"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

KAZARNOVSKIY, I.A.; LIPIKHIN, N.P.; TIKHOMIROV, M.V.

Isotopic oxygen exchange between a free hydroxyl radical and water. Zhur.fiz.khim. 30 no.6:1429-1430 Je '56. (MLRA 9:10)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova, Moskva.
(Oxygen--Isotopes) (Hydroxyl group)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, M., LIPIKHIN, N. and KASARNOVSKIY, I.

"Isotopic Exchange of Oxygen Between Free Hydroxyl Radicals and Water," Nature (British publication), Vol. 178, N. 4524, 14 July 1956.

English article.

Laboratory for Inorganic Chemistry, Karpov Inst. of Physical Chemistry, Moscow.

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TIKHOMIROV, M.V.

PHASE I BOOK EXPLOITATION SOV/1297

Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya po primeneniyu radioaktivnykh i stabil'nykh izotopov i izlucheniy v narodnom khozyaystve i nauke, Moscow, 1957

Polucheniye izotopov. Moshchnyye gamma-ustanovki. Radiometriya i dozimetriya; trudy konferentsii... (Isotope Production. High-energy Gamma-Radiation Facilities. Radiometry and Dosimetry; Transactions of the All-Union Conference on the Use of Radioactive and Stable Isotopes and Radiation in the National Economy and Science) Moscow, Izd-vo AN SSSR, 1958. 293 p. 5,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR; Glavnoye upravleniye po ispol'zovaniyu atomnoy energii SSSR.

Editorial Board: Frolov, Yu.S. (Resp. Ed.), Zhavoronkov, N.M. (Deputy Resp. Ed.), Aglintsev, K.K., Alekseyev, B.A., Bochkarev, V.V., Leshchinskiy, N.I., Malkov, T.P., Sinitsyn, V.I., and Popova, O.L. (Secretary); Tech. Ed.: Novichkov, N.D.

PURPOSE: This collection is published for scientists, technologists, persons engaged in medicine or medical research, and others concerned with the production and/or use of radioactive and stable isotopes and radiation.

COVERAGE: Thirty-eight reports are included in this collection under three main subject divisions: 1) production of isotopes 2) high-energy gamma-radiation facilities, and 3) radiometry and dosimetry.

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This report is a general survey of production methods, apparatus, raw materials, applications, investigations and future prospects for radio isotopes in the Soviet Union.

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Nyulenfordt, Yu.K., O.G. Zivert, and T.A. Gagua. A Rectification Column for Obtaining BF_3, Enriched With Isotope B^{10} 127
A method is described for enriching natural mixtures containing ~18.6 percent B^{10} concentration to ~80 percent B^{10} concentration by low temperature (~ - 100 degrees, scale not stated) adiabatic rectification. Separation capability was B^{10} of 95-96 percent purity after 480 hours processing; but, as the desired concentration was ~80 percent, separation yield was 4 liters per 24 hours. Block diagrams of installations are given.

Zhavoronkov, N.M., O.V. Uvarov, and S.I. Babkov. Research on the Separation of Stable Isotopes of Light Elements 134

Tunitskiy, N.N., O.G. Devyatykh, M.V. Tikhomirov, A.D. Zorin, and N.I. Nikolayev. Separation of Carbon Isotopes 143

Card 6/12

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TUNITSKIY, N.N.; TIKHOMIROV, M.V.; KUPRIYANOV, S.Ye.; KOLOTYRKIN, V.M.; GUR'YEV, M.V.; POTAPOV, V.K.

Studies in the field of mass spectrometry. Probl.fiz.khim. no.1:122-128 '58. (MIRA 15:11)

1. Laboratoriya adsorbtsionnykh protsessov Nauchno-issledovatel'skogo fiziko-khimicheskogo instituta im. Karpova.

(Mass spectrometry)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

5(4) SOV/76-32-12-12/32

AUTHORS: Gur'yev, M. V., Tikhomirov, M. V.

TITLE: The Dissociation of Deuterooctane at an Electron Impact (Dissotsiatsiya deyterooktana pri elektronnom udare)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 12, pp 2731 - 2738 (USSR)

ABSTRACT: This is a comparison of the mass spectra of n-octane and n-octane-$2D_1$. The picture was taken with the mass spectrograph MS-1 at a ionization potential of 70 eV and an analyzer temperature of 150°. As expected, the deuterium reduces the probability of a break in the C-C binding, but to a much lesser extent than with polydeuterobutanes. Probably none of the CH_3-ions, and only half of the C_2H_5- and C_3H_7-ions are traced with deuterium. This theory, however, is contradicted by the test results. Thus, a great intramolecular mobility of the H-atoms, especially for the light ions and the formation of ions weaker in H is probable. Calculations of these variation possibilities correspond closely to the test

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

The Dissociation of Deuterooctane at an Electron Impact SOV/76-32-12-12/32

results. Professor N. N. Tunitskiy was very helpful with his advice, and V. L. Tal'roze's cooperation was appreciated. There are 1 figure, 6 tables, and 14 references, 2 of which are Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova Moskva (Physico-Chemical Institute imeni L. Ya. Karpov, Moscow)

SUBMITTED: October 17, 1957

Card 2/2

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

5(4) SOV/76-32-12-31/32

AUTHORS: Gur'yev, M. V., Tikhomirov, M. V. and Tunitskiy, N. N.

TITLE: On the Mass Spectra of Large Molecules (O mass-spektrakh bol'shikh molekul)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 12, pp 2847-2847 (USSR)

ABSTRACT: For the purpose of investigating the dissociation processes in the case of an electron impact, mass spectra of n-nonane marked at a definite point with C^{13} (n-nonane-$5C^{13}$) were taken. By comparing them with the mass spectra of normal n-nonane the proportion of ions containing C^{13} was determined. The results can only be explained by assuming that the fragment ions form by a breaking of the binding between 2 carbon atoms. The molecule is broken in most cases into 3 fragments with C-atoms. The ions forming are strongly stimulated. Test results show that the stimulation energy of the initial ion, up to the moment of dissociation, can only spread to part of its degrees of freedom whereas H. Eyring (Ref 3) assumed a statistical distribution of

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SOV/76-32-12-31/32

On the Mass Spectra of Large Molecules

the energy to all degrees of freedom. There are 1 table and 4 references, 1 of which is Soviet.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova, Moskva (Physico-Chemical Institute imeni L. Ya. Karpov, Moscow)

SUBMITTED: May 25, 1958

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

SOV/20-120-5-30/67

AUTHORS: Kazarnovskiy, I. A., Corresponding Member, Academy of Sciences, USSR, Lipikhin, N. F., Tikhomirov, M. V.

TITLE: Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water (Izotopnyy obmen kisloroda meshdu svobodnym gidroksilnym radikalom i vodoy)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 5, pp. 1058-1061 (USSR)

ABSTRACT: The free hydroxyl radical plays an important role in radiation chemistry and in the theory of the oxidation processes, as it is an intermediate. Only few and contradicting data exist on its reactivity (Refs 1 - 4). The authors investigated the reaction mentioned in the title ($O^{16}H + H_2O^{18} = H_2O^{16} + O^{18}H$). Potassium ozonide was used as a new source of the free OH radical (Refs 5, 6). The potassium ozonide is instantaneously decomposed by water at room temperature and at 0° under violent oxygen separation. The reaction velocity of the hydroxyls amounts to the 4-5-fold of its dimerization velocity. The experiments showed that the oxygen produced in this connection is enriched with the isotope O^{18}. The reaction was carried

