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solutions. Indium can even be extracted from 10 N (and higher concentrated) H_2SO_4 with a high distribution coefficient, whereas Sn^{2+} is left almost quantitatively in the aqueous phase. The partition coefficient thus reaches 10^6. In is easily reextracted by washing with small amounts of 6-9 N HCl, Sn^{4+} being removed additionally. In an extraction cycle of 3-4 extraction stages, the indium concentration in the HCl re-extract may be increased by 60 - 80 times due to a counter flow of the initial solution (Ref.3: V. A. Mikhaylov, Izv. Sib. otd. AN SSSR, No 4.(1960)). With a high Sn content it is recommended to use a 100-150 g/l acid solution for the extraction since the solubility of Sn and In sulfates in concentrated H_2SO_4 solutions is low. The acidity of commercial solutions (after electrolytic removal of Sn) containing glue and β-naphthol has to be increased up to 400-450 g/l if good phase separation is wanted. Sn is then removed from the organic phase by washing with even stronger H_2SO_4 (700 - 900 g/l). Sometimes, preliminary dilution of the solution becomes

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S/020/61/138/006/019/019
B103/B215

Separation of indium ...

necessary. The solutions to be extracted contained: 0.75 - 1.5 g/l of In, 5 - 10 g/l of Sn^{2+}, and 4 - 6 g/l of Sn^{4+}. The above method allows a quantitative separation of In from Sn^{2+} within the range of Sn : In = (30 - 10) : 1 to 5000 : 1 (indicator amounts of In). Indium was thus twice re-extracted by 9 N HCl at O : A = 2.5 : 1. A metallic indium sponge containing 10 - 25% of impurities (mainly Sn^{4+}) was thus obtained from the re-extract by cementation onto zinc or by electrolysis. Sn^{4+} was most easily separated from In by washing the organic phase with HF (1 : 1). The ratio O : A = (30 - 40) : 1 was sufficient, since the distribution coefficient of Sn^{4+} from HF-containing solutions is very low (< 0.01). Indium sponge can thus be produced with a purity of 98 - 99%. After extraction of indium, the extracting agent may again be added to the cycle. It is recommended to use derivatives of higher alcohols (such as 2-ethyl hexanol) to reduce the losses of extracting agent in the aqueous phase. The above method can be applied to analytical and technological purposes.

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25343

S/020/61/138/006/019/019
B103/B215

Separation of indium ...

There are 1 figure, 1 table, and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The reference to English-language publication reads as follows: Ref.2: E. M. Scadden, N. E. Ballou, Anal. Chem., 25, 1602 (1953)).

ASSOCIATION: Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Chemistry and Metallurgy of the Siberian Branch of the Academy of Sciences USSR) Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Inorganic Chemistry of the Siberian Branch of the Academy of Sciences USSR)

PRESENTED: December 2, 1960 by I. V. Tananayev, Academician

SUBMITTED: December 1, 1960

Card 4/4

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25485

S/020/61/139/001/017/018
B103/B229

AUTHORS: Levin, I. S. and Zabolotsky, T. V.

TITLE: Separation of indium from zinc and accompanying elements by extraction with alkyl phosphoric acids

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 139, no. 1, 1961, 158-159

TEXT: The authors state that the usual extraction methods are used only in the analytical practice, especially to separate indium from cadmium. The numerous technological variants of the separation of indium from zinc, and also from cadmium, copper, lead, iron, and others, are based on classical methods of precipitation, electrolysis, cementation, and others. In their work the authors dealt with the extraction separation of indium from the aforementioned elements, and from cobalt, nickel, Fe^{II}, and Fe^{III}, and finally from aluminum and gallium. Mainly, a mixture was used by them consisting of 10 % pyro-, 10 % di-, and 80 % monooctyl phosphoric acid at room temperature and at a ratio of O : A (organic : aqueous) = 1 : 2. The mixtures were shaken for 5 minutes, although 1 minute is sufficient to obtain the equilibrium (except for Fe and Al). The authors found that

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25485
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B103/B229

Separation of indium from zinc...

indium can be extracted completely not only from sulfates of solutions, but also from such of perchloric, nitric, hydrofluoric, oxalic, formic, and other acids, in a wide range of concentrations. An extraction from a solution of phosphoric and acetic acid turns out to be less complete. Halogen hydracids (excepting HF) reextract indium even at a ratio of O : A = 1 : 100. A concentration of indium is thereby made possible. Thus the authors succeeded in obtaining hydrochloric indium solutions with an In content of 120 - 130 g/l, whereas the initial solutions contained 4.2 g/l. Zn, Cd, Ni, and Fe^{II} can only be extracted well from weak sulfuric acid solutions (pH 2 - 5). The distribution coefficients attaining 20 - 60 at these pH-values decrease rapidly with increasing acid concentration and amount to 10^{-2} - 10^{-3} in extraction from 10 M H_2SO_4. To separate indium from the aforementioned elements it was extracted from sulfuric acid solutions, whilst the organic phase was washed 3 - 4 times with H_2SO_4 (400 - 500 g/l), at a ratio of O : A = 3 : 1. In this case, In remains in the organic phase. The reextraction was carried out by means of 9 N HCl (O : A = 2 : 1). When the experiments were carried out under hard conditions

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B103/B229

Separation of indium from zinc...

a nearly quantitative separation was achieved. The soluble lead compounds can be extracted well at a slight acidity. However, when the organic phase is washed with 2 N H_2SO_4, a fine-crystalline precipitation of lead sulfate, (exactly like in the case of Sn^{II}) settles down. Those elements that form stable fluoride complexes cannot be extracted from the HF-solutions and therefore cannot be separated from indium (exactly like Sn^{IV}). The authors state that a separation of indium from Fe^{III}, Al, and gallium, is possible. According to data in the literature its separation is also possible from uranium, zirconium, thorium, scandium, and titanium. From the data given by the authors results that all elements analyzed by them (excepting Fe^{III}) practically do not influence the indium extraction, even in high concen- concentrations. The indium extraction is suppressed by Fe^{III}, whereby its low yield in the reextract can be explained. There are 2 figures, 2 tables, and 10 references: 8 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: B. S. Hunt et al. Ref. 6: Canad. Mining & Metallurg. Bull, No. 566, 359 (1959); Trans. Canad. Inst. Mining & Metallurgy, 62, 173 (1959)); D. C. Madigan (Ref. 10: Austral. J.

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25485
S/020/61/139/001/017/018
B103/B229

Separation of indium from zinc...

Chem. 13, 59 (1960)).

ASSOCIATION: Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Chemistry and Metallurgy of the Siberian Branch of the Academy of Sciences USSR) Institut neorganicheskoy khimii Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Inorganic Chemistry of the Siberian Branch of the Academy of Sciences USSR)

PRESENTED: December 2, 1960, by I. V. Tananayev, Academician

SUBMITTED: December 1, 1960

Card 4/4

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LEVIN, I.S.

A specific case of element separation by re-extraction. Izv.Sib. otd.AN SSSR no.1:55-61 '62. (MIRA 15:3)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN SSSR, Novosibirsk.
(Extraction (Chemistry))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; KLETENIK, Yu.B.

Conference on Extraction in Analytical Chemistry. Zav.lab. 28 no.4:516-517 '62. (MIRA 15:5)
(Extraction (Chemistry)--Congresses)
(Chemistry, Analytical)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

S/032/62/028/011/001/015
B106/B186

AUTHORS: Levin, I. S., and Azarenko, T. G.

