

VOLOKITIN, I.; VDOVENKO, B.

Wings are strengthened in flight. Grazhd.av. 20 no.11:2 of cover 1-3
N '63. (MIRA 17:2)

1. Spetsial'nyye korrespondenty zhurnala "Grazhdanskaya aviatsiya".

VDOVENKO, B.

107-12-1/46

AUTHOR: Semenov, V. and Vdovenko, B.

TITLE: Designers of Radio-Controlled Airplane Models
(Konstruktory radioupravlyaemykh modeley)

PERIODICAL: Radio, 1956, Nrl2, insert page (USSR)

ABSTRACT: Hundreds of young people, members of DOSAAF, construct radio-controlled flying models in their leisure hours. Petr Velichkovskiy from Alma-Ata has become the world champion when his model has flown for 3 hrs 6 min and 38 sec. The photo shows him controlling on 28-29 mc his model for 100 m against the wind and for 150 m with the tail wind. Boris Kochetkov from Kuznetsk town, Pensa oblast, built a model that flew 2 km 400 m in a straight-line route.

The 1956 All-Union Contest of flying models attracted many amateur designers from Moscow, Leningrad, Alma-Ata, Sverdlovsk and other cities. Three photos show the designers and their models. In addition to the above mentioned, the outstanding designers were: N. Drozhzhin (Moscow), L. Teplov (Kharkov), A. Erler (Leningrad), S. Malik (Moskva), Yu. Shchegolev (Sverdlovsk).

AVAILABLE: Library of Congress

Card 1/1

V I D U E T Y A L , 1 1

85-9-17 /33

AUTHORS: Prokof'yev S., (text) Vdovenko B., (photos)

TITLE: A Visit to the Promoters of the All-Union Competition of Aeroclubs (U initsiatorov sorevnovaniya aeroklubov)

PERIODICAL: Kryl'ya Rodiny 1957, Nr 9, inserted colored sheet between pp. 16-17 (USSR)

ABSTRACT: 22 photos of the members of the Serpukhovskoy aeroclub at their routine exercises, showing also some of the material equipment of the aeroclub. The text accompanying the photos offers brief and fragmentary information on the members represented in the photos and comments on their activities. Stressed are: the strict discipline maintained at the aeroclub by its head S.M. Nefedov; the importance the members of the club attach to the sports as a means of developing their physical condition; and the fact that the members of the aeroclub participate actively in the political work (obshchestvennaya rabota).

AVAILABLE: Library of Congress
Card 1/1

Vdovenko, B.

AID P - 4457

Subject : USSR/Aeronautics - Training (sports)

Card 1/1 Pub. 58 - 4/10

Authors : Vdovenko, B., and M. Semenov

Title : A Primary Organization of the DOSAAF at Work

Periodical : Kryl. rod., 1, 6-7, Ja 1956

Abstract : The article describes the day-to-day work of a DOSAAF-sponsored Parachute Circle functioning at an unnamed machine-building plant, and contains some advice as to the organization of work in such Circles. Six photos.

Institution : None

Submitted : No date

VDOVENKO, B.

Watch in Arctic Regions. Kryl.rod. 13 no.1:16b-16c Ja '62.
(MIRA 15:2)

(Arctic regions)

VDOVENKO, B. M.

"Application of Radioactivity Methods in Analytical Chemistry,"
a paper submitted at the Conference on the Application of Radioactive Tracers in
Chemistry and in the Industry, Leningrad, 30 Oct-1 Nov 56.

SUM: 1345 p. 95

ACC NR: AT7006973

SOURCE CODE: UR/2650/66/000/025/0122/0126

AUTHORS: Baydal, M. Kh.; Vdovenko, G. N.

ORG: none

TITLE: Refinement of a computational method for predicting rain on the basis of pressure maps

SOURCE: Alma-Ata. Kazakhskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 25, 1966. Voprosy meteorologii (Problems in meteorology), 122-126

TOPIC TAGS: weather forecasting, atmospheric pressure, atmospheric temperature

ABSTRACT: The authors have sought to refine a method for predicting rain proposed by them in 1963; application of the method to Frunze and the plains of Kazakhstan has also been considered. The method is based on daily changes in relative topography of pressure maps (300/500, 500/700, 700/1000) and the dew-point deficit at the 700-millibar level. Improvement is introduced by considering advection and the change in dew-point deficit from the 700-millibar level to the 500- and 300-millibar level. A good indicator of rain is a sharp decrease (more than 5°) in the dew-point deficit from one level to the overlying level, but there must not be a reversal in going on to the next level. Several actual examples of observed data are considered, and the results are encouraging. With consideration of this new modification, and on the

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ACC NR: AT7006973

basis of tests, 84--86% reliability is attainable, if the procedure is strictly followed. Consideration of advection, in conjunction with the other refinements, should provide even better results, but radiosonde data are necessary, and these are too meager in the investigated area. If advection is weak, the sonde must be used at the site where prediction is desired. The authors conclude that their proposed refinements improve reliability, but that more refinement is possible and necessary.

SUB CODE: 04/

SUBM DATE: none/

ORIG REF: 003

Card 2/2

116

Ca

PROCESSES AND PROPERTIES INDEX

The question of the water-mineral economy in acute articular rheumatism. E. V. Kavatkin and I. D. Vdovenko. *Terap. Arkh.* 16, 521-32(1938); *Chem. Zentr.* 1939, II, 1102. — In tests on patients suffering from rheumatism in which 1 l. of water was administered there was a reduction of the renal and extrarenal excretion of water in the acute stages which was accompanied by a lower chloride content in the urine. As the acute symptoms disappeared the renal excretion increased at the expense of the extrarenal excretion, the chloride content increasing at the same time. M. G. Moore

ASA-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

COMMON VARIABLES INDEX

OPEN

MATERIALS INDEX

1ST AND 7TH GROUPS

1ST AND 6TH GROUPS

1ST AND 5TH GROUPS

1ST AND 4TH GROUPS

1ST AND 3TH GROUPS

1ST AND 2TH GROUPS

1ST AND 1TH GROUPS

1ST AND 0TH GROUPS

1ST AND -1TH GROUPS

1ST AND -2TH GROUPS

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1ST AND -96TH GROUPS

1ST AND -97TH GROUPS

1ST AND -98TH GROUPS

1ST AND -99TH GROUPS

1ST AND -100TH GROUPS

5(4)

SOV/i53-2-3-7/29

AUTHORS: Vdovenko, I. D.; Kudra, O. K.

TITLE: On a New Method of Investigating Diffusion Processes

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 3, pp 345-351 (USSR)

ABSTRACT: The determination of diffusion coefficients according to the hitherto used methods, some of which are mentioned, still leads to considerable errors because the temperature can be kept sufficiently constant only with difficulties. For this reason the authors used for the determination according to Skobets and Kavetskiy (Ref 11) the current impulse which occurs in switching on the electrolysis. The electrolytes were solutions of CuSO_4 , ZrSO_4 , CeSO_4 and AgNO_3 of different concentration (Table). The current density and the period until the occurrence of the first cathode precipitation were measured. A measuring device was developed which is shown by a scheme (Fig 1). Formulas for the computation are deduced. Moreover, test series are carried out in which spherical instead of cylindrical cathodes are used. It could be proved that during

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On a New Method of Investigating Diffusion Processes SOV/153-2-3-7/29

the first seconds of electrolysis the rule of the linear diffusion holds irrespective of the shape of the electrode. There are 2 figures, 1 table, and 16 references, 8 of which are Soviet.

ASSOCIATION: Kiyevskiy politekhnicheskiy institut - Kafedra fizicheskoy i kolloidnoy khimii (Kiyev Polytechnic Institute - Chair of Physical and Colloid Chemistry) .

SUBMITTED: March 19, 1958

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VDOVENKO, I. D.; KUDRA, O. K.

Effect of the nature of the solvent on the diffusion of
electrolytes. Ukr. khim. zhur. 28 no.3:323-326 '62.
(MIRA 15:10)

1. Kiyevskiy politekhnicheskyy institut.

(Solvents) (Electrolyte solutions)

VDOVENKO, I.D.; BOGACHEVA, N.A.