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SOV/20-120-5-30/61

Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water

out in the apparatus (Fig 1 A). Table 1 contains the results of the determination of the isotopic composition of the oxygen which escapes during the decomposition of potassium ozonide by heavy water, as well as the found degree of exchange. The degree of exchange between the free [illegible] and water at +[illegible]° and at 0° amounts to approximately [illegible] and is independent of the pH of the solution, as is shown. This confirms the actual exchange between the free OH and [illegible] and not that between the OH-ions and the [illegible]. [illegible] more the isotopic composition of the oxygen in the [illegible]ing peroxide was determined. **It was found that the enrichment of H_2O_2 with isotope O^{18} was several times greater than that of oxygen liberated directly during the decomposition of KO_3 by** heavy water. Table 2 [illegible] of oxygen in the superoxide. Therefrom we may conclude that this oxygen is enriched with the isotope O^{18} by [illegible] -fold (3 times on the average). These results [illegible] the assumption that during the decomposition of KO_3 [illegible] free OH-radicals actually form H_2O_2. The experiments of the authors disprove Hinton's (Hinton) opinion that the [illegible] diffuses according to a normal and not according to [illegible]

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

SOV/20-120-5-30-6

Isotopic Exchange of Oxygen Between the Free Hydroxyl Radical and Water

Grottgus mechanism. There are 1 figure, 2 tables, and 9 references, 3 of which are Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Physicochemical Research Institute imeni L. Ya. Karpov)

SUBMITTED: February 18, 1958

1. Ozone-potassium compounds--Decomposition 2. Oxygen isotopes --Exchange reactions 3. Hydroxyl radicals--Sources 4. Hydroxyl radicals--Chemical effects 5. Heavy water--Chemical reactions

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

5(4) SOV/20-123-1-32/56

AUTHORS: Gur'yev, M. V., Tikhomirov, M. V., Tunitskiy, N. N.

TITLE: On the Mass Spectra of Large Molecules (O mass-spektrakh krupnykh molekul)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 1, pp 120-122 (USSR)

ABSTRACT: It is known that the bombarding of polyatomic molecules by electrons (energy 50-100 eV) leads to the ionization and dissociation of these molecules. In order to make it possible to draw unique conclusions concerning the mechanism of dissociation, the authors investigated the mass spectrum of n-nonane-5C^{13}. Carbon monoxide containing 51% C^{13} was used for the synthesis. The scheme for the synthesis is given.

The nonane and n-nonane-5C^{13} mass spectra, which were corrected to their natural content of C^{13} and were determined under the usual conditions by means of the device MI-1303, are given in a table. A second table shows the percentages of the ions containing C^{13}. If the molecule of n-nonane-5 C^{13} were

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dissociated by a simple stripping of bonds, the ions of the type $C_2H_5^+$, $C_3H_7^+$, $C_4H_9^+$ would contain no carbon C^{13}. The fragment-like ions of other types are essentially formed by the stripping of hydrogen atoms from the original ions. In general, the dissociation of large molecules in an electron collision develops as follows: First, "head ions" ("golovnyye" iony) are produced with equal probability from all parts of the molecule (by the capture of a hydrogen atom) with an even number of ions. Next, some of these ions decay, accompanied by the stripping of hydrogen ions, and they form a complete mass spectrum of the substance. These facts correspond to the conclusions drawn from the investigations of the mass spectra from large molecules. At present the following is assumed: The excitation energy is distributed over the entire molecule after the electron collision and this molecule then dissociates according to the decay law. The authors from this point of view investigated 2 molecules of normal structure, as e.g. n-hexane C_6H_{14} and n-tetratetracontane $C_{44}H_{90}$. Contrary to expectations, the experiments showed the following: The larger the molecule (in the case of equal structure) the smaller will be

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the content of molecular ions in its mass spectrum. Thus, the existence of even the mass spectra of large molecules must be explained by the fact that the energy transmitted by the electron cannot propagate over the entire molecule (before its dissociation). This supposition agrees with data concerning the investigation of initial ranges of ionization curves (Ref 7), and it makes it possible to explain the results obtained by the authors: If the electron incides with equal probability upon any part of the molecule, and if the energy transmitted by it is propagated before dissociation only within a small part of the molecule, it is just this part of the molecule that is "knocked out" in form of a fragment-ion. The ions produced in this way contain the main portion of the excitation energy and therefore dissociate easily accompanied with the stripping of hydrogen atoms. There are 2 tables and 7 references, 1 of which is Soviet.

PRESENTED: June 26, 1958, by V. A. Kargin, Academician

SUBMITTED: June 24, 1958

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

5(2) SOV/60-32-3-12/43

AUTHORS: Tikhomirov, M.V., Tunitskiy, N.N.

TITLE: The Separation of the Isotopes of Carbon and Oxygen by the Rectification of CO in a 12-m Column (Razdeleniye izotopov ugleroda i kisloroda rektifikatsiyey CO na 12-metrovoy kolonne)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol XXXII, Nr 3, pp 531-536 (USSR)

ABSTRACT: The stable carbon isotope C^{13} is used for studying the dissociation of molecules, for resolving optical and radio-frequency spectra, etc. The stable oxygen isotope O^{18} is also needed for many chemical investigations. An apparatus has been developed containing a packed rectification column (Figure 1) for the low-temperature rectification of CO. The upper reservoir of the column contained 400 - 600 cm^3 CO with a lowered C^{13} content. This reservoir was filled at regular intervals with CO of normal C^{13} content. After 52 days the coefficient of separation of carbon reached 67.8, that of oxygen 23.6. On reaching this coefficient the column produced within 36 days 82 g of CO with a content of C^{13} from 30 - 37% and O^{18} from 3.5 - 4.2%. This corresponds to 34.5 times and 21 times of the

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SOV/80-32-3-11/43

The Separation of the Isotopes of Carbon and Oxygen by the Rectification of CO in a 12-m Column

natural values respectively. The column may also be used for the production of C^{13} if the raw material contains the substance at a concentration of 1% or higher. N.I. Nikolayev, L.P. Lipikhin, A.K. Tsapuk and Yu.A. Shavarin helped in the work.

There are 2 diagrams, 1 graph and 8 references, 3 of which are Soviet, 3 English and 2 German.

SUBMITTED: November 10, 1957

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

82833
S/048/60/024/008/010/017
B012/B067

24.6100

AUTHORS: Gur'yev, M. V., Tikhomirov, M. V., Tunitskiy, N. N.

TITLE: Dissociation of Large Molecules in Electron Impact

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1960, Vol. 24, No. 8, pp. 975-978

TEXT: The present paper generally deals with the interaction between an electron and a large molecule. Usually, it is assumed in such a case that the molecular ion takes part in the dissociation as a whole. The calculations of the authors (Ref. 6) showed, however, that also with usual electron energies (~70 ev) the large molecules (C_{44}) may dissociate not in the same way as is the case in the experiments. A hypothesis is suggested to explain this fact. It says that in the processes accompanied by a dissociation of the molecule only a limited number of vibrational degrees of freedom is excited and that dissociation takes place in the region of excitation. It is demonstrated that this hypothesis can be accurately controlled. It is pointed out

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Dissociation of Large Molecules in Electron Impact

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that if the electron "arrives" with approximately equal probability in any part of the molecule and if the excitation energy transmitted by this electron is distributed only over a small part of the molecule - in the dissociation exactly this part of the molecule would be bound to "fall out" in the form of a fragment ion. Hence, the fragment ions would be bound to form with equal probability from any part of the molecule. The experiments conducted by the authors confirmed that the main fragment ions are actually formed in this way. It is pointed out that this is the case in the entire range from 1000 ev to energies which are by 1 ÷ 2 ev above the potential at which the corresponding ion is formed. The investigations of the mass spectra in the case of such high electron energies were conducted by Yu. M. Miller. The experiments made by the authors showed that the mass spectra of the molecules investigated are equal not only at 50 ÷ 70 ev but also at any electron energy. This proves that the interaction between electron and molecule is independent of the dimensions of the molecule which confirms the hypothesis on the "local" character of this interaction. In conclusion, considerations are made for the case of double bonds and other possible couplings of bonds

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Disscciation of Large Molecules in Electron Impact

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B012/B067

in the molecule. There are 1 figure and 10 references: 4 Soviet and 6 British.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physicochemical Institute im. L. Ya. Karpov)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

33123
S/638/61/001/000/054/056
B125/B104

11.9100

AUTHORS: Gur'yev, M. V., Tikhomirov, M. V., Tunitskiy, N. N.

