"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Determination of molybdenum by the drop method. N. A. TANANARY AND G. A. PANCHENKO. *Ukrainskii Khem. Zhur.* 4, Sci. Pt. 121 (1938). Add 1 drop of unknown soln. and 1 drop of KCNS to a drop of HCl on a filter paper. Red color indicates Fe. In the presence of Mo addn. of 1 drop of $SnCl_2$ or Na_2CO_3 changes the color to raspberry red. 0.05% of Mo can be detected. Ti, U, V and common metals do not interfere with the reaction, but in the presence of W 1 drop of unknown soln. is added directly to 1 drop of HCl. One more drop of HCl is then introduced and Mo detd. on the edge of the spot with KCNS and $SnCl_2$. Detect Mo in steel by treating the sample with HNO_3 and testing with KCNS and $SnCl_2$, and in minerals by fusing it with $KNaCO_3$, dissolving in hot H_2O and testing with HCl, KCNS and $SnCl_2$ as above. V. VROSOFOVSKY.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Detection of vanadium and tungsten. N. A. Tananaev and G. A. Panchenko. *J. Russ. Phys. Chem. Soc.* **61**, 1051-4(1929). The most sensitive reaction for the detection of V takes place as follows. Take a strip of filter paper, introduce a drop of a mixt. of equal vols. of aniline and concd. HCl, then place over it a drop of the soln. to be tested which has previously been oxidized by boiling with concd. HNO_3 to make sure that V is not in the form of lower oxides, but in that of V_2O_5. The latter oxidizes aniline with the formation of an intense blue coloration. The sensitivity of this reaction is about 0.003 mg. metallic V per 1 drop (or 0.01 cc.) of the soln. Cations do not interfere with the reaction, but strong oxidizing anions, such as CrO_4, ClO_3, ClO, MnO_4, do interfere and must, therefore, be reduced by ebullition with HCl. HNO_3 does not interfere. To detect V in alloys, particularly in steels, a min. piece of the metal of the size of a pinhead is dissolved on a watchglass in aqua regia, the soln. is evapd. with an excess of HNO_3 to remove HCl, and one proceeds as above. Cr present in the alloy does not become transformed into CrO_4 and, therefore, does not interfere. When operating with minerals, the latter are dissolved either in aqua regia, if they contain little SiO_2, or by fusing with a mixt. of $KNaCO_3$ and KNO_3 and extg. with hot water, after which one may proceed as above, but in this case, if Cr was present, the chromate formed must be reduced by boiling with thiosulfate and HCl, after which V must be oxidized to V_2O_5 by boiling with HNO_3. To detect W in salts of H_2WO_4 place a drop of HCl on a strip of filter paper, then place over it a drop of the soln. to be tested; a yellow spot is formed which, on being treated with $SnCl_2$, becomes blue colored; on adding NH_4CN, the blue coloration is intensified, and if it is, after that, treated with concd. HCl, it deepens still further. The sensitivity of this reaction is about 0.004 mg. of metallic W per drop (0.01 cc.) of the soln. If the soln. to be tested contains Mo, the action of $SnCl_2$ and NH_4CN causes the production of an intense cherry red coloration, but the latter disappears when concd. HCl is added, and thus does not interfere with the detection of W. To detect W in alloys, the latter are dissolved in aqua regia, the soln. is evapd. to dryness, the residue is calcined with oxalic acid and, after being dissolved with water and Na_2O_2, treated as above. W minerals are fused with $KNaCO_3$ and extd. with water, after which W can be detected as above. B. N.

METALLOGRAPHIC LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PROCESSES AND PROPERTIES INDEX

Colorimetric determination of titanium in cast iron and steel G. A. Panchenko and M. A. Raetzkii. *J. Applied Chem.* (U. S. S. R.) 8, 718-21(1935). Dil. 5-10 ml. of soln. (previously reduced with Hg Zn) to 50 ml., add 2 ml. of 2% aq. chromotropic acid and compare the color with that given by 0.001 N Ti soln. The method involves an error of 0.03% for concns. of 5-20 mg. of Ti per 100 ml.

B. C. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

CA

Polarometric determination of titanium, uranium, molybdenum and vanadium in the presence of iron by means of liquid amalgams

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

7

Colorimetric determination of molybdenum in special steels. G. A. Panchenko. *J. Applied Chem.* (U. S. S. R.) 8, 722-6(1935).—The steel is dissolved in aqua regia, Fe is pptd. by Na_2CO_3, Na_2O_2 and aq. NH_3, and the intensity of coloration given by the feebly acidified filtrate with aq. Na ethylxanthate is compared with that given by 0.01 N Mo soln. Cr, Ni, Mn and V do not interfere. H. C. A.

METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Some Results of the Application of Spectrographic Analysis to Brasses and Bronzes at the Lenin Works. G. E. Panchenko (*Izvest. Akad. Nauk S.S.S.R.*, 1940, [Fiz.], 4, (1), 222–224). – [In Russian.] Spectrographic methods are used for the sorting of brasses, the quantitative analysis of brasses (for Pb, Sn, and Fe), the quantitative analysis of bronzes, and the determination of impurities (As, Sb, Sn, Pb, Bi, and Fe) in electrolytic Cu. N. A.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

CH

Spectroscopy in the analysis of brasses and bronzes at the Lenin plant. G. R. **Panchenko.** *Bull acad. sci. U. R. S. S., Sér. phys.* 4, 222-4(1940).—Spectral analysis is employed for sorting brasses and steels, according to trade marks, as well as for the analysis of brasses, bronzes and electrolytic copper for impurities. Sorting of brasses is based mostly on detg. Cu and Zn, by making use of the lines Cu λ = 3063 A. and Zn λ = 3072 A. An activated arc is particularly suitable for the analysis.

Rokselana Gamow

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PROCESSES AND PROPERTIES INDEX

Quantitative Spectrographic Analysis of Silicon Brass for Silicon, Lead, and Zinc. G. E. Panchenko (*Izvest. Akad. Nauk S.S.S.R.*, 1941, [*Fiz.*], 5, (2/3), 313–318).—[In Russian.] A description is given of experiments carried out to determine suitable line pairs for use in the analysis of brasses containing Si 1·2–4, Pb 0·5–4, Zn 12–30, Fe 0·1–0·5%. Curves are given showing the time variation of these pairs. The Feussner spark was used as light source.—N. B. V.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, G. E.

"Some Results of the Use of Spectroscopy in the Analysis of Brasses and Bronzes at the Lenin Plant,"

Iz. Ak. Nauk SSSR, Ser. Fiz. 4, No. 1, 1940.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

SIN'KOV, V.M., kand.tekhn.nauk; OKSANICH, M.A., inzh.; PANCHENKO, G.F., inzh.

Measuring relative increases of fuel consumption and efficiency of boiler units. Avtom.i prib. no.2:113-[redacted] '61. (MIRA 14:12)
(Boilers)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, G.F.

Introducing a valveless proportioning pump. Biul.tekh.-ekon.inform. Gos.nauch.-issl.inst.nauch.i tekh.inform. 18 no.5:17-18 My '45. (MIRA 18:[illegible])

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, G.F.

Unit for automatic control of automotive transportation in open pits. Biul.tekh.-ekon.inform.Gos.nauch.-issl.inst.nauch.i tekh. inform. 18 no.1:65-66 Ja '65. (MIRA 18:4)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, G.M., elektromekhanik; DEKHTENKO, Yu.K., elektromekhanik

A protective arc for telegraph apparatus. Avtom., telem.i sviaz' 6 no.8:39 Ag '62. (MIRA 15:3)

1. Khar'kovskaya distantsiya signalizatsii i svyazi Yuzhnoy dorogi.
(Telegraph--Equipment and supplies)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

[illegible]NKO, G. [illegible].

[illegible]NKO, G. [illegible]: "[illegible] vermiform appendix [illegible]." [illegible] Dem State Medical Inst. ([illegible] Sciences)

[illegible]: Kyizhnaya Letopis' [illegible], [illegible] November [illegible]. Moscow.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

GUTNIKOV, B.Z., prof.; RUSAKOV, V.I., kand.med.nauk; PANCHENKO, G.S., kand.med.nauk; KOVALEV, G.G.; AKSENOV, A.I.; KHOPRYACHKOV, N.V.; KOMBACHEKOV, A.Sh.

Late results of treating patients with urethral strictures. Urologiia no.6:45-51 '60. (MIRA 15:5)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. B.Z. Gutnikov) Rostovskogo meditsinskogo instituta.
(URETHRA--STRICTURE)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

CHATSKIY, Ya.A.; PANCHENKO, G.T.

