ZHULIN, I. V.

PA 57T35

USSR/Engin
Mach - Construction
Peat Industry

Jan 1940

"Problems of Peat Machine Construction," I. Zhulin, Chief, GlavTorfMasha, 2 pp

"Torf Prom" No 1

According to the Stalin Fourth Five-Year Plan, extraction of peat must be increased primarily by mechanization of the most laborious processes, such as extraction and removal of lump and cut peat, loading of peat, digging trenches, laying drains, etc. Discusses difficulties with constructing machines used for these purposes.

LC

57T35

EBIN, L.Ye., doktor tekhn.nauk; LEVIN, M.S., kand.tekhn.nauk; ZHULIN, M.T., kand.tekhn.nauk

Mechanical design of steel-reinforced aluminum wires with small cross section. Nauch. trudy VIESKH 7:89-115 '60. (MIRA 15:8)
(Electric lines)

ZHULIN, M.T., inzh.

Technical and economic indicators of rural overhead electric networks with new types of wires. [Nauch.trudy] VIESKH 3:502-520 '58. (MIRA 13:4)

(Electric networks)

ZHULIN, M.T., Cand Tech Sci--(diss) "Methods of mechanical and economic ~~calculation~~ design of rural aerial electric lines." Mos, 1958. 16 pp (Joint Scientific Council of the All-Union Sci Res Inst of Mechanization of ~~Rural Economy~~ Agriculture VIM and the All-Union Sci Res Inst of Electrification of Agriculture (VIESKh), 110 copies (KL, 25-58, 113)

ZHULIN, M.T.

EBIN, L.Ye. doktor tekhn.nauk; LEVIN. M.S., kand.tekhn.nauk; ZHULIN M.T.

Economical loads for agricultural overhead lines of 6-10 kilovolts. Dokl. Akad. sel'khoz. 23 no.3:45-48 '58. (MIRA 11:4)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva. Predstavlena akademikom I.A. Budzko.
(Electric power distribution)

EBIN, L. Ye. doktor tekhn. nauk, prof.; LEVIN, M.S., kand. tekhn. nauk; ZHULIN, M.T., inzh.

Standards for economical current density. Elektrichestvo no.11:83-84 N '58. (MIRA 11:12)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.
(Electric lines)

8(0)

AUTHORS: Ebin, L. Ye., Professor, Doctor of Technical Sciences, Levin, M. S., Candidate of Technical Sciences, Zhulin, M. T., Engineer

SOV/105-58-11-19/28

TITLE: Standard Specifications for Economic Current Densities (Normy na ekonomicheskuyu plotnost' toka)

PERIODICAL: Elektrichestvo, 1958, Nr 11, pp 83 - 84 (USSR)

ABSTRACT: This is a comment on the article by P.S. Grudinskiy and Ye.N.Priklonskiy in Elektrichestvo, 1957, Nr 3. This article gives a presentation of the method of determining standards of an economic current density with sufficient lucidity. Some parts of the work, however, are disputed and require a more precise substantiation. In this comment it is pointed to the fact that the value of T_e, which denotes the redemption period, actually has very little influence upon the choice of conductor size. A curtailing of the redemption period even within wide limits does not noticeably affect the limits of economic operation of conductors

Card 1/3

with adjacent size. The recommendations advanced by the authors of the article are not featured in a manner as to be applicable to practical cases of planning. It is considered to be more appropriate to start from a continuous variation of conductor size. If, however, a discontinuous sequence of conductor size variation is to be considered, it would be more correct to consider the interval of economic current-carrying capacity for the respective conductor size. The calculations would attain a higher degree of accuracy if in the determination of this interval the particular features of lines operating at differently rated voltages would be taken into account. Diagrams demonstrating that the limits of economic load of individual lines according to the climatic conditions may vary by a factor of 1,5 - 2 are presented. There are 2 figures and 3 Soviet references.

Standard Specifications for Economic Current Densities SOV/105-58-11-19/28

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva (All-Union Scientific Research Institute for the Electrification of Agriculture)

Card 3/3

ZHULIN, M.T., inzhener.

New wires for rural electric lines. Mekh. sil'. hosp. 8 no.9: 22-23 S '57. (MLRA 10:9)

1. Vsesoyuzniy naukovo-doslidniy institut elektrifikatsii sil'skogo gospodarstva.

(Electric wire)

EBIN, L.Ye., doktor tekhn.nauk; ZUL', N.M., kand.tekhn.nauk; LEVIN, M.S., kand.tekhn.nauk; YAKOBS, A.I., kand.tekhn.nauk; ZHULIN, M.T., kand.tekhn.nauk; IL'ICHEV, F.V., inzh.; KUZNETSOV, V.I., inzh.

Concerning A.P.Korshunov's article "Efficient design of 6 to 10 kv. rural electric power transmission lines." Elek. sta. 32 no.12: 78-83 D '61. (MIRA 15:1)

(Rural electrification) (Electric power distribution) (Korshunov, A.P.)

1. KUTS, P.V.; ZHULIN, M.T.

2. USSR (600)

4. Electric Motors, Induction

7. Starting a three-phase asynchronous short circuited electric motor from single-phase networks of a mixed electric-power distribution system, P.V. Kuts, M.T. Zhulin, Mekh. i elek. sel'khoz. no. 3, 1953.

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

ZHULIN, M.T.

Problem of dependable and economical supports made from reinforced concrete. Energ.biul. no.2:25-28 Mr '54. (MLRA 7:3)
(Electric lines--Poles)

LEVIN, M.S., kand.tekhn.nauk; ZHULIN, M.T., inzh.

Using steel aluminum cables for rural electric lines. Mekh. sel'. hosp. 9 no.9:24-25 S '58. (MIRA 11:10)
(Electric cables) (Rural electrification)

ZHULIN, V.

Zhulin, V. "Sanitation indoctrination in armies", Tyl i snabzheniye voorush, sil, 1948, No. 12, p. 24-26.

SO: U-2888, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949)

ZHULIN, V.A., polkovnik meditsinskoy sluzhby

Method of carrying out field exercises with company and battalion medical personnel. Voen.-med. zhur. no.5:16-20 My '61. (MIRA 14:8)
(MEDICINE, MILITARY--STUDY AND TEACHING)

MESHKOV, V.V., polkovnik meditsinskoy sluzhby, dotsent; ZHULIN, V.A., polkovnik meditsinskoy sluzhby

Organization of medico-evacuation measures during a motorized infantry attack. Voen. - med. zhur. no.1:22-28 '63.
(MIRA 17:8)

ROZHKOV, A.T., polkovnik med. sluzhby; ZHULIN, V.A., polkovnik med. sluzhby

Organization of timely first aid under combat conditions. Voen. med. zhur. no.2:66-69 F '57 (MIRA 12:7)

(FIRST AID,
in combat cond. (Rus))
(MEDICINE, MILITARY AND NAVAL,
first aid in combat (Rus))

ZHULIN, V.A., polkovnik meditsinskoy sluzhby; KIRILLOV, P.N., polkovnik meditsinskoy sluzhby

High level of first aid training for troops. Voen.med.zhur. no.3:7-13 '59. (MIRA 12:6)

(MEDICINE, MILITARY AND NAVAL
in Russia, first aid in combat (Rus))
(FIRST AID
in combat cond. in Russia (Rus))

ZHULIN, V. A. and MESHKOV, V. V.

"Method of conducting training in the organization of the work of the battalion medical point" - p. 8

Voyenno Meditsinskiy Zhurnal, No. 3, 1962

ZHULIN, V. A. Lieut. Col of the Med. Ser

"THE IMPROVEMENT IN, AND PURPOSEFULNESS OF, THE SANITARY TRAINING"

The author outlines specific points for sanitary training emphasising matters such as the analysis of traumatism, visual aids, timing, etc.

Translation, 549807

ZHULIN, V. A.

"About the Betterment and Purposefulness of the Medical Education", Military-Medical Journal, No. 8, p 21, Aug 1955.

NEYGOL'DBERG, Viktor Yakovlevich; RUMYANTSEV, S.M., red.; AZROVA, A.G., red.; ZHULIN, V.K., red.

[River transportation of the U.S.S.R. during the years of the Great Patriotic War] Rechnoi transport SSSR v gody Velikoi Otechestvennoi voiny. Moskva, Transport, 1965. 255 p. (MIRA 18:10)

SLUTSKIY, S.S., kand.ekonom.nauk; PILIPCHUK, A.I., nauchnyy sotrudnik; ANTONOV, M.F., kand.tekhn.nauk; MALYARCHUK, G.S., kand.tekhn. nauk. Prinimali uchastiye: MEL'NIKOV, A.A., inzh.; ARSEN'YEVA, A.I., inzh.; TEREKHOVA, Z.S., tekhnik; SIDOROVA, L.N., tekhnik; ISSERLIS, I.I., tekhnik; KRAVCHENKO, A.I., inzh. POSTNIKOV, S.A., inzh., red.; ZHULIN, Y.K., otv. za vypusk; POKHLEBKINA, M.I., tekhn.red.

