The Laminar Convection Over a Linear Heat Source SOV/40-22-4-26/26

The flow equation, the continuity equation and the heat-conductivity equation are applied as initial equations. Supposing that the velocity profile and the temperature profile of the flow are similar, these equations can be approximatively integrated. Finally the author obtains an explicit solution of the problem satisfying all the boundary conditions. It has the form of a series. However, its applicability is restricted. Firstly one has to count upon errors in the direct neighborhood of the heat source, since real heat sources always have a finite thickness. Secondly it does not appear in this solution that the flow may become turbulent from a certain height.
There are 5 references, 3 of which are Soviet, and 2 English.

SUBMITTED: February 20,1957.

Card 2/2

USCOMM-DC-60,616

SEVRUK, I. G.: Master Phys-Math Sci (diss) -- "Some problems in the free thermal convection of a liquid". Kazan', 1959. 10 pp (Min Higher Educ USSR, Kazan' Order of Labor Red Banner State U im V. I. Ul'yanov-Lenin), 150 copies (KL, No 14, 1959, 118)

24(8)
AUTHOR: Sevruk,I.G. SOV/140-59-1-21/25

TITLE: Approximate Solution of the Problem of Cooling of a Heated Sphere Which is Immersed Into a Fluid Spherical Layer (Priblizhennoye resheniye zadachi ob okhlazhdenii nagretogo shara, pogruzhennogo v sharovoy sloy zhidkosti)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Matematika, 1959, Nr 1, pp 204-211 (USSR)

ABSTRACT: The author considers the process of cooling of a heated sphere which is immersed into a spherical layer of fluid, where the fluid in the moment t=0 is resting and has the temperature 0^{o}. Furthermore it is assumed that at the surface of the sphere the temperature 0^{o} is maintained constantly. The author determines the change of temperature of the sphere and of the fluid shell in the approximation of index zero and index one and the velocity of the fluid in the first approximation. Furthermore the heat

Approximate Solution of the Problem of Cooling of a Heated Sphere Which is Immersed Into a Fluid Spherical Layer

SOV/140-59-1-21/25

flow through the surface of the sphere is calculated. The author thanks G.A.Ostroumov for giving the problem and S.I.Mel'nik for advices.
There are 5 references, 4 of which are Soviet, and 1 German.

ASSOCIATION: Permskiy gosudarstvennyy universitet imeni A.M.Gor'kogo (Perm' State University imeni A.M.Gor'kiy)

SUBMITTED: February 8, 1958

Card 2/2

S/044/62/000/001/037/061
C111/C222

AUTHOR: Sevruk, I.G.

TITLE: The uniqueness of the solution of the basic problem of magneto-hydrodynamics

PERIODICAL: Referativnyy zhurnal. Matematika, no. 1, 1962, 56, abstract 1 B 270.("Uch. zap. Permsk. un-t", 1960, 17,no. 2, 125-127)

TEXT: The author proves the uniqueness of the solution of the equations of magneto-hydrodynamics, which describe the flow of a viscous conducting, incompressible liquid in a magnetic field. The principle system of equations is written in the symmetric form suggested by W.M. Elsasser (Phys. Rev., 1950, 79, 183), where the boundary conditions for the sought functions are prescribed accordingly. The uniqueness of the solution for the interior problem is proved by the author according to the Dolidze method (RZh Mat, 1955, 2225). The author considers the possibility of generalizing the uniqueness proof to cover the exterior problem.

[Abstracter's note : Complete translation.]

Card 1/1

KAARDE, I.A., prof.; KHERUVIMOV, V.P.; SEVRUK, O.; LUZYANIN, D.; LESNIK, E.; POTAPOV, V.M.; SIKORSKIY, A.N.

Brief news. Veterinariia 41 no.6:122-125 Je '64. (MIRA 18:6)

MINASYAN, A.K.; SEVRUK, O.G.

Studying the brewing qualities of Armenian barleys. Izv.AN Arm.SSR.Biol.nauki 12 no.7:23-31 Jl '59. (MIRA 12:10)

1. Institut zemledeliya Ministerstva sel'skogo khozyaystva Armyanskoy SSR.
(ARMENIA--BARLEY--VARIETIES) (MALT)

SEVRUK, O., inzh.

New types of vitaminized food stuffs made of intermediate and waste products of beer brewing. Prom.Arm. 4 no.9:46-48 S '61. (MIRA 14:11)

1. TSentral'naya laboratoriya upravleniya pishchevoy promyshlennosti, Sovnarkhoz Armyanskoy SSR.
(Food, Enriched)
(Brewing industry--By-products)

MIKHAYLOV, V.V., doktor tekhn.nauk, prof.; GITMAN, F.Ye., kand.tekhn.nauk; RUDENKO, I.F., inzh.; SEVRUK, P.P., inzh.

Automatic vibration and pressure molding line at the Reinforced Concrete Research Institute. Trudy NIIZHB no.21:181-190 '61. (MIRA 14:12)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR.
(Prestressed concrete)

SEVRUK, R.M.; RADBIL', O.S.

Clinical use of lantozid, a clinical preparation of Digitalis lanata. Sov.med.19 no.10:80-84 O '55. (MLRA 8:12)

1. Iz kafedry terapii (zav. prof. B. Ye. Votchal) Tsentral'nogo instituta usovershenstvovaniya vrachey i otdela farmakologii (zav.--prof. A.D.Turova) Vsesoyuznogo nauchno-issledovatel'skogo instituta lekarstvennykh i aromaticheskikh rasteniy.
(DIGITALIS,
lanatosid, ther. use & results)

SEVRUK, Sil'vestr Martynovich; BARDASH, A.F., spetsredaktor

[Swine house for 30 sows, with vaulted roof, made of three-step blocks. Model plan No.221] Svinarnik-matochnik na 30 svinomatok so svodchatym pokrytiem iz trekhstupenchatykh blokov. Tipovoi proekt no.221. Kiev, Izdatel'skii otdel, 1955. 12 p. 29 plans. (MLRA 9:10)

1. Ukrainskiy gosudarstvennyy institut proyektirovaniya sel'skogo i kolkhoznogo stroitel'stva.
(Swine houses and equipment)

SEVRUK, Sil'vestr Martynovich; BARDASH, A.F., spetsredaktor

[Fattening barn for 300 swine, with vaulted roof, made of three-step blocks. Model plan No.222] Svinarnik-otkormochnik na 300 golov so svodchatym pokrytiem iz trekhstupenchatykh blokov. Tipovoi proekt No.222. Kiev, Izdatel'skii otdel, 1956. 12 p., 24 plans.

1. Ukrainskiy gosudarstvennyy institut proyektirovaniya sel'skogo i kolkhoznogo stroitel'stva.
(Swine houses and equipment)

SEVRYUGIN, A.

Working out norms for the number of workers in a steel smelting shop. Biul.nauch.inform: trud i zar. plata 3 no.12:14-17 '60. (MIRA 14:3)
(Smelting)

SOV/105-58-7-16/32

AUTHORS: Gurgenidze, M. Z., Engineer, Sevryugin, I. K., Engineer

TITLE: Device for the Measurement of the Angle Between the Voltage- and EMF-Vectors of a Synchronous Machine (Ustroystvo dlya izmereniya ugla mezhdu vektorami napryazheniya i e.d.s. sinkhronnoy mashiny)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 65 - 67 (USSR)

ABSTRACT: A somewhat more accurate method for the determination of the static and dynamic overload capacity of a synchronous machine by means of the angle-characteristic of the power developed in the case of different modes of operation is described. Construction can be carried out in the completest manner according to the oscillographic recordings of the changes of the actual efficiency and of the angle Θ both in the case of slow and of rapid changes of load. The device for measuring the angle Θ must warrant continuous recording. The most promising was the device for measuring the angle Θ, which was carried out according to the circuit developed by the Institute of Water Power Engineering AS of the Armenian SSR (Ref 4). This construction, however, entails

Card 1/3

Device for the Measurement of the Angle Between the Voltage- and EMF-Vectors of a Synchronous Machine

a distortion of the linear relation between the angle θ and the voltage at the filter output. This fault was corrected in the device designed according to the new circuit (which is given here). The results obtained by the experimental examination of this device are described by oscillograms. The data obtained from tests show that this device may be used for the investigation of the enforced oscillations of the synchronous machines (oscillations with high angular accelerations), as well as of the free oscillations (with low angular accelerations). This device may also be used as a linear angular transmitter in connection with various control devices. There are 4 figures and 6 [illegible] Soviet references.

ASSOCIATION: Institut elektromekhaniki Akademii nauk SSSR
(Institute of Electromechanics, AS USSR)

SUBMITTED: July 15, 1957

SOV/105-58-7-16/32

Device for the Measurement of the Angle Between the Voltage- and EMF-Vectors of a Synchronous Machine

1. Electromotors--Testing equipment 2. Oscillographs--Applications

Card 3/3

SEVRYUGIN, I.K.

Analytical study of the sparkless region of the commutation of a d.c. machine. Sbor.rab.po vop.elektromekh.no.8:259-275 '63. (MIRA 16:5)

(Electric machinery--Direct current) (Commutation (Electricity))

SEVRYUGIN, N.A.

Geology of the Semipalatinsk region. Sov. geol. 2 no.8:15-32 Ag '59. (MIRA 13:2)

1. Yuzhno-Kazakhstanskoye geologicheskoye upravleniye.
(Semipalatinsk region (Kazakhstan)--Geology))

KISELEV, L.I.; SEVRYUGIN, N.A.; BESPALOV, V.F.; ABDRAKHMANOV, K.; MOROZOV, M.D.; MIKHAYLOV, A.P.; BEKZHANOV, G.O.; LYAPICHEV, G.F.

Resolutions of the Kazakhstan Petrographic Conference. Izv.AN Kazakh.SSR.Ser.geol. 22 no.5:98-103 S-O '65.
(MIRA 18:12)

SEVRYUGIN, P.N.; GANIN, A.I., starshiy inzh.

Success was assured by skillful organization of work. Elek. i tepl. tiaga 5 no.6:3 Je '61. (MIRA 14:10)

1. Nachal'nik Chernikovskoy distantsii kontaktnoy seti Demskogo energouchastka Kuybyshevskoy dorogi (for Sevryugin. 2. Demskiy energouchastok Kuybyshevskoy dorogi (for Ganin).
(Electric railraods--Wires and wiring)

SEVRYUGIN, V. I.

Pile Driving

All-purpose pile driver of great power. Mekh . trud. rab. 6 no. 4, 1952

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

SHPIRT, Ya.Yu.; DAVIDENKOVA, I.M.; SEMYUGINA, A.I.

Vitamins A and E in atherosclerosis. Trudy Inst. klin. i eksper. kard. AN Gruz. SSR [illegible] 137-140 [illegible]. (MIRA 17:7)

1. TSentral'naya bol'nitsa Ministerstva zdravookhraneniya RSFSR, Moskva.

SOV/137-57-6-9817

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 6, p 72 (USSR)

AUTHORS: Loshkarev, M.A., Sevryugina, M.P.

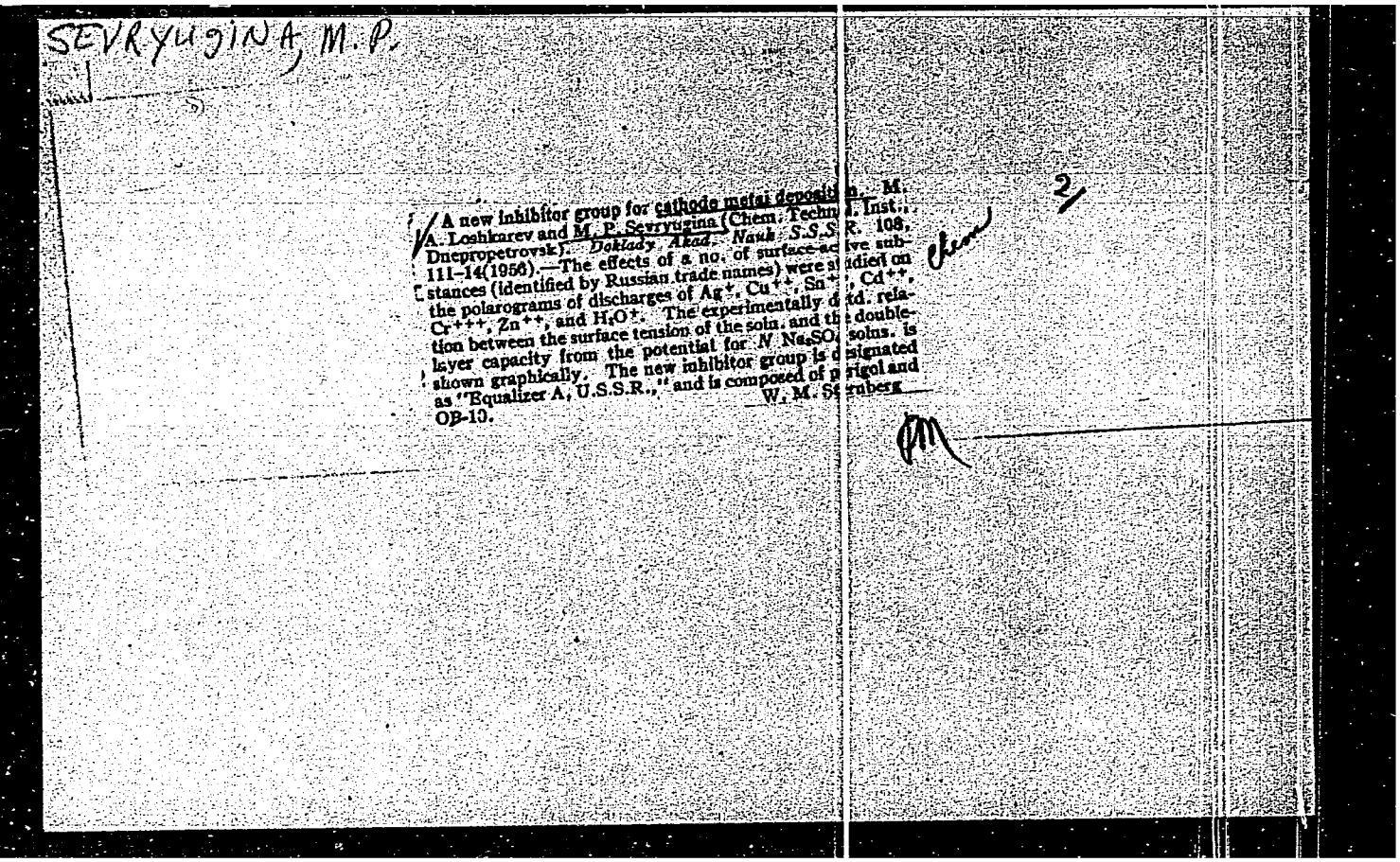
TITLE: On a New Group of Inhibitors of Cathodic Precipitation of Metals (O novoy gruppe ingibitorov katodnogo vydeleniya metallov)

PERIODICAL: Tr. Dnepropetr. khim.-tekhnol. in-ta, 1956, Nr 5, pp 129-134

ABSTRACT: Note is taken of the role of surface-active substances in the cathodic precipitation of metals. The new surface-active substances include OP-4, OP-7, OP-10, OS-20, stereox, equalizer A, peregal, igepal, leonil, emulphor, etc.