TITLE: Determination of small quantities of indium and tin-containing materials by extraction and photometric analysis

PERIODICAL: Zavodskaya laboratoriya, v. 28, no. 11, 1962, 1313 - 1316

TEXT: A method of combined extraction was elaborated, by which small quantities of In can be separated from large quantities of Sn and other elements. Preliminary experiments showed that indium and tetravalent tin can be extracted by alkyl phosphoric acids from hydrohalic solutions, thereby, the extractability from isomolar solutions of these acids increases for In in the order HCl < HBr ≤ HF < HI, but for Sn in the order HF ≤ HCl ≤ HBr. The highest values of the distribution coefficient α_{In}/α_{Sn} were obtained by extraction from hydrofluoric solutions or by shaking the organic extract with dilute hydrofluoric acid. Thus, In with a residual Sn content of only $< 10^{-4}$ % could be separated from solutions with an Sn-to-In ratio of 50:1. Tin as well as indium were also extracted from

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hydrobromic solutions; equilibrium became established with indium after 10 - 15 sec, but with Sn only after 1 - 1.5 hrs. On the basis of this result the following method is suggested for determining In: Indium and tetravalent tin are extracted together from a 3 - 4 N sulfate solution of the sample with 2-ethyl-hexyl phosphoric acid dissolved in octane or isooctane and are thus separated from Zn, Cd, As, Sb, Fe, Cu, Co, Ni, and Au and rapid reextraction with hydrobromic acid. Also other alkyl phosphoric acids (alkyl groups C_5 - C_{12}) can be used for the extraction. Indium is rapidly (1 - 2 min.) reextracted from the extract with hydrobromic acid (organic : aqueous phase = 5 : 1), whereby practically the entire Sn remains in the organic phase. In the acid extract, indium is photometrically determined in benzene solution by the color reaction with rhodamine 6Ж (6Zh). Gallium and thallium interfering with the determination are to be separated. The sensitivity of the method corresponds to 10^{-4}% In for a weighed portion of 1 g; the error is 5 - 8% with In contents of 10^{-2} - $5 \cdot 10^{-3}$%, and 15 - 30% with In contents of $5 \cdot 10^{-3}$ - $5 \cdot 10^{-5}$%. The method was used to analyze sulfide and oxide concentrates containing 15.6-53.7% Sn, 33.6-2.11% Fe, 0.065-2.25% W, 8.1-14.4% SiO_2, 0.2% Ti, 0.22% Pb,

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Determination of small quantities... S/032/62/028/011/001/015
B106/B186

0.4% Zn, 0.007-0.0009% In. There are 2 figures and 2 tables.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.

Separation of indium and tin by extraction with alkylphosphoric acids. Zhur.prikh.khim. 35 no.11:2368-2379 N '62. (MIRA 15:12)
(Indium—Analysis) (Tin—Analysis) (Extraction (Chemistry))

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; AZARENKO, T.G.

Separation of indium from bi, tri, and tetravalent metals by extraction with alkyl phosphoric acids. Zhur. anal. khim. 18 no.11:1335-1339 N '63. (MIRA 17:1)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN SSSR, Novisibirsk.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

KLETENIK, Yu.P.; LEVIN, I.S.

Interaction of mono-2-ethylhexylphosphoric acid with tributyl phosphate in n-octane. Radiokhimiia 7 no.1:110-113 '65. (MIRA 18:6)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

L 41494-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD
ACCESSION NR: AP5004431 S/0075/65/020/001/0062/0066

AUTHORS: Levin, I. S.; Shatalova, A. A.; Azarenko, T. G.

13
12
B

TITLE: Use of alkyl phosphoric acids in analytical chemistry. Communication 2. Separation of indium from antimony and bismuth

27 27 27

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 1, 1965, 62-66

TOPIC TAGS: indium, antimony, bismuth, sulfuric acid, nitric acid, perchloric acid, phosphoric acid, extracting agent, oxalic acid

ABSTRACT: A method for simultaneous separation of indium from antimony (Sb III) and bismuth (Bi III) by extraction with alkyl phosphoric acid (APA) is described. First, the extraction of Sb and Bi from sulfuric, nitric, and percholric acid solutions is studied. It is shown that at 12-13 N H_2SO_4 concentration, the percent extraction of Sb is at a maximum with mono-di- and pyro-ethylhexylphosphoric acid. It is then shown that oxalic acid is the best medium for separating indium from Sb and a part of Bi. The separation of indium from antimony and partial bismuth separation is based on the re-extraction of Sb and Bi when indium (after flushing) is in the organic phase. This can be accomplished with practically any amount of Sb, e.g., Sb: In = 4000:1. Similarily, indium can be separated from bismuth by the

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

L 41494-65

ACCESSION NR: AP5004431

re-extraction of bismuth with potassium iodide. Orig. art. has: 5 figures, 3 tables, and 1 formula.

ASSOCIATION: Khimiko-metallurgicheskiy institut SO AN SSSR, Novosibirsk (Chemical-Metallurgical Institute, SO AN SSSR)

SUBMITTED: 07Dec63 ENCL: 00 SUB CODE: GC

NO REF SOV: 017 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

L 49023-65 EWT(m)/EWP(t)/EWP(b) LIP(c) JD
ACCESSION NR: AP5011049 UR/0075/65/020/004/0452/0458

11
10
B

AUTHOR: Levin, I. S.; Azarenko, T. G.

TITLE: Use of alkylphosphoric acids in analytical chemistry. Report No. 3. Reextraction of indium and determination of its small quantities in ores and intermediate products of the lead-zinc and copper industries

SOURCE: Zhurnal analiticheskoy khimii, v. 20, no. 4, 1965, 452-458

TOPIC TAGS: indium 27 extraction, indium determination, ore analysis, alkylphosphoric acid, lead refining, zinc refining, copper 27 refining, tributyl phosphate

ABSTRACT: Studies of the extraction of indium by mixed solvents revealed that the systems indium - mono-2-ethylhexylphosphoric acid (M2 EHPA) - tributyl phosphate (TBP) - mineral acid (H_2SO_4, HNO_3, $HClO_4$, etc.) - water, indium - di-2-ethylhexylphosphoric acid (D2 EHPA) - TBP - mineral acid- water, and others are characterized by a very substantial antagonistic effect consisting of the fact that the extraction capacity of individual M2 EHPA and D2 EHPA as well as that of other mono- and dialkylphosphoric acids and their mixtures decreases appreciably in the presence of TBP. This antagonistic effect facilitates the

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L 49023-65

ACCESSION NR: AP5011049

reextraction, permits a considerable expansion of the assortment of reextracting agents, and the selection of a suitable aqueous phase. A rapid method of determining small amounts of indium in ores and intermediate products of the lead-zinc and copper industries is described in detail, indium being determined photometrically. The sensitivity of the method for a 1 g sample is 1×10^{-5}%. Orig. art. has: 5 figures, 1 table, and 4 formulas.

ASSOCIATION: Khimiko-metallurgicheskiy institut SO AN SSSR, Novosibirsk (Chemical-Metallurgical Institute, SO AN SSSR)

SUBMITTED: 03Mar64 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 016 OTHER: 033

Card 2/2

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; SHATALOVA, A.A.

Extraction of antimony (III) by alkyl phosphoric acids and the possibility of its separation from the accompanying elements. Dokl. AN SSSR 161 no.5:1158-1160 Ap '65. (MIRA 18:5)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN SSSR. Submitted October 24, 1964.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; SHATALOVA, A.A.; AZARENKO, T.G.

Use of alkyl phosphoric acids in analytical chemistry. Part 2: Separation of indium from antimony and bismuth. Zhur. anal. khim. 20 no.1:62-66 '65. (MIRA 18:3)

1. Khimiko-metallurgicheskiy institut Sibirskogo otdeleniya AN SSSR, Novosibirsk.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I. S.

PHASE I BOOK EXPLOITATION 228

Vsesoyuznoye soveshchaniye po probleme iskusstvennogo zhidkogo topliva i tekhnologicheskikh gazov. 2d., Moscow, 1954.

Khimicheskaya pererabotka topliva; trudy soveshchaniya (Chemical Treatment of Fuel; Transactions of the Second All-Union Conference on Synthetic Liquid Fuel and Industrial Gases) Moscow, Izd-vo AN SSSR, 1957. 430 p. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut goryuchikh iskopayemykh.

Eds.: Lanin, V. A., Doctor of Chemical Sciences (semi-coking); Lozovoy, A. V., Doctor of Chemical Sciences (hydrogenation); Shishakov, N. V., Doctor of Technical Sciences (gasification); Ed. of Publishing House: Bankvitser, A. L.; Tech. Ed.: Kiseleva, A. A.; Corrector: Bobrov, V. A.

PURPOSE: This book is intended to promote technical progress and to assist in the exchange of experience among scientists working on the production of synthetic liquid fuels and gases.