Surgical treatment of lung hemorrhage in pulmonary tuberculosis. Probl.tub. no.4:106-107 '61. (MIRA 14:12)

1. Iz legochnogo otdeleniya (zaveduyushchiy Ya.A. Chatskiy) Vinnitskogo oblastnogo tuberkuleznogo dispansera (glavnyy vrach O.Z. Toretskaya).
(TUBERCULOSIS) (HEMORRHAGE) (LUNGS--SURGERY)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.

Community workers check up. Okhr. truda i sots. strakh. 4 no.6:7-8 Je '61. (MIRA 14:7)

1. Predsedatel' zavkoma Lipetskogo traktornogo zavoda, g. Lipetsk.

(Lipetsk—Insurance, Social)
(Lipetsk—Tractor industry—Hygienic aspects)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.A.

Sensitivity of the respiratory center to carbon dioxide in the state of chronic hypercapnia. Biul. eksp. biol. i med. 49 no. 5:25-28 My '60. (MIRA 13:12)

1. Iz fiziologicheskoy laboratorii (zav. - prof. L.L. Shik) TSentral'nogo nauchno-issledovatel'skogo instituta eksperitizy trudosposobnosti i organizatsii truda invalidov (dir. - prof. D.I. Gritskevich), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.
(RESPIRATION) (CARBON DIOXIDE—PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.A.

Characteristics of respiration regulation after some surgical interventions on the chest. (Electromyographic study). Biul. eksp. biol. i med. 52 no.11:27-30 N '61. (MIRA 15:3)

1. Iz fiziologicheskoy laboratorii (zav. - doktor meditsinskikh nauk Ye.N. Domontovich) TSentral'nogo nauchno-issledovatel'skogo instituta ekspertizy trudosposobnosti i organizatsii truda invalidov (dir. - prof. D.I. Gritskevich), Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.V. Parinym.
(RESPIRATION) (CHEST—SURGERY)
(ELECTROMYOGRAPHY)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D. PA 64/49T8

USSR/Chemistry - Polarography Nov 48
Chemistry - Electrodes, Polarographic

"Use of Hard Electrodes in Polarography," Ye. M. Skobets, I. D. Panchenko, V. D. Ryabokon', Inst of Gen and Incrg Chem, Acad Sci Ukrainian SSR, 6 pp

"Zavod Lab" Vol XIV, No 11

Describes construction of a straight movable hard electrode manufactured either from silver or platinum amalgam. Determined that appearance of a maximum on the voltage curve which is characteristic for the mercury electrode is noticed only in a few cases with respect to the hard electrode.

[redacted] 64/49T8

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.

Use of solid electrodes for polarographic study of complex ions. Ukrain. Khim. Zhur. 17, 872-6 '51. (MLRA 6:4)
(CA 47 no.22:12039 '53)

1. Inst. Gen. Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D.

USSR/Chemistry - Polarography 1 Jul 53

"The Applicability of the Heyrovsky-Il'kovich Equation to Polarographic Waves Taken at Solid Electrodes in Fused Salts," Yu. K. Delimarskiy, I. D. Panchenko, Inst of Gen and Inorg Chem, Acad Sci USSR

DAN SSSR, Vol 91, No 1, pp 115-118

Results obtained with the use of Pt electrodes on $AgNO_3$, $Cd(NO_3)_2$, $Mg(NO_3)_2$, $Zn(NO_3)_2$, AgCl. $CaCl_2$, TlCl, $PbCl_2$, $ZnCl_2$, $NiCl_2$, $CoCl_2$, and $CuCl_2$

266T5

dissolved in molten $NaNO_3$ showed that the Heyrovskiy-Il'kovich is valid for fused salts at solid electrodes. This opens up new possibilities for the polarographic investigation of salt melts. Presented by Acad A. N. Frumkin 24 Apr 53.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D.

Dissertation: "Polarographic Investigation of Molten Salts by Using Solid Electrodes." Cand Chem Sci, Inst of General and Inorganic Chemistry, Acad Sci Ukrainian SSR, Kiev, 1953. (Referativnyy Zhurnal—Khimiya, Moscow, No 9, May 54)

SO: SUM 318, 23 Dec 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Panchenko, I. D.

Diagrams of phase transformations of RbCl-MgCl₂ and CsCl-MgCl₂. B. F. Markov and I. D. Panchenko (Inst. Gen. and Inorg. Chem., Acad. Sci. Ukr. SSR). *Ukrain. Khim. Zhur.* 20, 620-8(1954)(in Russian).—These diagrams studied by visual-polythermic method show that 2 congruently melting compds., $MgCl_2.RbCl$ and $MgCl_2.2RbCl$, are formed in the $RbCl-MgCl_2$ system; 3 compds., $MgCl_2.CsCl$, $MgCl_2.2CsCl$, and $MgCl_2.3CsCl$ and a congruently melting $CsCl.3MgCl_2$ are formed in the $CsCl-MgCl_2$ system. A definite regularity in diagram changes is observed when passing from $KCl-MgCl_2$ to $RbCl-MgCl_2$ and $CsCl-MgCl_2$: the crystn. of compds. extends over a greater range of compn., the crystn. temp. of compds. gradually increasing (cf. Menge, *C.A.* 6, 44). Elisabeth Barabash

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D.

USSR/ Chemistry - Physical chemistry

Card 1/1 : Pub. 147 - 16/22

Authors : Markov, B. F.; Delimarskiy, Yu. K.; and Panchenko, I. D.

Title : Thermodynamic properties of $PbCl_2$ in $PbCl_2$-LiCl, $PbCl_2$-NaCl, $PbCl_2$-KCl, $PbCl_2$-RbCl -fusions.

Periodical : Zhur. fiz. khim. 28/11, 1987-1998, November 1954

Abstract : The electromotive forces of chemical chains with mixed electrolytes were measured in relation to temperature and composition of several binary lead chloride and alkali metal fusions. The thermodynamic properties of $PbCl_2$ in solutions with alkali metal chlorides were calculated. It was established, on the basis of thermodynamic data, that $PbCl_2$-LiCl solutions are almost ideal mixtures and that the components forming the solution blend together with the absorption of heat. The free reaction energy of $PbCl_2$ with alkali metal chlorides was determined. Eighteen references: 9-USSR; 6-German and 3-USA (1906-1953). Tables; graphs; drawing.

Institution : Academy of Sciences Ukr-SSR, Institute of General and Inorganic Chemistry

Submitted : March 21, 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

MARKOV, B.F.; PANCHENKO, I.D.

Equilibrium diagrams of binary systems: magnesium chloride -- alkali metal chlorides. Zhur. ob. khim. 25 no.11:2038-2043 O '55. (MLRA 9:4)

1. Institut obshchey i neorganicheskoy khimii Akademii nauk Ukrainskoy SSR.

(Chlorides)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D.

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 147 - 7/26

Authors : Markov, B. F.; Delimarskiy, Yu. K.; and Panchenko, I. D.

Title : Thermodynamic properties of $MgCl_2$ in $MgCl_2$-LiCl, $MgCl_2$-NaCl, $MgCl_2$-KCl and $MgCl_2$-RbCl fusions.

Periodical : Zhur. fiz. khim. 29/1, 51-61, Jan 1955

Abstract : The electromotive forces of chemical chains with mixed $Mg/MgCl_2$ electrolytes were measured for various binary liquid systems and the thermodynamic properties of $MgCl_2$ were calculated in solutions with alkali metal chlorides. It was found that $MgCl_2$ and LiCl create solutions close to ideal mixtures. Data are given on the partial isobaric potential of $MgCl_2$ as well as its partial entropy.

Institution : Academy of Sciences Ukr SSR, Institute of General and Inorg. Chem., Kiev.

Submitted : March 20, 1954

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Periodical : Zhur. fiz. khim. 29/1, 51-61, Jan 1955

Card 2/2 Pub. 147 - 7/26

Abstract : The thermodynamic properties of $MgCl_2$ in solutions with KCl and RbCl indicated a deep reaction between the individual components which led to the formation of compounds capable of being separated in the solid state. Eight references; 4 USSR; 3 German and 1 Swiss. (1911-1954). Tables; graphs; drawing.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Панченко, И. Д.

USSR/Physical Chemistry - Electrochemistry, B-12

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 536

Author: Panchenko, I. D.

Institution: None

Title: On the Equation of the Polarographic Wave Obtained with a Hard Electrode in Fused Salts

Original Periodical: Ukr. khim. zh., 1956, Vol 22, No 2, 153-155

Abstract: On the basis of the picture of the deposition of metals from fused salts during polarographic recording with a hard electrode presented earlier (Referat Zhur - Khimiya, 1953, 2881; 1954, 21433; 1955, 5357), a more exact equation for the polarographic wave under these conditions is given. The equation is based on the assumption that the activity of the deposited metal is a function of the current, due to the diffusion of the metal in the hard electrode. The equation thus obtained is identical with the Geyrov-Il'kovich equation.

