PA 247T24

USSR/Biology - Virus Diseases 21 Sep 52

"The Effect of Inhibitors of Nuclein Metabolism on the Propagation of Tobacco Mosaic Virus (VTM)," Corr Mem Acad Sci USSR V. L. Ryzhkov, N. K. Marchenko, Lab Physiol of Viruses, D. I. Ivanovskiy, Acad Med Sci USSR

DAN SSSR, Vol 86, No 3 pp 637-639

Found that aminopterin suppresses VTM in vivo. This effect is counteracted by folic acid (I), which stimulates VTM. 2,6-diaminopurine (II) and thiouracil are also inhibitors of VTM. The inhibiting

247T24

effect of thiouracil is nullified by uracil. The substances tested did not act as inhibitors in vitro. It was established by workers outside the USSR that I suppresses a number of viruses other than VTM which are pathogenic to plants, human beings, and animals. The mechanism of suppression of VTM by thiamin (V. L. Ryzhkov) deserves further study. The sensitivity of VTM to analogs of purine and pyrimidine bases (which enter into the compn of nucleic acids) and to analogs of I (effective in the synthesis of these bases) indicates that the propagation of viruses is based on the synthesis of nucleic acids.

247T24

MARCHENKO, N. K.

USSR/Medicine - Microbiology, Bacteriophage 21 Aug 53

"The Suppression of Phage by Some Aminoacids," V. L. Ryzhkov, Corr Mem Acad Sci USSR; N. K. Marchenko, Inst of Virology im D. I. Ivanovskiy, Acad Med Sci USSR

DAN SSSR, Vol 91, No 6, pp 1389-1392

Expts showed that glycine, l-tyrosine, racemic alanine, phenylalanine, arginine, methionine, serine, proline, threonine, leucine, norleucine, and d-leucine do not suppress multiplication of phages counteracting Str. lactis and Staph. aureus, while

269T32

natural glutamic acid, d,l-cysteine, d,l-histidine, and d,l-aspartic acid do. The action of substances which counteract the inhibiting effect of aminoacids on phagolysis was investigated, i. e., the action of dinitrophenol, methionine, choline, betaine, and NaOOCH.

MARCHENKO, N.K.

USSR/Biology - Plant pathology

Card 1/1 Pub. 22 - 40/47

Authors : Ryzhkov, V. L.; Kabachnik, M. I., Memb. Corresp. of Acad. of Sc. USSR; Tarasevich, L. M.; Medved', T. Ya.; Zeytlenok, N. A.; Marchenko, N. K.; Vagzhanova, V. A.; Ulanova, E. F.; and Cheburkina, N. V.

Title : Biological activity of alpha-aminophosphinic acids

Periodical : Dok. AN SSSR 98/5, 849-852, Oct 11, 1954

Abstract : The biological activity of alpha-aminophosphinic acids (toxic when in large concentrations), is discussed. The biological activity of these acids is best expressed in the inhibition of virus multiplication in the mosaic disease of tobacco. The effect of these acids and glycol on the titer of influenza virus in growing chicken embryos was investigated and the results are described. Eleven references: 7-USSR; 2-USA; 1-French and 1-German (1930-1953). Tables.

Institution : Acad. of Sc. USSR, Institute of Elementary-Organic Compounds and the Academy of Medical Sciences USSR, The D. I. Ivanov Institute of Virusology

Submitted : July 7, 1954

Marchenko, N. K.

USSR/ Biology - Virusology

Card 1/1 : Pub. 22 - 41/44

Authors : Ryzhkov, V. L., Memb. Corresp. of Acad. of Sc. USSR.; and Marchenko, N. K.

Title : Effect of certain metabolites on the multiplication of the mosaic disease viruses of tobacco

Periodical : Dok. AN SSSR 98/6, 1033-1036, October 21, 1954

Abstract : The effect of certain metabolites on the multiplication of mosaic disease viruses of tobacco leaves is discussed. Fourteen references: 8-USA; 5-USSR and 1-German (1938-1952). Tables.

Institution : Academy of Medical Sciences USSR, The D. I. Ivanovskiy Institute of Virusology

Submitted : July 7, 1954

Marchenko, N. K.

1072. Action of amino acids: the suppression of phage and phosphorus metabolism in bacterial cells. N. V. Cheburkina and N. K. Marchenko. *Mikrobiologiia*, 1955, 24, 532—538; *Referat. Zh. Biol.*, 1956, Abstr. No. 70909.—Phosphorus metabolism in lactic acid streptococci was studied by following the entry of ^{32}P into the cell. It was shown that glutamic acid and cystine, which have the capacity to depress the growth of phage, reduce the rate of phosphorus metabolism both in actively growing and in resting cells. Alanine, which does not have the capacity to depress the propagation of phage, does not change the rate of phosphorus metabolism in lactic acid streptococci. In all experiments, glutamic acid slowed up the incorporation of ^{32}P into sol. phosphates in actively growing cells, and a small delay in the inclusion of ^{32}P in the insol. phosphates of the cells was only observed in individual experiments. It is suggested that the depression of phage propagation by amino acids is connected with their disturbance of metabolic processes in the bacterial cell. (Russian)

B. C. Vickery

2

Med

Inst Virology im D. I. Ivanovsky

RYZHKOV, V.L.; MARCHENKO, N.K.

Problem of the ontogenesis fo tobacco mosaic virus. Vop.virus. 1 no.1:45-48 Ja-F '56. (MLRA 10:1)

1. Institut virusologii imeni D.I.Ivanovskogo AMN SSSR, Moskva.
(VIRUSES,
tobacco mosaic virus, ontogenesis (Rus))

USSR/Virology. Plant Viruses E

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57333

Author : Ryzhkov V. L., Marchenko N. K.
Inst : Not given
Title : Effect of Cations of Some Metals on the Reproduction of the Viruses of Tobacco Mosaic Disease (BTM).

Orig Pub : Mikrobiologiya, 1957, 26, No 3, 380-386

Abstract : Of the metals investigated the least toxic are K, Na, Mg, Ca, Mo, Mn; moderately toxic are Li, Zn, Fe, most toxic are Cu, Co, and Ln. Most of the tested metallic salts depress the reproduction of BTM in isolated tobacco leaves. Na and Ca do not depress the reproduction of BTM. The depressing effect of Mg is nullified by the equimolar concentration of Ca^{++}. The toxicity

Card 1/2

Marchenko, N. K.

AUTHORS: Ryzhkov, V. L., Corresponding Member of the AN USSR, and Marchenko, N. K. 20-3-46/52

TITLE: Effect of the Sulfanylamide on the Multiplication of Tobacco Mosaic Virus (Vliyaniye sul'fanilamida na razmnozheniye virusa mozaichnoy bolezni tabaka).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 3, pp. 523-525 (USSR)

ABSTRACT: At an earlier date it was demonstrated, that the aminopterine which is an antimetabolitic substance and analogue to the folic acid, suppresses the multiplication of the virus of the mosaic disease of the tobacco (in the following referred to as VMT). The folic acid, on the other hand, has been considered to be stimulating the multiplication of the VMT. In this work the authors study the effect of the sulfanylamide of the paraamino benzoin acid and of the paraamino salicylic acid upon the propagation of the VMT. Tab. 1 illustrates the results of a successful application of the sulfanylamide in a concentration of 0,02 M. The question arose, whether this reaction has been the result of a toxic effect on the plant tissue at the inoculation point. For, as it is known, the virus don't propagate on a dead tissue. There is no doubt,

Card 1/3

that the sulfanylamide prevents the propagation of the VMT as a result of the specific effect on the fermentative system, under the assistance of the folic acid. The higher plants synthesize themselves the folic acid, and this synthesis is disturbed by the presence of the sulfanylamide. At presence of the sulfanylamide the plant tissued synthesize an amount of folic acid not sufficient for the virus, which prevents the propagation of the VMT. It has been proved, that at an administration of folic acid from without the sulfanylamide is not able to prevent the propagation of the VMT. The authors set up the hypothesis, that the fermentative system of the synthesis of the ribonuclein acid and the timonuclein acid depends likewise on the derivatives of the folic acid, but, however, differ from each other. This has been demonstrated also on animal tissues.

There are 1 table, and 4 references, 2 of which are Slavic.

20-3-46/52

Effect of the Sulfanylamide on the Multiplication of Tobacco Mosaic Virus

ASSOCIATION: Institute for Virusology imeni D. I. Ivanovskiy, Academy of Medicine, USSR (Institut virusologii im. D. I. Ivanovskogo, Akademii meditsinskikh nauk SSSR)

SUBMITTED: July 12, 1957

AVAILABLE: Library of Congress

Card 3/3

COUNTRY : USSR
CATEGORY : Virology, Plant Viruses

ABS. JOUR. : RZhBiol., No. 19[illegible], No. 9881

AUTHOR : Ryzhkov, V. G., Marchenko, N. I.