G.S.

Card 1/1



SEVRYUGINA, M.P.

A new inhibitor group for cathode metal deposit... M.
A. Loshkarev and M. P. Sevryugina (Chem. Techn... Inst.,
Dnepropetrovsk). *Doklady Akad. Nauk S.S.S...* R. 108,
111–14(1956).—The effects of a no. of surface-ac... ive sub-
stances (identified by Russian trade names) were s... idied on
the polarograms of discharges of Ag^+, Cu^{++}, Sn^{+}... , Cd^{++},
Cr^{+++}, Zn^{++}, and H_3O^+. The experimentally d... td. rela-
tion between the surface tension of the soln. and th... double-
layer capacity from the potential for *N* Na_2SO... solns. is
shown graphically. The new inhibitor group is d... signated
as "Equalizer A, U.S.S.R.," and is composed of p... rigol and
OB-10. W. M. Sc... ruberg

2/

SEVRYUGINA, M.P.; LOSHKAREV, M.A.

Effect of surface active agents on the electrodeposition of copper. Trudy DKHTI no.6:36-50 '58. (MIRA 13:11)
(Copper plating) (Surface active agents)

SEVRYUGINA, M. P., Cand Chem Sci (diss) -- "A new group of inhibitors of cathode isolation of metals". Dnepropetrovsk, 1960. 15 pp (Min Higher and Inter Spec Educ Ukr SSR, Dnepropetrovsk Chem-Tech Inst im F. E. Dzerzhinskiy), 200 copies (KL, No 14, 1960, 128)

S/081/62/000/021/005/069
B168/B101

AUTHORS: Sevryugina, M. P., Gromik, L. I.

TITLE: Emulsifying and wetting agents as inhibitors of the processes of electrocrystallization of metals. Report II. Electrocrystallization of lead

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 21, 1962, 57, abstract 21B407 (Nauchn. tr. Dnepropetr. khim.-tekhnol. in-t, no. 12, part 2, 1961, 119-135)

TEXT: The effects of additives on the cathodic polarization and on the structure of lead deposited during electrolysis of perchlorate (I), phenolsulfonic (II), fluosilicic (III) and nitrate (IV) solutions were studied. The action of the additives varies with the nature of the electrolyte. According to the efficiency of the inhibiting action of the additives the order of these electrolytes is: IV < III < II < I. Introduction of wetters "НБ" ("NB") and "ДБ" ("DB") slightly increases cathodic polarization, while at the same time the structure of the deposit improves although it remains coarsely crystalline and although the deposit itself is still not uniform enough. Additive "ПБ-5" ("PB-5") severely

Card 1/2

LOSHKAREV, M.A.; KOSTENKO, B.N.; CHERNENKO, V.I.; SEVRYUGINA, M.P.

Selecting optimal conditions for copper electrocrystallization.
Trudy DKHTI no.16:43-54 '63. (MIRA 17:2)

ABDULKABIROVA, M.A.; ALEKSANDROVA, M.I.; AFONICHEV, N.A.; BANDALETOV, S.M.; BASPALOV, V.F.; BOGDANOV, A.A.; BORZOVIKOV, L.I.; BORSUK, B.I.; BORUKAYEV, R.A.; BUVALKIN, A.K.; BYKOVA, M.S.; DVORTSOVA, K.I.; DEMBO, T.M.; ZHUKOV, M.A.; ZVONTSOV, V.S.; IVSHIN, N.K.; KOPYATKEVICH, R.A.; KOSTENKO, N.N.; KUMPAN, A.S.; KURDYUKOV, K.V.; LAVROV, V.V.; LYAPICHEV, G.F.; MAZURKEVICH, M.V.; MIKHAYLOV, A.Ye.; MIKHAYLOV, N.P.; MYCHNIK, M.B.; NIDLENKO, Ye.N.; NIKITIN, I.F.; NIKIFOROVA, K.V.; NIKOLAYEV, N.I.; PUPYSHEV, N.A.; RASKATOV, G.I.; REINGARTEN, P.A.; SAVICHEVA, A.Ye.; SALIN, B.A.; SEVRYUGIN, N.A.; SEMENOV, A.I.; CHERNYAKHOVSKIY, A.G.; CHUYKOVA, V.G.; SHLYGIN, Ye.D.; SHUL'GA, V.M.; EL'GER, E.S.; YAGOVKIN, V.I.; NALIVKIN, D.V., akademik, red.; PERMINOV, S.V., red.; MAKUSHIN, V.A., tekhn.red.

[Geological structure of central and southern Kazakhstan] Geologicheskoe stroenie TSentral'nogo i Yuzhnogo Kazakhstana. Leningrad, Otdel nauchno-tekn.informatsii, 1961. 496 p. (Leningrad. Vsesoiuznyi geologicheskii institut. Materialy, no.41) (MIRA 14:7)

(Kazakhstan--Geology)

SEVRYUGOVA, N.N.

USSR/Nuclear Physics - Installations and Instruments. Methods of Measurement and Research. C-2

Abs Jour : Ref Zhur - Fizika, No 4, 1957, 8604

Author : Sevryugova, N.N., Uvarov, O.V., Zhavoronkov, N.M.

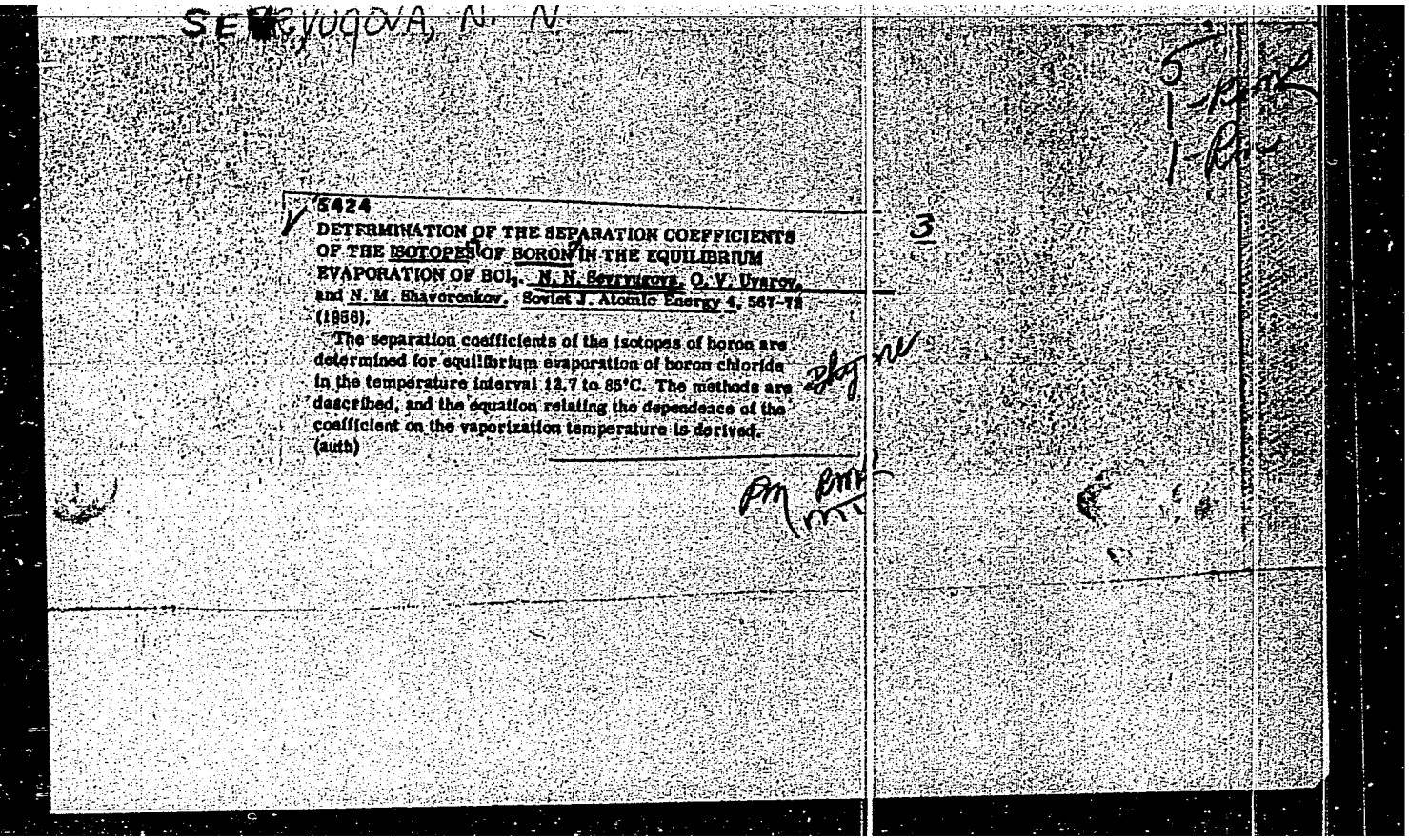
Inst :

Title : Determination of the Coefficients of Separation of Boron Isotopes in Equilibrium Evaporation of BCl_3

Orig Pub : Atom. energiya, 1956, No 4, 113-117.

Abstract : The method of Rayleigh distillation was used to determine the coefficient of separation of boron isotopes (α) in the system $B^{10}Cl_3$ -- $B^{11}Cl_3$ at evaporation temperatures from -85° to the normal boiling point of 12.7°. The dependence of α on the temperature (T) is expressed by the equation $\log \alpha = 0.00483 - 1.00757/T$. At a temperature of -61.7°, $\alpha=1$, below this point the $B^{11}Cl_3$ is the more volatile $\Delta\square$, while above this point ---- $B^{11}Cl_3$ is the more volatile. The procedure is described.

Card 1/2



SE[illegible]rugova, N. N.

5424

DETERMINATION OF THE SEPARATION COEFFICIENTS OF THE ISOTOPES OF BORON IN THE EQUILIBRIUM EVAPORATION OF BCl_3. N. N. Serpukova, O. V. Dvarov, and N. M. Shavorenkov. Soviet J. Atomic Energy 4, 547-75 (1958).

The separation coefficients of the isotopes of boron are determined for equilibrium evaporation of boron chloride in the temperature interval 12.7 to 85°C. The methods are described, and the equation relating the dependence of the coefficient on the vaporization temperature is derived. (auth)

SEVRYUGOVA, N.N.

5(2) PHASE I BOOK EXPLOITATION SOV/1916

Vsesoyuznoye soveshchaniye po khimii bora, 1955

Bor; trudy Konferentsii po khimii bora i yego soyedineniy (Boron; Transactions of the Conference on the Chemistry of Boron and Its Coumpounds) Moscow, Goskhimizdat, 1958. 189 p. Errata slip inserted. 2,400 copies printed.

Ed.: G.P. Luchinskiy; Tech. Ed.: M.S. Lur'ye.

PURPOSE: This book is intended for chemists, as well as for industrial personnel working with boron and its compounds.

COVERAGE: This collection contains 24 studies on the chemistry, crystalline structure, physicochemical properties, and technology of boron and its compounds. Twenty-two of the studies were presented at the All-Union Conference on Boron Chemistry, held at the Nauchno-issledovatel'skiy fiziko-khimicheskiy institut im. L. Ya. Karpova (Scientific Research Physicochemical Institute im. L. Ya. Karpov) in

Card 1/6

December 1955. Two of these articles deal with the thermochemistry of boron. The two studies on "borundum" production are being published for the first time. The studies are well illustrated and accompanied by bibliographies.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

TM/rj
6-22-59

5 (2), 21 (5) SOV/20-126-5-36/69

AUTHORS: Sevryugova, N. N., Uvarov, O. V., Zhavoronkov, N. M., Corresponding Member AS USSR

TITLE: Separation of Boron Isotopes by Boron Chloride Rectification (Razdeleniye izotopov bora rektifikatsiyey khloristogo bora)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 5, pp 1044 - 1046 (USSR)

ABSTRACT: At the beginning, the differences between the two boron isotopes B^{10} and B^{11} are indicated (Ref 1). The light isotope B^{10} is used for filling neutron counters; besides, it can be used as a protection against neutron radiation, and for regulating the operation of reactors. The separation of boron isotopes is achieved by 5 different methods: a) electromagnetically, b) by thermodiffusion, c) by means of diffusion by vapor, d) by the chemical isotope exchange, and e) by rectification. The methods a) and c) make possible a high degree of separation, but are little productive. The method b) failed. At present, the two latter methods d) and e) can be regarded as most convenient for the B^{10}-production. Both of them have been chemically developed.