Card 1/1 Inst. obshey, neorganicheskoy khimii AN USSR.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

KANCHENKO, I.D.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. D., MARKOV, B. F., and DELIMARSKIY, Y. K., Institute of General and Inorganic Chemistry, AS USSR, Kiev.

"Thermodynamic Properties of Certain Chlorides in Melts," a paper submitted at the International Symposium on Macromolecular Chemistry, 9-15 Sep 1957, Prague.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

MARKOV, B. G., DELIMARSKIY, U, K., and PANCHENKO, I. D.

(Institute of General and Inorganic Chemistry, Acad. Sci. Ukr. SSR, Kiev, USSR)

"Thermodynamic Properties of Some Fused Chlorides,"
paper submitted at Soviet High-Polymers, Intl. Conference, Nottingham,
21-24 July 1958.

E-3,109,661

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.

Investigating the performance of lubrication system valves in D-54 engines. Mekh. sil'. hos. 9 no.4:26-27 Ap '58. (MIRA 11:5)

1. Ukrains'ka akademiya sil'skogospodarskikh nauk
(Tractors--Engines)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

I. D. PANCHENKO, GITMAN, Ye. B., A. A. KOLOTTY, Yu. K. DELIMARSKIY

"Electrolytic Production of Lead by Electrolysis of Fused Salts"

IONKh Ac. Sc. Ukr SSR.

report submitted at a conference on new methods of lead production from concentrates, Gintsvetmet (State Inst. Non-Ferrous Metallurgy), Moscow 22-25 June 1958.

(for entire conf. see card for LIDOV, V. P.)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO I.D.

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor; Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodepositon and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

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5(4) PHASE I BOOK EXPLOITATION SOV/2...

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

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Gokhshteyn, Ya. P. (Institut geokhimii i analiticheskoy khimii AN SSSR imeni V.I. Vernadskogo - Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy, Academy of Sciences, USSR). Diffusion of Electrolytes and the Polarographic Method 677

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PANCHENKO, I. D.

5(4) PHASE I BOOK EXPLOITATION SOV-

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Lewin, F.I., and I.A. Baumen (Deceased) (Vsesoyuznyy nauchno-issledovatel'skiy Institut tsvetnykh metallov - All-Union Scientific Research Institute of Nonferrous Metals) Special

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РАПЕНЕНКО, I. D.

AUTHOR: Bilimovich, G. N. SOV/75-14-4-30/30

TITLE: Section of Analytical Chemistry of the VIII Mendeleyev Congress on General and Applied Chemistry

PERIODICAL: Zhurnal analiticheskoy khimii, 1959, Vol 14, Nr 4, pp 511-512 (USSR)

ABSTRACT: Approximately 500 persons participated in the work of the Department of Analytical Chemistry, among them representatives of various scientific research institutes, higher schools and industrial enterprises in Russia, scientists from China, Bulgaria, the CSR, Poland, Hungary, and Italy. Approximately 70 reports were heard. In his opening speech I. P. Alimarin reported on the achieved results and on modern problems of analytical chemistry. I. V. Tananayev reported on the application of physico-chemical analysis in heterogeneous systems for the solution of a series of problems of analytical chemistry. V. I. Kuznetsov reported on modern aims in the use of organic reagents. A. K. Babko showed at the example of halide and thiocyanate complexes the correlation between the stability of complexes and the position of the corresponding central atoms in the periodic system. V. M. Peshkova and V. M. Loginova lectured on the stability of oximates of Cu, Co, and Ni as depending on the structure of the oxime molecule. V. P. Tyrnova lectured on the double character of reaction of some compounds in the formation of complexes. The problem of the application of heteropolyacids in analytical chemistry was dealt with in the lectures of I. P. Alekhova and co-workers, and A. I. Kokorin and N. A. Belyshenova. A large number of lectures dealt with the use of new organic reagents in analysis: A. I. Busev and M. I. Ivanyutin reported on the application of dialkyl and diaryl dithiophosphoric acid for the separation of elements, A. I. Perinov used aryl arsonic acid and aryl phosphinic acid. N. P. Lastovskiy and his co-workers treated some properties of new complexons. The lectures of F. A. Nazarenko, G. G. Shitarova and A. I. Komenenko dealt with the photometric determination of a series of elements using fluorine derivates. A. I. Cherkesov lectured on the use of halochromation in analytical chemistry. N. M. Dobkina and I. N. Malyutina lectured on the determination of tantalum using differential spectrophotometry. Th. V. Moracheveskiy and L. A. Stolyarova reported on new highly sensitive analysis methods using an ultraviolet microscope. Several lectures dealt with methodical and theoretical problems of spectrum analysis (N. P. Zakharin and G. A. Sheynin; E. Ya. Yuyushteyn and co-workers). N. S. Poluektov and M. K. Nikonova treated the perfection of flame photometry. Several lectures dealt with the determination of elements by polarography (S. I. Sinyakova; Z. N. Syshdeshtsynskaya and I. A. Yarovoy; Ya. P. Gokhshteyn). New results in using fixed electrodes were reported by L. N. Samchenko and Yu. S. Lyalikov and co-workers. The lecture of V. K. Pal'tsyev and F. N. Fili treated the use of amperometric titration with two electrodes in the chemistry of uranium and thorium. N. N. Benyavin showed possibilities of predicting the conditions of chromatographic separation of elements based on their position in the periodic system. T. A. Belyavskaya reported on the use of ion exchange in the investigation of the state of substances in solutions. A. S. Vernidub and V. I. Petrashen' lectured on the chromatographic separation of a series of elements. N. G. Polyanskiy reported on adapting the properties of ion exchanger resins, V. N. Cherzyakin and associates reported on the chromatographic proof of sulfanilamide preparations in liquids of the organism. G. L. Starobinets and associates treated the application of high polymers in chromatographic analysis. The lecture of A. A. Zhukhovitskiy and N. S. Turkel'taub, G. Shay dealt with gas chromatography. Several lectures treated the use of radioactive isotopes for the chromatographic investigation of complex formation (D. I. Ryabchikov and associates), for the investigation of the co-precipitation mechanism of ions of rare metals with sulfides (N. A. Rudney) and for determining rare elements by means of isotope dilution (I. P. Alimarin, G. N. Bilimovich). In the field of elementary organic microanalysis the lectures of N. O. Kornblum, T. M. Seltzan and V. A. Klimova with associates have to be mentioned, who treated the elaboration of rapid micro methods for the simultaneous determination of several elements from one weighed portion of boron, fluorine and silicium and organics.

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B020/B064

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AUTHOR: Panchenko, I. D.

TITLE: Derivative Polarography on Solid, Rotating Electrodes in Molten Salts

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol 15, No 4, pp. 388 - 390

TEXT: Since a number of metals is obtained by electrolysis of molten salts, the investigation of the electrochemical properties of the accompanying substances is of interest, which is possible in each case by means of derivative polarography. Ye. M. Skobets (Ref. 1) obtained the derivation peaks for a number of compounds on solid electrodes and in aqueous solutions, and N. G. Chovnyk (Ref. 2) in molten salts. The author aimed at determining the decomposition voltage of some metal chlorides, studying the change of the diffusion current as dependent on the speed of rotation of the electrodes, and the change of the polarization curves as dependent on the rate of polarization. Silver, lead, and cadmium chlorides were investigated; a eutectic LiCl-KCl mixture was used as

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Derivative Polarography on Solid, Rotating Electrodes in Molten Salts

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supporting electrolyte, and the polarograms recorded with a Heyrovský polarograph. The sensitivity of the galvanometer was 1 6 10^{-9} a/mm The investigations were conducted at 400°C, and the temperature was kept constant to within ±2°C by means of a thermostat Porcelain crucibles with a platinum wire cathode and a platinum plate anode served as electrolyzers The electrodes had a speed of 100, 500, 750, and 1500 rpm Fig 1 gives the scheme of the polarographing cell The authors first recorded the usual polarograms with separate and joint precipitation of the metals on an LiCl-KCl background. With separate precipitation of the metals, reproducible polarograms were obtained, whereas with joint precipitation no positive results were obtained The decomposition voltage of the supporting electrolyte equals -2 3 v The half-wave potential for silver is 0.9 v, and for lead, 0 95 v In the reduction of cadmium chloride, two waves were obtained; the potential of the first half-wave was 1 1 v, and that of the second one, 1 3 v In the authors opinion, the first wave corresponds to the reduction of cadmium chloride to the subchloride, and the second to the reduction of the subchloride to metallic cadmium At a concentration of 0.001 molar parts, the diffusion current limits were

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Derivative Polarography on Solid, Rotating Electrodes in Molten Salts

