation at the fundamental
frequency (P_1) was P_2/P_1 = 0.2—0.3. After passing through the filter system F_1, this
ratio became equal to P_2/P_1 = 10^4--10^5. Thus, the second, amplifying KDP crystal was

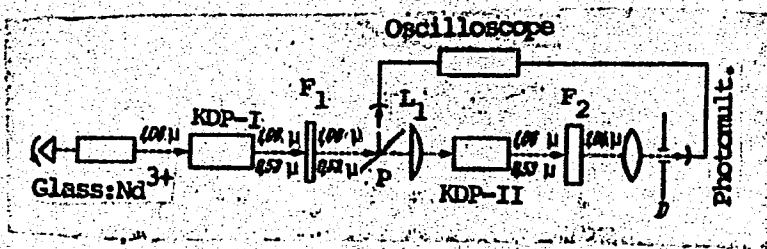Card   1/3

L 7690-66

ACC NR: AP5027987

Fig. 1. Block diagram of experimental setup; F_1 - filter, F_2 - infrared filter, D - diaphragm, L_1 - cylindrical lens, P - plane-parallel plate.

fed a weak signal beam ($\lambda_s = 1.06$ μ) and a powerful pump wave ($\lambda_p = 0.53$ μ). The pump was focused on crystal KDP-II ($\ell = 3$ cm) with the aid of a cylindrical lens L_1 (focal distance 13 cm) so that the pump power density in the second crystal reached $S_2 \approx 100$ MW/cm^2. A two-channel photoelectric circuit or photographic film was used to register the change in the signal intensity in the KDP-II crystal. The curves show that appreciable parametric amplification takes place only in a relatively narrow angle between the amplified signal and the index matching direction, Q $\approx 10'$. The maximum gain corresponded to the index matching direction, but fluctuated from flash to flash; the average experimental gain was ≈ 2.5, compared with a theoretical value of 14. The appreciable fluctuations of the parametric amplification from pulse to pulse and the small average gain (compared with the theoretical) may be due to singularities of the parametric interaction in the degenerate mode. The authors deem the gain attained by them sufficient for the realization of a parametric light

Cord 2/3

L 7690-66

ACC NR: AP5027987   3

generator in which continuous tuning of the frequency of coherent optical oscillations
is possible. The authors are grateful to V. G. Dmitriyev for useful discussions.
Orig. art. has: 2 figures and 2 formulas.   44, 53   [02]

SUB CODE: OP, EC/ SUBM DATE: 23Jul65/ ORIG REF: 002/ OTH REF: 004/ ATD PRESS:

4143

Card 3/3

KOVRIGIN, A.I.

Damage caused by bugs of the genus Eurydema Lap. to vegetable
crops. Zashch. rast. ot vred. i bol. 6 no.3:56 Mr '61. (MIRA 15:6)

1. Pedagogicheskiy institut, g. Gorno-Altaysk.
   (Gorno-Altai Autonomous Province--Vegetables--Diseases and pests)
                        (Eurydema)

KOVRIGIN, A.I.

     Hop pests. Zashch. rast. ot vred. i bol. 6 no.8:55-56
     Ag '61.   (MIRA 15:12)

    1. Gorno-Altayskiy pedagogicheskiy institut.
      (Gorno-Altai Autonomous Province—Hops—Diseases and pests)
    (Gorno-Altai Autonomous Province—Insects, Injurious and beneficial)

KOVRIGIN, A.I.

    Geographical distribution and significance of hemipterons in
    some regions of the Gornyy Altai. Izv. Alt. otd. Geog. ob-va
    SSSR no.5:161-163 '65.   (MIRA 18:12)

    1. Gorno-Altayskiy pedagogicheskiy institut.

KOVRIGIN, A.V.

Veterinary service in Moscow. Veterinariia 33 no.8:10-15 Ag '56.
                                              (MIRA 9:9)
1.Nachal'nik veterinarnogo otdela ispolkoma Mosgorsoveta.
(Moscow Province--Veterinary medicine)

KOVRIGIN, A.V.

