

VECHERKIN, S.S., kand.veterin.nauk; YESIKOV, V.I., starshiy nauchnyy
sotrudnik

Control measures against Hemosporidia infections in cattle in
Kirghizistan. Veterinariia 40 no.7:17 J1 '63. (MIRA 16:8)

1. Kirgizskiy nauchno-issledovatel'skiy institut zhivotnovodstva i
veterinarii.

(Kighizistan--Hemosporidia)
(Kirghizistan--Cattle--Diseases and pests)

L 2228-66 EWT(m)/EFF(n)-2/V/ DM
ACCESSION NR: AP5023767

UR/0089/65/019/003/0261/0208
621.039,514.23

AUTHOR: Smolin, V. N.; Polyakov, V. K.; Yestkov, V. I.; Shulnov, Yu. N.

TITLE: Study on a stand of the start-up conditions of the I. V. Kurchatov atomic power plant in Beloyarsk

SOURCE: Atomnaya energiya, v. 19, no.3, 1965, 261-268

TOPIC TAGS: atomic energy plant equipment, nuclear power plant, water cooled nuclear reactor, boiling water reactor

ABSTRACT: The hydrodynamic stability of the flow rate of the heat carrier in the channels under boiling conditions was studied, and the switching of heating channels from water-cooling to vapor-cooling operation followed by the attainment of the rating is discussed. Experimental thermotechnical stands were constructed the basic configurations of which corresponded to the technological layouts of the first and second units of the electric power station. On the basis of the data obtained from the experiments performed, operational conditions providing for a stable flow rate and reliable cooling in the evaporating and superheating
Card 1/2

L 2228-66
ACCESSION NR: AP5023767

channels during the start-up period and under rated conditions were selected. It is shown that the method of gradual replacement of water in the superheating channels by a steam-water mixture and then by steam insures an adequate operation of the channels and of the entire system during the start-up period. Orig. art. has: 7 figures.

ASSOCIATION: None

SUBMITTED: 18Sep64

ENCL: 00

SUB CODE: NP

NO REF SOV: 005

OTHER: 003

Card 2/2

YESIKOV, V.I., starshiy nauchnyy sotrudnik

Hemosporidiosis of cattle in the south of Kirghizia, Veterinariia
41 no.7:48-49 J1 '64. (MIRA 18:11)

1. Kirgizskiy nauchno-issledovatel'skiy institut zhivotnovodstva
i veterinarii.

YESIKOV, Yu.G., inzh.

Stress distribution of an electric field in a cylindrical insulator.
Elektrichestvo no.8:67-70 Ag '64. (HIRA 17:11)

1. Moskovskiy energeticheskiy institut.

VALEYEV, Kh.S. (Moskva); YESIKOV, Yu.G. (Moskva)

Discharge voltage of insulators with high ambient relative humidity.
Elektrichestvo no.4:86-88 Ap '63. (MIRA 16:5)
(Electric lines—Overhead) (Electric discharges)

YESIKOV, Yu.G., inzh.

Sectionalizing of plane-parallel insulation. *Elektrichestvo*
no.2:72-74 F '64. (MIRA 17:3)

1. Moskovskiy energeticheskiy institut.

YESIKOV, A.D.; YESIKOVA, G.S.; YAKOVLEV, G.N.

Determination of the absolute age of some lepidolites by the
rubidium-strontium method. *Biul.Kom.po opr.abs.vozr.geol.form.*
no.5:89-93 '62. (Lepidolite) (Geological time) (MIRA 15:11)

S/169/62/000/012/007/095
D228/D307

AUTHORS: Yesikov, A.D., Yesikova, G.S. and Yakovlev, G.N.

TITLE: Determining the absolute age of some lepidolites by the rubidium-strontium method

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1962, 10, abstract 12A81 (Byul. Komis. po opredeleniyu absolyutn. vozrasta geol. formatsiy, AN SSSR, no. 5, 1962, 89-93)

TEXT: The rubidium-strontium method of ascertaining the absolute age of minerals is based on the β -decay of the rubidium isotope with mass 87 and on the formation of the stable strontium isotope. Lepidolites which, as a rule, contain up to 2-3% rubidium are most suitable for age determination. Mass-spectrometric methods are being applied to determine extremely small amounts of strontium and rubidium. Work on determining the age of several lepidolites was carried out in the Laboratoriya absolyutnogo vozrasta IGYEM AN SSSR (Absolute Age Laboratory, IGYEM, AS USSR). Rubidium was deter-
Card 1/2

Determining the absolute age ...

S/169/62/000/012/007/095
D228/D307

mined by the flame photometry method; radioactive strontium was determined on a mass-spectrograph. One-band sources, mass-spectral scanning, and the method of increasing the mass-spectrometer sensitivity, which were all developed by the author, were employed in the latter determinations. The results obtained from determining the age of lepidolites by the rubidium-strontium method agree well with data for age determinations by the potassium-argon method.

[Abstracter's note: Complete translation]

Card 2/2

USSR / Microbiology. Sanitary Microbiology. Micro-
biology of Food Products.

F

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5520.

Author : Klyuchareva, T. Ye., Polyakova, A. S.; Yesikova,
N. S.

Inst : Not given.

Title : On the Suitability of the Method of Agglutin-
ation on Glass (Huddleson Reaction) for Deter-
mination of the Contamination of Milk Products.

Orig Pub: Zh. mikrobiol., epidemiol. i immunobiologii,
1957, No 9, 30.

Abstract: Tests were carried out with fermentation of
milk samples with a negative Huddleson reaction
to establish the relationship between a posit-
ive agglutination reaction and the degree of
acidity of dairy products. All the samples pro-

*Laboratory, Tashkent State Sanitary-Epidemiology
Station.*

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USSR / Microbiology. Sanitary Microbiology. Micro-
biology of Food Products.

F

Abs Jour: Ref Zhur-Biol., No 2, 1959, 5520.

Abstract: duced a positive reaction in 1:50 and 1:100
dilutions when the acidity exceeded 80° ac-
cording to Turner. The agglutination titer
increased in proportion to the increase in
acidity. Accordingly, the nonspecificity of
the agglutination reaction on glass for dairy
products with an acidity above 80° according to
Turner was demonstrated. -- L. G. Ivanova.

Card 2/2

YESILEVSKAYA, M.A.; KIRICHENKO, L.B.; MOYERMAN, Yu.A.

Characteristics in the development of the Ukrainian strain of the
tussah moth in the Ukraine, Crimea, and Transcaucasia. Zool. zhur.
34 no.6:1315-1319 N-D '55. (MIRA 9:1)

1. Kafedra eksperimental'noy ekologii Khar'kovskogo gosudarstvennogo
universiteta imeni A.M.Gor'kogo.

(Silkworms)

YHSILEVSKIY

V.P.

KHIMCHENKO, N.V., kandidat tekhnicheskikh nauk; YHSILEVSKIY, V.P.,
inzhener

Multiple defectoscopy fo compressor pins. Sbor.st. NIIEKIMHASH
no.14:109-116 '53. (MIRA 7:11)
(Compressors) (Quality control)

AID P - 5207

Subject : USSR/Engineering

Card 1/2 Pub. 107-a - 6/13

Authors : Khimchenko, N. V., Kand. of Tech. Sci., and V. P. Yesilevskiy, Eng. (NIIKhIMMASH)

Title : Ultrasonic control of welded seams

Periodical : Svar. proizv., 7, 18-22, J1 1956

Abstract : The authors present this method of inspection of welded seams as the most effective for detection of inner microscopic defects because the ultrasonic waves penetrate into metal deeper than X-rays or even Gamma-rays. They describe the technique of detection and the equipment used in ultrasonic control. Four photos, 2 tables, 8 drawings and 1 graph.

Institutions: Leningrad Electrotechnical Institute; Scientific Research Institute of Chemical Machine-Building (NIIKHIMMASH); All-Union Scientific Research Institute of Aviation

Yesilevskiy, V.P.

AUTHORS: Khimchenko, N. V., Candidate of Technical Sciences 64-8-9/19
Yesilevskiy, V. P.

TITLE: Application of Ultrasonic Calipers Under Industrial Conditions
(Primeneniye ul'trazvukovykh tolshchinomerov v promyshlennykh usloviyakh).