Investigating corrosion resistance of indium-tin-thallium alloy.
Mashinostroenie no.4:70-72 J1-Ag '62. (MIRA 15:9)

1. Akademiya nauk UkrSSR. (Tin alloys--Corrosion)

VDOVENKO, I.D.; KUDRA, O.K.

Method of studying diffusion in electrode layers in the absence
of a current. Ukr.khim.zhur. 26 no.1:36-40 '60. (MIRA 13:5)

1. Kiyevskiy ordena Lenina politekhnicheskoy institut.
(Diffusion) (Electrodes)

VDOVENKO, I. D.

VDOVENKO, I. D. -- "A New Electrochemical Method of Investigating Solutions." Min Higher Education USSR. Kiev Order of Lenin Polytechnic Inst. Chair of Physical and Colloid Chemistry. Kiev, 1955. (Dissertation for the Degree of Candidate in Chemical Sciences)

SOURCE Knizhnaya Letopis', No 6 1956

VDOVENKO, I.D.; GRATSIANSKIY, N.N.

Effect of organic additions on the corrosion of binary alloys of
nonferrous and rare metals in aggressive media. Ukr. khim.zhur.
29 no.9:983-987 '63. (MIRA 17:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

VDOVENKO, N.V., kand.tekhn.nauk; VDOVENKO, I.D., kand.tekhn.nauk

New method of chemical degreasing. Mashinostroenie no. 2:
66 Mr-Ap '64. (MIRA 17:5)

VDOVENKO, I.D.; KUDRA, O.K.

New methods of investigating diffusion processes. *Izv. vys. ucheb. zav.; khim. i khim. tekhn.* 2 no. 3:345-351 '59. (MIRA 13:8)

1. Kiyevskiy politekhnicheskoy institut, kafedra fizicheskoy i kolloidnoy khimii. (Diffusion)

GRATSIANSKIY, N.N.; VDOVENKO, I.D.

Formation of a lead sulfate film on an In-Pb alloy during corrosion
in sulfuric acid solution. Zhur.fiz.khim. 35 no.6:1208-1211 Je '61.
(MIRA 14:7)

1. Akademiya nauk USSR, Institut obshchey i neorganicheskoy khimii.
(Indium-lead alloys--Corrosion) (Lead sulfate)

S/185/62/007/010/011/020
D234/D308

AUTHORS: Hratsians'ky, M. M., Vdovenko, I. D. and Baturyns'ka,
N. L.

TITLE: Formation and structure of corrosion surface layers
in In-Pb and Fe-Ni alloys

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 10, 1962,
1118-1123

TEXT: The layers were studied by the x ray method, using charac-
teristic Fe wavelengths 1.9321 Kx and 1.7514 Kx, on both rotating
and fixed samples. Corrosion unstable in In-Pb has a layer of
PbSO₄ on the surface, a thin layer of nearly pure Pb below it, and
finally a solid, Pb-enriched In-Pb solution. Up to the depth of 2
microns two cubic lattices are observed. Corrosion-stable In-Pb
possesses similar surface layers. In Fe-Ni alloys lattice parame-
ters do not change and new lines do not appear. Stable alloys ex-
hibit the Ni lattice and unstable alloys the Fe lattice. Thickness
and composition of the layers were studied in previous papers by

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Formation and structure ...

S/185/62/007/010/011/020
D234/D308

the first of the authors et al. There are 2 figures and 2 tables.

ASSOCIATION: Instytut zahalnoyi ta neorhanichnoyi khimiyi AN URSR,
Kyyiv (Institute of General and Inorganic Chemistry
AS UkrSSR, Kiev) ✓

SUBMITTED: March 31, 1962

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18-8300 4016 2808 1413

27679
S/073/61/027/005/003/004
B103/B101

AUTHOR: Vdovenko, I. D.

TITLE: Investigation of the resistance to corrosion of indium - tin alloys

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 27, no. 5, 1961, 629-633

TEXT: The resistance to corrosion of the indium - tin system in different media was studied, since data available on this subject are insufficient. The alloys nos. 1 - 10 were used, which were produced from pure metals and contained: 1.0; 3.0; 12.5; 25.0; 37.5; 50.0; 62.5; 80.0; 97.0, and 99.0 atom% of tin. They were molten under a layer of anhydrous glycerol. The samples were pressed to disks (diameter 16 mm, thickness 80 - 100 μ), and then annealed. The purified samples were immersed in 500 ml of the corroding solution. The corrosion tests took 14 days at room temperature and with air supply without stirring. The following corroding solutions were used: chemically pure 1, 20, and 60% H₂SO₄ solutions, 5% HCl, or 3% NaCl. The resistance to corrosion was estimated from the loss in weight of the samples in g/cm²·hr and from the change in appearance. At the same
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S/073/61/027/005/003/004
B103/B101

Investigation of the...

time, the potentials of the alloys were measured by the compensation method with a ППТБ-1 (PPTV-1) potentiometer. The potentials of the alloys nos. 1 - 7 and the potential of pure indium in 1 and 20% H_2SO_4 were found to be more negative than those of pure tin and of alloys rich in tin. The potential is shifted toward negative values with increasing acid concentration. In the afore-mentioned concentrations the potential drops at the beginning of corrosion (within 3 - 4 hr) in all alloys, and then remains nearly constant during the whole corrosion time. This is explained by the formation of an insoluble film of corrosion products. The higher weight losses in 1% H_2SO_4 solution as compared with 20% solution may be due to the formation of a permeable film in the former case. In 60% solution, the alloys are dissolved without any film formation. The course of the curves potential versus time of corrosion in the two other corroding media is analogous to that in H_2SO_4 solutions. In HCl, the potential approaches that of a nobler metal owing to dissolution of the less resistant, and increased concentration of the more resistant component on the surface. In NaCl, the change of the potential in direction of that of a nobler metal is due to film formation. Corrosion losses largely depend on the physicochemical

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B103/B101

Investigation of the...

conditions of corrosion. In dilute H_2SO_4 solutions, the corrosion losses of the alloys depend only slightly on the composition. On the other hand, the curve of weight losses in 60% H_2SO_4 solution shows three abrupt breaks. They correspond (1) to the alloy with ≈ 3 atom% of tin (due to increased corrosion), (2) to the alloy with ≈ 20 atom% (decrease in corrosion), (3) to the alloy with 65 atom% (higher decrease in corrosion). (1) corresponds to alloys with α -phase, (2) to alloys with β -phase, (3) to the range of existence of the $\beta + \gamma$ phase. Consequently, the limits of corrosion resistance correspond to the phase transformations in the alloys. Such a difference of the corrosion resistance depending on the composition of alloys is explained by their structural characteristics. The existence of different phases promotes the formation of sections of different electrochemical properties. The dissolution of In-Sn alloys, which is comparatively moderate in H_2SO_4 solutions of medium concentration, markedly increases in HCl solutions, owing to the high corrosion activity of the chloride ion. In analogy with the corrosion in 60% H_2SO_4 , a sharp limit of corrosion resistance is found in 5% HCl. It corresponds to the

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B103/B101

Investigation of the...

alloy with ~70 atom% Sn. The weight losses in alloys with 0 - 70 atom% Sn are located on a straight line parallel to the abscissa. The absolute values of these losses are equal to those of pure indium. Hence, the alloying of tin with 30% of indium highly increases the corrosion resistance of the former. The corrosion losses of the alloy in 3% NaCl solution are only fractions of those in HCl and H₂SO₄. Accordingly, corrosion

processes largely depend on the nature of anions and cations. There are 8 figures, 1 table, and 5 non-Soviet references. The three most recent references to English-language publications read as follows: G. Colin, C. G. Fink et al., Trans. of Electrochem. Soc., 75, 463 (1939); C. G. Fink, E. R. Jette et al. *ibid.* 88, 229 (1945); F. Rhines, W. M. Urquhart and H. P. Home, Trans. Am. Soc. of Metals, 39 (1947). X

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

SUBMITTED: September 28, 1960

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8/073/62/028/008/002/002
A057/A126

AUTHORS: Vdovenko, I. D., Gratsianskiy, N. N.

