"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

S/137/63/000/003/015/016
A006/A101

AUTHOR: Mubayadzhyan, M. A.

TITLE: A new method of rhodanide determination of rhenium

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1963, 4, abstract 3K22 ("Nauchn. tr. N.-i. gornometallurg. in-t ArmSSR", 1960, no. 1, 185 - 198)

TEXT: The method is based on determining Re in the form of a rhenium-rhodanide complex. Mo is separated from Re by extracting with ester the rhodanide complex of Mo^{6+}. An ore, concentrate, or flotation tail specimen is decomposed by HNO_3. To remove HNO_3 formalin is used, and the completeness of HNO_3 distillation is determined with the aid of diphenylamine. After eliminating HNO_3, Fe and Cu are precipitated with 5 n. NaOH solution. The filtrate is evaporated down to 20 - 30 ml volume, transferred to a separating funnel, a solution of $FeCl_3$, 10 ml concentrated HCl, 3 ml 40% NaSCN solution, 15 - 20 ml easter is added, and the mixture is shaken for 30 sec. After removing Mo 2 ml NaSCN solution, 3 ml $SnCl_2$ are added to the aqueous layer in the separating funnel

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

A new method of rhodanide determination of rhenium S/137/63/000/003/015/016
A006/A101

and thoroughly shaken. After 30 min, 15 ml ester is added and the rhodanide Re complex is extracted. The ester extract is transferred to a vessel and colorimetrically analyzed for FEK-M with a blue light-filter.

L. Vorob'yeva

[Abstracter's note: Complete translation]

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 23626-65 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JG/MLK

ACCESSION NR: AT5002792 S/0000/64/000/000/0251/0252

11
B+1

AUTHOR: Mubayadzhyan, M. A.

TITLE: Thiocyanate determination of rhenium 27

SOURCE: Vsesoyuznoye soveshchaniye po probleme reniya, 2d, Moscow, 1962, Reniy (Rhenium); trudy soveshchaniya, Moscow, Izd-vo Nauka, 1964, 251-252

TOPIC TAGS: rhenium determination, molybdenum extraction, thiocyanate complex flotation, molybdenum ore, copper ore

ABSTRACT: A method of separating molybdenum from rhenium, proposed earlier by the author and V. Patrovsky and based on the extraction with ethyl ether of thiocyanate complexes of hexavalent molybdenum, was used to develop a new technique of thiocyanate determination of rhenium for application to products of the dressing of copper-molybdenum ores and to various wastes of the metallurgy of molybdenum raw materials containing rhenium. A detailed description is given, on the one hand, on the analysis used for products with a relatively high content of rhenium and a low content of iron and copper such as molybdenites, molybdenum concentrates, dusts from electrostatic filters, etc. and, on the other hand, of the analysis used for products containing small amounts of rhenium and large

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 23626-65
ACCESSION NR: AT5002792

amounts of iron and copper (the procedure used for flotation tailing containing approximately 5 x 10^{-6}% rhenium is described).

ASSOCIATION: None

SUBMITTED: 05Aug64 ENCL: 00 SUB CODE: IC, GC

NO REF SOV: 003 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

85346

S/120/60/000/005/016/051
E032/E514

24.3900

AUTHORS: Golovashkin, A.I., Motulevich, G.P. and Mubin, A.A.

TITLE: Measurement of the Optical Constants of Metals at Low Temperatures

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No.5, pp.74-76

TEXT: The optical system of the instrument is shown in Fig.1. A parallel beam of light passing through the polarizer Π_1 enters a system of two plane and parallel mirrors L under investigation (in the figure the plane of the mirrors has been rotated through 90° for the purposes of the illustration). After four reflections in this mirror system, the light strikes an auxiliary mirror L' which reflects it back at an angle of 4° to the original direction and the plane of reflection lies in the plane of the mirrors L. In this way the light experiences a further four reflections at the mirrors under investigation. The mirror L' is identical with the mirrors L and a correction is introduced for the phase difference due to this mirror. It was found that the correction is negligible compared with the phase difference Δ due to the mirrors under investigation after four reflections. On leaving the set of parallel mirrors L, the light passes through a further polarizer

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

85346

S/120/60/000/005/016/051
E032/E514

Measurement of the Optical Constants of Metals at Low Temperatures

Π_2 which is rotated at a frequency of 9 cps. It is then passed through a monochromator M and is detected by the bolometer B. The bolometer signal is amplified by a tuned amplifier. The system of mirrors L - L' is placed in a container which is then lowered into a dewar filled with liquid nitrogen or liquid helium. The first measurements obtained with the aid of this apparatus were concerned with aluminium at liquid nitrogen and room temperatures in the wavelength region 0.8-7 μ. The determination of the micro-characteristics of aluminium from the results obtained is described by the present authors in Ref.4. There are 3 figures and 4 Soviet references.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute AS USSR)

SUBMITTED: July 16, 1959

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCALOV, Zivko

$UNO, Yugoslav association for nuclear power plants. Nuklear energija 1 no.1:23 Jl '64.

1. Director of the "Energoprojekt" Enterprise, and Chairman of the Board of Directors, Yugoslav Association for the Design, Production, and Assembling of Nuclear Equipment and Power Plants.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

CONEA, Ana; VOLOVICI, C; MUCENIC, Iulia; NITU, I.

Pedological complex of Calmatui Valley. Dari seama sed 46: 429-446 '58/59 [publ. '62].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

CONEA, Ana; VOLOVICI, C.; MUCENIC, Iulia; NITU, I.;

Soil of the low plain of Siret. Dari seama sed 47:421-439 '59/60 [publ. '62].

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

CONEA, Ana; VOLOVICI, C.; MUCENIC, Iulia; NITU, I.; BRATOSIN, Niculina; BUCRAC, Elena; IACOB, Eugenia; VASILESCU, Marcela; BALABAN, Lidia; COLIOS, Elena; PETRESCU, Adriana; POPESCU, Florica; SAFTA, Rodica; MAC, Hareta.

The Oradea plain and hilly soils. Dari seama sed 48[redacted]88 60/61 [publ. '62]

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

1. MUCENIECE, A.

2. USSR (600)

4. Infection, Focal

7. Experimental mixed infection by Mycobacterium phlei and Staphylococcus aureus. Latv. PSR Zin. Akad. Vestis 1, 1951

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

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

USSR/Human and Animal Physiology (Normal and Pathological) T
Metabolism. Vitamins.

Abs Jour : Ref Zhur Biol., No 6, 1959, 26292

Author : Muceniece, A.

Inst : Academy of Sciences Latvian SSR

Title : The Influence of Microdoses of Cobaltous Chloride on the Content of Vitamin C in the Organism of Guinea Pigs.

Orig Pub : Izv. AN LatvSSR, 1958, No 5, 71-77

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, A.

The role and duties of the foreman in a production establishment. p. 190. PRZEDGLAD PAPIERNICZY. Lodz. Vol. 10, no. 8, Aug. 1955

Source: East European Accessions List, (EEAL), Lc, Vol. 5, No. 3, March 1956

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, A.

Foam rubber, a new material for soles in the shoe industry, p. 199. (PRZEGLAD SKORZANY, Lodz, Vol. 8, no. 8, Aug. 1953.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jan. 1955, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MICH, A.

Rubber Footwear. p. 269.

PRZEGLAD SKORA Y. (Centralne Zarzady Przemyslu Garbarskiego, Chemicznego i Artykulow Skorzanych) Lodz, Poland. Vol. 10, no. 11., ov. 1955.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no. 2, feb. 1960.