[Efficient distribution of and organization of work at cargo transfer points] Ratsional'noe razmeshchenie i organizatsiia raboty punktov perevalki. Pod obshchei red. S.S.Slutskogo. Moskva, 1960. 127 p. (MIRA 14:2)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta. 2. TSentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (for Slutskiy, Pilipchuk, Terekhova, Sidorova, Isserlis). 3. Institut kompleksnykh transportnykh problem AN SSSR (for Antonov, Malyarchuk, Kravchenko).
(Cargo handling)

USSR/Chemistry - Polymerization

Card 1/1 : Pub. 22 - 21/44

Authors : Gonikberg, M. G.; Butuzov, V. P.; and Zhulin, V. M.

Title : Polymerization of tetramethylethylene at pressures ranging up to 27500 atm

Periodical : Dok. AN SSSR 97/6, 1023-1026, Aug 21, 1954

Abstract : The results obtained during thermal polymerization of tetramethylethylene at high and ultra-high pressures, are described. The properties of tetramethylethylene polymerization products (unsaturated dimer $C_{12}H_{24}$ and high-molecular unsaturated polymers) were analyzed. Possible ways for dimerization (thermal dimerization) of tetramethylethylene, are discussed. It was established that ultra-high pressures (23000 - 27500 atm) not only accelerate the polymerization of hydrocarbons but even displace the polymerization equilibrium. Nine references: 5-USSR and 4-USA (1925-1953).

Institution : Acad. of Sc. USSR, Institute of Crystallography and the N. D. Zelinskiy Institute of Organ. Chemistry

Presented by : Academician B. A. Kazanskiy, April 15, 1954

Name: ZHULIN, V. M.

Dissertation: Study on thermal transformations of tetramethylethylene and tetrachlorethylene at high pressures

Degree: Cand Chem Sci

Affiliation: Acad Sci USSR, Inst Organic Chemistry imeni N. D. Zelinskiy

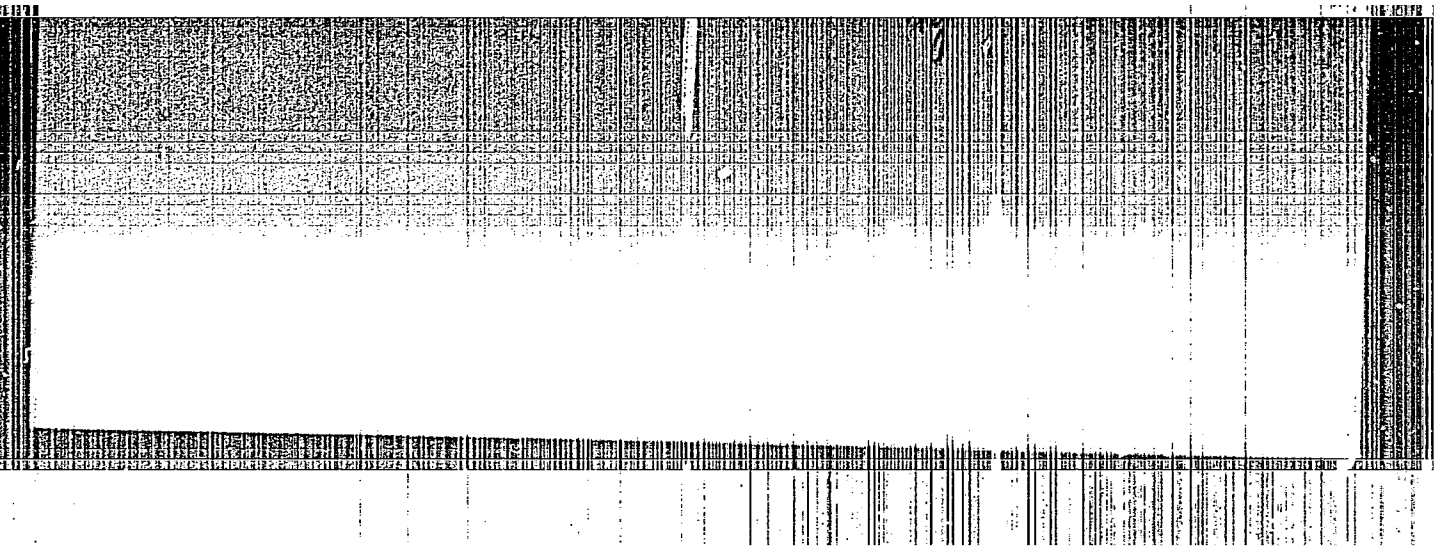
Defense Date, Place: 1956, Moscow

Source: Knizhnaya Letopis', No 51, 1956

GONIKBERG, M.G.; ZHULIN, V.M.; BUTUZOV, V.P.

Thermal conversion of tetrachloroethylene at super-high pressures. Izv.AN SSSR.Otd.khim.nauk no.6:730-732 Je '56. (MIRA 9:9)

1.Institut organicheskoy khimii imeni N.D.Zelinskogo Akademii nauk SSSR i Institut kristallografii Akademii nauk SSSR.
(Ethylene)



APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R002065010018-8"

GONIKBERG, M.G.; ZHULIN, V.M.

Thermal transformations of tetrachloroethylene under pressure.
Izv. AN SSSR Otd.khim.nauk no.4:510-511 Ap '57. (MIRA 10:11)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Thermochemistry) (Ethylene)

Zhulin, V.M.

AUTHOR GONIKSBERG N.G., ZHULIN V.M., ALEKSANYAN V.I., STERIN Kh.E. PA - 2917

TITLE The polymerization of 2,3-Dimethylbutene - 2, 2,3-Dimethylbutene - 1 and 3,3-Dimethylbutene-1 at pressures up to 4.000 atm. (Issledovaniye polimerizatsii 2,3-dimetilbutena-2, 2,3-dimetilbutena-1 i 3,3-dimetilbutena-1 pri davleniyakh do 4.000 atmosfer - Russian)

PERIODICAL Doklady Akademii Nauk SSSR 1957, Vol 113, Nr 1, pp 123 - 126 (U.S.S.R.)

Received: 6/1957 Reviewed: 7/1957

ABSTRACT In a previous paper it was shown that high pressure accelerates the polymerization of 2,3 dimethyl-butan-2 (henceforth referced as DMB) considerably. In the present paper the authors intended to study the cinetics of 2,3 DMB-2 and of related compounds at high pressure and to investigate the properties of the polymers. This reaction takes place gradually under a pressure of 3660-3680 atm and at a temperature of 290-292°C and passes through a dimer state (which has its maximum yield after about 16 hrs). The dimer fraction is able to undergo further polymerization. The degree of polymerization after 32 hrs is still low (9,1-17,7%). Under the same conditions 2,3-DMB-1 and 3,3-DMB-1 are polymerzated

CARD 1/3

The polymerization of 2,3-Dimethylbutene-2, 2,3-Dimethylbutene-1 and 3,3-Dimethylbutene-1 at pressures up to 4.000 atm.

much faster and form produots of a high molecular weight. The polymers of the three hexanes under discussion, which are similar with respect to their molecular weight, show considerable differences among themselves and with regard to the produots of ion polymerization. Since the present of 2,3 DMB-1 was established in the monomer fraction of the polymerization produot 2, 3 DMB-2, the authors carried out polymerization experiments with a mixture of both substances. If they were mixed with a ratio of 1 : 1, 2,3-DMB-2 reacted much faster than 2,3-DMB-1 in comparison to separate polymerization of either hexane. In the case of small admixtures of the latter hexane to the former these effects are not observed. This is indicative of a co-polymerization, a fact, which is confirmed by the values of the diffraction coefficient and by the specific weight. No formation takes place, therefore, of a simple mixture of the polymers of both hexanes. Consequently the polymerization of 2,3-DMB-2 does not pass through a preceding stage of isomerization of the 2,3-DMB-1. From the investigation of the dimer fraction, which consists at least of

The polymerization of 2,3-Dimethylbutene-2, 2,3-Dimethylbutene-1 and 3,3-Dimethylbutene-1 at pressures up to 4.000 atm.

two olefines, it appears that, in the case of the polymerization of the three hexames under consideration, as structural polymerization takes place. Without this process the formation of Cis-dalkylethylenes could not be expected. They predominate, however, in the dimer fraction. Moreover, the formation of monoalkylethylenes would not be imaginable without the assumption that in the case of the polymerization of 2,3 DMB-2 it is not the molecules or the radicals of the monomeres that are subjekt to a structural isomerozation, but dimer molecules or the radicals $C_{12}H_{23}$. Results show that the reaction of thermal polymerization accelerated by pressure is slowest in the case of 4-substituted ethylenes. This is apparently due to the important spatial difficulties under consideration.
(With 3 tables and 5 citations from other publications.)