PERIODICAL: Khimicheskaya Promyshlennost', 1957, Nr 8, pp. 39-41 (USSR)

ABSTRACT: The devices used for the ultra sonic thickness gauging: the defectoscope Y,Д -7 and the thickness gauge Y3T -3 (both devices are constructed by TsNIIImash) are described and their applications in the industry are shown. Both are based upon the ultra sonic impulse oscillations with a frequency of 2,5 mc and give the possibility of measuring flat and cylindrical products with a thickness of 8-10 mm up to 2 m. For thinner parts the thickness gauges of the resonance type are used. The measuring preciseness amounts to 2,0 - 2,5% at neatly worked surfaces and to -5% at unworked (rolled stock). The ultra sonic thickness gauge and the defectoscope are fitted with an ultra sonic time normal (standard). The time normal consists of a piezo element, a cylinder, a piston, and a scale. The cylinder is filled with liquid. The working principle of the devices is the following: a high-frequency

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Application of Ultrasonic Calipers Under Industrial Conditions 64-8-9/19

generator generates short high-frequency alternating voltage impulses which excite the piezoelectric plates of the sender and of the time normal which on their part transform these oscillations into elastic oscillations of the same frequency. With the emission of the initial impulse into the product the control generator which controls the ray of the electron-beam tube begins to work. The impulses are reflected at the "bottom" of the product and are again transformed into electric oscillations by the piezoplate. The latter are intensified in a amplifier and reach after the detection the vertical-deflecting plates of the electron-beam tube. In this case a "peak" occurs on the screen of the tube (as the result of the deviation of the electron ray). Simultaneously the "peak" produced by the reflexion of the ultra sonic from the piston of the time normal is observed. The position of this "peak" on the screen depends on the position of the piston. The latter can be determined by means of the scale (in millimeters or microseconds). In changing the position of the piston both peaks can be brought to agreeing and the thickness of the product in millimeters can be read at the device scale or the time of the ultra sonic passage in the metal in microseconds. Both devices have a scale graduation which is adjusted to

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Application of Ultrasonic Calipers Under Industrial Conditions 64-8-9/19

steel products. In the case of other materials the measuring result has to be multiplied with a coefficient K. The measuring is obtained from the formula $S = V\tau$ mm, V is the velocity with which the ultrasonic propagates in the material in question in mm/ μ sec and τ is the reading of the device. In the case of tubes applies the formula

$$y = R - \sqrt{R^2 - \frac{a^2}{4}}$$

R is the radius of the tube or of the fitting and a is the width of the measuring place. The real thickness of the product is computed from

$$S = x + y, \quad x \text{ is the reading of the thickness gauge in mm.}$$

Some examples for the application of the devices in the industry are given. In the measuring of elements of the Flansch compounds the fact is important that the measuring is possible without a dismounting. Also the possibility of measuring double knees of rifflet tubes of heating furnaces is of great practical importance.

Card 3/4

KHIMCHENKO, N.V., kand. khim. nauk; YESILEVSKIY, V.P.

Using ultrasonic thickness gauges under industrial conditions.
Khim. prom. no.8:487-489 D '57. (MIRA 11:2)
(Ultrasonic waves--Industrial applications)
(Gauges)

KHIMCHENKO, N.V.; YESILEVSKIY, V.P.; TSECHAL', V.A.

Ultrasonic defectoscopy of welded joints made by automatic welding with flux. Avtom. svar. 10 no.2:70-78 Mr-Ap '57. (MLRA 10:6)

1. Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya i Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona Akademii nauk USSR.

(Electric welding--Quality control)
(Ultrasonic waves--Industrial applications)

KHIMCHENKO, N.V., kand.tekhn.nauk; ~~YESILEVSKIY, V.P., inzh.~~

Over-all defectoscopy of large-size high-pressure equipment.

Sbor.st. NIIKHIMMASH no.23:111-123 '57. (MIRA 12:5)

(Chemical apparatus--Testing)

24.1800

67981

SOV/112-59-21-45028

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 21, p 193
(USSR)

AUTHORS: Khimchenko, N.V. Yesilevskiy, V.P.

TITLE: Ultrasonic Thickness Measurement¹⁴

PERIODICAL: Sb. statey. Vses. n-i. i konstrukt. in-ta khim. mashinostr., 1957,
Nr 23, pp 124-133

ABSTRACT: An experience in the use of ultrasonic thickness gauges and flaw detectors, supplied with an ultrasonic time standard for checking the thickness of parts and units of oil and chemical equipment is described. A brief characteristic of the ultrasonic thickness gauge UZT-3 and of the ultrasonic flaw detector UZD-7 designed by TsNIIT Mash is given: the principle of operation of the ultrasonic time standard is investigated. A correction to the measurement data for a decrease in thickness of cylindric pieces (pipes, columns) in the place of checking, on account of a flat platform for a piezo-feeler, is considered. An analysis of the results of measurements of the wall thickness by means of ultrasonic instruments is given for casings of high pressure apparatuses, elements of flange connections,

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Ultrasonic Thickness Measurement

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elbows of ribbed pipes and high pressure pipes. The data of ultrasonic measurements are compared with those obtained by micrometer. Discrepancies of readings in all cases do not exceed $\pm 1.5\%$ of the thickness being checked.

Y.u.V.B.

Card 2/2

YESILEVSKIY, V. P.

PHASE I BOOK EXPLOITATION

SOV/2555

25(6)

Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Ukrainakoye respublikanskoye pravleniye

Novyye metody kontrolya i defektoskopii v mashinostroyeni i priborostroyeni (doklady Respublikanskoy konferentsii (Nov. Methods of Inspection and Flaw Detection in the Machinery and Instrument-manufacturing Industries (Reports of the Conference Held at Kiev, 1956)) Kiev, Gosizdat USSR, 1958. 264 p. 4,700 copies printed.

Sponsoring Agency: Akademiya nauk USSR.

Ed.: A. Analtin; Tech. Ed.: P. Patsalyuk; Editorial Board: I. I. Greban, B. D. Gruzin, A. Z. Zhundakly, G. N. Savin (Resp. Ed.), I. D. Pavnerman (Dep. Resp. Ed.), and A. A. Shakhlovskiy.

PURPOSE: This book is intended for engineers, scientific workers, and technicians dealing with problems of inspection and flaw detection.

COVERAGE: This is a collection of scientific papers presented at a

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conference sponsored by the Academy of Sciences, USSR, and the Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti, Ukrainakoye pravleniye (Ukrainian Branch, Scientific and Technical Society of the Instrument-manufacturing Industry). The papers deal with modern methods of inspection and flaw detection. The subjects discussed include the use of electron microscopes. In the inspection of metal surfaces: X-ray, gamma-ray, luminescence, magnetic, and ultrasonic methods of flaw detection; use of radioactive isotopes; X-ray diffraction methods of metal analysis; and the use of interferometric methods of measuring length and thickness and determining the coefficient of linear thermal expansion. So personalities are mentioned. References follow several of the

Guravich, A. L., Engineer, Leningrad NII of Bridges. Ultrasonic

Detection of Flaws in Fillet Welds

143

El'machenko, V. V., V. P. Yesilevskiy, Engineer, and V. A. Tschell, Engineer, Kiev Electrowelding Institute Iamni Ye. O. Faton.

Ultrasonic Detection of Flaws in Electroslag Welds

159

Trushchenko, A. A., Engineer, Kiev Electric Welding Institute Iamni Ye. O. Faton. Testing Welds for Permeability

161

Smirnova, M. B., Doctor of Technical Sciences, Professor Leningrad VNI Iamni Mendeleev. Ways of Improving the Accuracy of the

173

Interference Method of Measuring Length

180

Koztshin, M. T., and A. A. Shakhlovskiy, Kiev State University Iamni Shakhlovskiy. Use of NII Microinterferometers for Determining Thicknesses and Refractive Indices

180

Vol'kova, V. A., Candidate of Technical Sciences, Leningrad VNI Iamni Mendeleev. Interference Method of Measuring the

188

Card 6/9

PHASE I BOOK EXPLOITATION SOV/5488

Moscow. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya.
 Materialy v khimicheskoy mashinostroyeni (Materials in Chemical Machine Building) Moscow, Informatsionno-izdatel'skiy otdel, 1960. 143 p. (Series: Its: Trudy, v. 34) 3,000 copies printed.
 Sponsoring Agency: Gosudarstvennyy komitet Svyetov Ministrov SSSR po avtomatizatsii i mashinostroyeniyu and Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya NIIMKPMASH.
 Ed. (title page): V. K. Fedorov, Candidate of Technical Sciences; Editorial Council: Chairman: V. B. Nikolayev; Deputy Chairman: Yu. M. Vinogradov, Candidate of Technical Sciences; B. N. Borisoglebskiy, A. M. Goncharov, Yu. G. Popandopulo, I. N. Rukalov, Candidate of Technical Sciences and G. M. Yusova, Candidate of Technical Sciences; Ed.: V. I. Glukhov; Tech. Ed.: P. A. Vshivtsev.

PURPOSE: This collection of articles is intended for technical personnel in chemical machine building and other branches of the machine and instrument industry.
 CONTENTS: The collection deals with the results of investigations on the mechanical, corrosive, and engineering qualities of certain alloys. Also discussed are heat-treatment regimes, the phase composition of stainless steels, methods of checking products, and new designs of apparatus used in checking. References accompany each article.