Card 1/3

Separation of Boron Isotopes by Boron Chloride Rectification

SOV/20-126-5-36/69

The authors think that rectification is one of the most economical methods. They carried out the rectification of the BCl_3 in columns of various types of construction (Fig 1). The procedure is described in detail. Figure 2 shows the course of the increase in $B^{10}Cl_3$ in the retort liquid. Within 28 days, a 5-fold enrichment was obtained at a content of 100 cm^3 liquid in the distillation vessel. The stationary phase was not attained during the period mentioned. The calculation showed that the (maximum possible) separability of the column is equal to 800 theoretical steps. This should guarantee the obtaining of a product with a content of about 75 Mol-% $B^{10}Cl_3$. An approximate calculation showed that the production method for elementary boron described here is acceptable from an economical point of view. There are 2 figures and 5 references, 4 of which are Soviet.

Card 2/3

Separation of Boron Isotopes by Boron Chloride Rectification SOV/20-126-5-36/69

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

SUBMITTED: September 5, 1958

Card 3/3

82733
S/089/60/009/002/004/015
B006/B056

24.6710

AUTHORS: Sevryugova, N. N., Uvarov, O. V., Zhavoronkov, N. M.

TITLE: Separation of Stable Boron Isotopes 19

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 2, pp. 110-125

TEXT: The present article gives a detailed description of the methods of separating the boron isotopes B^{10} and B^{11} which are interesting for industrial purposes. The molar ratio of the two isotopes in naturally occurring boron is about 20 : 80. The various methods furnish somewhat different values, and various authors also obtained different results by one and the same method (on BF_3) (cf. Table 1). These problems are briefly dealt with in the introduction, after which the electromagnetic method, the method of thermal diffusion, and the method of diffusion in the vapor current of an inert substance are discussed, while in the following the two most important methods of industrial separation of isotopes are explained in great detail: the method of chemical isotopic exchange and the method of rectifying boron halides. G. M. Panchenkov, V. D. Moyseyev, and A. V. Makarov

4

Card 1/4

(Ref. 31) were among the first who suggested using the chemical exchange between boron halides and organic boron halogen complexes for the separation of boron isotopes. The separation factor α is comparatively large for these processes and is, on the average, about 1.03. Its temperature dependence for the systems $(C_6H_5)(CH_3)OBF_3$ - BF_3 and $(C_4H_9)SBF_3$ - BF_3 is given in Tables 2 and 3. For the last-mentioned system α attains a maximum value of 1.054 at -20°C. The α-values determined by various authors by means of different isotopic exchange methods are given in Table 4. The grave disadvantage of the method consists in the high molecular weight of the complex. This is the reason why industrial plants find it less economical to work by this method. The rectification methods are considerably more simple, but, in this case, the separation factor is small. In $BO_3(CH_3)_2$, e.g., it is only 1.001; in practice, only BF_3 and BCl_3 are used, which have a somewhat higher α. In the first case, the temperature dependence of α is given by $\alpha = 1.0488\ e^{-6.17/T}$, and in the second case by $\alpha = 1.0112\ e^{-2.33/T}$. The temperature- and pressure dependence of α

Separation of Stable Boron Isotopes

in BF_3 rectification are illustrated also by the numerical values in Table 6 and the $\alpha(T)$ curve in Fig. 3. $\alpha(T)$ for BCl_3 rectification is shown in Fig. 5. The greatest disadvantage of the rectification methods consists in the fact that, for the purpose of increasing α, it is necessary to work at the lowest possible temperatures, which reduces productivity because of the consumption of liquid air. BCl_3 rectification seems to be the most profitable method; though the separation factor is only about 1.003, this value may be attained at atmospheric pressure and room temperature. A large table (5) shows the characteristics of the individual columns for rectification- and isotopic exchange methods (taken from Refs. 40-47). The most important data of the various methods are compared in Table 7. There are 7 figures, 7 tables, and 71 references: 23 Soviet, 20 US, 5 German, 4 British, 1 French, 6 Dutch, 2 Swedish, and 1 South African.

82733

Separation of Stable Boron Isotopes

S/089/60/009/002/004/015
B006/B056

SUBMITTED: April 4, 1960

4

Card 4/4

S/076/60/034/05/10/038
B010/B002

5.2400(A)

AUTHORS: Sevryugova, N. N., Uvarov, O. V., Zhavoronkov, N. M.

TITLE: Separation Factors of Boron Isotopes in the Equilibrium Vaporization of Boron Fluoride

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 5, pp. 1004-1008

TEXT: The authors investigated the dependence of the separation factors α on temperature with respect to the system $B^{11}F_3 - B^{10}F_3$ under equilibrium vaporization. The values of α were determined by Raleigh's distillation method. In order to obtain a larger value of G_o/G_E (G_o and G_E = amount of substance at the beginning and at the end of distillation), vaporization was brought about in two stages. Experiments took place in a device suited for the purpose (Fig. 2), the main elements of which are two vaporization vessels (Fig. 1), in which mixing is done with magnetic stirrers. The vessels are installed in a cryostat filled with isopentane, the temperature of which is measured with thermocouples. Experiments showed (Table 1) that the maximum value of α is attained at a stirrer speed of 200 rpm. Determinations of the influence exerted by the boiling temperature (measured at 157 to 168°K) on the value of α revealed (Table 2) that α drops with temperature, which fact had already been observed on the system $B^{11}Cl_3 - B^{10}Cl_3$.

Card 1/2

S/020/60/134/004/035/036XX
B004/B067

AUTHORS: Sevryugova, N. N. and Zhavoronkov, N. M., Corresponding Member of the AS USSR

TITLE: Temperature Dependence of the Partition Coefficient of the System $C^{13}O - C^{12}O$

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 4, pp. 875-878

TEXT: The authors attempted to study the partition coefficients in the $C^{13}O - C^{12}O$ system, which had been determined already earlier by other scientists, in a wider temperature range. They measured the difference ΔP between the vapor pressure of carbon monoxide with a natural content of C^{13} and O^{18} and the vapor pressure of carbon monoxide with 23% and 32% C^{13}. The purification of CO with natural isotopic composition and obtained from pure sulfuric and formic acids is described: removal of moisture, oxidation to CO_2 by means of CuO, removal of N_2, O_2, Ar by freezing, reduction to CO by means of Zn, examination of purity by means of an

Card 1/3

Temperature Dependence of the Partition Coefficient of the System $C^{13}O - C^{12}O$

S/020/60/134/004/035/036XX
B004/B067

MC-4 (MS-4) mass spectrometer and on the basis of the freezing point. Samples with C^{13} excess and normal O^{18} content were obtained from the CO samples with C^{13} and O^{18} excess, which had been prepared at the laboratory of adsorption processes of the authors' Association according to the following reaction scheme: $C^{13}O^{18}+CuO^{16} = Cu+C^{13}O^{16}O^{18}$; $C^{13}O^{16}O^{18}+4H_2 = C^{13}H_4+H_2O^{16}+H_2O^{18}$; $C^{13}H_4+4CuO^{16} = 4Cu + 2H_2O^{16}+C^{13}O_2^{16}$; $C^{13}O_2^{16}+Zn = ZnO+C^{13}O^{16}$. These samples were purified in the same way as the standards with natural composition. ΔP was measured in an apparatus calibrated with a CO standard. The apparatus contained two cells filled with a standard and $C^{13}O$. The temperature was varied between -170 and +205°C, corresponding to a pressure change from 100 mm Hg to 5 atm in the cells. A temperature dependence of the partition coefficient α was obtained from the equation $(\alpha - 1) = \Delta P/P(N_1 - N_2)$ (P = pressure in the cells; N_1 and N_2 = C^{13} content in the two cells expressed in molar parts), which follows the equation $\alpha = Aexp(B/T)$. The following values were found for the constants by a graphical representation of the function $\log\alpha = f(1/T)$: A = 0.9954; B = 1.477. $B = (\lambda_{C^{13}O} - \lambda_{C^{12}O})/R = \Delta\lambda/R$, where λ denotes the evaporation

Card 2/3

S/191/62/000/006/002/016
B110/B138

AUTHORS: Sevryugova, N. N., Sokol'skiy, V. A., Chervyakova, A. A., Zhavoronkov, N. M.

TITLE: High purification of industrial styrene

PERIODICAL: Plasticheskiye massy, no. 6, 1962, 5-7

TEXT: An attempt was made to reduce the impurity content of styrene to analytical purity. Rectification was performed at 50 mm Hg in a Pyrex laboratory rectification column. The column, 1.5 mm high and 30 mm in diameter, was filled with 3·3 mm spirals of 0.2 mm stainless wire and possessed only a slight hydraulic resistance. The surface of the condensation column was calculated so that vapor completely condensed even under maximum pressure. Before setting the apparatus in operation, it was evacuated to 1-2 mm Hg, 1 liter styrene was poured into the flask, and the heater switched on. With a styrene/ethyl benzene mixture in a ratio of 4 to 13% and a distribution coefficient of 1.36, the maximum load on the cross-section of the column was 1100 cc/hr, equivalent to 160 cc/cm^2·hr. With a minimum charge of 500 cc/hr, the steady state developed after 6 hrs.

Card 1/2

SEMYUGOVA, N.N.; SOKOLSKIY, V.A.; ZHAVORONKOV, N.M.

Phase equilibria for acrylonitrile - acetonitrile mixtures.
Zhur. prikl. khim. 37 no.9:1989-1993 S '64.
(MIRA 17:10)

SOKOLOV, N.M.; SEVRYUGOVA, N.N.; ZHAVORONKOV, N.M.

Liquid-vapor equilibrium in the system acrylonitrile-acrolein at various pressures. Zhur. fiz. khim. 39 no.4:1008-1012 Ap '65. (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN SSSR. Submitted May 27, 1964.

SEVRYUK, Vladimir Mikhaylovich; SHVYDCHENKO, L.I., red.; ALYAKRITSKAYA, L.S., tekhn.red.

[Let us fatten 6000 swine per year] Otkormim za god 6000 svinei. Rostov-na-Donu, Rostovskoe knizhnoe izd-vo, 1960. 18 p. (MIRA 14:12)

1. Starshiy svinar' uchebno-opytnogo khozyaystva "Zernovoye", Mechetinskogo rayona (for Sevryuk).
(Swine--Feeding and feeds)

SEVRYUK, V.N.

Involute gear transmissions with a point contact. Trudy LVMI 1:40-47 '62 (MIRA 17:7)

SEVRYUK, V.N., kand. tekhn. nauk, dotsent

Some geometrical characteristics of cylindrical round-helical surfaces. Izv. vys. ucheb. zav.; mashinostr. no.10:38-48 '64 (MIRA 18:1)

1. Luganskiy mashinostroitel'nyy institut.

RUMYANTSEV, B.P., dots., otv. red.; GULIDA, E.N., red.; KARTASHOV, I.N., prof., red.; KIRILLOV, Yu.G., dots., red.; MOGIL'NYY, N.I., dots., red.; SEVRYUK, V.N., dots., red.; STAN'KO, D.G., dots., red.; TSOY, N.G., dots., red.; KHLUS, A.A., dots., red.; POLUBICHKO, B.V., red.