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0.24 ma for silver, 0.32 ma for lead, and 0.16 and 0.06 ma, respectively, for cadmium. The derivative polarograms were recorded at a sensitivity of S=1/200. The derivation polarograms of silver precipitated from an LiCl-KCl supporting electrolyte at an AgCl concentration of 0.001 molar parts (Fig. 2) and of cadmium precipitated from an LiCl-KCl supporting electrolyte at a $CdCl_2$ concentration of 0.0007 molar parts (Fig 3) are given. The derivative peak potentials of the chlorides investigated correspond to those of the half-waves with insignificant deviations The derivative peaks (Fig. 4) resulting from coprecipitation of silver and cadmium are similar to those found in coprecipitation of lead and cadmium With a rotating cathode, the height of the derivative peak as compared to the stationary electrode is twice as much at 100 rpm, at 500-750 rpm, three times as much, and at 1500 rpm, four times as much The respective derivative polarograms are shown in Fig. 5 An exact mathematical relation between the speed of the electrode and the height of the derivative polarogram peak cannot be established. The diffusion currents on rotating electrodes in aqueous solutions increase 15-20 times at 700-800 rpm; diffusion currents in melts are, therefore, 5-7 times smaller than in

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Derivative Polarography on Solid, Rotating Electrodes in Molten Salts

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aqueous solutions, which is due to the temperature of the former since the diffusion coefficient is an exponential function of temperature. Since the coprecipitation of the metal ions examined showed no positive results on ordinary polarograms, the polarograms were recorded for low rates of polarization (10-20 mv/min), and it was found that, at low rates, the limiting currents are recorded in the coprecipitation of metals (Fig. 6), and the stepwise reduction of cadmium chloride is confirmed. This paper was read in the Analytical Section of the VIII Mendeleyevskiy s"yezd (VIII Mendeleyev Congress) on March 21, 1959. There are 6 figures and 8 references: 6 Soviet, 1 US, and 1 German.

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

SUBMITTED: June 15, 1959

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

77517
SOV/80-33-1-26/49

5.1310

AUTHORS: Panchenko, I. D., Delimarskiy, Yu. K.

TITLE: Electrolytic Recovery of Lead From the Factory Crude Lead and Bismuth Dross Using Melted Electrolytes

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol 33, Nr 1, pp 153-156 (USSR)

ABSTRACT: Large-scale laboratory experiments of electrolytic lead refining were conducted in order to find the best conditions and materials for removing impurities from lead and for producing different grades of lead. Crude factory lead and bismuth dross were used. The following conclusions were made from the data obtained. These eutectic electrolytes may be used in electrolytic lead refining: $PbCl_2$-KCl-NaCl, $PbCl_2$-NaCl, and $PbCl_2$-PbC. It was found that by refining the crude lead with 25% recovery of the cathode lead, grade C_1 lead is obtained; with 50% recovery, grade C_2 lead is obtained; with [illegible]% recovery in a triple and double eutectic mixture of lead,

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potassium, and sodium chlorides, grade C_3 lead is obtained. It was found that by the electrolytic refining of bismuth dross containing 5% of Bi, grade C_1 lead can be obtained (one thousandth of a percent of Bi); dross containing 13% of Bi yields grade C_2 cathode lead (containing one hundredth of a percent of Bi). It was found that the following electrolysis conditions are optimal: temperature, 500° C; anode current density (D_a), 0.4 amp/cm^2; cathode current density (D_c), 1 amp/cm^2. Yield based on current, 97-98%. Electric energy consumption, 1.6 kw hours/kg. There are 4 tables; and 6 Soviet references.

SUBMITTED: November 15, 1958

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APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.

report to be submitted for the IUPAC 21st Conference and 1 th Intl. Congress of Pure and Applied Chemistry, Montreal, Canada, 2-12 August 1961

ALIMARIN, I. P., and ZOLOTOV, Yu. A., Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy, Academy of Sciences USSR - "Extraction of metal chelate compounds as affected by the nature of the solvent" (To be presented in Russian) (Section C.2 - 11 Aug 61, morning)

BAGDASAR'YAN, Kh. S., and KRONGAUZ, V. A., Scientific Research Physico-Chemical Institute imeni L. Ya. Karpov, Moscow - "Some aspects of energy transfer in radiation chemistry" (Section A.1, Session II - 7 Aug 61, morning)

DELIMARSKIY, Yu. K., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "The kinetics of the electrode processes in the electrolysis of melted salts" (Section B.3 - 10 Aug 61, morning)

DELIMARSKIY, Yu. K., ANDREYA, V. N., BOJKA, K. M. (Possibly VOYKA, K. M.), NASARENKO, G. D., and KAPSOVA, T. N., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "Electrochemical experiment with melted borate and phosphate" (Section A.3, c. (2), Session I - 11 Aug 61, morning)

DELIMARSKIY, Yu. K., PANCHENKO, I. D., and SHILINA, G. V., Institute of General and Inorganic Chemistry, Academy of Sciences UkSSR, Kiev - "On the convection diffusion in melted salts" (Section B.3 - 9 Aug 61, afternoon)

GERASIMOV, Ya I., Moscow State University imeni M. V. Lomonosov, (Co-Chairman, Section A.3,c,(2), Session I(B), 11 Aug 61, afternoon)

GERASIMOV, Y. I., LAVRENT'YEV, V. I., KUZNETSOV, F. A., and REZUKHINA, T. N., Moscow State University imeni M. V. Lomonosov - "The thermodynamic properties of columbium and cerium oxides" (Section A.3,c,(3), Session II(A), 11 Aug 61, morning)

GOL'DANSKIY, V. I., Institute of Chemical Physics, Academy of Sciences USSR - "Two-proton radioactivity - a new kind of radioactive decay of nuclei" (Section A.4 - 7 Aug 61, morning)

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D210/D303

AUTHORS: Delimars'kyyi, Yu.K., Member of AS UkrSSR, Panchenko I.D., and Shylina, H.V.

TITLE: Rotating disc electrode in the polarography of fused salts

PERIODICAL: Akademiya nauk Ukrayins'koyi RSR. Dopovidi, no. 2 1961, 205 - 208

TEXT: The authors state that the question of theoretically interpreting polarographical curves obtained for fused electrolytes with the use of stationary or revolving cylindrical electrodes cannot be regarded as solved, because different investigators propose different equations for their interpretation. Only V.G. Levich (Ref. 3: Fiziko-khimicheskaya gidrodinamika, Fizmatgiz, M., 1959 (Physico-Chemical Hydrodynamics)) worked out a theory of convective diffusion of a rotating disc electrode, its equity having been proved for aqueous electrolyte solutions. The thickness of the

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diffusion layer is given by the equation

$$\delta = 1.6 \cdot D^{1/3} \cdot \gamma^{1/6} \cdot \omega^{1/2} \quad (4)$$

where δ is the layer thickness, D - coefficient of diffusion, γ - kinematic viscosity, ω - angular velocity of the rotating disc electrode. The ultimate current value is given by the equation

$$i_d = \frac{nFDC}{\delta}$$

which, taking into account Eq. (4) may be expressed as

$$i_d = 0.62\, nFD^{2/3} \cdot \gamma^{-1/6} \cdot \omega^{1/2}. \quad (5)$$

The authors decided to apply Levich's theory to fused salts. They obtained polarograms of a series of electrolytes, using a rotating disc electrode. They investigated AgCl, $PbCl_2$, $CdCl_2$ and TlCl on the background of a fused mixture of [illegible]Cl - KCl. Polarograms were

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obtained by means of a check polarograph LP55A. Experiments were carried out at 420°C in a china crucible, cap. 100 ml, the anode was a platinum plate of 4 cm^2, the cathode a platinum microdisc set in a molybdenum tube, disc's angular velocity 100, 500 and ... rev/min. Apart from normal polarograms they obtained derivative ones, by using an electrolytic condenser, consecutively connected with the galvanometer. The depolarizer concentrations were in the range of 0.0005 to 0.003 mol fractions. Their first object was to investigate the dependence of the limit-current on the rate of electrode revolutions. Polarograms obtained with different electrode angular velocities are shown in Fig. 1. On the basis of these, the authors found that the above dependence can be expressed by the equation:

$$i_d = K \cdot \omega^{0.58},$$

This is in agreement with Eq. (6), which follows from Levich's connective diffusion theory. They thus proved the adequacy of this theory for fused electrolytes, in which it is possible to use a re-

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tating disc electrode. Their experimental results are given in tabulated form. Two waves were observed for cadmium and lead chlorides which is obviously due to the formation of univalent chlorides. The authors express the opinion that the use of the rotating disc electrode allows polarographic curves to be obtained with lower concentrations than with the stationary ones which is a proof of its higher susceptibility and permits a more precise polarogram interpretation. Kinematic viscosity values being known, it is possible to calculate from Eq. (6) the diffusion coefficients in the sed electrolytes; the authors found that this coefficient for silver ions equals $0.9 \cdot 10^{-5} cm^2/sec$, which is in good agreement with data obtained for determining it by different methods. [Abstractor's note: Methods not given]. There are 3 figures, 1 table, and 8 references: 6 Soviet-bloc and 2 non-Soviet-bloc. The references to the English-language publications read as follows: E.D. Black T. De-Vries, Analyt. Chem., 27, 906, 1955; J. Corbert, S. Winbush, F. Alberts, J. Am. Chem. Soc., 79, 3020, 1957.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

Rotating disc electrode in ... S/021/61/000/002/011/013
D210/D303

ASSOCIATION: Institut zagal'noyi ta neorganichnoyi khimiyi AN URSR (Institute of General and Anorganic Chemistry, AS UkrSSR)

SUBMITTED: September 3, 1960

Card 5/6

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D., kand. tekhn. nauk; VEDMID', M.P., kand. tekhn. nauk; NATANZON, I.I., kand. tekhn. nauk, red.; KOSOVSKIY, V.A. [Kosovs'kyi, V.A.], red.; KVITKA, S.P., tekhn. red.