TITLE: Dissociation of big molecules on electron impact

SOURCE: Tashkentskaya konferentsiya po mirnomy ispol'zovaniyu atomnoy energii. Tashkent, 1959. Trudy. v. 1. Tashkent, 1961, 378-382

TEXT: The mass spectra of the ramified hydrocarbons cannot be explained even qualitatively by the hypothesis of simple rupture. Ion fragments of the type $C_nH^+_{2n+1}$ are formed from all parts of the molecule with approximately equal probability. From the central parts of the paraffin molecule they are formed by the capture of a hydrogen atom. The mass spectra of n-octane-$2d_1$, n-octane, n-nonane-$5C^{13}$, and n-nonane were examined under the usual conditions by Soviet mass spectrometers. Since 46% of the resulting ion fragments $C_3H^+_7$ (generally $C_nH^+_{2n+1}$) contains C^{13} in the dissociation of n-nonane-$3C^{13}$, the ion fragments are bound to form with about equal probability from all parts, also from the central

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parts of the molecule. The percentages, found experimentally of the marked ions of the type CH_3^+, $C_2H_5^+$, $C_3H_7^+$, and $C_4H_9^+$, found in the dissociation of n-nonane $5C^{13}$ and n-octane-$2d_1$, (as percentage of the total number of ions) differ from the percentages calculated theoretically due to the different probabilities of ions rupture from different parts of the molecule. According to Yu. M. Miller, the dissociation mechanism does not change significantly even at electron energies of ~400 ev. On electron impact, big molecules are probably dissociated as follows: When a hydrogen atom is captured, ion fragments $C_nH_{2n+1}^+$ with even number of electrons are formed from all parts of the molecule with approximately the same probability. The residual ions arise from the molecular parts with composition similar to the ion fragments. The contribution of molecular ions to the mass spectrum is the smaller, the bigger the molecule (at otherwise equal structure). According to the authors' measurements and contrary to the statistical theory, the initial sections of the ionization curves of the $C_3H_7^+$ ion (from $H=C_8H_{18}$ and $H=C_{19}H_{40}$) coincide. However, all contradictions dissolve if it is assumed that the energy transferred from the electron does not propagate over the whole molecule prior to dissocia-

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

33123

Dissociation of big molecules ... S/638/61/001/000/054/056
B125/B104

tion. The excitation energy required for the rupture of the second C-C bond is widely compensated by the transition of a hydrogen atom. The excitation energy is easily transferred over a system of conjugate bonds if double bonds or any other bond conjugations exist. Benzene, other aromatic compounds, and also olefins dissociate statistically after the excitation energy has transferred over the whole molecule. The hypothesis suggested here, however, is valid for sufficiently big molecules only. The excitation energy transferred from the electron to the molecule is probably distributed over three to four oxygen molecules. There are 1 table and 11 references: 3 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: Field F. H., Franklin I. L. Electron impact phenomena, New York, 1957; Mc Lafferty F. W. Anal. Chem., 28, 306, 1956; Catalog of Mass-spectral Data, American Petroleum Institute, Research Project, 44, 1955; Friedman L., Long F. A., Wolfsberg M. J. Chem. Phys., 26, 714, 1957.

ASSOCIATION: N.-i. fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Physicochemical Research Institute imeni L. Ya. Karpov)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

S/120/62/000/001/033/061
E032/E314

AUTHORS: Tikhomirov, M.V. and Shavarin, Yu.Ya.

TITLE: Production of ultrahigh vacuum with the aid of ordinary pumps

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1962, 137 - 141

TEXT: It is pointed out that the use of ionization gauges as pumps suffers from the disadvantage that they have a low pumping speed. The authors have therefore made use of the method described by A. Venema and M. Bandringa (Phylips Techn. Rev., 1958/1959, 20, no. 6, 145 - Ref. 8) and have employed an ordinary vacuum technique ensuring a high pumping speed. Two vacuum systems are described, capable of producing a vacuum of the order of 4×10^{-10} to 5×10^{-10} mm Hg. The systems incorporate commercial mercury diffusion pumps and high-efficiency liquid nitrogen traps. The diffusion pumps are the ДРН-10 (DRN-10) and ДРН-50 (DRN-50) models. A description is also given of a two-stage glass mercury diffusion pump

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Production of S/120/62/000/001/033/061
E032/E314

having a speed of about 60 litres/sec. This pump is similar to that described in Ref. 8. Characteristics are reported of the ionization gauge ИМ-11 (IM-11) and it is shown that it can be used to record pressures down to 10^{-10} mm Hg. The design of these systems is based on the recommendations of Venema and Bandringa (Ref. 8). There are 4 figures.

ASSOCIATION: Nauchno-issledovatel'skiy fiziko-khimicheskiy institut (Scientific Research Physicochemical Institute)

SUBMITTED: May 11, 1961

Card 2/2

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ACCESSION NR: AT3012830 S/2965/63/000/003/0086/0093

AUTHORS: Gur'yev, M. V.; Tikhomirov, M. V.

TITLE: Some technical questions concerning mass-spectrometer investigation of large molecules

SOURCE: Moscow. Fiziko-khimicheskiy institut. Problemy* fizicheskoy khimii, No. 3, 1963, 86-93

TOPIC TAGS: mass-spectrometry, large molecule, mass-spectrum, n-C sub32 Hsub66, n-Csub9Hsub20, ionization curves, n-Csub8Hsub18, n-Csub19Hsub40, n-Csub32Hsub66, Csub2Hsub5, Csub3Hsub7, Csub6Hsub13, Xe

ABSTRACT: Ionization curves of the ion $C_3H_7^+$ from n-octane and n-nonadecone are shown to be comparatively close down to the potential of origin, while the ionization curve for $C_3H_7^+$ from n-dotriacontane went significantly lower. Teh deviation of $C_3H_7^+$ from n-dotriacontane starts at 60 ev and becomes very abrupt at 20-30 ev. According to startistical theory, the probability of dissociation is determined by the relationship of the activation energy to the amount of molecular freedom. Therefore, it must be approximately proportional

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ACCESSION NR: AT3012830

to the size of the molecules. Mass-spectra are presented for n-nonane with m/e values covering a range of 26-128. Results are compared with those obtained in the United States as listed in the Catalog of Mass-Spectral Data, No. 132. Mass-spectra are also presented for n-dotriacontane covering the range of m/e values 13-267. Ionization curves of $C_nH_{2n+1}^+$ ions from n-octane for $C_2H_5^+$, $C_3H_7^+$ and $C_6H_{13}^+$ are compared. In addition, there are ionization curves for Xe without organic substances, with n-dotriacontane, up to the time of admission of n-dotriacontane and after admission; ionization curves of $C_3H_7^+$ from n-dotriacontane at 200 and 375C and from n-octane; ionization curves of Xe, plotted in experiments with the ionization box, which was made from stainless steel, at various voltage draws (i.e, 130V. and 90V.); and ionization curves of $C_3H_7^+$ from n-dotriacontane without and with magnetic source. The mass spectra were obtained by means of a modified MI-1303 Mass Spectrometer and the apparatus and method of investigation are discussed. Orig. art. has: 8 figures and 2 tables.

ASSOCIATION: Fiziko-khimicheskiy institut, Moscow, (Physicochemical Institute)

Card 2/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

SIMEONOV, A.A.; TIKHOMIROV, M.V.; ZIMINA, K.I.

Thermal-diffusion separation of hydrocarbons. Neftepер. i neftekhim. no.7:25-31 '63 (MIRA 17:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

L 17727-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS ASD Ps-4/Pc-4/Pr-4
RM/WW

ACCESSION NR: AP3004059 S/0076/63/037/007/1500/1503

AUTHORS: Chelobov, F. N.; Dubov, S. S.; Tikhomirov, M. V.