[Problems of locomotive manufacture, technology of machine manufacture and founding] Voprosy lokomotivostroeniia, tekhnologii mashinostroeniia i liteinogo proizvodstva. L'vov, Izd-vo L'vovskogo univ., 1964. 126 p. (MIRA 17:10)

1. Lugansk. Mashinostroitel'nyy institut.

SEVRYUKOV, I., polkovnik

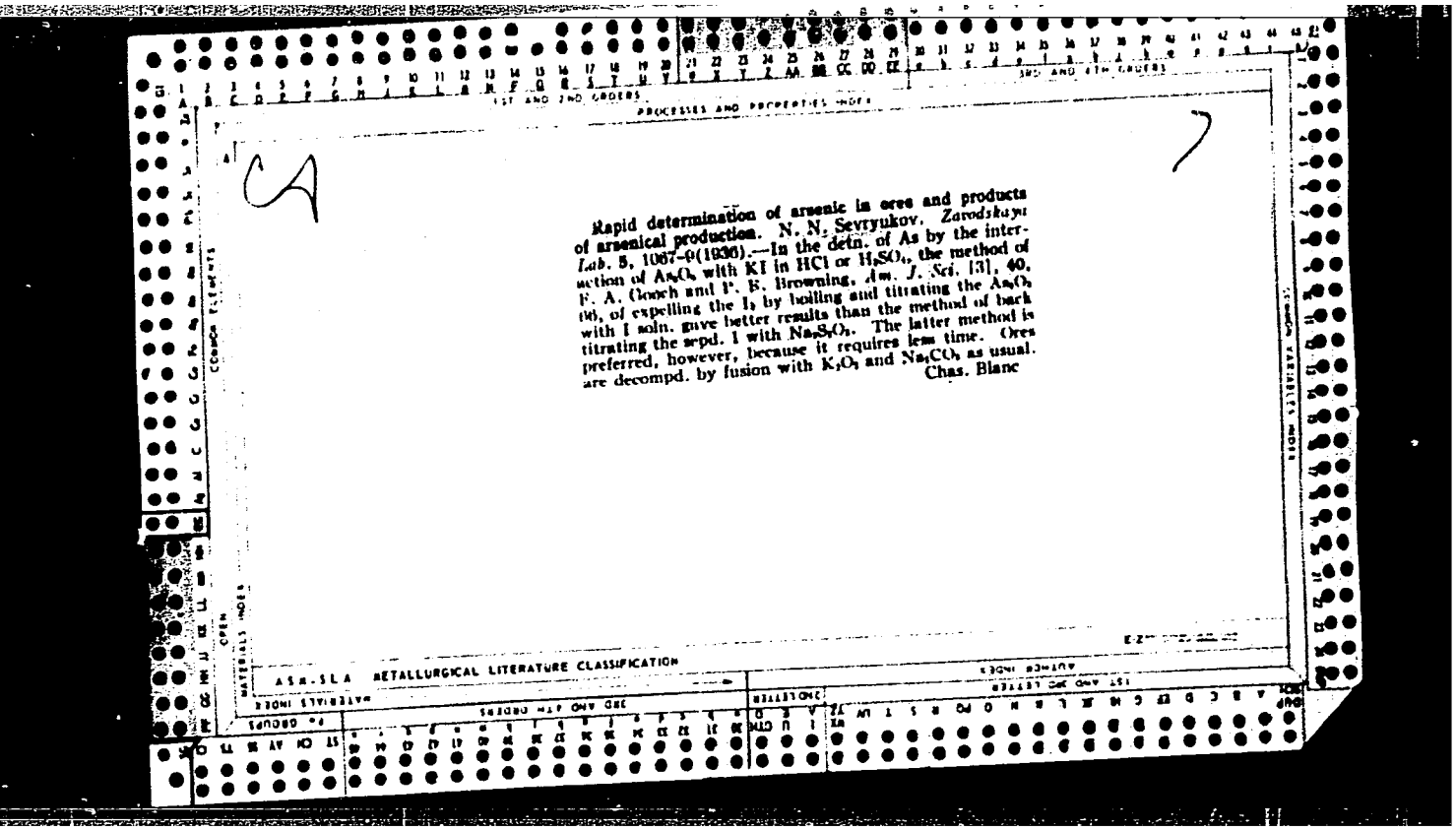
Tactical and drill exercises in a company. Voen. vest. 41 no.2: 49-53 F '62. (MIRA 15:3)

(Military education)

SEVRYUKOV, I. P. and GRYZLOV, I. M. (Veterinary Assistant Surgeon and Veterinary Surgeon) (Shakhovsk Raion, Moscow Oblast')

"Treatment of the malignant catarrhal fever in cattle"

Veterinariya, Vol. 38, no. 10, October 1961, pp. 81-89

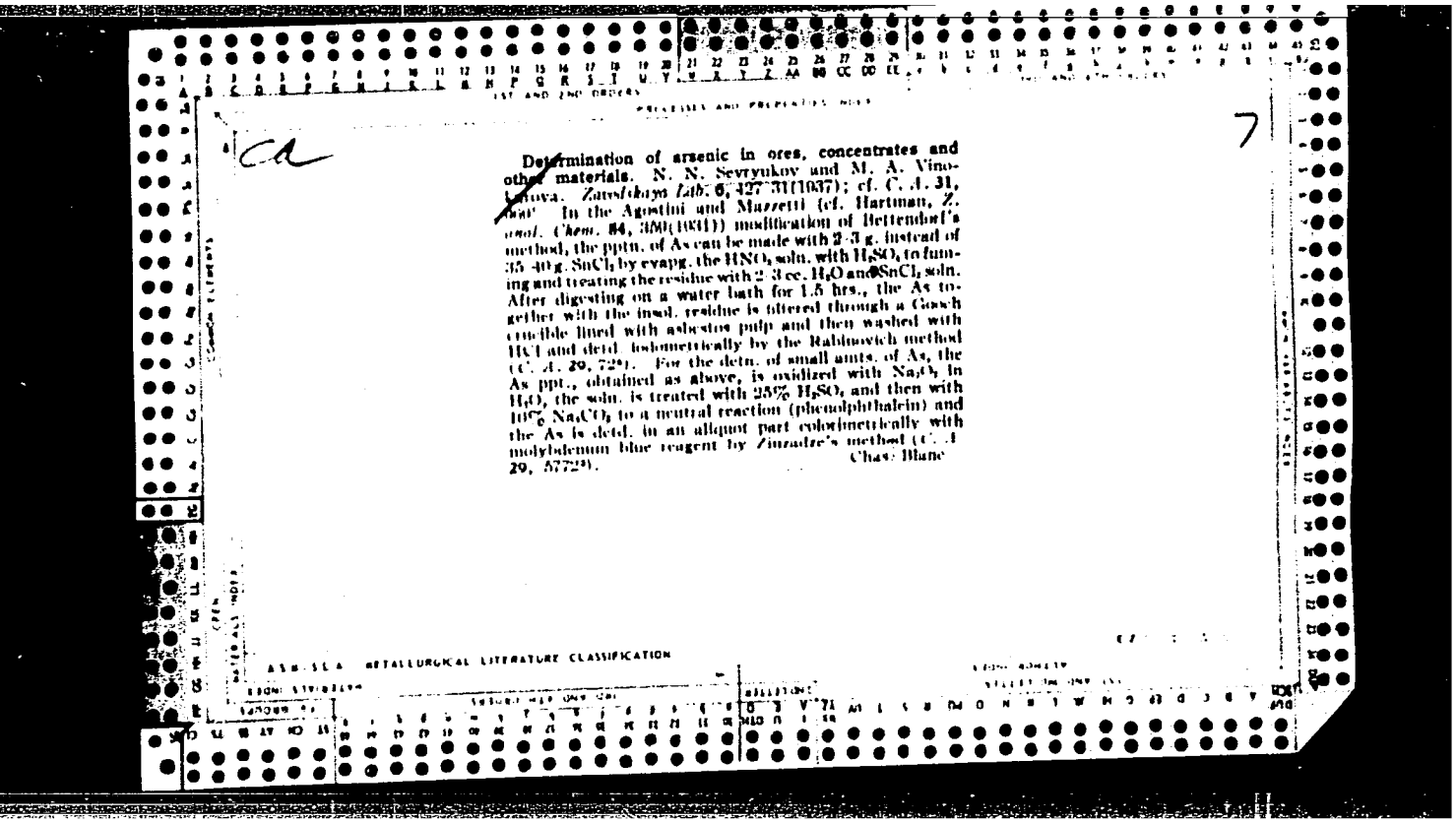


CA

7

Rapid determination of arsenic in ores and products of arsenical production. N. N. Sevryukov. *Zavodskaya Lab.* 5, 1067–9(1936).—In the detn. of As by the interaction of As_2O_5 with KI in HCl or H_2SO_4, the method of F. A. Gooch and F. B. Browning, *Am. J. Sci.* [3], 40, 90, of expelling the I_2 by boiling and titrating the As_2O_5 with I soln. gave better results than the method of back titrating the surplus I with $Na_2S_2O_3$. The latter method is preferred, however, because it requires less time. Ores are decompd. by fusion with K_2O_2 and Na_2CO_3 as usual.
Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



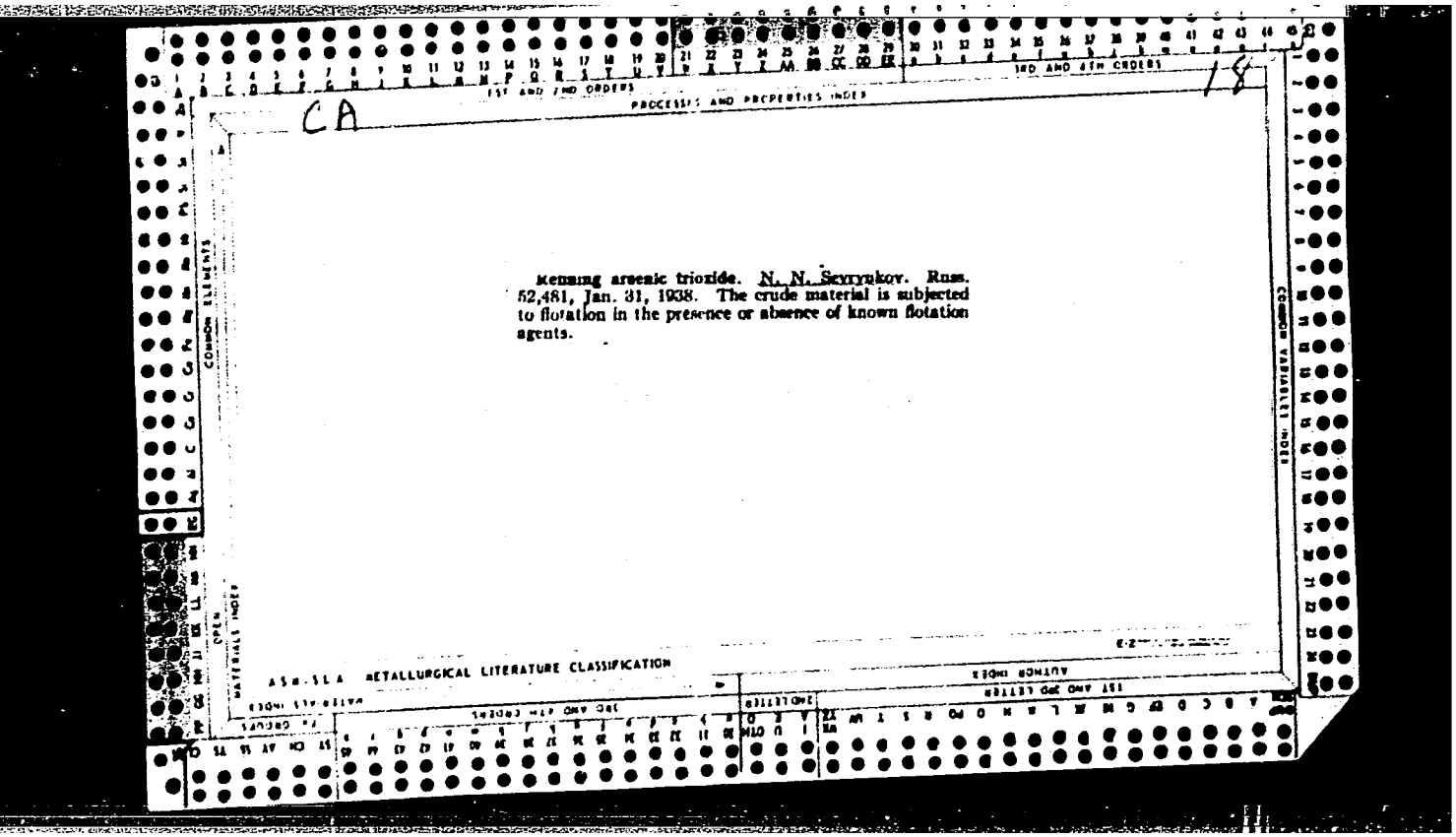
Cd

7

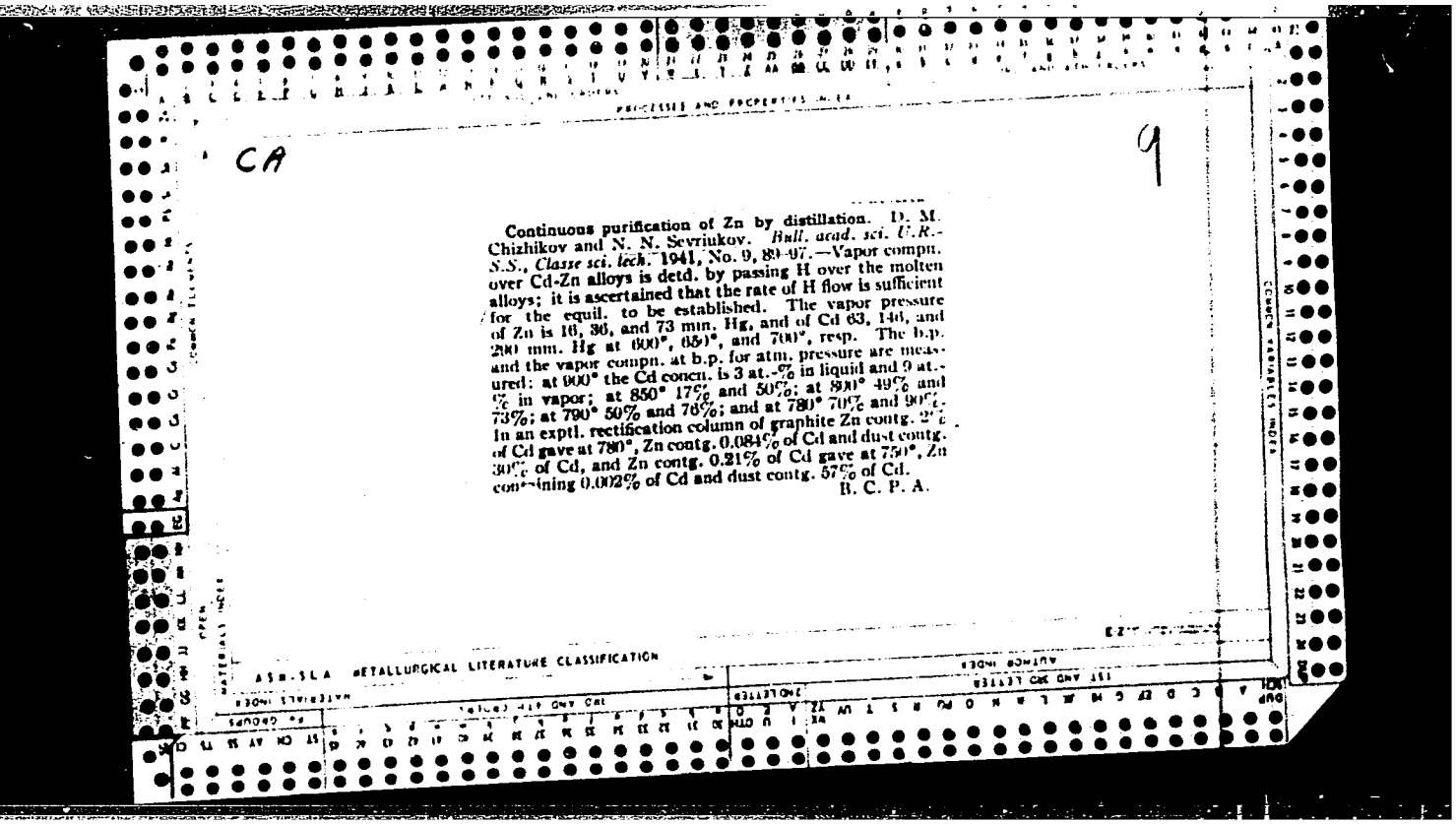
Determination of arsenic in ores, concentrates and other materials. N. N. Sevryukov and M. A. Vinogradova. *Zavodskaya Lab.* 6, 427-31(1937); cf. C. A. 31, [illegible]. In the Agostini and Mazzetti (cf. Hartman, *Z. anal. Chem.* 84, 390(1931)) modification of Bettendorf's method, the pptn. of As can be made with 2-3 g. instead of 35-40 g. $SnCl_2$ by evapg. the HNO_3 soln. with H_2SO_4 to fuming and treating the residue with 2-3 cc. H_2O and $SnCl_2$ soln. After digesting on a water bath for 1.5 hrs., the As together with the insol. residue is filtered through a Gooch crucible lined with asbestos pulp and then washed with HCl and detd. iodometrically by the Rabinowich method (C. A. 29, 7229). For the detn. of small amts. of As, the As ppt., obtained as above, is oxidized with Na_2O_2 in H_2O, the soln. is treated with 25% H_2SO_4, and then with 10% Na_2CO_3 to a neutral reaction (phenolphthalein) and the As is detd. in an aliquot part colorimetrically with molybdenum blue reagent by Zinzadze's method (C. A. 29, 5772).

Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION


CA

Refining arsenic trioxide. N. N. Seyrykov. Russ. 52,481, Jan. 31, 1938. The crude material is subjected to flotation in the presence or absence of known flotation agents.



CA

9

Continuous purification of Zn by distillation. D. M. Chizhikov and N. N. Sevriukov. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1941, No. 9, 89-97.—Vapor compn. over Cd-Zn alloys is detd. by passing H over the molten alloys; it is ascertained that the rate of H flow is sufficient for the equil. to be established. The vapor pressure of Zn is 16, 30, and 73 mm. Hg, and of Cd 63, 146, and 280 mm. Hg at 900°, 850°, and 700°, resp. The b.p. and the vapor compn. at b.p. for atm. pressure are measured: at 900° the Cd concn. is 3 at.-% in liquid and 9 at.-% in vapor; at 850° 17% and 50%; at 800° 49% and 73%; at 790° 50% and 78%; and at 780° 70% and 90%. In an exptl. rectification column of graphite Zn contg. 2% of Cd gave at 780°, Zn contg. 0.084% of Cd and dust contg. 30% of Cd, and Zn contg. 0.21% of Cd gave at 750°, Zn containing 0.002% of Cd and dust contg. 57% of Cd.

B. C. P. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

SEVRYUKOV, N.N.; KUZ'MIN, B.A., CHELISHCHEV, Ye.V.

[General metallurgy] Obshchaia metallurgiia. Moskva, Metallurgizdat, 1954. 640 p. (MLRA 7:11D)

The syntheses of Mn. I. S. Volynskii and N. P. Sevryukov, J. Gen. Chem. U.S.S.R. 25, 2259-64(1955)(English trans.: B. M. R.)

VOLYNSKIY, I.S., SEVRYUKOV, N.N.

Tin sulfieds. Zhur.ob.khim. 25 no.13:2380-2388 D '55.(MLRA 9:3)

1. Moskovskiy institut tsvetnykh metallov i zolota imeni M.I. Kalinina.

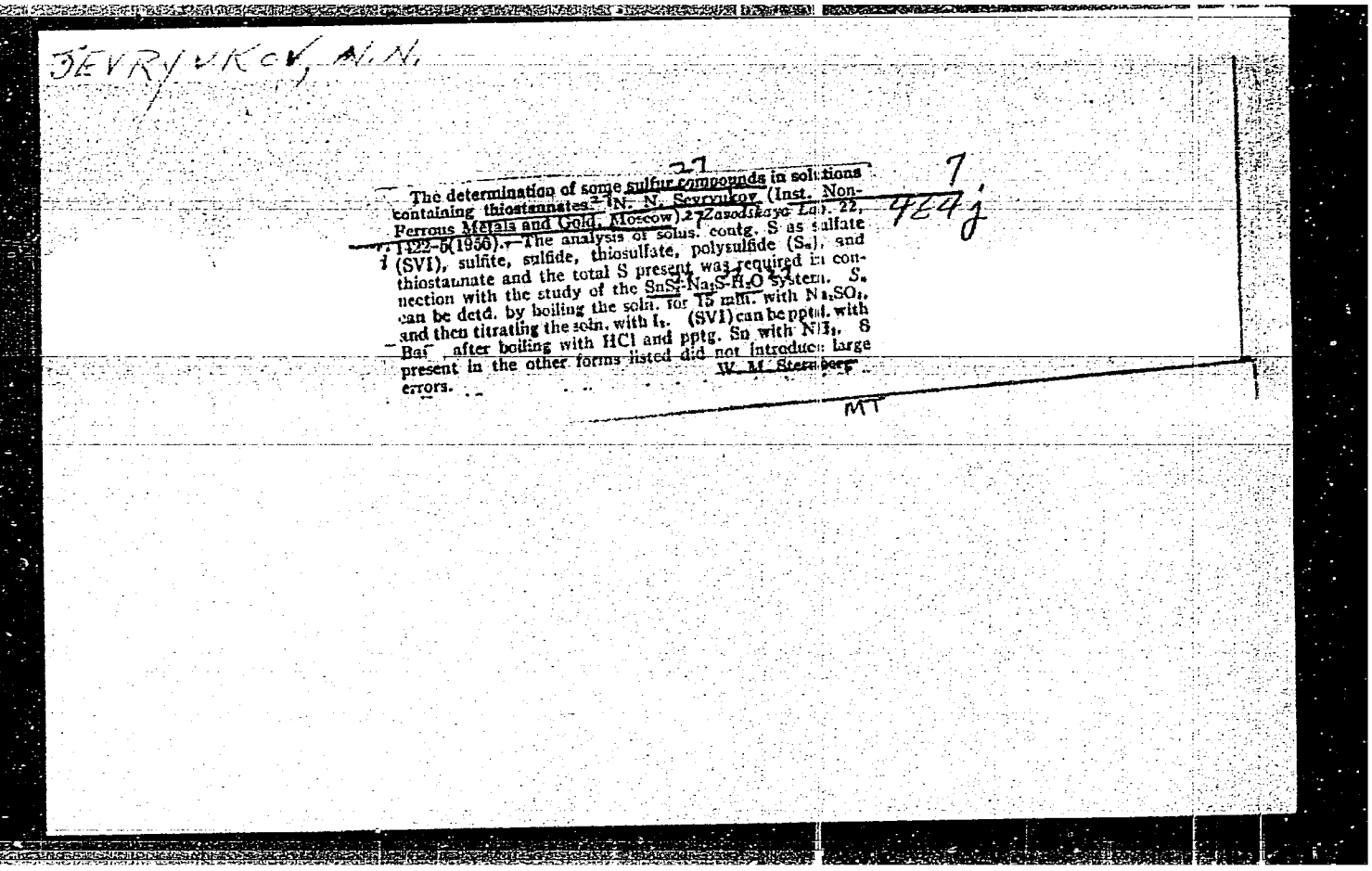
(Tin sulfides)

SEVRYUKOV, N.N.

BEREGOVSKIY, V.Ye.; VASILENKO, M.I.; VELIER, R.L.; VERBLOVSKIY, A.M.; VERNER, B.F.; VOYDALOVSKAYA, Ye.N.; VOL'SKIY, A.N.; GLAZKOVSKIY, A.A.; GRANOVSKIY, B.L.; GREYVER, N.S.; GUDIMA, N.V.; DOLGOPOLOVA, V.I.; KARCHEVSKIY, V.A.; KOVACHEVA, Ye.B.; KUDRYAVTSEV, P.S.; LEBEDEV, A.K.; LISOVSKIY, D.I.; LIKHNITSKAYA, Z.P.; MATVEYEV, N.I.; MEL'NITSKIY, A.N.; MIRONOV, A.A.; MIKHEYEVA, A.A.; MURACH, N.N.; OKUN', A.B.; OL'KHOV, N.P.; OSIPOVA, T.B.; PAVLOV, V.P.; ROTINYAN, A.L.; SAZHIN, N.P.; SEVRYUKOV, N.N.; SIDOROV, P.M.; SOBOL', S.I.; KHEYFETS, V.L.; TSEYNER, V.M.; SHAKHNAZAROV, A.K.; SHEYN, Ya.P.; SHEREMET'YEV, S.D.; SHERMAN, B.P.; SHISHKIN, N.N.; SHLOPOV, A.P.

Georgii Ivanovich Blinov. TSvet.met. 28 no.6:62 N-D '55. (MIRA 10:11)

(Blinov, Georgii Ivanovich, 1911-1955)



SEVRYUKOV, N. N.

27
The determination of some sulfur compounds in solutions containing thiostannates. N. N. Sevryukov (Inst. Non-Ferrous Metals and Gold, Moscow). Zavodskaya Lab. 22, 1422-5(1956). The analysis of solns. contg. S as sulfate (SVI), sulfite, sulfide, thiosulfate, polysulfide (S_n), and thiostannate and the total S present was required in connection with the study of the SnS_2-Na_2S-H_2O system. S_n can be detd. by boiling the soln. for 15 min. with Na_2SO_3, and then titrating the soln. with I_2. (SVI) can be pptd. with BaI_2 after boiling with HCl and pptg. Sn with NH_3. S present in the other forms listed did not introduce large errors.

W. M. Sternberg

MT

7
484 j

Sevryukov, Nikolay Nikolayevich

PHASE I BOOK EXPLOITATION 429

Lakernik, Mark Moiseyevich, Candidate of Technical Sciences; and Sevryukov, Nikolay Nikolayevich, Docent, Candidate of Technical Sciences

Metallurgiya tsvetnykh metallov (Metallurgy of Nonferrous Metals) Moscow, Metallurgizdat, 1957. 535 p. 8,500 copies printed.

Reviewers: Belyayev, A.I., Professor, Doctor; Veller, R.L., Candidate of Technical Sciences; Vanyukov, A.V.; Krol', L. Ya.; Samsonov, G.V.; and Leonidov, N.K., Engineer; Ed.: Veller, R.L.; Zhemchuzhina, Ye.A.; Ed. of Publishing House: El'kina, L.M.; Tech. Ed.: Mikhailova, V.V.

PURPOSE: This is a textbook for students at nonferrous-metallurgy technicums; it may also be used by foremen and other workers taking special improvement courses.

Card 1/13

Sevryukov N.N.

137-1958-3-4643

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 26 (USSR)

AUTHOR: Sevryukov, N. N.

TITLE: The Dissociation Pressure of Higher Sulfides of Tin (Davleniye dissotsiatsii vysshikh sul'fidov olova)

PERIODICAL: Sb. nauchn. tr. Mosk. in-t tsvetn. met. i zolota i VNITO tsvetn. metallurgii, 1957, Nr 26, pp 259-264

ABSTRACT: Results of experiments dealing with the determination of the dissociation pressure of SnS_2 at temperatures of 350°, 400°, 450° and 500°, are presented in the form of tabular and graphical data which readily conform to a straight line represented by the equation: $\log pS_2 = -19{,}280/T + 16{,}66$. The sulfides exhibited volatility in a range of temperatures between 450° - 500° only. Calculated values of standard isobar potentials of the formation of highest sulfides of Sn are given, as follows:
for SnS_2: $\Delta Z^{o}_{298.1} \approx -47{,}552$ cal, and

for Sn_2S_3: $\Delta Z^{o}_{298.1} \approx -64{,}561$ cal.

Card 1/1

G. F.

SOV/136-58-6-15/21

AUTHOR: Sevryukov, N.N.