TITLE: The effect of surface-active substances upon the corrosion of indium, tin, and indium-tin alloys

PERIODICAL: Ukrainskiy khimicheskij zhurnal, v. 28, no. 8, 1962, 991 - 995

TEXT: The effect of adding small quantities (0.094 resp. 0.265 g/l) of mixtures of heptyl and octyl amine, of decyl and dodecyl amine, and of octyl amine on the corrosion of indium, tin, and their alloys (50% In, or 20% In) was investigated in 60% sulfuric acid solutions by the method of cathodic and anodic polarization curves. These admixtures caused a shift of the cathodic polarization curves towards negative potentials. The shift of potentials is explained by a decrease in the rate of the cathodic reaction, i.e. an increase of the over-voltage of the hydrogen ion discharge. This is due to the formation of dense adsorbed layers of the surface-active organic compounds on the surface of the electrode. Corrosion inhibitors with a specific adsorption on the metal surface show the greatest effect when the potential of the electrochemical reaction is

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The effect of surface-active substances upon...

S/073/62/028/008/002/002
A057/A126

similar to the potential of the neutral point of the electrode metal. In the presence of amine decreases also the diffusion and self-dissolving current. This is apparently due to a barrier effect of the surface film formed. No effect of the investigated admixtures was observed on the anodic process. Thus the examined corrosion process is generally controlled by cathodic reactions. There are 9 figures. ✓

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

SUBMITTED: July 19, 1961

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8/073/62/028/009/005/011
A057/A126

AUTHORS: Vdovenko, I. D., Gratsianskiy, I. N.

TITLE: Corrosion resistance of indium, tin, and indium-tin alloys in the presence of surface-active substances

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 28, no. 9, 1962, 1069. - 1072

TEXT: At the Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry AS UkrSSR) corrosion properties of indium, tin, and their alloys were studied at room temperature in 60% H₂SO₄ in the presence of the surface-active substances heptyl-octylamine, decyl-dodecylamine mixtures, or octadecylamine at various concentrations (0.094 and 0.265 g/l). Alloys of the following composition were studied (in at%): 99.0, 97.0, 87.5, 75.0, 62.5, 50.0, 37.5, 20.0, 3.0, 1.0. The tests were carried out with disc shaped samples 80 - 100 μ thick, measuring during 12 days the stationary potential, and the corrosion rate was determined gravimetrically. The electrode potentials shifted towards negative values after the addition of the amines, apparently due to the formation of an inhibiting film which affects the cathodic processes. The

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Corrosion resistance of indium,...

S/073/62/028/009/005/011
A057/A126

gravimetric measurements showed a considerable inhibition of the corrosion by the investigated amines. This effect increases with the concentration of the amines. The change of the corrosion rate of the alloys occurs with alternations of their structural state i.e. phase transitions. Minimal corrosion was observed in the region of γ - and ϵ -phases. The formation and structure of surface layers, formed during the corrosion process, depend on the concentration of the added inhibitors. An increase of the latter effects a drop of the relative content of tin or a rise of the indium content. Hence, surface active substances may influence the formation of corrosion surface layers in dependence of the concentration and nature of these substances. There are 4 figures. ↓

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

SUBMITTED: September 16, 1961

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18 8300

24651

S/076/61/035/006/001/013
B127/B203

AUTHORS: Gratsianskiy, N. N. and Vdovenko, I. D.

TITLE: Formation of lead sulfate films on an In-Pb alloy during corrosion in sulfuric acid solution

PERIODICAL: Zhurnal fizicheskoy khimii, v. 35, no. 6, 1961, 1208 - 1211

TEXT: The authors describe the treatment of an In-Pb alloy with 1% sulfuric acid. The alloy was obtained from chemically pure lead and indium fused together in vacuum, the mixing ratio was 55 atom% lead ; 45 atom% indium. A resistant layer was found to form on the alloy surface due to the deposition of poorly soluble corrosion products in the form of lead sulfate. The object of the present paper was a study of the formation process of this layer. The formation of the film was observed with the aid of S^{35} in sulfuric acid ($H_2S^{35}O_4$). The activity of the film was measured with an MCT-17(MST-17) Geiger counter. It was observed that the layer grew rapidly at the beginning, but the rate of growth decreased more and more until it

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Formation of lead sulfate...

71651
S/076/61/035/006/001/013
B127/B203

came to a standstill. The layer thickness was empirically found by the equation: $x^n = kt$; x denotes the layer thickness, t is the time of corrosion, and k and n are constants equal to 0.018 and 1.5 so that the equation now reads: $x^{1.5} = 0.018t$. The layer thickness was equal to 0.5μ . The authors conclude that the stability of the In-Pb alloy is conditioned by the formation of a corrosion-resistant layer of poorly soluble corrosion products on the surface of noncorrodible layer consisting of lead atoms and the solid Pb-In solution concentrated with lead. There are 3 figures, 1 table, and 4 Soviet-bloc references.

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

SUBMITTED: August 3, 1959

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VDOVENKO, I.D.; BUSHIN, V.V.

Corrosion resistance of indium-tin alloys in sulfuric acid.
Ukr. khim. zhur. 29 no.11:1222-1223 '63. (MIRA 16:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

(BR)

ACCESSION NR. AP4022108

B/0073/64/030/003/0247/0252

AUTHOR: Vdovenko, I. D.; Kovalevskiy, V. I.

TITLE: Investigation of the corrosion of indium-antimony alloys

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 3, 1964, 247-252

TOPIC TAGS : indium antimony alloy, corrosion, corrosion activation, InSb, electric potential, rate of solution, stable passive film, homogeneous alloy, electrochemical property.

ABSTRACT: This study was conducted to accumulate experimental data regarding the behavior of In-Sb alloys in aggressive media and to correlate this behavior to the chemical composition, structure and nature of the reagents. The corrosive behavior of In-Sb alloys was studied in acid (HCl and H₂SO₄) and in alkaline (NaOH) media of different concentrations. The corrosion rate of In-rich alloys is greatest in HCl, the chloride ions apparently activating the corrosion. The rate of solution of In-Sb alloys is in accord with the phase diagram, the most stable being the homogeneous alloys containing the chemical compound InSb. The minimum corrosion rate is shown by Sb-rich alloys. The potentials of several alloys were also measured.

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ACCESSION NR: AP4022108

As a rule good correlation is noted in acid media between the corrosive and the electrochemical properties. Improvement in the potential is accompanied by a decrease in the rate of solution of the alloys. In In-rich alloys the potential assumes a negative value and with increasing Sb content the potential becomes positive. The rate of solution in alkaline solutions is minimal, possibly due to the formation of stable passive films under the influence of atmospheric oxygen. Orig. art. has: 7 figures and 1 table.

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

SUBMITTED: 16May63

DATE ACQ: 09Apr64

ENCL: 00

SUB CODE: ML

NO. REF. SOV: 005

OTHER: 002

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VDOVENKO, I.D.

Automation of time determination in the electrochemical
measurement of the thickness of films on metals. Ukr.
khim. zhur. 30 no.4:418-419 '64. (MIRA 17:6)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

VDOVENKO, L.I.; ROYEV, L.M.

Effect of surface-active agents on the evaporation velocity of drops
of a solution and the condensation of water vapor on them. Trudy UkrNIGMI
no.47:17-21 '65. (MIRA 18:7)

1. KNIGINA, G.I.: ANTSELEVICH, V.I.: VDOVENKO, I.S.
2. USSR (600)
4. Kuznetsk Basin - Building Materials
7. Building materials from burn ores of the Kuznetsk Basin.
Ugol' 27 No. 10, 1952.

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

KUDRA, O.K.; VDOVENKO, I.D.

Electric timer method for the analysis of solutions. Ukr.khim.
zhur. 25 no.1:25-31 '59 (MIRA 12:4)

1. Kiyevskiy ordena Lenina politekhnicheskii institut.
(Electrochemical analysis)

SHERSHACHOVA, L.I.; VDOVENKO, K.G.; MUZYUKINA, T.M.