Uncla.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

24133
P/046/60/005/009/004/006
D241/D302

21.4100

AUTHORS: Perec, Mieczysław, Mucha, Franciszek and Debiński, Apoloniusz

TITLE: Production of uranium by reducing UF_4 with metallic calcium

PERIODICAL: Nukleonika, v. 5, no. 9, 1960, 559 - 568

TEXT: This work was aimed at the eventual production of "nuclear purity" uranium, containing B ≤ 0.1, Cd 0.15, Li ≤ 0.1, Co ≤ 5, Mn ≤ 15, V ≤ 10, Ni ≤ 30, Cu ≤ 5, Cr ≤ 20, Fe ≤ 150, Al ≤ 50, P ≤ 25, Si ≤ 20, and C ≤ 100 ppm. Reduction with metallic Ca was chosen by the Instytut badań jądrowych PAN (Nuclear Research Institute PAS). The reaction is exothermic to the extent of -134 kcal/mole U and theoretically occurs at 2240°C; in practice the temperature is lower, depending on the scale of the process, heat losses, etc. Initial reductions were carried out on a small scale (1 kg UF_4) in the apparatus shown in Fig. 1, consisting of a steel, water-cooled cylinder (11), closed by a lid (2) with

Card 1/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

24133

P/046/60/005/009/004/006
D241/D302

Production of uranium...

an opening (1) to allow the hot vapors to escape. The steel reactor (9) was placed inside a second cylinder (3), on a support (6), and was lined with fluorite (10). The apparatus was filled with gas inlets (12) and outlets (7, 8) and with a tube (4) for the electrical contacts which initiated the reaction. The lining was prepared by the method evolved at the Instytut chemii nieorganicznej w Gliwicach (Inorganic Chemistry Institute at Gliwice). Natural flourite was crushed to less than 1 mm, leached with aq.HF, washed with distilled water and dried. Fluorite flour was then mixed with the minimum quantity of 1% starch solution in water, rammed into position and dried, raising the temperature to ~300°C over a few days. The lining was shaped to form a funnel-like cavity inside the reactor. A fluorite or graphite crucible was placed at the bottom to receive the molten U. The reactants were deposited, on a supporting thin Al sheet, in the conical part of the reactor cavity, above the U receptacle, in alternate layers (or mixed) using a 20 - 30% excess of Ca shavings. The charge was hand-rammed and a Kanthal wire heater,

Card 2/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

24133

P/046/60/005/009/004/006
D241/D302

Production of uranium...

thickly covered with a mixture of Mg powder and $KClO_4$, was laid on top. Technical quality chemicals were used as the starting materials. The reaction was initiated electrically after filling the apparatus in argon and took place in a few seconds. Orifice (1) was then closed and the apparatus was cooled under argon. The product was porous (15 g/cm3) and contained non-metallic inclusions. After remelting in a quartz crucible, at least 1400°C and at 10^{-3} mm Hg, a dense material (17.4 g/cm3) free from inclusions was obtained. Experience gained with this apparatus allowed further investigations, using 10 - 20 kg. charges, to be carried out. The starting materials were of known, higher quality to allow an estimate of the purification attained. High purity Ca was obtained from the Instytut metali nieżelaznych, oddział metali lekkich w Skawinie (Institute of Non-Ferrous Metals, Light Metals Department in Skawina). The metal was used in the form of shavings, 3 mm. thick, a few cm. wide and 8 mm long. Reductions were carried out at a pressure of 1 mm Hg. 4 and 8.5 kg. ingots of U were obtained, the latter being non-porous and free from slag, of density 17.9 g/cm3. The amounts of

Card 3/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

24133

P/046/60/005/009/004/006
D241/D302

Production of uranium...

impurities in the U are tabulated. 99% yields were obtained. It is stressed that the ingots were not entirely homogeneous chemically and were not of "nuclear purity". Remelting under vacuum would improve the product but Fe, Cu, Ni and Si would remain in comparatively high concentrations. Very high purity should be attainable with very pure starting materials, as no contamination is introduced during the calcio-thermic process. There are 6 figures, 1 table and 11 references: 6 Soviet-bloc and 5 non-Soviet-bloc. The references to the English-language publications read as follows: M. Benedict, Th.H. Pigford, Nuclear Engineering, New York, 1957, MacGraw-Hill, p. 145; J. Van Impe, Chem. Eng. Progress, 50, 230, (1954).

ASSOCIATION: Instytut badań jadrowych (Nuclear Research Institute)

SUBMITTED: June, 1960

Card 4/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

26831
P/046/61/006/007/003/008
D249/D302

21.2100 also 2406, 2606

AUTHOR: Adamski, Tadeusz, and Mucha, Franciszek

TITLE: Coating of granular materials with carbon by the pyrolysis of hydrocarbons in a fluidized bed

PERIODICAL: Nukleonika, v. 6, no. 7-8, 1961, 467-474

TEXT: A description of the first part of a research program undertaken by the Institute of Nuclear Research, Department of Chemical Technology. The fluidizing gas simultaneously supplies the hydrocarbon vapors for the reaction. Coating of the following materials has been attempted: (1) 0.12 - 1.5 mm sand grains; (2) CaO, obtained by burning calcite, comminuted to < 2 mm and screened through a 0.12 mm mesh; (3) burnt brick, comminuted, screened to 2.0 - 0.12 mm size and mixed with sand; (4) sintered alumina, 5 - 15 mm size, mixed with sand, and (5) UO_2. In early experiments UO_2 was prepared by reducing U_3O_8 with NH_3 at $\sim 900^\circ C$ and screening to 1.0 - 0.12 mm. Later, UO_2 was mixed with 30% of pitch, coked at $< 800^\circ C$ and comminuted to a suitable distribution, (between 0.12 and 1.0 mm). The apparatus is

Card 1/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

26831
P/046/61/006/007/003/008
D249/D302

Coating of granular...

shown in Fig. 1. Nitrogen, saturated with naphthalene vapor at 110 - 120°C, was preheated and passed at 4.9 - 10.3 l/min. at 20°C and 1 atm. into the fluidized bed reactor, consisting of a silica tube heated in a silite furnace at 1100 - 1300°C. The results are summarized in Table 2. Attempts at coating freshly prepared UO_2 were abandoned due to excessive dusting which occurred 1 - 2 minutes after contact with naphthalene vapor. In contrast to the above, carbon deposition on pitched and coked UO_2 produced compact coatings with a metallic luster. No dusting was observed in the latter case. Good coatings were also obtained on sand, alumina/sand and brick/sand mixtures. In the case of CaO, a good coating was formed which subsequently disrupted due to unknown, secondary reactions. The coatings were relatively abrasion resistant and adherent, but they were permeable to corrosive agents such as HF. Further work on the production and testing of pyrolytic carbon coatings is now in progress. There are 6 figures, 2 tables and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: C. R. Kinney, E. Dell Bell: Ing. Engng. Chem. 46 (1954), 548-556; Some Experiments Concerning Pile Materials, Ref. Gen. 1955, v. 8, 478-486.

Card 2/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

26831
P/046/61/006/007/003/008
D249/D302

Coating of granular...

ASSOCIATION: Polish Academy of Sciences, Institute of Nuclear Research, Warsaw

SUBMITTED: May, 1961

Card 3/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

POLAND

ADAMSKI, Tadeusz, doc.; MUCHA, Franciszek, mgr inż.