INST. : --

TITLE : The Effect of Metabolites on the Multiplication of Tobacco Mosaic Disease Virus in Leaves of Tobacco of the Amboleme Variety Resistant to the Virus

ORIG. PUB. : Vopr. virusologii, 1958, No 1, 20-23

ABSTRACT : Tobacco of the Amboleme variety is distinguished by a very low susceptibility to the tobacco mosaic virus. The authors have suggested that in tissues of this variety there are either special substances preventing the multiplication of the virus or there is a deficiency in metabolites. The second supposition was amplified. A study was made of the effect of a number of compounds on the multiplication of the virus in tobacco plants of the Samsun and Amboleme varieties. Certain metabolites stimulated the multiplication of the

Card: 1/2

MARCHENKO, N.K.

Stimulation of phagolysis of Streptococcus lactis by various agents.
Vop.virus. 4 no.5:610-615 S-O '59. (MIRA 13:2)

1. Institut virusologii imeni D.I. Ivanovskogo AMN SSSR.
(BACTERIOPHAGE)
(STREPTOCOCCUS)

RYSHKOV, V.L.; MARCHENKO, N.K.

Reversible inhibition of multiplication of the tobacco mosaic virus in tobacco leaves. Dokl. AN SSSR 137 no.4:986-988 Ap '61. (MIRA 14:3)

1. Institut virusologii im. D. I. Ivanovskogo AMN SSSR.
(TOBACCO MOASIC VIRUS)
(SULFANILAMIDE)

MARCHENKO, N.L.

New welding machines. Biul. tekh.-ekon.inform. no.9:18-21 '58.
(MIRA 11:10)

(Electric welding)

MARCHENKO, N.L.

Automatic special-purpose electric welding machines. Biul.tekh.-ekon. inform. no.2:23-26 '59. (MIRA 12:3)
(Electric welding)

MARCHENKO, N.L.

The A2 and A02-type three-phase asynchronous motors. Biul.tekh.-ekon.inform. no.11:40-43 '59. (MIRA 13:4)
(Electric motors, Induction)

ALENCHIKOV, D.A., inzh.; MARCHENKO, N.L., inzh.

The UMP-series magnetic amplifiers and BO-type blocks. Vest. elektroprom. 33 no.11:79-80 N '62. (MIRA 15:11)
(Magnetic amplifiers)

NIKULIN, Nikolay Vasil'yevich; MARCHENKO, N.L., nauchnyy red.; SOROKINA, M.I., red.; DORODNOVA, L.A., tekhn. red.

[Handbook for beginner electricians on electrical materials and products] Spravochnik molodogo elektrika po elektrotekhnicheskim materialam i izdeliiam. Moskva, Proftekhizdat, 1962. 277 p. (MIRA 16:5)
(Electric engineering--Materials)
(Electricians--Handbooks, manuals, etc.)

BOBYLEV, Oleg Vasil'yevich; DROZDOV, Nikolay Gavrilovich;
NIKULIN, Nikolay Vasil'yevich; RUDAKOV, Pavel Vasil'yevich;
TSYGANOV, Vladimir Iosifovich; KARPENKO, L.L., red.

[Technology of the manufacture of electrical insulating materials and constructions] Tekhnologiia proizvodstva elektroizoliatsionnykh materialov i konstruktsii. [By] O.V. Bobylev i dr. Moskva, Energiia, 196[illegible]. [illegible] p.

3/020/60/135/003/022/039
B019/B077

AUTHORS: Gliki, N. V , Yeliseyev, A. A., and Marchenko, N. M.

TITLE: The Forming of Ice Single Crystals by Freezing an Undercooled Water Drop

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No 3, pp 591-594

TEXT: The authors investigated the freezing of undercooled water drops containing different chemical compounds in suspension. They used polarized light and payed special attention to the morphology of the ice crystals. The drops were attached to a glass fiber and put into an undercooled chamber. It was found that there are two types of solidification. At considerable undercooling, the air dissolved in the drop cannot escape fast enough, and the crystal formed is non-transparent. A transparent crystal is formed at weaker undercooling. Many tests showed an increase of the probability for the growth of a single crystal at a certain temperature with decreasing dimensions of the drop. An increase of the solidification temperature of drops with certain sizes had the same effect The optical

The Forming of Ice Single Crystals by Freezing an Undercooled Water Drop

S/020/60/135/003/022/039
B019/B077

axis of the crystals is usually not oriented. The optical axis shows a tendency to a horizontal position in larger drops (> 1 mm). During the growth of ice single crystals, a change of the drop shape was noticed, and the geometrical axis of the single crystal always coincided with the optical axis. The ellipsoid form of the single crystals was very stable during vaporization. Conditions are discussed where these forms of the single crystal can be strengthened or weakened. The influence of humidity on the crystal growth is also studied. Further tests about the morphology and the growth conditions are announced. A. V Shubnikov is mentioned There are 2 figures and 4 references: 2 Soviet, 1 British, and 1 US.

ASSOCIATION: Institut kristallografii Akademii nauk SSSR (Institute of Crystallography, Academy of Sciences, USSR)

PRESENTED: April 20, 1960, by A. V Shubnikov, Academician

SUBMITTED: April 11, 1960

Card 2/2

GLIKI, N.V.; YELISEYEV, A.A.; MARCHENKO, N.M.

Growth of spherical ice crystals. Kristallografiia 7 no.4:609-612 Jl-Ag '62. (MIRA 15:11)

1. Institut kristallografii AN SSSR.
(Ice crystals)

GLIKI, N.V.; YELISEYEV, A.A.; MARCHENKO, N.M.

Transformation of cloud drops into ice crystals. Dokl. AN SSSR 143 no.5:1087-1089 Ap '62. (MIRA 15:4)

1. Institut kristallografii AN SSSR. Predstavleno akademikom A.V.Shubnikovym.

(Ice crystals)

NEYMAN, G.B., doktor biol.nauk; MARCHENKO, N.M.

Tuber damage and loss during potato harvesting. Dokl. Akad. sel'khoz. 23 no.4:41-44 '58. (MIRA 11:5)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva. Predstavleno akademikom I.V. Yakushkinym.
(Potatoes--Harvesting)

M-

MARCHENKO, N.; SADOVSKIY, I.

A hero's star. Prof.-tekh. obr. 17 no.9:20-21 S '60. (MIRA 13:10)
(Farm mechanization)

MARCHENKO, N.; SADOVSKIY, I.

Earth submits to the strong. Prof.-tekh. obr. 18 no.5:19-20 My '61. (MIRA 14:8)
(Mogilev Province--Farm mechanization)

MARCHENKO, N.M., inzh.

Principles of the feeler mechanism in potato harvesting machinery. Mekh. i elek. sots. sel'khoz. 19 no.6:12-15 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.
(Potato digger (Machine))

MARCHENKO, N.N.

Plant struggling to achieve high labor productivity. Koks i khim. no.5:56-57 '63. (MIRA 16:5)
(Zaporozh'ye--Coke industry--Labor productivity)

MARCHENKO, N. P. Cand Med Sci -- (diss) "Lethal Poisoning by Carbon Monoxide From the Juridico-Medical Standpoint." Khar'kov,1957 19 pp 20 cm. (Khar'kov State Medical Inst), 300 copies (KL, 28-57, 112)

MARCHENKO, N.P.; SEMENENKO, L.A.

Concerning the so-called "new sign" of intravital trauma proposed by V.I. Akopov. Sud.-med. ekspert. 2 no.3:56-58 Jl-S '59. (MIRA 13:4)

1. Kafedra sudebnoy meditsiny (zav. - prof. N.N. Bokarius) Khar'kovskogo meditsinskogo instituta i Khar'kovskoye oblastnoye byuro sudebnomeditsinskoy ekspertizy (nachal'nik N.P. Marchenko).
(WOUNDS)

MARCHENKO, N.P.

Liquid acetone poisoning. Sud.-med.ekspert. 3 no.1:57-58 Ja-Mr '60. (MIRA 13:5)

1. Kafedra sudebnoy meditsiny (zav. - prof. N.N. Bokarius) Khar'kovskogo meditsinskogo instituta.
(ACETONE--TOXICOLOGY)

PRODANOV, V.I., starshiy nauchnyy sotrudnik; MARCHENKO, N.S., veterinarnyy vrach; SUKHENKO, V.P., veterinarnyy fel'dsher

Treatment of mastitis in cows. Veterinariia 39 no.1:43-45 Ja '63. (MIRA 16:6)

1. Krasnodarskaya nauchno-issledovatel'skaya veterinarnaya stantsiya (for Prodanov). 2. Krasnodarskaya krayevaya veterinarno-bakteriologicheskaya laboratoriya (for Marchenko). 3. Kolkhoz imeni Kalinina, Novotitarovskogo rayona, Krasnodarskogo kraya (for Sukhenko).

(Udder--Diseases)

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16.4600

AUTHOR: Marchenko, N.V.