Comparative evaluation of various methods for taking material to be tested for dysentery. Lab.delo 2 no.2:25-26 Mr-Apr '56. (MLBA 9:10)

1. Iz bakteriologicheskogo otdela Kuybyshevskoy gorodskoy sanitarno-epidemiologicheskoy stantsii.
(DYSENTERY)

PROCESSES AND PROPERTIES INDEX

Blowing-Out of the No. 3 Blast-Furnace at the Magnitogorsk Stalin Metallurgical Works. (I. Pitrovskiy, M. Vdvyenkoy and A. Dryupin. (Stal, 1940, No. 10, pp. 13-15). (In Russian). A time-table is given of the blowing-out process which was carried out without the addition of any material to fill the empty space in the furnace as the burden was consumed. For blowing out, the furnace was disconnected from the gas main, the furnace gas being allowed to escape to atmosphere. Water was supplied through water-pipes welded into the gas outlet pipes to cool the throat. Additional steam was supplied to the dust-catchers. The essential feature of the blowing-out operation by this method is the control of the throat temperature, which should not exceed about 550° C., for fear of gas explosions. Throat temperature is controlled by controlling the rate of supply of the cooling water and the blast. The latter should be reduced to one half of the original supply towards the end of the operation. The stock level should fall to 1.5-2 m. above tuyere level. The blowing-out operation described took 14 hr. 5 min.

A 58.35A METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

AUTHOR INDEX

1ST AND 2ND ORDERS

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

VDOVENKO, M. B.

Dissertation: "Foraminiferal Fauna of the Vizey Stage of the Donets Basin and Its Stratigraphic Significance." Cand Geol-Min Sci, Kiev State U, Kiev, 1953. Referativnyy Zhurnal--Geologiya, Geografiya, Moscow, Jul 54.

SO: SUM No 356, 25 Jan 1955

VDOVENKO, M.F.

BASINA, I.P.; BUDON, V.D.; VDOVENKO, M.I.; ONAYEV, I.A.; TONKONOGIY, A.V.;
SERGIYENKO, V.Ya.

Cyclone smelting of polymetallic concentrates. Vest. AN Kazakh.
SSR 13 no.8:76-82 Ag '57. (MLRA 10:9)

1. Akademiya nauk Kazakhskoy SSR (for Basina, Budon, Vdovenko,
Onayev, Tonkonogiy). 2. Chimkentskiy svintsovyy zavod (for
Sergiyenko).

(Smelting)

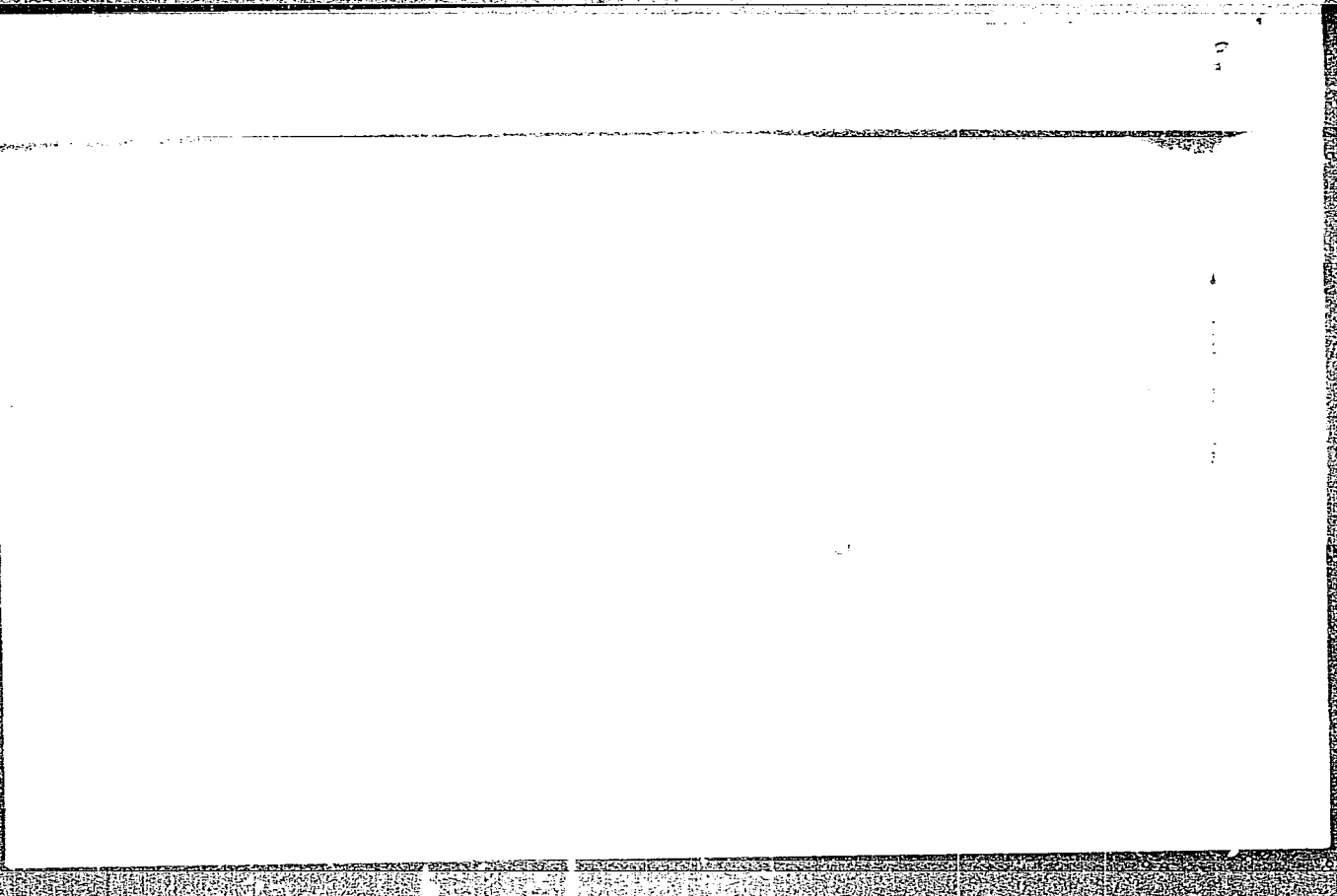
VDOVENKO, M. I.

Dissertation: "Investigation of the Temperature Characteristics of Ashes From Kazakhstan Coal Used in Power Plants." Cand Tech Sci, Inst of Power Engineering, Alma-Ata, 1953.
Referativnyy Zhurnal--Khimiya, Moscow, No 13 Jul 54.

SO: SUM No. 356, 25 Jan 1955

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859210013-1



APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001859210013-1"

V.D. OVENKO, M.I.

Klovenko, M. J.

VDOVENKO, M.I.
TONKONOGIY, A.V., kandidat tekhnicheskikh nauk; BASINA, I.P.; VDOVENKO, M.I.

The cyclone process used in pyrometallurgy. TSvet.met. 30 no.1:30-
42 Ja '57. (MLRA 10:3)

1. Akademiya nauk Kazakhskey SSR.
(Smelting) (Turboblonders)
(Nonferrous metals--Metallurgy)

BAYAKHUNOV, A. Ya.; VDOVENKO, M. I.; YERSHINA, L. M.

Oxidation rate of copper sulfides. Izv. AN Kazakh. SSR. Ser.
energ. no.2:63-70 '62. (MIRA 16:1)

(Copper sulfide)

VDOVENKO, M.I.; KORDIN, V.F.

Oxidation rate of iron sulfide. Izv. AN Kazakh.SSR. Ser.energ.
no.1:51-58 '60. (MIRA 15:5)

(Iron sulfides)

S/031/61/000/002/002/003
A161/A133

AUTHORS: Vdovenko, M. I., Bayakhunov, A. Ya., Kondin, V. F.

TITLE: Investigation of iron sulfide oxidation in suspension

PERIODICAL: Vestnik. Akademii nauk Kazakhskoy SSR, no. 2, 1961, 52 - 61

TEXT: The existing data on the mechanism and rate of iron sulfide oxidation were obtained in experiments where only the factors affecting the process rate were determined, but the present state of the theory and practice of roasting (in the "boiling layer") and melting (in suspension and in the cyclone) require studies in conditions close to the real process. The described investigation was conducted in four stages: 1) determination of the reaction surface area; 2) of the traveling speed of the sulfide particles in the furnace; 3) of the reaction surface temperature; 4) of roasting degree of sulfide. The iron sulfide powder was screened through a 200-micron meshscreen and introduced into the furnace in single particles. The reaction surface was calculated assuming globular shape. Under the microscope the particles were polygonal. They turned into globules in the heat. The temperature of the moving burning particles was determined by a photo-pyrometric method based on comparison of the shadow densities on images with a

✓

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Investigation of...