1. Department of Chemical Technology, Institute for Nuclear Research (Zakład Technologii Chemicznej Instytutu Badań Jądrowych) (for both; Adamski-Director of the Dept., Mucha-Adjunct of the Dept.); 2. Institute of Inorganic Chemistry (Instytut Chemii Nieorganicznej), Gliwice (for both?)

Warsaw, Chemia stosowana, No 6, November-December 1965, pp 1365-68

"Neutralization of arsenic acid using calcium hydroxide."

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 09186-67 EWP(e)/EWP(t)/ETI IJP(c) JD

ACC NR: AP7002751 SOURCE CODE: PO/0046/66/011/005/0327/0338

AUTHOR: Kalinowski, Bohdan--Kalinovski, B.; Mucha, Franciszek--Mukha, F.; Wlodarski, Rafal--Vlodarski, R. 26

ORG: Department of Chemical Technology, Institute of Nuclear Research, Warsaw (Zaklad Technologii Chemicznej, Instytut Badan Jadrowych)

TITLE: Investigations on the obtaining of spherical uranium dicarbide particles from uranium dioxide

SOURCE: Nukleonika, v. 11, no. 5, 1966, 327-338

TOPIC TAGS: uranium compound, uranium

ABSTRACT: The preparation of UC_2 in the form of dense spherical particles is described. The applied method is based on heating UO_2 particles in a graphite powder bed in a furnace with a graphite heating element up to 2500°C, in Ar atmosphere under normal pressure. Starting materials such as UO_2 prepared by sintering, unsintered UO_2 and UO_2 agglomerated without additions containing C substances are used. The influence of the UO_2 on the particle size distribution and the product quality is examined. The dependence of free C content and product density on the spherical particles specific surface (diameter) of the product is established and explained. Some of the problems are discussed concerning the increase of the process scale. Orig. art. has: 17 figures and 2 tables. [NA]

SUB CODE: 07 / SUBM DATE: 13Dec65 / ORIG REF: 002 / OTH REF: 008

Card 1/1 mst 0925 1625

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

BASINSKI, Antoni; MUCHA, Janina

The solubility of zinc ferrocyanide in water and in water solutions.
Rocz chemii 34 no.3/4:811-816 '60. (EEAI 10:3)

1. Katedra Chemii Fizycznej Uniwersytetu M.Kopernika, Torun.
(Zinc ferrocyanides)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCH', L.

An attempt to complete and re-edit the first Czech geographical atlas. p. 124. KARTOGRAFICKY PREHLED. (Ceskoslovenska akademie ved. Kabinet pro kartografii) Praha. Vol. 8, no. 3, Sept. 1954.

SOURCE: East European Accessions List, Vol. 5, no. 9, September 1956

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, Ludvik

SURNAME (in caps); Given Names

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: /not given/

Source: Prague, Sbornik Ceskoslovenske Spolecnosti Zemepisne, Vol 66, No 3, 1961, pp 239-251

Data: "Czech Historical Atlases."

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, LUDVIK

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: /not given/

Source: Prague, Sbornik Ceskoslovenske Spolecnosti Zemepisne, Vol 66, No 4, 61. pp 383.

Data: Czech School Maps, 1848-1918 (Ceske skolni nastene mapy v letech 1848-1918). Prague, 1960. 14 pages.

Author: MUCHA, Ludvik

Reviewer: POKORNY, Ota

OFO 94144)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, Ludvik

Globes of Josef Erben. Sbor zem 68 no.1:135-137 '63.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476 P/0095/65/013/001/0053/0058 8 7 B+1

AUTHOR: Kryszewski, M.; Mucha, M.

TITLE: Influence of UV-radiation on the glass transition temperature of the vinyl chloride-vinylidene chloride copolymer (Saran B) 15

SOURCE: Polska Akademia Nauk. Bulletin. Serie des sciences techniques, v. 13, no. 1, 1965, 53-58

TOPIC TAGS: glass transition temperature, ultraviolet irradiation, vinyl, vinylidene, copolymer/ Saran B copolymer

ABSTRACT: The glass transition temperature for simple vinyl copolymers is almost a linear function of the weight (or volume) fraction of both comonomers and depends on their glass transition temperatures. Copolymers containing ethylene and vinyl monomers in which isolated $-CH_2-CHR-CH_2-$ groups exist have a constant glass transition temperature (between -10°C and -50°C depending on the nature of the alkyl group) within a wide composition range when the ethylene content is comparatively large. When the ethylene content in this type of copolymer is reduced past a certain point, the glass transition temperature gradually increases from the constant value up to the glass transition temperature of the homopolymer. In order to

Card 1/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

determine whether vinyl copolymers modified by ultraviolet light behave like ethylene copolymers or like simple vinyl copolymers with respect to glass transition temperature, Saran B films 15-20 μ thick were subjected to ultraviolet radiation from a Philips 57413 P/40 TUV low pressure mercury lamp with a power of 30 watts. About 90% of the output from this UV source is at the resonance line (λ = 2537 Å) strongly absorbed by Saran B. The irradiated samples were tested for density, gel content and glass transition temperature. Density and gel content are given as functions of irradiation time in figs. 1 and 2 of the Enclosure respectively. The glass transition temperature was determined by the dilatometric method, using Bekkedahl's dilatometer (N. Bekkedahl, J. Research N.B.S., 43 (1949), 371). The Saran B samples were placed in the dilatometer, heated to 50°C and degassed for several hours at a pressure of 10^{-3} mm Hg before the instrument was filled with mercury. The dilatometer was then placed in a thermostat and held at a constant temperature ±0.05°C for 30 minutes. The height of the mercury column was then used to find the specific volume as a function of temperature. The glass transition temperature occurs at the break point in the curve $V = f(T)$ (see fig. 3 of the Enclosure). The glass transition temperature as a function of irradiation time for Saran B is shown in Fig. 4 of the Enclosure. It is concluded that ultraviolet radiation causes the glass transition temperature in Saran B to change from the

Card 2/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

behavior observed for simple vinyl copolymers to that which occurs in copolymers of ethylene and vinyl monomers. A subsequent article will deal with cross-linking and degradation as functions of the glass transition temperature. Orig. art. has: 4 figures.

ASSOCIATION: Katedra Fizyki, Wydział Chemii, Politechnika, Łódź (Department of Physics, Faculty of Chemistry, Technical University)

SUBMITTED: 00 ENCL: 04 SUB CODE: OC,OP

NO REF SOV: 001 OTHER: 020

Card 3/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

ENCLOSURE: 01

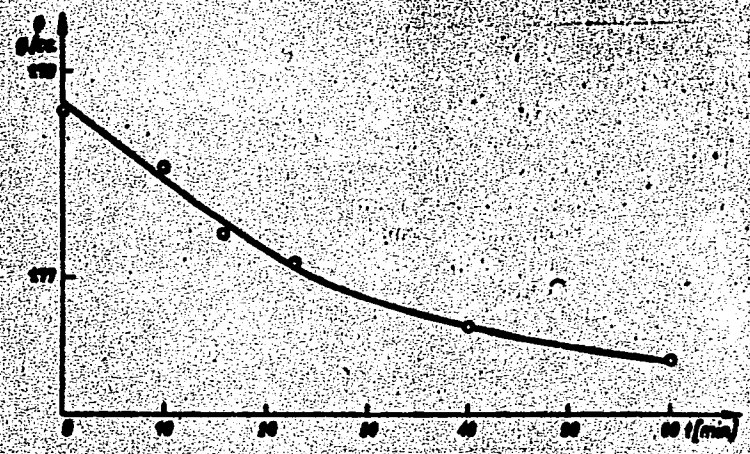

Fig. 1. Density of Saran B as a function of UV radiation time.