COVERAGE: This monograph contains selected reports delivered at the Second All-Union Conference on Synthetic Liquid Fuel and Gases which was held in Moscow from November 25, 1954 to December 2, 1954. The reports deal with such subjects as

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Chemical Treatment of Fuel (Cont.)

the theory and technology of semi-coking of solid fuels, gasification, hydrogenation, and thermal diffusion. The reports also discuss the use of gases as raw material for the production of synthetic liquid fuel and chemical products. This monograph is extensively illustrated with diagrams and tables. For references see Table of Contents. The following institutions are mentioned in this monograph: IGI AN SSSR (Institut goryuchikh iskopayemykh imeni G. M. Krzhizhanovskogo AN SSSR—Institute of Mineral Fuels imeni G. M. Krzhizhanovskiy of the Academy of Sciences, USSR), VNIGI (Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo zhidkogo topliva i gaza — All-Union Scientific Research Institute of Synthetic Liquid Fuels and Gases), Irkutskiy gosudarstvennyy universitet imeni A. A. Zhdanova (Irkutsk State University imeni A. A. Zhdanov), Ural'skiy politekhnicheskiy institut imeni S. M. Kirova (Ural Polytechnic Institute imeni S. M. Kirov), Institut teploenergetiki AN UkrSSR (Institute of Thermal Power Engineering, Academy of Sciences, UkrSSR), Laboratoriya khimicheskoy pererabotki topliv Instituta teploenergetiki AN UkrSSR (Ukrainian Academy of Sciences Laboratory for the Chemical Treatment of Fuels), Slantsekhimicheskiy kombinat "Kiviyli" ("Kiviyli" Shale-Chemical Combine), VNIIPS (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke slantsev—The All-Union Scientific Research Institute for Shale Processing), Institut nefti AN SSSR (Petroleum Institute, Academy of Sciences, USSR), Institut energetiki i khimii Vostochno-Sibirskogo filiala AN SSSR

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Chemical Treatment of Fuel (Cont.)

(Power and Chemistry Institute, East Siberian Branch of the Academy of Sciences, USSR), TsIATIM (Tsentral'nyy nauchno-issledovatel'skiy institut aviatsionnykh topliv i masel — Central Scientific Research Institute of Aviation Fuels and Lubricants), GIAP (Gosudarstvennyy institut azotnoy promyshlennosti — State Institute of the Nitrogen Industry), Saratovskiy gosudarstvennyy institut imeni, N. G. Chernyshevskogo (Saratov State University imeni, N. G. Chernyshevskiy), Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza (All-Union Scientific Research Institute of Natural Gas), Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva (All-Union Scientific Research Institute of Petroleum and Gas Refining and Synthetic Liquid Fuel Production), VTI (Vsesoyuznyy teplotekhnicheskiy institut im. F. Dzerzhinskogo — All-Union Heat Engineering Institute im. F. Dzerzhinskiy), and MEI (Moskovskiy energeticheskiy institut im. Molotov — Moscow Institute of Energetics im. Molotov).

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Foreword 3

Kazakov, Ye. I. (IGI AN SSSR and VNIGI), and Bezradetskiy, G. N. (IGI AN SSSR and VNIGI). Semi-coking of Solid Fuels and the Tasks of Scientific Research in this

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Field

There are 14 references of which 9 are Soviet and 5 are English. Reference is made to the following institutions which assisted in the study of raw material for semi-coking: Irkutskiy gosudarstvennyy universitet (Irkutsk State University), Ural'skiy politekhnicheskiy institut (Ural Politechnic Institute), Institut organicheskoy Khimii Akademii nauk SSSR (Institute of Organic Chemistry, Academy of Sciences, USSR).

Lanin, V.A. (IGI AN SSSR) (Deceased). Role and Significance of Scientific Research in the Effective Use of Low Temperature Tars 18

There are no references and no facilities are listed. The one personality referred to is S. R. Sergiyenko.

Larina, V. A. (Irkutskiy gosudarstvennyy universitet). Raw Material Base for Semi-coking in Eastern Siberia 23

There are 3 Soviet references. Twelve tables are included. The following personalities are mentioned: A. V. Kalabina, A. Ye. Favorskiy, and M. F. Shostakovskiy.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

Levin, I. S. (Ural'skiy politekhnicheskiy institut) Lignites of the Urals and Siberia as a Raw Material Base for the Synthetic Liquid Fuel Industry. 36

The following personalities are referred to: L. P. Ukhov, Docent, and his assistants A. A. Bashkirtseva and B. S. Gurevich; B. I. Timin, Docent, and his assistants Ye. S. Ekel' and Z. D. Kablova. Extensive work in thermal dissolution of fuel was done by M. K. D'yakova and A. V. Lozov. One table and one diagram are included. There are no references.

Shchegolev, G. M. (Institut teploenergetiki AN UkrSSR). Semi-coking of Ukrainian Lignite by Means of a Solid Heat Carrier 45

No personalities are referred to and there are no references. The only facility mentioned is the Energeticheskiy institut imeni, G. M. Krzhizhanovskogo AN SSSR (Power Institute imeni G. M. Krzhizhanovskiy, Academy of Sciences, SSSR). Eight diagrams are included.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

Bezradetskiy, G. N. (VNIGI) and Turskiy, Yu. I. (VNIGI).
Semi-coking of Coal Mines in a "Boiling" Zone 56

There are no references. Five tables are included.

Perepelitsa, A. L. (Vostochno-Sibirskiy filial AN SSSR)
Semi-coking of Powdered Cheremkhovo Coals 65

There are 3 references of which one is Soviet and 2 are English.

The personalities referred to are: Ye. I. Kazakov who demonstrated the advantage of using a gaseous heat-carrier instead of a solid carrier; B. K. Klimov, Corresponding Member, Academy of Sciences, USSR, active in the establishment (1945) of the first power-chemical plant using gaseous and solid heat carriers at the Gusinoozersk Power Plant of the East Siberian Railroad; I. Ye. Kubynin and L. I. Girshman, Members of Komissiya Prezidiuma AN SSSR (Commission of the Presidium, Akademy of Sciences, USSR). The facilities mentioned are: Elektrostantsiya zavoda Libknekhte (the power plant of the K. Libknekht Plant at Dnepropetrovsk). DPRZ (Dnepropetrovskiy parovozoremontnyy zavod—Dnepropetrovsk Locomotive Repair Plant), Gusinoozerskaya elektrostantsiya (Gusinoozersk Power Plant), Sodovyy zavod Buryat-Mongol'skoy ASSR (Soda Plant in the Buryat-Mongol'skaya ASSR), IZTM (Irkutskiy savod tyazhelogo mashinostroyeniya—Irkutsk Heavy Machine-building Plant), Irkutskiy gorno-metallurgicheskiy institut (Irkutsk Mining and Metal-

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lurgical Institute), Zavod imeni Kuybysheva (Plant imeni Kuybyshev), and Institut energetiki i khimii Vostochno Sibirskogo filiala AN SSSR (Power and Chemistry Institute of the East Siberian Branch of the Academy of Sciences, USSR). Seven diagrams are included.

Al'tshuler, V. S. (IGI AN SSSR) and Shafir, G. S. (IGI AN SSSR).
Characteristics of Semi-coking of Solid Fuel Under Pressure 76

There are no references. Personalities mentioned are N. A. Orlova and N. D. Likhacheva of the Khar'kov Coal and Chemical Institute; A. D. Kokurina, O. A. Krylova, F. Fisher and his assistants who studied the effect of pressure on the thermal dissolution of fuels; B. K. Klimov, Ye. I. Kazakov, P. K. Kogerman, V. A. Lanin, G. Ye. Fridman, and V. P. Tsibasov who studied the effect of gas on semi-coking processes. Eight tables and two diagrams are included.

Kazakov, Ye. I. (IGI AN SSSR) and Malashenko, L. P. (IGI AN SSSR).
Dynamics of Separating Volatile Products in Semi-coking Fine-grained Shales in the Gas Flow 87

Card 7/20 There are 4 Soviet references. No personalities or facilities are mentioned. Six tables and 7 diagrams are included.