TITLE: The existence of solutions to a certain class of nonlinear integral equations

PERIODICAL: Akademii nauk SSSR. Doklady, vol.137,no.3, 1961. 515-518

TEXT: The author considers the equation

$$\varphi(x) = \int_0^1 K[x,y,\varphi(y)]\,dy, \qquad (1)$$

where $K(x,y,z)$ is defined either on $P(A,B)$: $\{0 \leq x \leq 1,\ 0 \leq y \leq 1,\ A < z < B\}$ or on P_{AB}: $\{0 \leq x \leq 1,\ 0 \leq y \leq 1,\ -\infty < A \leq z \leq B < +\infty\}$.

(1) is called M-solvable if it has a solution, and there exist constants C,D $(A < C < D < B)$ so that $C \leq \varphi(x) \leq D$ for an arbitrary solution $\varphi(x)$, and $0 \leq x \leq 1$.

The author gives some sufficient conditions for the M-solvability of (1).

Theorem 1: Let $K(x,y,z)$ be continuous on $P(-\infty,+\infty)$, and $\overline{\lim}_{z \to +\infty} \frac{K(z)}{z} < 1$. Then (1) is M-solvable.

Card 1/3

The existence of solutions...

Let $f(y,z) \geqslant 0$ and continuous on $Q(0,+\infty)$, where $Q(A,B)$ is defined by $0 \leq y \leq 1$, $A < z < B$. Let $\overline{f(z)} = \sup \frac{f(y,z)}{z}$ for $0 \leq y \leqslant 1$, $\underline{f(z)} = \inf \frac{f(y,z)}{z}$ for $0 \leqslant y \leqslant 1$. The function $f(y,z)$ is called α_1, α_2-bounded if either $\overline{\lim_{z \to 0}} \overline{f(z)} < \frac{1}{\alpha_2}$ and $\underline{\lim_{z \to +\infty}} \underline{f(z)} > \frac{1}{\alpha_1}$ or $\underline{\lim_{z \to 0}} \underline{f(z)} > \frac{1}{\alpha_1}$ and $\overline{\lim_{z \to +\infty}} \overline{f(z)} < \frac{1}{\alpha_2}$, where $\alpha_2 > \alpha_1 > 0$.

Theorem 2: Let $K(x,y,z)$ be continuous on $P(0,+\infty)$ and $\alpha_1 f(y,z) \leqslant K(x,y,z) \leqslant \alpha_2 f(y,z)$ for $\{x,y,z\} \in P(0,+\infty)$, where $f(y,z)$ is $\alpha_1 \alpha_2$-bounded. Then (1) is M-solvable.

Let $K(x,y,z) = K(x,y)f(y,z)$. The author considers

$$\varphi(x) = \int_0^1 K(x,y) f[y, \varphi(y)]dy. \qquad (4)$$

Theorem 3: Let $K(x,y)$ be continuous on I; $0 \leq x \leqslant 1$, $0 \leqslant y \leqslant 1$; let $f(y,z)$ be continuous on $Q(0,+\infty)$ and $\overline{\lim_{z \to +\infty}} K \frac{f(z)}{z} < 1$, where $K = \sup_{\{x,y\} \in I} |K(x,y)|$,

Card 2/3

The existence of solutions...

$g(z) = \sup_{\{y,t\} \in Q_{-z,z}} |f(y,t)|$. Then (4) is M-solvable.

(Q_{AB} is defined by $0 \leq y \leq 1$, $-\infty < A \leq z \leq B < +\infty$).

Theorem 4: Let $K(x,y) > 0$ and continuous in I. Then

$$\varphi(x) = \int_0^1 K(x,y)\,\varphi^{\alpha}(y)\,dy \qquad (5)$$

is M-solvable for $\alpha \neq 1$.

The author mentions A.S.Kronrod. There is 1 Soviet-bloc reference.

PRESENTED: October 27, 1960, by I.G.Petrovskiy, Academician

SUBMITTED: October 6, 1960

Card 3/3

MARCHENKO, N.V.

Continuation of an operator and the existence of fixed points. (MIRA 16:2)
Dokl. AN SSSR 147 no.5:1026-1028 D '62.

1. Predstavleno akademikom I.G. Petrovskim.
(Operators (Mathematics)) (Topology)

ABRAMOVA, S.A.; MARCHENKO, O.F.

Materials for the palynological study of the subsalt layer in the Verkhne-Kamskoye potassium deposit. Trudy VNIIG no.40:337-370 '60. (MIRA 14:11)

(Kama Valley--Salt deposits)
(Palynology)

VOLKOV, A.I., dotsent, kand. tekhn. nauk; MARCHENKO, P.A., inzh.

Graphic method of compiling mine surveying maps in projection on an inclined plane. Nauch. dokl. vys. shkoly; gor. delo no.1:83-85 '59. (MIRA 12:5)

1.Predstavlena kafedrami Marksheyderskogo dela i geodezii Tomskogo politekhnicheskgo instituta.
(Mine maps)

VOLKOV, A.I., dotsent; MARCHENKO, P.A., assistent

Instruments for making projections on an inclined plane.
Izv.vys.uchob.zav.; gor.zhur. no.7:31-34 '60.
(MIRA 13:7)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M.Kirova. Rekomendovana nauchnym seminarom kafedr geodezii i marksheyderskogo dela.
(Mine surveying--Equipment and supplies)

VOLKOV, A.I., dotsent; MARCHENKO, P.A., inzh.

Connection to a plumb bob alignment by means of an isoceles triangle. Izv. vys. uchab. zav.; gor. zhur. no. 11:93-100 '60. (MIRA 13:12)

1. Tomskiy ordena Trudovogo Krasnogo Znameni politekhnicheskiy institut imeni S.M. Kirova. Rekomendovana kafedroy marksheyderskogo dela Tomskogo politekhnicheskogo instituta.
(Mine surveying)

MARCHENKO, P.A. (Kemerovo)

Permissible difference in double measurements of the length in underground traverses. Ugol' 40 no.4:66-67 Ap '65.
(MIRA 18:5)

MARCHENKO, P. E.

MARCHENKO, P. E. - "Investigation of the Process of Obtaining Gas of High Calorific Value from Wood under Laboratory Conditions." Min Higher Education USSR. Moscow Forestry Engineering Inst. (Dissertation for the Degree of Candidate in Technical Sciences)

So; Knizhnaya Letopis' No 3, 1956

LIR, Yu.S., kand. ekonomicheskikh nauk; MARCHENKO, P.K., inzh.

Calculated prices for coal are the most important factors in commercial accounting at enterprises of the coal industry. Nauch. soob. IGD 20:89-92 '63. (MIRA 16:10)

(Coal--Prices)

MARCHENKO, P.S., inzh.; POPOV, G.I., inzh.

Adjusting rolling mills. Mov. tekh. i pered. op v stroi. 20 no. 7:25-28 Jl '58. (MIRA 11:8)
(Rolling mills)

MARCHENKO, P.S.

Rapid construction of rolling mills in the Ural Mountain region.
Prom. stroi. 39 no. 2:10-13 '61. (MIRA 14:2)
(Ural Mountain Region--Rolling mills)

POPOV, G.I., inzh.; MARCHENKO, P.S.

Comments on the article "Inspection of the equipment of rolling mills." Mont. i spets. rab. v stroi. 24 no.7:25-27 Jl '62. (MIRA 15:6)

1. Gosudarstvennyy trest po montazhu metallurgicheskogo oborudovaniya v vostovhnykh rayonakh.
(Rolling mills--Equipment and supplies)

MARCHENKO, P.S., inzh.

Manufacture and assembly of frames for anchor bolts.
Mont. i spets. rab. v stroi. 24 no.10:18-19 '62. (MIRA 15:10)

1. Gosudarstvennyy trest po montazhu metallurgicheskogo oborudovaniya v vostochnykh rayonakh.
(Rolling-mill machinery--Foundations)

MARCHENKO, P.V.

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(2)

Nephelometric determination of ~~arsenic~~ in copper and zinc. P. V. Marchenko (Inst. Gen. and Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev). *Ukrain. Khim. Zhur.* 20, 77–82(1954)(in Russian).—The purpose of this investigation was to det. the suitability of $SnCl_2$ as replacement for hypophosphite in reducing As and subsequent nephelometric detn. of the latter. For best results in reduction with $SnCl_2$, the HCl concn. of the As soln. should not be less than 9*N* and in the presence of $HgCl_2$ (acting as catalyst) not less than 8*N*. It was further detd. that the max. turbidity of samples in test tubes immersed in boiling water appeared within 10–20 min., depending on the amt. of As present. Further heating caused diminution of turbidity due to coagulation. A comparison between hypophosphite and $SnCl_2$ methods showed no significant difference in the results.

M. Hoseh

MARCHENKO, P. V.