TITLE: Ionization and dissociation of ethylene and tetrafluoroethylene by elements with varying energies

SOURCE: Zhurnal fizicheskoy khimii, v. 37, no. 7, 1963, 1500-1503

TOPIC TAGS: ethylene, tetrafluoroethylene, mass spectrometry, Pahl method

ABSTRACT: The dependence of ethylene and tetrafluoroethylene mass spectra upon the ionizing electron energies has been investigated. The investigation was carried out in a range of 10 to 70 ev. A possible mechanism has been proposed for the dissociative ionization of these molecules. It was established on the basis of intensity comparison of analogous ions of both substances that a number of features of mass spectra can be explained on the basis of the proposed varying distribution of charges in molecular ions. A comparative evaluation has been made of the effect of the ionizing electron energies upon the stability of molecular ions based on Pahl's method and upon the strength of C=C bond of ethylene and tetrafluoroethylene. The ionization of ethylene molecule occurs at the C=C bond with participation of Pi electrons which should lead to the formation of an

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L 17727-63

ACCESSION NR: AP3004059

2

ion with a symmetric charge distribution and an equal effect on the strength of all C-H bonds. Ionization of the tetrafluoroethylene molecule apparently occurs predominantly in the region of the C-F bond which leads to an ion with asymmetric distribution of the charge. This results in the weakening of one C-F bond, permitting the formation of ions with three fluorine atoms and increasing the possibility of migration of the weakly bound fluorine atom. "The authors express their gratitude to N. N. Tunitskiy for his help and to M. V. Gur'yev for important remarks during the evaluation of results." Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 15Jun62 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: CH NO REF SOV: 000 OTHER: 005

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

L 14349-63 EPR/EWP(j)/EPF(c)/EWT(m)/BDS Pa-4/Pc-4/Pr-4 RM/WW/MAY

ACCESSION NR: AP3003861 S/0020/63/151/003/0631/0633 1/2

AUTHORS: Chelobov, F. N.; Dubov, S. S.; Tikhomirov, M. V.; Dobrovitskiy, M. I.

TITLE: Ionization and dissociation of hexafluoropropylene by electrons at varying energy

SOURCE: AN SSSR. Doklady*, v. 151, no. 3, 1963, 631-633

TOPIC TAGS: ionization, hexafluoropropylene, electron, MS-2 mass-spectrometer

ABSTRACT: Authors give results of destructive ionization of hexafluorpropylene, which was accomplished on a MS-2 mass spectrometer, having accelarating voltage of 2500V. The energy of electron beam was in range from 10 to 70 ev. Observations have shown that the molecular ions $C_3H_6^+$ begin to appear at a potential of 10.3 ev, while the ions originating from splitting of the molecular ions appear in the following sequence: $C_2F_4^+$ at 12.5 ev; $C_3F_5^+$ at 14.8 ev; CF_3 at 15.0 ev; and $C_2F_3^+$ at 16.1 ev. It is difficult to admit that the ions $C_2F_3^+$ were produced by rupture of the C=C bond instead of C-C, therefore the appearance of these ions especially at a comparatively low potential is explained by ionization of the C-F bond of the CF_3 group and migration of the F^+ ion into the CF_2 group. Formulation of CF_3^+ apparently is originated not only from dissociation of $C_3F_6^+$

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L 149-63

ACCESSION NR: AP3003861

2

but also from $C_3F_5^+$ and $C_2H_4^+$. Proposed mechanism of destructive ionization is specific only for fluoro-carbon compounds since destructive ionization of Ethylene and propylene proceeds differently. "Authors express deep thanks to N. N. Tunitskiy for his help in this work, and to A. I. Skobina for preparing the samples." Orig. art. has: 2 tables and 1 figure.

ASSOCIATION: none

SUBMITTED: 01Apr63 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: PH, CH NO REF SOV: 001 OTHER: 004

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

CHELCBOV, F.N.; DUBOV, S.S.; TIKHOMIROV, M.V.; GITEL', P.O.; YAKUBOVICH, A.Ye.

Ionization and dissociation during an electroni impact of α-fluoro nitriles with a growing alkyl chain. Zhur.ob.khim. 34 no.2:571-575 F '64. (MIRA 17:3)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

FOMIN, O.K.; TIKHOMIROV, M.V.

Surface ionization of organic molecules on platinum. Zhur. fiz. khim. 38 no.3:725-728 Mr '64. (MIRA 17:7)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

FOMIN, O.K.; TIKHOMIROV, M.V.

Surface ionization of organic molecules on molybdenum and nickel. Zhur. fiz. khim. 38 no.3:813-814 Mr '64. (MIRA 17:7)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

S/0076/64/038/004/0955/0956

ACCESSION NR: AP4034581

AUTHOR: Tikhomirov, M. V.; Komarov, V. N.; Tunitskiy, N. N.

TITLE: The formation of the N sub 3 sup + and N sub 4 sup + ions in the mass-spectrometer

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 4, 1964, 955-956

TOPIC TAGS: nitrogen, mass spectra, mass spectrometry, N sub 3 sup + ion, N sub 4 sup + ion, ionic current intensity, electron energy, formation cross section, sup 14 N sup 15 N sup ++ molecular ion, vibrational excitation, N sub 2 sup + ion, N sub 2 sup + ion

ABSTRACT: The mass spectra of nitrogen at pressures to 1 x 10-7 mm Hg was studied. The relationship between the ionic current intensities and the electron energies at m/e = 42 and 56 showed the mean potentials at which these peaks occur are 20.4 ± 1.3 and 46.5 ± 1 ev, respectively. The peak at 42 was considered to be the N_3^+ ion, the cross section of its formation is about 5 x 10^{-18} cm^2. The potential of the peak at 56 and of the double charged molecular ion $^{14}N^{15}N^{++}$ are close. Since there is no isotopic peak m/e = 57 it was concluded that N_4^+ is not formed, but that

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ACCESSION NR: AP4034581

the overcharged ion N_2^{++} is between the electric and magnetic fields of the mass spectrometer: $N_2^{++} + N_2 \longrightarrow N_2^{+} \quad N_2^{+}$. The cross section of this process is 1×10^{-15} cm^2 and is independent of the electron energy from 50-100 ev. To study the excitation of the initial ions, the relative intensity - electron energy relationship at m/e = 7 was examined. This peak results from the decomposition of the N_2^{+} ion ($N_2^{+} \longrightarrow N^{+} + N$) resulting from collision with nitrogen molecules in the area between the electric and magnetic fields. The increase in relative intensity with increased electron energy up to 35 ev (above this value the relative intensity decreases) is interpreted as vibrational excitation of the primary ion N_2^{+}. Orig. art. has: 3 equations and 2 figures.

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova (Physical-Chemical Institute)

SUBMITTED: 11Dec62 ENCL: 00

SUB CODE: IC, OP NO REF SOV: 002 OTHER: 009

Card 2/2

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ACCESSION NR: AP4042932 S/0057/64/034/008/1441/1443

AUTHOR: Fomin, O.K.; Tikhomirov, M.V.; Tunitskiy, N.N.

TITLE: Mass spectra of organic ions formed on a heated oxidized molybdenum surface in the residual gas atmoshpere within a mass spectrometer

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.8, 1964, 1441-1443

TOPIC TAGS: ion source, ionization, catalytic activity, mass spectrum, molybdenum compound

ABSTRACT: The mass spectrum was recorded of the heavy ions formed on the heated surface of a 10 x 10 x 0.05 mm^3 99.9% pure molybdenum strip which had been oxidized by heating in air for 20 hours at 450 to 500°C, and which occupied the source position in a type MI-1305 mass spectrometer. The temperature of the molybdenum strip was monitored with a thermocouple; the spectrometer was exhausted to 7 x 10^{-6} mm Hg with a mercury diffusion pump; and ions originating elsewhere than on the molybdenum strip were prevented from reaching the spectrometer proper by platinum shields. When the Mo strip temperature was 400°C, ion currents of the order of 10^{-12} A/cm^2 were observed at mass numbers 58, 72, 84 and 86; currents of the order of 10^{-3} A/cm^2