TABLE OF CONTENTS:

Gavrilov, V. M. [Engineer], and V. K. Fedorov [Candidate of Technical Sciences]. Crystallization of Alloys in the Elastic-Vibration Field 3
 Moskvkin, M. I. [Engineer]. Metal which Will Resist Corrosion in Molten Type Metal Containing Zinc 12
 Shadrin, M. B. [Engineer], and V. M. Makarov [Engineer]. Induction Hardening of Small-Module Pistons of [Speed] Engines 26
 Chernykh, H. P. [Engineer]. Industrially Aligned with DOKASHA-100000 [Branch of NIIMKPMASH] Investigation of the Effect of Hydrogen on the Endurance of Carbon Steels [Engineers V. D. Kolchanova and M. I. MLY took part in the investigation] 33
 Akhmetzava, A. Z. [Candidate of Technical Sciences] and G. H. Shumakova [Engineer]. Effect of Heat Treatment on the Phase Composition of KHL50YT and KHL50YT Steels [V. N. Poyatlova, P. T. Daitryev, B. M. Shevelkin, M. Shabanova, Z. K. Qurtsova, and I. Ye. Lobanova took part in the investigation] 50
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 Shevelkin, B. M. [Candidate of Technical Sciences]. Effect of Various α -Phase Contents in KHL50YT Steel and α - and σ -Phase Card 3/5

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- Materials in Chemical (Cont.) SOV/5488
- Contents in Kh18N2GT Steel on Their Formability [Engineers A. P. Golovanova, L. L. Kravchenko, V. N. Dyatlova, and Candidate of Technical Sciences A. P. Akhmetzhanova took part in the investigation] 82
- Rubtsova, M. V. [Junior Scientific Worker], M. S. Dombrovskaya [Doctor of Chemical Sciences], V. G. Kuznetsov [Doctor of Chemical Sciences], and Ye. N. Zhilina [Engineer]. Chemical Investigation of the α -Phase Precipitated From Kh18N2GT Steel [X-ray phase analysis was carried out at the Institute of General and Inorganic Chemistry of the Academy of Sciences of the USSR by V. G. Kuznetsov and Z. V. Popova] 104
- Zeslavskiy, V. P. [Engineer], and N. S. Anulya [Academician of the Academy of Sciences of the Belorussian SSR]. Ponderomotive Magnetic Method of Determining the α -Phase Content in Austenitic Steel [Equipment was manufactured by Mikhuritsin, Technician V. M. Malinin participated in working out the electrical circuit for the α -phasometer] 112
- Riashchenko, M. V. [Candidate of Technical Sciences], and V. N. Prikhod'ko [Engineer]. Wide-Range Ultrasonic Analyzer for Checking the Structure of Metals [Technicians V. M. Kravtsov and N. N. Matranavskiy participated in the production of the attachment] 120
- Riashchenko, M. V. and V. N. Prikhod'ko. Use of the Wide-Range Ultrasonic Analyzer in Investigating the Structure of Steel and Cast Iron 130
- Riashchenko, M. V., V. N. Prikhod'ko, and V. P. Gruzak [Engineer]. Checking the Metal Quality of Large Shafts Under Factory Conditions 137

AVAILABLE: Library of Congress

YESILEVSKIY, V.P., inzh.; AKULOV, N.S., akademik

Ponderomotive magnetic method of determining the per cent content of the α -phase in austenite steel. Trudy NIIKHIMMASH no.34:112-119 '60. (MIRA 14:1)

1. AN BSSR (for Akulov). (Ferromagnetism) (Austenite)

69971

S/170/60/003/01/14/023

B022/B007

24,2300

AUTHORS: Akulov, N. S., Yesilevskiy, V. P.

TITLE: The Generalization of the Method of Magnetic Mirror Images

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1960, Vol. 3, No. 1, pp. 87 - 90

TEXT: The method of measuring the force necessary to separate a permanent magnet from the surface of the product or sample is now being more and more used. This force of the magnet is a function of magnetic susceptibility, which is determined by the phase composition and structure of the ferromagnetic substance. If a non-magnetic layer exists on the surface of the ferromagnetic material, the separating force of the magnet depends also on the thickness of this layer. This method offers wide possibilities of use, because it has many advantages. Make-and-break mechanisms are used in the tests. The separating force F is calculated on the basis of the "mirror image"-principle for a magnet with variations of h (distance between the surface of the product and the end of the magnet) within a wide range. Fig. 1 shows the curve of the dependence of the separating force of the magnet on the thickness of the non-magnetic layer, and Fig. 3 shows the theoretical curve of the influence of the shifting

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Physics Tech Inst. Minsk

The Generalization of the Method of Magnetic Mirror
Images

69971

S/170/60/003/01/14/023
B022/B007

of the magnetic pole upon the amount of the separating force. It is mentioned that the theoretical part of this paper was carried out by N. S. Akulov and the experiments by V. P. Yesilevskiy. There are 3 figures and 1 Soviet reference.

ASSOCIATION: Fiziko-tehnicheskiy institut, g. Minsk (Institute of Physics and Technology, City of Minsk)

4

Card 2/2

L 15198-63 EWP(q)/EWT(m)/BES AFTTC/ASD Pad ID
ACCESSION NR: AR3001637 9/0137/63/000/004/1115/1115

SOURCE: RZh. Metallurgiya, Abs. 4I653

600
56

AUTHOR: Yesilevskiy, V. P.; Akulov, N. S.

TITLE: ~~XXXXXXXXXXXXXXXXXXXX~~ The pondermotive magnetic method of determining the percentage of the alpha-phase in austenitic steel

CITED SOURCE: Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostri, no. 34, 1960, 112-119

TOPIC TAGS: pondermotive magnetic method, alpha-phase, austenitic steel, break-away force, process instrumentation device, transducer circuit, magnico alloy ANKO-4, LKh18N9T

TRANSLATION: The basic principles of the pondermotive magnetic method of determining the alpha-phase in austenitic steel are expounded. These principles are based on measurement of the attractive force of a permanent magnet. A description of the design is given and the circuit is shown of a special instrument, the alpha-phasesceter, by means of which it is possible to determine the

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L 15498-63

ACCESSION NR: AR3001637

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content of alpha-phase in steel both in the specimens of arbitrary shape and directly in the parts and bars at a point volume of metal. The instrument consists of a transducer which is in direct contact with the part at the time of measurement and a measuring device which makes it possible to build up current in the transducer sufficient for attraction of the magnet and to exactly fix the moment of attraction. The transducer is designed on the basis of an electrical measuring instrument of the magnetoelectric type with the use of two cylindrical magnets (1-mm diameter) made of magnetic nickel-cobalt alloy (ANKO-4) which are secured symmetrically in a thin brass tube with similar poles on the opposite sides. The balance of the mobile system permits measurements at any position of the transducer in space. The measurement controlling device includes two circuits: a current regulation circuit in a coil and a signal circuit which indicates the moment of the magnet's attraction. The instrument makes it possible to take measurements of alpha-phase content ranges from 0.5 to 30%. During this process the deviation of its readings from an average of three measurements at one point is less than 5%. Data are presented on the measurement of percent alpha-phase in sheet steel grade LKh18N9T with a thickness of 20 mm and in the welded seams of LKh18N9T, which were obtained with the aid of the alpha-phaseometer of the design described.

Card 2/82

14 YEF...
 L 53736-65 EFF(c)/EPR/EPA(s)-2/EWT(m)/EWP(1)/EWP(b)/EWP(e) Pq-4/Pr-4/Ps-4/Pt-7
 WJ/VHJ
 ACCESSION NR: AP5015562 UR/0286/65/000/008/0119/0119
 666.189.211 62
 8
 AUTHOR: Shkol'nikov, Ya. A.; Polik, B. M.; Karakhanidi, N. G.; Ivanov, P. K.; Baber, E. L.; Ulybyshev, V. V.; Alen'kin, A. T.; Bugrova, N. M.; Bimakov, D. P.; Shchipin, I. Ye.; Gur'yeva, Yu. M.; Yefimova, M. I.; Nechayeva, Ye. S.; Yesilkina, K. R.; Ivanova, A. I.; Dayn, E. P.; Nabatov, V. G.; Novoyevskaya, Ye. A.; Kukin, Ye. B.; Balashov, V. N.; Gmza, L. B.
 TITLE: Glass for glass fibers. Glass 32, No. 170369 15
 SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 8, 1965, 119
 TOPIC TAGS: glass, glass fiber
 ABSTRACT: An Author Certificate has been issued for a glass suitable for making glass fibers. To increase chemical durability, to prevent corrosion of alloys of aluminum and other light metals, and to improve processability, the glass is formulated to contain: 58-63% SiO₂, 2-4% B₂O₃, 6-8% Al₂O₃, 0.5-1.5% P₂O₅, 4-6% ZrO₂, 6-8% CaO, 12-13% Na₂O, and 1.5-2% K₂O. [8M]
 ASSOCIATION: none
 Card 1/2

B. Ab. YESIMAN, I. G.

BT-1, Chem. Eng. plant,
machinery

Special characteristics of centrifugal pumps for transfer of products of varying viscosity. I. G. Esiman and B. A. Gross (*Nef. Khim.*, 1948, No. 6, 81-88; *J. Fuel Technol.*, 1948, 24, 353A).—The use of centrifugal pumps on trunk pipelines is discussed. For handling liquid of variable η a flat form of characteristic is undesirable; the curve should fall steeply and have no "hump." For dealing with liquids with a η up to 1.6 sq. cm. per sec., a speed control of 8-10% is advisable. In the case of pumps driven by asynchronous three-phase motors, direct electrical speed variation is complicated; adequate control can be obtained by the use of hydraulic couplings.
R. B. CLARKE.