CARD 3/3

ASSOCIATION: Institute for Organic Chemistry "N.D. Zelinskiy" and the Commission for Spectroskopy of the Academy of Sciences of the USSR.

PRESENTED BY: B.A. KAZANSKIY.

SUBMITTED: 21.9. 1956.

AVAILABLE: Library of Congress.

AUTHORS: Gonikberg, M. G., Zhulin, V. M. SOV/62-58-10-16/25

TITLE: Thermal Polymerization of Dimethyl Butene Under High Pressure (Termicheskaya polimerizatsiya dimetilbutenov pri vysokikh davleniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1958, Nr 10, pp 1254 - 1263 (USSR)

ABSTRACT: In a previous paper (Ref 1) on the polymerization of 2,3-dimethyl butene-2 it was shown that the reaction velocity under increased pressure can be considerably increased; in the same way, the increase in pressure causes an increase of the average polymerization degree of this olefin. In the present paper the authors investigated in detail the thermal polymerization of 2,3-dimethyl butene-2 under a pressure of about 4000 kg/cm^2 at 290°. Also the polymerization of two other hexenes were investigated: 2,3-dimethyl butene-1 and 3,3-dimethyl butene-1, under the same conditions. Based on the investigation of the kinetics of the polymerization of 2,3-dimethyl butene-2 (under pressure) the steplike

Card 1/3

Thermal Polymerization of Dimethyl Butene Under High Pressure SOV/62-58-10-16/25

character of this reaction was discovered. Furthermore it was found that the thermal polymerization of 2,3-dimethyl butene-1 and 3,3-dimethyl butene-1 under pressure takes place much more rapid than the polymerization of 2,3-dimethyl butene-2 under similar conditions. It leads to the formation of polymers with a higher average molecular weight. Based on the comparisons of the properties and the structure of dimer fractions of the polymerization products of 2,3-dimethyl butene-2 and 2,3-dimethyl butene-1 it is assumed that the polymerization of 2,3-dimethyl butene-2 takes place mainly not by way of the stage of the preliminary isomerization in 2,3-dimethyl butene-1. From the data obtained on the structure of dimer fractions it may be concluded that under the conditions investigated besides the displacement of the double bond also a structural isomerization (apparently of the dimer molecules or radicals $C_{12}H_{23}$) takes place. The thermal polymerization of 2,3-dimethyl butene-2 under high pressure leads to the formation of olefins. These

Card 2/3

5(4)

AUTHORS: Gonikberg, M. G., Zhulin, V. M. SOV/62-59-4-8/42

TITLE: Thermal Conversion of Tetrachloroethylene Under Pressure (Termicheskiye prevrashcheniya tetrakhloretilena pod davleniyem). Communication 2. Investigation Under Pressures up to 1870 kg/cm^2 (Soobshcheniye 2. Issledovaniye pri davleniyakh do 1870 kg/sm^2)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 4, pp 617-625 (USSR)

ABSTRACT: In the preceding work (Ref 1) the thermal conversion of tetrachloroethylene under pressures of 10000-24000 atmospheres and at temperatures of 300-350° was investigated and hexachloroethane and hexachlorobenzene were identified. During this work it was not possible to identify the heavy liquid formed in small amounts. For this purpose experiments with larger amounts of tetrachloroethylene were conducted under a lower pressure in the present work. Table 1 gives the results obtained in experiments conducted at 350° in a Nr 1 steel ampoule (Fig) having a volume of approximately 21 milliliters. It is seen 1) that the con-

Card 1/4

Thermal Conversion of Tetrachloroethylene Under Pressure. Communication 2. Investigation Under Pressures up to 1870 kg/cm^2

version of C_2Cl_4 increases upon an increase in pressure, 2) that the hexachloroethane : hexachlorobutadiene ratio in the reaction products increases when the duration of the experiment is prolonged while the temperature remains constant. An experimental series has been conducted to determine the kinetic order. These experiments were carried out in a Nr 2 steel ampoule (volume approximately 31 milliliters) at 350° and with a uniform tetrachloroethylene feed (44.00 g). Experimental results are given in table 2. The data of table 2 have been plotted in the x, τ graph (Fig 2). It is seen that under the assumed conditions (350°, 1000-1100 atmospheres) the thermal conversion take place like zero order reactions. Another experimental series was conducted in a steel reactor provided with a "hydraulic seal", a pocket for the thermocouple, and a pressure gauge (Table 3). It has been found that the thermal conversion rate of tetrachloroethylene increases upon an increase in the C_2Cl_4 pressure. The C_2Cl_6 : C_4Cl_6 ratio in the reaction products is almost equi-

molecular at low pressure and increases with an increase in pressure. The thermal conversion of tetrachloroethylene is slightly accelerated by the hydrogen pressure; this is due to an increase in the compressibility factor. Table 4 gives the result of a similar experimental series carried out in another reactor. In GIAP MKhP SSSR an approximate determination of the critical temperature and critical density of C_2Cl_4 according to the method of the vanishing meniscus was made. The critical temperature was found to be 338 ± 2° and the critical density to be 0.5-0.6 g/cm^3. This d_{cr} value is in agreement with the data determined for the critical density of hydrocarbon halogen derivatives (Ref 4). Table 5 gives the computed values of the compressibility factors at various pressures and experimentally determined rate constants of the thermal conversion of C_2Cl_4.

A. A. Opekunov, designer, and V. A. Kuznetsov and M. D. Pushkinskiy, mechanics, participated in the work. The authors

Thermal Conversion of Tetrachloroethylene Under Pressure. Communication 2. Investigation Under Pressures up to 1870 kg/cm^2 SOV/62-59-4-8/42

appreciate the assistance given by I. R. Krichevskiy and N. Ye. Khazanovaof GIAP MKhP SSSR. There are 1 figure, 5 tables, and 16 references, 9 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: July 16, 1957

Card 4/4

5(3)

AUTHORS: Gonikberg, M. G., Zhulin, V. M. SOV/62-59-5-24/40

TITLE: Investigation of the Thermal Conversions of Trichloroethylene at High Pressures (Issledovaniye termicheskikh prevrashcheniy trikhloretilena pri vysokikh davleniyakh)

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye khimicheskikh nauk, 1959, Nr 5, pp 916-922 (USSR)

ABSTRACT: In a short survey the conversion reactions of trichloroethylene known from publications are mentioned (Refs 1 - 9). In an earlier paper by the authors (Refs 11, 12) the thermal conversion of tetrachloroethylene had been investigated, and it was found that at temperatures of 300 - 350° and a pressure of 30000 at hexachlorobutadiene and hexachloroethane are formed, and that the conversion is considerably accelerated if pressure further increases. The present paper gives and explains the results obtained by investigations of the conversion mentioned in the title. The investigations were carried out by a method which has already been described in reference 11. It followed from

Card 1/3

preliminary investigations that trichloroethane, when heated under pressure, is able to undergo self-accelerating thermal conversion. The following substances are obtained by thermal conversion: 1,1,2,4,4-pentachlorobutadiene-1,3 and, in small quantities, asymmetrical tetrachloroethane. The distillation curves of the fractions II and III are shown by figures 1 and 2. Further, the influence exercised by temperature, pressure, and the duration of experiments upon the thermal conversion of trichloroethane was investigated. The results obtained at 200, 230, and 250°, as well as by pressures of 900 - 1270 kg/cm^2 are given in table 1. This list shows that thermal conversion is considerably accelerated by pressure. At a pressure of 25000at and a temperature of190° the self-accelerating reaction sets in which leads to a part-carbonization of the substances. At low pressure the temperature of the beginning accelerating reaction increases. A scheme of the radical chains of the dimerization of trichloroethane,

Investigation of the Thermal Conversions of Trichloroethylene at High Pressures

SOV/62-59-5-24/40

as assumed to be possible by the authors in the formation of the mentioned substances, is given. (1,1,2,4,4,-pentachloro--butadiene-1,3). There are 2 figures, 2 tables, and 19 references, 2 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

SUBMITTED: July 16, 1959

Card 3/3

20483
S/020/60/132/02/30/067
BC11/B002

5.3930

AUTHORS: Gonikberg, M. G., Zhulin, V. M., El'yanov, B. S.