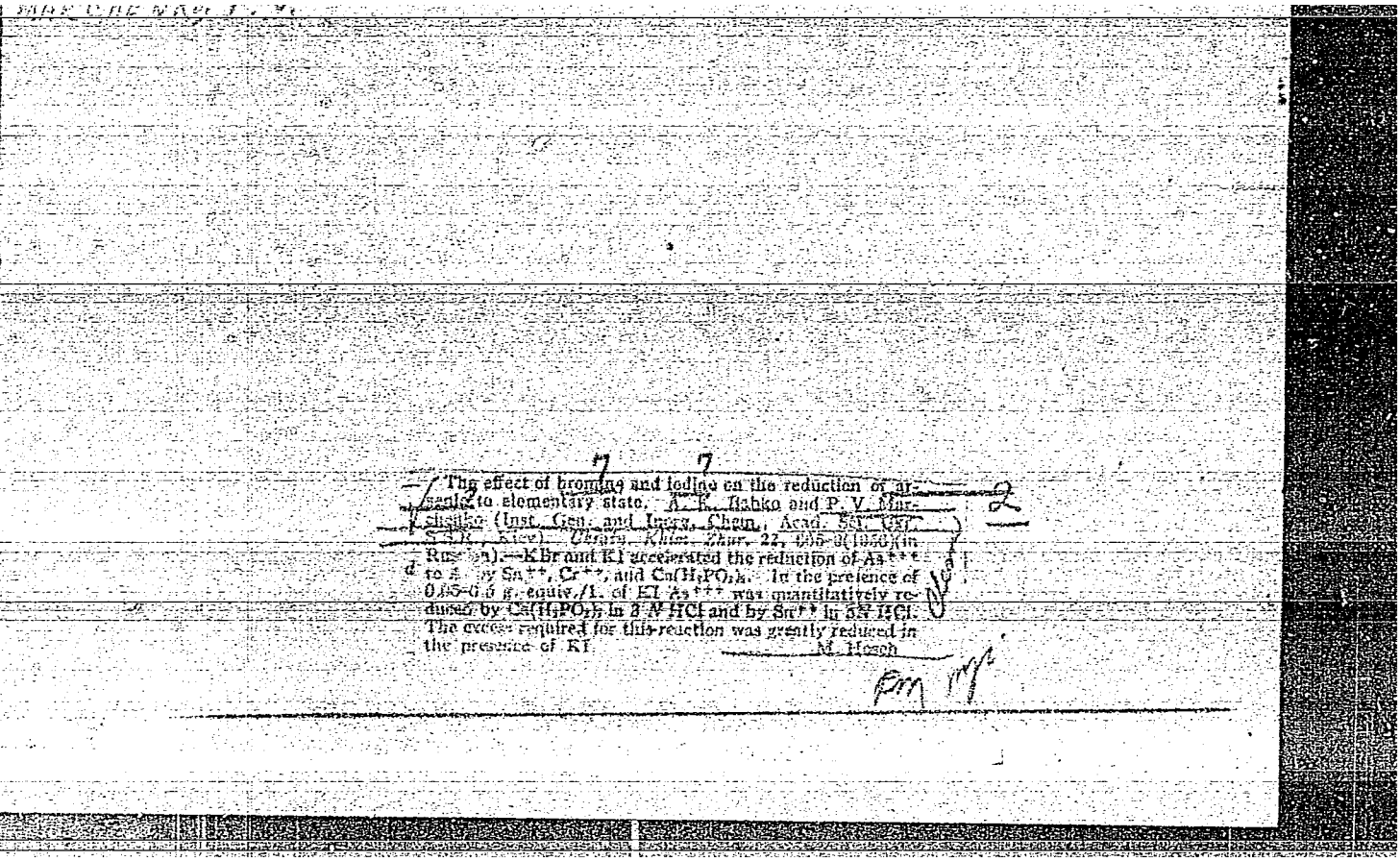
MARCHENKO, P. V.- "Investigation of Methods of Determining Small Quantities of Arsenic, Based on Oxidation-Reduction Reactions." Acad Sci Ukraine SSR, Inst of General and Inorganic Chemistry, Kiev, 1955, (Dissertations for Degree of Candidate of Chemical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

MARCHENKO, P.V.

5000

1/ 932. Electrolytic method of obtaining analytical concentrates for the determination of impurities in copper. A. K. Babko, P. V. Marchenko and T. N. Nazarchuk (Inst. Gen. Inorg. Chem., Acad. Sci. Ukraine SSR). *Zavod. Lab.*, 1935, 21, (6), 682-684.—The method is based on the simultaneous anodic dissolution of the sample and the cathodic deposition of Cu in Hg. Mercury (100 g) is placed in a 200-ml beaker with 50 ml of water, 1 ml of H_2SO_4 and 1 ml of HNO_3. A connection to the Hg is made through a platinum wire in a glass tube. The sample of copper, 10 g of plate or rod, is suspended in the solution. A current of 2 to 5 amp. is passed for 4 hr., about 3 to 4 g of the sample dissolves. The sample is washed and weighed, the difference being taken as the sample weight. A platinum anode is inserted and the electrolysis is continued for 30 min. to remove Cu from the solution. The amalgam is shaken for 30 min. with a dil. copper salt solution. Tin, Pb and Bi are completely extracted from the amalgam and can be determined colorimetrically. With Pb, the latter part of the electrolysis can be omitted since Pb does not enter the amalgam while copper salts are present. Nickel, Sb and Fe cannot be completely extracted from the amalgam. A platinum cathode is used instead of Hg and the electrolyte contains 2 ml of HNO_3 and 1 ml of H_2SO_4 in 50 ml of water. The sample is dissolved completely, a platinum anode is inserted and the electrolysis is continued until the solution is colourless. Traces of Cu are removed with H_2S prepared from Na_2S, and Fe and Ni are determined in the filtrate. G. S. SMITH



The effect of bromine and iodine on the reduction of arsenic(V) to elementary state. A. K. Babko and P. V. Mur-[illegible] (Inst. Gen. and Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev). *Ukrain. Khim. Zhur.* 22, 605-9 (1956) (in Russian).—KBr and KI accelerated the reduction of As^{+++} to As by Sn^{++}, Cr^{++}, and $Ca(H_2PO_2)_2$. In the presence of 0.05-0.6 g.-equiv./l. of KI As^{+++} was quantitatively reduced by $Ca(H_2PO_2)_2$ in 3 *N* HCl and by Sn^{++} in 5 *N* HCl. The excess required for this reaction was greatly reduced in the presence of KI. M. Hosch

Marchenko, P.V.

AUTHORS: Babko, A.K., Marchenko, P.V. 32-11-2/60

TITLE: The Utilization of the "Simultaneous Precipitation Method" for the Conservation of the Analytical Concentrations of Cd, Pb, Bi and Zn When Analyzing Alloys (Ispol'zovaniye soosazhdeniya dlya polucheniya analiticheskikh kontsentratov Cd, Pb, Bi i Zn pri analize splavov)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 11, pp. 1278-1283 (USSR)

ABSTRACT: When analyzing refractory alloys of nickel with tungsten or molybdenum, the content of easily meltable components must be determined, for which purpose the conservation of the concentration of the elements to be determined is necessary. The present work is intended to examine the conditions that offer the possibility of attaining the highest possible degree of separating microcomponents in that they are precipitated in such a manner that only the basic component remains in the solution. In order to be able to control the complete separation of zinc and cadmium components, the radioactive isotopes Zn^{65} and Cd^{115} were used, the lead- and bismuth content was determined by spectral analysis. For spectral analysis it is necessary to transform the deposit obtained into oxide. The usual precipitation of the microcomponents concerned is then repeated several times until it is quite certain that these components are no longer present. In the chapter dealing with the pre-

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The Utilization of the "Simultaneous Precipitation Method" for the Conservation of the Analytical Concentrations of Cd, Pb, Bi and Zn When Analyzing Alloys

cipitation of secondary ingredients in form of sulphides in an acid medium for the separation of cadmium-, bismuth-, lead-, and zinc sulphides a solution with pH=3-4 is recommended, but this solution is well suited only for the sorting out of Cd, Bi and Pb and not for Zn. (The experiment is described). In the chapter: The precipitation of microcomponents in form of sulphides in an ammonia medium it is pointed out that in this case only the separation of molybdenum and tungsten components is possible in a perfect manner. Ostroumov recommended the use of pyridine in this case, where the so-called "crystallite sulphides" of nickel, cobalt, etc. are obtained. (The process is described. In the chapter: The application of thioacetaminide for the precipitation (simultaneous precipitation) of the microcontents of Cd, Pb, Bi and Zn including nickel sulphide, this application is recommended as particularly practical, especially in order to conserve the analytical concentrations of zinc, cadmium, lead, and bismuth. (The experiment is described). In the chapter: The purification of reagents and filters the particular importance of the purity of reagents and filters is described on the basis of examples and several purification methods are recommended. There are 4 tables and 4 references, 3 of which are Slavic.

32-11-2/60

The Utilization of the "Simultaneous Precipitation Method" for the Conservation of the Analytical Concentration of Cd, Pb, Bi and Zn When Analysing Alloys

ASSOCIATION: Institute for General and Inorganic Chemistry AN Ukrainian SSR (Institut obshchey i neorganicheskoy khimii Akademii nauk USSR)

AVAILABLE: Library of Congress

Card 3/3

MARCHENKO, P. Y.