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reference picture with known temperatures. The particles were photographed by a high-speed camera using a color film, and the shadow density was measured with two filters - a red and a blue one. The reference image was of the filament of an optic pyrometer. The temperature and exposition time were determined graphically and the degree of roasting by gas analysis as well as by chemical and X-ray analysis of the roasted particles. The test assembly is illustrated (Fig. 1). Sulfide was fed by an electromagnetic feeder (1) and a water-cooled mobile pipe (2) into vertical furnace (3). The roasted particles were collected in cooled receiver (4). Gas from the receiver was extracted through absorber bulbs (5) absorbing SO₂ and SO₃, and the quantity of burned sulfur was determined by titration with iodine or alkaly. Air was fed by pipe (2) after purifying and drying in vessels (6). The air flow was kept constant and measured with flow meter (7). The system resistance was measured with pressure gage (8), and the quantity of roasted sulfide by weight prior to and after roasting. The temperature of the particles was measured from photographs taken through the bottom furnace window (11) with a "Zenit" camera of single particles on the dark background. The speed of particles was determined by the number of frames taken through both windows (11), top and bottom, with a "Kiyev" camera (9) through a mirror system in a tube (10). The test results are discussed and illustrated in graphs and a table (Table 1). The table shows three temperature

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ranges with a characteristic prevalence of certain reactions. It was not possible to separate each reaction in pure form. Reactions dominating in high temperature apparently will be present in lower ranges, and vice versa. No SO determinations were made, but it had been found in the iron sulfide oxidation process in a work carried out previously at the Ural'skiy filial Akademii nauk SSSR (The Ural Branch of the Academy of Sciences USSR). In a comparison the determined temperature of particles agreed with the theoretical one up to 800°C in the medium (or 1,050° on the particle surface), but from 800°C up the difference was considerable (the theoretical was higher). This may indicate that the intermediate CO compound is forming with much lower heat liberation than in oxidation to CO₂ and SO₃, and that further oxidation of SO goes on in a gaseous state and the liberating heat has no heating effect on the particles. Conclusions: 1) The new method made it possible to determine the sulfide particle, temperature and the reaction surface area. 2) The obtained data indicate three different stages in the process at different temperatures - formation of higher sulfur oxides at low temperature, and low oxides at high temperature, up to 80, with a faster process rate in the third stage. 3) The kinetic constants were determined for the summary process in separate temperature ranges. There are 5 figures, 2 tables and 5 Soviet-bloc references. ✓

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Table 1

Temp. °C	oxidation reactions	Formation reactions of oxides	
		SO ₃	SO ₂
300 - 600° 100 - 1050° 1050 - 1300°	$\text{FeS} + 2\text{O}_2 \rightarrow \text{FeSO}_4$ $2\text{FeS} + 3,5\text{O}_2 \rightarrow \text{Fe}_2\text{O}_3 + 2\text{SO}_2$ $2\text{FeS} + 2,5\text{O}_2 \rightarrow \text{Fe}_2\text{O}_3 + 2\text{SO}$	$\text{FeSO}_4 \rightarrow \text{FeO} + \text{SO}_2$ $2\text{SO}_2 + \text{O}_2 = 2\text{SO}_3$	$2\text{FeS} + 3,5\text{O}_2 = \text{Fe}_2\text{O}_3 + 2\text{SO}_2$ $2\text{SO} + \text{O}_2 = 2\text{SO}_2$



Kinetic constants of summary process	
E, cal/mol	K ₀ , 1/sec
4270	0,25
11750	18
45700	5,57 · 10 ⁴

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Figure 1

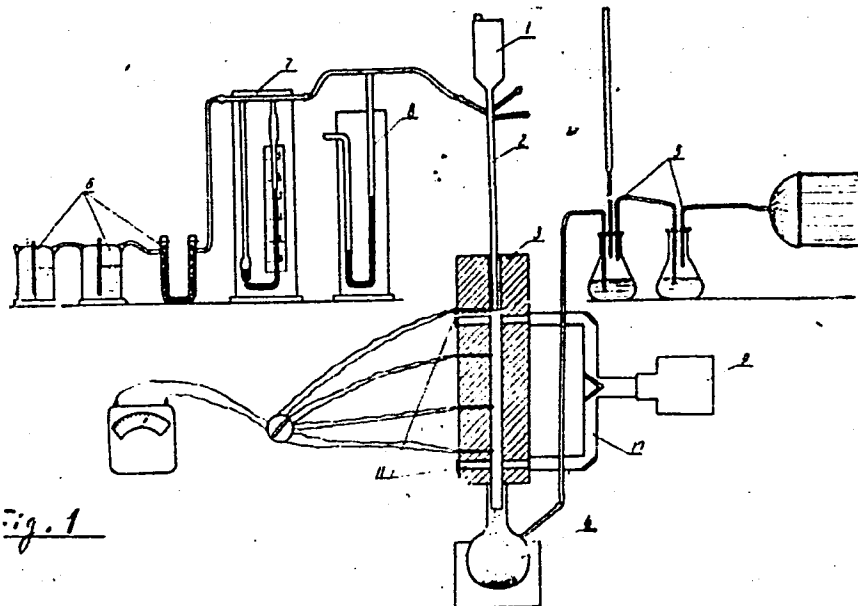


Fig. 1

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A161/A133

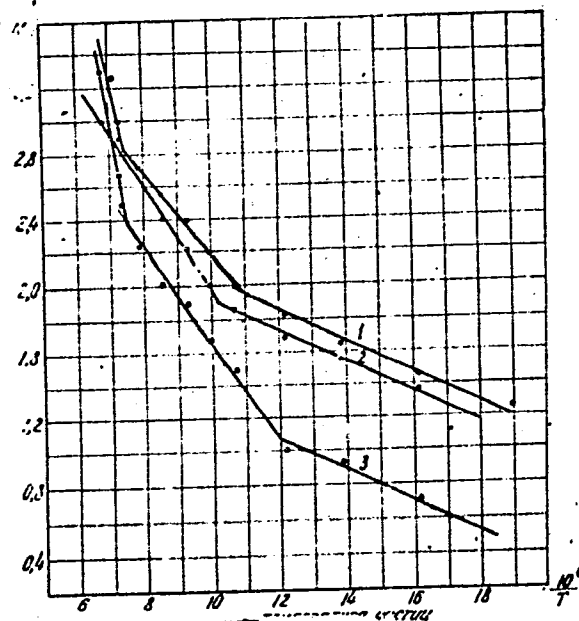
Figure 4: Dependence of the logarithm of the reaction rate constant on the inverse value of absolute temperature
1-summary process of sulfide oxidation, 2-oxidation of sulfide to sulphate,
3-oxidation of sulfide with formation of SO_2

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Investigation of...

Figure 4 continued

S/031/61/000/002/002/003
A161/A133



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TONKONOGIY, A.V.; BASINA, I.P.; VDOVENKO, M.I.; KURMANGALIYEV, M.R.

New method of metal extraction from sublimates. Izv. AN Kazakh. SSR.
Ser.energ. no.1:110-114 '59. (MIRA 12:11)
(Nonferrous metals--Metallurgy)

BASINA, I.P.; VODYENKO, M.I.; KURMANALIYEV, M.R.; REZNYAEV, A.B.;
TONKONOGIY, A.V.

Iron ore treatment flow sheet with the use of the cyclone method.
Izv. AN Kazakh. SSR. Ser.energ. no.2:97-101 '59.

(MIRA 12:7)

(Iron ores)

(Separators (Machines))

8(6)

SOV/112-59-4-6537

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 4, p 19 (USSR)

AUTHOR: Vdovenko, M. I., and Favorskiy, V. V.