TITLE: On the Problem of the Connection Between the Crystallization of Aldehydes and the Development From Them of Polyoxymethylene-type Polymers

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 2, pp. 353-356

TEXT: It was the main purpose of this paper to find out whether the original crystallization of butyraldehyde is necessary for its polymerization under high pressure. Butyraldehyde first was purified by its transformation into parabutyraldehyde. The experiments were conducted in a multiplier with two windows (Fig. 1), which was provided for 8000 kg/cm^2 at normal temperature. A soldered up lead phial with butyraldehyde was introduced into the canal of the high-pressure block of the multiplier. The canal was filled with water - glycerin (1:1) and the required pressure was produced. The solid polymer was not soluble in acetone and alcohol, and little soluble in benzene, chloroform and CCl_4. The published data show that the solid polymer develops by a pressure increase from 4200 to 5200 kg/cm^2. The addition of benzoylperoxide accelerates this process. The authors doubt

On the Problem of the Connection Between the Crystallization of Aldehydes and the Development From Them of Polyoxymethylene-type Polymers

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S/020/60/132/02/30/067
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whether the polymerization of butyraldehyde is due to its crystallization followed by melting (as it is the case with acetaldehyde). Repeated freezing and melting under atmospheric pressure did not cause polymerization. The experiments in the multiplier with windows showed that butyraldehyde polymerizes under pressure without preceding crystallization. Experiments conducted by the authors on the action of various admixtures to polymerization and depolymerization of the solid polymers of butyraldehyde will be published separately. ~ 1.3% of water and 5% of propyl alcohol reduce the yield in solid polymers considerably. Hydroquinone (1.5%-3%) inhibits the reaction. Dinitrile of azo-isobutyric acid does not accelerate the polymerization noticeably. The polymers obtained at a pressure of 6300 kg/cm^2 were solid, plastic substances unstable under atmospheric pressure. Some weight% of quinone and hydroquinone added to the polymer bring about its stabilization. At room temperature, the polymer thus keeps several months if exposed to air. Equilibrium shift under the influence of pressure, is one of the main factors for the development of solid polymers of butyraldehydes under pressure. The authors conclude that a comparatively small increase in pressure may lead to a considerable equilibrium shift in the polymerization reaction. Further investigations by the authors are planned as to the problem why the

Card 2/3

On the Problem of the Connection Between the Crystallization of Aldehydes and the Development From Them of Polyoxymethylene-type Polymers

8048
S/020/60/132/02/30/067
B011/B002

polymerization sets in at a pressure similar to that required for the crystallization of the aldehyde at room temperature. There are 1 figure and 15 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy of the Academy of Sciences, USSR)

PRESENTED: January 13, 1960, by B. A. Kazanskiy, Academician

SUBMITTED: January 12, 1960

Card 3/3

ZHULIN, V.M.; GONIKBERG, M.G.

Polymerization of aldehydes at high pressures. Part 1: Polymerization of butyraldehyde under pressure. Vysokom. soed. 3 no.2:262-267 F '61. (MIRA 14:5)

1. Institut organicheskoy khimii imeni N. D. Zelinskogo AN SSSR.
(Butyraldehyde) (Polymerization)

GONIKBERG, M.G.; ZHULIN, V.M.

Polymerization of aldehydes at high pressures. Part 2: Mechanism of butyraldehyde polymerization under pressure. Vysokom. soed. 3 no.2:268-275 F '61. (MIRA 14:5)

1. Institut organicheskoy khimii imeni N.D. Zelinskogo AN SSSR.
(Butyraldehyde)
(Polymerization)

ZHULIN, V.M., EL'YANOV, B.S., GONIKBERG, M.G.

Study of effects (steric) in chemical reactions by means of high pressure."

Report to be submitted for the 3rd Congress, European Federation of Chemical Engineering
London, England 20-29 Jun 62

KORSHAK, Vasiliy Vladimirovich; FRUNZE, Tat'yana Mikhaylovna; RAFIKOV, S.R., doktor khim. nauk, otv. red.; ZHULIN, V.M., red.; LOSKUTOVA, I.P., red.; TIKHOMIROVA, S.G., tekhn. red.

[Synthetic heterochain polyamides] Sinteticheskie geterotsepnye poliamidy. Moskva, Izd-vo Akad. nauk SSSR, 1962. 523 p. (MIRA 15:7)

(Polyamides) (Macromolecular compounds)

ZHULIN, V.M.; GONIKBERG, M.G.; ZAGORBININA, V.N.

Homolytic telomerization of vinyl acetate with tetrachloroethylene at high pressures. Izv.AN SSSR Otd.khim.nauk no.4:716-720 Ap '62. (MIRA 15:4)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Vinyl acetate) (Ethylene) (Polymerization)

GONIKBERG, M.G.; BAYKOVA, R.I.; ZHULIN, V.M.

Homolytic copolymerization of vinyl acetate and trichloroethylene at high pressures. Izv.AN SSSR.Otd.khim.nauk no.7:1164-1169 Jl '62. (MIRA 15:7)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.
(Vinyl acetate) (Ethylene) (Polymerization)

ZHULIN, V.M.; BAYKOVA, R.I.; GONIKBERG, M.G.

Unusual effect of pressure on radical polymerization. Izv. AN SSSR. Ser. khim. no.6:1133 Je '64.

(MIRA 17:11)

1. Institut organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

L 21778-65 EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4 [illegible]

RM/WW

ACCESSION NR: AP4044704 S/0062/64/000/008/1497/1500

AUTHOR: Zhulin, V. M.; Pen'kova, M. P.; Konkin, A. A.; Gonikberg, M. G.

TITLE: Polymerization of α-methylacrolein at high pressures

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 8, 1964, 1497-1500

TOPIC TAGS: alpha methylacrolein, polymerization, high pressure polymerization, heterogeneous [illegible] homogeneous polymer, [illegible] radical polymerization

ABSTRACT: The heterogeneous polymerization of α-methylacrolein in methanol (1:1 raio, using 0.10% α, α'-bisazodinitrile of isobutyric acid, based on weight [illegible] was [illegible] atmospheric and higher pressures [illegible] was [illegible] in pyridine and dimethylformamide. The high pressure products were not [illegible] [illegible] polymeriza-

Card 1/2

L 21778-65

ACCESSION NR: AP4044704

tion rate under the conditions of the investigation increased linearly in proportion to the increase in polymer yield to about 30% conversion. At 2000 kg/cm^2 pressure the initial polymerization rate was increased 8.4 times and at the same time the polymerization was accelerated 5.6 times in proportion to the accumulated polymer. The following relationship was found to obtain: $g = v_0 (e^{at} - 1)/a$, where g is the polymer yield, v_0 is the initial polymerization rate, t is the reaction time, and a is the slope of the straight line determining acceleration of the [illegible] polymer. The accelerating effect of [illegible] is explained by [illegible]. There are 2 equations and 1 table.

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 26Dec62 ENCL: 00

SUB CODE: MT, GC NO REF SOV: 003 OTHER: 004

Card2/2

L 63761-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5016082 UR/0020/65/163/001/0106/0109

AUTHOR: Zhulin, V. M.; Gonikberg, M. G.; Egorbinina, N. P.

TITLE: Effect of pressure on the reaction rate constants of chain transfer during radical polymerization of styrene

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 106-109

TOPIC TAGS: radical polymerization, reaction rate constant, chain transfer, chain growth, sytrene, polymer radical, covalent bond, transfer agent, butyric aldehyde, isobutyric aldehyde, monomer, polymerization pressure activated complex

ABSTRACT: Theory implies that in the process of the polymerization of vinyl

Card 1/3

L 63761-65

ACCESSION NR: AP5018082

To verify this assumption, the authors investigated the radical polymerization of styrene, initiated by azoisobutyric dinitrile in the presence of butyric [illegible] at pressures of up to 4000 kg/cm^2. The polymerization was performed in lead ampules. The high-pressure setup and the experimental techniques were the same as described in a [illegible] 4000 kg/cm^2 the k_t:k_p ratio (ratio of the rate constant of [illegible] strips the hydrogen atom from the aldehyde molecule and the viscosity effect of net-

Card 2/3

L 63761-65

ACCESSION NR: AP5018082

3

ivation may include an additional negative decrement due to the solvation of the activated complex as a result of charge separation. These and other findings indicate that the ratio between the rate constants of chain transfer and chain growth as a function of pressure in radical polymerization may markedly vary. The nature of this variation is [illegible]

[illegible]

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 07Jan65 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 005 OTHER: 001

Card 3/3

ZHULIN, V.M.; GONIKBERG, M.G.; BAYKOVA, R.I.

Radical polymerization of vinyl acetate and its telomerization with carbon tetrachloride at high pressures. Izv. AN SSSR. Ser. khim. no.3:432-438 '65. (MIRA 18:5)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR.