5(2); 21(5) PHASE I BOOK EXPLOITATION SOV/1900

Akademiya nauk SSSR. Komissiya po analiticheskoy khimii

Primeneniye radioaktivnykh izotopov v analiticheskoy khimii (Use of Radioactive Isotopes in Analytical Chemistry) Moscow Izd-vo An SSSR, 1958. 366 p. [Series: Its: Trudy, t. 9 (12)] Errata slip inserted. 3,000 copies printed.

Resp. Ed.: I.P. Alimarin, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: A.N. Yermakova Tech. Ed.: Z.V. Polyakova.

PURPOSE: The book is intended for chemists and chemical engineers concerned with work in analytical chemistry.

COVERAGE: The book is a collection of the principal papers presented in Moscow at the Second Conference on the Use of Radioactive Isotopes. The problems discussed at the Conference included coprecipitation, aging, and solubility of precipitates, determination of the instability constants

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of complex compounds, separation of rare earth metals, and ion-exchange chromatography. No personalities are mentioned. There are 351 references, 175 of which are Soviet, 33 German, 19 French, 8 Swedish, 2 Hungarian, and 2 Czech.

TABLE OF CONTENTS:

Use of Radioactive Isotopes (Cont.) SOV/1900

Izmaylov, N.A., and V.S. Chernyy. Study of the Solubility of Salts in Nonaqueous Solvents with the Aid of Tagged Atoms 44

Busev, A.I., and V.M. Dyr'ko. Determination of the Affinity Product of Cadmium Diethyldithiophosphate by the Radioactive Indicator Method 59

Babko, A.K., and P.V. Marchenko. Study of the Conditions for Precipitation of Microquantities of Some Metals in the Form of Halogen Compounds With Basic Dyes 65

Rumetsov, V.I., and O.V. Ryasoyedov. Organic Coprecipitants. 9. Coprecipitation of Rare Earth Elements 76

Rumetsov, V.I., and O.V. Ryasoyedov. Organic Coprecipitants. 10. Coprecipitation of Molybdenum 89

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5(2) SOV/32-25-9-7/53

AUTHORS: Babko, A. K., Marchenko, P. V.

TITLE: Determination of Microimpurities in Zirconium by Means of Basic Dyes

PERIODICAL: Zavodskaya laboratoriya, 1959, Vol 25, Nr 9, pp 1047-1050 (USSR)

ABSTRACT: For the enrichment of zinc, cadmium, molybdenum, and bismuth, occurring as microimpurities in high-purity metallic zirconium, a precipitation of the former may be carried out by means of the basic dyes methyl blue (I) and crystal violet (II) in the presence of iodides (III) or thiocyanates (IV). The resulting precipitate may be separated by a flotation with the aid of light, non-water mixable, liquids (toluene, ether). The impurities may then be determined colorimetrically from the concentrate. The completeness of the zinc precipitation with (I) and (IV) in the presence of larger zirconium quantities was investigated by means of Zn^{65}, and it was found that 20 γ Zn can be separated from 0.5 - 2.0 g Zr practically without loss, e.g. that 5.10^{-5} - 1.10^{-5}% Zn may be determined.

Determination of Microimpurities in Zirconium by Means of Basic Dyes

(II) besides (III) was used as precipitant for the concentration of cadmium. The analysis was carried out with Cd^{115}. 30 γ Cd were separated from 0.5 - 4 g Zr with maximum losses of 5%; this method permits the determination of 1.10^{-5} - 2.10^{-5}% Cd in 2 g of zirconium. The determination of the microquantities of molybdenum in Zr was most favorable with (II) besides (IV); it was also found that with Mo^{6+} a better precipitation can be obtained than with Mo^{5+} (Table 1). A precipitation of Bi is likewise obtained best with (II) (according to Kuznetsov and Panushina, Ref 6), as is shown by experiments with other dyes ((I) and rhodamine) (Table 2). An ammonium thiocyanate concentration of maximally 0.2 g.equivalent/l should be used (Table 3). According to the two methods mentioned last, quantities of 5.10^{-5}% Mo and Bi respectively, can be determined in a 2 g weighed portion, the precipitate separating, as above, by flotation. There are 3 tables and 8 Soviet references.

SOV/32-25-9-7/53

Determination of Microimpurities in Zirconium by Means of Basic Dyes

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR (Institute of General and Inorganic Chemistry of the Academy of Sciences, UkrSSR)

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MARCHENKO, P.V.

Determination of small amounts of zinc metallic cadmium. Zav.lab. 26 no.5:532-535 '60. (MIRA 13:7)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Zinc--Analysis) (Cadmium--Analysis)

BABKO, A.K.; MARCHENKO, P.V.

Photometric determination of boron in steel with brilliant green. Zav.lab. 26 no.11:1202-1206 '60. (MIRA 13:11)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk USSR.
(Boron--Analysis) (Steel)

55230

25351
S/032/61/027/006/001/018
B124/B203

AUTHORS: Marchenko, P. V., Vdovenko, M. Ye., Nabivanets, B. I., Obolonchik, N. V., and Spivakovskaya, N. Ye.

TITLE: Methods of determining impurities in metallic cadmium of high purity

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 6, 1961, 638 - 639

TEXT: The present paper describes a number of chemical methods for determining Fe, Cu, Ni, Sn, Sb, Tl, and As in high-purity cadmium; the determination of Zn had already been described in Ref. 1 (P. V. Marchenko. Zavodskaya laboratoriya, XXVI, 5, 532 (1960)), whereas the Pb determination will be described in Ref. 2 (M. Ye. Vdovenko, N. Ye. Spivakovskaya. Zavodskaya laboratoriya (in print)). For the corresponding determinations, the authors used semimicro-methods and only purified reagents and re-distilled water. Cadmium was dissolved in hydrochloric acid in a platinum vessel. Iron was determined colorimetrically with the aid of the ternary Fe-thiocyanate-diantipyrilmethane complex which can be extracted with chloroform. The disturbing Cu and Bi are precipitated with ZnS at pH = 4.

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Fe^{3+} is reduced with ascorbic acid to Fe^{2+} to avoid losses by formation of $Fe(OH)_3$. Copper is determined without separation from cadmium with diethyl dithiocarbamate; the colored complex is extracted from 40 - 45 ml of aqueous solution with 2 ml of CCl_4, and the color of the extract is compared with a standard series. Nickel is determined by extraction of its complex with dimethyl glyoxime by means of chloroform and subsequent evaporation of the chloroform under HCl. For the final determination of Ni, the authors used the formation of its complex with dimethyl glyoxime in the presence of ammonium persulfate. Tin is determined colorimetrically by extraction of its diethyl dithiocarbamate complex with chloroform, re-extraction with permanganate, and reaction with p-nitro-phenyl fluorone. For a quantitative extraction of tin in the presence of large Cd amounts, the extraction is repeated four times with new portions of a solution of diethyl dithiocarbamic acid in chloroform. Arsenic is determined colorimetrically in the form of arsenomolybdenum blue which can be extracted with 1 ml of isoamyl alcohol. To concentrate the arsenic and separate it from Cd, the latter is distilled off in the form of arsenic hydride, the

Methods of determining impurities...

analyzed cadmium specimen being used instead of metallic zinc. Antimony and thallium are determined by the known extraction-colorimetric methods with the use of crystal violet from one weighed portion; the difference in the pH-values in the precipitation of their hydroxy acids (Sb at pH = 5, Tl^{3+} at pH = 8 - 9, and Cd at pH = 7) is used for the cadmium separation. The following table was compiled on the basis of the experiments made.
There are 1 table and 11 Soviet-bloc references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR (Institute of General and Inorganic Chemistry of the Academy of Sciences UkrSSR)

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25633

S/032/61/027/007/003/012
B110/B203

5.5300

AUTHOR: Marchenko, P. V.

TITLE: Boron determination in metallic titanium and zirconium

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 7, 1961, 801-802

TEXT: The known boron determinations in Ti metal require previous boron separation. In zirconium, boron has hitherto been determined by the spectral method. The present paper describes an extraction-photometric method of determining boron in Ti and Zr requiring no boron separation. It is based on the formation of a dye compound between the anion of tetrafluoboric acid and brilliant green according to I. A. Blyum et al. (Ref. 4) Byulleten' VIMS No 12 (200), 12 (1959)) which is extracted by means of benzene at pH=3. The conditions of formation of the BF_4'-brilliant green complex had been described by the author (Ref. 5: Zavodskaya laboratoriya, XXVI, 11, 1202 (1960)). Ti and Zr bound as a fluorine complex do not disturb. 0.1 g Zr was mixed with a mixture of 0.5 ml of concentrated H_2SO_4 and 0.25 g K_2SO_4. Glass wool in the upper part of the