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ACCESSION NR: AP4042932

were observed at mass numbers 99, 95, 101, 110 and 114; and smaller ion currents were observed at mass numbers 59, 96, 111 and 112. All these ion currents behaved in the same way when the Mo strip temperature was varied. The maximum current occurred at 400°C. At lower temperatures the ion currents were smaller but stable, but at higher temperatures the currents decreased exponentially with time. At 415°C the time constants for the decrease of the most intense of the ion currents were in the vicinity of 2 hours. When the strip was heated to 500°C the currents ceased within a second and could be restored only by reheating the Mo strip in air. The results are compared with those obtained by E.Ya.Zandberg and N.I.Ionov (DAN SSSR 141, 139, 1961) with oxidized tungsten, and obvious explanations are suggested for such differences as exist. From the findings of J.W.Hickman and E.A.Gulbransen (Metals Tech. AIME, T.P.2144, April, 1947) concerning the formation of oxides on molybdenum surfaces and the behavior of the ion currents with varying emitter temperature, it is concluded that the active catalyst is MoO_3 and that the heavy ions probably contain oxygen. It is suggested that the ions of mass number 58 and 72 may be $C_3H_6O^+$ and $C_4H_8O^+$. Air containing 1% ethanol, propanol or toluol was admitted to the source chamber at a pressure of 10^{-3} mm Hg. No increase in any of the ion currents was thereby produced. Orig.art.has: 1 figure.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ACCESSION NR: AP4042932

ASSOCIATION: none

SUBMITTED: 10Nov63

ENCL: 00

SUB CODE: NP,GP

NR REF SOV: 006

OTHER: 003

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APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

ZUBKOV, V.I.; TIKHOMIROV, M.V.; ANDRIANOV, K.A., akademik; GOLUBTSOV, S.A.

Mass spectrometric study of intermediate products of the reaction of silicon with copper monochloride. Dokl. AN SSSR 159 no.3: 599-601 N '64 (MIRA 18: 1)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

FOMIN, O.K.; TIKHOMIROV, M.V.; TUNITSKIY, N.N.

Surface ionization of toluene on oxidized molybdenum. Kin. i kat. 6 no.4:634-640 Jl-Ag '65. (MIRA 18:9)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova, Moskva.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

SPRYHAKOVA, G.Ye.; TONIYSKIY, N.N.; TIKHOMIROV, M.V.

Ionic-molecular reactions in hydrogen and in a hydrogen-helium mixture. Zhur. fiz. khim. 39 no.8:2002-2008 Ag '65. (MIRA 18:9)

1. Moskovskiy fiziko-khimicheskiy institut imeni Karpova.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

L 11645-66 EWT(1)/EWT(m)/EWP(c)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(1)/EWA(h)/

ACC NR: AP6001595 SOURCE CODE: UR/0120/65/000/006/0205/0206

EWA(c)/ETC(m) LJP(c) JD/WW/HM/GG

AUTHOR: Nikolayenko, O. K.; Bulgakov, Yu. V.; Tikhomirov, M. V.

ORG: Scientific-Research Physicochemical Institute, Moscow (Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

63
62
B

TITLE: A simple pump for obtaining an ultrahigh vacuum

SOURCE: Pribory i tekhnika eksperimenta, no. 6, 1965, 205-206

TOPIC TAGS: high vacuum pump, vacuum technique

ABSTRACT: A titanium nitrate pump is described. It is made of glass and was designed for obtaining an ultrahigh vacuum of about 10^{-9} tor in a small limited space. The operation of the pump is based on the abnormal sorption of gases evaporated by titanium at temperatures lower than -170 C. A glass vacuum envelope with an interposed Kovar alloy connection was soldered to a flange made of stainless steel. A cross section of the pump is shown in Fig. 1. A ball-shaped surface (1) covered by a titanium film and cooled by liquid nitrogen (oxygen) serves as a pumping element. The electrically heated spiral (2) made of 0.7 mm molybdenum wire with a titanium coating is used as a titanium evaporator. The screen (3) prevents the discharge of titanium into

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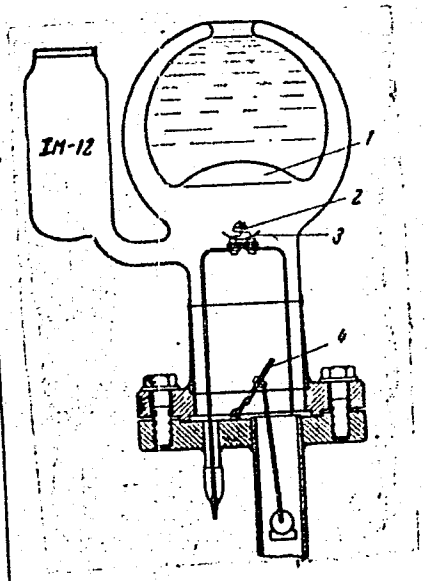
L 11645-66

ACC NR: AP6001595



the vacuum. The valve (4) separates the glass envelope from the other part of the vacuum system. The operation of the pump is briefly explained. The pump can operate during 100 hours without replacing the spiral. The consumption of liquid nitrogen was one liter per hour. Orig. art. has: 1 figure. [22]

Fig. 1. Ultrahigh-vacuum pump

seal

SUB CODE: 13 / SUBM DATE: 13Oct64 / ORIG REF: 003 / ATD PRESS: 4175

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

FOMIN, O.K.; TIKHOMIROV, M.V.

Nature of oxides responsible for the ionization of organic vapors on oxidized molybdenum. Kin. i kat. 6 no.4:764 Jl-Ag '65. (MIRA 18:9)

1. Fizikc-khimicheskiy institut imeni L.Ya. Karpova, Moskva.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, Nikolay Alekseyevich. Prinimal uchastiye VITSINSKIY, V.V., dots.; KAN, P.M., red.

[Theory and equipment of a ship for inland navigation] Teoriia i ustroistvo sudna vnutrennego plavaniia. Moskva, Transport, 1965. 273 p. (MIRA 18:5)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

EYDEL'NANT, L.B., inzh.; TIKHOMIROV, M.Ye., starshiy inzh.-metodist, otv. za vypusk; GROSFATER, B.B., red.

[Equipment for the petrochemical industry and oil and gas refineries; program and tests for correspondence technical school courses "Installation and maintenance of industrial equipment"] Metodicheskii kabinet. Oborudovanie predpriiatii neftegazopererabatyvaiushchei i neftekhimicheskoi promyshlennosti; programma i kontrol'nye raboty dlia zaochnogo obucheniii po spetsial'nosti tekhnikumov "Montazh i remont promyshlennogo oborudovaniia." Moskva, 1959. 14 p. (MIRA 15:2)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Upravleniye kadrov. Metodicheskiy kabinet.
(Petroleum refineries—Equipment and supplies)
(Chemicals industry—Equipment and supplies)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.; BETOKHOV, M.

Characteristics of navigation in the section Kama estuary - Golaktionovo. Rech.transp. 20 no.6:41-43 Je '61. (MIRA 14:6)

1. Nachal'nik Kazanskogo tekhuchastka puti (for Tikhomirov).
2. Starshiy inspektor Kazanskogo uchastka sudokhodnoy inspektsii (for Vetokhov).

(Kama River--Navigation)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.

"Propulsion by Pump," Retch. Transport, No.s, 1955

D 329697

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N., kandidat tekhnicheskikh nauk.

Review of some designs of water-jet impellers. Rech.transp. 14 no.3:19-23 Mr '55. (MIRA 8:5)
(Ship propulsion)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N., kandidat tekhnicheskikh nauk.

Effect of load and road conditions on the need for repair and maintenance of trucks and truck trains. Avt.transp. 33 no.3: 12-15 Mr '55. (MIRA 8:5)
(Motor trucks - Repairing)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

PA 30/49T40

TIKHOMIROV, N.

USSR/Electricity Oct 48
Drives, Electric
Drills, Turbine

"Arrangement of Electric Drive for Turbine Drilling," G. Kozan, N. Tikhomirov, Molotovneft', 4 pp

"Energet Byul" No 10

Discusses general principles involved in selection of electric drive for turbo drilling. Describes method used at Molotovneft', with three sketches.

