"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Titov, V. B.

66255

5(4) 5.3200 SOV/76-33-11-13/47

AUTHORS: Brodskiy, A. M., Kalinenko, R. A., Lavrovskiy, K. P., Titov, V. B.

TITLE: On the Mechanism of High-temperature Cracking of Ethane

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 11, pp 2457-2466 (USSR)

ABSTRACT: The reaction mechanism of the cracking of hydrocarbon gases at 770-890° was studied, as in general the industrial pyrolysis of these gases takes place at these high temperatures. A special experimental method was developed by which tracer atoms and ethane are used to which approximately 5% of marked $C^{14}H_4$ methane was added. The experiments were made in a continuously working apparatus (Fig 1) at approximately 90 mm Hg. The quartz reactor was filled with corundum acting as heat carrier, and the temperature was recorded by means of an EPP-09 electronic potentiometer. The results obtained (Tables 1-3) showed that at these temperatures the maximum participation of the chain-reaction process in the conversion of ethane into ethylene is 5%, and that the inherent inhibition

Card 1/2

characteristic of cracking at 500-650°C does not occur. The reaction proceeds according to the first order, and the activation energy is 82±2 kcal/mol. The reaction-rate constant of $CH_3 + C_2H_6 \rightarrow CH_4 + C_2H_5$ points to a steric factor of the order of 10^{-5} for this reaction, while the activation energy obtained from 12±2 kcal is in agreement with data from other publications. The recombination constant, obtained both by experiment and by calculation using thermodynamic data, is approximately 5.10^2 times smaller than that obtained at lower temperatures. The decomposition rate constant of the ethyl radical is 10^3 times smaller than it would be according to the elementary kinetic gas theory. There are 4 figures, 3 tables, and 14 references, 8 of which are Soviet.

ASSOCIATION: Akademiya nauk SSSR, Institut neftekhimicheskogo sintera (Academy of Sciences, USSR, Institute of Petroleum-chemical Synthesis)

Card 2/2

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BRODSKIY, A.M.; ZVONOV, N.V.; LAVROVSKIY, K.P.; TITOV, V.B.

Radiation thermal conversions of petroleum fractions.
Neftekhimia 1 no.3:370-381 My-Je '61. (MIRA 16:11)

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L 10701-63 EPR/EWP(j)/EPF(c)/EPF(n)-2/EWT(m)/BDS--AFFTC/ASD/APGC/SSD--
Ps-4/Pc-4/Pr-4/Pu-4--BW/RM/WW/MN
ACCESSION NR: AP3002019 S/0195/63/004/003/0337/0347

85
84

AUTHOR: Brodskiy, A. M.; Lavrovskiy, K. P.; Titov, V. B.

TITLE: Radiation transformation rate of hydrocarbons as a function of temperature

SOURCE: Kinetika i kataliz, v. 4, no. 3, 1963, 337-347

TOPIC TAGS: radiation decomposition, liquid hydrocarbon, radiation-thermal cracking, nuclear reactor, hydrocarbon radiolysis

ABSTRACT: Authors examine the rate of radiation decomposition of liquid hydrocarbons as a function of temperature. Detailed experimental data concerning the radiation-thermal cracking of a mixture of petroleum hydrocarbons - directly distilled gas oil in a nuclear reactor is shown. These data made it possible to determine basic characteristics of a change in the rate and direction of radiolysis of the hydrocarbons with a rise in temperature, which are of a theoretical and practical interest at the present time. "The authors with to thank A. Kh. Eglit for his help in this study." Orig. art. has: 7 equations, 5 figures, and 4 tables.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Titov, V.B.

BRODSKIY, A.M.; KALINENKO, R.A.; LAVROVSKIY, K.P.; TITOV, V.B.

Significance of chain reactions in the high-temperature cracking of ethane. Dokl. AN SSSR. 117 no.6:1013-1016 D '57. (MIRA 11:3)

1. Institut nefti Akademii nauk SSSR. 2. Chlen-korrespondent AN SSSR (for Lavrovskiy).
(Ethane) (Cracking process)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Titov, Y. B.

20-6-26/47

AUTHORS: Brodskiy, A. M., Kalinenko, R. A., Lavrovskiy, K. P., Corresponding Member of the AN USSR, Titov, Y. B.

TITLE: The Significance of Chain Reactions in the High-Temperature Cracking of Ethane (O znachenii tsepnykh reaktsiy pri vysokotemperaturnom krekinge etana)

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 6, pp. 1013-1016 (USSR)

ABSTRACT: The present paper investigates the portion of chain reactions in the cracking of ethane in the temperature interval 770-900°C. This problem is at present intensively investigated for low temperatures (references 1, 2, 3, 8). But the mechanism of the cracking and of the pyrolyses is not to be considered as finally determined, especially not at the high temperatures used in engineering. For solving this problem the authors made measurements of the activities of the different products obtained in the cracking of a mixture of ethane with methane (labelled with C^{14}). The method of these tests was already described in an earlier work (reference 5). The data obtained for the temperatures 770, 840 and 890°C are illustraded in a diagram. The tests discussed here were performed in the case of complete or almost complete intermixture in the "boiling" layer, which permits the reduction of the problem under review

Card 1/2

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The Significance of Chain Reactions in the High-Temperature Cracking of Ethane 20-6-26/47

to the solution of a system of algebraic equations. The author additionally includes 5 elementary processes in the examination. Then the expressions for the dependence of the concentrations of the various active products on time, obtained due to a special analysis, are given. A provisional estimation already shows that the portion of chain reactions in the total process of cracking within the frame of the generally used scheme in the case investigated here is very small. Detailed numerical data on this are given. There are 1 table, and 9 references, 5 of which are Slavic.

ASSOCIATION: Petroleum Institute AN USSR (Institut nefti Akademii nauk SSSR)

SUBMITTED: July 18, 1957

AVAILABLE: Library of Congress

Card 2/2

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[illegible]

[illegible] in the mechanism at the higher temp., namely [illegible] emphasis on chain reactions. The cracked products contain small amts. of butadiene and butylenes, with only traces of isobutane, propylene, or propane. G. M. K.

1-4E4J
1-4E3d

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

14

B

Determination of Corrosion of Wire Test Specimens Under Constant Tensile Stress. (In Russian.) N. D. Tomashov and V. A. Titov. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 15, Jan. 1949, p. 48-53.

Describes specially developed apparatus for corrosion testing in synthetic brines. Typical test data on steel wire are tabulated and charted.

COMMON ELEMENTS

COMMON VARIABLES INDEX

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Applied Mechanics Review

Material Test Techniques

775. N. D. Tomashov and V. A. Titov, Corrosion test of wire samples with simultaneous application of constant tension (in Russian), Zavodsk. Lab. 15, 18-21 (Jan. 1949).

Tests were performed on steel wires subjected to tension and simultaneously placed in mine water to cause corrosion. Various amounts of tension were applied and the time required to cause fracture was determined in each case.

Further tests were performed to measure the electric resistance and strength of wires after corrosion and simultaneous tension.

Andrew Boresi, USA

1950

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

6A-54. **Determination of Corrosion of Wire Test Specimens Under Constant Tensile Stress.** (In Russian.) N. D. Tomashov and V. A. Titov. *Zavodskaya Laboratoriya* (Factory Laboratory), v. 15, Jan. 1949, p. 48-53.

Specially developed apparatus for corrosion testing in synthetic brines. Typical test data on steel wire.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.B.

Some methods of processing observation data on tidal phenomena. Okeanologiia 4 no.5:932 '64 (MIRA 18:1)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

BRODSKIY, A.M.; LAVROVSKIY, K.P.; TITOV, V.B.; EGLIT, A. Kh.

Radiation-thermal transformations of normal alkanes in the liquid phase. Dokl. AN SSSR 159 no.6:1319-1322 D '64 (MIRA 18:1)

1. Institut neftekhimicheskogo sinteza im. A.V. Topchiyeva.
2. Chlen-korrespondent AN SSSR (for Lavrovskiy).

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

S/844/62/000/000/049/129
D287/D307

AUTHORS: Brodskiy, A. M., Lavrovskiy, K. P. and Titov, V. B.