TITLE: New Method for Treating Lean Complex Tin Raw Material (Novyy metod pererabotki bednogo kompleksnogo olovyannogo syr'ya)

PERIODICAL: Tsvetnyye Metally, 1958, Nr 6, pp 86 - 93 (USSR)

ABSTRACT: The author states that present methods of treating lean tin ores containing other valuable metals are not suitable for the high standards of purity demanded of tin. He describes results of laboratory investigations of a new, hydrometallurgical process based on the sintering of tin- or tin and tungsten-containing material with sodium sulphide to form water-soluble thiosalts (Figure 1 shows flowsheet). In practice, the sintering is with a mixture of sodium sulphate, coal and sulphur in a rotary kiln at 850 °C. The product is leached without grinding or warming solutions. The solutions contain tin as Na_4SnS_4 and tungsten as $Na_2WO_xS_y$ where $x = 1, 2, 3$ and $x + 4 = 4$. Silica, alumina, iron and heavy non-ferrous metals hardly go into solution. The small amounts of arsenic and antimony (mainly arsenic) which remain after sintering

Card1/3

New Method for Treating Lean Complex Tin Raw Material

go into solution and are removed by a preliminary electrolysis before the electrodeposition of tin. For the latter, a diaphragm process was found to be better than the use of an insoluble lead anode (Figure 6 shows the dependence of the lead-anode potential on the current density in Na_4SnS_4 and Na_2S solutions at 25 °C). The main electrolysis is carried out in iron baths with canvas diaphragms at 50 - 55 °C, the current density being 100 - 200 A/m^2. The spent electrolyte is evaporated and the sodium salts regenerated and returned for sintering after drying: some tungsten and tin can also be recovered at this state. Results obtained with raw material containing 1.05, 4.69, 9.50 and 10.7% Sn showed recoveries in the solution of 92, 88.4, 93.7 and 82.3%, respectively, of the tin with appreciable losses in sintering (solution). As part of the research, the author determined the 20 °C isotherms for the system $Na_2S - SnS_2 - H_2O$ (Figure 2), the dependence of the cathode potential on the current density for Na_4SnS_4 solutions of various concentrations

New Method for Treating Lean Complex Tin Raw Material

(Figure 4) and the ampere yield for various concentrates (Figure 5). From a rough economic analysis, the author concludes that Mark O-3 tin produced by the new process would cost 55.3% of the present fixed dispatch price and that capital costs would be recouped in 17 months. Raw material, fuel and other materials, power, wages and amortisation he estimates at 33.2, 20.7, 3.0, 21.6 and 5.1% of the total costs.
There are 6 figures, 1 table and 8 references, 1 of which is English and 7 Soviet.

ASSOCIATION: Mintsvetmetzoloto

SEVRYUKOV, N.N.

Electrolysis of sodium thiostannate aqueous solutions. Zhur. prikl. khim. 31 no.7:1067-1075 Jl '58. (MIRA 11:9)
(Electroysis) (Sodium thiostannate)

SEVRYUKOV, N. N.: Doc Tech Sci (diss) -- "Outlook for the development of the hydrometallurgy of thiosalts". Moscow, 1959. 18 pp (Min Higher Educ USSR, Krasnoyarsk Inst of Nonferrous Metals im M. I. Kalinin), 150 copies (KL, No 14, 1959, 119)

SEVRYUKOV, N.N.

Sodium thiostannates. Sbor. nauch. trud. GINTSVETMET no.33: 34-42 '60. (MIRA 15:3)

(Sodium thiostannate)

SEVRYUKOV, N.N.

Ways of intensifying the electrolytic refining of tin in a sulfide-alkali electrolyte. Izv. vys. ucheb. zav.; tsvet. met. 3 no.4:105-112 '60. (MIRA 13:9)

1. Krasnoyarskiy institut tsvetnykh metallov. Kafedra redkikh i radioaktivnykh metallov.
(Tin—Electrometallurgy)

SEVRYUKOV, N.N.; SERGIYEVSKAYA, Ye.M.

Theory of the reduction of sodium sulfate by carbon. Zhur. prikl. khim. 34 no.1:54-59 Ja '61. (MIRA 14:1)
(Sodium sulfate) (Carbon)

ZELIKMAN, A.N., prof, doktor tekhn. nauk, red.; KOMISSAROVA, L.N., dots., kand. khim.nauk, red.; KRAPUKHIN, V.V., dots., kand. tekhn. nauk, red.; SEVRYUKOV, N.N., prof., doktor tekhn. nauk, red.; KAMAYEVA, O.M., red. izd-va; MIKHAYLOVA, V., tekhn. red.

[Separation of rare metals having similar properties]Razdelenie blizkikh po svoistvam redkikh metallov. Moskva, Metallurgizdat, 1962. 264 p. (MIRA 15:8)
(Nonferrous metals—Metallurgy)

SEVRYUKOV, Nikolay Nikolayevich, prof., doktor tekhn. nauk; KUZ'MIN, Boris Aleksandrovich, dots., kand. tekhn. nauk; CHELISHCHEV, Yevgeniy Vasil'yevich, dots., kand. tekhn. nauk; GUDIMA, N.V., red.; KAMAYEVA, O.M., red. izd-va; MIKHAYLOVA, V.V., tekhn. red.

[General metallurgy] Obshchaia metallurgiia. 2. izd., perer. i dop. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1962. 583 p. (MIRA 15:2)
(Metallurgy)

KOLODIN, Samuil Mikhaylovich; SEVRYUKOV, N.N., red.; LUTSKAYA, G.A., red.izd-va; EL'KIND, L.M., red.izd-va; MIKHAYLOVA, V.V., tekhn. red.

[Secondary tin] Vtorichnoe olovo. Moskva, Metallurgizdat, 1963. 219 p. (MIRA 17:2)

MURACH, Nikolay Nikiforovich[deceased]; SEVRYUKOV, Nikolay Nikolayevich; POL'KIN, Stepan Ivanovich; BYKOV, Yuriy Aleksandrovich; SLONIMSKIY, B.I., red.; LUTSKAYA, G.A., red.izd-va; KARASEV, A.I., tekhn. red.

[Metallurgy of lead] Metallurgiia olova. Moskva, Metallurgizdat, 1964. 351 p. (MIRA 17:3)

SEVRYUGOVA, N.N.; SOKOL'SKIY, V.A.; ZHAVORONKOV, N.M.

Purification of raw acrylonitrile. Khim. prom. no.8:572-576 Ag '63. (MIRA 16:12)

L 44580-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015641 SOURCE CODE: UR/0413/66/000/009/0052/0053

10
B

INVENTOR: Sevryukov, V. N.; Martyushin, I. G.

ORG: none

TITLE: Apparatus for direct heating of a fluidized bed. Class 21, No. 181211

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 52-53

TOPIC TAGS: fluidized bed, heating equipment

ABSTRACT: This Author Certificate introduces an apparatus for direct heating of a fluidized bed of electroconductive material. The device features a housing containing a gas distributor grate and a system of heating elements. In order to impart stable electric properties to the fluidized bed, the heating elements are shaped as horizontal flat, grid-type electrods arranged vertically at a certain distance from each other. The space between them is filled with a packing of electric insulation material (see Fig. 1). Orig. art. has: 1 figure. [Translation]

[LD]

Card 1/2 UDC: 66.023.2:621.365.32

L 44580-66

ACC NR: AP6015641

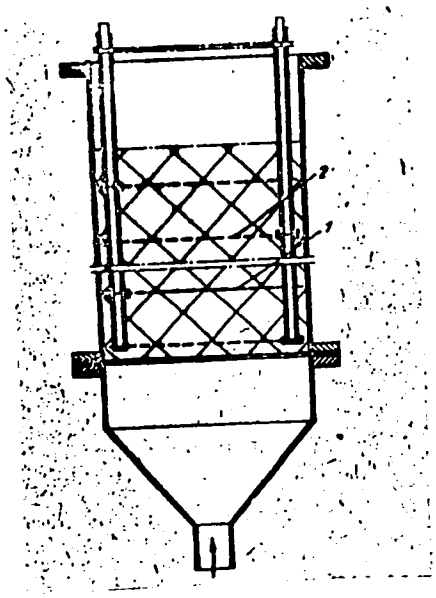


Fig. 1. Equipment for direct heating of a fluidized bed.
1, 2—Grid-type electrodes

SUB CODE: 13/ SUBM DATE: 07Apr65/

Card 2/2

SEVRYUKOV, Ye.A., kapitan meditsinskoy sluzhby

Work of the individual department of the medical service.
Voen.-med. zhur. no. 1:19-21 Ja '60. (MIRA 14:2)
(MEDICINE, MILITARY)

SEVRYUKOV, Ye.G.

VINARSKIY, Ye.N., inzhener; LINKOV, A.V., inzhener; MAZING, I.V., inzhener; CHERETYANKO, V.I., inzhener; RYKHNINA, R.I., inzhener; CHUPRINA, N.A., inzhener. PLOTNIKOVA, M.Z., inzhener; LEYPSON, A.M., inzhener; LELYAKOVA, L.P., inzhener; MANDALOVSKAYA, M.V., inzhener; UZUNKUYAN, I.D., inzhener; SEVRYUKOV, Ye.G., inzhener; VINARSKIY, Ye.N., redaktor; ALADOVA, Ye.I., tekhnicheskiy redaktor

[Metal demountable headframe] Prokhodcheskie metallicheskie sborno-razbornye kopry. Moskva, Ugletekhizdat, 1954. 110 p. (MLRA 8:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii i mekhanizatsii shakhtnogo stroitel'stva.
(Mine buildings)

23733
S/057/61/031/006/017/019
B116/B201

9,3130

AUTHORS: Berezin, A. K., Stupak, V. G., Bolotin, L. I., Berezina, G.P., Lyapkalo, Yu. M., Sevryukov, Yu. N.

TITLE: Passage of intense pulsed electron beams through dielectric tubes

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 751 - 753

TEXT: The passage of an electron beam through metal tubes had been studied in theoretical and experimental papers by E. G. Linder and K. J. Herngvist (Ref. 1: Journ. of Appl. Phys., 21, 1088, 1950), by H. F. Ivey (Ref. 2: Advances in Electronics and Electron Physics, 6, 137, 1954), and by M. D. Gabovich (Ref. 3: UFN, 56, 215, 1955). On the passage of a beam through a tube, the residual gas is ionized, and positive ions as well as slow (secondary) electrons appear in the tube. In the case of a metal tube, these secondary electrons reach the wall, and do not participate in the further processes related to the passage of the electron beam through the tube. If the dielectric tube is "overneutralized", the secondary electrons will first reach the wall, and, after a certain time (of the order of magni-

Card 1/3 4

Passage of intense pulsed...

tude of the time required for complete neutralization of the beam), they will return to the electron-beam axis. Both the radial and the longitudinal component of the electric field are modified by this process. This, however, has an effect upon conditions on the passage of the beam through the tube, particularly upon the energy of secondary electrons. An experimental study has now been made of the passage of a pulsed electron beam through a dielectric tube. The experiment has been conducted in the following manner: A square voltage pulse having an amplitude up to 50 kv, a duration of 4.4μsec (Fig. 1a), and a frequency of 50 pulses/second was applied to the electron gun placed in a vacuum chamber at a pressure of $2 \cdot 10^{-6}$ mm Hg. The gun permitted obtaining an electron beam with an amperage of up to 1 a in the pulse. The electron beam was injected into a quartz tube with an internal diameter of 9 mm and a length of 120 mm. On the other side of the tube, the vacuum chamber was connected with a device, by which the pressure in the chamber was varied from $2 \cdot 10^{-4}$ to 10^{-2} mm Hg. Part of the beam reached the electrostatic analyzer, by which the energy spectrum of the electrons in the beam was determined. A 30-mm wide metal ring, used for measuring the radial

Card 2/3 4

Passage of intense pulsed...

current I_p was mounted on the quartz tube. The signal reaching the ring was differentiated by an RC circuit and fed to the oscilloscope. One of the oscillograms is shown in Fig. 1b. The negative half-wave on the oscillogram corresponds to the motion of secondary ions toward the wall and to the capture of ions near the electron-beam axis. If "overneutralization" takes place in the beam, the electric field will change its sign, and the ions, due to diffusion and other factors, will start moving toward the wall, while the secondary electrons migrate to the beam axis. The positive half-wave on the oscillogram corresponds to this condition. The energy spectrum of electrons passing through the quartz tube, measured with the electrostatic analyzer, permits distinguishing two separate electron groups, i.e., a group of fast electrons and a group of slow electrons. If, under the same conditions, the electron beam is allowed to pass through a metal tube, the spectrum will, as usual, consist of fast electrons only. Experiments have been conducted to determine the moment at which slow electrons of a given energy appear in the beam. The time was calculated from the beginning of the voltage pulse at the electron gun onward. The moment at which slow electrons appear at the analyzer output as a function of their energy is presented in Fig. 1c. As may be seen from Figs. 1b and 1c, slow electrons do not appear in the energy

Card 3/5 9

S/057/61/031/006/017/019
B116/B201

Passage of intense pulsed...

spectrum until the radial field has changed its sign, i.e., not until the electrons start moving from the tube wall toward the beam axis. The results presented in Figs. 1a, 1b, 1c have been obtained under the following conditions: voltage of the beam, 35 kv; beam current, 0.4 a; pressure in the chamber, $3.6 \cdot 10^{-4}$ mm Hg. It is finally pointed out that in the course of experiments described here also the energy spectrum of slow electrons as a function of pressure, intensity, and velocity of the primary electron beam has been has been determined experimentally (no details, however, are given). [Abstracter's note: Essentially complete translation.] There are 2 figures and 3 references: 1 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN USSR Khar'kov (Institute of Physics and Technology, AS UkrSSR, Khar'kov)

SUBMITTED: December 30, 1960

Card 4/4

APPROVED FOR RELEASE: 08/23/2000 CIA-RDP86-00513R001548220011-7"

L 64115-65 EWT(l)/EWT(m)/EPF(c)/EPF(n)-2/T/EWP(t)/EWP(b)/EWA(h) IJP(c)
JD/GG/AT
ACCESSION NR: AP5021175 UR/0139/65/000/004/0096/0099

AUTHOR: Zaydman, S. A.; Sevryukova, L. M.