FDB 30/49T40

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

1. TIKHOMIROV, N.

2. USSR (600)

4. Compressed Air

7. Device for determining compressed air leakage. Eng. , Podshipnik no. 4, 1953.

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

1. TIKHOMIROV, N.

2. USSR (600)

4. Moving-picture Projection

7. Learning from those who are better qualified. Kinomekhanik, No. 3, 1953.

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.

Voluntary workers are a reliable support. NTO 5 no.3:23-26 Mr '63. (MIRA 16:4)

1. Sekretar' Kostromskogo gorodskogo komiteta Kommunisticheskoy partii Sovetskogo Soyuza.
(Technological innovations)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N., Eng-Col

Listed as author of article, "The Proper Operation of Artillery Pieces," published in Artilleriyskiy Zhurnal, No 11, 1953. (Sovetskaya Armiya, 25 Nov 53)

SO: Sum 145, 1 June 1954

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

S/044/61/000/002/010/015
C111/C222

AUTHOR: Tikhomirov, N.A.

TITLE: Approximate solution on the spreading of a bounded turbulent ray and the determination of the length of a cylindric mixing chamber

PERIODICAL: Referativnyy zhurnal, Matematika, no.2, 1961, 22-23, abstract 2V 159. ("Tr.Gor'kovsk. inzh.-stroit. in-ta" 1958, vyp.29, 95-108)

TEXT: The problem of the determination of the velocity profile in the cross sections of a cylindric mixing chamber in jet apparata leads to the differential equation

$$\frac{\partial[v^2(x,r)]}{\partial(x)^2} = a^2\left[\frac{\partial^2(v)^2}{\partial r^2} + \frac{1}{r}\frac{\partial(v)^2}{\partial r}\right] \qquad (1)$$

under the following conditions

$$v^2(0,r) = \begin{cases} v_1^2 = \text{const for } 0 < r \leq r_0, \\ v_2^2 = \text{const for } r_0 \leq r \leq R, \end{cases} \qquad (2)$$

where v_1 -- velocity of the working fluid, v_2 -- velocity of the

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inducted fluid, r -- running radius, r_0 -- radius of the jet, R -- radius of the cylindrical chamber;

$$\left[\frac{\partial (v)^2}{\partial r}\right]_{r=R} = 0 \qquad (3)$$

The author applies the Fourier method, separates the variables and obtains two ordinary differential equations; the solution of one of them is a power function while the other equation is integrable in terms of Bessel functions. the author obtains the constants of integration from the conditions (2),(3). For the approximate determination of the length l of the chamber the author starts from the assumption that the ratio $v^2(l,R)/v^2(l,0)$ is given; it is said that the calculation according to the obtained approximate formula has shown a satisfactory agreement with experimental results. Some theorems of the paper are not sufficiently edited, there are misprints and omissions (e.g. in the title of the paper behind the words "approximate solution" the word "of the problem" is missing; on p.100, 5th line behind "ratio" "of the squares of the velocities" is missing; on p.101 there are misprints

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Approximate solution on the spreading... S/044/61/000/002/010/015
C111/C222

in the formulation of the mark of convergence of the Fourier-Bessel-series; on p.105 the second sentence is senseless; in the references read "I.Ya.Akushskiy" instead of "I.Ya.Akushinskiy".

[Abstracter's note: Complete translation.]

Card 3/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

S/124/61/000/003/016/028
A005/A105

AUTHOR: Tikhomirov, N. A.

TITLE: Results of comparisons of the free turbulent stream theory with experimental data

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 3, 1961, 74, abstract 3B502 (Tr. Gor'kovsk. inzh.-stroit. in-ta, 1959, no. 32, 40-48)

TEXT: Two theories of the free turbulent stream of an incompressible liquid, which were developed by G. N. Abramovich and I. M. Konovalov, are compared with the corresponding experimental data obtained by Tryupel'. Both calculation schemes lead to practically equal velocity fields in the asymmetric turbulent stream, which satisfactorily agree with the experimental velocity fields, in spite of the disparity of the formulae connecting the turbulence friction with the averaged flow parameters. There are 6 references.

O. Yakovlevskiy

[Abstractor's note: Complete translation]

Card 1/1

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.A.; BARTENEV, N.G.

Automatic machine for simultaneous shaping of thread on both ends of studs. Stan. i instr. 29 no.4:21-22 Ap '58. (MIRA 11:5)
(Screw-cutting machines)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.A.

136-58-3-5/21

AUTHORS: Selyutin, A.S. and Tikhomirov, N.A.

TITLE: The MS-2 High-Intensity Magnetic Separator for Concentrating Weakly Magnetic Ores and Materials. (Magnitnyy separator vysokoy intensivnosti dlya obogashcheniya slabomagnitnykh rud i materialov MS-2)

PERIODICAL: Tsvetnyye Metally, 1958, Nr.3, pp. 25 - 29 (U.S.S.R.)

ABSTRACT: The type MS-2 high-intensity electromagnetic separator (figs.1, 2) described, was developed by the design department of the imeni Kotlyakov engineering works in Leningrad (Leningradskiy mashinostroitel'nyy zavod imeni Kotlyakova) from a proposal by A.M. Volikov. A.I. Kirichenko took part in the design work. The separator is of the double-disc type and is rated at 0.2-1.0 tonnes/hour, the limiting specific magnetic susceptibility of the separated material being 10×10^{-6}. After listing technical data, the authors consider the special features of the separator. These include: blockage-free feeding system; separation of the strougly magnetic fraction by a magnetic system located in the feeder drum; vibrating trough conveyor leading to improved distribution of material and separation; a screen between the feeder and trough to retain oversize material; cast cores made in one piece with the yoke, reducing magnetic resistance; pole pieces of the steel yoke of the magnetic system direct and concentrate the field (up to 16,000 Oersted and over); simplified (worm) drive for the discs; counter-weighted easily charged hair brushes for

AS.

AVA.

Card 1/2

Ores-Purification-Equipment

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N. A.

121-4-9/32

AUTHORS: Tikhomirov, N.A. and Bartenev, N.G.

TITLE: An Automatic Machine for the Rolling-on of Thread Simultaneously at Both Ends of a Stud (Avtomat dlya nakatyvaniya rez'by odnovremenno na dvukh kontsakh shpil'ki)

PERIODICAL: Stanki i Instrument, 1958, No.4, pp. 21 - 22 (USSR).

ABSTRACT: Studs threaded at both ends for instrument applications have both their threads rolled-on simultaneously in an automatic machine described and illustrated. The machine is designed to ensure the precise location of the two sets of thread-rolling dies. The mechanism performing the positive feed of the blank, its exact positioning at the working station and reliable clamping is described. The machine is designed for 24 000 components per shift in the range of diameters between 3 and 5 mm and lengths between 30 and 200 mm.
There are 5 figures.

AVAILABLE: Library of Congress

Card 1/1 1. Screw threads-Production 2. Machines tool-Automatic

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.A.

AUTHORS: Selyutin, A.S. and Tikhomirov, N.A. 136-58-3-5/21

TITLE: The MS-2 High-Intensity Magnetic Separator for Concentrating Weakly Magnetic Ores and Materials. (Magnitnyy separator vysokoy intensivnosti dlya obogashcheniya slabomagnitnykh rud i materialov MS-2)

PERIODICAL: Tsvetnyye Metally, 1958, Nr.3. pp. 25 - 29 (U.S.S.R.)