[Temperature conditions of a lubrication system and their regulation] Temperaturnyi rezhym systemy mashchennia ta ioho reguliuvannia. Kyiv, Vyd-vo Ukr. Akad. sil's'kohospodars'kykh nauk, 1961. 146 p. (MIRA 15:4)
(Tractors—Lubrication)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.; SHILINA, G.V.

Rotating disk electrode in the polarography of fused salts. Zhur.anal.khim. 18 no.8:920-923 Ag '63. (MIRA 16:12)

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

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.; SHILINA, G.V.

Theory of convective diffusion in the polarography of fused salts. Ukr. khim. zhur. 29 no.11:1164-1169 '63. (MIRA 16:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

L 30243-66 EWT(m)/ETC(f)/T/EWP(t)/ETI IJP(c) DS/JD/JG

ACC NR: AP6013884 SOURCE CODE: UR/0073/65/031/011/1203/1206

AUTHOR: Panchenko, I. D.; Penkalo, I. I.

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

TITLE: Polarographic study of rare earth elements in fused potassium bisulfate as the supporting electrolyte

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 11, 1965, 1203-1206

TOPIC TAGS: polarography, lanthanum oxide, gadolinium compound, yttrium compound, cerium compound, europium compound, potassium compound / LP-55A polarograph

ABSTRACT: A polarographic study of oxides of lanthanum, gadolinium, yttrium, cerium, and europium was carried out in potassium bisulfate as the supporting electrolyte by using a rotating disc electrode. The reduction polarograms were recorded on an LP-55A polarograph at 240°C, and the half-wave potentials of the reduction of the oxides were determined: $E_{1/2}$ was 1.1 V for La_2O_3, 1.08 V for Gd_2O_3, 1.03 V for Y_2O_3, 0.9 V for CeO_2, and 0.4 V for Eu_2O_3. Thus, the deposition potentials differed appreciably in this fused electrolyte. The limiting diffusion current was found to be directly proportional to the concentration of the oxides studied. The diffusion coefficients of

UDC: 543.253+546.6+541.133

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L 30243-66

ACC NR: AP6013884

the ions were found to be $2.6 \cdot 10^{-5}$ for La, $0.31 \cdot 10^{-5}$ for Gd, $0.33 \cdot 10^{-5}$ for Y, $1.11 \cdot 10^{-5}$ for Ce, and $1.34 \cdot 10^{-5}$ for Eu. The thickness of the diffusion layer in fused potassium bisulfate was calculated to be $\sim 2 \cdot 10^{-3}$ cm. Orig. art. has: 5 figures, 1 table.

SUB CODE: 07/ SUBM DATE: 26Oct64/ ORIG REF: 006/ OTH REF: 002

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.D.; BOYKO, K.M.

Use of various electrode materials in the polarography of fused salts. Ukr.khim.zhur. 31 no.2:190-194 '65. (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. P.

Use of an automatic metal dropping electrode in the polarography of fused salts. Zhur. fiz. khim. 39 no.2:514-515 F '65. (MIRA 18:4)

1. Institut obshchey i neorganicheskoy khimii AN SSSR.

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

L 30215-66 EWT(m)/ETC(f)/T/EWP(t)/ETI IJP(c) DS/JD/JG

ACC NR: AP6015011 SOURCE CODE: UR/0364/66/002/005/0529/0535

AUTHOR: Panchenko, I. D.; Penkalo, I. I.; Delimarskiy, Yu. K.

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

TITLE: Polarographic study of the cerium group of rare earth elements in the fused LiCl-KCl eutectic as supporting electrolyte

SOURCE: Elektrokhimiya, v. 2, no. 5, 1966, 529-535

TOPIC TAGS: polarographic analysis, lanthanum compound, praseodymium compound, samarium compound, europium compound, cerium compound, neodymium compound, lithium chloride, potassium chloride

ABSTRACT: In order to determine its usefulness for analytical purposes, the authors investigated the polarographic behavior of lanthanum, cerium, praseodymium, neodymium, samarium, and europium in the fused LiCl-KCl eutectic at 400°C, using a rotating platinum disc electrode. Polarograms of the reduction of the rare earth chlorides were recorded at various concentrations of the chlorides. A direct proportion was established between the wave height and the concentration of the depolarizer. The half-wave potentials were determined and differences between some of them were found to exceed

UDC: 541.135.3

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

SOV/149-58-5-14/18

AUTHORS: Layner, V.I., Panchenko, I.I.

TITLE: Electrode Processes in Electro-deposition of Nickel from Fluoborate Electrolytes (Elektrodnyye protsessy pri elektro-osazhdenii nikelya iz ftorboratnykh elektrolitov)

PERIODICAL: Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, 1958, Nr 5, pp 124 - 130 (USSR)

ABSTRACT: The object of the investigation described in this paper was to study the effect of various factors on electrodeposition of nickel from fluoborate solutions and on the quality of the deposits obtained by this method. For the preparation of the HBF_4 solution, chemically pure H_3BO_3 and an HF solution (whose concentration was determined from its density) were used in the stoichiometric ratio, H_3BO_3 being added (a small quantity at a time) to the continuously stirred and ice-cooled HF solution. To the obtained HBF_4 solution, also continuously cooled, nickel carbonate (a small quantity at a time) was added and in this manner it was possible to obtain solutions containing up to 180 g/litre nickel in the form of

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Electrode Processes in Electro-deposition of Nickel from Fluoborate Electrolytes

fluoborate (density approx. 1.5), which could then be diluted to any required concentration. The characteristics of the experimental electrolytes (pH = 3 in all cases) are given in Table 1 which shows the nickel concentration (N = 1 to 4), the content (in g/litre) of fluorine, F_1, present in the form of BF_3OH, the content of fluorine, F_2, present in the form of BF_4^-, the total fluorine content $F = F_1 + F_2$, the B content, the F/B and F/Ni ratios, the $NiCl_2.6H_2O$ content, and the density at 20 °C. Nickel anodes and steel, copper or brass cathodes were used in the experiments, the results of which are reproduced graphically. The effect of the current density (A/dm^2) on the cathode potential is illustrated in Figure 1, where graphs 1, 2, 3 and 4 correspond to the nickel concentrations of 1N, 2N, 3N and 4N, respectively. Figure 2 illustrates the current-density/cathode-potential relationship for electrolytes with no excess of H_3BO_3

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Electrode Processes in Electro-deposition of Nickel From Fluoborate Electrolytes

(graph 1) and with 5, 10 and 15g/litre H_3BO_3 in excess of the stoichiometric ratio (graphs 2,3 and 4). The results of the tests in which the current-density/cathode-potential relationship was studied for 3N electrolytes containing no Cl ions at 20 °C and those containing 15, 30 and 50 g/litre $NiCl_2.6H_2O$ at 50 °C are reproduced in Figure 3 (graphs 1, 2, 3 and 4, respectively). The same relationship for a 3N electrolyte with no excess of H_3BO_3 at 20, 30, 40 and 50 °C is shown in Figure 4 (graphs 1 to 4). A 3N electrolyte was also used for investigating the effect of the pH number which was varied between 1 and 5 by means of HBF_4 or sodium iodide additions. It was found that at pH = 5, the electrolyte is unstable and contains black, insoluble particles (most likely $Ni(OH)_2$ with basic salts) held in suspension. Pitting occurs and a dendritic deposit is obtained which at low current densities (1 to 5 A/dm^2) becomes dark. At pH = 4, low current