TITLE: Radiation-induced thermal cracking of kerosene-gas oil fractions

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 295-303

TEXT: The present work is a continuation of an earlier investigation with the difference that thermal cracking of petroleum fractions was replaced by radiolysis of the kerosene-gas oil fraction in the liquid phase, the fraction containing relatively large quantities of naphthenes and aromatic hydrocarbons. The gas oil was purified before the process of hydrostabilization. The experiments were carried out both under static conditions (at 100 - 450°C, 150 - 200 megarad) and under dynamic conditions (at temperatures of 300° and 315°C, 3 - 5 atm pressures and 100 megarad). In the absence of radiation hardly any thermal cracking could be observed under either

Card 1/3

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Radiation-induced thermal ... S/844/62/000/000/049/129
D287/D307

of these conditions at the given temperatures (except at 450°C). Pure gas oil fractions as well as fractions containing $(1 \pm 0.2) \times 10^{-3}$ M inhibitors (tetraphenylbutadiene and terphenyl) were tested under static conditions. Under dynamic conditions in circulation reactors, marked changes in the rate and direction of radiolysis conversions could be observed at ~310°C and at temperatures above 300 - 330°C radical decomposition reactions proceeded at considerable rates, with a cleavage of the C-C bond; the CH_4 content in the gaseous products increased whilst the H_2 content decreased. Activation energies are calculated. The yield of products was found to vary linearly with the dosage (up to 100 megarad), slight deviations during the initial stages being due to gaseous products being dissolved in the gas oil. Investigations on the relationship between the radiolysis yield of the high-boiling residue and 1/T have proved that the yield increased slightly at 100 - 300°C and began to decrease at 300 - 450°C. Investigations of the chemical composition of liquid products under dynamic conditions have indicated that the percentage of naphthenic and unsaturated compounds increased slight-

Card 2/3

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ly with increasing dose whilst the percentage of paraffins and aromatics had decreased. Addition of inhibitors decreased the yields of gaseous products, and of the high-boiling residue by 20 - 30%. There are 6 figures and 5 tables.

ASSOCIATION: Institut neftekhimicheskogo sinteza, AN SSSR (Institute of Petrochemical Synthesis, AS USSR)

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S/020/61/138/005/021/025
B101/B231

AUTHORS: Brodskiy, A. M., Lavrovskiy, K. P., Corresponding Member AS USSR, and Titov, V. B.

TITLE: Radiation-thermal cracking of liquid hydrocarbons

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 138, no. 5, 1961, 1143-1146

TEXT: The present paper deals with the joint effect of high-energy radiation and heating on gasoil fractions which boil between 200 and 350°C. Experiments were made in evacuated quartz ampuls in a ВВР (VVR) reactor. The results shown in Fig. 1 disclose three sections. In section I, ln G is nearly independent of T. At a critical temperature, T_p, of about 600°K, G rises rapidly with an activation energy of 20 ± 5 kcal (section II), passing at last into thermal cracking (section III) if still higher temperatures are applied. The yield of highly molecular products begins to drop at T_p. These results are explained by superimposition of two processes. Hydrocarbon + radiation ⟶ ..... ⟶ excited molecule ⟶ stable end products (1); Hydrocarbon + radiation ⟶ ... ⟶ thermal hydrocarbon

Card 1/4

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

radicals $\longrightarrow$ products of radical reactions (2). The processes (1) are temperature-independent, and supply a constant contribution to section I and II. The radicals of processes (2) are stable in section I and recombine again, whereas they dissociate in section II forming olefins and radicals of low molecular weight. A calculation of T_p is made at first for hydrocarbon gases. The following is put down: $k_d[R] = a_1 G_1 I$ (3), where $k_d = k_d^o \exp(-E_d/RT_p)$ is the mean value of the radical destruction constant, $[R]$ the concentration of highly molecular thermal radicals which originate as a result of reaction (2), I the intensity of the radiation dose per unit volume; a_1 is a constant of the magnitude order 1 Furthermore, $IG_R - k_d[R] - k_T[R][\bar{R}] = 0$ (4), where $[\bar{R}]$ is the total concentration of radicals corresponding to $IG_{\bar{R}} - k_T[\bar{R}]^2 = 0$ (5). (G_R is the radiation chemical yield of radicals according to (2), $G_{\bar{R}}$ the total yield of radicals). From (4) and (5) can be deduced: $T_p = E_d/R\ln(k_d^o b/\sqrt{k_T I G_{\bar{R}}})$ (6). The temperature-independent constant $b = (1 - a_1 G_1/G_R) > 0$ is ~ 1, and can be

Card 2/4

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neglected. Substituting $G_{\overline{R}} \sim 5$ (per 100 ev); $k_T = 10^{-11}$ cm^3/mole·sec; $E = 25$-30 kcal/mole results in $T_p = 600^oK$ in accordance with the experiment. According to Refs. 8 and 9 (see below), the cellular effect is taken into consideration for liquid hydrocarbons, and put down $G_{\overline{R}'} I - 1/\tau_T[\overline{R}'] - k_d[\overline{R}'] = 0$ (7) and $1/\tau_D[\overline{R}'] - k_d[\overline{R}''] - k_T[\overline{R}]^2 = 0$ (8), where $[\overline{R}']$ is the number of radicals in the unit volume being placed in a cell adjacent to such radicals as they have simultaneously originated with, $[\overline{R}'']$ the concentration of highly molecular radicals which diffused out of the cell, τ_T the time required for the diminution of $[\overline{R}']$ to the 1/e fold owing to recombination, τ_D the diffusion period. The processes (1) can here be neglected, and obtained is $G_{olef} I = k_d[\overline{R}] = k_d([\overline{R}'] + [\overline{R}''])$ $\simeq (k_d + 1/\tau_D) G_{\overline{R}'} I (1/\tau_T + k_d)^{-1}$ (9). The following holds for the passing from section I to section II: $k_d = k_d^o \exp(-E_d/RT_p) \simeq 1/\tau_D$ (10). Assuming that $E = 20$ kcal/mole, $k_d^o = 10^{13}$ sec^{-1}, $1/\tau_D = D/d^2$, where d is the cell

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dimension, $T_p = 600°K$, $D = 10^{-5}$ cm^2/sec $d = 10^{-6}$ cm is found. The cellular effect has thus a remarkable influence on the radiolysis of liquid hydrocarbons. L. S. Polak and M. A. Mokul'skiy are mentioned. There are 3 figures and 9 references: 5 Soviet-bloc and 4 non-Soviet-bloc. The two most important references to English-language publications read as follows: Ref. 8: E. Rabinovitch, Trans. Farad. Soc., 33, 1225 (1937); Ref. 9: B. Williamson, V. K. La Mer, J. Am. Chem. Soc., 70, no. 2, 717 (1948).

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences USSR)

SUBMITTED: February 18, 1961

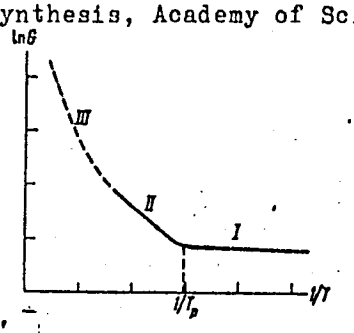

Fig. 1: Schematic representation of the function $\ln G = F(1/T)$; T_p = critical point.

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BRODSKIY, A.M.; LAVROVSKIY, K.P.; TITOV, V.B.

Radiation-induced and thermal cracking of liquid hydrocarbons.
Dokl.AN SSSR 138 no.5:1143-1146 Je '61. (MIRA 14:6)

1. Institut neftekhimicheskogo sinteza AN SSSR. 2. Chlen-korrespondent AN SSSR (for Lavrovskiy).
(Hydrocarbons) (Cracking process)
(Radiochemistry--Industrial applications)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

BRODSKIY, A.M.; LAVROVSKIY, K.P.; TITOV, V.B.