L 36989-66 EWP(j)/EWT(m)/T RM/WW

ACC NR: AP6008507 SOURCE CODE: UR/0062/66/000/001/0154/0156

AUTHOR: Baykova, R. I.; Zhulin, V. M.; Gonikberg, M. G.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Effect of pressure on radical polymerization of acrylonitrile in a solution of dimethylformamide

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 1, 1966, 154-156

TOPIC TAGS: pressure effect, radical polymerization, acrylonitrile

ABSTRACT: The authors, having found that pressure has an unusual effect on heterogeneous radical polymerization of acrylonitrile, e.g., an increase of pressure from atmospheric to 2000 kg/cm^2 at 50C leads to a decrease of the rate of polymerization and molecular weight of the polymer by a factor of 2.5 and 3.2 respectively, attempted to obtain data on the effect of pressure on homogeneous polymerization of acrylonitrile. This article gives the results of an investigation of polymerization of acrylonitrile in a solution of dimethylformamide initiated by dinitrile of azoisobutyric acid at atmospheric pressure and at 2000 kg/cm^2. The experiment demonstrated that the rate of homogeneous radical polymerization of acrylonitrile in dimethylformamide at 50C, unlike heterogeneous radical

Card 1/2 UDC: 539.893+542.952+531.1

L 36989-66

ACC NR: AP6008507

polymerization of acrylonitrile, increases with an increase of pressure from atmospheric to 2000 kg/cm^2 by a factor of 4 and the average molecular weight of the polymer by a factor of 1.5. The authors explain the comparatively small increase of molecular weight at 2000 kg/cm^2 by the fact that in the studied system an appreciable role is played by the reaction of chain transfer through dimethylformamide and this reaction is accelerated by pressure almost to the same extent as the reaction of chain growth. Orig. art. has: 1 figure and 1 table.

SUB CODE: 07/ SUBM DATE: 11May65/ ORIG REF: 005/ OTH REF: 001

Card 2/2

L 36501-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AP6017875 (A) SOURCE CODE: UR/0062/66/000/005/0827/0832

AUTHOR: Zhulin, V. M.; Gonikberg, M. G.; Zagorbinina, V. N.

ORG: Institute of Organic Chemistry im. N. D. Zelinskiy, Academy of Sciences, SSSR (Institut organicheskoy khimii Akademii nauk SSSR)

TITLE: Study of the effect of pressure on the radical polymerization of styrene in solution. Report No. 1: Polymerization in benzene, butyraldehyde, and their mixtures.

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 5, 1966, 827-832

TOPIC TAGS: radical polymerization, styrene, aliphatic aldehyde, organic nitrile compound, organic azo compound

ABSTRACT: Radical polymerization of styrene, initiated with azoisobutyrodinitrile, was studied at pressures up to 2000 kg/m^2 in benzene, butyraldehyde, and their mixtures at 50°C. The rate and average degree of polymerization in benzene solution increase by factors of 4.2 and 6.5 respectively as the pressure is raised from atmospheric to 2000 kg/cm^2. The effect of pressure decreases with increasing butyraldehyde content of the mixture. On the basis of data on the influence of pressure on the rate and average degree of polymerization of styrene in benzene, the value of the volume activation effect during initiation ($\Delta V_{in}^{\neq}$) at atmospheric pressure was calculated. This value (+7.4 cm^3/M) was found to be close to that reported in the lit-

Card 1/2 UDC: 541.12.034.2 + 542.95

L 36501-66

ACC NR: AP6017875

erature for the decomposition of azoisobutyrodinitrile in toluene solution at 62.5° (+9.4 cm^3/M). A study of the dependence of the average degree of polymerization on the butyraldehyde/styrene ratio at various pressures led to the conclusion that the rate constant of chain growth in the polymerization of styrene increases with rising pressure to a considerably greater degree than does the rate constant of chain transfer via butyraldehyde. Orig. art. has: 2 figures, 2 tables, and 5 formulas.

SUB CODE: 07/11/ SUBM DATE: 08Jan64/ ORIG REF: 005/ OTH REF: 016

Card 2/2 nlp

BAYKOVA, R.I.; ZHULIN, V.M.; GONIKBERG, M.G.

Pressure effect on the radical polymerization of acrylonitrile in dimethylformamide solution. Izv.AN SSSR. Ser.khim. no.1:154-156 '66. (MIRA 19:1)

1. Institut organicheskoy khimii im. N.D.Zelinskogo AN SSSR. Submitted May 11, 1965.

NUDEL'MAN, L.A.; YEFREMOV, M.G.; ZHULIN, V.Ya.

Introduce greater economy and industrialization in the laying of foundations in rural construction. Osn., fund. i mekh. grun. 7 no. 6:1-2 '65. (MIRA 18:12)

ZASLAVSKIY, Yu.Z., kand. tekhn. nauk; VOLKOV, N.G., inzh.; ZHULIN, Yu.L., inzh.

Investigating the thermoelastic stresses surrounding mine workings located at great depths. Sbor. DonNIGI no.33: 183-191 '64. (MIRA 17:11)

TOGUNOVA, A.I.; KHATENEVER, M.L.; ZHULINA, L.V.

Immunobiological properties of antigenic complexes from Mycobacterium tuberculosis. Zhur. mikrobiol., epid. i immun. 32 no.9:116-120 S '61. (MIRA 15:2)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(MYCOBACTERIUM TUBERCULOSIS)
(ULTRASONIC WAVES--PHYSIOLOGICAL EFFECT) (IMMUNOLOGY)

BLAGOVESHCHENSKIY, V.A.; STEPANCHENOK-RUDNIK, G.I.; ZHULINA, L.V.

Study of the conditions of absorption of a soluble antigen isolated from Mycobacterium tuberculosis subjected to ultrasonic waves. Zhur.mikrobiol., epid.i immun. 33 no.8:130 Ag '62. (MIRA 15:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(ANTIGENS AND ANTIBODIES)(BCG)(ULTASONIC WAVES--PHYSIOLOGICAL EFFECT)

60712

S/169/62/000/008/087/090
E032/E114

AUTHOR: Zhulina, Ye.M.

TITLE: Comparison of the minimum useable frequencies calculated by different methods with experimental data

PERIODICAL: Referativnyy zhurnal, Geofizika, no.8, 1962, 29, abstract 8 G 216. (Tr. In-ta zemn. magn., ionosfery i rasprostr. radiovoln. AN SSSR, no.19(29), 1961, 116-130

TEXT: Communication data for different frequencies and a number of radio links of between 800 and 7000 km, were used to determine the experimental MUF. The radio links were so chosen that most of them passed through the auroral zone. The experimental values of the MUF were compared with the values calculated by two methods, namely, the CRPL method (Central Radio-Wave Propagation Laboratory, NBS, U.S.A.) and the method used at IZMIRAN which is based on the work of A.N. Kazantsev. It was found that, on the average, the IZMIRAN method gives a better agreement with the experimental data for these radio links than the

Card 1/2

CRPL method. It is noted that the calculations corresponding to night hours for links of 6000 to 7000 km which pass through the polar zone are very inaccurate. It is assumed that this is due to inaccuracies in the assumed frequency dependence of absorption, and also the absence of accurate information on the position of the polar absorption zone.

[Abstractor's note: Complete translation.]

Card 2/2

ZHULINA, Ye.M.

Deviations of critical frequencies from the monthly median value on calm and disturbed days. Geomag. i aer. 3 no.4: 707-710 Jl-Ag '63. (MIRA 16:11)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

ZHULINA, Ye.M.

Comparing the minimum usable frequencies calculated by different methods with experimental data. Trudy IZMIRAN no.19:116-130 '61. (MIRA 15:3)

(Ionospheric radio wave propagation) (Radio frequency)

L 13328-66 EWT(d)/FSS-2/EWT(1) GW

ACC NR: AP6002761 (N) SOURCE CODE: UR/0203/65/005/006/1115/1117

AUTHOR: Zhulina, Ye. M.

50
B

ORG: Institute of Terrestrial Magnetism, the Ionosphere, and Radio Wave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR)

TITLE: Variation in the characteristics of radio communication with the solar activity cycle 12,55

SOURCE: Geomagnetizm i aeronomiya, v. 5, no. 6, 1965, 1115-1117

TOPIC TAGS: solar activity, radio communication, SIGNAL RECEPTION

ABSTRACT: The author considers the effect of solar activity on radio communications. The study is based on data from reception of standard radio signals at three locations in Canada: Ottawa, Resolute Bay, and Churchill. The signals were transmitted mainly through the region of the Aurora Borealis. The signals were transmitted by Washington (WWV) on frequencies of 2.5, 5, 10, 15, 20 and 25 Mc, and by Hawaii (WWVH) on 5, 10 and 15 Mc. The data consisted of aural evaluation of reception at the three locations on a scale of 1-10. The material was analyzed according to the monthly median evaluations for each specific point.