Card 4/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

ENCLOSURE: 02

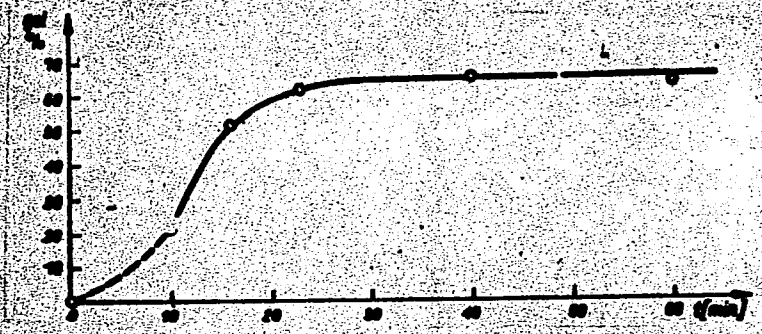

Fig. 2. Gel content in Saran B as a function of UV radiation time.

Card 5/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

ENCLOSURE: 03

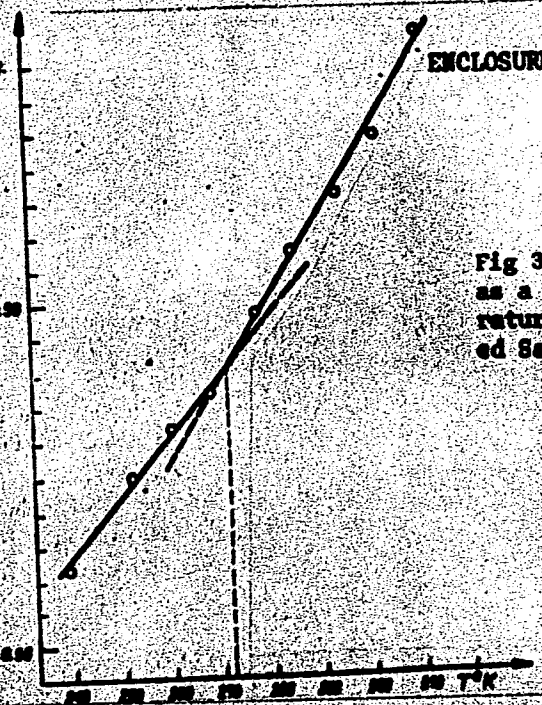

Fig 3. Specific volume as a function of temperature for non-irradiated Saran B.

Card 6/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 27876-66

ACCESSION NR: AT5009476

ENCLOSURE: 04

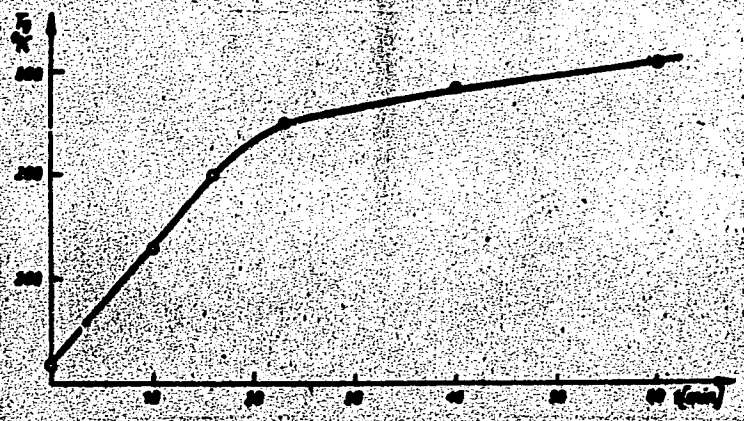

Fig. 4. Glass transition temperature for Saran B as a function of irradiation time.

Card 7/7

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, R.

CZECH

Reactivating ability of normal and cancerous serum and its effect on alkaline phosphatases. K. Molnárová, R. Mucha, and V. Thurzo (Výsk. ústav onkol., Bratislava, Czech.). Československ. Onkologia 2, 38-45(1955).—A new simplified method is described of prepg. alk. phosphatase (I) from beef kidneys including extended extn. with a mixt. of aq. acetone, Et acetate, and toluene at pH 8.3-8.7, subsequent purification with BuOH, and pptn. with acetone. The procedure removes 95% of proteins yielding products with an activity of 133-37 units/mg. of N. I was inactivated by dialyzing against double distd. water at 6° and reactivated by incubation at 37° with different concns. of human serum that had been inactivated by heating to 56°. The rise in activity was proportional to the length of incubation up to 2 hrs. There was no significant difference between the reactivation abilities of normal and cancerous serums. The high activity of I in the serum was not dependent on the amt. of activators present. L. J. H.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

CZECHOSLOVAKIA/Farm Animals. Rabbits. Q-3

Abs Jour: Ref Zhur - Biol., No. 22, 1958, 101222

Author : Mucha, Robert

Inst : -

Title : Physiology of Rabbit Breeding.

Orig Pub: Chovatel, 1957, No. 3, 42-43

Abstract: This paper discusses the specific structure of female sex organs, regular habits of mating and processes of ovulation, fertilization, and pregnancy. -- V.V. Yazvikov

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

VOZAR, Libor; MUCHA, Robert

Some aspects of glucide metabolism altered by complexon 3.
Biologia 18 no.10:760-770 '63.

1. Stredna priemyselna skola chemicka v Bratislave.
(EDATHAMIL) (LIVER GLYCOGEN) (MUSCLES)
(GLYCOGEN) (CARBOHYDRATE METABOLISM)
(BLOOD SUGAR) (EXERTION) (PHARMACOLOGY)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, Stanislaw, mgr

Pharmacists as garden plot owners. Farmacja Pol 19 no.8:170 25 Ap '63.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA T.

ALEKSANDROWICZ J., GRABCYNSKA Z., GUTMANOWAI., KUKIA B., JOSWA J., MUCHA T., PACHONSKA J. Wplyw ipertu azotowego na ustepowanie porazen w gruzliczym zapaleniu opon mozowo-rdzeinowych leczonych streptomycyna The invluence of nitrogen mustard on the rece sion of paralysis in tuberculous meningitis treated with streptomycin Polski Tyrodnik Lekarski, Warsaw 1949, 4/40 (1181-1182)

The drug was administered intravenously, once daily for 3-4 days to 10 children with this complication. In 6 of them paralysis disappeared in less than 24 hours.

Bogdanowicz-Warsaw(XX, 7, 8, 15)

SO: Neurology & Psychiatry Section VIII Vol 3 No 7-12

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V., inz.

Difficulties with using aluminum. A new voltage of 660 V. El tech obzor 52 no.3:145 Mr '63.

1. Bratislavske elektrotechnicke zavody, Bratislava.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.

MUCHA, V., prof. Dr

Tasks of hygiene in Czechoslovakia. Cesk. hyg. epidem. mikrob. 2 no.6:405-411 Dec. 53.
(HYGIENE,
in Czech.)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.; GORNER, F.

Improvement of milk quality by sanitary control. Bratisl.lek.listy 35 no.8:451-459 30 Apr 55.

1. Z Hygienickeho ustavu LFUK, prednosta akad. V.Mucha, a z Oblastneho ustavu hygieny v Bratislave, riaditel' doc. dr. P.Macuch.

(MILK,
cow's milk quality control in Czech.)
(PUBLIC HEALTH,
in Czech., sanitary milk control)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.