Temperature dependence of the rate of radiation-induced conversion of hydrocarbons. Kin. i kat. 4 no.3:337-347 My-Je '63. (MIRA 16:7)

1. Institut neftekhimicheskogo sinteza AN SSSR.
(Hydrocarbons) (Radiation)
(Chemical reaction, Rate of)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.B.

Measuring the elements of ice drift by the plumb method. Trudy AANII 254:51-55 '63.

Calculation of time corrections for the moments of printing of BPV recorders. Ibid.:71-74

(MIRA 17:11)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.B., kand.geograf. nauk; SHESTERIKOV, N.P., kand. geograf. nauk

Distribution and character of the tidal wave in the Southern Ocean. Inform. biul. Sov. antark. eksp. no.47:35-39 '64. (MIRA 18:4)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut.

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TOPIC TAGS: normal alkane, thermal radiolysis, radiation thermal conversion, material balance, normal tetratriacontane, ion reaction, ion radical reaction

ABSTRACT: The radiation-thermal conversion of n-tetratriacontane was studied with the tests run in the channel of a water-water type nuclear reactor at temperatures from 150-380 C at integral doses of $n \times 10^{-1}$ ev/gm. The amount of hydro-

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"The authors thank M. M. Kusanov, N. A. Shimanko and M. V. Shishkin for

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tute of Petrochemical Synthesis)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

ACCESSION NR: AR5003346

AUTHOR: Titov, V. D.

TITLE: Electronic simulation of a servosystem

CITED SOURCE: Sb. dokl. Konferentsii po primeneniyu vychisl. tekhn. i avtomatiki, Perm', 1963, [illegible]

TOPIC TAGS: servosystem, simulation, electronic simulation

TRANSLATION: An example of a specific servosystem (see RZhA and VT, 1964, 8A176) demonstrates the expediency of using the electronic simulation for investigating the system operation under transient conditions. An MN-7 outfit was used for simulation. The simulated transient-process curve accurately coincided with the estimated curve. The simulation is efficient [illegible] in determining the effect of system [illegible] curve, introducing any convenient time

Card 1/2

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scale, and allowing for system nonlinearities. Six illustrations. Bibliography:

SUB CODE: DP ENCL:

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

MALAKHOV, G.M., prof., doktor tekhn. nauk; TITOV, V.D., kand. tekhn. nauk; ZINCHEVSKIY, N.P.; KOZUB, F.S.

Working a deposit in the Lenin mine with 150m.-high levels. Gor. zhur. no. 12:3-10 D '65. (MIRA 18:12)

1. Krivorozhskiy gornorudnyy institut (for Malakhov, Titov).
2. Glavnyy inzhener trosta Leninruda (for Zinchevskiy).
3. Upravlyayushchiy rudoupravleniyem imeni Ordzhonikidze (for Kozub).

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., kand.tekhn.nauk

Research of the Krivoy Rog Scientific Research Mining Institute on the safety of working conditions. Bezop.truda v prom. 3 no.3:19-21 Mr '59. (MIRA 12:4)

1. Direktor Krivorozhskogo nauchno-issledovatel'skogo gornorudnogo instituta.
(Krivoy Rog--Mining engineering--Safety measures)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

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TITOV, V.D., gornyy inzhener

Over-all dust removal from the atmosphere of the Karl Liebknecht Iron Mine. Bor'ba s sil. 3:13-22 '59. (MIRA 12:9)
(KRIVOY ROG BASIN--IRON MINES AND MINING)
(DUST--REMOVAL)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

14(5)

SOV/127-59-3-20/22

AUTHOR: Titov, V.D., Candidate of Technical Sciences

TITLE: The Results of the NIGRI Survey in the Field of Systems of Underground Mining (Itogi issledovaniy NIGRI v oblasti sistem podzemnoy razrabotki)

PERIODICAL: Gornyy zhurnal, 1959, Nr 3, pp 68-73 (USSR)

ABSTRACT: The labor productivity of workers in different mining operations in the Krivoy Rog Basin Mines increased considerably [illegible] 1950-1959. At the same time, due to the lack of [illegible] in the execution of mining operations, especially in extracting ore from blocks, the losses of ore and its impoverishment remained unchanged, being 16 to 17% and 8 to 10%. NIGRI made an extensive survey of all conditions and systems of stoping operation, of utilized equipment and means of ore transportation. It was found that the resistance of rocks depends on their mineralogical composition, structure and porosity. The pressure of overlying rocks increases with the depth of

Card 1/3

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

SOV/127-59-3-20/22

The Results of the NIGRI Survey in the Field of Systems of Underground Mining.

the mine. Under the specific conditions of Krivoy Rog mines, the "behavior" of enclosing rocks is of utmost importance. Ore deposits of the basin can be divided into two groups. The first group is characterized by the resistant enclosing rocks of "the hanger", not caving at the depth of 400-500 m. Isolated deposits form this group with the enclosing rocks acting as pillars. With the increased depth of mining operations, the pressure on these pillars increases, and they can spontaneously "explode". To lower the pressure at levels of over 500 m deep, a compulsory caving of pillars is recommended. The second group is composed of deposits enclosed by rocks which cave in periodically during the stoping operations, and the pressure stabilization occurs only under conditions of steep dipping surfaces blocking the caved-in rocks. The system of compulsory block caving, with breaking of the ore by deep

Card 2/3

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

The Results of the NIGRI Survey in the Field of Systems of Underground Mining. SOV/127-59-3-20/22

bore-holes, is the most economical. The absence of underground crushers, of powerful winches and conveyer belts hinders the further increase of labor productivity. The use of drilling rigs PBS-5 with a PUSh-6 plunging perforator is recommended. Different conveyer-belts, LKR-10, LTsR-10 and NIGRI-57, are presently being constructed according to plans developed by NIGRI. The system of sublevel caving, with breaking of ore by deep drilling, is recommended as a high production system, which if correctly used, can lower the losses of ore to 10-12%, and the impoverishment - to 5-6%. There are 2 graphs, 1 photo and 1 diagram.

ASSOCIATION: Nauchno-issledovatel'skiy gornorudnyy institut (The Scientific-Research Ore-Mining Institute), Krivoy Rog.

Card 3/3

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., kand. tekhn. nauk.

More attention to safety problems in designing mines. Bezop. truda v prom. 2 no.11:11-12 N '58. (MIRA 11:11)

1. Krivorozhskiy nauchno-issledovatel'skiy institut gornorudnoy promyshlennosti.
(Mining engineering--Safety measures)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, Viktor Dmitrievich; MARTYNOV, G.P., redaktor; PETROVA, N.S., tekhnicheskiy redaktor

[Generalizing experience in high-speed horizontal mine excavation] Obobshchenie opyta skorostnoi prokhodki gorizontal'nykh vyrabotok v Krivorozhskom basseine. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 24 p. (MLRA 10:2)
(Krivoy Rog Basin--Mining engineering)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

ACCESSION NR: AR40[illegible] [illegible] 1 64 [illegible] 08 A 26 A 26

SOURCE: Ref. zh. Avtomat. i telemekh. [illegible] tekhn. Svodnyy tom, Abs. 8A176

AUTHOR: Titov, V. D.

TITLE: Dynamic calculation of a magnetic-element servo system

[illegible]

TOPIC TAGS: servosystem, magnetic element servosystem

TRANSLATION. An a-c servo system is considered in which a phased rectifier with [illegible]

[illegible]

Card 1/2

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L 51854-[illegible]

ACCESSION NR: AR[illegible]

In the core where the magnetic fluxes are [illegible]
ance and the voltage dr[illegible]
f the [illegible]
smaller [illegible]
cycle. As a [illegible]
[illegible]

[illegible]
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[illegible]
[illegible]
[illegible]

SUB CODE: DP, [illegible]

Card 2/2

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, Viktor Dmitriyevich; BUNIN, A.I., otv. red.; SOSEDOV, O.O., otv. red.; PARTSEVSKIY, V.N., red. izd-va; SABITOV, A., tekhn. red.