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Kazakov, Ye. I. (IGI AN SSSR); Tyazhelova, A. A. (IGI AN SSSR); and Malashenko, L. P. (IGI AN SSSR).

The Effect of Thermal Treatment of Ukrainian Lignites on the Yield and Composition of Products of Semi-coking. 98

There are 6 Soviet references. Six tables are included. No personalities or facilities are mentioned.

Kuznetsov, V. I. (Institut teploenergetiki AN UkrSSR).
Synthetic Liquid Fuel Obtained from Ukrainian SSR Lignite Primary Tar 105

There are no references. The personalities mentioned are: R. P. Govorova, A. G. Fadeicheva, A. A. Bobrova, M. K. Chernykh, T. B. Kigel', and P. I. Vorob'yev (chief mechanic). The above are all staff members of Laboratoriya khimicheskoy pererabotki topliv Instituta teploenergetiki AN UkrSSR (Laboratory of Chemical Purification of Fuels, Heat Thermal Power Engineering Institute, Ukrainian Academy of Sciences). No facilities are indicated. Five tables and three diagrams are included.

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Nikolayev, G. A. (Slantsekhimicheskiy kombinat "Kiviyli"). Operating Shale-distilling Tunnel Furnaces of the "Kiviyli" Shale-chemical Combine 116

There are no references. The personalities mentioned are: M. S. Kulzhinskiy, engineer, and P. M. Sheloumov, chief designer. They are credited with producing the original design of tunnel type furnaces and introducing them in the shale industry. Facilities referred to include: Kokhtla-Yarve Slantseperarabatyvayushchiy zavod (Kokhtla-Yarve Shale Processing Plant), Kashpirskiy slantseperegonnyy zavod Kashpirsk Shale Distilling Plant), Slantsevyye predpriyatiya im. V. Kingiseppa (Shale Plant im. V. Kingisepp at Sallamyae in the Estonskaya SSR), Proyektnyy i nauchno-issledovatel'skiy institut mestnoy i slantsekhimicheskoy promyshlennosti (Planning and Scientific Research Institute of the Local and Shale-chemical Industry), Tallinskiy politekhnicheskiy institut (Tallin Polytechnic Institute), and Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Chemical Machine Building).

Feofilov, Ye. Ye. (VNIIPS). Production of Synthetic Liquid Fuel and of Chemical Products from Shale Tar 120

There are no references. The personalities mentioned include: V. F. Polozov

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Chemical Treatment of Fuel (Cont.)

and M. V. Kobyl'skaya (both of the staff of VNIIPS); N. I. Zelenin and S. S. Semenov, who worked with the author in testing the components of shale tar; V. A. Lanin and his assistants of the IGI AN SSSR who studied the catalytic cracking of phenol-free shale tar fractions. Others were: A. P. Sivertsev; O. S. Kuratova; L. I. Gulyayeva; B. I. Ivanov; N. F. Sharonova; M. V. Pronina; G. N. Gantovskaya; and Kh. D. Raudsepp. The research workers, A. Ya. Drinberg and others of LKhTI (Leningradskiy khimiko-tekhnologicheskiy institut—Leningrad Institute of Chemical Technology) collaborated with staff members of the scientific research organizations of Estonskaya SSR. Other organizations mentioned were: Leningradskiy veterinarnyy institut (Leningrad Veterinary Institute); VIZR (Vsesoyuznyy nauchno-issledovatel'skiy institut zashchity rasteniy—All-Union Scientific Research Institute for the Protection of Plants); and TsIATIM (Tsentral'nyy nauchno-issledovatel'skiy institut aviamotorostroyeniya im. P. I. Baranova—Central Scientific Research Institute of Aircraft Engines im. P. I. Baranov).

Lanin, V. A. (IGI AN SSSR) (Deceased); Fridman, G. Ye. (IGI AN SSSR) and Peresleni, I. M. (IGI AN SSSR). Production of Motor Fuels from Generator Shale Tar 136

There are no references, personalities or facilities. Thirteen tables are included.

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Makarov, I. A., Data Gained from Starting a Hydrogenation Plant 146

There are no references, personalities or facilities. Two tables and four drawings are included.

Katsobashvili, Ya. R. (Institut nefti AN SSSR). Destructive Hydrogenation of Heavy Petroleum Residues in Dispersed State Under Low Pressure in a Circulating Catalyst Flow. There are 16 Soviet references. 159

The personalities mentioned are: V. I. Karzhev, Doctor of Sciences; N. S. Kurkova, A. R. Brun-Tsekhovoy, N. P. Volynskiy, and N. V. Sidorova. All of them are on the staff of the Petroleum Institute, Academy of Sciences, USSR. Ten tables and two drawings are included.

Lozovoy, A. V. (IGI AN SSSR) and Senyavin, S. A. (IGI AN SSSR). Relative Velocity in Hydrogenation and Decomposition of Hydrocarbons Under Conditions of Destructive Hydrogenation in the Presence of Sulfide Catalysts 180

There are 5 references of which 4 are Soviet and one is German. The personalities mentioned include: M. S. Nemtsov, Ye. I. Prokopets, V. N. Khadzhinov, and I. I. Yeru. Eight tables are included.

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Bogdanov, I. F. (IGI AN SSSR). Classification of Catalysts for Hydrogenation 195

There are 17 references, of which 14 are Soviet, one English, one German and one translated from German. No personalities or facilities are mentioned.

Kalechits, I. V.; Strakova, K. A.; and Katkova, L. M. (All of the Institut energetiki i khimii Vostochno-Sibirskogo filiala AN SSSR). Conversion of Benzene under Conditions of Destructive Hydrogenation 206

There are 15 references, of which 13 are Soviet, one English, and one German. The personalities mentioned are: N. A. Orlov, B. L. Moldavskiy, M. S. Nemtsov, I. B. Rapoport, A. V. Lozovoy, Ye. I. Prokopets, S. A. Senyavin, and A. Filaretov. Eight tables are included.

Kalechits, I. V., Popova, N. I., and Salimgireyeva, F. G. (All of them from Institut energetiki i khimii Vostochno-Sibirskogo filiala AN SSSR). The Composition of Raw Materials, of Semi-Products and of Destructive Hydrogenation Products of Cheremkhovo Primary Tar 216

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There 18 Soviet references. The following personalities are mentioned: A. V. Lozovoy, Ye. I. Prokopets, M. S. Nemtsov, G. S. Landsberg, B. A. Kazanskiy, N. D. Zelinskiy, I. A. Musayen and G. D. Gal'pern. The facilities mentioned are VNIGI and IGI AN SSSR. Ten tables are included.

Lanin, V. A. (IGI AN SSSR); Pronina, M. V. (IGI AN SSSR); and Knyazeva, M. S. (IGI AN SSSR). Chemical Composition of Fractions of Liquid-phase Hydrogenated Cheremkhovo Lignite Tar 231

There are 7 references of which 3 are Soviet, one German, one English, one French, and one Dutch. The only personality mentioned is Ye. I. Tomina of VNIIPS (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke slantsev—All-Union Scientific Research Institute for Shale Processing). Twelve tables are included.

Gol'dshteyn, D. L. (TsIATIM); Agafonov, A. V. (TsIATIM); Rysakov, M. V. (TsIATIM); and Teregulov, D. Kh. (TsIATIM). Hydrofining of Sulfurous Petroleum Products to Obtain Commercial Motor Fuels. 245

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The following personalities are mentioned: B. L. Moldavskiy, V. N. Pokorskiy, K. P. Lavrovskiy, P. V. Puchkov and A. V. Agafonov. Nine tables and 7 drawings are included.

D'yakova, M. K. (IGI AN SSSR). The Manufacture of Synthetic Liquid Fuel and Chemical Products by Means of Termal Solution of Solid Fuels 261

There are 7 Soviet References. No personalities or facilities are mentioned. Seven tables and 2 drawings are included.

D'yakova, M. K. (IGI AN SSSR); Vol'-Epshteyn, A. B. (IGI AN SSSR); and Sovetova, L. S. (IGI AN SSSR). Development of an Effective Method for Processing Coal and Shale Slurry Obtained During Hydrogenation and Thermal Dissolution. 276

There are 9 references of which 3 are Soviet, 4 English, one Japanese, and one German. No personalities or facilities are mentioned. Eight tables are included.