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Electrode Processes in Electro-deposition of Nickel From Fluoborate Electrolytes

densities result in a dark deposit, while dendrites are formed at high current densities. At pH = 1 or 2, intensive evolution of hydrogen takes place on the cathode surface, the evolved gas forming bubbles which adhere to the cathode and cause pitting. Best quality deposits are obtained at pH = 3. Yield per unit current varies in all cases between 89.6 and 99.7%, increasing with increasing current density and at high pH (3 to 4) values, and falling sharply at low current densities and at pH = 1 or 2. In the next stage of the investigation the anodic processes were studied. Four types of electrolytes were used containing (in g/litre): (A) 25 $Ni(BF_4)_2$, 68.5 F_1, 138.7 F_2 and 34.4 B; (B) same as (A) plus 15 $NiCl_2.6H_2O$; (C) 240 $NiSO_4.7H_2O$, 30 H_3BO_3; (D) same as (C) plus 20 NaCl. Cathodes were made of electrolytic nickel or of non-passivating nickel containing C 0.2%, Si 0.2% and S 0.005% (Ref 12). To reduce to minimum the difference between their true and the geometric surface areas, the cathodes were

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polished first mechanically and then electrolytically (to remove the plastically deformed layer). The results, in the form of graphs showing the relationship between the anodic current density and the anode potential, are reproduced in Figure 5: graph (1) - non-passivating nickel anode in electrolyte C; graph (2) - as (1) but electrolyte D used; graph (3) - non-passivating nickel anode in electrolyte A; graph (4) - as (3) but in electrolyte B; graphs (5) and (6) - electrolytic nickel anode in electrolytes C and D, respectively. When the ratio of the anode and cathode surface areas was $S_a/S_k = 2:1$, the yield of the dissolved metal per unit current was high even in the absence of chlorides in the electrolyte but for $S_a/S_k = 1:1$, a slightly lower yield was obtained. After the bath was operated for the equivalent of 800 A.hour per 1 litre of electrolyte, the concentration of the nickel-bearing salt in the solution was unchanged and only a slight rise in the pH number was observed. In their conclusions the authors state that: i) the main advantage

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Electrode Processes in Electro-deposition of Nickel From Fluoborate Electrolyte

to be gained by using the fluoborate electrolyte instead of a sulphate solution for nickel plating is that the process can be intensified, i.e. higher current densities can be employed without affecting the quality of the deposit and yet without reducing the yield per unit current. The maximum permissible current density can be increased by increasing the Ni concentration in the electrolyte (up to 3N) and by using higher temperatures; ii) when the concentration of H_3BO_3 in the electrolyte is increased, the cathode potential is reduced and so is the maximum permissible current density. In spite of this effect, which is probably due to partial dissociation of $Ni(BF_4)_2$ to $Ni(BF_3OH)_2$ and to a decrease in the activity of the nickel ions in the electrolyte, it is recommended to maintain the H_3BO_3 concentration slightly (approx. 15 g/litre) above the value corresponding to the stoichiometric ratio, since free H_3BO_3 improves the stability of the electrolyte and makes it less reactive;

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Electrode Processes in Electro-deposition of Nickel from Fluoborate Electrolyte

iii) the effect of chlorides introduced in the electrolyte in the form of $NiCl_2.6H_2O$ in amounts up to 15 g/litre is beneficial, since they reduce polarisation. However, at high (more than 30 g/litre) chlorides concentrations, the maximum permissible current density is lower and the quality of the deposit is adversely affected. At 50 °C, the effect of the chlorine ions becomes insignificant, most likely owing to the reduced adsorption of these ions on the cathode surface and to sufficiently high activity of the anode, particularly when made of non-passivating material. Owing to the latter factor, the fluoborate electrolytes are quite stable, so that in operation it is only necessary to replenish the fluoboric acid in order to maintain constant pH, since the anodic yield per unit current is slightly higher than the cathodic;

(iv) the optimum value of the pH number of a fluoborate solution for nickel plating is between 3 and 3.5. At pH = 1 , the yield per unit current is too much affected by the variation of the current density, while at

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PANCHENKO, I. I., Cand of Tech Sci — (diss) "Electrolytic Nickel Plating by Cobalt and an Alloy of Nickel and Cobalst From Fluorinated Electrolytes," Moscow, 1959, 12 pp (Institute of Non-Ferrous Metallurgy im M. I. Kalinin) (KL, 4-60, 120)

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AUTHORS: Layner, V.I., Doctor of Technical Sciences, Professor, and Panchenko, I.I., Engineer

TITLE: Nickel Plating in Fluoroborate Electrolyte (Nikelirovaniye vo ftorboratnom elektrolite)

PERIODICAL: Vestnik mashinostroyeniya, 1959, Nr 5, pp 65-68 (USSR)

ABSTRACT: An experimental study is reported concerned with the effect of each of the main factors on the nickel plating process in fluoroborate electrolytes. The solution of hydrofluoboric acid was prepared from hydrofluoric and boric acids by mixing the latter into the former in small doses accompanied by stirring and external cooling. Small doses of nickel carbonate were added accompanied by cooling. Concentrates with a specific gravity of 1.5 containing 180 g/litre of nickel can be obtained as fluoroborate of nickel. The fluoroborate of nickel has the formula $Ni(BF_4)_2 \cdot 6H_2O$. A method of analysis was used proposed by Ryss, I.G. ("The Chemistry of Fluorine and its Anorganic Compounds" Monograph, Goskhimizdat, 1956). Nickel was determined by the alkaline solution of di-methylglyoxime. 500 milli-litres of diluted

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Nickel Plating in Fluoroborate Electrolyte

concentrate were used in each test with a nickel anode and a cathode of copper, iron or brass foil. The current efficiency was measured with a copper coulometer. The specimens were electro chemically degreased, pickled in nitric acid (copper, brass) or hydrochloric acid (iron), washed in water then in alcohol, dried, cooled and weighed. Before immersing in the plating bath, the specimens were pickled in a 10% solution of sulphuric acid, washed in mains water and finally in distilled water. After plating, the specimens were washed in cold and hot water and in alcohol, dried, cooled and weighed. The curves of voltage against current density were plotted from measurements by the compensation method using a platinum disc cathode soldered into molybdenum glass. Before taking the readings, the cathode was covered by a 5 micron coat of copper from a sulphuric acid electrolyte. The deposited nickel was removed in hot 50% HNO_3 or by anodic dissolution in 50% H_2SO_4.

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Nickel Plating in Fluoroborate Electrolyte

The anode was a disc of non-passivated nickel. Examining the effect of nickel salt concentration an increase from 1 N to 3 N solutions at a pH of 3.0 and 50°C increases the permissible current density. Deposits of 25 microns are obtained without burns and dendrite formation at the corners. Further increase of concentration is not profitable. The concentration of boric acid has no effect on the current efficiency and the quality of the deposit. Solutions with a small excess of boric acid (10 g/litre) are more stable. The effect of chlorine ion concentration was studied by using electrolytes without chlorine ions and those with 15, 30 and 50 g/litre $NiCl_2.6H_2O$. Without chlorine ions, the quality of the deposit deteriorates, pitting increases, the current efficiency diminishes and the permissible current density drops. 15 g/litre is the best concentration. A temperature increase is beneficial by reducing polarization. The permissible current density increases and the quality of the deposit improves up to a temperature of 60°C. The pH value was

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SOV/122 59-5-22/32

Nickel Plating in Fluoroborate Electrolyte

studied in the range between 1 and 5. At a value of 4 and above the solution becomes unstable. At values of 1 and 2 the deposit contains much small pitting. The optimum value is 3. The buffer properties were studied at a temperature of 20°C by adding to fresh samples of 50 millilitre of electrolyte quantities of 10, 20 and 30 millilitre of 0.2N solution of NaOH and 0.2N solution of HCl and the measurement of the pH value of the solution by the quinhydron method. The electrolytes differed in the nickel, boric acid and chloride content. Sulphuric acid electrolytes were examined alongside the fluoroborate electrolytes. It was shown that fluoroborate electrolytes have a substantially greater buffer property than sulphuric acid electrolytes with buffer admixtures. The stability of the electrolyte of the optimum composition, after plating under optimum conditions, was judged by analysis for nickel, fluorine, boron and the pH value after 100 ampere-hours. A very good stability was observed. The anode to cathode surface ratio was varied between 8:1 and 1:1.

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Nickel Plating in Fluoroborate Electrolyte

After 300 ampere-hours per litre of electrolyte, the nickel, both forms of fluorine and boron contents did not change. The pH value rose from 3 to 3.4. The anode and cathode polarizations were plotted (Fig 6). The adhesion of deposits on iron, brass and copper specimens was judged by bending over 180° until fracture and by heating to 150°C. Deposits of 10, 30, 60, 100 and 500 microns were tested. Except in the thickest deposit, no delamination was found. In deposits beyond 30 microns, porosity was not observed. There are 6 figures, 1 table and 11 references, 8 of which are English, 2 Soviet and 1 French.

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PANCHENKO, Ivan Ivanovich; PROKOF'YEV, K.A., kand.tekhn.nauk, retsenzent; SHEMONAYEV, A.S., inzh., red.; VASIL'YEVA, V.P., red.izd-va; SHCHETININA, L.V., tekhn.red.