Card 1/3 UDC: 550.388.2:523.745

L 13328-66

ACC NR: AP6002761

The best reception from WWV was observed in Ottawa, 800 km away. Reception was satisfactory from 2.5 to 15 Mc. During the winter and the equinoxes in years of maximum solar activity, reception at this point was of high quality with evaluations of 8—9 points day and night; reception quality in years close to minimum solar activity was evaluated at 5 points on the average. Reception quality on 15 Mc is somewhat lower during minimum solar activity. Thus aural evaluation puts reception quality an average of 4 points lower during reduction of solar activity. This difference is reduced in the summer. The signals transmitted from WWV to Churchill, a distance of 2700 km, pass through a region of moderate polar absorption. Reception quality in years of minimum solar activity decreases in the winter by approximately 3 points in the daytime and by about 4—5 points at night. The distance to Resolute Bay from the WWV transmitter is ~4000 km. The path for radio communications between these two points passes twice through an absorbing region in the zone of weak and moderate polar absorption. Reception is not of high quality even in years of maximum solar activity, while in years of minimum activity reception is just barely satisfactory. The reception quality is about the same in summer months for minimum and maximum solar activity. Reception in years of minimum solar activity is impossible in the winter about 50% of the time at this point no matter what frequency

Card 2/3

L 12238-66

ACC NR: AP6002761

is used. Reception in Resolute Bay from Hawaii (6700 km away) is worse than any of the preceding cases. Reception was graded no better than 5 points even in years of maximum solar activity. Reception at Churchill from Hawaii showed the poorest quality. These points are separated by 6000 km, and the path of radio communications passes through a region of moderate absorption. In the winter and during the equinoxes reception was possible less than 50% of the time with a quality evaluation of 1–3 points. Reception quality was evaluated at no more than 5 points under the best conditions. Orig. art. has: 3 figures. [14]

SUB CODE: 17/ SUBM DATE: 05Apr65/ ORIG REF: 001/ OTH REF: 001

Card 3/3 FW

L 07090-67 FSS-2/EWT(i) WR
ACC NR: AP6019002 SOURCE CODE: UR/0109/66/011/006/1112/1120

AUTHOR: Zhulina, Yu. V.

39
B

ORG: none

TITLE: Measuring the coordinates of many targets by signals of unknown amplitudes and phases

9M

SOURCE: Radiotekhnika i elektronika, v. 11, no. 6, 1966, 1112-1120

TOPIC TAGS: radar, radar system, radar receiver, REFLECTED SIGNAL, RADAR SIGNAL ANALYSIS

ABSTRACT: N. J. Nilson tackled the problem of radar signal resolution when the reflected signal of unknown intensity was involved (IRE Trans., IT-7, 1961, 4). This problem did not include measuring target coordinates. The present article considers optimal radar measurement of coordinates of many targets whose echoes overlap and have unknown amplitudes and phases. A matrix of correlations

Card 1/2 UDC: 621.396.964.23

L 07090-67
ACC NR: AP6019002

of jointly effective estimators of amplitudes, phases, and parameters is calculated. Maximum likelihood estimators are found, and their asymptotic efficiency is proven with these assumptions: (1) The errors of estimating maximum likelihood are small and (2) The dispersions of the elements of a matrix A (entering the formula of random complex echo-signal amplitude) are small as compared with the mean values of these elements. Formulas are derived for the potential accuracy of joint measurement of coordinates of two targets. Block diagrams implementing the underlying ideas are presented. Orig. art. has: 3 figures and 39 formulas.

SUB CODE: 17, 09 / SUBM DATE: 26Nov64 / ORIG REF: 004 / OTH REF: 002

Card 2/2

ZHULINSKAYA, A.S., zav. glaznym otdeleniyem

Streptomycin and phthivazid in the treatment of tuberculosis of the eye. Oft.zhur. 12 no.1:10-14 '57. (MLRA 10:8)

1. Iz L'vovskoy zheleznodorozhnoy bol'nitsy
(EYE-TUBERCULOSIS) (STREPTOMYCIN)
(ISONICOTINIC ACID)

ZHULINA, Ye., inzh.

Monthly forecast and selection of communication frequencies.
Radio no.10:23,48 O '64. (MIRA 18:2)

ZHULINA, Ye.M.

Effect of cosmic radio-frequency radiation on the reception of information on board artificial satellites and at ground stations. Geomag. i aer. 4 no.6:1134-1136 N-D '64. (MIRA 18:1)

1. Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR.

L 05251-67 EWT(1)/FCC GW

ACC NR: AP6018930 SOURCE CODE: UR/0203/66/006/003/0604/0606

31
B

AUTHOR: Gorbushina, G. N.; Zhulina, Ye. M.

ORG: Arctic and Antarctic Scientific Research Institute (Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut); Institute of Terrestrial Magnetism, the Ionosphere, and Radio Wave Propagation, AN SSSR (Institut zemnogo magnetizma, ionosfery i rasprostraneniya radiovoln AN SSSR)

TITLE: Anomalous absorption zone at various phases of the solar activity cycle

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 3, 1966, 604-606

TOPIC TAGS: radio wave absorption, solar cycle, ionospheric absorption

ABSTRACT: This is a brief study of the geographic location of the zone of anomalous absorption of radio waves according to data from ionospheric observations for 1962 (relatively low solar activity: $\overline{w} = 37.6$). Hourly f_{min} readings at 28 northern hemisphere stations served as the primary data base. The data processing and research method was that of G. N. Gorbushina (Geomagn. i aeronomiya, 1962, 2, no. 2, 267), who made a similar study for 1958. The frequency of anomalous absorption occurrence was defined as the ratio (in percentages) of the number of instances at which f_{min} exceeded quiet day values by 50% to the total number of

Card 1/2 UDC: 550.388.2

observations. Estimation of the level of anomalous absorption in relative units permitted some reduction of the effect of differences in ionosphere probing equipment at the different stations. The results of the calculations were used to plot the frequency (totaled for all the days) of the occurrence of anomalous absorption as a function of the corrected geomagnetic latitude of the observation centers. An overall shift from 65° to 67° for maximum occurrence frequency was observed. Longitude has negligible effect on overall absorption patterns, with the result that the latitudinal function of anomalous absorption occurrence can be used for any longitude. Orig. art. has: 2 figures.

SUB CODE: 08 / SUBM DATE: 27Jul65/ ORIG REF: 003

ZHULINSKAYA, A.S., zasluzhennyy vrach USSR.

Effectiveness of nicotinic acid in some eye diseases. Oft. zhur. 15 no. 6:335-339 '60. (MIRA 13:10)

1. Iz dorozhnoy bol'nitsy g. L'vova.
(EYE--DISEASES AND DEFECTS) (NICOTINIC ACID)

ZHULINSKAYA, A.S., zasluzhennyy vrach USSR; SIDOROV, N.A., kand.med.nauk

Use of cortisone in the treatment of eye diseases. Oft.zhur. 15 no.4: 219-222 '60. (MIRA 13:11)

1. Iz glaznogo otdeleniya i laboratorii dorozhnoy bol'nitsy L'vovskoy zheleznoy dorogi.
(CORTISONE)
(EYE--DISEASES AND DEFECTS)

ACCESSION NR: AP4021985 S/0073/64/030/002/0228/0232

AUTHORS: Dubovenko, L. I.; Zhulinskaya, T. F.

TITLE: Determination of the instability constant of oxalate complexes of lanthanum

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 2, 1964, 228-232

TOPIC TAGS: lanthanum oxalate, lanthanum oxalate complex, instability constant, solubility product, lanthanum separation, solubility, equilibrium constant, lanthanum monooxalate complex, lanthanum dioxalate complex, lanthanum trioxalate complex

ABSTRACT: Oxalic acid is used for the precipitation of lanthanoids and their separation from other elements. This study was conducted to determine the properties of lanthanum oxalate and its various complexes. The solubility of lanthanum oxalate in HNO_3 (0.02-0.5N) was determined; the solubility product (average for 0.2-0.5N HNO_3) of $[La^{3+}]^2[C_2O_4^{2-}]^3 = 1.5 \times 10^{-26}$. The solubility of lanthanum oxalate in the presence of excess oxalate in 0.1 N HNO_3 at 170 decreases if the excess is small (less than 0.03 mole), but increases