TITLE: Temperature Characteristics of the Ashes of Some Kazakhstan Coals

PERIODICAL: V sb.: Issled. fiz. osnov. rabocheho protsesssa topok i pechey.
Alma-Ata, AS Kazakhskaya SSR, 1957, pp 279-284

ABSTRACT: The Power-Engineering Institute, AS Kazakhskaya SSR, has studied the viscosity of slags of typical Kazakhstan coals within $t_1 - t_3$ temperature range with the purpose of finding the connection between the viscosity and temperature characteristics. A number of heterogeneous compositions with a solid-phase content of 30-50% have been studied. The solid phase has been represented by quartz sand, barite ore, or galenite with the specific weights 2.6, 4.3, and 6.6, respectively. The liquid phase has been represented by solutions of sugar in glycerine, colophony, transformer oil, and coal tar. The following empirical relation between the temperature and viscosity has been obtained: $\mu = at^{-n}$. The slags from Lenger, Yaysan, Kel'temashat, and

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SOY/112-59-4-6537

Temperature Characteristics of the Ashes of Some Kazakhstan Coals

Karaganda brown coals have been studied; these slags have a relatively low fusion point. The empirical relation between the temperature characteristic and viscosity for these slags in dimensionless quantities is $\bar{\eta} = \Theta^{-n}$, where $\bar{\eta}$ is the ratio of viscosity at any temperature to the viscosity at the point t_2 , Θ is the ratio of the temperature at which the viscosity is sought to the temperature at the point t_2 , n is a constant (70 for the above experiments). The following conclusions are drawn:

In studying viscosity characteristics of high-temperature complex systems, a similarity between them and the low-temperature heterogeneous systems can be used. Slags of some Kazakhstan power-producing coals at the temperature t_2 have the same viscosity, about 100,000 poise, and at the point t_3 , about 33,000 poise. The viscosity-temperature relation of the above slags and that of coal systems can be expressed, in dimensionless coordinates, by the same curve; this fact points out that there is an approximate similarity in the effect of temperature on viscosity.

S. M. Sh.

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VDOVENKO, M. I.

5(1) PHASE I BOOK EXPLOITATION 807/2659

Stademiya nauk Kazakhstoy KSNR, Alma-Ata.

Isledovaniya fizicheskikh osnov yubochego protsessa topok i pechey (Nauka) State of the Physical Basis of Operational Processes of Combustion (Burners and Furnaces) Alma-Ata, Izdat AN Kazakhstoy SSR, 1957. 369 p. 600 copies printed.

Additional Sponsoring Agency: Alma-Ata. Kazakhskiy gosudarstvennyy universitet im. S.M. Kirova.

Ed. (title page): L.A. Valls, Doctor of Technical Sciences, Professor; Ed. (inside book): D.M. Glazyrina; Tech. Ed.: I.P. Morokina.

FOREWORD: This book is intended for a wide circle of scientists and industrial engineers.

CONTENTS: The twenty-nine articles of this collection report on experimental and theoretical investigations of different physical phenomena which constitute an integral part of the complex operational processes of modern combustion engineering equipment, and also, the entire process applicable to different types of burners and furnaces (cyclone combustion chambers, swirl burners, burners with automatic stokers, etc.). Articles in Part I treat liquid and turbulent jets of liquids and compressible gas. Part II treats methods of modeling combustion processes (light, pyrolysis and electrical), enthalpy, temperature measurement, calorimetry, etc. Part III relates to different problems and theories of fuel combustion and to different operational features of combustion and furnace equipment. No particularities are mentioned.

Valls, L.A., M.D. Kosov, and V.A. Potekhin. Determining the Heat Constants of Poor Heat Conductors 292

Yakovlev, M.I., and V.Y. Pavlovskiy. The Temperature Characteristics of Some Kazakhstan Coal Ashes 279

Kosov, M.D. Some Methods of Determining the Diffusion Coefficient of Gases 285

Kosov, M.D. The Temperature Dependence of the Diffusion Coefficient of Gases 291

Basina, I.P. Methods of Measuring Flame Temperatures in Melting Furnaces 297

Valls, L.A., and M.D. Kosov. A New Method of Calorimetric Measurement 311

Card 5/7

BASINA, I.P.; VDOVENKO, M.I.; KURMANGALIYEV, M.R.

Principal results of the studies of cyclone processes of smelting and
sublimation. Trudy Inst. energ. AN Kazakh. SSR 2:261-273 '60.
(MIRA 15:1)

(Smelting) (Furnaces) (Copper)

KOLOSOV, I.S.; VDOVCHENKO, M.S.

Certain problems of long term planning of emergency reserve
requirements of electric power systems. Obshch. energ. no.1:
43-51 '59. (MIRA 13:2)
(Electric power production)

VDOVENKO, M.V.

Lower Vise Foraminifera in the Donets Basin. Nauk.zap.Kyiv.un.
16 no.14:115-123 '57. (MIRA 13:4)
(Donets Basin--Foraminifera, Fossil)

VDOVENKO, M.V.

Comparison between the Foraminifera found in lower Visé sediments
of the Donets Basin and the Foraminifera in the Bashkirian Mountains.
Nauk zap. Kyiv. un. 15 no.2:53-57 '56. (MIRA 11:7)
(Donets Basin--Foraminifera, Fossil) (Bashkiria--Foraminifera, Fossil)

VDOVENKO, M. I.

VDOVENKO, M. I.; FATEYEVA, Ye. T.

Characteristics of some Kazakh coals for power. Izv. AN Kazakh. SSR
Ser. energ. no. 7:92-108 '54. (MLRA 8:12)

(Coal)

VDOVENKO, M.I.; FAVORSKIY, V.V.

Study of temperature characteristics of ashes from Kazakh industrial coals. Izv. AN Kazakh SSR. Ser. energ. no. 8:95-108 '55.
(Ash (Technology)) (MIRA 8:12)

Disturbance of the water balance and disorder of the liver in acute articular rheumatism. I. I. Speranskii and M. S. Vdovenko. *Klin. Med.* (U. S. S. R.) 16, 1051-6 (1938); *Chem. Zentr.* 1939, I, 4041.—In all cases of acute articular rheumatism disturbance of the water balance was observed both in the febrile stage of the disease and for a long time after the temp. had gone down. This disturbance consisted of 2 phases: In the first the excretion of water was insufficient; in the following 2nd phase it was excessive. The cause is regarded as derangement of the liver. M. G. Moore

ASB 11A METALLURGICAL LITERATURE CLASSIFICATION

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,
p 17 (USSR) 15-57-5-5835

AUTHOR: Vdovenko, M. V.

TITLE: A Comparison of the Lower Visean Foraminiferal Fauna of the Donets Basin and the Mountainous Part of Bashkiria (Porivnyannya fauny foraminifer nyzhn'ovizeys'kykh vidkladiv Donets'koho baseynu ta girs'kof' Bashkiri --- in Ukrainian)

PERIODICAL: Nauk. zap. Kiyivs'k. un-t, 1956, Vol 15, Nr 2, pp 53-57

ABSTRACT: The author notes the similarity in the foraminiferal and fusulinid groups from lower Visean deposits in the Kur-Krauk River section of the Southern Urals and in rocks of the same age in the Donbass. Archaediscus, endothyrids of the group Endothyra uradyi, and, very rarely, quasiendothyrids appear for the first time in this group. Primitive forms of Eostafella and Parastafella (Eostafella mediocris, E. prisca, and the subgenus Eoparastafella) are also present. A group of

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15-57-5-5835

A Comparison of the Lower Visean Foraminiferal Fauna (Cont.)

foraminifers similar to those in the Kur-Krauk section is found in the lower Visean rocks along the Sikaza River (Southern Urals). Brunsia and Lituotubella occur in the Donets group but are almost absent at Kur-Krauk. Tetrataxis does not occur and Archaediscus is but poorly represented in the Donets assemblage. Thus, the Kur-Krauk rocks contain foraminifers only of upper lower-Visean age. The author suggests that a hidden unconformity occurs between the Tournaisian and the Visean rocks at Kur-Krauk and at other places in the Southern Urals (Sikaza River and elsewhere).

Card 2/2

R. A. V.

VDOVENKO, M.V.

Some new Upper Visean and Lower Namurian species of Foraminifera
in southwestern and central Kazakhstan. Paleont.zhur. no.1:41-46
'62. (MIRA 15:3)

1. Kiyevskiy gosudarstvennyy universitet imeni Shevchenko.
(Kazakhstan--Foraminifera, Fossil)

VDOVENKO, M.V.