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Shishakov, N. V. (IGI AN SSSR). Problems of Industrial Gas Production 291

There are no references and no personalities. The following facilities are mentioned: VNIGI (Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo zhidkogo topliva i gaza — All-Union Scientific Research Institute of Synthetic Liquid Fuel and Gas), VTI (Vsesoyuznyy teplotekhnicheskiy institut imeni F. Dzerzhinskogo—All-Union Heat Engineering Institute im. F. Dzershinskiy), GIAP (Gosudarstvennyy institut azotnoy promyshlennosti — State Institute of the Nitrogen Industry), MEI (Moskovskiy energeticheskiy institut imeni Molotov — Moscow Institute of Power Engineering im. Molotov), MKhTI im. D. I. Mendeleyev (Moskovskiy khimiko-tekhnologicheskiy institut imeni. D. I. Mendeleyeva — Moscow Institute of Chemical Technology imeni D. I. Mendeleyev), IGI (Institut goryuchikh iskopayemykh — Institute of Mineral Fuels), and VNIIPS (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke slantsev — All-Union Scientific Research Institute for Shale Processing). Two tables are included.

Novikov, L. Z. Industrial Gasification of Central Asiatic Lignites in the "Boiling" Zone of a Gas Generator for Manufacturing Synthetic Ammonia 309

There are no references. The only personality mentioned is N. V. Karkhov (GIAP). The facilities listed are the Stalinogorskiy khimkombinat

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(Stalinogorsk Chemical Combine), GIAP (Gosudarstvennyy institut azotnoy promyshlennosti—State Institute of Nitrogen Industry), and Vsesoyuznyy nauch-issledovatel'skiy institut iskusstvennogo zhidkogo topliva i gaza (All-Union Scientific Research Institute of Synthetic Liquid Fuel and Gas). One table and five drawings are included.

Lebedev, V. V. (IGI AN SSSR). Continuous Metal-Vapor Process for Manufacturing Hydrogen 320

One table and 13 drawings are included, and there is one Soviet reference. No personalities or facilities are mentioned.

Kashirskiy, V. G. (Saratovskiy gosudarstvennyy universitet im. N. G. Chernyshevskiy). Investigation of the Thermal Decomposition of "Obshchiy Syrt" Pulverized Shale in Vapor Flow 333

There are seven references, of which 5 are Soviet and 2 are English. Personalities mentioned include V. S. Petelina, N. B. Lobacheva, and V. D. Tsarev, who participated in the experimental part of the research, and V. S. Vasil'yev, Z. F. Chukhanov, M. D. Zalesskiy, and I. P.Nikhamov. Two tables are included.

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Anisonyan, A. A.; Volod'ko, N. P.; and Boldyreva, L. A. (All of them are from the Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza). Extraction of a Gas Mixture Rich in Carbon Monoxide from Residual Synthesis Gas 341

There are no references and no personalities. Three tables and 4 drawings are included.

Anisonyan, A. A.; Volod'ko, N. P.; and Boldyreva, L. A. (All of them are from the Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza). Investigation of the Process of Incomplete Combustion of Methane in Oxygen Under Pressure for Manufacturing Synthesis Gas 348

There are no references, and no personalities or facilities are mentioned. Ten drawings are included.

Tesner, P. A. (Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnogo gaza). Thermodynamic Calculation of Continued Processes for Manufacturing Synthesis Gas 358

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There are 9 references of which 5 are Soviet, 3 English, and one German. Two drawings are included. No personalities are mentioned.

Leybush, A. G. (GIAP). Catalytic Conversion of Methane with Water Vapor, Oxygen, and Carbon Dioxide 372

There are no references. The personalities mentioned, all co-workers at GIAP, are: B. P. Kornilov, M. A. Shpolyanskiy, O. V. Uvarov, M. A. Lyudkovskaya, Ye. D. Shorina, and I. V. Shulyatikov. Three tables and five drawings are included.

Poluboyarinov, G. N. (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvannogo zhidkogo topliva). The Gasification of Donets Anthracites for Manufacturing Water Gas 383

There are 4 Soviet references. The facilities mentioned are GIAP, VNIGI, and Stalinogorskiy khimkombinat (the Stalinogorsk Chemical Combine). One table and four drawings are included.

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Pis'men, M. K. (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva). Gasification of Lignites in the "Boiling" Zone. 394

There are no references. The facilities mentioned are IGI, VTI, and MEI. Three tables are included.

Yermakov, V. G. (Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva). The Manufacture of Industrial Gases by Gasification of Lean Fuel and the Removal of Slag in a Liquid State 400

Two tables are included. There are no references.

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Bashkirov, A. N. (Institut nefti AN SSSR). Some Methods of Developing Syntheses from Carbon Oxides and Hydrogen, and Methods of Manufacturing Synthetic Hydrocarbons 408

There are 31 Soviet references. The personalities mentioned include the following co-workers of the author: V. V. Kamzolkin, Yu. B. Kryukov, Yu. B. Kagan, V. S. Smirnov, S. M. Loktev, Ya. B. Chertkov, L. I. Zvezdkina, M. I. Khotimskaya, and B. N. Dolgov. Institut tonkoy khimicheskoy tekhnologii imeni M. V. Lomonosova (Institute of Fine Chemical Technology imeni M. V. Lomonosov) is mentioned.

Bashkirov, A. N.; Loktev, S. M.; and Novak, F. I. (All of them are from the Institut nefti AN SSSR). Synthesis of Hydrocarbons From Carbon Monoxide and Hydrogen on Silica Catalysts 418

There are 22 references of which 17 are Soviet, 4 German, and one English. Five tables are included. No personalities are mentioned.

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Levin, I. S.

GOFTMAN, M.V.; LEVIN, I.S.; BARNYAKOVA, T.A.

Producing ultrapure coal as a substitute for pitch in the manufacture of low ash content coke. Trudy Ural. politekh. inst. no.59:67-73 '57. (MIRA 11:4)

(Coal preparation)

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LEVIN, I.S.; UKHOV, L.P.; BASHKIRTSEVA, A.A.

Characteristics of lignite from the Southern Urals and means for its industrial utilization. Part 1: Semicoking of Kabay and Kuyurgaz coals. Trudy Ural. politekh. inst. no.59:74-87 '57. (Ural Mountain region--Lignite) (MIRA 11:4)

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LEVIN, I.S.; BASHKIRTSEVA, A.A.

Characteristics of lignite from the Southern Urals and means for its industrial utilization. Part 2: Babay coal as a raw material for bitumen. Trudy Ural. politekh. inst. no.59:88-105 '57.
(Babay—Lignite) (Bitumen) (MIRA 11:4)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.

Characteristics of lignite from the Southern Urals and means for its industrial utilization. Part 3: New approach to the choosing of a solvent for extraction of lignite and methods of evaluating the quality of bitumen. Trudy Ural. politekh. inst. no.59:106-118 '57. (MIRA 11:4)

(Bitumen) (Lignite) (Solvents)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S., BARNYAKOVA, T.A.

Separate production of tars and detarred waxes from Ukrainian brown coals in a single technological process. Trudy Inst.khim. UFAN SSSR no.5:49-55 '59. (MIRA 13:6)
(Waxes) (Coal tar)

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BASKAKOV, A.P.; RYSAKOV, N.F.; LEVIN, I.S.; RUBTSOV, G.K.

Thermal decomposition of brown coal at different heating rates.
Gaz.prom. 5 no.6:15-19 Je '60. (MIRA 13:6)
(Coal gasification)

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LEVIN, I.S.; ZABOLOTSKIY, T.V.

Separation of indium from zinc and their accompanying elements by extraction with alkylphosphoric acids. Dokl AN SSSR 139 no.1:158-159 J1 '61. (MIRA 14:7)

1. Khimiko-metallurgicheskiy institut i Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR. Predstavleno akademikom I.V. Tananayevym.
(Indium) (Zinc) (Metals)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; KHARLAMPOVICH, G.D.