YESIMONTOVSKIY, M. G.

Substitution of powdered talc by an insulating solution.
 M. Esimonovskii, S. Ronkin and Shrifcellik. *Chimicheskie i
 Ned-Rubben-Aty. S. S. R.)* 1938, No. 3, 78-81; *Chem.
 Zentr.* 1939, 1, 1020. -- Powdering rubber bands with talc
 before vulkanization has several disadvantages. On the
 basis of extensive tests a soln. of soft soap, talc and water
 in the ratio 0.12:100 is recommended for the purpose.
 This prepn. prevents sticking to molds and has other tech.
 advantages over powd. talc. M. G. Moore

ASA-ILA METALLURGICAL LITERATURE CLASSIFICATION

GROUP 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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

GROUP 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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

LESNICHUVSKI, M. M.

"Manufacturing of vulcanized plasters of pieces of tires," Automobile, 1951.

BELEN'KIY, I.A.; YESIMONTOVSKIY, M.G.; ZAKRUTKIN, V.F.; SUDAKOV, N.P.;
ALEKSEYEV, V.N., kandidat tekhnicheskikh nauk, retsenzent.

[Manual on repairing automobile tires] Rukovodstvo po remontu avtomobil'nykh shin. Leningrad, Gos. nauchno-tekh. izd-vo mashinostroit. i sudostroit. lit-ry, 1953. 136 p. (MLRA 7:5)
(Automobiles--Tires)

KUZ'MITSKAYA, K.A.; NAUMOV, V.I.; SIDOROV, G.N., inzh., retsenzent;
YESIMONTOVSKIY, M.G., inzh., retsenzent; BRONSHTEYN, Ya.I.,
kand. tekhn. nauk, dots., red.; DLUGOKANSKAYA, Ye.A., tekhn.
red.

[Organization of a tire shop in a garage] Organizatsia shin-
nogo khoziaistva v garazhe. Moskva, Mashgiz, 1952. 102 p.
(MIRA 16:7)

(Tires, Rubber)

BELEN'KIY, I., inzh.; YESIMONTOVSKIY, M., inzh.; Prinimal uchastley: KRYUKOV, V.

Pressing with cold water in repairing tires. Avt.transp.
40 no.ll:26-28 N '62. (MIRA 15:12)
(Tires, Rubber—Retreading and recapping)

YESIMONTOVSKIY, M., inzh.

Size of the tread for tire repair. Avt.transp. 41 no.1:30-31 Ja
'63. (MIRA 16:2)

(Tires, Rubber---Retreading and recapping)

GOLOVANOV, I.M.; MANSUROV, M.; MAMONTOV, B.V.; YESIMOV, B.O.

Bismuth mineralization in magnesium magnetite skarns in one
of the ore manifestations in the Kurama Range. Uzb. geo. zhur.
9 no.6:10-17 '65. (MIRA 19:1)

1. Institut geologii i geofiziki imeni Abdullayeva AN UzSSR.
Submitted March 19, 1965.

BRAN'KOV, P.; SANAYEV, I.; YESIN, A.; MURATOV, V.

New wage system on collective farms in practice. Sotv.trud 5 no.4:
79-89 Ap '60. (MIRA 13:9)
(Collective farms--Income distribution)

YESIN, A.I., kand. ekon. nauk

Monetary wages in collective farm stockbreeding. Zhivotnovodstvo
21 no.4:18-26 Ap '59. (MIRA 12:5)

1. Zaveduyushchiy opornym punktom Vsesoyuznogo instituta
ekonomiki sel'skogo khozyaystva pri kolkhoze imeni XIX
s"yezda Kommunisticheskoy partii Sovetskogo Soyuza.
(Wages) (Stock and stockbreeding)

EWI(a)/EWP(v)/EWP(k)/EWP(h)/EWP(l)

ACC NR: AT6022758

SOURCE CODE: UR/2563/65/000/259/0107/0114

AUTHOR: Drannikov, V. G.; Yesin, A. I.; Ineshin, A. P.; Sevast'yanov, V. A.

34
33
B

ORG: None

TITLE: Analysis of the dynamics of a self-saturating magamp drive with intermediate semiconductor amplifiers

SOURCE: Leningrad. Politekhlicheskiy institut. Trudy, no. 259, 1965. Perekhodnyye protsessy v avtomatizirovannom elektroprivode (Transient processes in automated electric drive), 107-114

TOPIC TAGS: magnetic amplifier, machine tool, industrial automation

ABSTRACT: The authors consider the use of intermediate semiconductor amplifiers as a means for reducing the time constant in self-saturating magnetic-amplifier circuits used in combination with electric motors for driving the feed screws of machine tools. An analysis of transition processes in this type of system shows that linear operation of the intermediate semiconductor amplifier in self-saturating magamp-motor drive combinations has no noticeable effect on the time constant of the drive. The interference voltage acting through the correction circuit in an actual drive puts the intermediate amplifier into conditions of artificial switching with a frequency of 300 cps which increases the time of the transition process by a factor of more than 1.5. Class D

Card 1/2

L 05410-67

ACC NR: AT6022758

intermediate semiconductor rectifiers with pdm may be used satisfactorily for wide-range control in self-saturating magamp drives. The small losses in the output transistor of the amplifier in both the open and closed states result in considerable power delivery at high efficiency to the control circuits of the magnetic amplifier. The operation of this transistor is nearly independent of the scatter in its parameters and variations in ambient temperature. The frequency of the intermediate amplifier must be selected with regard to the particular features of the specific magnetic amplifier circuit. The use of low-interference stabilization circuits in conjunction with high-power class D intermediate semiconductor amplifiers provides high-quality drives for wide-range speed control based on self-saturating magnetic amplifier circuits. Orig. art. has: 5 figures, 2 formulas.

SUB CODE: 09, 13/ SUBM DATE: None/ ORIG. REF: 005

Card 2/2 *tdh*

L. UZMI-O/ RMP(j)/RMT(m)/RMT(L)/ETI IJF(e) RH/JD/HW/VB
ACC NR: A6029420 SOURCE CODE: UR/0317/66/000/006/0055/0057

AUTHOR: Zhikh, V. (Colonel, Engineer); Yesin, B. (Captain, Engineer)

ORG: None

TITLE: An anticorrosive coating with prospects

SOURCE: Tekhnika i vooruzheniye, no. 6, 1966, 55-57

TOPIC TAGS: corrosion protection, protective coating, nickel plating, corrosion resistance

ABSTRACT: The use of nickel-phosphorus²⁶ coating applied to metal surfaces by means of a chemical-nickel plating is discussed. This chemical bath method is considered simpler and less expensive than the galvanic plating. The bath is filled with a solution of nickel salt and hypophosphite with organic additives. The solution contents are shown in a table. The chemical process in a bath heated to 80 - 98 C is described. The progressive decline in the yield rate and its restoration by adding fresh chemical agents is explained and graphically illustrated. A chemical plating circulation system is shown in a flow diagram including the bath, preheater, cooler, regenerator and filter. After the chemical process, the coated surfaces are submitted to a 30-min heat treatment at about 450 C for steel and at about 230 C for aluminum. The corrosion resistance is approximately the same as for chrome plating. However, the nickel-phosphorus coatings can preserve their resistant properties at higher temperatures (up to 800 C). Their resistance

Card 1/2

L 09321-67

ACC NR: AP6029420

2

to wear and ⁴friction is also higher at high temperatures. They can also be applied to non-metal surfaces such as plastics, ceramics, etc. The formation of nickel alloys is considered and their use for decreasing the cyclic fatigue stresses in coated steel is also examined. Orig. art. has: 3 graphs, 1 table.

SUB CODE: 11/ SUBM DATE: None

Card 2/2

YESIN, Dmitriy Alekseyevich; MESHKOVSKAYA, M., red.; KUZNETSOVA, A., tekhn.
red.