[Vibration resistance of turbine blades] Vibratsionnaia prochnost' lopatok turbin. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1959. 253 p. (MIRA 12:9)
(Blades--Vibration)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

VOROB'YEV, M.M., kand. veter. nauk; [illegible], veterinarnyy vrach

Treating cyathostomosis in geese. [illegible]
[illegible]

1. Chernigovskaya oblastnaya veterinarnaya laboratoriya.

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VOROB'YEV, M.M.; [illegible]

[illegible]nigov and Kiev

Distribution [illegible] 33 no.5:625

Provinces; [illegible] (MIRA 18:4)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. P.

"Alloys of Titanium With Tungsten and Aluminum," by N. T. Gudotsov and I. P. Panchenko, Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, No 2, Feb 57, pp 139-143

An investigation of the hardness, endurance, and heat-resistence of alloys of titanium with 3 percent aluminum and 5, 10, and 15 percent tungsten revealed the expediency of alloying titanium with both aluminum and tungsten; these alloys are strengthened at 400-600 degrees [centigrade], as a result of which the hardness at room temperature is increased to 44, 82, and 85-117 Vickers units for the corresponding percentages; hardness and endurance increase with increased tungsten content. (U)

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Panchenko I. P.

F-2

USSR/Microbiology - Antibiosis and Symbiosis, Antibiotics.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 14736

Author : Gromashevskaya, L.L., Golub, N.F., Panchenko, I.P.

Inst : -

Title : Sensitivity of Dysentery Bacteria to Biomycin.

Orig Pub : V sb.: Disenteriya, Kiev, Gosmedizdat USSR, 1956, 62-69

Abstract : Studies of the sensitivity of 120 strains of Flexner bacteria of various serotypes and 80 strains of Sonne bacteria to biomycin (I), levomycetin and norsulfazole showed that the most active I depressed the growth of the main mass of bacteria (91.5% of strains studied) at a concentration of 0.1-6.0 γ/ml. Sonne bacteria are more resistant to activity of I than Flexner bacteria, the sensitivity of which did not depend upon belonging to a definite serotype. The microorganisms are more sensitive to I on a Moore than on a Drobotko medium. I decreases oxygen consumption on a propiferating as well as on a non-proliferating culture

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Panchenko, I. P.

137-58-2-4253

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 2, p 281 (USSR)

AUTHORS: Gudtsov, N. T., Panchenko, I. P.

TITLE: Titanium-tungsten Alloys (Titanovol'framovyye splavy)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 36, pp 5-12

ABSTRACT: A study was made of the effect of W on the microstructure, hardness, and long-term strength of magnesium-fusion-process Ti alloys (with 5, 10, and 15% W contents) smelted in graphite crucibles under a residual pressure of 10^{-2} mm Hg and containing 0.7-1.0% C. The alloys, quenched in water after being maintained 1-2 hours at a temperature of 1100°C, had the microstructure of a transformed β and molecular phase containing $\sim$10.5% C. As an alloy's W content was increased, the microhardness of the molecular phase increased also, as a result of its enrichment with W. Quenching reduced the hardness of Ti-W alloys and increased their ρ. After being annealed at $\sim$800° they had a three-phase structure: a molecular phase and two solid solutions based on α-Ti and W. The microstructure of alloys which had been aged at 200-500° for 10-24 hours retained the acicular form it had acquired as a result of the quenching.

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137-58-2-4253

Titanium-tungsten Alloys

As the W content was increased, the formation temperature of the high-strength phase rose from 200° (in the case of the Ti) to 400-500° (in the case of the Ti/15%-W alloy). Gradual heating both intensified and raised the temperature of the dispersion-hardening process in the W-enriched alloys. Heating to 600° caused coagulation of the high-strength phase and a decline in hardness. At 650-700°, under a stress of 10-20 kg/mm^2, the investigated alloys exhibited a relatively low long-term strength, which increased, however, concurrently with their W content.

G. T.

1. Titanium alloys--Microstructure 2. Titanium alloys--Production
3. Titanium alloys--Test methods 4. Titanium alloys--Test results

Card 2/2

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PANCHENKO, I.P.

Modernizing crank presses. Mashinostroitel' no.11:7-8 N '58.
(MIRA 11:12)

(Power presses)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.P.; GUDTSOV, N.T. [deceased]

Investigation of titanium alloys with tungsten, aluminum, beryllium and boron. Titan i ege splavy no. 1:114-123 '58. (MIRA 14:5)

1. Institut metallurgii AN SSSR.
(Titanium alloys--Metallography) (Creep of titanium--Testing)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. P.

18(2) PHASE II - ABSTRACTS AB-1

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 209 p. 4,000 copies printed.

Resp. Ed.: N.V. Agayev, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: V.B. Rzhevskiy; Tech. Ed.: A.A. Kiseleva.

INTRODUCTION: This book, of which a Phase I Exploitation (SOV/1200) has been prepared, is a collection of scientific papers devoted to the study of titanium and its alloys from three main points of view: physical metallurgy, forming, and welding. Special problems investigated include structural changes occurring during welding, determination of the content of harmful gases, development of industrial methods of rolling, and oxidation at various temperatures.

PART I. PHYSICAL METALLURGY

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Titanium and Its Alloys (Cont.) AB-1

Gudtsov, N.T. and I.P. Panchenko (Institute of Metallurgy, USSR Academy of Sciences) Investigation of Titanium Alloys Containing Tungsten, Aluminum, Beryllium, and Boron 114

The aim of this investigation was to study the microstructure, hardness, and creep of the following alloys: 5 percent W + Ti; 5 percent W + 3 percent Al + Ti; 5 percent W + 3 percent Al + 0.1 percent Be + Ti; and 5 percent W + 3 percent Al + 0.1 percent B + Ti. The following materials were used for making the alloys: Mg-reduced titanium (99.93 percent), aluminum (99.99 percent), beryllium (99.3 percent), and ferroboron (20.45 percent B). The alloys were vacuum-melted in graphite crucibles. The ingots were forged at 800-1100° C into small rods, from which the test specimens were made. Quenching was carried out at 1100°. The specimens were heated in evacuated quartz tubes for 2 hours, after which the tubes were broken in water. Conclusions. 1) Alloying of titanium with W, Al, Be, and B reduced the creep rate 26-40 times at 500° C and under a tension of 5 kg/mm^2 during a 528-hour test period. 2) The alloys tested should be used at temperatures below 500°. 3) Measurement of hardness in a vacuum installation in the process of heating at progressively higher temperatures permits the determination of the hardening range,

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and measurement of hardness during isothermal holding at heat makes it possible to trace the rate and duration of the hardening process and to make a proper choice of aging conditions for the alloys. There are 5 figures, 7 tables, and 3 references (2 Soviet and 1 English).

PART II. FORMING OF TITANIUM AND TITANIUM-BASE ALLOYS

Pavlov, I.M. (Institute of Metallurgy, USSR Academy of Sciences)
General Conditions for Forming Titanium and Its Alloys 124

Titanium and its alloys require special conditions for hot and cold forming. Cold deformation of Ti (alpha phase), as in other metals with a hexagonal structure (Mg, Zn, etc.), is accompanied by marked twinning. Cold ductility of Ti is greater than that of these other metals because of the greater number of possible slip and twinning planes. In a single cold-forming operation, Ti and its commoner alloys can be deformed by not more than 30 percent. With fractional (or repeated) deformation the figure can be brought up to 80 percent. Cold working in a particular direction causes anisotropy to develop. The crystal anisotropy is weak, but the mechanical anisotropy rises sharply when car-

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

AUTHOR: Panchenko, I.P. SOV/117-58-11-5/26

TITLE: The Modernization of Crank Presses (Modernizatsiya krivoshipnykh pressov)

PERIODICAL: Mashinostroitel', 1958, Nr 11, pp 7 - 8 (USSR)

ABSTRACT: Crank presses of the firm "Berningauz", with a pressure of 180 tons and more, are used for cold drop forging. The friction clutch of these presses has been modernized by engineers of KhTZ. There is 1 diagram.

1. Forge presses--Performance 2. Clutches--Design

Card 1/1

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PANCHENKO, I.P.

Mechanized conveying of carts. Mashinostroitel' no.11:23 N '60.
(MIRA 13:10)

(Conveying machinery)

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

BAKLANOV, Ivan Mikhaylovich, kapitan-nastavnik; [illegible], Ivan Fanteleyevich, kapitan-nastavnik; [illegible], [illegible], red.

[Sailing tankers to the Antarctic] Opyt plavaniia tankerov v Antarktiku. Moskva, Transport, 19[illegible]5. 74 p. (MIRA 18:4)

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I. Ya.