New types of binding material for the briquetting of fuel.
Ugol' 37 no.9:48-52 S '62. (MIRA 15:9)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova.
(Briquets (Fuel))
(Coal tar)

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LEVIN, I.S., dotsent, kand. tekhn. nauk

Efficient utilization of brown coal of the Urals and Siberia. Sbor. nauch. trud. Ural. politekh. inst. no.122:140-151 '61. (MIRA 17:12)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S.; BELIK, T.M.; GOFTMAN, M.V.

New types of binders for briquetting derived from petroleum. Ugol' 40 no.6:66-69 Je '65. (MIRA 18:7)

1. Ural'skiy politekhnicheskiy institut.

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KHRISTOFOROV, B.S.; KONDRAT'YEV, V.M., kand. khim. nauk, retsenzent; MISHCHENKO, M.A., retsenzent; TIMERBULATOVA, M.I., retsenzent; NOVIK, I.V., retsenzent; PETRENKO, A.G., retsenzent; MAR'YEVA, N.N., retsenzent; LEVIN, I.S., retsenzent; BUSEV, A.I., prof., otv. red.; KRAVCHENKO, L.S., red.

[Selective solvents in mineral phase analysis] Izbiratel'nye rastvoriteli v veshchestvennom analize. Novosibirsk, Red.-izd. otdel Sibirskogo otd-niia AN SSSR, 1964. 95 p. (MIRA 17:12)

1. Moskovskiy gosudarstvennyy universitet (for Busev).

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.S., dotsent, kand.tekhn.nauk; BARNYAKOVA, T.A., mladshiy nauchnyy sotrudnik

Special features of the composition of Southern Ural lignites and means for utilizing them in industry. Trudy Ural. politekh. inst. no.108:29-38 '61. (MIRA 16:9)

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LEVIN, I.S., dotsent, kand.tekhn.nauk

Enriched fuels for Sverdlovsk Province. Trudy Ural. politekh. inst. no.108:23-28 '61. (MIRA 16:9)

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LEVIN, I.Sh.

Methods for evaluating the effectiveness of the operation of radial beater-drum scraping machines. Izv.vys.ucheb.zav.; pishch.tekh. no.2:91-96 '59. (MIRA 12:8)

1. Odesskiy tekhnologicheskiy institut imeni I.V.Stalina.
(Flour mills)

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L 09154-67 EWT(m) SOURCE CODE: UR/0089/66/021/002/0141/0142
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AUTHOR: Bazhenov, V. A.; Bochkarev, V. V.; Golubev, Yu. M.; Lovin, I. V.; Sokolova, T. N.; Turkin, A. D.

ORG: none

TITLE: Measurements of activity of radioactive gases by means of spherical ionization chamber

SOURCE: Atomnaya energiya, v. 21, no. 2, 1966, 141-142

TOPIC TAGS: ionization chamber, radioactivity measurement

ABSTRACT: A spherical, 24-cm ionization chamber with a copper barrier, filled with air under atmospheric pressure and operating in the -spectrum energy range (0.15 to 2.20 Mev) was used for measuring the gas activity in experiments with ^{133}Xe, CO_2 (labeled with ^{14}C), ^{131}Xe, ^{85}Kr, and ^{14}Ar gases. The gas activity was determined by means of compensation counters. The order of error was about 2.5%. The results showed that only ^{14}C, ^{85}Kr, and ^{41}Ar with simple spectra could be used, while ^{133}Xe and ^{131}Xe, with their conversion electrons, could not be used. The average current magnitudes K per particle in the chamber were correlated with the theoretical values and the results agreed within 25 to 30%. Orig. art. has: 1 figure and 1 table. [NA]

SUB CODE: 18 / SUBM DATE: 19Jul65 / ORIG REF: 002 / OTH REF: 001

UDC: 543.52.539.107.42

Card 1/1 nst

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

FRANTSUZ, A.G.; TONKONOGIY, I.M.; LEVIN, I.Ya.

Use of electronic computers for solving problems of differential diagnosis in aphasia. Zhur. nevr. i psikh. 64 no. 12:1759-1765 '64. (MIRA 18:1)

1. Laboratoriya meditsinskoy psikhologii (nauchnyy rukovoditel'- prof. V.N.Myasishchev) i nefrologicheskoye otdeleniye (nauchnyy rukovoditel' - prof. G.Z.Levin) Nauchno-issledovatel'skogo psikhonevrologicheskogo instituta im. Bekhtereva, Leningrad.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I. YA.

Spravochnik konstruktora tochnykh priborov [Handbook for the designer of precision instruments]. Moskva, Oborongiz, 1953. 610 p.

SO: Monthly List of Russian Accessions, Vol. 6 No. 8 November 1953

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

KVASOV, D.D.; LEVIN, I.Ya.

Use of the components of distribution curves in hydrological calculations. Trudy GGI no.73:141-145 '60. (MIRA 13:6)
(Hydrology--Tables, calculations, etc.)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.Ya.; SHUR, S.S.

Methodology for choosing the parameters of discharger disigned for limiting internal overvoltages. Izv. NIIPT no.7:148-175 '61. (MIRA 14:9)

(Electric protection)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I.Ya.

Conditions for the existence of stationary oscillations of a doubled frequency in a.c. power transmission lines. Izv. NIIPT no.7:242-250 '61. (MIRA 14:9)
(Electric power distribution--Alternating current)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

L 10254-63 EWT(d)/FCC(w)/BDS AFFTC/ASD/ESD-3/APGC Pg-4/Pk-4/Po-4/
Pq-4 GG/IJP(C)
ACCESSION NR: AP3001087 S/0103/63/024/006/0769/0773

AUTHOR: Levin, I. Ya. (Leningrad); Sapozhnikov, L. B. (Leningrad) 75

TITLE: Recognition algorithms 16

SOURCE: Avtomatika i telemekhanika, v. 24, no. 6, 1963, 769-773

TOPIC TAGS: character recognition, "Ural-1" computer

ABSTRACT: The problem of recognition of patterns 16 by statistical methods is considered. Likelihood ratio and discriminant function are two types of statictics often used in solving recognition problems. A new algorithm based on a set of logical functions is suggested. Experiments in recognizing Russian A and K written in longhand (30 patterns of each written by different persons) are reported; the discriminant-function method and the new algorithm were used for recognition. In the latter case, it was found that the probability of correct recognition (85 per cent) rises with the number of logical functions used up to about 50 functions. "Ural-1" electronic computer was used in the experiments. Orig. art. has: 3 figures and 5 formulas.

ASSOCIATION: none
SUBMITTED: 19Nov62 DATE ACQD: 01Jul63 ENCL: 00
SUB CODE: 00 NO REF SOV: 002 OTHER: 007
Card 1/1 elm/jpr

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, Iosif Yakovlevich; ARKIV, A.G., kand. tekhn.nauk, retsenzent; YERMAKOV, S.S., kand. tekhn. nauk, retsenzent; SHIRYAYEVA, V.Ya., kand. tekhn. nauk, red.; RODZEVICH, S.S., red.; ORESHKINA, V.I., tekhn. red.

[Handbook for the designer of precision instruments]Spravochnik konstruktora tochnykh priborov. 2. izd. Moskva, Oborongiz, 1962. 727 p. (MIRA 16:4)
(Mechanical engineering--Instrument manufacture)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

ACCESSION NR: AP4028974 S/0280/64/000/002/0050/0055

AUTHOR: Levin, I. Ya. (Leningrad)

TITLE: Some problems of the theory of pattern recognition

SOURCE: AN SSSR, Izvestiya. Tekhnicheskaya kibernetika, no. 2, 1964, 50-55

TOPIC TAGS: cybernetics, pattern recognition, statistical decision theory, medical diagnosis pattern recognition, aphasia diagnosis pattern recognition

ABSTRACT: A method of constructing an algorithm for solving the problem of pattern recognition (2 classes) by the theory of statistical decisions is set forth. The logarithm of the likelihood ratio $L(X) = \ln \frac{P_1(X)}{P_2(X)}$, (where $P_1(X)$ and $P_2(X)$ are either conditional distribution densities or conditional probabilities of occurrence of the point X in the corresponding class) is approximated by some statistics that depend on the sample statistical characteristics of the patterns to be recognized.