TITLE: The irradiation of silicon with fast neutrons and its effect on the electric properties of alloy p-n junctions fabricated from irradiated silicon

SOURCE: IVUZ. Fizika, no. 4, 1965, 96-99

TOPIC TAGS: p n junction, irradiation, neutron irradiation, radiation damage, radiation effect, silicon

ABSTRACT: The initial material exposed to irradiation was Si doped with P with a resistivity of 5—7 ohm cm. All measurements were performed directly on the crystals, from which p-n junctions were then fabricated by alloying Si with Al. Exposure to irradiation with fast neutrons for a period of 150 hr (integrated flux of 15.2×10^{10} n/cm^2) resulted in an increase in the density of dislocations from 8×10^4 per cm^2 to 8.39×10^6 per cm^2. Since fabrication of p-n junctions requires heating to 670C, the effect of heating on annealing of radiation defects was also investigated. Although the lifetime of minority carriers τ increased by about 10 μsec after annealing, the density of dislocations remained approximately the same. The increase in τ was attributed to annealing of vacancies and interstitials.

Card 1/2

L 64115-65

ACCESSION NR: AP5021175

Of all the defects produced by fast neutron bombardment of Si, the dislocations exerted the strongest effect on τ. During the alloying of Al with Si, the point defects in Si are annealed, although the generation of additional dislocations results in a decrease of τ. A decrease of τ in the diode can also be associated with the increase in the donor concentration from the side of the ohmic contact, which is made of gold and an antimony alloy. The irradiation of silicon with fast neutrons and the reduction of the restoration time of reverse resistance result in an increased reverse current in the p-n junction. Orig. art. has: 5 figures. [JA]

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut imeni V. D. Kuznetsova (Siberian Physicotechnical Institute)

SUBMITTED: 18Dec63 ENCL: 00 SUB CODE: SS, NP

NO REF SOV: 002 OTHER: 000 ATD PRESS: 4070

Card 2/2

SEVRYUKOVA, L.S.

USSR/Plant Diseases. Diseases of Cultivated Plants 0-3

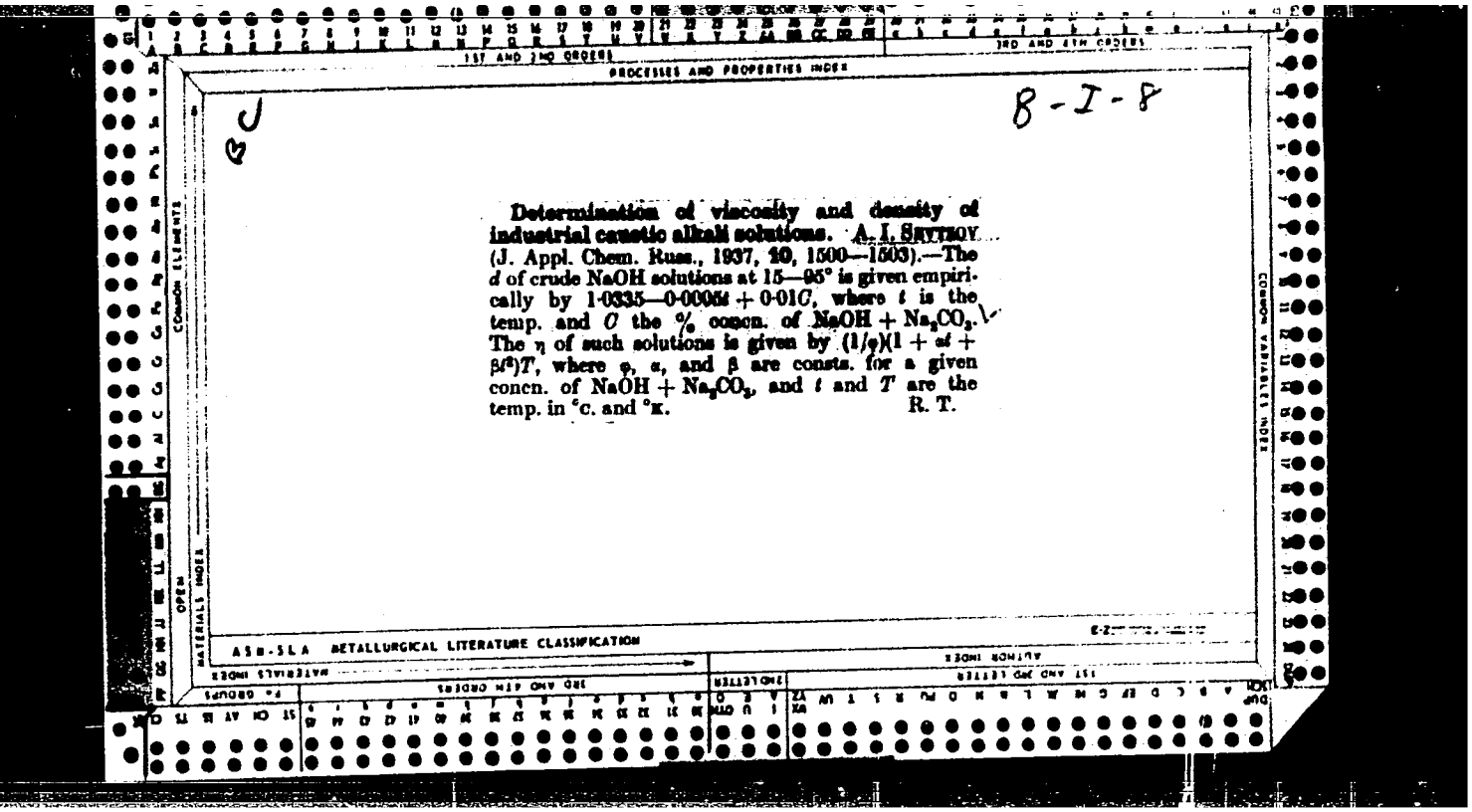
Abs Jour : Ref Zhur - Biol., No 10, 1958, No 44457

Author : Sevryukova L.S.
Inst : Khar'kov Agricultural Institute
Title : The Use of the Gas Desorption Disinfecting Method to Control Wheat Bunt

Orig Pub : Zap. Khar'kovsk. s.-kh. in-ta, 1957,13, (50), 149-154

Abstract : Both laboratory and field tests on the use of the gas desorption method in the control of wheat bunt have established the high toxicity of the bunt spores and the beneficial influence on summer wheat seed germination of the preparations: furfural-sorbent soil 5% in a dose of 2% of the seed weight with 24 hour exposure, and furfural-sorbent soil at 10% in a dose of 1% of the grain weight. The simultaneous planting of the seeds with the gas desorption preparations (formaldehyde and formic acid) cut the wheat bunt infection by 2-2½ times. -- Ye.D. Yakimovich

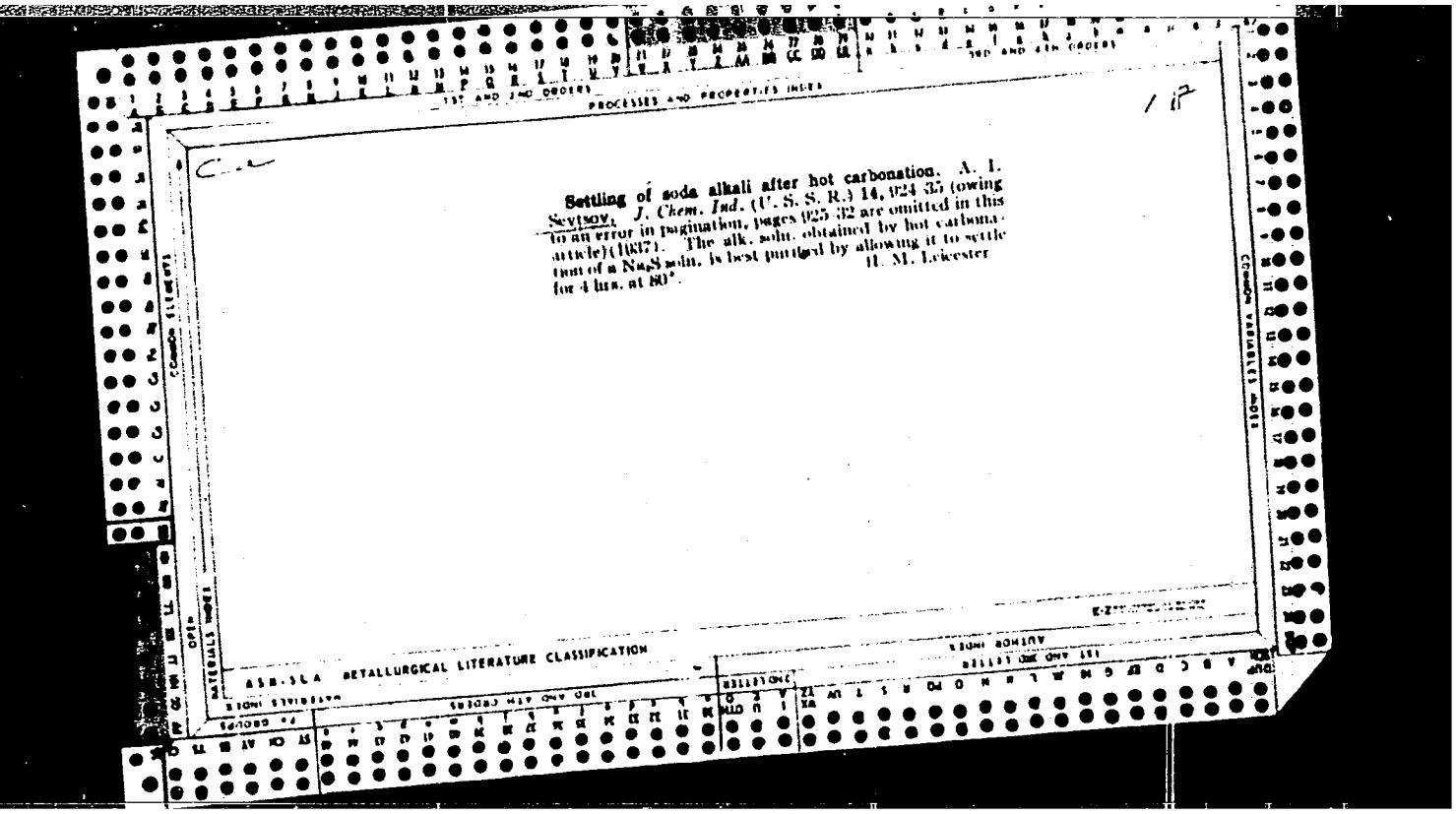
Card : 1/1



8-I-8

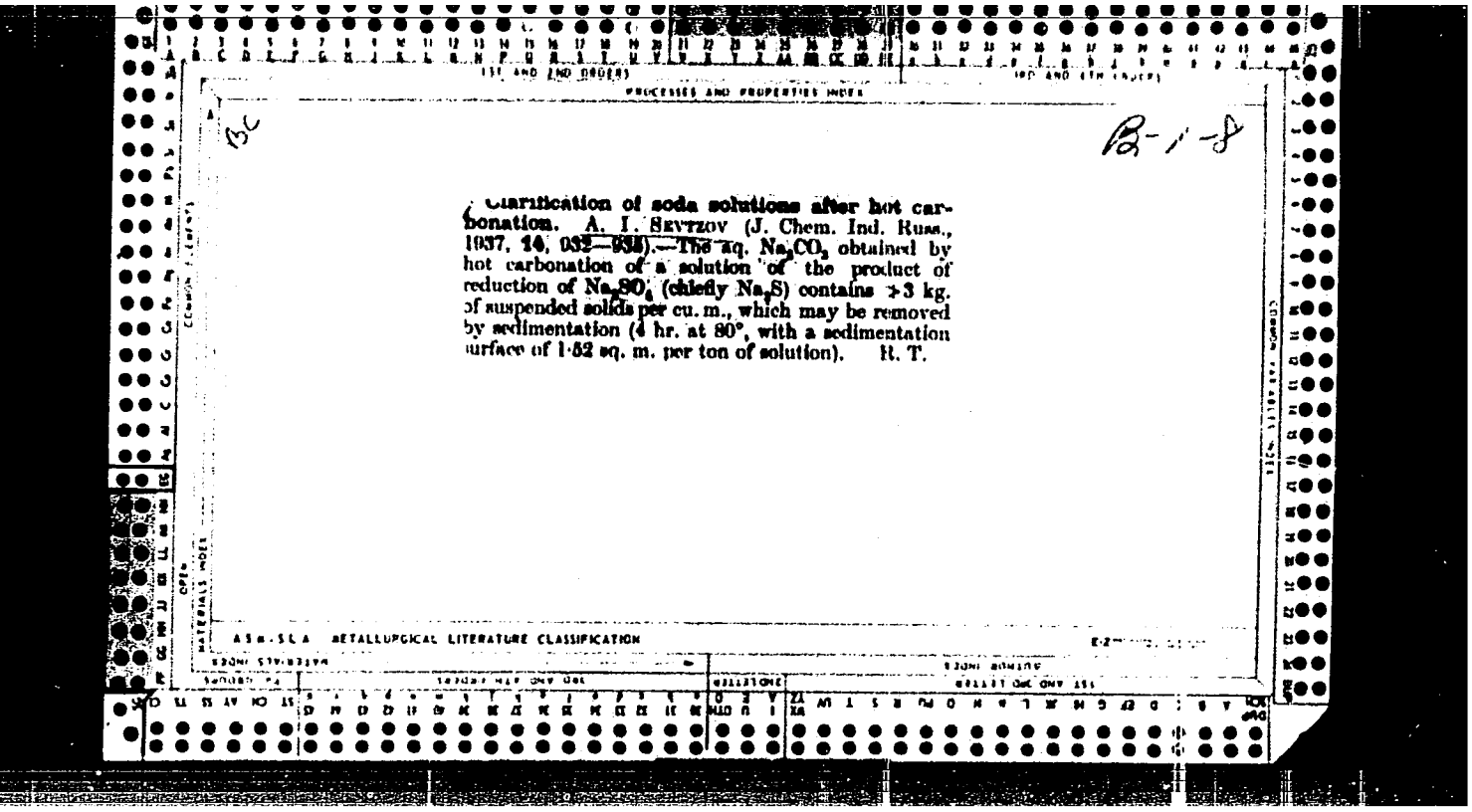
Determination of viscosity and density of industrial caustic alkali solutions. A. I. SKVORTSOV. (J. Appl. Chem. Russ., 1937, **10**, 1500—1503).—The d of crude NaOH solutions at 15—95° is given empirically by $1{\cdot}0335-0{\cdot}0005t+0{\cdot}01C$, where t is the temp. and C the % concn. of $NaOH + Na_2CO_3$. The η of such solutions is given by $(1/\varphi)(1+\alpha t+\beta t^2)T$, where φ, α, and β are consts. for a given concn. of $NaOH + Na_2CO_3$, and t and T are the temp. in °c. and °K.