[Opening up ore deposits] Vskrytie rudnykh mestorozhdenii. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 285 p.

(Mining engineering) (MIRA 15:2)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V. D.

TITOV, V. D. : "Investigation of the 'warehouse' [illegible] under the conditions of large [illegible] iron-ore [illegible]." Min Higher Education [illegible]. Dnepropetrovsk Order of Labor Red Banner Mining Inst imeni Artem. Dnepropetrovsk, 1956. (Dissertation For the Degree of Candidate in Technical Science)

So: Knizhnaya Letopis', No. [illegible], 1956

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., gornyy inzhener; TARAN, P.N., gornyy inzhener; ZYMALEV, G.S., gornyy inzhener; OSTROUKHOV, A.I., gornyy inzhener; AL'TSHULER, M.A., gornyy inzhener; BORZENKO, P.V., gornyy inzhener.

"Underground mining of ore and placer deposits" by R.P. Kaplunov and other. Reviewed by V.D. Titov and others. Gor.zhur.no.11:63-64 N '56. (MLRA 10:1)

(Mining engineering--Study and teaching)

(Kaplunov, ~~R.P.~~)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

Plans for the introduction of new machinery and technical equipment in mines; letter to the editors. Gor.zhur.no.8:64-3 of cover Ag '56.

1.Glavnyy inzhener rudoupravleniya imeni K.Libknekhta. (MLRA 9:10)
(Mining machinery) (Mine timbering)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

Effective dust removal from the air in the Novaia mines. Gor.zhur. no.5:51-54 My '56. (MLRA 9:8)

1. Glavnyy inzhener rudoupravleniya imeni K. Libknekhta.
(Mine dusts)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

Potentialities of increasing the speed of driving hauling entries in the Krivoy Rog Basin. Gor.zhur.no.3:22-27 Mr '56. (MIRA 9:7)

1.Glavnyy inzhener rudoupravleniya imeni K.Libknekhta.
(Krivoy rog--Iron mines and mining)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., gornyy inzhener.

Speedsd-up transfer of skips to new levels. Gor.zhur.no.11:14 N '55. (MLRA 9:1)

(Mining engineering)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

Mining Engineering

"Discovery of ore deposits." Reviewed by V.D.Titov. Gor.zhur., no. 4, 1952.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1952 ~~1953~~ Uncl.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., FIDELEV, A.S.

Mining Engineering

Application of the analytical method to mining (continued), Gor.zhur., no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1952 ~~1953~~, Uncl.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V. D.

Mine Surveying

"Discovery of ore deposits." Reviewed by V. D. Titov. Gor.Zhur. No. 4, 1952.

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

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D., FEDALEV, A.S.

Mining Surveying

Application of the analytical method to mining (continued). Gor.zhur., no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1952 ~~1953~~, Uncl.

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V. D. PA 67T96

USSR/Mines and Mining Jun 1948
Mining Methods
Mining Equipment

"Storied Cross Drifts Worked by Scraping in the Mine Imeni Karl Libknekht," V. D. Titov, Mining Engr, 1 p

"Gor Zhur" No 6

In this new system scrapers were located at the same level as the veins containing the ores being mined. In addition, scraper equipment was placed so that it could be used to greatest capacity. The number of drifts in each locality should be limited, however, so that they will have direct access to the mine outlet.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V. D.

41/49T91

USSR/Mining Methods
Drilling, Rock

Apr 49

"Mechanized Sinking in the Mine Imeni K. Libknekht," V. D. Titov, A. F. Khivrenko, Mining Engineers, 3 pp

"Gor Zhur" No 4

In the pit of the "Novaya" mine imeni K. Libknekht in 1946 - 47, two-track crosscuts with a cross section of 14 sq m each were drilled through hard rocks in 5 months. Drilling and collecting of rock was fully mechanized. Use of heavy hand drills with the drilling head increased to 64 mm (instead

41/49T91

LC

USSR/Mining Methods (Contd)

Apr 49

of 42 mm) reduced the number of blastholes 2.2 times because of the larger quantity of explosive in the hole.

41/49T91

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APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V. D.

Mechanism of the hydration of acetylene. A. L. Klebanskiĭ and V. D. Titov. J. Applied Chem. (U.S.S.R.) 20, 1005-12(1947) (in Russian).--In analogy with Ipatiev's scheme (C.A. 29, 7935[8]) of the polymerization of olefins in the presence of strong acids, formation of MeCHO from C_2H_2 in acid soln. is assumed to proceed over intermediate, readily hydrolyzable, vinyl esters of the corresponding inorg. acid, e.g., H_3PO_4. Without catalysts, yields of MeCHO are poor; thus, C_2H_2 passed through 50% H_3PO_4 at 130° gave only 2% MeCHO. The role of heavy metal salt catalysts is attributed in the main to an increase of the soly. of C_2H_2 through formation of complex compds. of C_2H_2 and the metal salt, and to activation of the C_2H_2 owing to ionization of an H atom of C_2H_2. Effective catalysts are, besides Hg, salts of Zn, Cd, and particularly Cu and Ag. In the liquid phase, in strong acid soln., polymerization predominates over formation of MeCHO; with C_2H_2 dild. with N_2 in the ratio 1:2, at 130°, with Cu_2O dissolved in 70% H_3PO_4, the C_2H_2 reacted in one run to the extent of 70% (as against 20% without Cu_2O) with a yield of 7% MeCHO. Polymerization is reduced considerably, and the yield of MeCHO increased, in the gas phase; at 350°, on 80% H_3PO_4 on a solid carrier, the yield of MeCHO in a single run was 30% with respect to the C_2H_2 passed, 50-70% with respect to the C_2H_2 reacted. With a catalyst of H_3PO_4 and a mixt. of Zn and Ag or Cu salts on a solid carrier (carbon or silica gel), at 275-350°, with C_2H_2 dild. with H_2O vapor in the vol. ratio 1:10 and with N_2 in the ratio 1:2 (gas mixt. contg. 5 vol. % C_2H_2), the av. yield of MeCHO is 60% with respect to the C_2H_2 passed, and 92-95% with respect to the C_2H_2 reacted. This catalyst produced 350 g. MeCHO/hr./l. catalyst at a contact time of 0.2 sec.

N. Thon

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TITOV, V. D.

Mechanism of the hydration of acetylene. A. L. Klebanskii and V. D. Titov. J. Applied Chem. (U.S.S.R.) 20, 1005-12 (1947) (in Russian).--In analogy with Ipatiev's scheme (C.A. 29, 7935°) of the polymerization of olefins in the presence of strong acids, formation of MeCHO from C_2H_2 in acid solu. is assumed to proceed over intermediate, readily hydrolyzable, vinyl esters of the corresponding inorg. acid, e.g., H_3PO_4. Without catalysts, yields of MeCHO are poor; thus, C_2H_2 passed through 50% H_3PO_4 at 130° gave only 2% MeCHO. The role of heavy metal salt catalysts is attributed in the main to an increase of the soly. of C_2H_2 through formation of complex compds. of C_2H_2 owing to ionization of an H atom of C_2H_2. Effective catalysts are, besides Hg, salts of Zn, Cd, and particularly Cu and Ag. In the liquid phase, in strong acid soln., polymerization predominates over formation of MeCHO; with C_2H_2 dild. with N_2 in the ratio 1:2, at 130°, with Cu_2O dissolved in 70% H_3PO_4, the C_2H_2 reacted in one run to the extent of 70% (as against 20% without Cu_2O) with a yield of 7% MeCHO. Polymerization is reduced considerably, and the yield of MeCHO increased, in the gas phase; at 350°, on 80% H_3PO_4 on a solid carrier, the yield of MeCHO in a single run was 30% with respect to the C_2H_2 passed, 50-70% with respect to the C_2H_2 reacted. With a catalyst of H_3PO_4 and a mixt. of Zn and Ag or Cu salts on a solid carrier (carbon or silica gel), at 275-350°, with C_2H_2 dild. with H_2O vapor in the vol. ratio 1:10 and with N_2 in the ratio 1:2 (gas mixt. contg. 5 vol. % C_2H_2), the av. yield of MeCHO is 60% with respect to the C_2H_2 passed, and 92-95% with respect to the C_2H_2 reacted. This catalyst produced 350 g. MeCHO/hr./l. catalyst at a contact time of 0.2 sec.