Research on the dynamics of self-purification of the Danube water. p.71.
(Vodohospodarsky Casopis, Vol. 5, No. 1, 1957, Bratislava, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.

An address at the Plenary Session of the Hygienists Section of the J.E. Purkyne Society of Czechoslovak Physicians, p. 569.

DESKOSLOVENSKA HYGIENA. Praha, Czechoslovakia. Vol. 4, no. 9, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1, January 1960.

Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

[illegible], [illegible]
SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees: Academician

Affiliation: Chief of Hygiene Section (oddelenie hygieny) within Institute of Experimental Medicine (Ustav experimentalnej mediciny) of SAV [Slovenska akademia vied; Slovak Academy of Sciences], Bratislava

Source: Prague, Ceskoslovenska Hygiena, No 4, May 61, pp 216-221

Data: "The Tasks of Public Health Officers in Controlling Surface Waters under the [Czechoslovak] Third Five-Year Plan [1961-1965]"

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.; ROSIVAL, L.

Hygienic standards and contamination of the living environment by industrial and agricultureal waste products. Cesk. hyg. 6 no.10: 581-584 D '61.

1. Ustav hygieny fakulty Univerzity Komenskeho, Bratislava.
(WATER POLLUTION)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SUCHOL, Given Names

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: Chair of Hygiene, LFUK /Lekarska fakulta Komenskeho University; Faculty of Medicine, Comenius University/ (Katedra Hygieny LFUK), Bratislava

Source: Bratislava, Nasa Veda, Vol VIII, No 9, 1961, pp 513-519.

Data: "The Hygienical Significance of the Green Zones in Residential Areas."

GPO 981643

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, Vojtech (Acad.)

SURNAME, Given Names

Country: Czechoslovakia

Academic Degrees:

Affiliation: Department of Hy[illegible] Institute of Experimental Medicine, SAV /Slovenska akade[illegible]; Slovak Academy of Sciences/ (Oddeleni Hygieny, Ustav [illegible] Medicinej Medicinej, SAV), Bratislava.

Source: Bratislava, Nasa [illegible] [illegible]II, No 11, Nov 61, pp 648-652.

Data: "Limnological and Hy[illegible] [illegible]arch of the Danube River in Czechoslo-[illegible]"

Authors: MUCHA, Vojtech, Ac[illegible]

DAUBNER, Imrich, C.S.[illegible]

GPO 981643

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, Vojtech, akademik; DAUBNER, Imrich, PhMr., C.Sc.

International scientific excursion of limnologists on the Danube River from Vienna to the Black Sea. Biologia 16 no.7:550-555 '61.

1. Ustav experimentalnej mediciny Slovenskej akademie vied, Oddelenie hygieny, Bratislava, Sienkiewiczova 1.

(LIMNOLOGY) (DANUBE RIVER)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

DUB, Oto; MUCHA, Vojtech, akademik Slovenskej akademie vied

Study trip of limnologists on the Danube. Vestnik CSAV 70 no.1: 143-146 '61.

1. Clen korespondent Ceskoslovenske akademie ved (for Dub).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.; KELETI, J.; DAUBNER, I.

Reasons for advocating standardization of hydrobacteriological methods. Cesk. hyg. 7 no.4:209-215 My '62.

1. Ustav hygieny Lekarskej fakulty Univerzity Komenskeho a Oddelenie experimentalnej hygieny CSAV Ustavu experimentalnej mediciny SAV, Bratislava.

(WATER SUPPLY microbiology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.; KUKURA, J.

On the development of teaching and education in hygiene by the medical faculty of Komensky University in Bratislava. Cesk. hyg. 7 no.7:399-403 Ag '62.

1. Ustav hygieny Lekarskej fakulty Univerzity Komenskeho v Bratislave.
(HYGIENE education)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, V.; KAMENSKY, P.; KELETI, J.

Apropos of the pathogenesis and prevention of alimentary nitrate methemoglobinemia in infants. Bratisl. lek. listy 44 no.8:457-466 '64.

1. Katedra hygieny lek. fak. Univerzity Komenskeho (veduci akademik V. Mucha); Katedra biochemie a mikrobiologie Farmaceut. fak. Univerzity Komenskeho (veduci prof. A. Jindra) a Detske oddelenie Mestskeho ustavu narodniho zdravi (veduci MUDr. P. Kamensky).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, W.; REIMANN, B.

Soils of the state farm C, p. 203. (ROCZNIKI GLEBOZNAWCZE, Warszawa, Vol. 3, 1954.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jun. 1955, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHA, W., Dr., Lekarz Zakladowy zakladow chemicznych "Wizow"

Medical service at the chemical plant "Wizow". Zdrowie pub., Warszawa no.6:456-459 Nov-Dec 54.

(INDUSTRIAL HYGIENE
in Poland, chem. ind.)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 00889-67 EWP(m) WW

ACC NR: AP6021978 SOURCE CODE: PO/0006/66/014/002/0289/0296

AUTHOR: Mucha, Z. (Warsaw); Pietrzyk, Z. A. (Warsaw)

ORG: Department of Mechanics of Liquids and Gases, Institute of Fundamental Problems in Technology PAN (Zaklad Mechaniki Cieczy i Gazow Instytutu Podstawowych Problemow Techniki PAN)

TITLE: Calculating the energy input for an electrical shock tube

SOURCE: Rozprawy inzynierskie, v. 14, no. 2, 1966, 289-296

TOPIC TAGS: shock tube, shock wave velocity, electric discharge, gas discharge, ELECTRIC CURRENT

ABSTRACT: A simple method is proposed for determining the input energy to an electric shock tube based on measurement of the electric current flowing in the discharge circuit as a function of time. The method is illustrated by application to a nitrogen-filled shock tube with an axial electrode. The current in the discharge circuit is measured by a Rogowski loop. The conditions for selecting the parameters of this loop are given. An oscillogram is given showing current intensity as a function of time in the discharge circuit. This oscillogram is used for determining the resistance between the electrodes in the shock tube which may then be used together with the entire resistance of the electric circuit to determine the input energy. The diagram for the input energy as a function of the initial energy of the discharge capacitors is similar

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

L 00889-67

ACC NR: AP6021978

to that for the velocity of the shock wave as a function of this same independent variable. It is shown that the velocity of the shock wave may be increased by changing the design of the tube so that energy is transferred to the gas by some other mechanism than Joule's heat, e. g. the magnetic field. The best design at present from the standpoint of shock wave velocity is a tube with coaxial electrodes. Orig. art. has: 6 figures, 9 formulas.

SUB CODE: 20/ SUBM DATE: 22Apr65/ ORIG REF: 001/ SOV REF: 001/ OTH REF: 003

Card 2/2 afs

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHAIDZE, A. N.

"Investigation of Forced Fluctuation in the Operation of a High Speed Piston Engine Controlled by a Centrifugal Regulator." Cand Tech Sci, State Union Sci Res Order of Labor Red Banner Automotive and Automoti e Engine Inst, Min Motor Vehicle, Tractor, and Agricultural Machine Building USSR,Moscow 1955. (KL,No 12, Mar 55)

So: Sum. No 670, 29 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHAIDZE, A.N.

Effect of irregular delivery of fuel to the cylinders on the maintenance of constant speed in multicylinder piston engines. Soob.AN Gruz.SSR 22 no.1:57-62 Ja '59. (MIRA 12:5)

1. AN GruzSSR, Institut metallurgii, Tbilisi. Predstavleno akademikom V.V.Makhaldiani.
(Gas and oil engines)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

S/251/62/028/005/002/003
I042/I242

AUTHOR: Muchaidze, A.N.