City veterinary services. Gor.khoz.Mosk. 36 no.2:28-29
F '62.   (MIRA 16:2)

1. Zaveduyushchiy Moskovskim gorodskim veterinarnym
otdelom.
                    (Moscow---Veterinary medicine)

KOVRIGIN, A.V.; VIZIROV, B.N.; VOLKOVA, F.M.

Paratyphoid diseases. Veterinariia 41 no.8:33-34 Ag '64.
(MIRA 18:4)

1. Zaveduyushchiy Veterinarnym otdelom Ispolnitel'nogo komiteta
Moskovskogo gorodskogo Soveta deputatov trudyashchikhsya (for
Kovrigin). 2. Starshiy veterinarnyy vrach Veterinarnogo
otdela Ispolnitel'nogo komiteta Moskovskogo gorodskogo Soveta
deputatov trudyashchikhsya (for Vizirov). 3. Zaveduyushchaya
bakteriologicheskim otdelom Moskovskoy veterinarnoy laboratorii
(for Volkova).

AUTHORS: Kovrigin, B.S., Petrzhak, K.A.   SOV/ 89-4-6-6/30

TITLE: Investigation of the Statistical Distribution of Events of
                  Spontaneous Fission of U^{238} on the Basis of the Energies of Two
                  Fission Fragments (Issledovaniye statisticheskogo raspredeleniya
                  aktov spontannogo deleniya U^{238} po energiyam dvukh oskolkov)

PERIODICAL: Atomnaya energiya, 1958, Vol 4, Nr 6, pp 547-554 (USSR)

ABSTRACT: By means of an apparatus consisting of a double ionization chamber,
                  2 amplifier channels, a coincidence scheme, and a double-beam
                  momentum-oscillograph the kinetic energy of each of the two fission
                  fragments was measured, namely for 780 cases of the spontaneous
                  fission of U^{238} and about 4500 cases of the fission of U^{235} with
                  slow neutrons.
                  On the basis of these data the statistical distribution of the
                  acts of spontaneous fission and of fission with slow neutrons over
                  the energy of the two fission fragments was drawn. With the aid of
                  this distribution the following curves were constructed for both
                  kinds of fission:
Card 1/4   1.) Energy spectrum of all fission fragments, both light and heavy.

Investigation of the Statistical Distribution of Events   SOV/89-4-6-6/30
of Spontaneous Fission of U^{238} on the Basis of the
Energies of Two Fission Fragments

2.) Distribution of the acts of fission over the total kinetic
energy of both nuclear fragments.
3.) Mass distribution of fission fragments.
4.) Dependence of the total kinetic energy of both fission frag-
ments on the mass ratio of fission fragments.
5.) Dependence of the kinetic energy of light and heavy fragments
on the total kinetic energy.

For both kinds of fission the respective curves take the same
course.

The following are the characteristic properties of the fission
spectra:

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Investigation of the Statistical Distribution of Events   SOV/89-4-6-6/30
of Spontaneous Fission of U^{238} on the Basis of the
Energies of Two Fission Fragments

	Spontaneous fission		Fission with slow neutrons	
	Light fragments	Heavy fragments	Light fragments	Heavy fragments
Most probable energy in MeV	90.0±0.3	54.4±0.4	92.3±0.12	56.6±0.15
Half width of peak in MeV	17.5	21.1	19.2	23.5
Ratio of most prob-able energies		1.6		1.63
Ratio between the peak of light and that of heavy fragments		1.13		1.15
Ratio between the height of the saddle separating the peaks and the height of the peak of light fission fragments		0.33		0.42

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Investigation of the Statistical Distribution of Events   SOV/ 89-4-6-6/30
of Spontaneous Fission of U^{238} on the Basis of the
Energies of Two Fission Fragments

There are 7 figures, 1 table and 16 references

SUBMITTED: July 1, 1957

1. Fission fragments--Energy   2. Statistical analysis
--Applications   3. Uranium isotopes (Radioactive)--Fission
4. Slow neutrons--Energy

Card 4/4

21(8)
AUTHORS: Kovrigin, B. S., Kondrat'ko, M. Ya.,   SOV/56-36-1-46/62
              Petrzhak, K. A.