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TA 17T65

TITOV V. D.

USSR/Mines and Mining
Mineral Industries

Aug 1947

"Exploitation by the Method of Sub-Level Drifts at Pits imeni K. Libknekht," V. D. Titov, 4 pp

"Gornyy Zhurnal" No 8

This method of exploitation is conducted by creation of cells and has been used successfully in ore mines of the Krivoy Rog area. However this method should be used as a final means of exploitation.

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APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

[High-speed methods of driving haulage drifts in the Krivoy Rog Basin] Metody skorostnoi prokhodki otkatochnykh vyrabotok v Krivorozhskom basseine. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 28 p. (MLRA 6:12)
(Krivoy Rog--Mining engineering) (Mining engineering--Krivoy Rog)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.D.

[Methods of mining iron ore] Sistemy razrabotki zhelezorudnykh mestorozhdenii. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1953. 279 p. (MLRA 6:9)

(Iron mines and mining)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, Viktor Dmitriyevich; ONISHCHENKO, Anna Ivanovna; SOSEDOV, O.O., retsenzent; KAPLUNOV, R.P., otv. red.; YEROKHIN, G.M., red.izd-va; LOMILINA, L.N., tekhn. red.; PROZOROVSKAYA, V.L., tekhn. red.

[Underground method of iron-ore mining] Razrabotka rud chernykh metallov podzemnym sposobom. Moskva, Gosgortekhizdat, 1963. 181 p. (MIRA 16:12)
(Iron mines and mining)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Mechanism of the hydration of acetylene. A. L. Klebanskii and V. D. Titov. *J. Applied Chem.* (U.S.S.R.) 20, 1005 [illegible] (in Russian). -In analogy with Ipatiev's scheme (C.A. 29, 7935[illegible]) of the polymerization of olefins in the presence of strong acids, formation of MeCHO from C_2H_2 in acid soln. is assumed to proceed over intermediate, readily hydrolyzable, vinyl esters of the corresponding inorg. acid, e.g., H_3PO_4. Without catalysts, yields of MeCHO are poor; thus, C_2H_2 passed through 50% H_3PO_4 at 130° gave only 2% MeCHO. The role of heavy metal salt catalysts is attributed in the main to an increase of the soly. of C_2H_2 through formation of complex compds. of C_2H_2 and the metal salt, and to activation of the C_2H_2 owing to ionization of an H atom of C_2H_2. Effective catalysts are, besides Hg, salts of Zn, Cd, and particularly Cu and Ag. In the liquid phase, in strong acid soln., polymerization predominates over formation of MeCHO; with C_2H_2 dild. with N_2 in the ratio 1:2, at 130°, with Cu_2O dissolved in 70% H_3PO_4, the C_2H_2 reacted in one run to the extent of 70% (as against 20% without Cu_2O) with a yield of 7% MeCHO. Polymerization is reduced considerably, and the yield of MeCHO increased, in the gas phase; at 350°, on 80% H_3PO_4 on a solid carrier, the yield of MeCHO in a single run was 30% with respect to the C_2H_2 passed, 50–70% with respect to the C_2H_2 reacted. With a catalyst of H_3PO_4 and a mixt. of Zn and Ag or Cu salts on a solid carrier (carbon or silica gel), at 275–350°, with C_2H_2 dild. with H_2O vapor in the vol. ratio 1:10 and with N_2 in the ratio 1:2 (gas mixt. contg. 5 vol. % C_2H_2), the av. yield of MeCHO is 60% with respect to the C_2H_2 passed, and 92–95% with respect to the C_2H_2 reacted. This catalyst produced 350 g. MeCHO/hr./l. catalyst at a contact time of 0.2 sec.

N. Thon

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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B

27

*934. **The Mechanism of Hydration of Acetylene.** (In Russian.) A. L. Klebanskii and V. D. Titov. *Zhurnal Prikladnoi Khimii* (Journal of Applied Chemistry), v. 20, Oct. 1947, p. 1005-1012.

Above mechanism was thoroughly investigated, using different catalysts. The catalyst is believed to form complex compounds with acetylene, thus increasing the apparent solubility of the latter. A new, very active catalyst consisting of charcoal or silica gel impregnated with phosphoric acid and Zn, Ag, or Cu salts was developed. 23 ref.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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5.4600,21.5100

78329
SOV/89-8-3-14/32

AUTHOR: Titov, V. F.

TITLE: Electrolytic Production of Layers of Uranium Compounds of Density 1-3 mg/cm^2. Letter to the Editor

PERIODICAL: Atomnaya energiya, 1960, Vol 8, Nr 3, pp 257-258 (USSR)

ABSTRACT: Electric plating of uranium compounds on hard metallic cathodes is one of the best methods for producing 0.2-0.3 mg/cm^2 uniform layers utilized for various experiments in nuclear physics. Standard methods are, however, not very satisfactory for production of layers of density 2-3 mg/cm^2, as pointed out by Wilson and Koch (see ref). The author tried to obtain such layers from solutions of ammonium oxalate and carefully treated 0.5-1.0 mm thick aluminum disks with emery cloths. Anodes were made of platinum, and both electrodes had a 10-20 cm^2 surface. The electrolysis was performed in cells described by Yakovlev and others (Atomnaya energiya, Nr 5, 131 (1956)). 0.2 M solution of $(NH_4)_2C_2O_4$ served as the electrolyte,

Card 1/3

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Electrolytic Production of Layers of Uranium Compounds of Density 1-3 mg/cm^2. Letter to the Editor

78329
SOV/89-8-3-14/32

pH = 9, volume of solution 1 ml per cm^2 of cathode surface. Concentration of the uranium in the form of uranyl nitrite was 1-3 mg/ml, corresponding to the required density of the deposit. Temperature was 80° C. The preliminary heated solution was poured into the cell under current--the current density adjusted to 10 ma/cm^2. The electrolysis lasted 50-60 min and the cathode would collect 95 + 2% of uranium. The deposit could be even larger, but the quality of the layer would then suffer. At the end, the author added methyl alcohol; the solution was thrown away, and the layer was dried in the air. Fastest ratio of deposition was achieved with a uranium concentration of 1 mg/ml. Using 100 ma/cm^2 of current, the author also deposited a firm uniform 3 mg/cm^2 layer on aluminum which was first cleaned with emery cloths and plated with zinc from a solution of 525 gm NaOH and 100 gm ZnO per liter of water. Uniformity was checked by counting α-particles, and the largest variation did

Card 2/3

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Electrolytic Production of Layers of Uranium Compounds of Density 1-3 mg/cm^2. Letter to the Editor

78329
SOV/89-8-3-14/32

not exceed 10%. X-ray structural analysis showed the UO_2 structure. There are 2 figures; and 4 references, 1 Soviet, 3 U.S. The U.S. references are: C. Casto, Analytical Chemistry of Uranium and Thorium, Translation edited by P. N. Paley, M., Izd-vo inostr. lit., 1956, p 340; L. Kock, J. Nucl. Energy, 2, 110 (1955); C. Wilson, A. Langer, Nucleonics, 11, Nr 8, 48 (1953).

SUBMITTED: August 27, 1959

Card 3/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

CHERNOV, M.S.; dots.; MIKEROVA, V.V., dots.; VORSINA, M.A., dots.; KUVSHINNIKOV, I.M., dots.; MIL'CHEV, V.A., dots.; MAYYER, M.M., prepod.; IVANOVA, V.M., assist.; TITOV, V.F., prepod.; GRISHINA, L.V., assist.; BELYAYEVA, Ye.M., assist.; POPOVA, L.F., asist.; GUSEV, S.P., prof., red.; SERGEYEVA, A.S., tekhn. red.