ABSTRACT: The type MS-2 high-intensity electromagnetic separator (figs.1, 2) described, was developed by the design department of the imeni Kotlyakov engineering works in Leningrad (Leningradskiy mashinostroitel'nyy zavod imeni Kotlyakova) from a proposal by A.M. Volikov. A.I. Kirichenko took part in the design work. The separator is of the double-disc type and is rated at 0.2-1.0 tonnes/hour, the limiting specific magnetic susceptibility of the separated material being 10×10^{-6}. After listing technical data, the authors consider the special features of the separator. These include: blockage-free feeding system; separation of the strongly magnetic fraction by a magnetic system located in the feeder drum; vibrating trough conveyor leading to improved distribution of material and separation; a screen between the feeder and trough to retain oversize material; cast cores made in one piece with the yoke, reducing magnetic resistance; pole pieces of the steel yoke of the magnetic system direct and concentrate the field (up to 16,000 Oersted and over); simplified (worm) drive for the discs; counter-weighted easily charged hair brushes for

Card 1/2

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The MS-2 High-Intensity Magnetic Separator for Concentrating Weakly Magnetic Ores and Materials. 136-58-3-5/21

removing the magnetic fraction from the disc; hermetical sealing to prevent dust nuisance. These features showed to good advantage in comparative tests against an MSL-3 "Leningrad" separator at the Skopinskiy beneficiation works. The productivity of the MS-2 was 666.0 and of the "Leningrad" 200.0kg/hr. The authors enumerate the advantages of the former over the latter and give details of test results (table 2) at the same works with the MS-2 separator and minerals so weakly magnetic as to be untreatable with the "Leningrad" and other difficult materials. These tests lasted 9th - 19th April, 1957. There are 2 figures and 2 tables.

ASSOCIATION: Zavod Imeni Kotlyakova (Imeni Kotlyakov Works)

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1. Minerals-Separation-Equipment 2. Ores-Purification-Equipment

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, Nikolay Alekseyevich; SUKHOV, I.V., inzh., red.; FOMICHEV, A.G., red. izd-va; BELOGUROVA, I.A., tekhn. red.

[Mechanizing the fitting of fastenings]Mekhanizatsiia postanovki krepezhnykh detalei. Leningrad, 1961. 22 p. (Leningradskii dom nauchno-tekhnicheskoi propagandy. Obmen peredovym opytom. Seriia: Mekhanicheskaia obrabotka metallov, no.26) (MIRA 15:5)
(Machine-shop practice) (Fastenings)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

STRAKHOV, Aleksey Petrovich; TIKHOMIROV, N.A., retsenzent; YEFREMOV, G.V., retsenzent; SHLENNIKOVA, Z.V., red. izd-va; RIINAYA, I.V., tekhn. red.

[Principles of theoretical shipbuilding and the structural arrangement of ships for inland navigation]Osnovy teorii i ustroistva sudov vnutrennego plavaniia. Izd.2., ispr. i dop. Moskva, Izd-vo "Rechnoi transport," 1962. 224 p. (MIRA 15:10)
(Hulls (Naval architecture)) (Inland navigation)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

S/081/61/000/012/009/028
B117/B203

AUTHOR: Tikhomirov, N. A.

TITLE: Results of comparison of the theory of free turbulent jets with experimental data

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1961, 308, abstract 12И25 (12I25). ("Tr. Gor'kovsk. inzh.-stroit. in-ta", no. 32, 1959, 40-48)

TEXT: The velocity profile of submerged liquid jets is investigated. These are jets flowing into the mass of a similar liquid. The following assumptions were made when studying the propagation of the submerged jet: The mass of liquid surrounding the jet is immovable; the mass of jet increases with growing distance from the origin at the expense of the surrounding liquid; pressure is constant at any point of the jet; ordinary frictional forces may be neglected. Curves for comparing the values of axial velocity of round jets are given. They were calculated from theoretical equations (Konovalov, T. M., Trudy Leningradskogo in-ta inzhenerov vodnogo transporta, no. XIV, 1947), and obtained by experiments with an air jet flowing out of

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a round pipe of 90 mm diameter at an initial velocity of 87 m/sec. Data were found to agree satisfactorily. [Abstracter's note: Complete translation.]

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, Nikolay Alekseyevich; OBERTINSKAYA, T.V., retsenzent; NOVIK, R.I., retsenzent; KARPOV, A.B., dotsent, retsenzent, red.; KAN, P.M., red.izd-va; YERMAKOVA, T.T., tekhn.red.

[Ship propulsion] Khodkost' sudna. Moskva, Izd-vo "Rechnoi transport," 1959. 198 p. (MIRA 13:8)
(Ship propulsion)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N. A.

Tikhomirov, N. A. -- "The Theory of the Ejector-Jet Engine." Min Sea and River Fleet USSR, Main Administration of Schools, Gor'kiy Inst of Engineers of Water Transport, Chair of the Theory and Planning of the Ship, Gor'kiy, 1954 (Dissertation for the Degree of Candidate of Technical Sciences)

So: Knizhnaya Letopis', No. 24, Moscow, Jun 55, pp 91-104

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

SHAVSHUKOVA, L.Z., TIKHOMIROV, N.D.

"The Akdzhal Polymetallic Deposit of the Northwestern Balkhash Area", Tsvet. Met. 14, No. 8, August 1939.

[redacted] Report U-1506, 4 Oct. 1951.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

1. TIKHOMIROV, N.E.

2. USSR (600)

4. Grapefruit - Sakhalin

7. Grapefruit in North Sakhalin, Priroda 42, No. 3, 1953

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

Country : USSR
CATEGORY : M-8

ABS. JOUR. : RZBiol., No. 19 1958, No. 87257

AUTHOR : Tikhomirov, N. I.
INST. :
TITLE : Growth Regulators in the Production of Young Grapevine Plants.

ORIG. PUB. : Vinodeliye i vinogradarstvo SSSR, 1956, No 2, 37-39

ABSTRACT : Report on experimental work conducted by Mikhel'sonovskaya decade-school (Ukhtomskiy sayon. Moskovskaya Oblast').

CARD: 1/1

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.

Intrusive complexes of Transbaikalia and tectonic conditions governing their formation. Trudy VSEGEI 85:137-147 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.; BULAKOVA, Ch.N.

Time of the separation of tourmaline in the course of the formation of some tin ore deposits in Transbaikalia. Zap. Vses. min. ob-va 92 no.3:257-258 '63. (MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut (VSEGEI), Leningrad.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.; KOZUBOVA, L.A.; TIKHOMIROV, I.N.; KAZITSYN, Yu.V.; KHARKEVICH, D.S.; PANOV, Ye.N.; RUDAKOVA, Zh.N.; PAVLOVA, V.V.; ROZINOV, M.I.; ALEKSANDROV, G.V.; SHATKOV, G.A.; SOLOV'YEV, N.S.

[Intrusive complexes of Transbaikalia] Intruzivnye kompleksy Zabaikal'ia. [By] N.I.Tikhomirov i dr. Moskva, Izd-vo "Nedra," 1964. 214 p. (MIRA 17:7)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.

V.N.Lodochnikov on the classification of granitoids. Zap.Vses. min.ob-va 91 no.5:587-588 '62. (MIRA 15:11)
(Granite--Classification)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, ~~N.I.~~, red.; MIRZOYEVA, M.D., red. izd-va; NYKOVA, V.V., tekhn. red.

[Materials on the petrology of granitoids in Transbaikalia] Materialy po petrologii granitoidov Zabaikal'ia; sbornik statei. Pod red. N.I.Tikhomirova. Moskva, Gosgeoltekhizdat, 1962. 128 p. (MIRA 15:7)

1. Leningrad. Vsesoyuznyy geologicheskiy institut. 2. Vsesoyuznyy geologicheskiy institut, Leningrad (Tikhomirov).
(Transbaikalia—Granite)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.

Permian deposits in the area between the Kyra and Onon rivers (Transbaikalia). Dokl. AN SSSR 114 no.5:1097-1098 Je '57. (MLRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut. Predstavleno akademikom D.V. Nalivkinym.

(Onon Valley--Geology, Stratigraphic)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV N. I.

PA 49T67

USSR/Metals

Mar 1946

Molybdenum Ore Deposits
Surveying, Geophysical

"Physicochemical Method of Surveying for Molybdenum in the Semiarid Regions Around Northern Balkhash," N. I. Tikhomirov, S. D. Miller, 5½ pp

"Razvedka Nedr" No 2, V. 12, 34-39, 1946

Method authors describe can be used in general for all rare metals. They intend to show that possible to use physicochemical method of survey to locate molybdenum deposits. Explain experiments and test surveys conducted and note that veins located too poor to be of industrial use. However, method has possibilities and should be investigated further.

LC

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

OZEROV, Ivan Moiseyevich; TIKHOMIROV, N.I., nauchnyy red.; CHIZHOV, A.A., vedushchiy red.; FRUMKIN, P.I., tekhn.red.