"The Clinical Importance of Electrocardiographs in the Evaluation of the Condition of the Cardiovascular System in Cattle During Various Functional Disturbances." Cand Vet Sci, Moscow Technological Inst of the Meat and Dairy Industry, 6 Jan 55. (VM, 27 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun55

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, I.Ya.; PUCHKOVA, S.M.

Condition of the organism of lambs poisoned with strontium-90. Veterinariia 42 no.5:77-80 My '65. (MIRA 18:6)

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L 09414-67
ACC NR: AT6029427 (A)

SOURCE CODE: UR/0205/66/006/004/0625/0627

AUTHOR: Dobryakova, G. V.; Panchenko, I. Ya.; Povalyayev, A. P.

ORG: none

TITLE: Ratio of strontium to calcium upon passage from rations into dog skeletons

SOURCE: Radiobiologiya, v. 6, no. 4, 1966, 625-627

TOPIC TAGS: dog, isotope, calcium, strontium, biologic metabolism, food ration, bone

ABSTRACT: Tests were conducted for 180 days on 2 groups of dogs whose overall and mineral metabolism had been raised to a slightly positive calcium balance. The dogs were fed bone meal from animals who had received $strontium^{90}$ for a long time. Doses for groups 1 and 2 were 4.4×10^{-9} and 4.4×10^{-8} curie and 1 and 10 g calcium respectively. The animals were sacrificed after 30, 90 and 180 days and samples of rations, bone, blood, soft tissues, urine and feces were studied radiometrically and chemically. In group 2, the absolute $strontium^{90}$ accumulation in bone was only 2 fold that of group 1 although its content in the ration was 10 fold. Calcium and strontium absorption in group 2 was 1.5-2 fold that of group 1. No statistically valid difference was found for the calcium content of bones from the animals of groups 1 and 2. The same applied to soft tissues and blood. Results show that the uptake of calcium and strontium from the gastrointestinal tract and their accumulation in the

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L 09414-67

ACC NR: AP6029427

body occurs in a certain ratio; thus their metabolism in the body is apparently subject to the same rules. The uptake depends on the Ca/Sr ratio with a discriminatory correction for Sr. Orig. art. has: 2 tables.

SUB CODE: 06, 07/ SUBM DATE: 4Feb65/ ORIG REF: 002/ OTH REF: 004

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C - a. Organic Sand
App

Br abs

[illegible]. **Capillary pyrnometer for determining the specific gravity of gasolines.** O. V. Pletneva and K. N. Panchenko (*Neft. Khoz.*, 1947, No. 2, 58—60; *J. Inst. Petrol.*, 1948, 34, 202 A).—Tests with an instrument made to the design of Lipkin (C., 1944, 94) showed it to be easy to handle and to give results repeatable within 0·0002—0·0003 unit. R. B. CLARKE

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

463. CAPILLARY PYCNOMETER FOR DETERMINING SPECIFIC GRAVITY OF GASOLINES. Pletneva, O. V. and Panchenko, K. N. (Neftyanoe Khoz., 1947, 25, (2), 58-60; Chem. Abstr., 1947, 41, 6392).

APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4"

"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, Kh. N.

PA [illegible]

USSR/Chemistry - Fuels

Feb. [illegible]

"A Capillary Pycnometer to Determine the Specific Gravity of Gasoline," O. V. Pletneva, Kh. N. Panchenko, 2 pp

"Neftyanoye Khozyaystvo" Vol XXV, No 2

Schematic diagram and a graph. Discusses measurements of isopentane, heptane, benzol, isopropyl-benzol, and aviation gas, with a table.

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1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

CA

22

Capillary pycnometer for determining the specific gravity of gasolines. O. V. Pleteneva and Kh. N. Pauchenko. Neftyanoe Khoz. 25, No. 2, 58-60(1947); cf. C.A. 38, 881[4]. Bruno C. Metzner

COMMON ELEMENTS

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

1. PA[illegible], K.P., Engineer

2. USSR (600)

(STZ) (Stalingrad Tractor Plant)
"The Maximum Value of a Subsidiary Angle [illegible]."
Stanki i Instrument, 12, No. 1, 1941

3. [redacted] Report [illegible], [illegible] 1951

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, K.P.

9

USSR

Gladilin, A. N., Dubinin, N. P., Zhevtunov, P. P., Nazarov, S. T., Panchenko, K. P., Popov, V. A., Popov, L. A. and Storozhev, M. V.: Tekhnologiya metallov (Technology of Metals). Moscow: Mashgiz, 1952. 637 pp. R. 24, K. 10. Reviewed in *Vestnik Mashinostroeniya* 34, No. 11, 103-8(1954).

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

GLADILIN, A. N.; DUBININ, N. P.; ZHVETUNOV, P.P.; NAZAROV, S.T.; PANCHENKO, K.P.; POPOV, V.A.; POPOV, L.A.; and STOROZHEV, M.V.

Tekhnilogiya Metallov, published by Mashgiz, Moscow, 1952

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, F. P., ed.

Russian scientists - founders of the sciences of metallurgy. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 27 p. (53-20056)

TN[illegible].R95

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"APPROVED FOR RELEASE: 06/15/2000 CIA-RDP86-00513R001238920020-4

PANCHENKO, K.P.

123-1-604

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957, Nr 1, p. 101 (USSR)

AUTHOR: Panchenko, K. P.

TITLE: Screw Profiled Form Cutters (Vintovyye fasonnyye rezetsy)

PERIODICAL: Rezaniye metallov i instrument. Sbornik (MVTU, 54), Moscow, Mashgiz, 1955, pp. 111-135

ABSTRACT: The author presents a mathematical analysis of the degree of precision of a screw type thread form cutter and a method of calculating design data. It was established that the most important factors affecting the cutting precision are the taper of δ_0, the relief and rake angles, and the angle of profile distortion φ. Maximum error with δ_0 = 60° and φ =30° is 1.4 mm. The longer the tapered part of the cutter (ℓ) and the shorter the radius of the wider base (R), the greater the error. With R = 35 mm and ℓ = 30 mm, the error reaches 1 to 1.2 mm. The effect of other factors is practically nil. On comparing the obtained data, the author concludes that screw profiled form cutters are as accurate as disc form cutters. B.L.Ya.

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ANTIPOV, K.F., inzhener; B[illegible]AKSHIN, [illegible], doktor tekhnicheskikh nauk, professor; BARYLOV, G.I., inzhener; BEYZEL'MAN, R.D., inzhener; BERDICHEVSKIY, Ya.G., inzhener; BOBKOV, A.A., inzhener; KA[illegible]NIN, M.A., kandidat tekhnicheskikh nauk; KOVAN, V.M., doktor tekhnicheskikh nauk, professor; KOR[illegible]KOV, V.S., doktor tekhnicheskikh nauk; KOSILOVA, A.G., kandidat tekhnicheskikh nauk; KUDRYAVTSEV, [illegible], doktor khimicheskikh nauk, professor; KURYSHEVA, Ye.S., inzhener; LAKHTIN, Yu.M., doktor tekhnicheskikh nauk, professor; NAYERMAN, M.S., inzhener; NOVIKOV, M.P., kandidat tekhnicheskikh nauk; PARIY-SKIY, M.S., inzhener; PERE[illegible]OV, M.N., inzhener; POPILOV, [illegible]Ye., inzhener; POPOV, V.A., kandidat tekhnicheskikh nauk; SAVE[illegible]N, M[illegible], doktor tekhnicheskikh nauk, professor; SASOV, V.V., kandidat tekhnicheskikh nauk; SATA[illegible], [illegible], doktor tekhnicheskikh nauk, professor; SOKOLOVSKIY, A.P., doktor tekhnicheskikh nauk, professor [illegible]; STANKEVICH, V.G., inzhener; [illegible]RUMIN, Yu.[illegible], inzhener; [illegible], inzhener; TSEYTLIN, [illegible], inzhener; SHUKHOV, Yu.V., kandidat tekhnicheskikh nauk; BA[illegible], [illegible]I., kandidat tekhnicheskikh nauk; VOLKOV, S.I., kandiat tekhnicheskikh nauk; GORODETSKIY, [illegible]Ye., doktor tekhnicheskikh nauk, professor; GOROSHKIN, A.K., inzhener; DOSCHATOV, V.V., kandidat tekhnicheskikh nauk; ZAMA[illegible], [illegible], inzhener; ISAYEV, A.I., doktor tekhnicheskikh nauk, professor; [illegible], kandidat tekhnicheskikh nauk; MALOV, A.N., kandidat tekhnicheskikh nauk; MARDANYAN, M.Ye., inzhener; PANCHENKO, K.P., kandidat tekhnicheskikh nauk; SEKRETEV, [illegible], inzhener; STAYEV, K.P., kandidat tekhnicheskikh nauk; SYROVATCHENKO, P.V., inzhener; TAURI[illegible], [illegible], inzhener; EL'YASHEVA, M.A., kandidat tekhnicheskikh nauk;

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