Evolution of the series Eoparastaffella-Pseudoendothyra. Trudy
Inst. geol. nauk AN URSR Ser. strat. i paleont. no. 48:16-30 1964
(MIRA 18:3)

KYHOR, O.L.; VDOVENKO, H.V.

Stratigraphy of the Lower Carboniferous of the Belsuty
basin in central Kazakhstan. Sbor.nauch.rab.Kiev.un.

no.1:35-46 '63.

(MIRA 18:11)

VDOVENKO, M.V.

Stratigraphic distribution of Lower Carboniferous Foraminifera
in central Kazakhstan. Sbor.nauch.rab.Kiev.un. no.1:59-66 '63.
(MIRA 18:11)

BABKO, A.K.; VDOVENKO, M.Ye.

Effect of a solvent mixture composition on the separation of some rare earths by paper chromatography. Zhur.amal.khim. 17 no.7: 820-824 0 '62. (MIRA 15:12)

1. Institute of General and Inorganic Chemistry, Academy of Sciences, Ukrainian S.S.R., Kiev.

(Rare earths—Analysis)
(Paper chromatography)

VDOVENKO, M.Ye.

Effect of the composition of a mixture of esters with ketones
and alcohols on the separation of certain rare-earth elements
by paper chromatography. Zhur. anal. khim. 18 no.9:1063-1070
S '63. (MIRA 16:11)

1. Institute of General and Inorganic Chemistry, Academy
of Sciences, Ukrainian S.S.R., Kiev.

BABKO, A.K.; VDOVENKO, M.Ye.; KOPA, M.V.

Direct photometric determination of rare earth elements by
paper chromatography. *Zav. lab.* 29 no.6:645-649 '63.
(MIRA 16:6)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Rare earths--Analysis)
(Paper chromatography)

VDCVENKO, M.Ye.; SPIVAKOVSKAYA, N.Ye.

Trilon B in the determination of microquantities of lead in metallic cadmium. Zav.lab. 27 no.8:963-964 '61. (MIRA 14:7)

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

L 12774-63
 EWP(q)/BIS/EXT(m) AFPTC/ASD JD/JG
 8/0032/63/029/006/0645/0649
 ACCESSION NR: AP3001521

56
55

AUTHOR: Babko, A. K.; Vdovenko, M. Ye.; Kopa, M. V.

TITLE: Direct photometric determination of rare earth elements by paper chromatography

SOURCE: Zavodskaya laboratoriya, v. 29, no. 6, 1963, 645-649

TOPIC TAGS: rare-earth chromatogram, rare-earth chromatography, lanthanum, neodymium, yttrium, reflection coefficient, chromatographic spot, rare-earth element, paper chromatography, reflected light

ABSTRACT: The authors determined the color intensity of spots from rare earth chromatograms in reflected light, using a universal photometer with a light filter of 574 millimicron wave length. Using various concentrations of lanthanum-, neodymium-, and yttrium-nitrate, they found the reflection coefficient K to be inversely proportional to the amount of substance in the chromatographic spot. Thus, the problem was reduced to obtaining spots of the same size and shape. The experimental technique consisted in placing 0.001 ml of the rare metal nitrate solution on a chromatographic paper strip, allowing it to stand for 30 minutes in a humidifying chamber, followed by 5 hours of ascending chromatography

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L 12774-63

ACCESSION NR: AP3001521

in cylinders containing 50 ml of a 1:2 ether-acetone mixture with 0.4 gm thiocyanic acid. After drying, the chromatogram was developed by spraying with a 0.4% alizarin solution containing 3% urotropin. The authors found that the spots were of a round shape when the drop of the experimental solution was placed 15 cm from the lower edge of the chromatographic paper strip, also when the ascendant flow was slowed down either by rendering the solution more viscous by dissolving photographic film in it or by narrowing its access with transverse cuts in the paper strip. The technique proved accurate within 10% on samples of Loparite, Monazite, and Parisite, as compared with the x-ray spectral and trilon microtitration procedures. Orig. art. has: 4 figures and 1 table.

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

SUBMITTED: 00

DATE ACQ: 17Jun63

ENCL: 00

SUB CODE: 00

NO REF SOV: 005

OTHER: 001

Card 2/2

5.5230

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

Methods of determining impurities...

Fe^{3+} is reduced with ascorbic acid to Fe^{2+} to avoid losses by formation of $\text{Fe}(\text{OH})_3$. 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

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Methods of determining impurities...

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S/032/61/027/006/001/018
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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, Tl³⁺ 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)

Card 3/4

VDOVENKO, M.Ye.

Fourth Republic Congress on Chemical Control of Production in Metallurgy and Metalworking Industries. Ukr.khim.zhur. 24 no.5:695-697 '58.

(MIRA 12:1)

(Metallurgy--Congresses)

5(2)

SOV/32-25-4-12/71

AUTHORS: Vdovenko, K. Ye., Spivakovskaya, N. Ye.

TITLE: The Use of Trilon B in Determining Chromium in Steel
(Primeneniye trilona B pri opredelenii khroma v stali)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 416-417 (USSR)

ABSTRACT: The determination of chromium in steel can be made by an oxidation of the chromium to bichromate and a subsequent iodometric titration. Iron can be bound by trilon B (Ref 1), but some difficulties will arise in the presence of vanadium. To overcome these, some hints have already been given (Refs 2,3) which are based on a change of the redox potential with the pH. In the present paper it was found out that at pH = 1.5 - 2.0 the bichromate is still reduced fast enough with potassium iodide (3 - 5 minutes) while the vanadate only reacts very slowly with potassium iodide. This knowledge forms the basis for the suggested method of determination of chromium in steels with or without vanadium, also in the presence of wolfram. A table of analytic results by the described methods of analysis of different standard samples is given (Table). There are 1 table and 3 references.

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The Use of Trilon B in Determining Chromium in Steel

SOV/32-25-4-12/71

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

Card 2/2

ACC NR: AP6019226

(A)

SOURCE CODE: UR/0073/66/032/002/0209/0212

AUTHOR: Babko, A. K.; Vdovenko, M. Ye.

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

TITLE: Comparison of reagents for direct photometric determination of rare-earth elements on chromatograms

SOURCE: Ukrainkiy khimicheskii zhurnal, v. 32, no. 2, 1966, 209-212

TOPIC TAGS: rare earth element, photometric analysis, chromatographic analysis, spectrophotometric analysis, light reflection coefficient, CHEMICAL AGENT

ABSTRACT: Eight organic reagents (methylthymol blue, pyrocatechol violet, glycine-thymol blue, alizarin, eriochromocyanine, xylenol orange resorcin, and peridylazo- and arsenazo-resorcin) were compared by studying the reflection spectra on paper caused by the reaction of La with the reagent. The spectrophotometric characteristics of the reagent and the products of reaction were used as criteria for selecting the most efficient reagent. The reflection spectra of complexes and reagents on the paper were taken with an SF-2M apparatus containing a device for measuring reflections. Water-alcohol and 1×10^{-3} M alcohol solutions of the reagents and 2.8×10^{-2} M La solutions at pH 5 (urotropine buffer) were used in the experiments. The La solution

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UDC: 543.544+546.65

ACC NR: AP6019226

(0.05 ml) was applied on chromatographic paper W1 (East German) and dried in air. After applying 0.05 ml of reagent solution, the paper was dried again and the reflection spectrum of the stain was taken in the SF-2M spectrophotometer. The minimums of the reflections of the complexes (λ_{MeR}) and reagents (λ_{HR}), the displacements of the reflection band during complex formation ($\Delta\lambda$), the minimal coefficients of the reflections of complexes (K_{MeR}) and reagents (K_{HR}), and their absolute ($\Delta K = K_{HR} - K_{MeR}$) and relative ($\Delta K/K_{MeR}$) differences were determined for each reagent from the reflection spectra of colored stains. The data obtained were tabulated and showed that methylthymol blue and alizarin were the best according to the intensity of reflections and the spectral displacement of the reflection band. It was found during the plotting of the calibration curve that the methylthymol blue yielded a considerably larger reflection for the blank experiment. The advantages of alizarin over methylthymol were substantiated also by the following observation. A certain amount of blurring was seen during the formation of stains on paper. This was related to the chromatographic properties of the reagent solvent (alcohol and H_2O). The blurring is objectionable in chromatograms with a large amount of separating elements. The solvent free of this effect, i.e., one with an R_f of nearly zero for all rare-earth elements, was the one to be searched for. A study was made of solutions of methylthymol and alizarin in higher alcohols and ketones. Only alizarin dissolved in butanol and ethanol. The use of alizarin dissolved in butanol yielded well-colored, distinct and uniform stains. The reflection spectra of the Ia with alizarin and the alizarin itself remained unchanged. Orig. art. has: 2 fig. and 1 table.