[New techniques in repairing] Novoe v tekhnike remonta. Moskva, Mosk.
rabochii, 1961. 34 p. (MIRA 14:11)

1. Rukovoditel' brigady kommunisticheskogo truda Podol'skogo mekhani-
chenkogo zavoda im. M.I. Kalinina (for Yesin).
(Repairing)

YESIN, D.T.; GUSHCHIN, N.L.

Research institute on voluntary basis. Neftianik 7 no.12:
25-26 D '62. (MIRA 16:6)

1. Direktor Saratovskogo obshchestvennogo nauchno-issledovatel'skogo instituta neftyanoy i gazovoy promyshlennosti (for Yesin). 2. Predsedatel' pravleniya Saratovskogo nauchno-tekhnicheskogo obshchestva neftyanoy i gazovoy promyshlennosti (for Gushchin).
(Saratov--Petroleum research)

BALZHI, Mikhail Fedorovich, kand.tekhn.nauk; YESIN, Grigoriy Dmitriyevich, inzh.; SERGEYEV, M.P., prof., red.; SVET, Ya.B., red.; KOLBICHEV, V.I., tekhn.red.

[Joint coupling with flexible dynamic connections and its vibration damping properties] Soedinitel'naya mufta s uprugimi dinamicheskimi svyaziami i ee antivibratsionnye svoistva. Pod red. M.P.Sergeeva. Cheliabinsk, Cheliabinskoe knizhnoe izd-vo, 1959. 49 p.

(MIRA 13:4)

(Couplings)

YESIN, G. D., Cand Tech Sci -- (diss) "Research into the effect of connectors with elastic dynamic couplings on torsional oscillations in power stations." Chelyabinsk, 1960. 23 pp with charts; (Ministry of Agriculture RSFSR, Chelyabinsk Inst for the Mechanization and Electrification of Agriculture, Chair of "Tractors and Automobiles"); 160 copies; price not given; (KL, 17-60, 154)

SHABANOV, Konstantin Dmitriyevich; YESIN, G.D., kand. tekhn. nauk;
retsenzent; DUGINA, N.A., tekhn. red.

[Double-flow transmissions for vehicle engines] Dvukhpotochnye peredachi transportnykh mashin. Moskva, Mashgin, 1962.
126 p. (MIRA 16:4)
(Motor vehicles--Transmission devices)

POLETSKIY, A. T., dotsent; YESIN, G. D., kand. tekhn. nauk;
ZAV'YALOV, G. A., aspirant

Stability of uniform rotation and of the frequency of natural
vibrations of a centrifugal clutch, Izv. vys. ucheb. zav.;
mashinostr. no. 7:5-13 '62. (MIRA 16:1)

1. Chelyabinskiy politekhnicheskiy institut.

(Clutches(Machinery)--Vibration)

VINOGRADOV, G.A., inzh.; YESIN, M.I.

Specialists in rapid repairing. Metallurg 7 no.4:17-19 Ap '62.
(MIRA 15:3)

1. Tsentral'naya zavodskaya laboratoriya Kuznetskogo metallurgicheskogo kombinata (for Vinogradov). 2. Nachal'nik smeny martenovskogo tsekha No.1 Kuznetskogo metallurgicheskogo kombinata (for Yesin).

(Novokuznetsk--Open-hearth furnaces--Maintenance and repair)

POLETSKIY, A.T.; YESIN, G.D.; ZAV'YALOV, G.A.

Stability and frequencies of natural vibrations of a centri-
fugal clutch. Teor. mash. i mekh. no.94/95:111-118 '63.
(MIRA 16:11)

Special features of runner design in high head Kaplan turbines. (Cont.) 308

increased at the same time as the head then for high head Kaplan runners it would be necessary to select a hub ratio that results in a reduction of speed and impaired cavitation properties of the runner. Although for high head runners an increase in hub dimension is unavoidable one method of improving the cavitation properties is to make the hub as small as possible. It is, therefore, necessary to re-design the runner as a whole.

There are two main stages in runner design - the attachment of the blades and the arrangements for their rotation. At high heads the number of blades is greater and the forces acting on them are greater. It would seem that the best solution is to select the size of hub according to the requirements for fixing the blades and to design the blade turning mechanism without increasing the hub diameter. One method of doing this is to increase the mechanical advantage in the axial direction. Diagrams of possible mechanisms for doing this are given. Formulae are given for the torque on the blade with various lever arrangements. A link mechanism such as is recommended was used at an early stage of Soviet water turbine development for the small turbines of the Svir'-3 station. Similar mechanisms are used by English Electric and Voith. The analysis of various constructions, which is given, shows that the greatest friction losses occur in the link

Special features of runner design in high head Kaplan turbines. (Cont.) 308

mechanism because of the high stresses acting on the cross pieces and lever slides.

One of the important problems of high head runners is that of making and fixing the blades. In the usual designs the blades are removable and are fixed to a lever passing through the journal by bolts. But sometimes they are made in one piece with the journal and a variety of methods of fixing are used. If the blade is made separate from the journal it is easier to cast and machine particularly in large size wheels. However, because removable blades inevitably lead to complications it may be necessary in many cases of high head runners with a large number of blades to use non-removable blading. As heads increase so will stresses and in many cases it will be necessary to use materials of increased strength and to improve the existing design procedures, this aspect of which is imperfect. Until recently runners were designed for the most unfavourable cases at all loads. In particular the strength of parts of the rotating mechanisms was based not on the stress required for rotation but on the maximum possible force that could be applied by the servo-motor. This procedure was acceptable for medium head turbines but calls for review

Special features of runner design in high head Kaplan turbines. (Cont.) 308

in heavily loaded high head Kaplan turbines. Other parts will also require revision, for example, the previously accepted method of designing the end sections of the blading was examined and in a number of cases the stresses in them were found to be much lower than had previously been supposed. A good deal of work has already been done on this subject, but it should be extended.

3 figures, 4 literature references.

YESIN, L.D., inzh.

New design of the runners of reversible-blade hydraulic turbines.
Energomashinostroenie 9 no.8:12-13 Ag '63. (MIRA 16:8)
(Hydraulic turbines)

IVANOV, Petr Sergeevich, podpolkovnik; POVERIN, Ivan Dmitriyevich,
podpolkovnik; YESIN, Mikhail Ivanovich, podpolkovnik;
ROSSAL, N.A., polkovnik, red.; SOKOLOVA, G.F., tekhn. red.

[Fortification installations for firing positions] Fortifi-
katsionnoe oborudovanie ognevykh pozitsii. Moskva, Voen.
izd-vo M-va oborony SSSR, 1961. 118 p. (MIRA 15:2)
(Fortification)

YESIN, M.I., starshiy master; MAKRUSHIN, V.V.

Work practices of foreman D.M. Bartolish. Metallurg 6 no.8:
32 Ag '61. (MIRA 14:8)

1. Kuznetskiy metallurgicheskiy kombinat. 2. Zamestitel' nachal'nika martenovskogo tsekha Kuznetskogo metallurgicheskogo kombinata (for Makrushin).
(Open-hearth furnaces--Maintenance and repair)

YESIN, M.P.

Perineal mobile left ectopy of the testicle. Khirurgia 35
no.3:125-126 Mr '59. (MIRA 12:8)
(TESTES, abnorm.
ectopy, perineal mobile left-sided (Rus))

YESIN, M.P.

Hennoch's abdominal purpura complicated by acute intestinal
obstruction and necrosis of a loop of the ileum. Khirurgiia
37 no.2:137-138 F '61. (MIRA 14:1)
(PURPURA (PATHOLOGY)) (INTESTINES—OBSTRUCTION)

SOV/137-58-7-14228

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 38 (USSR)

AUTHORS: Yesin, N.A., Shikhov, V.N.

TITLE: ~~Order of the Reaction and Limiting Stages of the Process of~~
Dephosphorization of Steel (Poryadok reaktsii i limitiruyushchiye stadii protsessa obesfosforivaniya stali)

PERIODICAL: Tr. Ural'skogo politekhn. in-ta, 1957, Nr 67, pp 69-77

ABSTRACT: Experiments conducted to clarify the effect of the initial [P] on the rate of its passage into the slag at 1550°C have shown that with an increase in the initial [P] the rate of its passage into the slag also increases while the time needed for the establishment of equilibrium decreases; [P] was varied in five steps from 0.004 to 0.1%. The time required for the establishment of equilibrium during the reverse passage of [P] from the slag into the metal also decreases with the increase of the initial [P]. In order to determine the order of the dephosphorization reaction, the methods of evaluation of the order of the direct and the reverse reaction were used. As a result of the calculations quoted and construction of curves it is found that the process of the passage of [P] from the metal into the

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SOV/137-58-7-14228

Order of the Reaction and Limiting Stages of the Process (cont.)

slag and back follows the second order of reaction. Observations on the passage of the [P] into the slag and back and the curves of the variation of concentrations of the final and initial material have shown that the dephosphorization reaction proceeds through several intermediate stages; here it is assumed that the stage which determines the rate of this reaction is the desorption of the PO_4^{3-} anion into the slag from the interface between the phases.