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cooler prevents the escape of volatile boron compounds. It is moistened by water and Perhydrol, and, at the end of the dissolution, rinsed with 2-3 ml of H_2O. An H_2O_2 excess is eliminated by addition of some drops of 7% $FeSO_4$ solution. No volatile boron compound escapes. The solution is mixed with 3 ml of 2 N NH_4F solution in a plastic vessel. After 30 min, the substance is neutralized to pH=3 by means of saturated Urotropin solution, brilliant green serving as indicator at the same time (color change: yellow→bluish green). 1 ml of 0.5% aqueous brilliant green solution is admixed in the separating funnel, and the ternary compound extracted with benzene. The color intensity is determined by an ФЭК-Н-57 (FEK-N-57) apparatus and light filter λ_{eff}=610mμ in cuvettes (layer thickness=0.5cm). The calibration curve is plotted with 0.5;1.0;1.5;2.0γB in 5 ml. A Zr solution without boron, prepared from Zr metal by means of HF and H_2SO_4, serves as background. The standard solution of 10γ/ml boron is made of recrystallized boric acid. Thus, boron ($5\cdot10^{-4}$ to $3\cdot10^{-3}$%) can be determined from 0.1 g of metal with a relative error of ≤10% (Table 1). 0.5 g of pulverized Ti metal was dissolved under slight heating in 5 ml of

H_2SO_4 (1:4). Trivalent Ti is oxidized with Perhydrol to discoloring in a quartz flask with reflux condenser. An H_2O_2 excess is removed by 7% $FeSO_4$ solution. It is filled up with H_2SO_4 (1:4) to 25 ml. 5 ml of the solution is treated just as the Zr solution. Titanium sulfate dissolved in H_2SO_4 (1:4), without boron, serves as background for the calibration curve. The sensitivity of the determination lies at $1 \cdot 10^{-3}$%B for 0.5 g of Ti. The relative error is ≤10% (Table 2). There are 1 figure, 2 tables, and 5 references: 3 Soviet-bloc and 2 non-Soviet-bloc. The two references to English-language publications read as follows: Ref. 1: K. C. Clarkins, V. A. Stenger, Anal. Chem., 28, 399 (1956); Ref. 2: M. Codell, G. Norwitz. Anal. Chem. 25, 1446 (1943).

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR (Institute of General and Inorganic Chemistry AS UkrSSR)

Table 1. Boron determination in metallic zirconium. Legend: (1) Boron

DANILOVA, V.N.; MARCHENKO, P.V.

Xylenol orange as indicator in the determination of bismuth in metallic lead and copper alloys. Zav.lab. 28 no.6:654-656 '62. (MIRA 15:5)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Bismuth--Analysis) (Lead--Analysis)
(Copper alloys) (Xylenol orange)

L 17706-63 EWP(q)/EWT(m)/BDS AFFTC/ASD/ESD-3 RM/JD/JG

ACCESSION NR: AP3003997 S/0073/63/029/007/0744/0746

AUTHOR3: Marchenko, P. V.; Tokovenko, T. Ya. 65 60

TITLE: Interaction of thiocyanate complex of niobium with methylene blue

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 7, 1963, 744-746

TOPIC TAGS: methylene blue, thiocyanate, niobium, tartaric acid, molybdenum, titanium, iron, zirconium

ABSTRACT: A study has been made on the interaction of the thiocyanate complex of niobium with a number of thionine dyes of tetramethylthioninechloride or methylene blue. The criterion of complex formation in the system Nb-SCN-MB (methylene blue) was the precipitation of niobium with the dye in presence of thiocyanate. Without the thiocyanate, such complex cannot be obtained. The precipitate resulting from the formation of the complex was floated to the surface with the addition of toluol. The optimum conditions of precipitation of $1x10^{-7}$ to $2x10^{-3}$ mole of niobium is: potassium thiocyanate 0.7 to 2.0 mole, methylene blue solution $1x10^{-3}$ mole, and 2 to 5 moles of HCl. It was found that tartaric acid and small concentrations of H_2O_2 do not interfere with the formation of the triple complex. However, fluorides and oxalic acid lower considerably the degree of niobium

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L 17706-63

ACCESSION NR: AP3003997

precipitation. The possibility of application of these substances for the separation of niobium from molybdenum, titanium, iron and zirconium has been also investigated. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Institut obschey i neorganicheskoy khimii AN UkrSSR (Institute of general and inorganic chemistry, Academy of Sciences, UkrSSR)

SUBMITTED: 04May62 DATE ACQ: 15Aug63 ENCL: 00

SUB CODE: CH NO REF SOV: 005 OTHER: 001

Card 2/2

ACCESSION NR: AP4021984 S/0073/64/030/002/0224/0227

AUTHOR: Marchenko, P. V.

TITLE: Investigation of the reaction of lead with xylenol orange.

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 2, 1964, 224-227

TOPIC TAGS: xylenol orange, color reagent, lead, determination, colorimetry, absorption coefficient, lead xylenol orange complex, masking agent

ABSTRACT: The possibility of using xylenol orange (XO) as color reagent for lead was investigated. It was established that the maximum light absorption of lead compounds with XO is at 580 millimicrons. The molar coefficient of absorption $E_{580} = 19400$ is obtained by saturating an XO solution with excess lead salt. The optimum pH is in the 4.5 range. At pH 2.5 and 4.5 the compound formed has a Pb:XO ratio of 1:1. The formula of the colored complex was established to be PbH_2R^{2-}:

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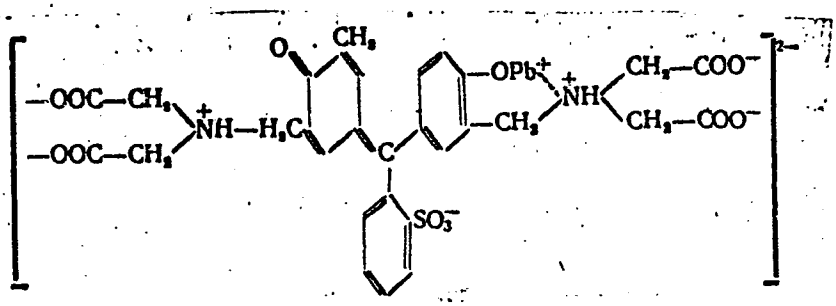
ACCESSION NR: AP4021984



Since XO is not specific for lead, masking agents are required. By using a mixture of 5×10^{-3} mol/l ammonium fluoride, 5×10^{-4} mol/l potassium ferrocyanide and 0.02% ascorbic acid, lead can be determined colorimetrically in the presence of small quantities of Al, Bi, Cu, Zn, Cd, Hg, Sn, Be, Fe III, Co and Ni. Orig. art. has: 6 figures, 1 table and 1 formula.

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ACCESSION NR: AP4021984

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk UkrSSR (Institute of General and Inorganic Chemistry, Academy of Sciences, UkrSSR)

SUBMITTED: 22Apr63	DATE ACQ: 09Apr64	ENCL: 00
SUB CODE: CH	NO REF SOV: 006	OTHER: 002

Card 3/3

MARCHENKO, P.V.

Reaction of lead with xylenol orange. Ukr.khim.zhur. 30 no.2: 224-227 '64. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

L 54501-65 EWT(m)/EPF(n)-2/EWP(t)/EWP(b) Pu-4 IJP(c) JD/JG
ACCESSION NR: AP5014311 UR/0073/65/031/006/0612/0615
543.064+541.49.486

29
28
B

AUTHOR: Marchenko, P. V.; Uzhviy, V. N.

TITLE: Production of analytic concentrates of molybdenum in the form of a molybdenum-thiocyanate-methylene blue ternary compound

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 6, 1965, 612-615

TOPIC TAGS: molybdenum, methylene blue, ammonium thiocyanate, precipitation, chemical reaction, organic dye, colorimetric analysis

ABSTRACT: Properties and conditions for formation of a ternary molybdenum-thiocyanate-methylene blue complex were studied. The possibility of using this complex for the separation of molybdenum from titanium is considered. In the presence of excess thiocyanate and dye, an insoluble methylene blue thiocyanate is also produced which acts as a collector and promotes more complete deposition of molybdenum. The optimum concentration of components is as follows: molybdenum--$1 \cdot 10^{-8}$-$5 \cdot 10^{-4}$ g·atom/L; ammonium thiocyanate--$2 \cdot 10^{-1}$-$5 \cdot 10^{-1}$ *M*; methylene blue--$5 \cdot 10^{-5}$ *M*; hydrochloric acid--0.5-2 *M* (or sulfuric acid--0.2-4 *M*). The synthesized complex was

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L 54301-65
ACCESSION NR: AP5014311

analyzed for its constituents and was found to contain Mo:SCN:methylene blue in a 1:3:1 ratio. Molybdenum is hexavalent in the complex which has the formula $(C_{16}H_{18}N_3S)MoO_2(SCN)_3$. It was shown that it is possible to separate molybdenum and titanium in the form of this complex. Here titanium is complexed with ammonium fluoride. On the basis of this experiment a method was developed for the determination of $2.5 \cdot 10^{-5}$% molybdenum in metallic titanium using colorimetric measurements after separation. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR (Institute of General and Inorganic Chemistry, AN UkrSSR)

SUBMITTED: 06Jan64 ENCL: 00 SUB CODE: GC, IC

NO REF SOV: 009 OTHER: 002

Card 2/2

MARCHENKO, P.V.; UZHVIY, V.N.