TITLE: The Energy Spectrum of the Fragments of the Photofission of
              U^{238} (Energeticheskiy spektr oskolkov fotodeleniya U^{238})

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1959,
              Vol 36, Nr 1, pp 315-317 (USSR)

ABSTRACT: In the present paper the energy spectrum mentioned in the
              title is determined at a maximum energy of 12.5 Mev of the
              betatron γ-radiation. The apparatus used for measuring the
              kinetic energy of the fragments of photofission consisted of
              a differential pulse-ionization chamber, an amplifier channel,
              and an electron pulse oscillograph with photorecording. The
              axis of the ionization chamber in operational position formed
              an angle of 15° with the axis of the beam. A diagram shows the
              energy spectrum of the fragments of the photofission of
              U^{238} at a maximum energy of 12.5 Mev of betatron bremsstrahlung.
              By means of the same apparatus and on the same preparation
              also the energy distribution of the fragments of the fission of

Card 1/3

The Energy Spectrum of the Fragments of the   SOV/56-36-1-46/62
Photofission of U^{238}

U^{235} by slow neutrons was determined. Also this distribution
is shown by the aforementioned diagram. The spectrum of the
photofission fragments has the most probable energies
55.1 ± 1 and (86.9 ± 1) Mev for the groups of heavy and light
fragments. If the absorption in the layer of this preparation
is taken into account, these two values increase by about
5 Mev. The two spectra differ mainly by the ratio between the
height of the "trough" between the two maxima and the height
of the peak of the light fragments. In the spectrum of
photofission it is 0.60, and in the spectrum of spontaneous
fission it is 0.33. This difference may be due to the stronger
excitation of the nucleus in photofission and also to the
superposition of fluctuations of the compensated
γ- background. In spite of the considerable excitation energy,
no essential increase of the most probable energies of fragments
and of the kinetic energy in photofission compared to
spontaneous fission was observed. The peaks of the photofission
spectrum are somewhat more close to one another than the
Card 2/3   corresponding peaks of the spectrum of spontaneous fission.

The Energy Spectrum of the Fragments of the   SOV/56-36-1-46/62
Photofission of U^{238}

There are 2 figures, and 3 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy tekhnologicheskiy institut (Leningrad
Technological Institute)

SUBMITTED: June 24, 1958

Card 3/3

33662
S/058/61/000/012/016/083
A058/A101

2/. 2110

AUTHORS: Kovrigin, B.S., Petrzhak, K.A.

TITLE: Production of thin free films containing uranium or thorium

PERIODICAL: Referativnyy zhurnal. Fizika, no. 12, 1961, 74, abstract 12B283 (In. Leningr. tekhnol. in-ta im. Lensoveta, 1961, no. 55, 23 - 27)

TEXT: There was worked out a technique for producing thin free films containing uranium or thorium by cathode spraying a cellulose nitrate backing with its subsequent dissolution. More than 20 films were prepared, each with surface density $0.1-0.2$ mg/cm^2 and working area 60 cm^2. The uranium films contained 70% U_3O_8, and the thorium films contained 40% thorium and ThO_2. Comparison of α-particle spectra and uranium fission fragments from both sides of films showed that impurities (organic matter and moisture) are distributed throughout film thickness and that the backing side has a residual layer with surface density 0.01 mg/cm^2.

[Abstracter's note: Complete translation]

X

Card 1/1

KOVRIGINA, Ye.K.; KOVRIGIN, F.P.

Stratigraphy of the Pre-Cambrian of the western slope of the
Yenisey Ridge in the Verkhnyaya and Nizhnyaya Surnikha,
Stolbovaya, and Isakovka Basins. Inform.sbor.VSEGEI no.40:3-15
'60.   (MIRA 14:12)

(Yenisey Ridge--Geology, Stratigraphic)

KOVRIGIN, I.