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APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN I.Ye.

TERENT'YEV, M.L.; OSAD'KO, M.P.; BRAGINSKIY, B.I.; SLOBODIN, V.M.; FISHMAN, Z.A.; LEVIN, I.Ye.; TSYNKOV, M.Yu.; BADIR'YAN, G.G.; TYUTIN, V.A.; ABRAMOV, V.A.; FRAYER, S.V.; KOBCHIKOVA, I.A.; KARMAUKHOVA, Ye.I.; OBOLENSKIY, K.P.; IL'IN, S.A.; GAVRILOV, V.I.; FREYDMAN, S.M.; KALASHNIKOVA, V.S., redaktor; LAPIDUS, M.A., redaktor; RAKITINA, Ye.D., redaktor; FEDOTOVA, A.F., tekhnicheskiy redaktor

[Manual for students of collective farm economy] V pomoshch' izuchaiushchim ekonomiku kolkhozov. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 423 p. (MLRA 10:1)
(Collective farms)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

SMIRNOV, Nikifor Sergeyevich; LEVIN, Isay Yefimovich; KATSNEL'SON, S.M., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Objectives of technical progress in agriculture in the light of the resolutions of the June Plenum of the Central Committee of the Communist Party of the Soviet Union] Zadachi tekhnicheskogo progressa v sel'skom khoziaistve v svete reshenii Iiun'skogo Plenuma TsK KPSS. Moskva, Izd-vo "Znanie," 1959. 31 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.5, Sel'skoe khoziaistvo, no.31) (MIRA 12:11)

(Farm mechanization)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, I. Z.

"A Secondary Cataract in the Light of a Slit Lamp." Sub 29 May 51, Central Inst for the Advanced Training of Physicians.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, K.S.

"Kommunar" Plant is 50 years old. Tsement 30 no.3:12 My-Je '64. (MIRA 17:11)

1. Glavnyy inzhener zavoda "Kommunar", Vol'sk.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, K.S.

Combine armor plates. TSement 29 no.3:20 My-Je '63. (MIRA 17:1)

1. TSementnyy zavod "Kommunar."

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEBEDINSKIY, M., podpolkovnik zapasa (Moskva, Leningradskiy rayon); LEVIN, L. (Novosibirsk); VIKTOROV, F.

On the labor watch. Kryl. rod. 15 no.7:17 Jl '64. (MIRA 18:1)

1. Khimicheskiy zavod "Kauchuk", Moskva (for Viktorov).

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, LEON.

Levin, Leon. Eksperimentalna hidraulika. Beograd, Izdavacko stamparsko preduzece Saveta za energetiku i ekstraktinu industriju, 1951. 336 p. (Experimental hydraulics. French summaries. Bibl.)

SO: Monthly List of East European Accessions, LC, Vol. 3, No. 1, Jan. 1954, Uncl.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.

Reasons for high costs of lime production in White Russia. Stroi. mat. 3 no.4:28-29 Ap '57. (MIRA 10:6)

1. Nauchno-issledovatel'skiy institut stroymaterialov, Ministerstvo promyshlennosti stroitel'nykh materialov Belorusskoy SSR.
(White Russia--Lime)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.

Czech miners (from pages of "Mistr i hornicke prace" for 1957).
Mast.ugl. 7 no.4:28-29 Ap '58. (MIRA 11:4)
(Czechoslovakia--Coal mines and mining)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

KOLOTIY, M. [Kolotii, M.]; LEVIN, L.

Reconstructing barns for loose housing of cows. Sil'. bud. 9 no.2:10-12 F '59. (MIRA 12:6)

1.Chlen kollegii Ministerstva sel'skogo khozyaystva USSR (for Kolotiy). 2.Nachal'nik Upravleniya po stroitel'stvu v sovkhozakh Ministerstva sel'skogo khozyaystva USSR (for Levin).
(Dairy barns)

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

SOV/107-59-3-34/52

6 (4)

AUTHOR: Levin, L., Katunin, G., Kotov. B.

TITLE: The Radio Receiver "Syurpriz" (Radiopriyemnik "Syurpriz")

PERIODICAL: Radio, 1959, Nr 3, pp 40 - 42, p 1 of centerfold, p 4 of cover (USSR)

ABSTRACT: Radio engineers of the Saratov Industrial-Economical Rayon have designed a pocket-size radio receiver "Syurpriz". Production of this receiver has already started. It is a superheterodyne with seven P-14 transistors and printed circuits. The polystyrene case is 150 x 80 x 32 mm, but does not have adequate mechanical strength, especially at the loudspeaker openings and at the tuning dial. The total weight of the radio is 520 g. Power is provided by four alcaline cadmium-nickel batteries of type KNP-0.42 with a capacity of 0.3 - 0.4 amp-h. The batteries may be charged from a 127/220 v ac network by means

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SOV/107-59-3-34/52

The Radio Receiver "Syurpriz"

of a special rectifier consisting of two MLT-2 resistors and one DG-Ts27 diode. At a nominal output of 0.1 watt, 20-40 milliamps are required. The receiver works on long waves (150 - 415 kc) and on medium waves (520 - 1600 kc). A built-in ferrite antenna, consisting of ferrite rod F-600, provides a sensitivity of not less than 10 mv/m for the long wave range and 7 mv/m for the medium wave range. There is also a jack for an external antenna. The adjacent-channel selectivity is 10 db. The receiver has automatic gain control and an efficiency factor of 34 %. The P-14 transistor of the converter is especially selected since the frequency to be generated by it must not be lower than 2.1 mc. Experience showed that it is possible to find one transistor which meets this requirement among seven P-14 transistors. The two-stage IF amplifier works with a frequency of 465 kc. The detector stage contains one

Card 2/3

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

YEDVABNIK, Yu.A.; LEVIN, L.A.; SHEKHEL', A.E.

Using algorithms in calculating cement mixes. Trudy Uzhgiprotsementa no.6:35-41 '64. (MIRA 17:12)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

~~LEVIN, L. B.~~

LEVIN, L.B., FEDURKIN, V.V. I KARATOV, V. F.

33171. Ustanovka Dlya Avtomaticheskoy Anodnoy Polirovki I Zatochki Metallicheskikh Izdeliy Med. Prom-st' SSSR, 1949, No. 5, C. 38-40

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L. B.

А. Ф. Хольшева

Схема сдвигателя на магнитных элементах

Н. Н. Гречков,
Л. С. Лесковский,
М. А. Цифров

Магнитное оперативное запоминающее устройство с магнитным управлением

Л. В. Левин,
М. Г. Жаркова,
Г. Н. Бобкова

Дискретно-аналоговый преобразователь на магнитных элементах с активным ферритовым запоминающим устройством

Н. В. Трубников

Многоразрядные [illegible] на магнитной лентах

12 июня
(с 10 до 16 часов)

М. Л. Аврух,
Н. Н. Рожин

Принципы построения опытной ферритовой вычислительной машины

[illegible]

Ю. А. Мамаулов,
Л. Н. Шахнарова

Арифметическое устройство ферритовой цифровой машины

Ю. А. Мамаулов

Высшее устройство ферритовой малогабаритной цифровой машины ЛЭМ-1

Г. Н. Клейнерман

О контроле [illegible] в вычислительной машине ЛЭМ-1

12 июня
(с 18 до 22 часов)

В. В. Анисимов

Подготовка информации для программного управления металлорежущими станками

Л. Д. Клевский

Некоторые вопросы использования электронных вычислительных машин в системах связи

Г. Н. Клейнерман

Опыт решения задачи по определению [illegible] уравнений [illegible] на машине ЛЭМ-1

[illegible]

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORIE), Moscow, 8-12 June. 1959

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.E.; KORELOV, S.K.; TRUSHKIN, P.G.; CHERNYSHEVA, Z.S.

Relation of the basic structural elements in the central trans-Volga region to the Pre-Pliocene relief and the structural features of the Pliocene-Quaternary sediments. [Trudy] NIInefteqaza no.10:50-60 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti; Institut geografii AN SSSR i Kuybyshevskiy nauchno-issledovatel'skiy institut neftyanoy promyshlennosti.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

BROD, I.O.; LEVIN, L.E.; ROZANOV, L.N.; SAL'MAN, G.B.; SEYFUL'-MILYUKOV, R.B.