TITLE: The effect of discontinuous control on the stability of operation of a piston engine

PERIODICAL: Akademiya nauk Gruzinskoy SSR. Soobshcheniya, v.28, no.5, 1962, 561-566

TEXT: The most important element in the control system consists usually of two inert masses, activated by centrifugal forces, which are sensitive to the number of revolutions. The regulator and engine form a complex dynamic system which, under certain conditions, can acquire undamped vibrations or even resonate with one of the harmonics of the activating force. This process interferes with the stability of the operation. Its nature has been studied and the equations for the system have been derived. These studies, however, are based on

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

S/251/62/028/005/002/003
I042/I242

The effect of discontinuous control...

the classical theory of continuous control while the actual operation has a periodic nature and the average moment is determined by the coordinates of the element at a particular instant. The problem is thus reduced to the investigation of forced fluctuations of a free regulator caused by a periodic disturbing force. The conditions necessary to avoid resonance are derived by an extensive mathematical treatment. There are 2 figures.

ASSOCIATION: Akademiya nauk Gruzinskoy SSR, Institut mashinovedeniya, Tvilisi (Academy of Sciences of the Georgian SSR, Institute of Machinery Management, Tbilisi)

PRESENTED: December 29, 1960, by V.V. Makhaldiani, Academician

SUBMITTED: December 30, 1960

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHAIDZE, D.R.

~~MUCHAIDZE, D.P.~~; PROSKURKO, A.I.

Geological and petrological peculiarities of gangues of the Barsanginskii mountain range junction. Izv.Otd.est.nauk AN Tadzh.SSR no.22:41-51 '57. (MIRA 11:8)

1.Kafedra mineralogii i petrografii Tadzhikskogo gosudarstvennogo universiteta im. V.I. Lenina i Tadzhikskoye geologicheskoye.
(Tajikistan--Geology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

LAVRUSEVICH, A.I.; MUCHAIDZE, D.R.

Stratigraphy of the calcareous shale formation of the eastern part of the Zeravshan-Gissar Range. Izv. Otd. geol.-khim. i tekh. nauk AN Tadzh.SSR 1:61-67 '60. (MIRA 15:1)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Tadzhikskoy SSR.

(Zeravshan Valley--Shale)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SOV/137-58-9-18768

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 88 (USSR)

AUTHORS: Agladze, R.I., Muchaidze, N.N.

TITLE: Recovery of Metallic Manganese by Electrolysis of Chloride Solutions (Polucheniye metallicheskogo margantsa elektrolizom khloristykh rastvorov)

PERIODICAL: V sb.: Elektrokhimiya margantsa, Tbilisi, AN GruzSSR, 1957, pp 341-353

ABSTRACT: The influence of various factors on cathode current efficiency in Mn recovery upon electrolysis of chloride solutions is studied. These include the concentrations of Mn and NH_4Cl in the starting electrolyte (E), the cathode current density, the temperature, the joint effect of temperature and cathode cd, duration of electrolysis, and cathode material. Observations of the composition of, and changes in, the anolyte were made in all the experiments. The optimum conditions for the electrolysis of Mn chloride are determined: Mn contents of the E should be 30-40 g/liter, NH_4Cl 60-200 g/liter, cathode cd 4-5 amps/dm^2, and electrolysis time 6-12 hours. The advantages of the hydrochloric over the sulfuric method are: a) Less

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SOV/137-58-9-18768

Recovery of Metallic Manganese by Electrolysis of Chloride Solutions

possibility of contamination of the precipitate by S, b) higher current efficiency, c) lower voltage on the bath, d) the possibility of recovering a larger quantity of Mn from an identical volume of solution, e) absence of formation of insoluble MnO_2 formations and a simpler regeneration of used E, and f) the possibility of working with higher current densities.

N.P.

1. Manganese chlorides--Electrolysis 2. Manganese--Recovery 3. Electrolytes 4. Electric currents 5. Temperature--Effectiveness

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SOV/137-58-9-18770

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 88 (USSR)

AUTHORS: Agladze, R.I., Muchaidze, N.N.

TITLE: The Electrolytic Refining of Ferromanganese in Hydrochloric-acid Electrolytes (Elektroliticheskoye rafinirovaniye ferromargantsa v solyanokislykh elektrolitakh)

PERIODICAL: V sb.: Elektrokhimiya margantsa. Tbilisi, AN GruzSSR, 1957, pp 355-374

ABSTRACT: With the object of eliminating anode precipitation of Cl in the electrolytic recovery of Mn from chloride solutions, the authors investigate the possibility of obtaining metallic Mn by electrolytic refining of carbon-ferromanganese electrodes in chloride solutions. The electrolysis was conducted in a bath with diaphragms, cathodes of stainless steel being immersed in the bath. The level of the electrolyte (E) in the diaphragms was higher than the level of the E in the bath. The E contained 30-40 g Mn/liter, as well as 150-180 g $(NH_4)_2SO_4$/liter; the pH of the E was 6.7-7.1, the temperature was 20°C, and the anode cd ≤ 3 amps/dm^2. Exhausted and contaminated E was allowed to stand for 2-3 days to remove the Fe, which came down as a

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SOV/137-58-9-18770

The Electrolytic Refining of Ferromanganese (cont.)

precipitate in the form of $Fe(OH)_3$, and then was freed of Ni, Co, and Cu by Mn sulfide or $(NH_4)_2S$, filtered, adjusted for pH (by addition of HCl or NH_4OH) and delivered to electrolysis in the cathode space. The current efficiency of Mn yield at the cathode is 64-70%, electric energy consumption is 3.5-3.75 kwh/kg Mn. A balance of materials for refining over an 8-hour period of bath operation is presented, as well as balances for Mn, NH_3, Cl_2, and water, and for the consumption of the base materials and electrical energy.

N.P.

1. Carbon-iron-manganese alloys--Electrolysis 2. Electrodes--Performance
3. Hydrogen chloride--Applications

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHEV, D.

"Practical instructions for calculating the net cost of the production on cooperative farms; on the basis of the instruction sent to the cooperative farms by the Ministry of Agriculture and Forestry."

OTCHETNOST I KONTROL V SELSKOTO STOPANSTVO., Sofiia, Bulgaria., Vol. 4, No. 4, Apr. 1959

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHEV, I.

TECHNOLOGY

Periodical LEKA PROMYSHLENOST. TEKSTIL. Vol. 7, no. 8, 1958.

MUCHEV, I. Results from introducing cost accounting in the workshops. p. 29.

Monthly List of East European Accessions (EEA) L, Vol. 8, no. 3, March, 1959. Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHIN A.I.

5
8-RML

8476* Total Cross Sections of Positive Pions in Hydrogen. **Polnye secheniya vsaimodeistviya polozhitel'nyh v-mezonov s vodorodom.** (Russian.) A. E. Ignatenko, A. I. Muchin, E. B. Ozerov, and B. M. Pontecervo. *Zhurnal Eksperimental'noi i Teoreticheskoi Fiziki*, v. 30, no. 1, Jan. 1956, p. 7-11.

Total proton cross sections were determined by attenuation in liquid H. Conclusions on the contribution to the cross section by states with different isotopic spin were drawn. Diagram, tables, graphs. 14 ref.

62

(4)

RML

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

CZECHOSLOVAKIA

MUCHIN, M.