Ye.T.

1. Steel--Processing
2. Slags--Chemical reaction
3. Phosphorus--Chemical reaction
4. Phosphorus--Chemical reactions

Card 2/2

ZHILYAYEV, A.P.; YESIN, N.V.

Methodology of the quantitative evaluation of abrasion; based
on the example of a flysch coast. Okeanologiya 5 no.6:1107-
1109 '65. (MIRA 19:1)

1. Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya
stantsiya Instituta okeanologii AN SSSR. Submitted February 27,
1965.

IC 511, 14.14.

AUTHORS: Sudnishnikov, B.V.; Yesin, N.N.; Yemel'yanov, P.M. SOV-19-58-4-33/523

TITLE: A High-Frequency Percussion Mechanism (Vysokochastotnyy pnevmaticheskii udarnyy mekhanizm)

PERIODICAL: Byulleten' izobreteniy, 1958, Nr 4, p 12 - 13 (USSR)

ABSTRACT: Class 5b, 9⁰¹. Nr 112374 (581898, 10 Aug 1957). Submitted to the Committee for Inventions and Discoveries at the USSR Council of Ministers. In this high-frequency percussion mechanism, the increase of the percussion frequency is achieved by a sudden breaking of the movement of the striker when changing over from the working stroke to the return stroke. For this purpose, an auxiliary striker is used to apply an impact to the basic striker at the end of the return stroke. Thus the direction of its movement is immediately changed.

Card 1/1

SUDNISHNIKOV, B.V.; YESIN, N.N.

New method of increasing the stroke frequency of pneumatic hammers.
Izv. Sib. otd. AN SSSR. no.7:125-127 '58. (MIRA 11:9)

1. Zapadno-Sibirskiy filial AN SSSR.
(Pneumatic tools)

YEMEL'YANOV, P.M.; YESIN, N.K.; kand. tekhn. nauk

[NKR-100 all-purpose semi-automatic boring machine] Uni-
versal'nyi burovoi poluavtomat NKR-100. Novosibirsk,
Izd-vo SO AN SSSR, 1961. 124 p. (MIRA 18:3)

YEMEL'YANOV, Petr Mikhaylovich; YASIN, N.N., kand. tekhn. nauk, red.; MELIKHOV, I.D., red. izd-va; LAVRENT'YEVA, L.G., tekhn. red.

[Machines for drilling blastholes with pneumatic hammers in underground workings and ways of increasing their productivity] Mashiny dlia bureniia vzryvnykh skvazhin pnevmaticheskimi molotkami na podzemnykh gornyykh rabotakh i puti povysheniia ikh proizvoditel'nosti. Pod red. N.N.Esina. Moskva, Gosgortekhzdat, 1963. 34 p. (MIRA 16:10)
(Boring machinery--Pneumatic driving)

YESIN, N.N., kand.tekhn.nauk; ZHURAVLEV, K.I., gornyy inzh.

The air hammer reamer is a new boring head. Gor.zhur. no.3:54-55
Mr '65. (MIRA 18:5)

1. Institut gornogo dela Sibirskogo otdeleniya AN SSSR (for Yesin).
2. Sibirskiy gosudarstvennyy proyektno-konstruktorskiy eksperimental'-nyy institut gornogo mashinostroyeniya (for Zhuravlev).

ACC NR: AT7001795

(N)

SOURCE CODE: UR/0000/66/000/000/0170/0187

AUTHOR: Yesin, N. V.

ORG: none

TITLE: Formation of marine terraces

SOURCE: AN SSSR. Okeanograficheskaya komissiya. Issledovaniya gidrodinamicheskikh i morfodinamicheskikh protsessov beregovoy zony morya (Studies of hydrodynamic and morphodynamic processes of the shoreline). Moscow, Izd-vo Nauka, 1966, 170-187

TOPIC TAGS: geophysics, erosion, ocean dynamics

ABSTRACT: The article deals with the controversial question as to whether marine terraces on the shoreline can be formed when there is a uniform lowering of the sea level. The conclusion that, under the stated condition, the formation of terraces is not possible, arrived at by some authors (especially, by A. E. Scheidegger, Marine terraces, Geofisica pura e applicata, no. 52, 1962) is challenged by the present author. The problem can be approached theoretically by using the relationship of the form

$$v_n = \frac{\frac{\partial y}{\partial t}}{\sqrt{1 + \left(\frac{\partial y}{\partial x}\right)^2}} \quad (1)$$

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ACC NR: AT7001795

where $y = f(x, t)$ is the equation of the slope profile and v_n is the normal rate of change of the relief (Yesin, 1964) and by assuming with Loginov that v_n is proportional to u_{\max}^2 , u_{\max} being the maximal values of water velocity near the ground. However, the quantity is not yet known as a function of the slope parameters. Therefore, the author approached the problem experimentally using the wave basin (17 m long, 55 cm deep, 50 cm wide) at the Black Sea Experimental Research Station of the Institute for Oceanography AN SSSR, with the cooperation of B. A. Popov. The shoreline slope was imitated by a model made of gypsum and table salt, the latter being introduced for faster erosion. The formation of two to three terraces was always observed. The author explains this result by consideration of the interaction between the wave climbing up the slope and the wave sliding back. Orig. art. has: 6 figures and 25 equations.

SUB CODE: 08/ SUBM DATE: 17Apr66/ ORIG REF: 009/ OTH REF: 001

Card 2/2

YESIN, N.V.

Kinematics of the formation of marine abrasive terraces.
Okeanologiya 4 no.2:284-289 '64. (MIRA 17:5)

1. Chernomorskaya eksperimental'naya nauchno-issledovatel'skaya
stantsiya Instituta okeanologii AN SSSR, gorod Gelendzhik.

PAVLOV, V.V.; POPEL', S.I.; YESIN, O.A. (Sverdlovsk)

Calculation of the surface tension of liquids from the excess
isochore-isotherm potential. Part 2. Zhur. fiz. khim. 37 no.4
797-801 Ap '63. (MIRA 17:7)

1. Ural'skiy politsehnicheskiy institut imeni S.M. Kirova.

KAMYSHOV, V.M.; YESIN, O.A.; CHUCHMAREV, S.K.

Nitrogen solubility in iron-free slags. Izv. vuz. ucheb. zav.;
chern. met. 7 no.7:24-28 '64 (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut.

TOPORISHCHEV, G.A.; YESIN, O.A.; KALUGIN, V.N.

Kinetics of high temperature electrode processes studied by
the galvanostatic method. Dokl. AN SSSR 157 no.1: 162-164
Jl '64 (MIRA 17:8)

1. Ural'skiy politekhnicheskiy institut im. S.M. Kirova. Pred-
stavleno akademikom A.N. Krumkinym.

L 45892 EWT(m)/ENP(w)/T/EWP(t)/ETI IJP(c) JD/JW
ACC NR: AP6026150 (A) SOURCE CODE: UR/0076/66/040/007/1598/1603

67
66
B

AUTHOR: Sorokin, Yu. V.; Khlynov, V. V.; Yasin, O. A.

ORG: Ural Polytechnic Institute (Ural'skiy politekhnicheskiy institut)

TITLE: Kinetics of spreading of a fluoride-oxide melt on solid oxides

SOURCE: Zhurnal fizicheskoy khimii, v. 40, no. 7, 1966, 1598-1603

TOPIC TAGS: calcium fluoride, aluminum oxide, fluid flow, surface tension, irreversible thermodynamics

ABSTRACT: The spreading of ANF-6 melt (70% CaF₂, 30% Al₂O₃) on plates of Al₂O₃, MgO, ZrO₂, SiO₂, and on a surface precoated with the same liquid was studied at 1480-1720°C with the aid of high-speed motion-picture photography (3000 frames per second). Two stages were observed in the spreading process. In the first stage, the liquid assumes an irregular shape with breaks in its surface. The rate v at which the plate becomes covered at this stage is independent of the surface tension of the drop, but depends on the temperature; the activation energy values indicate a viscous character of the resistance to the flow of the liquid. At a constant temperature, v depends on the plate material and decreases in the series Al₂O₃, MgO, ZrO₂, SiO₂ (on the precoated plate v is approximately the same as on SiO₂). The transition to the second stage is due to the action of the tension of the melt. In this stage, v is much lower than in

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UDC: 532.61

L 45892-66

ACC NR: AF6026150

the first. The observed behavior can be accounted for by formal relations of irreversible thermodynamics. ¹ Orig. art. has: 2 figures and 1 table.

SUB CODE: 07/
20/ SUBM DATE: 21Jul65/ ORIG REF: 008/ OTH REF: 004

Card 2/2 LC

KHLYNOV, V.V.; YESIN, O.A.