[Using the sluice method in prospecting and analyzing sluices] Shlikhovaia s"emka i analiz shlikhov. Leningrad, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 377 p. (MIRA 12:12)

(Ores--Sampling and estimation) (Prospecting)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

BOBROV, V.A.; POLEVAYA, N.I.; SPRINTSSON, V.D.; TIKHOMIROV, N.I.

Age groups of intrusive rocks in Transbaikalia and eastern Mongolia based on geological data and the results of absolute age determination. Sov.geol. 6 no.3:94-112 Mr '63. (MIRA 16:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskiy institut i Geologorazvedochnoye upravleniye pri Sovete Ministrov Mongol'skoy Narodnoy Respubliki.
(Transbaikalia--Geological time) (Mongolia--Geological time)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N.I.

20-5-50/60

AUTHOR TIKHOMIROV, N.I.

TITLE Permian Deposits in the Interfluvial Region Kyra-Onon (Transbaikalia) (Permskiye otlozheniya v mezhdurech'ye Kyra - Onon (Zabaykal'ye). Russian)

PERIODICAL Doklady Akademii Nauk SSSR, 1957, Vol 114, Nr 5, pp 1097-1098 (U.S.S.R.)

ABSTRACT In spite of the wide distribution of Paleozoic deposits in the South East of Transbaikalia, the study of its stratigraphy meets with considerable difficulties due to the scarcity of fauna fossils. This also renders difficult the solution of many problems of geological development of the region , of tektonic problems, volcanism and metallogeny. But these problems of the geology of Transbaikalia are of essential importance not only from a scientific but also from a practical point of view. This concerns above all the ore districts, especially that of Khapcheranga-Lyubov (Kyr-Onon), on the Mongolian border). Here Paleozoic deposits prevail. In spite of numerous geological surveys made during more than two decades the fundamental problems of the stratigraphy of the Paleozoic remained unsolved for the afore-mentioned reason. Therefore individual finds of flora and fauna are of special value. However, nothing has hitherto been published about them. Some of the geologists working there do not acknowledge the occurence of Permian deposits. The cross section of the Paleozoic in the Kyr-Onon district is subdivided into two parts, the lower one being represented by a series of rocks recently called "ononic" and the upper one belonging to the

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Permian Deposits in the Interfluvial Region Kyr-Onon (Transbaikalia)

Permian system. They differ in composition, degree of metamorphism and are probably separated by discordance. The Onon series in its lower part consists of mica slate and slates similar to mica slate, most frequently carboniferous ones, with intermediate layers of green slates and jaspers the color of sealing wax. In the upper part it consists of slaty sandstones and aleurolites. The total thickness is 3000 - 4000 m. The age of the Onon-series is conventionally dated from the Upper Silurian to the Lower Carboniferous, that is in analogy to similar sediments of northeastern Mongolia in which Silurian and Devonian fauna were discovered. In the upper course of the Amur there exists (according to unpublished data by Ye.A. MODZALEVSKAYA) an uninterrupted cross section from the Upper Silurian to the Lower Carboniferous characterized by fauna. On the Onon , at the station of Olovyannaya and at the divide of Onon-Turgino-Kharanor-depression, a Devonian and Lower Carboniferous fauna was discovered. The sediments of the Permian system may be separated into two suites: 1.) suite of quartzose sandstones with intermediate layers of aleurolite (thickness ca. 3000 m) and 2.) suite of sandstone and slate (thickness ca. 4000 m). All known finds in their totality allow to draw the conclusion of the indubitable presence of Permian deposits in the interfluvial region Kyr-Onon. They probably are

Card 2/3

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

20-5-50/60

Permian Deposits in the Interfluvial Region Kyra-Onon (Transbaikalia) much wider distributed then was hitherto assumed.

ASSOCIATION Allunion Scientific Research Institute for Geology (Vsezoyznyy nauchno-issledovatel'skiy geologicheskiy institut)

PRESENTED BY NALIVKIN, B.B., Member of the Academy

SUBMITTED 10.1.1957

AVAILABLE Library of Congress

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

[illegible], N.N.; TAKHOMIROV, N.I.

Types of tin-ore deposits in Transbaikalia. Zap. Vses. min. obshch. 94 no.6:642-654 '65. (MIRA 18:12)

1. Dayetvitel'nyy chlen Vsesoyuznogo mineralogicheskogo obshchestva (for Takhomirov).

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N. M. (Gorkiy polytechnical institute A. A. Zhdanov)

"Electrolytic precipitation of alloys copper-nickel, nickel--tin, iron-nickel, iron-zinc."

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute im. S. M. Kirov, Sverdlovsk, held from 27-30 May 1963.

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)
JPRS 24,651 19 May 64

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

NOSKOV, S.K., kand.tekhn.nauk. Prinimali uchastiye: BELKIN, A.I., inzh.; TIKHOMIROV, N.M.. ODINOKOV, S.D., kand.tekhn.nauk, nauchnyy red.; AZRILYANT, Ya.M., red.izd-va; NAUMOVA, G.D., tekhn.red.

[Using rolled roofing materials in constructing roofs] Ustroistvo pokrytii s rulonnoi krovlei. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 180 p. (MIRA 13:6)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu. 2. Instruktory peredovykh metodov truda instituta Orgstroy (for Belkin, Tikhomirov).

(Roofing)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

TIKHOMIROV, N. M.

Utilizing wind power in steppe and semiarid zones of the U.S.S.R.

S405.V822 no.24 1954

1. Windmills.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2

OBRAZTSOV,V.N., 1874-1949; SHAUL'SKIY,F.I., doktor tekhnicheskikh nauk, professor; ZEMBLINOV,S.V., doktor tekhnicheskikh nauk, professor; SOSKOVICH,V.A., doktor tekhnicheskikh nauk, professor; [deceased]; NIKITIN,V.D., doktor tekhnicheskikh nauk, professor; KOCHNEV,F.P., doktor tekhnicheskikh nauk, professor; TIKHOMIROV,N.M.; CHVANOV,V.G., redaktor; ZELENKOVA,Ye.G., tekhnicheskiy redaktor

[Selected works] Izbrannye trudy. Moskva, Izd-vo Akademii nauk SSSR. Vol.1. 1955. 444 p. (MLRA 9:1)

(Railroads) (Transportation)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755610004-2"

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BLIZNYAK, Ye.V., doktor tekhnicheskikh nauk, zasluzhennyi deyatel' nauki i tekhniki, redaktor; TIKHOMIROV, N.M., redaktor; POLYAKOVA, T., tekhnicheskiy redaktor [redacted]

[Proceedings of the All-Union conference on the study of runoff, runoff control, and winter runoff] Trudy vsesoiuznogo soveshchaniia po izuchenuiiu stoka, regulirovaniiu stoka i zimnemu rezhimu; kratkoe soderzhanie dokladov i reshenie soveshchaniia. Moskva, Izd-vo Akademii nauk SSSR, 1954. 102 p. (MLRA 8:7)

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TIKHOMIROV, N.N.

YEVREINOV, Dmitriy Vsevolodovich; YAMPOL'SKIY, German Isaakovich; TIKHOMIROV, N.N., redaktor; GALAKTIONOVA, Ye.N., tekhnicheskiy redaktor

[Organizing automotive transportation of building materials] Organizatsiia avtomobil'nykh perevozok stroitel'nykh gruzov. Moskva, Nauchno-tekhn.izd-vo avtotransportnoi lit-ry, 1955. 55 p. (MLRA 8:10)

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TIKHOMIROV, Nikolay Nikolayevich, kandidat tekhnicheskikh nauk; SHVETSOV, I.B., redaktor; MAL'KOVA, N.V., tekhnicheskiy redaktor

[Automobile trains; technical and economic principles of work organization for freight automobile trains] Avtomobil'nye poezda; tekhniko-ekonomicheskie osnovy organizatsii raboty gruzovykh avtomobil'nykh poezdov. Moskva, Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1956. 203 p. (MLRA 10:2)
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