Chair of Surgery of the Jaw and Face and Stomatology of the Kirov Military Medical Academy (Katedra chirurgie celisti a obliceje a stomatologie Kirovovy vojenske lekarske akademie), Leningrad

Prague, Ceskoslovenska stomatologie, No 5, 1963, pp 289-295

"Method of Surgical Treatment of Adamantomas of the Lower Jaw."

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHIN, M. V.

"Therapy of Thermal Burns with the Use of Antibiotics," from the book Theses of the Reports of the Scientific Session of the Military Medical Academy im. S. M. Kirov, Tezisy Dokladov Nauchnoy Sessi, 29 Oct-2 Nov 1956, Leningrad.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHINSKIY, David Yakovlevich; POTOLOVSKIY, Lev Aleksandrovich; EMISHERLOVA, O.M., ved. red.

[Polymerization of propylene; experience in the industrial production of low-molecular olefins] Polimerizatsiia propilena; opyt promyshlennogo proizvodstva nizkomolekuliarnykh olefinov. Moskva, Khimiia, 1964. 90 p.
(MIRA 17:12)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHINSKIY, D.Ya.

Factory production of NP-1 sulfonol. Izv. AN Turk. SSR. Ser. fiz.-tekh., khim. i geol. nauk no.4:73-84 '61. (MIRA 14:12)

1. Krasnovodskiy neftepererabatyvayushchiy zavod. (Sulfonol)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

SEREBRYANYY, V.B.; MUCHINSKIY, D.Ya.

Using centrifugal pumps with open impellers in petroleum refining. Mash. i neft. obor. no.2:3-4 '65. (MIRA 18:5)

1. Krasnovodskiy neftepererabatyvayushchiy zavod.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHINSKIY, D.Ya.

Intensifying the primary refinement of petroleum in the Krasnovodsk Petroleum Refinery. Neftepер. i neftekhim. no.3:3-5 '65. (MIRA 18:5)

1. Krasnovodskiy neftepererabatyvayushchiy zavod.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHINSKIY, D.Ya.

Remodeling typical pressure piping. Nefteper. i neftekhim. no.4:4-6 '65. (MIRA 18:5)

1. Krasnovodskiy neftepererabatyvayushchiy zavod.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHINSKIY, D.Ya.; SEREBRYANYY, V.B.

Selecting the types of tubestill heater pumps for electric desalter and atmospheric-vacuum units. Nefteper. i neftekhim. no.6:47-50 '65. (MIRA 18:7)

1. Krasnovodskiy neftepererabatyvayushchiy zavod.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHKIN, N.F.; GOLOVAN', P.F.

Wiring diagrams should be prepared by designing organizations. Avtom., telem. i sviaz' 2 no.2:46 F '58. (MIRA 11:1)

1. Glavnyy tekhnolog tresta "Transsignalstroy" (for Muchkin).
2. Nachal'nik tekhnicheskogo otdela tresta "Transsignalstroy" (for Golovan').

(Electric circuits--Graphic methods)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MAZALOV, A.T.; MUCHKIN, N.F.

New reinforced concrete elements in building the signal system. Transp. stroi. 11 no.5:10-12 My '61. (MIRA 14:6)

1. Glavnyy inzhener tresta Transsignalstroy (for Mazalov).
2. Glavnyy tekhnolog tresta Transsignalstroy (for Muchkin).
(Railroads—Signaling) (Reinforced concrete)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHKIN, V.G.

History of psychiatry in Penza Government in the pre-Zemstvo period of the 19th century. Zhur. nevr. i psikh. 54 no.8:679-683 Ag '54. (MLRA 7:9)

1. Penzenskaya psikhonevrologicheskaya bol'nitsa.
(PSYCHIATRY, history
Russia)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

GORSKA, Jadwiga; MUCHNICKA, Dorota

Attempted classification of human strains of Streptococcus viridans. Med.dosw.mikrob. 7 no.4:361-369 1955.

1. Z Panstwowego Zakladu Higieny w Warszawie.
(STREPTOCOCCUS,
viridans, classif. of human strains)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

GORSKA, Jadwiga; MUCHNICKA, Dorota; KOWALCZYK, Janina

Evaluation of biological method of blood examination of endocarditis lenta. Med.dosw.mikrob. 7 no.4:457-463 1955.

1. Z Panstwowego Zakladu Higieny w Warszawie.
(ENDOCARDITIS, SUBACUTE BACTERIAL, bacteriology, blood exam. biol.methods)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK,A.A.

Precast reinforced concrete factory building for earthquake zones. Stroi. prom. 33 no.7:32-35 Jl '55. (MLRA 8:9)

1. Glavnyy konstruktor Dnepropetrovskogo gosudarstvennogo instituta proyektirovaniya na transporte.
(Factories) (Earthquakes and building)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A.A.

Call Nr: AF 1108825

Transactions of the Third All-union Mathematical Congress (Cont.) Moscow, Jun-Jul '56, Trudy '56, V. 1, Sect. Rpts., Izdatel'stvo AN SSSR, Moscow, 1956, 237 pp.

Muchnik, A. A. (Moscow). Solution of Post's Reduction Problem. 184

Sodnomov, B. S. (Ulan-Ude). Consistency of Projectivity of Some Uncommon Sets. 184-185

Trakhtenbrot, B. A. (Penza). Descriptive Classifications in Recursive Arithmetics. 185

Uspenskiy, V. A. (Moscow). Calculable Operations, Calculable Operators, and Constructively Continuous Functions. 185

There are 2 references, 1 of which is USSR, and another English.

Uspenskiy, V. A. (Moscow). Concept of Program and Computed Operators. 186

Mention is made of Kolmogorov, A. N.

Card 59/80

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A.A.

SUBJECT USSR/MATHEMATICS/Foundations of mathematics CARD 1/2 PG - 583
AUTHOR MUCHNIK A.A.
TITLE Negative answer to the problem of reducibility of the theory of algorithms.
PERIODICAL Doklady Akad.Nauk 108, 194-197 (1956)
reviewed 2/1957

This paper contains the well-known problem of Post (Bull.Am.Math.Soc. 50, 284 (1944)) of determining whether there exist different degrees of undecidability for recursively enumerable (r.e.) sets. By a fairly intricate construction (details of the proof are left to the reader) the author constructs two r.e. (in fact hypersimple) nonrecursive sets neither of which is reducible to the other by any partial recursive operator. He shows further that there exists an infinite r.e. sequence of hypersimple sets every pair of which have this property. Also that if G is any r.e. but not recursive set then there exists a hypersimple set H which is reducible to G but to which G is not reducible. He goes on to state some further results relating to the calculus of mass problems introduced by Medvedev (Doklady Akad.Nauk 104, 501-504 (1955). Let A_ψ denote the problem of extending the partial recursive function $\psi(n)$ (i.e. the problem whose class of solutions consists of all extensions of $\psi(n)$). Theorem 4: If problem B has a unique solution and is reducible to A_ψ then B is decidable. Theorem 5: For every pair of recursively inseparable r.e. sets

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

Muchnik, A.A.