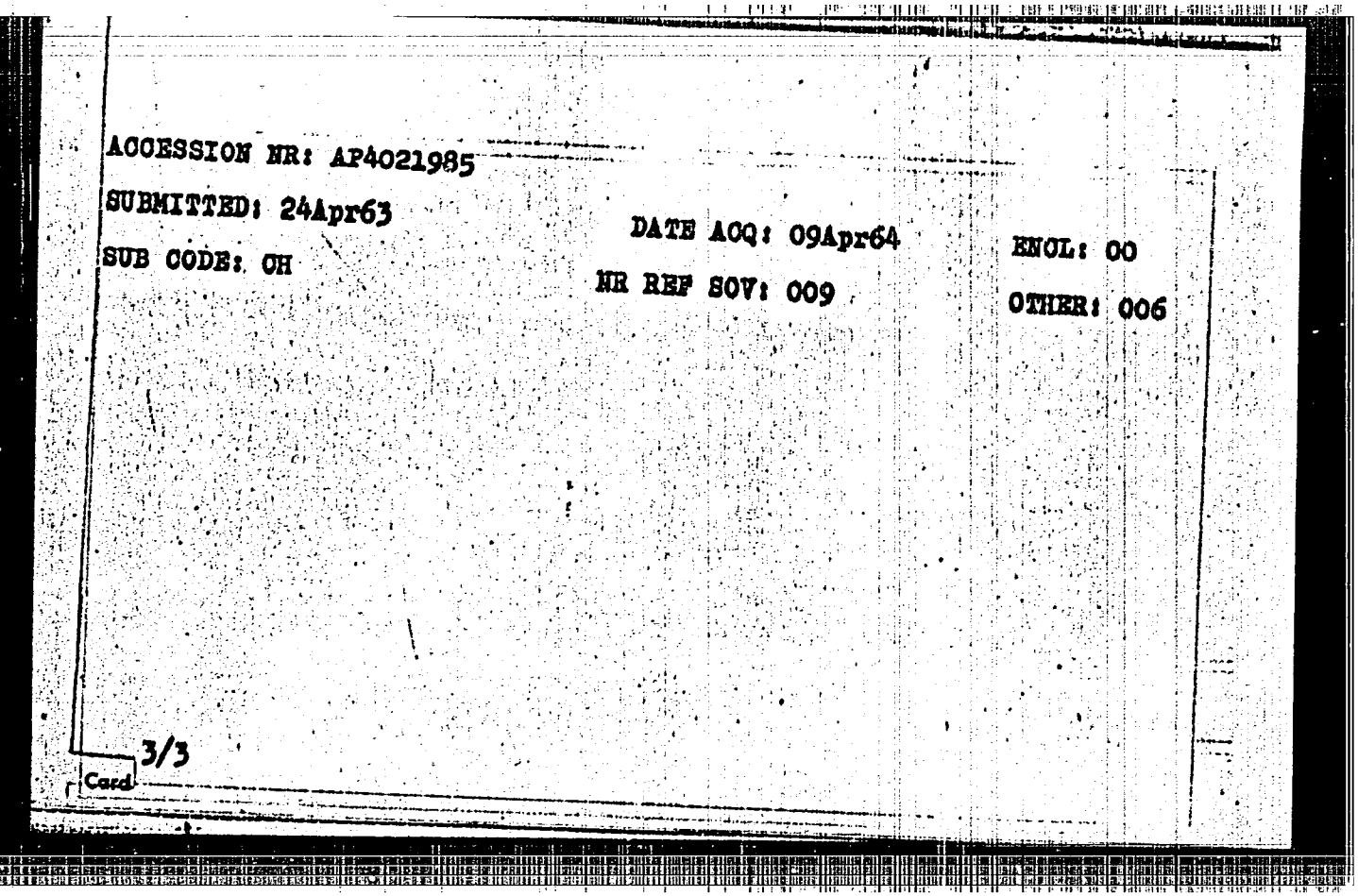
Card 1/3

ACCESSION NR: AP4021985

greatly with a large excess. The equilibrium constants for the reaction $La_2(C_2O_4)_3 + La^{3+} \rightleftharpoons 3LaC_2O_4^+$ were calculated. The value for the instability constant of the complex $LaC_2O_4^+$ was approximated to be 1.3×10^{-6}. The solubility of lanthanum oxalate in ammonium oxalate solutions of different concentrations (0.1-0.25 M) at pH 3-4 was studied. The equilibrium constants for the reaction $La_2(C_2O_4)_3 + C_2O_4^{2-} \rightleftharpoons 2La(C_2O_4)_2^-$ were calculated. The instability constant of the $La(C_2O_4)_2^-$ ion was averaged to be 1.9×10^{-9}. The instability constants for the mono-, di- and trioxalate complexes of lanthanum calculated by the Leden method (Z. phys. Chem. A. 188, 160 (1941)) are in close agreement. The instability constant for the coordination saturated complex ion $La(C_2O_4)_3^{3-}$, $K_{La(C_2O_4)_3^{3-}} = [La^{3+}] / [C_2O_4^{2-}]^3 / [La(C_2O_4)_3^{3-}]$ is 2.2×10^{-10}. Orig. art. has: 8 equations and 3 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk UkrSSR(Institute of General and Inorganic Chemistry, Academy of Sciences, UkrSSR)

Card 2/3



ACCESSION NR: AP4021985

SUBMITTED: 24Apr63 DATE ACQ: 09Apr64 ENCL: 00

SUB CODE: CH NR REF SOV: 009 OTHER: 006

3/3
Card

VLASENKO, V.M.; RUSOV, M.T.; YUZEFOVICH, G.Ye.; Prinimali uchastiye: ZHULINSKAYA, V.A.; SIKORSKAYA, E.K.

Kinetics of carbon dioxide hydrogenation on a nickel catalyst. Kin.i kat. 2 no.4:525-528 Jl-Ag '61. (MIRA 14:10)

1. Institut fizicheskiy khimii imeni L.V.Pisarzhevskogo AN USSR, Kiyev.
(Carbon dioxide) (Hydrogenation) (Nickel, Catalyst)

ALEKSEYEV, S. V., ZHULINSKIY, A. P.

Hoisting Machinery

Hauling timber with the hoist TL-Z and leaving "tree islands" for natural propagation of trees. Les. khoz. 5 no. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

ALEKSEYEV, S. V., ZHULINSKIY, N. P.

Lumbering

Hauling timber with the hoist TL-Z and leaving "tree islands" for natural propagation of trees. Les. khoz. 5 no. 4, 1952

2

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

KSHANOVSKIY, S.A., kand.med.nauk; CHAPLYGINA, M.N.; ZHULKEVICH,A.P.; GOLEVA, V.K.

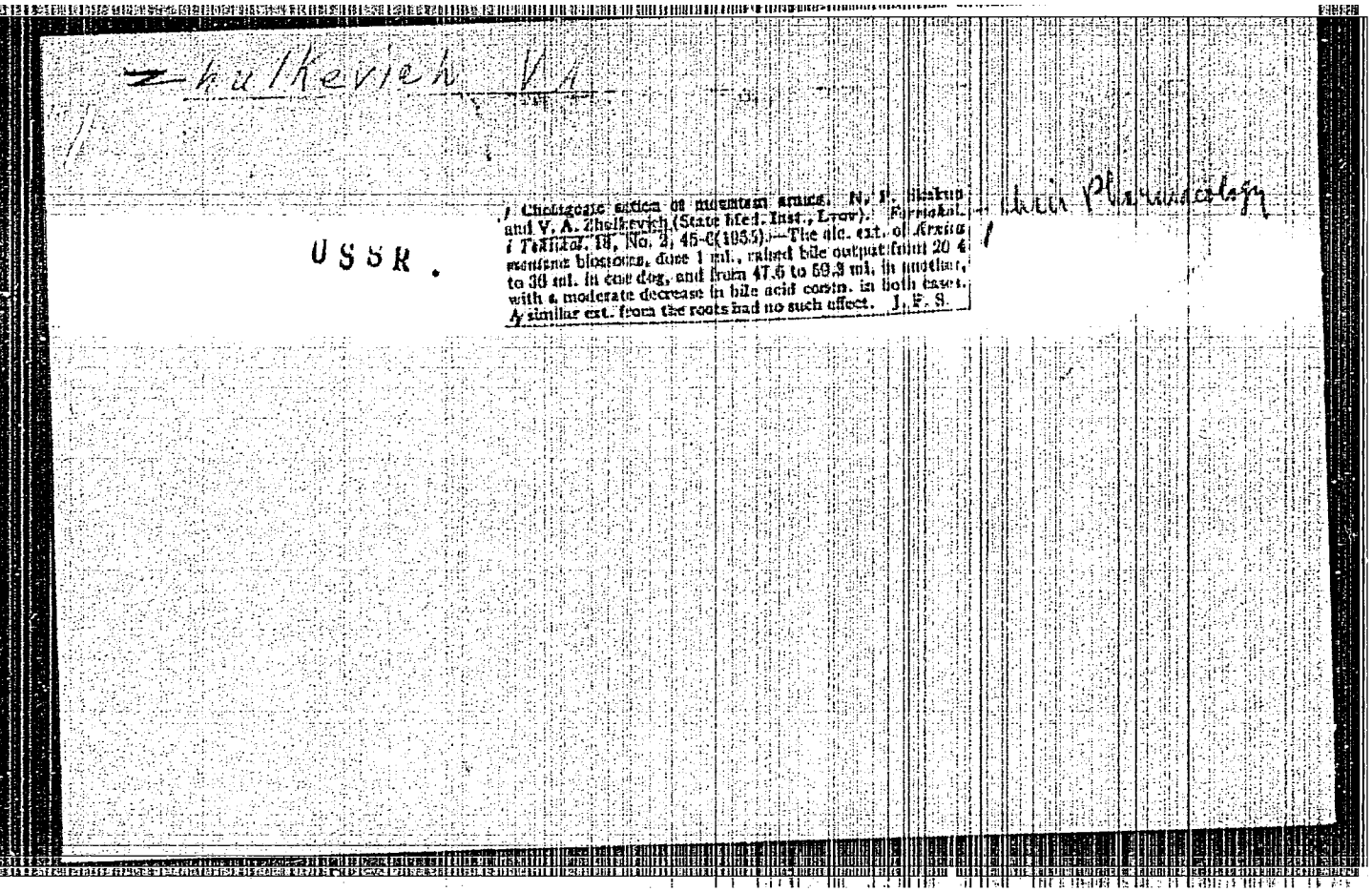
Experience with wide use of intracutaneous BCG revaccination in rural areas of Khmel'nitskiy Province. Probl.tub.41 no.11:7-11 '63. (MIRA 17:9)

1. Iz Ukrainskogo nauchno-issledovatel'skogo instituta tuberkuleza i grudnoy khirurgii (dir. - dotsent A.S.Mamolat) i Khmel'nitskogo oblastnogo otdela zdravookhraneniya (zav.Ye.S.Grigor'yeva).