[Laboratory manual on general chemistry; for the students of the institutions of higher learning specializing in the study of commodities and technology] Rukovodstvo k prakticheskim zaniatiiam po obshchei khimii dlia studentov tovarovedenykh i tekhnologicheskikh spetsial'nostei vysshikh uchebnykh zavedenii. Pod obshchei red. S.P.Guseva. Moskva, 1962. 206 p. (MIRA 16:9)

1. Moscow. Institut narodnogo khozyaystva. Kafedra obshchey khimii.

(Chemistry—Laboratory manuals)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.G., inzhener.

Damage to VM-35 bushings due to defective reinforcement.
Elek.sta.27 no.2:57 F '56. (MLRA 9:6)
(Electric insulators and insulation)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

MIKHAYLOV, L.L.; GUSHOV, A.I.; TITOV, V.G.

Combined transportation of oil and gas by pipelines. Neft. khoz. 39 no.7:43-47 Jl '61. (MIRA 14:6)
(Pipelines)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

CA

Concentration of Zangezur ore on a commercial scale. V. G. Titov. *Novosti Tekhniki, Ser. Gornorudnaya Prom.* 1935, No. 20, 10-11. Satisfactory results were obtained with the following amts. of reagents. (*a*) Sn-Cu flotation: Na_2CO_3 4-5, KCN 0.04-0.07, $ZnSO_4$ 0.4, K ethylxanthate 0.07-0.1, pine oil 0.03-0.06 kg./ton; (*b*) Zn flotation: $CuSO_4$ 1.0-1.4, xanthine 0.10-0.12, pine oil 0.05-0.09 kg./ton. A. A. Podgorny

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BC

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

B-I-4

Concentration of Sangaur ore on a commercial scale. V. G. Titov (*Nov. Tech., Ser. Gorn. Prom.*, 1965, No. 20, 10—11).—Satisfactory results were obtained with the following amounts of reagents. Sn–Cu flotation: Na_2CO_3 4—5, KCN 0·04—0·07, $ZnSO_4$ 0·4, OEt-CS_2K 0·07—0·1, pine oil 0·03—0·06 kg./ton. Zn flotation: $CuSO_4$ 1·0—1·4, xanthine 0·10—0·12, pine oil 0·06—0·09 kg./ton.

CH. ABS. (e)

COMMON ELEMENTS

OPEN

MATERIALS INDEX

COMMON VARIABLES INDEX

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MATERIALS INDEX

AUTHOR INDEX

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

COMMON ELEMENTS

Concentration of Zangezur ore on a commercial scale

V. G. Titov. *Nesysti Tekhniki, Ser. Gornorudnaya Prom.* 1935, No. 20, 10-11. Satisfactory results were obtained with the following amts. of reagents: (a) Sn-Cu flotation: Na_2CO_3 4-5, KCN 0.04-0.07, $ZnSO_4$ 0.4, K ethylxanthate 0.07-0.1, pine oil 0.03-0.06 kg/ton; (b) Zn flotation: $CuSO_4$ 1.0-1.4, xanthine 0.10-0.12, pine oil 0.05-0.09 kg/ton. A. A. Podgorny

OPEN

MATERIALS INDEX

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

MATERIALS INDEX

AUTHOR INDEX

1ST AND 2ND LETTER

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

GUZHOV, A.I.; TITOV, V.G.; POLYAKOV, G.G.

Study of the problem of joint oil and gas pipeline transportation. Izv. vys. uchob. zav.; neft' i gaz 3 no.5:113-120 '60. (MIRA 15:6)

1. Groznenskiy neftyanoy institut.
(Pipelines)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

S/075/62/017/005/001/007
I033/I233

AUTHORS: Brudz', V.G., Titov, V.I., Osiko, Ye. P., Drapkina, D. A., and Smirnova, K.A.

TITLE: Sulphonazo as a reagent for the determination of scandium

PERIODICAL: Zhurnal analiticheskoy khimii, v.17, no.5, 1962, 568-573

TEXT: Properties of various reagents which produce colored compounds with Sc ions were investigated and compared. The best results were obtained in the case of sulphonazo. For a solution of pH 4.0 - 5.5, buffered by urotropine or acetate, the peak of optical density is obtained at 610-620 mμ. The Beer law is obeyed

Card 1/3

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up to a concentration of 80 μg/25 ml. In an urotropine medium color develops immediately and is less affected by changes of pH; in an acetate medium the reaction is more selective. 50 μg of Sc may be determined in the presence of of 20 mg Y. V(V), Co, and Ga should be absent; In, Cu, U(VI), Ni, Al, and Zn also interfere. 500-1000-fold excesses of alkali metals, alkaline earths, R.E., Mn(II), Tl, Be, Cr(III), Cd, Pb, Ge, Mo and Re do not interfere. This method was used for determination of Sc in rocks. The results agree with those obtained by the spectrochemical method within 10%.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh reaktivov i osobo chistykh khimicheskikh veshchestv i Vsesoyuznyy nauchno-issledovatel'skiy

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S/075/62/017/005/001/007
I033/I233

Sulphonazo as a reagent....

institut mineral'nogo syr'ya (All-Union Scientific Research Institute of Chemical Reagents and High Purity Chemical Substances, and All-Union Scientific Research Institute of Mineral Raw Materials) Moscow

SUBMITTED: May 20, 1961

Card 3/3

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.I., inzh.

Problem concerning the specifications of electric lighting projects. Svetotekhnika 9 no.5:25 My '63.

(MIRA 16:7)

(Electric lighting--Standards)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

ACCESSION NR: AT4026425 S/2667/63/000/011/0066/0075

AUTHOR: Titov, V. I.

TITLE: Some seasonal features of weather conditions at the Leningrad, Vnukovo, Kursk, Kharkov, and Rostov-on-Don airports as determined by the height of clouds and visibility

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy*, no. 11, 1963. Klimatologiya i aviaklimatologiya (Climatology and aviation climatology), 66-75

TOPIC TAGS: meteorology, aviation climatology, Soviet airport conditions, cloud cover, cloud ceiling, airport visibility

ABSTRACT: An analysis is made of daily weather data collected during 1954-58 at such widely spaced (latitudinally) locations as Leningrad, Moscow (Vnukovo), Kursk, Kharkov, and Rostov-on-Don airports. Two basic meteorological parameters were selected for analysis because of their practical value to aviation (visual approach and take-off): a ceiling of no more than 200 m with 2-km visibility (k_1), and a 300-m ceiling with 4-km visibility (k_2). "Poor weather" was then defined by

Card 1/4

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ACCESSION NR: AT4026425

either of the parameters. Despite the considerable difference in the locations (though not in the elevations) of the airports, the values of the parameters were found to be very similar. The seasons were defined as winter (December to February), summer (May to September), and the transitional months (March—April and October—November). The parameter values were very similar for the periods March—November and April — October. Data analysis showed that during the winter poor weather conditions exist during 45% of the time, and during the summer, 2-10%, with the weather becoming progressively worse toward the south. Thus, for Leningrad the relative figure was 3%, for Moscow, 10%, for Kursk, 11%, for Kharkov, 19%, and for Rostov-on-Don, 23%. At the Kursk airport poor weather conditions (on an annual basis) reach their maxima three hours after sunrise, with optimum conditions occurring around sunset in the summer and three hours after sunset in the winter. Fig. 1 of Enclosure shows k_2 for the various airports. Hours are plotted on the vertical axis and months on the horizontal. Other graphs and tables give related analyses. Orig. art. has: 3 figures and 5 tables.

ASSOCIATION: none

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ACCESSION NR: AT4026425

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 01

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

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.I.; OSIKO, Ya.P.; ANTONOVA, E.A.

Determination of the magnitude of random errors in chemical analysis of geological samples. Zav.lab. 29 no.3:316-321 '63. (MIRA 16:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Mineralogical chemistry)
(Errors, Theory of)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

KOTOV, Anatoliy Ivanovich, kand. sel'khoz. nauk; TITOV, V.I., red.; POKID'KO, A.I., red.; VIDONYAK, A.P., tekhn. red.