Losses of ferrochromium resulting from its adhesion to carbon.
Izv. vys. ucheb. zav.; chem. met. 7 no.8:9-14 '64.

(MLRA 17:9)

1. Ural'skiy politekhnicheskiy institut.

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RRR
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XXX
YYY
ZZZ

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2

Modern theory of overvoltage. O. A. Ekin. *Dspekhi Khim.* 2, 413-416 (1963); cf. C. A. 28, 3079.---Intermediate compds., surface tension, intermediate discharge of ions, and quantum-theory considerations are discussed. P. H. Rathmann

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

ALPHABETIC INDEX

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ca

9

Electrolytic pickling of transformer steel. O. A. Esin and A. Balabai. *J. Applied Chem.* (U. S. S. R.) 6, 638-52 (1953).—A steel scale contg. 70-80% Fe was investigated. Anodic pickling in H₂SO₄ soln., Cu cathode and work anode did not show any advantages as compared with the chem. pickling in H₂SO₄. The H overvoltage on Cu is higher than on Fe; therefore, a very weak current (1-6 ma./sq. dm.) flows through the Cu-Fe couple. However, cathodic pickling in H₂SO₄ or Na₂SO₄ solns. with an applied e. m. f. does not produce satisfactory results at low c. d., because at low c. d. the H ions are discharged on the metallic constituent of the scale and do not penetrate into the space between the scale and the steel. Moreover, the reducing action of the H cannot remove the scale, because metallic Fe is the main ingredient of the scale. The anodic pickling of the transformer steel with a 30% H₂SO₄ soln. (the highest cond.) sets in at a terminal voltage (0.2-0.6 v.) which corresponds to the discharge of the H ions on the cathode and the soln. of Fe at the anode. The voltage shows a sharp rise after a

certain time (up to 3-4 v.), and O₂ generation on the anode sets in. The latter removes the remaining scale mechanically. A pickled steel which becomes passive with rising voltage retains a silvery surface in the air for a long time. The energy consumption amounts to 0.23 kw. hrs./2 sq. m. at a c. d. of 1.0 amp./sq. dm., and the pickling requires 10-30 min. With a c. pickling in a H₂SO₄ soln. the surface of the steel becomes dull. However, a satisfactory surface is obtained when a. c. pickling is effected in a HCl soln. With a. c. Fe and H₂ are alternately dissolved and generated on the surface of the scale, making it difficult to det. the completion of the process. A simultaneous etching of a number of plates was effected according to the principle of bipolar electrodes. The energy consumption at a c. d. of 5 amp./sq. dm. was 0.16 kw. hrs./2 sq. m. for d. c. and 0.13 kw. hrs./2 sq. m. for a. c. The durations were 0.4 and 1.0 hrs., resp. The higher concn. of Fe and the corresponding lowering in the content of Fe in the electrolyte have no noticeable effect when a. c. is used, but it requires a higher energy consumption, amounting to 0.6 kw. hrs./2 sq. m. for d. c.

A. A. Bochtling

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

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Cathode polarization during the electrodeposition of copper and zinc from their complex cyanide solutions.
O. A. Kain and E. Alimova. *J. Phys. Chem. (U.S.S.R.)* **7**, 137-46 (1961); cf. *C. A. B.*, 1960. On the basis of a series of curves showing the potential ϕ , d for various concns. of $K_2Zn(CN)_4$, $K_2Cu(CN)_4$, and $K_2Cu(CN)_6$ and of data on the efficiency of deposition as a function of current used, B. and A. conclude that pptn. of Zn and Cu occurs without any chem. polarization. The change of cathode potential with ϕ , d obeys the equation for anion polarization obtained by calcg. the amt. of H_2 liberated, the accumulation of CN^- ions near the cathode and the existence of 2 Cu complex ions. P. H. Rathmann

Ca

Polarization during the precipitation of alkali metals on a mercury cathode. O. A. Esin, M. Lushkarev and F. Solinski. *Acta Physicochim. U.R.S.S.* 7, 484-50, 1957 (in German). See C. A. 52, 4759. E. J. C.

ASACSLA METALLURGICAL LITERATURE CLASSIFICATION

BRONI STR 02124

CLASSIFICATION

0 1 2 3 4 5 6 7 8 9 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 AA AB AC AD AE AF AG AH AI AJ AK AL AM AN AO AP AQ AR AS AT AU AV AW AX AY AZ BA BB BC BD BE BF BG BH BI BJ BK BL BM BN BO BP BQ BR BS BT BU BV BW BX BY BZ CA CB CC CD CE CF CG CH CI CJ CK CL CM CN CO CP CQ CR CS CT CU CV CW CX CY CZ DA DB DC DD DE DF DG DH DI DJ DK DL DM DN DO DP DQ DR DS DT DU DV DW DX DY DZ EA EB EC ED EE EF EG EH EI EJ EK EL EM EN EO EP EQ ER ES ET EU EV EW EX EY EZ FA FB FC FD FE FF FG FH FI FJ FK FL FM FN FO FP FQ FR FS FT FU FV FW FX FY FZ GA GB GC GD GE GF GG GH GI GJ GK GL GM GN GO GP GQ GR GS GT GU GV GW GX GY GZ HA HB HC HD HE HF HG HH HI HJ HK HL HM HN HO HP HQ HR HS HT HU HV HW HX HY HZ IA IB IC ID IE IF IG IH II IJ IK IL IM IN IO IP IQ IR IS IT IU IV IW IX IY IZ JA JB JC JD JE JF JG JH JI JJ JK JL JM JN JO JP JQ JR JS JT JU JV JW JX JY JZ KA KB KC KD KE KF KG KH KI KJ KL KM KN KO KP KQ KR KS KT KU KV KW KX KY KZ LA LB LC LD LE LF LG LH LI LJ LK LL LM LN LO LP LQ LR LS LT LU LV LW LX LY LZ MA MB MC MD ME MF MG MH MI MJ MK ML MN MO MP MQ MR MS MT MU MV MW MX MY MZ NA NB NC ND NE NF NG NH NI NJ NK NL NO NP NQ NR NS NT NU NV NW NX NY NZ OA OB OC OD OE OF OG OH OI OJ OK OL OM ON OO OP OQ OR OS OT OU OV OW OX OY OZ PA PB PC PD PE PF PG PH PI PJ PK PL PM PN PO PP PQ PR PS PT PU PV PW PX PY PZ QA QB QC QD QE QF QG QH QI QJ QK QL QM QN QO QP QQ QR QS QT QU QV QW QX QY QZ RA RB RC RD RE RF RG RH RI RJ RK RL RM RN RO RP RQ RR RS RT RU RV RW RX RY RZ SA SB SC SD SE SF SG SH SI SJ SK SL SM SN SO SP SQ SR SS ST SU SV SW SX SY SZ TA TB TC TD TE TF TG TH TI TJ TK TL TM TN TO TP TQ TR TS TT TU TV TW TX TY TZ UA UB UC UD UE UF UG UH UI UJ UK UL UM UN UO UP UQ UR US UT UU UV UW UX UY UZ VA VB VC VD VE VF VG VH VI VJ VK VL VM VN VO VP VQ VR VS VT VU VV VW VX VY VZ WA WB WC WD WE WF WG WH WI WJ WK WL WM WN WO WP WQ WR WS WT WU WV WW WX WY WZ XA XB XC XD XE XF XG XH XI XJ XK XL XM XN XO XP XQ XR XS XT XU XV XW XX XY XZ YA YB YC YD YE YF YG YH YI YJ YK YL YM YN YO YP YQ YR YS YT YU YV YW YX YY YZ ZA ZB ZC ZD ZE ZF ZG ZH ZI ZJ ZK ZL ZM ZN ZO ZP ZQ ZR ZS ZT ZU ZV ZW ZX ZY ZZ

4

CA

Cathode polarization during electrodeposition of mercury from cyanide solutions. O. A. Esin and E. Alimova. *J. Gen. Chem. (U. S. S. R.)* 7, 2830-31 (1937); cf. C. A. 31, 1706¹. Curves are given showing potential v. d. for electrolysis of solns. of $K_2Hg(CN)_4$ in concns. 0.104, 0.058 and 0.02 mol. % and of solns. of $Hg(CN)_2$ in concns. 0.097, 0.048 and 0.02 mol. %. With $Hg(CN)_2$ the solns. contained 0.1 mol. % K_2SO_4 . In all cases the current yield was 100%. The results show that deposition of Hg from complex cyanide solns. is accompanied only by concn. polarization, while its deposition from $Hg(CN)_2$ is accompanied by chem. polarization in addition to concn. polarization. S. L. Madorsky

ASA-5LA METALLURGICAL LITERATURE CLASSIFICATION

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PROCESSED AND REPRODUCED BY THE NATIONAL ARCHIVES

4

Anodic polarization during solution of copper. O. A. Kuznetsov and I. Antropov. *J. Gen. Chem. (U. S. S. R.)* 7, 2719-28 (in French 2728) (1937); *cf. C. A.* 30, 1937. — A study was made of the relationship between anode polarization and rate of anodic soln. of Cu in electrolytic refining. The relationship is dependent on c. d., concn. of Cu ions and other factors. Conclusion: The most probable cause of anode polarization of Cu is the slow rate of change from Cu metal to Cu^{2+} in soln. Twenty-two references.