Reducing expenditures per one kilometer of guaranteed-depth
waterway. Rech.transp.14 no.12:23-24 Je '55.   (MIRA 9:9)

1.Nachal'nik izyskatel'sko-ruslovoy partii Ryazanskogo tekhni-
cheskogo uchastka.
      (Waterways) (Dredging)

PETROV, Sergey Mikhaylovich; KOVRIGIN, Mikhail Grigor'yevich; SHATILOV, A.I.,
inzh., retsenzent; MOTORNYY, V.I., kand. tekhn. nauk, red.;
MATVEYEVA, Ye.N., tekhn. red.

[Small capacity $Ch\frac{8.5}{11}$ diesels] Dizeli Ch $\frac{8.5}{11}$ malomoshchnye. Moskva,

Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958. 269 p.
                    (Diesel engines)   (MIRA 11:8)

PHASE I BOOK EXPLOITATION   SOV/2555

Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlen-
   nosti. Ukrainskoye respublikanskoye pravleniye

Novyye metody kontrolya i defektoskopii v mashinostroyenii i pri-
   borostroyenii [doklady Respublikanskoy konferentsii] (New Methods
   of Inspection and Flaw Detection in the Machinery and Instrument-
   manufacturing Industries [Reports of the Conference Held at Kiyev,
   1956]) Kiyev, Gostekhizdat USSR, 1958. 264 p. 4,700 copies printed.

Sponsoring Agency: Akademiya nauk USSR.

Ed.: A. Amelin; Tech. Ed.: P. Patsalyuk; Editorial Board: I.I.
   Greben', B.D. Grozin, A.Z. Zhmudskiy, G.N. Savin (Resp. Ed.), I.D.
   Faynerman (Dep. Resp. Ed.), and A.A. Shishlovskiy.

PURPOSE: This book is intended for engineers, scientific workers, and
   technicians dealing with problems of inspection and flaw detection.

COVERAGE: This is a collection of scientific papers presented at a

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New Methods of Inspection (Cont.)   SOV/2555

conference sponsored by the Academy of Sciences, UkrSSR, and the
Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlen-
nosti, Ukrainskoye pravleniye (Ukrainian Branch, Scientific and
Technical Society of the Instrument-manufacturing Industry). The
papers deal with modern methods of inspection and flaw detection
used in the machinery- and instrument-manufacturing industries.
The subjects discussed include the use of electron microscopes
in the investigation of metal surfaces; X-ray, gamma-ray, lumines-
cense, magnetic, and ultrasonic methods of flaw detection; use of
radioactive isotopes; X-ray diffraction methods of metal analysis;
and the use of interferometers for measuring length and thickness
and determining the coefficient of linear thermal expansion. No
personalities are mentioned. References follow several of the
papers.

TABLE OF CONTENTS:

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New Methods of Inspection (Cont.)   SOV/2555

Arkhangel'skiy, A.A., Engineer, I.V. Vorob'yev, Engineer, O.D.
Kovrigin, Engineer, and G.D. Latyshev, Leningradskiy institut
inzhenerov zheleznodorozhnogo transporta (Leningrad Railroad
Engineers Institute). Pulse-counting Method of Gamma-ray Flaw
Detection   18

Bogdanov, V.I., Candidate of Technical Sciences, Novocherkasskiy
politekhnicheskiy institut (Novocherkassk Polytechnical Institute).
Selection of Radioactive Sources for Measuring Equipment   25

Movchan, B.A., Candidate of Technical Sciences, Institut elek-
trosvarki imeni Ye.O. Patona, Kiyev (Kiyev Electric Welding In-
stitute imeni Ye.O. Paton). Use of Radioactive Isotopes in the
Detection of Flaws in Welds   41

Zhmudskiy, A.Z., Doctor of Technical Sciences, Professor, Gosuni-
versitet imeni Shevchenko, Kiyev (Kiyev State University imeni
Shevchenko). X-ray Diffraction Method of Inspecting Finished
Parts   50

Card 3/9

KOVRIGIN, O.D.; LATYSHEV, G.D.

Measurement and stabilization of the magnetic field of the beta-spectrometer with double focusing by using a magnetic modulation probe. Inzh.-fiz.zhur. no.11:92-97 N '58.

(MIRA 12:1)

1. Institut inzhenerov zheleznodorozhnogo transporta, g. Leningrad.

(Magnetic fields)