[Principles and particular aspects of forest management] Ob osnovakh lesoustroistva i ego osobennostiakh. Kiev, Izd-vo Ukr. Akad. sel'khoz. nauk, 1961. 118 p. (MIRA 14:8)
(Forest management)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

RUSANOV, A.K., red.; TITOV, V.I., red.; SHMANENKOV, I.V., red.; STOLYAROV, A.G., red. izd-va; BYKOVA, V.V., tekhn. red.

[Chemical, physicochemical, and spectral methods of analyzing ores of rare and trace elements] Khimicheskie, fiziko-khimicheskie i spektral'nye metody issledovaniia rud redkikh i rasseianykh elementov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr, 1961. 138 p. (MIRA 14:8)

1. Russia (1923- U.S.S.R.) Ministerstvo geologii i okhrany nedr. (Metals, Rare and minor--Analysis)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.I.; SHCHERBOV, D.P.

Scientific conference held on the occasion of the 40th anniversary of the Kazakh S.S.R. Zav. lab. 27 no.3:362 '61. (MIRA 14:3)
(Kazakhstan--Chemistry--Congresses)

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

5(2) PHASE I BOOK EXPLOITATION SOV/2532

Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya

Metody khimicheskogo analiza mineral'nogo syr'ya, vyp. 4 (Methods of Chemical Analysis of Mineral Raw Materials, Nr 4) Moscow, Gosgeoltekhizdat, 1958. 66 p. Errata slip inserted. 2,000 copies printed.

Sponsoring Agency: Ministerstva geologii i okhrany nedr SSSR.

Compilers: V.I. Titov, (Chief Compiler), P.I. Vasil'yev, R. G. Lebova, and R.L. Podval'naya; Ed. of Publishing House: S.M. Vlasova; Tech. Ed.: S.A. Pen'kova.

PURPOSE: This book is intended for chemists and geologists interested in chemical analysis.

COVERAGE: The booklet describes methods for determination of rare and dispersed elements, namely: beryllium, gallium, hafnium, germanium, indium, lithium, rare earth elements, selenium, tellurium, and zirconium. The booklet is based on well-known methods

Card 1/4

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of analysis and on modified and new methods developed by scientific research organizations and checked by a group of analysts under the supervision of R.G. Lebova, Chief Method Specialist. The method descriptions were tested by the methodological section of the Scientific Council of the Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya (VIMS—All-Union Scientific research Institute for Mineral Raw Materials) consisting of I.V. Shmanenkov (Chairman), V.I. Titov (Vice-Chairman), Ye. I. Zheleznova (Vice-Chairman), V.M. Pensionerova (Secretary), and members P.I. Vasil'yew, L.I. Gerkhardt, F.V. Zaykovskiy, V.M. Zvenigorodskaya, A.K. Rusanov, I.V. Sorokin, V.G. Sochevanov, and B.I. Frid, and were approved for use in geological laboratories. P.I. Vasil'yev and R.L. Podval'naya drew up directions for the determination of beryllium, gallium, germanium, indium, and thallium; V.I. Titov for the determination of hafnium by optical spectral analysis; V.I. Titov, for rare earth elements; V.I. Titov and G.V. Rozovskaya, for selenium and tellurium, and A.V. Vinogradov for zirconium. There are 30 references; 23 Soviet, 3 German, 3 English, and 1 French.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TABLE OF CONTENTS:

Foreword 3

Beryllium. Determination of Beryllium by the Visual and Photocolorimetric Methods With Quinalizarin 5

Gallium. Determination of Gallium by the Fluorometric Method With 8-hydroxyquinoline 13

Hafnium. Preparation of the Material for Determination of Hafnium by the Method of Optical Spectral Analysis 20

Germanium. Determination of Germanium by the Photocolorimetric Method With Phenylfluorone 21

Indium. Determination of Indium by the Fluorometric Method With 8-hydroxyquinoline 29

Lithium. Determination of Lithium by the Gravimetric Method in Silicate Rocks 34

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

Methods of Chemical Analysis (Cont.) SOV/2532

Rare Earth Elements. Separation of the Total of Rare Earths for Subsequent Determination by X-ray Spectrum Analysis 40

Selenium and Tellurium. Determination of Selenium and Tellurium by the Colorimetric and Gravimetric Methods 44

Thallium. Determination of Thallium by the Photocolorimetric Method With Methyl Violet or Crystal Violet 55

Zirconium. Determination of Zirconium by the Volumetric Method 61

Bibliography 66

AVAILABLE: Library of Congress

Card 4/4

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APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

AUTHOR: Titov, V. I. 32-9-1/43

TITLE: A Conference on Rare Metals (Soveshchaniye po redkim metallam)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 9, pp. 1141-1142 (USSR)

ABSTRACT: In June 1957 a conference of the collaborators of laboratories and institutes of the Ministry of Geology and Conservation of Mineral Resources of the USSR was held at Leningrad . Most of the lectures were devoted to the investigation methods of ores and minerals with rare earths. In the work of the conference more than persons took part, among them the representatives of the Institutes of the AS, of the Iron- and Nonferrous Metal-Metallurgical Engineering, of the coal- and of the chemical industry. 161 lectures were held by 45 organisations. V. I. Kuznetsov and I. V. Seryakova (Institute for Geochemistry and Analytic Chemistry of the AS USSR) spoke on the application and theory of the action of organic reagents. N. S. Poluektov (Ukraine Subsidiary of the Institute for Rareland Small Metals) reported on the

Card 1/5

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A Conference on Rare Metals

32-9-41/43

determinations of rare alkali metals. V. S. Bykova (All-Union Scientific Research Institute for Geology) reported on the methods for the determination of niobium and tantalum. T. V. Cherkashina, B. S. Tsyvina, and V. N. Vladimirova (State Institute for Rare and Trace Metals) spoke on the present state of the analytic chemistry of trace elements. P. I. Vasil'yev (All-Union Institute for Mineral Raw Materials) reported on the methods for the determination of beryllium. L. A. Blyum (Uraltsvetmetrazvedka; Nonferrous Metal Scrape, Ural) reported on the determination of selenium and tellurium.- For the determination of small quantities of rare and trace elements the calorimetric and fluorometric analysis method was recommended. The advice is given to determine relatively high quantities of rare earths by means of the weighing method. Because of the quite long duration of such determinations the application of the volume method, wherever it is possible, is recommended. For a number of cases, as in case of thallium, indium, and selenium, the polarographical method is recommended For the determination of lithium, rubidium, cesium, and

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A Conference on Rare Metals

32-9-41/43

strontium the method of the flame-photometric recording is regarded to be the most complete one. For the determination of the individual elements of the rare earth group the X-ray spectrum method with precedent concentration by chemical reparation (though too little sensitive) has to be called the most universal one. The chromatographical method with marked atoms is recommended for the determination of rubidium and cesium (in case of a content of more than 1 %). The greatest interest have aroused the lectures on the influence of the composition of the analized sample on the results of the spectroscopical determination. To these lectures belong: The lecture by P. A. Kok (Kazakh Subsidiary of the Institute for Mineral Materials) on the evaporation process and the nature of mechanical influence of third elements in the quantitive spectroscopic analysis. The lecture by A. K. Rusanov and V. G. Khitrov (All-Union Institute for Mineral Raw Materials) on general rules governing the radiation on occasion of blowing the sample powder into the discharge zone. The lecture by N. S. Poluektov (Ukraine Subsidiary of the Giredmet) on the mutual influence of the elements in the

Card 3/5

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A Conference on Rare Metals

32-9-41/43

flame photometrical analysis. Interesting lectures on the application of the quantitative X-ray spectrum analysis method were held by I. D. Zarinskiy (Institute for Geology and Mineralogy AS USSR) and I. P, Tibukin (Uzbeck Geolupravleniye - Department of Geology). In the mineralogical section 24 lectures were held. The majority of these lectures dealt with the questions of the method. On the mineral separation and on the segregration of the monomineral fractions at adhesive surfaces spoke G. O. Kots (All-Union Institute for Mineral Raw Materials), on the utilisation of the difference in the dielectric properties in the case of the minerals Ye. V. Rozhkova (All-Union Institute for Mineral Raw Materials), on complex chemical-mineralogical methods of the quantitative analysis of the aggregates A. A. Glagolev (Kazakh Subsidiary of the Institute for Mineral Raw Materials). Ya. Z. Bur'yanova (All-Union Scientific Research Institute for Geology) spoke on the method for the determination and half-quantitative valuation of the selenium content in ores and minerals. V. M. Ratynskiy and

Card 4/5

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A Conference on Rare Metals 32-9-41/43

F. Ya. Saprykh (All-Union Scientific Research Institute for Geology) reported on the determination of the compound sort of germanium with the carbon components. The conference stressed the necessity of working out methods for a rapid determination of rare elements, as well as of the automation of some processes.