Obtaining the analytical concentrates of molybdenum as a ternary compound molybdenum - thiocyanate - methylene blue. Ukr. khim. zhur. 31 no.6:612-615 '65. (MIRA 18:7)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

85354

1.9600 18.8000 262358 S/120/60/000/005/026/051
E032/E314

AUTHORS: Morgulis, N.D. and Marchenko, R.I.

TITLE: Some Ionisation Methods of Measuring Very Low Pressures

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No. 5, pp. 106 - 108

TEXT: The Alpert gauge is almost universally used to measure very low pressures ($\leqslant 10^{-8}$ mm Hg). Although it is a very simple device it is far from being perfect. It has a relatively low sensitivity and therefore requires relatively complicated ion-current amplifiers. The principal disadvantage, however, is the fact that its lower pressure limit is still too high. The present authors describe various methods for improving the Alpert gauge. Fig. 1a shows one of these modified forms of the Alpert gauge. In this gauge the electron current is injected into the anode I, which is in the form of a cylindrical grid with closed ends. The system incorporates a simple Wehnelt cylinder and an electron reflector III. The ion-collector IV is in the form of a very thin wire at a small and, if possible, the same negative

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S/120/60/000/005/026/051
E032/E314

Some Ionisation Methods of Measuring Very Low Pressures

potential as on the electrodes II and III. A coil is wound on the outside of the glass envelope and produces a small magnetic field H . Use of the electron reflector and the magnetic field increases the mean free path, i.e. the ionising power, and the almost field free space inside the anode enables the positive ions to leave this space more easily. This kind of manometer has a lower pressure limit of 10^{-9} mm Hg. With H = 150 Oe the sensitivity of the manometer was found to be 120 mm^{-1} and this is higher by an order of magnitude than the sensitivity obtained with the Alpert gauge. The present authors have also investigated the design reported by Houston and Alpert in Ref. 2. This design is shown schematically in Fig. 1. The gauge consists of a closed anode I , a reflector II and an ion-collector III . The electrode system is located in a strong longitudinal magnetic field. It was found that with this design the ion current depends linearly on the pressure and the sensitivity is extremely

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E032/E314

Some Ionisation Methods of Measuring Very Low Pressures

large (of the order of 10^6 mm^{-1}). Although the present authors have investigated this gauge only in the range $\sim 10^{-8} - 10^{-7}$, they are of the opinion that owing to the high sensitivity this gauge would be very suitable for pressures $\ll 10^{-9}$ mm Hg. It is therefore suggested that this manometer should be further investigated.
There are 5 figures and 5 references: 4 English and 1 Soviet.

ASSOCIATION: Kiyevskiy gosudarstvennyy universitet
(Kiyev State University)

SUBMITTED: July 13, 1959

IX

MORGULIS, N.D. [Morhulis, N.D.]; MARCHENKO, R.I.

Partial adsorption and desorption of residual gas components on the surfaces of germanium and silicon single crystals in a very high vacuum. Ukr. fiz. zhur. 6 no.3:376-385 My-Je '61. (MIRA 14:8)

1. Kiyevskiy gosudarstvennyy universitet im. T. Shevchenko.
(Germanium crystals)
(Silicon crystals)
(Gases in metals)

MARCHENKO, R. I.

AID Nr. 976-16 24 May

RATE AND PRODUCTS OF THORIUM CARBIDE THERMIONIC CATHODE EVAPORATION (USSR)

Mikhaylovskiy, B. I., and R. I. Marchenko. Radiotekhnika i elektronika, no. 4, Apr 1963, 680-683. S/109/63/008/004/019/030

The rate of thermionic cathode evaporation of ThC_2 in the temperature region of 2000°K and the degree of ThC_2 thermal dissociation were investigated at Kiyev State University. An experimental tube was designed for this purpose, consisting of a cathode evaporator (tungsten ribbon) coated with a thin ThC_2 layer, a collector (pure tungsten ribbon 1 mm wide), coated with a monomolecular ThC_2 layer, and an anode (flat electrode with diaphragm) located between them. The tube was sealed off at a pressure of $1 \cdot 10^{-7}$ mm Hg. An optical pyrometer was used to determine cathode temperature. The contact potential difference (ΔU_k) was determined by shifting the cathode collector current characteristic at a constant decelerating field. At a temperature of 1300°K the rate of evaporation was negligible.

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AID Nr. 976-16 24 May

RATE AND PRODUCTS OF THORIUM [Cont'd] S/109/63/008/004/019/030

and there was no contact potential difference. During the experiment, the cathode evaporation temperature was raised to a value in the 1800-2050°K range, where considerable evaporation of ThC_2 was expected. Results show that the ΔU_k gradually rises with time, up to the constant value of ΔU_m = 1.5 volt. It was concluded that the ΔU_m value corresponds to the work function (3 ev) of the ThC_2 cathode. On the basis of the heat of evaporation for ThC_2 (Q = 4.8 ev), the expression for the rate of evaporation was found to be $N = Ae^{-Q/kt}$, where A is $2.3 \cdot 10^4$ gram/cm^2. sec. To study the ThC_2 dissociation within the investigated range of temperatures, a high vacuum mass spectrometer was used. Only two peaks of ion current corresponding to pure Th (m = 232) and ThC_2 (m = 256) were detected in the mass range from 200 to 270; these peaks increased exponentially with the increase of cathode temperature. The experiment demonstrated that the ratio of the ion currents I_{Th} to I_{ThC_2} remained constant over the entire temperature range. It was concluded that thermal dissociation of ThC_2 is absent on the cathode surface and that the formation of pure thorium depends on the ThC_2 dissociation produced by electron shock in the ion source of the mass spectrometer.

[KM]

Card 2/2

MARCHENKO, R.N.

POPOV, G.S.; MARCHENKO, R.N., inzhener

Drilling and completion of an oil well of simplified desighn. Neftianik 2 no.1:3-5 Ja '57. (MLRA 10:2)

1. Glavnyy inzhener Polaznenskoy kontory turbinnogo bureniya ob"yedineniya Molotovneft' (for Popov). 2. Polaznenskaya kontora turbinnogo bureniya (for Marchenko).
(Oil well drilling)

GORIN, D., kand. tekhn. nauk; MARCHENKO, S., inzh.; LITOVSKIY, M., inzh.

High frequency metallization. Avt. transp. 42 no.11:24-26 N '64. (MIRA 17:12)

GORIN, D.I., kand. tekhn. nauk; MARCHENKO, S.A., kand. tekhn. nauk;
LITOVSKIY, M.A., kand. tekhn. nauk

Reconditioning crankshafts. Mashinostroitel' no. 1:16 Ja '66
(MIRA 19:1)

MARCHENKO, S. N.

"Determination and Elimination of Systematic Errors of Theodolite Turning Entering Into Results of Horozontal Angle Measuring".
Tr. Kievsk. gidromelior. in-ta, 4, p 139-146, 1954.

The determination of the error is sought by finding the difference between computed and observed angles. A table of corrections is given for $2 \angle n \leq 8$ where n is the number of directions from one station. Triangulation in the Kiev region was carried out with Wild theodolites. The mean error was found to be 0.41."
(RZhAstr, No. 1, 1956)

SO: Sum No 884, 1956

S/006/60/000/010/004/008
B012/B054

AUTHORS: Marchenko, S. N., Sadilenko, N. Kh.

TITLE: Accurate Determination of the Constants of the Thread Range Finder

PERIODICAL: Geodeziya i kartografiya, 1960, No. 10, pp. 36 - 40

TEXT: The authors point out that the practical accuracy of the thread range finder differs from theory, and show that, among other things, the constants of the thread range finder are determined with insufficient accuracy. This is one of the principal causes of this error. The exact method of determining these constants consists in the following: The projections of the outer cross wires are fixed on the vertical rod instead of the readings on this rod. The distances n_i between these projections are measured with a check rod with an accuracy of tenths of a millimeter. Next, the mean values k and c of the constants are determined from n_i and D_i (exactly measured distances). The coefficient k_q of the range finder for a certain rod q is determined from formula (6): $k_q = kq_m$, where k is

the mean value of the coefficient of the range finder, and q_m is the mean length of the meter division of the surveyor's rod. The constant c of the range finder remains unchanged. The constants of the thread range finder for the theodolite TH No. 21266 (TN No. 21266) of 1959 were determined by this method in connection with the testing of the surveyor's rod for the range finder manufactured by the sektor inzhenernoy geodezii Nauchno-issledovatel'skogo instituta gradostroitel'stva Akademii stroitel'stva i arkhitektury USSR (Sector of Technical Geodesy of the Scientific Research Institute of Town Planning of the Academy of Construction and Architecture of the UkrSSR). The tests were carried out by the otdel geodezii i kartografii instituta "Kiyevproyekt" (Department of Geodesy and Cartography of the "Kiyevproyekt" Institute). This high-precision surveyor's rod is shown in Fig. 1 and described. Its handling is shown in Fig. 2. Calculations and tests (Ref., footnote on p. 40) showed that an ordinary surveyor's rod makes it possible to determine the distances of $D \leq 50$ m by the thread range finder with a root-mean-square of $m_D = \pm 0.07$ m. With the use of the new high-precision rod, however, it is possible to measure $D \leq 51$ m with an m_D of ± 0.03 m. The absolute maximum error is 0.05 m. In

Accurate Determination of the Constants of the Thread Range Finder

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conclusion, the following is stated: An accurate determination of the constants k and c makes it possible to increase considerably the accuracy in measuring distances by means of a thread range finder. If, in addition, the new high-precision rod is used, distances of $D \leq 50$ can be measured with an m_D of ± 0.03. There are 2 figures, 1 table, and 1 Soviet reference.