SUB CODE: 07/ SUBM DATE: 01Dec64/ ORIG REF: 009/ OTH REF: 004
Card 2/2

MARCHENKO, P.V.; VDOVENKO, M.Ye.; NABIVANETS, B.I.; OBOLONCHIK, N.V.
SPIVAKOVSKAYA, N.Ye.

Methods of determining the impurities in high purity metallic
cadmium. Zav.lab. 27 no.6:638-639 '61. (MIRA 14:8)

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

S/075/62/017/007/002/006
B119/B186

AUTHORS: Babko, A. K., and Vdovenko, M. Ye.

TITLE: Effect of the composition of solvent mixtures on the paper chromatographic separation of some rare earths

PERIODICAL: Zhurnal analiticheskoy khimii, v. 17, no. 7, 1962, 820 - 824

TEXT: A physicochemical analysis was made to discover how the paper chromatographic separation of La, Nd, and Y is affected by different compositions of mixtures of diethyl ether (E) with methanol (I), ethanol (II), propanol (III), butanol (IV), acetone (V), methyl ethyl ketone (VI), or cyclohexanone (VII). The following mixtures were found to be optimum: E:I = 3:1 (R_f values in the order La, Nd, Y: 0.25, 0.41, 0.60); E:II = 1:1 (R_f : 0.19, 0.35, 0.59); E:III = 1:9 (R_f : 0.06, 0.16, 0.36); E:V = 1:2 (R_f : 0.06, 0.22, 0.61); E:VII = 1:9 (R_f : 0.03, 0.10, 0.30); pure VI (R_f : 0.08, 0.27, 0.51). The differentiating action of the solvent increases with its solubility in water. There are 7 figures and 1 table.

Card 1/2

Effect of the composition of...

S/075/62/017/007/002/006
B119/B186

The most important English-language reference is: F. Pollard, J. Mc. Omie,
H. Stevens, J. Chem. Soc. 12, 4730 (1952).

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

SUBMITTED: October 31, 1961

Card 2/2

L 24826-66 JD/JG

ACC NR: AP6010834

SOURCE CODE: UR/0073/66/032/003/0284/0289

AUTHOR: Vdovenko, M. Ye.

20
B

ORG: Institute of General and Inorganic Chemistry, AN UkrSSR (Inst'tut obshchey i neorganicheskoy khimii AN UkrSSR)

TITLE: Mechanism of separation of rare earth elements in the form of thiocyanates by paper chromatography

27

SOURCE: Ukrainskiy khimicheskij zhurnal, v. 32, no. 3, 1966, 284-289

TOPIC TAGS: rare earth element, thiocyanate, paper chromatography, chemical separation, partition coefficient

ABSTRACT: In order to check the hypothesis that the mechanism of separation of rare earth elements by paper chromatography is not identical when different solvent mixtures are used, the separation of rare earths in the form of thiocyanates was studied in different mixtures of methyl acetate, ether, and butyl acetate with methanol or acetone. The partition coefficients K_{part} of the rare earths were determined (using yttrium as an example) at various compositions of these mixtures. R_f values

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UDC: 543 + 546.65

L 24826-66

ACC NR: AP6010834

were then calculated and compared with values obtained experimentally in a chromatographic separation with the same mixtures. In order to determine K_{part} , it was necessary to know the volume of the organic phase; since for a mixture of solvents of which one is completely soluble in water the volume of the organic phase changes as a function of the composition of the mixture, the volume change of the organic phase was determined in the following system of various compositions: saturated solution of ammonium nitrate - mixture of solvents. It was shown that in acetone - ester or acetone - ether mixtures the separation followed a simple partition mechanism. In the case of methanol - ester or methanol - ether mixtures, the relation between R_f and K_{part} is more complex. It is concluded that in the chromatographic separation of rare earth elements in the form of thiocyanates, the maximum differential effect of the solvent mixture corresponds to a definite volume of the organic phase. Orig. art. has: 6 figures.

SUB CODE: 07// SUBM DATE: 18Nov64/ ORIG REF: 004/ OTH REF: 002

Card 2/2 *dda*

VDOVENKO, N. M.

USSR/Scientific Organization - Academy of Sciences
USSR Feb 53

"Director of the Radium Institute imeni V. G. Khlopin"

Vest Akad Nauk No 2, 1953, p 53

Presidium has appointed N. M. Vdovenko, Dr Chem Sci,
to be Dir of the Inst, subject to the approval of
the General Assembly of the Acad.

271T97

SOKOL'SKAYA, A.M.; VDOVENKO, N.N.

Hydrogenation of hydroxycodoinone. Vest.AN Kazakh.SSR
16 no.2:44-48 F '60. (MIRA 13:6)
(Codeinone) (Hydrogenation)

VDOVENKO, N.S., inzh.; SHEVCHENKO, A.G.

Large-block assembly of a composite banking unit. Mont. i spets.
rab. v stroi. 24 no.9:5-8 S '62. (MIRA 15:9)

1. Soyuzprommekhanizatsiya.

(Earthmoving machinery)

OVCHARENKO, Fedor Danilovich, akademik; KUKOVSKIY, Yevgeniy Georgiyevich;
NICHIPORENKO, Sergey Petrovich; VDOVENKO, Sergey Petrovich;
VDOVENKO, Nadezhda Vasil'yevna; TRETINNIK, Vikentiy Yur'yevich;
~~KRODILSKIY, Nikolay Nikolayevich~~; PANASEVICH, Aleksandr
Aleksandrovich; POKROVSKAYA, Z.S., red. izd-va; MONZHERAN, P.F.,
tekhn. red.

[Colloid chemistry of palygorskite] Kolloidnaia khimiia paly-
gorskita. Pod obshehei red. F.D.Ovcharenko. Kiev, Izd-vo AN
Ukr.SSR, 1963. 119 p. (MIRA 16:7)

1. AN Ukr.SSR (for Ovcharenko).
(Palygorskite) (Colloids)

VDOVENKO, N.V., kand.tekhn.nauk; VDOVENKO, I.D., kand.tekhn.nauk

New method of chemical degreasing. Mashinostroenie no. 2:
66 Mr-Ap '64. (MIRA 17:5)

L 15936-66 E.T(m)/T/EWP(1) DJ/GD/RM

ACC NR: AT6020589

SOURCE CODE: UR/0000/65/000/000/0077/0081

AUTHOR: Kolosyuk, R. G.; Vdovenko, N. V.; Ishchuk, Yu. L.

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ORG: UkrNIIgiproneft'

B+1

TITLE: Structural and mechanical properties of oleopseudogels based on octadecylammonium bentonite and palygorskite complexes ^

SOURCE: Neftepererabotka i neftekhimiya (Petroleum refining and petroleum chemistry). Kiev, Naukova dumka, 1965, 77-81

TOPIC TAGS: clay, grease, rheologic property

ABSTRACT: The Ukraine has rich deposits of Ca-bentonites and palygorskite; in this connection, the authors studied the possibility of using modified clays of Ukrainian deposits in the production of lubricating greases!! The modification of the surface of the clays was carried out by using octadecylamine (C₁₈H₃₇NH₂). The lubricants were made by preparing a suspension of the organophilic clay and mineral oil, then homogenizing the mixture in a laboratory paint mill. A quantitative evaluation of the rheological properties of the bentonite oleopseudogels obtained showed that the most effective of the thickening agents studied were the BK-1 and BCh-1 organophilic bentonites and a bentonite-palygorskite mixture. The results lead to the hypothesis that the nature of organomineral complexes (thickening agents) substantially affects the

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