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

SHMANENKOV, I.V.; TITOV, V.I.; RUSANOV, A.K.; ROZHKOVA, Ye.V.; EYGELES, M.A.; ZVEREV, ~~L.V.~~

All-Union conference on laboratory methods of studying ores and minerals of rare and trace elements. Sov. geol. no.61:158-166 '57. (MIRA 11:4)

1. Vsesoyuznyy institut mineral'nogo syr'ya.
(Mineralogy--Congresses)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

FINKEL'SHTEYN, D.N.; BORETSKAYA, V.A.; TITOV, V.I., red.; SKVORTSOV, V.P., red.izd-va; GUROVA, O.A., tekhn.red.

[Methods for the analysis of minerals: work of the Central Laboratory of the Ural Geological Administration] Metody analiza mineral'nogo syr'ia; iz opyta raboty tsentral'noi laboratorii Ural'skogo geologicheskogo upravleniia. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr, 1958. 183 p. (MIRA 12:3)

(Mineralogy, Determinative)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.I., kand.tekhn.nauk

"Amperometric (polarimetric) titration in the analysis of mineral matter" by O.A.Songina. Reviewed by V.I.Titov. Zav.lab. 24 no.10:1296 '58. (MIRA 11:11)

(Metals--Analysis) (Conductometric analysis)
(Songina, O.A.)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

TITOV, V.I.; VASIL'YEV, P.I.; LEBOVA, R.G.; PODVAL'NAYA, R.L.; VLASOVA, S.M., red.izd-va; PEN'KOVA, S.A., tekhn.red.

[Chemical analysis of mineral ores] Metody khimicheskogo analiza mineral'nogo syr'ia. Moskva, Gos. nauchno-tekhn.izd-vo lit-ry po geol. i okhrane nedr. No.4. 1958. 66 p. (MIRA 12:2)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Ores--Analysis) (Chemical elements)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

AUTHOR: Titov, V. I., Candidate of Technical Sciences SOV/32-24-10-68/70

TITLE: O. A. Songina: The Amperometric (Polarometric) Titration in the Analysis of Mineral Raw Materials (O. A. Songina, Amperometricheskoye (polyarometricheskoye) titrovaniye v analize mineral'nogo syr'ya) A Manual of Methods. Gosgeoltekhizdat, 1958, Edition: 5000, 211 Pages, Price: 8,90 Roubles (Metodicheskoye rukovodstvo, Gosgeoltekhizdat, 1958 g., t. 5000 ekz., 211 str. ts. 8 r. 90 k.)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol 24, Nr 10, pp 1296-1296 (USSR)

ABSTRACT: The book discussed is the first attempt to systematically represent the fundamental principles, possibilities and methods of amperometric titration. In the first chapter general ideas concerning the method itself are given. The second chapter deals with problems of the theory of this method. In the third and fourth chapters the apparatus used and the titration technique employed are described. The main part of this book deals with the identifications of: Al, Ba, Be, B, V, Bi, W, Fe, Au, In, J, K, Cd, Ca, Co, Si, Mn, Cu, Mo, As, Ni, Sn, Pd, Hg, Pb, Se, S, Ag, Sb, Tl, Te, Ti, Th, U, P, F, Cl, Cr, Zn, Zr in

Card 1/2

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

O. A. Songina: The Amperometric (Polarometric) Titration in the Analysis of Mineral Raw Materials. A Manual of Methods. Gosgeoltekhizdat, 1958, Edition: 5000, 211 Pages, Price: 8,90 Roubles SOV/32-24-10-68/70

various objects. After a short critical comment it is mentioned that this book is especially valuable as no other Soviet manual on polarographic analysis exists.

Card 2/2

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"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

URAZOV, G.G. [deceased]; BOL'SHAKOV, K.A.; TITOV, V.I.

Preparation of bismuth from slimes following the electrolytic refining of lead. Izv. vys. ucheb. zav.; tsvet. met. 3 no.4:94-101 '60. (MIRA 13:9)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii. Kafedra khimii i tekhnologii redkikh i rasseyannykh elementov.
(Lead--Electrometallurgy) (Bismuth)

APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9"

"APPROVED FOR RELEASE: 07/16/2001 CIA-RDP86-00513R001755910004-9

L 1341-66 EWT(1)/FCC GW

ACCESSION NR: AT5022392

AUTHOR: Titov, V. I. UR/2667/65/000/034/0003/0016

44,55

TITLE: Some climatic features of the Rostov-on-Don, Mineral'nyye Vody, and Tbilisi regions

20
17
B+1

SOURCE: Moscow. Nauchno-issledovatel'skiy institut aeroklimatologii. Trudy, no. 34, 1965. Aeroklimatologiya (Aeroclimatology), 3-16

TOPIC TAGS: micrometeorology, aviation meteorology, weather forecasting, airport

12,44,55

ABSTRACT: This paper describes the characteristics of recurring complex meteorological conditions for the three airports of Rostov-on-Don, Mineral'nyye Vody, and Tbilisi, depending on the season of the year and the synoptic situation. The purpose was to evaluate the recurrence and stability of ceilings of 200 m or less and horizontal visibility of less than 2 km, and to examine these two elements in relation to several other meteorological elements and atmospheric phenomena (fog, various types of precipitation, wind velocity and direction, topography of the

Card 1/2

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underlying ground, air temperature, turbulence, and the location and movement of highs, lows, and fronts. Orig. art. has: 3 figures and 9 tables. [ER]

ASSOCIATION: Nauchno-issledovatel'skiy institut aeroklimatologii, Moscow (Scientific Research Institute of Aeroclimatology)

44,55

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TITOV, V.I.

Some climatic characteristics of the regions of Rostov-on-Don, Mineral'nyye Vody, and Tiflis. Trudy NIIAK no.34:3-16 '65. (MIRA 18:11)

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U.S.S.R. Ministerstvo geologii i okhrany nedr

Metody opredleniya radioaktivnykh elementov v mineral'nom syr'ye (Methods of Determining Radioactive Elements in Mineral Raw Materials) Moscow, Gosgeoltekhizdat, 1958. 68 p. 3,000 copies printed.

Compilers: Sochevanov, V.G. and Titov, V.I.; Ed.: Krasnova, N.E. Tech. Ed.: Averkiyeva, T.A.

PURPOSE: This book is for those engaged in geochemical prospecting for radioactive ores.

COVERAGE: The chemical determination of radioactive substances in minerals and rock formations is described in this publication. Chemical treatment of materials in preparation for radiometric analysis is also included. The proposed methods are considered to be the most

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reliable for geochemical research. Methods are presented in the form of separate procedure instructions with the inclusion of: principle of the method, elimination of interfering factors, application limits, necessary reagents, procedure of analysis. Specifications for high purity reagents are given whenever necessary. There is a bibliography with 26 references, 17 of which are Soviet, 4 English, 3 German, 1 Czech, and 1 Swiss.

TABLE OF CONTENTS:

Preface 3

URANIUM

Titov, V.I., Volkov, I.I. Colorimetric Determination of Uranium by the Trilon-Phosphate Method 4

Zvenigorodskaya, V.M., Rudina, L.P. Colorimetric Determination of Uranium by Means of the Fluoride Method 12

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