Card 3/3

MARCHENKO, S.N.

Exact timing of the tying of theodolite traverses to polygonometric wall marks. Geod. i kart. no.2:50-54 F '61. (MIRA 14:9)
(Surveying)

MARCHENKO, S.N.

Adjustment of indirect measurements in city and engineering polygonometry. Geod. i kart. no.11:12-16 N '61. (MIRA 15:1)
(Traverses (Surveying))

MARCHENKO, S.N.

Improving the construction of the main geodetic base in cities. Geod. i kart. no.2:22-30 F '62. (MIRA 15:3)
(Transverses (Surveying))

KOS'KOV, B.I.; MUKHIN, N.S.; SMIRNOV, A.A., kand. tekhn. nauk; NIKITIN, V.I., prepodavatel'; KONDRAT'YEVA, N.Ya., kand. tekhn. nauk, prepodavatel'; LOSEV, K.A., dotsent; ZVONKOV, A.P.; KOMAROVSKIY, V.M.; MARCHENKO, S.N., kand. tekhn. nauk

Discussion of an article by B.I. Gerzhuly. Geod. i kart. no.4:28-36 Ap '64. (MIRA 17:8)

1. Nachal'nik tekhnicheskogo otdela Moskovskogo gorodskogo tresta geologo-geodezicheskikh i kartograficheskikh rabot (for Kos'kov). 2. Nachal'nik kompleksnogo otdela Moskovskogo otdeleniya TSentral'nogo tresta inzhenerno-stroitel'nykh izyskaniy (for Mukhin). 3. Nachal'nik geodezicheskoy sluzhby pri Upravleni glavnogo arkhitektora Voronezha (for Smirnov) 4. Kafedra geodezii Khabarovskogo politekhnicheskogo instituta (for Nitkin). 5. Kafedra kartografii Leningradskogo gosudarstvennogo universiteta (for Kondrat'yeva). 6. Kuybyshevskiy inzhenerno-stroitel'nyy institut (for Losev). 7. Rukovoditel' sektora Nauchno issledovatel'skogo institut gradostroitel'stva Kiyev (for Marchenko).

GARANINA, V. [Haranina, V.]; LADYGINA, O. [Ladyhina, O.]; OSTREYKO, L. [Astreika, L.]; MARCHENKO, T. [Marchenko, T.]; PERETYAGINA, L. [Peratsiahina L.]; SHIROKOVA, N. [Shyrakova, N.], inzh.

We are proud of our beautiful city. Rab. i sial. 35 no.6:12-13 Je '59. (MIRA 12:8)

1.Zakroyshchitsa atel'ye No.1 Belpromsoveta (for Marchenko).
2.Zaveduyushchaya aparatno pryadil'nym proizvodstom, g. Minsk (for Shirokova).
(Minsk--Description) (Minsk--Economic conditions)

MARCHENKO, Ts. A.

USSR/Electricity - Suspension line supports

Card 1/1 : Pub. 133 - 3/20

Authors : Kachan, I. K.; Marchenko, Ts. A.; and Anisimov, A. P.

Title : The application of centrifuged reinforced-concrete supports for overhead communication lines

Periodical : Vest. svyazi 10, 5-6, Oct 54

Abstract : An account is given of the production methods and structure of centrifuged reinforced-concrete supports for overhead communication lines. A description of the above mentioned supports is presented, together with tables giving technical specifications. Drawings.

Institution : ...

Submitted : ...

IGONON, P.G., inzh.; SVITKIN, V.V., inzh.; MITROFANOV, M.G., kand.tekhn.nauk; SLEPTSOV, Yu.S., inzh.; KOLOZHVARI, A.A., inzh.; PASHENKO, M.A., inzh.; ZHIVOLUPOV, M.A., inzh.; Prinimali uchastiye: MUSHENKO, D.V.; TSYSKOVSKIY, V.K.; SHCHEGLOVA, TS.N.; FREYDIN, B.G.; PYL'NIKOV, V.I.; LEVINA, M.I.; LEVIN, A.I.; LUR'YE, Ye.I.; BAYKINA, T.A.; UDOVENKO, S.A; MARCHENKO, T.A.

Effect of the method of liquid paraffin oxidizing on the yield and quality of the obtained fatty acids. Masl.-zhir.prom. 28 no.11:20-23 N '62. (MIRA 15:12)

1. Groznenskiy nauchno-issledovatel'skiy neftyanoy institut (for Igonin, Svitkin, Mirtofanov, Sleptsov, Kolozhvari, Pashenko, Zhivolupov). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut neftekhimicheskikh protsessov (for Mushenko, TSyskovskiy, Shcheglova, Freydin, Pyl'nikov, Levina, Levin). 3. Lengiprogaz (for Lur'ye, Baykina). 4. VNIISINZh (for Udovenko, Marchenko).

(Paraffins) (Acids, Fatty)

MIKHAL'CHENKO, V.M.[Mykhal'chenko, V.M.]; MISNICHENKO, O.M.; MARCHENKO, T.I.; MIKHAYLOVA, M.Y.[Mykhailova, M.I.]; SHVED, M.P.; OSTAPENKO, M.G.[Ostapenko, M.H.]; BULDEY, I.A.; MARKIN, M.S., glav. red.; OSTAPENKO, M.G. [Ostapenko, M.H.], otv. za vyp.; MINEVICH, M.I.[Minevych, M.I.], tekhn. red.

[Soviet trade in the Ukrainian S.S.R.; statistical abstract] Radians'ka torhivlia v Ukrains'kii RSR; statystycnyi zbirnyk. Kyiv, Derzh. stat. vyd-vo, 1963. 318 p. (MIRA 16:9)

1. Ukraine. Statisticheskoye upravleniye. 2. Otdel statistiki torgovli TSentral'nogo statisticheskogo upravleniya pri sovete ministrov Ukr. SSR (for Mikhal'chenko, Misnichenko, Marchenko, Mikhaylova, Shved, Ostapenko, Buldey). 3. Nachal'nik TSentral'nogo statisticheskogo upravleniya Ukr.SSR (for Markin).
(Ukraine--Commerce) (Ukraine--Statistics)

AIEKSEYEV, Nikolay Dmitriyevich; MARCHENKO, Taisiya Timofeyevna; VOYTKEVICH, S.A., retsenzent; BLIZNYAK, V.V., retsenzent; BIRKGAN, Yu.B., spetsredaktor; KHMEL'NITSKAYA, A.Z., red.; CHEBYSHEVA, Ye.A., tekhn.red.

[Engineering equipment for the production of essential and synthetic oils, perfums and cosmetics] Tekhnologicheskoe oborudovanie efiromaslichnogo, sinteticheskogo i parfiumerno-kosmeticheskogo proizvodstv. Moskva, Pishchepromizdat, 1957. 379 p. (MIRA 11:2)
(Perfumes, Synthetic) (Cosmetics)

COUNTRY : USSR V
CATEGORY : Pharmacology and Toxicology. Cardiovascular Agents
ABS. JOUR. : RZhBiol., No. 1 1959, No. 4574

AUTHOR : Volkova, Ye. A.; Marchenko, T. V.
INST. : Kharkov Pharmaceutical Institute
TITLE : A Variant of the Method of Veratrine Purification During Its Isolation from Substances of Biological Origin
ORIG. PUB. : Tr. Khar'kovsk. farmatsevt. in-ta, 1957, vyp. 1, 115-118
ABSTRACT : No abstract

CARD: 1/1

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S/207/61/000/004/002/012
E032/E514

11.7430
26.2161

AUTHORS: Grigoryan, S.S., Marchenko, T.V. and Yakimov, Yu L (Moscow)

TITLE: Nonsteady motion of gas in shock tubes of variable cross-section

PERIODICAL: Akademii nauk SSSR. Siberskoye otdeleniye. Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no.4, 1961, 109-113

TEXT: The problem is formulated as follows. Consider a vessel separated by a orifice from a shock tube of variable cross-section. The gas contained in the vessel is heated and expands through the orifice into the shock tube which is initially filled with stationary gas. This results in nonsteady-state motion of both gases in the tube, which is completely defined by the initial parameters of the gas in the tube p_o, ρ_o, γ_1, by the mass flow $Q = Q(t)$, by the energy flow through the orifice $N = N(t)$ and by the adiabatic exponent γ_2 of the gas leaving the vessel The functions $Q(t)$ and $N(t)$ are assumed to be given and are determined by the processes taking place inside the vessel. The problem may

Card 1/3