ZHULKEVICH, V.A.

Use of astringent substances for the prevention and treatment of virus grippe. Vrach.delo no.1:87-89 '60. (MIRA 13:6)

1. Ternopol'skaya gorodskaya bol'nitsa.
(ASTRINGENTS) (INFLUENZA)



Zhukevich VA

USSR

Cholagogic action of medicinal grasses. N. I. Nikitin and V. A. Zhukevich (State Med. Inst., Lvov). Farmakol. i Toksikol. 18, No. 2, 45-6(1955).—The ale. ext. of Arnica montana blossoms, dose 1 ml., raised bile output from 20 to 30 ml. in one dog, and from 47.5 to 69.3 ml. in another, with a moderate decrease in bile acid contn. in both cases. A similar ext. from the roots had no such effect. J. F. S.

Liver Physiology

ZHUL'KOV, L.A.; REYN, M.D.; FIKHMAN, V.D.

Polyvinyl chloride fibers. Khim. volok. no.4:61-62 '64. (MIRA 18:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut steklyanogo volokna.

LADYGIN, P.F.; ZHUL'KOV, V.F.; LAVENETSKIY, F.A.; TIKHOMIROV, D.F.; KOZHEVNIKOV, A.I.; IVANOV, M.

Discussion of the article "Pedal or track circuit?" Avtom., telem. i svias' 9 no.9:39-40 S '65. (MIRA 18:9)

1. Revizory po bezopasnosti dvizheniya Severnoy dorogi (for Ladygin, Zhul'kov, Lavenetskiy). 2. Starshiy elektromekhanik Volkovstroyevskoy distantsii Oktyabr'skoy dorogi (for Tikhomirov). 3. Zamestitel' nachal'nika 12-y distantsii Kuybyshevskoy dorogi (for Kozhevnikov). 4. Starshiy inzh. sluzhby signalizatsii i svyazi Kuybyshevskoy dorogi (for Ivanov).

24(1)
AUTHORS: Sergeyev, G. Ya., Titova, V. V., Savitskiy, Ye. M., Chul'kova, A. A., Nikolayeva, Z. P.

307/89-5-6-2/25

TITLE: The Mechanical Properties of Uranium (Mekhanicheskiye svoystva urana)

PERIODICAL: Atomnaya energiya, 1958, Vol 5, Nr 6, pp 618-623 (USSR)

ABSTRACT: The test apparatus (IM - 4L) with which the hardness of uranium at increased temperature and the expansion of uranium at increased temperature were investigated in a neutral gas (argon), are represented by two sectional drawings. Measuring results are given by a graph. The following details are mentioned:
The hardness of the uranium decreases with increasing temperature. If temperature rises up to 600°C, hardness decreases from 350 kg/mm^2 to 50 kg/mm^2. A regular variation of hardness in dependence on the carbon content of the uranium (0.07 to 0.24 %) was not observed.
The presence of carbon in uranium samples influences outflow pressure if these samples are pressed in the α-phase. The outflow pressure increases with an increasing carbon content

Card 1/3

(0.09 to 0.24 %). At 650°C and a degree of deformation of 75 % the outflow pressure increases by about 60 %. For uranium in the γ-phase outflow pressure decreases from 4 kg/mm^2 at 830°C to 1.8 kg/mm^2 at 1050°C.

Ultimate strength and creep strength increase with an increasing carbon content in the uranium. In hot-rolled uranium with a C-content of 0.01 % ultimate strength is σ_b = 36 kg/mm^2, in uranium with 0.24 % C-content σ_b = 52 kg/mm^2. The creep strengths in these cases amount to 23 to 31 kg/mm^2.

At temperatures of from 100 - 150°C all mechanical properties characterizing the strengths decrease monotonously, whereas the properties that characterize plasticity increase. For uranium with 0.12 % C-content one finds that at 750°C σ_b = 12 kg/mm^2, δ = 18 % (relative elongation), ψ = 51 % (relative narrowing of the pressed surface), at 600°C σ_b = 7 kg/mm^2, δ = 23 %, ψ = 76 %, and at 850°C σ_b = 0.8 kg/mm^2, δ = 31 %, ψ = 97 %.

γ-uranium, which has a volume-centered lattice, has the highest degree of plasticity. The tetragonal β-uranium is inclined to be brittle, and velocity of deformation is more

ZHUL'KOVA, A.A.

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Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pereverzev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Sinel'nikov, K.D., V. Ye. Ivanov, V.M. Amonenko, and V.D. [illegible]. Refining Beryllium and Other Metals by Condensation on Heated Surfaces (Report No. 2051)	526
Ivanov, Ya.I., and V.M. Shmelev. Melting and Casting of Beryllium (Report No. 2048)	536
Vol'skiy, A.N., Ye.V. Tsvetkova, N.P. [illegible], E.L. Kal'tsman, and T.S. Poschilo. Production of Chemically Pure Strontium, Barium, Magnesium, and Calcium (Report No. 2050)	542
Bochvar, A.A., G.Ya. Sergeyev, A.A. Zhul'kova, L.I. Kolobneva, and G.I. Tomson. Effect of Thermal Cycling and Cooling on the Dimensional and Structural Stability of Various Metals and Alloys (Report No. 2190)	554
Konobeyevskiy, S.T., G.Ya. Sergeyev, V.V. Titova, B.M. Levitskiy, and Yu.N. Sokurskiy. Influence of the Structure and Properties of Uranium on Its Behavior Under Irradiation (Report No. 2191)	572

Card 9/11

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The Mechanical Properties of Uranium

SOV/89-5-6-2/25

sensitive to temperature. Because of the low symmetry of the rhombic lattice of α-uranium, the latter is characterized by sharply marked anisotropic properties. There are 13 figures, 2 tables, and 3 references.

SUBMITTED: July 16, 1958

Card 3/3

BOCHVAR, A.A.; SERGEYEV, G.Ya.; DAVYDOV, V.A.; ZHUL'KOVA, A.A.

Effect of cyclic heat treatment with constantly applied load on the dimensional stability of metals and alloys. Issl. po zharopr. splav. 7:3-10 '61. (MIRA 14:11)
(Metals--Heat treatment) (Deformations (Mechanics))

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AUTHORS: Bochvar, A.A., Sergeyev, G.Ya., Davydov, V.A., and Zhul'kova, A.A.

TITLE: Influence of cyclic heat treatment under a constantly applied load on the dimensional stability of metals and alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 3 - 10

TEXT: Flat specimens of identical shape, and overall length 100 mm (length of working portion 40 mm, width 8 mm, thickness 2 mm), made from uranium, aluminum, zinc and from copper-zinc alloys of different compositions, were used for the investigation. The uranium specimens were tested without protection against oxidation, heating being carried out in air and quenching in water. The specimens were subjected to cyclic heat treatment in the temperature ranges 180 - 550°C and 490 - 720°C for uranium 20 - 400°C for aluminum, 20 - 300°C for zinc and 20 - 600°C for copper-zinc alloys. The temperatures

Card 1/4

Influence of cyclic heat ...

of specimens were controlled at these points by means of thermocouples welded onto the specimens. The magnitude of the residual deformation of the specimens was determined (1) after cyclic heat treatment without application of external load; (2) after cyclic heat treatment with application of a tensile load during the heat treatment cycle; (3) after creep tests at a temperature equal to the upper temperature of the cycle. The duration of the latter tests was that of the full period of the heat treatment cycle, multiplied by the number of cycles (the load during cyclic thermal treatment under load and in the creep tests being identical). Texturized uranium rolled in the α-phase region and untexturized uranium annealed in the γ-phase region and quenched from the β-phase region, were tested. Specimens of texturized uranium were cut along the direction of rolling and at right angles to it. It was found that as the result of applying a small tensile load to uranium, aluminum, zinc, α and β brass during cyclic heat treatment, a considerable residual deformation developed; this exceeded the total deformation due to creep and cyclic heat treatment without application of load, by a considerable extent. Cyclic thermal treatment of transfer specimens

Card 2/4