Basic structural elements of the basement of the northern Caspian oil- and gas-bearing basin. [Trudy] NIInefteqaza no.10: 17-49 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti i Volgogradskiy nauchno-issledovatel'skiy institut neftyanoy i gazovoy promyshlennosti.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.E.; PAVLOVSKIY, V.I.

New data on the tectonics of the Ryazan-Saratov Trough and prospects for finding oil and gas in it. Neftegaz.geol.i geofiz. no. 9:24-29 '63. (MIRA 17:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti Gosudarstvennogo geologicheskogo komiteta SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.E.; LIKHOLATNIKOV, V.M.

New data on the prospects for oil and gas in the Pliocene sediments in the northern Caspian Sea region. Neftegaz. geol. i geofiz. no.6:20-24 '63. (MIRA 17:10)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti Glavnogo upravleniya geologii i okhrany nedr pri Sovete Ministrov RSFSR i trest "Soyuzlurgaz" Glavnogo upravleniya gazovoy promyshlennosti SSSR.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

SEYFUL-MULYUKOV, R.B.; LEVIN, L.E.; SAL'MAN, G.B.; SHORNIKOV, B.Ya.

Correlation of the basic structural elements of the central parts of the northern Caspian oil- and gas-bearing basin. [Trudy] NILneftegaza no.10:61-78 '63. (MIRA 18:3)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti i Upravleniye neftyanoy i gazovoy promyshlennosti Privolzhskogo soveta narodnogo khozyaystva.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.E.; SEYFUL'-MULYUKOV, R.B.; TOLSTOY, N.S.

Basement pattern in the southeastern part of the Russian Platform reflected in the structure of the sedimentary cover in connection with prospecting for oil and gas. Izv. AN SSSR. Ser. geol. 29 no.12:62-71 D '64. (MIRA 18:1)

1. Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev po otsenke perspektiv neftegazonosnosti ("NILNEFTEGAZ"), Moskva.

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

R(ZANOV Leonid Nikolayevich; SEYFUL'-MULYUKOV, Rustem Bedriyevich; LEVIN, Leonid Eliazarovich; SAL'MAN, Gel'vetsiy Borisovich

[Tectonics and oil and gas potentials of the eastern part of the Russian Platform] Tektonika i neftegazonosnost' vostoka Russkoi platformy. Moskva, Nedra, 1965. 258 p. (MIRA 18:8)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

KLUBOV, V.A.; LEVIN, L.E.; SAL'MAN, G.B.; EZDRIN, M.B.

Tectonic prerequisites of the search for oil and gas deposits within the northern borderland of the Caspian syneclise. Geol. nefti i gaza 9 no.1:19-24 Ja '65. (MIRA 18:3)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy neftyanoy institut, Moskva; Nauchno-issledovatel'skaya laboratoriya geologicheskikh kriteriyev otsenki perspektiv neftegazonosnosti i Nizhnevolzhskiy nauchno-issledovatel'skiy institut geologii i geofiziki.

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"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

TROFIMOV, Viktor Ivanovich; LEVIN, L.E., red.; MATVEYEV, G.I., tekhn.red.

[Investigation and analysis of elements of steel supports for electric transmission lines] Issledovanie i raschet elementov stal'nykh opor linii elektroperedachi. Moskva, Gos.energ.izd-vo, 1959. 101 p. (MIRA 12:3)
(Electric lines--Poles) (Steel, Structural)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

BUKHARIN, Ye.M., inzh.; LEVIN, L.E., inzh.

New design of concrete reinforced supports for 500 kv. electric power transmission lines. Energetik 9 no.9:2-6 S '61. (MIRA 14:9)
(Electric lines--Poles)
(Electric lines--Overhead)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

"APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9

LEVIN, L.E, red.; BRANDENBURGSKAYA, E.Ya., red.; VORONIN, K.P., tekhn. red.

[Foundations of electric power transmission line towers] Fundamenty opor linii elektroperedachi; sbornik statei. Pod red. L.E.Levina. Moskva, Gosenergoizdat, 1961. 182 p. (MIRA 16:5)

1. ORGES, trust, Moscow.
(Electric lines--Poles and towers)

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R000929520014-9"

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KOZHARINOV, V.V., inzh.; KOTOV, M.B., inzh.; LEVIN, L.E., inzh.; YAKUB, Yu.A., inzh.

Standardization of the structural designs of 35 and 110 dv. outdoor power distribution systems. Elek.sta.33 no.1:45-51 Ja '62. (MIRA 15:3)

(Electric power distribution)(Electric substations)

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REUT, Mikhail Antonovich; LEVIN, L.E., red.; BORUNOV, N.I., tekhn. red.

[Use of precast reinforced concrete in the construction of 35-500 kv. electric systems]Primenenie sbornogo zhelezobetona pri sooruzhenii elektricheskikh setei napriazheniem 35-500 kv. Moskva, Gosenergoizdat, 1962. 173 p. (MIRA 16:3)
(Precast concrete construction)
(Electric lines--Poles and towers)

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TROFIMOV, Viktor Ivanovich; LEVIN, L.E., red.; BUL'DYAYEV, N.A., tekhn. red.

[Study of stability and carrying strength of metal power transmission tower type structures] Issledovanie ustoichivosti i nesushchei sposobnosti metallicheskikh konstruktsii tipa opor linii elektroperedachi. Moskva, Gosenergoizdat, 1963. 319 p. (MIRA 16:10)

(Electric lines—Poles and towers)

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BUKHARIN, Yevgeniy Mikhaylovich; KOLYAKOV, Ayzik Mordkovich; KURNOSOV, Aleksey Ivanovich; LYALIN, Feliks Isayevich; TROFIMOV, Viktor Ivanovich; LEVIN, L.E., red.

[Designing structures for electric transmission lines using the method of limiting states] Proektirovanie stroitel'nykh konstruktsii linii elektroperedachi po predel'nym sostoianiiam. Pod red.E.M.Bukharina. Moskva, Energiia, 1965. 111 p. (MIRA 18:11)

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SOV/76-32-7-34/45

AUTHOR: Levin, L. E.

TITLE: On Ultimate Irreversible Processes, (O predel'no-neobratimykh protsessakh)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 7, pp. 1669 - 1670 (USSR)

ABSTRACT: The real processes taking place in nature tend to show that the above-mentioned processes, just as the reversible ones, are ideal and actually do not take place, so that any real process is always taking place under expenditure of energy. As in real processes there always occurs a number of secondary phenomena it is possible that in the basic process the work is equal to zero and that the secondary processes taking place as side phenomena are connected with the expenditure of energy, so that the process as a whole always is connected with a certain amount of work. The heat transition from the hot to the cold body, the gas expansion into empty space and the diffusion of two gases at constant volume may be regarded as classical examples of irreversible processes taking place without work. Actually, however, these processes always proceed with an expenditure of energy. By some examples the author proves that in the

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On Ultimate Irreversible Processes.

SOV/76-32-7-34/45

above-mentioned cases there is always some work performed; it is then proved that in nature no real processes without work performance are possible. Using the conception on the degree of irreversibility it is found that all real processes in nature are irreversible, the degree of irreversibility q following the inequality $1 > q > 0$, and that ultimate cases like reversible and ultimate-irreversible processes in which $q = 0$ and $q = 1$ can not be realized. According to K.A.Putilov the transport of energy can take place only by heat transfer or by work, these processes being inseparable from each other. There is 1 reference, which is Soviet.

SUBMITTED: May 26, 1956

1. Physics--Theory 2. Chemistry--Theory 3. Heat transfer--Energy

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1. Institut "Energoset'proyekt".

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(Plastics)

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1. Khar'kovskiy institut rentgenologii, radiologii i onkologii i kafedra bolezney ukha, gorla i nosa (zav.-prof. A.M.Natanzon) Khar'kovskogo meditsinskogo instituta.
(EAR--DISEASES) (X RAYS--THERAPEUTIC USE)

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(MENINGITIS)

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(MIRA 13:12)

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