R. T.



Settling of soda alkali after hot carbonation. A. I. Sevtsov. *J. Chem. Ind.* (U. S. S. R.) 14, 924-35 (owing to an error in pagination, pages 925-32 are omitted in this article)(1937). The alk. soln. obtained by hot carbonation of a Na_2S soln. is best purified by allowing it to settle for 4 hrs. at 80°.

H. M. Leicester



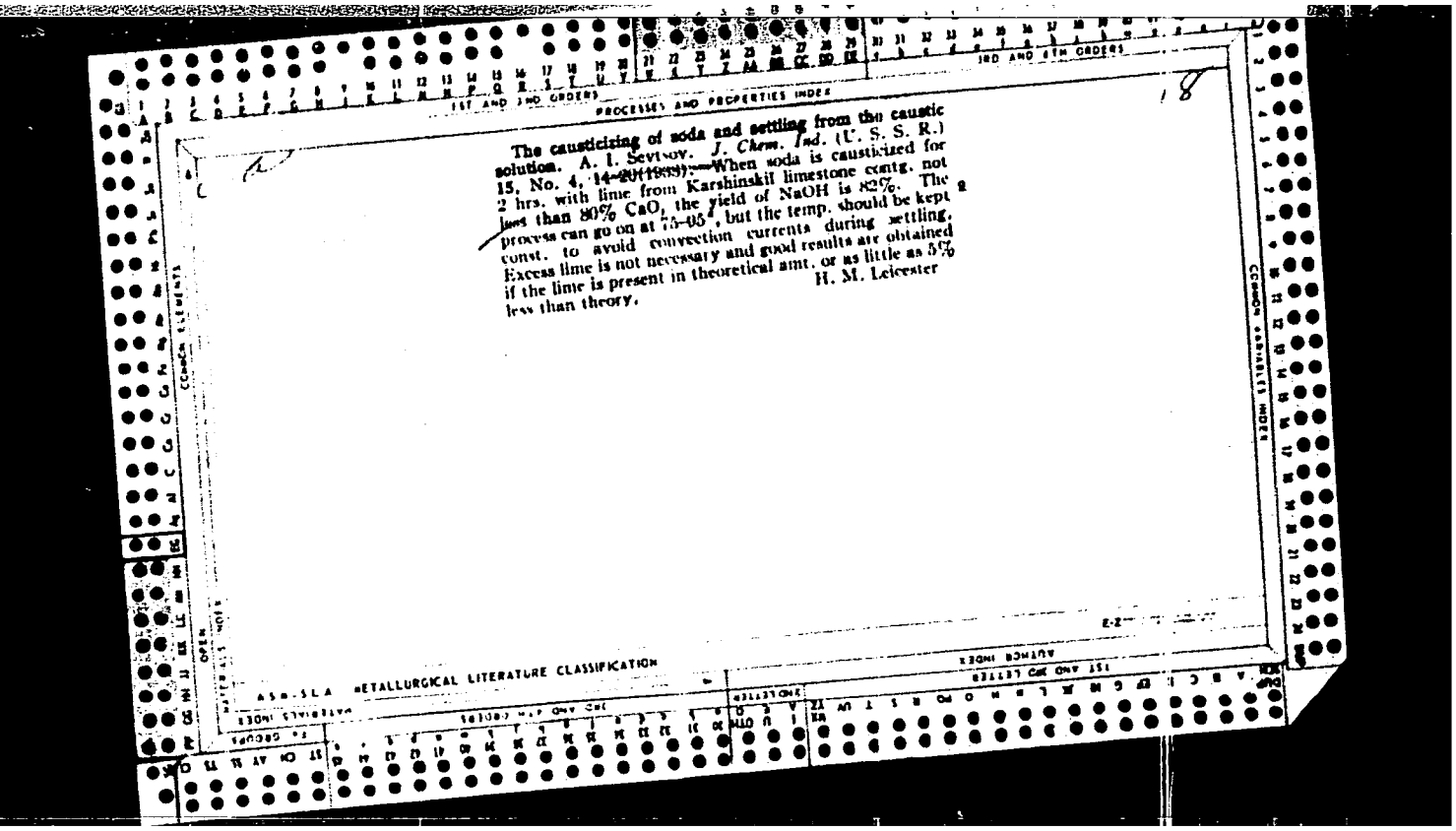
PROCESSES AND PROPERTIES INDEX

13C

B-1-8

Clarification of soda solutions after hot carbonation. A. I. SEVTZOV (J. Chem. Ind. Russ., 1937, **14**, 932—938).—The aq. Na_2CO_3 obtained by hot carbonation of a solution of the product of reduction of Na_2SO_4 (chiefly Na_2S) contains >3 kg. of suspended solids per cu. m., which may be removed by sedimentation (4 hr. at 80°, with a sedimentation surface of 1·52 sq. m. per ton of solution). H. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



PROCESSES AND PROPERTIES INDEX

18

The causticizing of soda and settling from the caustic solution. A. I. Sevtsov. *J. Chem. Ind.* (U. S. S. R.) 15, No. 4, 14-20(1938).—When soda is causticized for 2 hrs. with lime from Karshinskii limestone contg. not less than 80% CaO, the yield of NaOH is 82%. The process can go on at 75–95°, but the temp. should be kept const. to avoid convection currents during settling. Excess lime is not necessary and good results are obtained if the lime is present in theoretical amt. or as little as 5% less than theory.

H. M. Leicester

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

USSR/Chemistry - Ammonium nitrate

ID-2723

Card 1/1 Pub. 50 - 4/20

Authors : Sevtsov, A. I., Kil'man, Ya. I.

Title : Improvement of the operation of plant departments which produce ammonium nitrate

Periodical : Khim. prom. No 5, 268-270, Jul-Aug 1955

Abstract : Measures are outlined for carrying out neutralization of ammonia with nitric acid in such a manner that losses of either ammonia or nitric acid are avoided. The method of vacuum neutralization is recommended as the most efficient. Losses in evaporation and separation are also mentioned and measures for reducing them discussed. One figure.

SEVULESKU, O.T. [Sevulescu, T.]

Some endemic or rare species of Peronospora in the Rumanian People's Republic. Bot. zhur. 49 no.7:1023-1024 Jl '64
(MIRA 17:8)

1. Bukharestskiy universitet.

Sevulesku

RUMANIA / Cultivated Plants. General Problems L-1

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 22640

Author : Sevulesku, A.
Inst : Not given
Title : Development of the Science and Practice of Agronomy in the Rumanian People's Republic. Achievements of the Institute of Agronomic Research in RPR

Orig Pub : An. Inst. cercetari agron., 1952-1953 (1955), 22, No 3, 3-146

Abstract : The thematic plan of the Institute of agronomic research embraces problems and themes which respond on the one hand to demands put forth by agricultural practice and the socialist reformation of agricultural economy and, on the other hand, by the requirements of a profound theoretical study of agrobiological science. The Institute has 14 departments (soil science, agrotechnique, specialized agro-

Card : 1/3

RUMANIA / Cultivated Plants. General Problems L-1

Abs Jour : Ref Zhur - Biol., No 6, March 1957, No 22640

Abstract : technique, improvement of plants, meadows and pastures, vegetable cultivation, fruit cultivation, grape cultivation, phytopathology, agricultural zoology, agricultural melioration, agroforest melioration, technology, economics and socialist economic organization), 2 laboratories (seed control and climatologic), and a central silk cultivation station. The Institute has 27 outlying testing stations. The Institute and its experimental stations maintain constant contact with 152 farms of the socialist sector. The results of achievements of the Institute and its stations for the past 10 years are noted (numerically and in tables). Also a detailed list of the Institute's published works is given. The ties of the Institute with the Academy of Sciences, Rumanian People's Republic, and other institutes are noted. In conclusion, the activity of the Institute is

Card : 2/3

SEVULESKO, A

RUMANIA/Cultivated Plants. Potatoes. Vegetables. Melons M-5

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1586

Author : A. Sevulesku, St. Stan
Inst : Scientific-Research Agronomical Institute
Title : The Effect of Several Growth Stimulants on the Amount and Quality of the Tomato Crop.

Orig Pub : Comun. Acad. RPR, 1956, 6, No 8, 1007-1013

Abstract : Aqueous solutions of Na salts 2, 4-T (10 milligrams per liter) w, r, 5-T (50 mg/l) and beta-naphthoxyacetic acid (50 mg/l) have been applied by the Agronomical Scientific Research Institute of the Academy of Sciences Rumanian Peoples Republic. The spraying with 3,4-D raised the percentage of seedless fruits up to 63%, the crop yield by 17%, and accelerated the fruit ripening. The best grades of fruits were obtained by treating them with 2,4,5-T.

Card : 1/1

RUMANIA/Plant Diseases. Diseases of Cultivated Plants. O-2

Abs Jour: Ref Zhur-Biol., No 6, 1958, 25365.

Author : Sevulesku, A Fosteris, Petresku, Polyak.
Inst : Bucharest Agronomic Institute.
Title : New Gambo Hemp Diseases in Rumania.
(Novyye bolezni kenafa, otmechennyye v Rumynii).

Orig Pub: Anuarul lucrar. stiint. inst agron., 1957, 75-88.

Abstract: At the Experimental Field of the Bucharest Agronomical Institute one discovered in the summer of 1956: Ascochyta hibisci-cannabini Chochrjkow, Alternaria hibiscina (Thüm.) Lissitzyna, Botrytis cinerea Pers. and Cuscuta campestris Yuncker. The two former species are new in Rumania.

Card : 1/1

SEVUMYAN, A.M.

Treatment of certain forms of involutional psychosis. Med. zhur. Uzb. no.12:59-60 D '61. (MIRA 15:2)

1. Iz Tashkentskoy psikho-nevrologicheskoy bol'nitsy (glavnyy vrach - kand.med.nauk M.G.Gulyamov, nauchnyy rukovoditel' - prof. F.F.Detengof).
(PSYCHOSES)

L 63283-65 EWT(d)/EWT(m)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/EWP(l) Pf-4/Ps-4
ACCESSION NR: AT5013044 UJP(c) JD/GS UR/0000/64/002/000/0140/0146 31 30

AUTHOR: Antipenkov, V. P. (Moscow); Goldyreva, Z. M. (Moscow); Gorokhovskiy, L. T. (Moscow); Ioannisyants, V. V. (Moscow); Mol't, L. I. (Moscow); Rabinovich, B. V. (Moscow); Sevumyan, Yu. R. (Moscow) B+1

TITLE: Supervisory control machine for aluminum-making industry 27

SOURCE: Vsesoyuznaya konferentsiya po avtomaticheskomu kontrolyu i metodam elektricheskikh izmereniy. 4th, Novosibirsk, 1962. Avtomaticheskiy kontrol' i metody elektricheskikh izmereniy; trudy konferentsiy, t. 2: Teoriya izmeritel'nykh informatsionnykh sistem. Sistemy avtomaticheskogo kontrolya. Elektricheskiye izmereniya neelektricheskikh velichin (Automatic control and electrical measuring techniques; transactions of the conference, v. 2: Theory of information measurement systems. Automatic control systems. Electrical measurements of nonelectrical quantities). Novosibirsk, Redizdat Sib. otd. AN SSSR, 1964, 140-146

TOPIC TAGS: supervisory control, aluminum industry / ERA-800 supervisory control

Card 1/3

L 63248-65

ACCESSION NR: AT5013044

ABSTRACT: An ERA-800 Soviet-made centralized automatic supervisory control machine intended for controlling one series of aluminum-electrolysis process, is described. The ERA-800 machine scans the 160—170 electrolyzers that make up the series recording their process parameters in digital form; the interpole-gap resistance R_{pp} and the integral and mean values of performance indices are recorded. The machine is designed to perform the control, 2-hr and 6-hr cycle recording, recording on operator's request, and instrumental supervision. The control includes a sequential connection to all electrolyzer sensors, regulating (on the basis of R_{pp}) those cells which deviate from the normal operation, and recording such deviate cells. In the 2-hr cycle recording, the process parameters, such as v-h, a-h, etc., are printed automatically; in the 6-hr cycle, the resistances of anodic and cathodic regions and the electrolyte temperature are also recorded. Other facilities are designed for visual monitoring and manual control of anodes. The machine has these fundamental characteristics: number of control points, 800; output signal, 0—10 v d-c; input-signal-to-digital-code conversion time, 0.2 sec; conversion error, 0.5%; recording rate, 7—8 characters per sec; supply voltage, 3-phase 220 v 50 cps; power consumption,

Card 2/3