SUBJECT USSR/MATHEMATICS/Foundations of mathematics CARD 1/2 PG - 994
AUTHOR MUCHNIK A.A.
TITLE On the separability of recursively enumerable sets.
PERIODICAL Doklady Akad.Nauk 109, 29-32 (1956)
reviewed 7/1957

In this paper the concept of recursive separability is applied to the proof of the deductive incompleteness of a wide class of calculi for set theory. The set theories to which the proof is applicable are those (such as Bernays-Godel) which are obtained by adding a finite or (recusively enumerable) set of axioms to the lower predicate calculus (with identity). The set of axioms must include the following: extensionality, existence of null set, of $\{x\}$, of $x \cup y$, of $x \times y$, of $x-\{y\}$. Now let $A(F^1, G^1, \ldots)$ be any closed formula of the lower predicate calculus. We obtain a formula $A(f,g,\ldots,q)$ from this by relativising with respect to non-null $Q(x)$ and replacing $Q(x)$, $F(x_1,\ldots x_i)$, $G(x_1,\ldots,x_j)$ etc. by $x \in q$, $\langle x_1,\ldots,x_i\rangle \in f$, $\langle x_1,\ldots,x_j\rangle \in g$ etc. We nom define $A(q) = (f)(g)\ldots [(f \subset q^i \text{ and } g \subset q^j \ldots)] \rightarrow A(f,g,\ldots q)]$. Intuitively $A(q)$ says that A is valid when q is the domain of individuals. Now let K_i, K_ω, P denote respectively the class of formulas of the lower predicate calculus

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A. A.,

"Solution of Post's Reducibility Problem and of Certain Other Problems of the Theory of Algorithms. I.," Trudy, t. 7 (Transactions of the Moscow Mathematical Society, v. 7), Moscow, Fizmatgiz, 1958. p 390.

Basic results of the article were presented at the October 16, 1956 session of the Moscow Mathematical Society. The article contains the following sections: Introduction; Ch. I. Functional Representation of Partially Recursive Operators; 1) Cortege and quasi-cortege; 2) Functional representations of operators; 3) Universal partially recursive operator; 4) Calculation [solution] of M - [Medevedev] problems; Ch. II. Decision Problems of Enumerable Sets; I) Semilattices $\mathfrak{A}$(p); 2) Post's reducibility problem; References.

"Isomorphism of Systems of Recursively Enumerable Sets With Effective Properties," Ibid. p 407.

The basic results given in this article were presented at the December 17, 1957 session of the Moscow Mathematical Society. The article contains the following sections: 1) Introduction; 2) On the correspondence (reducibility of systems of sets; 3) Effective inseparability; 4) Quasi-effective properties; References.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

Post-reduction

MUCHNIK, A.A., Cand Phys-Math Sci--(diss) "Solution of [redacted] problem [redacted]

[redacted] Mos, 1958. 5 pp (Mos State Pedag Inst im V.I.Lenin),

150 copies (KL,47,58,130)

-7-

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A.A.

Isomorphism of systems of recursively enumerable sets with effective properties. Trudy Mosk.mat. ob-va 7:407-412 '58. (MIRA 11:8)

(Aggregates)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

Мучник, А. А.

16(1) PHASE I BOOK EXPLOITATION SOV/2508

Matematicheskoye prosveshcheniye; matematika, yeye prepodavaniye, prilozheniya i istoriya, vyp. 4 (Mathematical Education; Mathematics, Its Teaching, Application and History, Nr. 4) Moscow, Gostekhizdat, 1959. 15,000 copies printed.

Ed.: I.N. Bronshteyn; Editorial Board of Series: I.N. Bronshteyn, A.I. Markushevich, I.M. Yaglom; Tech. Ed.: S.N. Akhlamov.

PURPOSE: This book is intended for persons without an extensive mathematical education who are interested in trends in contemporary mathematics. The book may be useful to high school mathematics teachers.

COVERAGE: The book consists of articles, reviews, and scientific and methodological reports, some of which are translations from other languages. The state of modern mathematics is covered, including applications, history, teaching of mathematics in schools, and mathematical developments in the USSR and abroad. One section deals with scientific and pedagogical life in the USSR and another contains reviews of certain mathematical publications. Some mathematical background is necessary to understand the book; certain articles require a knowledge of higher mathematics.

Mathematical Education; (Cont.) SOV/2508

Without the Use of Cardan Formulas 208
4. Sapgir, I.N. Two Tests of Divisibility by Any Odd Number Not Ending in 5 209

IV. SCIENTIFIC AND PEDAGOGICAL CHRONICLE

Nazibin, F.F. The 16th Conference of Mathematics Departments of Pedagogical Institutes in the Ural Region 213

Smolyanskiy, M.L. Meeting of Teachers of Correspondence Pedagogical Institutes of the RSFSR 219

Talaf, L.Ya. On the Joint Scientific- Methodological Seminar of the Mathematics Departments of Moscow Vtuzes 227

Innovations in Mathematical Science
1. Muchnik, A.A., and R. Fridberg. The Problem of the Recursiveness of Enumerable Sets 233

Card 6/8

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

16(1)

AUTHORS: Yanov, Yu.I., Muchnik, A.A. SOV/20-127-1-11/65

TITLE: On the Existence of k-Valued Closed Classes Having no Finite Basis

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 127, Nr 1, pp 44-46 (USSR)

ABSTRACT: The paper completes the investigations of Lyndon [Ref 4], Slupeski [Ref 5] and S.V. Yablonskiy [Ref 6].
Theorem : For every $k \geqslant 3$ there exists a k-valued closed class without basis.
Theorem : For every $k \geqslant 3$ there exists a k-valued closed class with infinite basis.
Theorem : For every $k \geqslant 3$ P_k contains a continuum of different closed classes.
O.B. Lupanov is mentioned in the paper. - There are 6 references, 2 of which are Soviet, 3 American, and 1 Polish.

PRESENTED: March 9, 1959, by M.V. Keldysh, Academician
SUBMITTED: March 5, 1959

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

[illegible], [illegible]; FRIDBERG, R.

Reducibility of enumerable sets. Mat.pros. no.4:233-23[illegible] (MIRA [illegible])

(Algorism)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A. A. and GINDIKIN, S. G.

"On completeness of system of unreliable elements realizing logical functions"

report submitted for the Intl. Symposium on Relay Systems and Finite Automata Theory (IFAC), Moscow, 24 Sep-2 Oct 1962.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

S/020/62/144/005/002/017
B125/B104

AUTHORS: Muchnik, A. A., and Gindikin, S. G.

TITLE: The completeness of a system of unreliable elements representing functions in the algebra of logic

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 144, no. 5, 1962, 1007-1010

TEXT: A system of functions in the algebra of logic comprises two non-intersecting parts: $A = \{g_1, g_2, \ldots, g_r, \ldots\}$ and $B = \{f_1, f_2, \ldots, f_s, \ldots\}$ consisting of completely reliable elements. All functions $f_s \in B$ are represented by the functional elements π_{f_s} which possess an upper limit ε_s of error probability ($\varepsilon_s < 1/2$). $\tilde{B}$ denotes the totality of the functions f_s and the pertinent numbers ε_s. In this investigation an attempt was made to set up, for each function in the algebra of logic, a system of functional elements corresponding to the functions of the

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

The completeness of a system of ... S/020/62/144/005/002/017
B125/B104

system $A \cup \bar{B}$ and having a predetermined degree of reliability. There is 1 figure.

PRESENTED: January 23, 1962, by P. S. Novikov, Academician

SUBMITTED: December 29, 1961

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A.A.

Strong and weak reducibility of algorithmic problems. Sib.mat.zhur. 4 no.6:1328-1341 N-D '63. (MIRA 17:9)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2

MUCHNIK, A.A.

Reducibility of decidability problems of denumerable sets to separability problems. Izv. AN SSSR. Ser. mat. 29 no.3:717-724 '65. (MIRA 18:6)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135520002-2"