S. L. Madorsky

METALLURGICAL LITERATURE CLASSIFICATION

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O.A. ESIN

Time dependence of electrode polarization. 1. Over-polarization in the discharge of copper ions on a copper cathode. (I. A. Fam, I. Antropov and A. Levin. *J. Phys. Chem.* 1957, 61, 2411-2414). The "over-polarization" η increases in the direction of time to a maximum after a certain time τ , and then falls to a constant value η_{∞} . τ increases with c and decreases with rise of temp. η_{∞} increases at first with diminution of Cu^{++} concn. but later becomes constant; it also increases with increasing Cu^{++} concn. η_{∞} has a max. at a certain value of c . H. C. A.

ASH 31A METALLURGICAL LITERATURE CLASSIFICATION

CA

Polarization during the precipitation of alkali metals on a mercury cathode. O. A. Reim, M. Loshkarev and K. Soifskii, *J. Phys. Chem.* (U. S. S. R.) 10, 132-44 (1937).—From exptl. curves for deposition potential vs. c. d. for the discharge of Na and K ions from concn. aq. solns. of the chlorides and hydroxides on a moving Hg cathode E., L. and S. find that the polarization potential η is a function of c. d., D' : $\eta = -0.058 \lg (1 + D'/K_1)$ where K_1 is proportional to the initial concn. of amalgam and the

rate of flow of the Hg. Polarization is not due to a delayed discharge nor to over-satn. but probably due to delayed diffusion of Na or K into the Hg. Data obtained with a stationary Hg cathode with const. stirring of the soln. verify the above conclusions and show that K_1 does not depend on the solvent used. The data are summarized in 5 tables and 11 graphs. P. A. Rathmann

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

Cathodic polarization during deposition of metals from nonaqueous solutions. A. I. Levin and G. A. Biri. *Trudy Vys. Ind. Inst.* 1938, No. 6, 41-51; *Khim. Ref. Ser. Zhur.* 2, No. 2, 10(1020). Curves for the cathodic potential vs. c. d. were prep'd. based on the exptl. data for the discharge of Cu^{2+} and Cu^+ ions and for Ag^+ and Zn^{2+} ions. The expts. are described. Formamide and pyridine were used as solvents. The polarization in the Cu^{2+} discharge was studied with a $CuSO_4$ soln. in formamide, and in the Cu^+ discharge, with a $CuCl$ soln. In both cases free $HCOOH$ was present. Polarization during the discharge of Ag^+ was studied in a 0.1 N $AgNO_3$ soln. in pyridine. Pyridine was also solvent for the Zn^{2+} solns. The curves show that during the discharge of Cu ions a considerable chem. polarization takes place (besides the usual concn. polarization) which is expressed by the Frdey-Gruz and Volmer equation which presupposes that the retardation of the formation of the crystal grains is the cause for the polarization. During the deposition of Ag a chem. polarization is also observed, but its abs. value is considerably smaller than that for Cu . For Zn^{2+} as well as for Cu^+ only the concn. polarization is observed. Curves are shown for the change in cathodic polarization with time, for the pyridine and of $ZnCl_2$ in acetone. These curves indicate a special initial polarization which had been found by L. and E. previously in the study of cathodic polarization during the deposition of Cu from aq. solns.

W. R. Hemm

ADD-51A METALLURGICAL LITERATURE CLASSIFICATION

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Concentration Effects

Materials Index

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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 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Polarization during discharge of the ammonium ion and its alkyl derivatives on a mercury cathode. M. Lezhkarev and O. Esin. *J. Gen. Chem. (U. S. S. R.)* 8, 510-18 (in French 518)(1938).—The data of Náray-Szabó and Salatinay (*C. A.* 29, 6141^o) are insufficient to explain the nature of NH_4^+ deposition on a Hg cathode, since they used slightly acid solns., so that the H^+ inevitably affected their results; also, they did not show potential-time curves, which would have revealed the effect of diminishing concn. of the ion in soln. on the potential. L. and E. repeated their work electrolyzing solns. of $NH_4Cl + NH_4OH$, of NH_4Cl alone and of aq. solns. of $CH_3NH_2Cl + CH_3NH_2OH$ and of $(CH_3)_2NH_2Cl + (CH_3)_2NH_2OH$. The effect of concn. of NH_4^+ and of c. d. on the potential, ϵ and c. d., i , can be expressed by $\epsilon = \text{const.} - (RT/F) \ln i - Ri$. The logarithmic relation between ϵ and i is evidently due to concn. polarization as manifested in the rate of diffusion of the deposited ion into the interior of the Hg cathode.
S. L. Malorsky

CP

The cell potential components in the electrolytic nickel refining bath. O. Bain and M. Loshkurev. *J. Appl. Chem.* (U. S. S. R.) 11, 1432-0 (in German, 1439) (1938).
 In the cell Ni|NiSO₄, H₂BO₃, H₂O|NiSO₄, H₂BO₃, H₂SO₄, H₂O|Ni, S with an av. voltage of 3.2, 30% of the potential drop is in the electrolyte, 3-4% in the contacts, and 57-58% as electrode potentials. A. A. Podgorny

ASB-SLS METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND COVERS

PROCESSES AND PROPERTIES INDEX

120 AND 6TH COVERS

6A

COMMON ELEMENT

COMMON ELEMENTS

MATERIALS INDEX

ASB-31A METALLURGICAL LITERATURE CLASSIFICATION

W. R. HENN

Lab. Theoretical Electrochemistry, Ural'sk Industrial Inst. im. Kirov, Sverdlovsk

Polarization during the electrodeposition of tin from acid solutions of its simple salts. M. Loshkarev, O. A. Esp and V. Sotnikova. *J. Gen. Chem.* (U. S. S. R.) 9, 1112-22 (1938). Measurements were made of the polarization during cathodic deposition and of anodic soln. of Sn in acid solns. of SnCl₂ and SnSO₄ by use of the direct compensation method with a mirror galvanometer. The deviations of the polarization values in parallel expts. were 0.2-0.3 mv. for solns. without any addns. and 0.3-0.5 mv. for solns. with addns. for small c. d. At high c. d. in con. baths the deviations were greater, but did not exceed 10 mv. For moving Hg cathodes the reproducibility was 2-3 mv. for pure Hg and 1 mv. for the Sn amalgam. The observed small polarization in SnCl₂ and SnSO₄ solns. can be almost completely overcome by agitating the electrolyte. This polarization is a result of the slow diffusion of Sn²⁺ in the electrolyte. Volts vs. c.-d. curves are given for the deposition of Sn from acid solns. (SnSO₄, H₂SO₄, glue, cresolsulfonic acid, H₂O). A high polarization voltage is observed in the presence of cresolsulfonic acid. The first part of the voltage vs. c.-d. curve (up to the "limiting" c. d.) can be expressed by the equation for the concn. polarization if a sufficient amt. of the cresolsulfonic acid is present. The second part of the curve (beyond the "limiting" c. d.) can be satisfactorily expressed by the equation $\eta = a - b \log(i - i_0)$ where η is the polarization, i is the total c. d. and i_0 is the "limiting" c. d. Analogous expts. with moving Hg cathodes were performed. Results supported the previous conclusions. Ten references.

101 AND 100 GROUPS

PACKAGES AND SUBPACKAGES

2

CA

An experimental verification of Stern's double-layer theory. O. Egan and B. Markov. *Acta Physicochim. U. R. S. S. 18, 353-64 (1939)* (in English).—Exptl. data on the height of the Hg column and on the potential of the cell Hg | KI || KCl satd., Hg₂Cl₂ | Hg at concns. of KI from 0.01 to 3.0 N give for the max. potential values ϵ : -0.60 in 0.01 N KI; -0.67 in 0.05 N; -0.70 in 0.10; -0.73 in 0.20; -0.76 in 0.50; -0.78 in 0.70; -0.80 in 1.00; -0.82 in 1.5; and -0.84 in 3.0 N KI soln. The slope of the $\epsilon - \ln c/s$ curve is approx. 0.10 instead of the theoretical 0.068. E. and M. and Prumkin believe that the discrepancy is due to the neglect of the forces of interaction between the adsorbed ions parallel to the interface both in their own theory as well as in that of Stern. P. H. Rathmann

Sub. Theoretical Electrochem., Vural Industrial Inst., Smolensk

ASME-ISA METALLURGICAL LITERATURE CLASSIFICATION

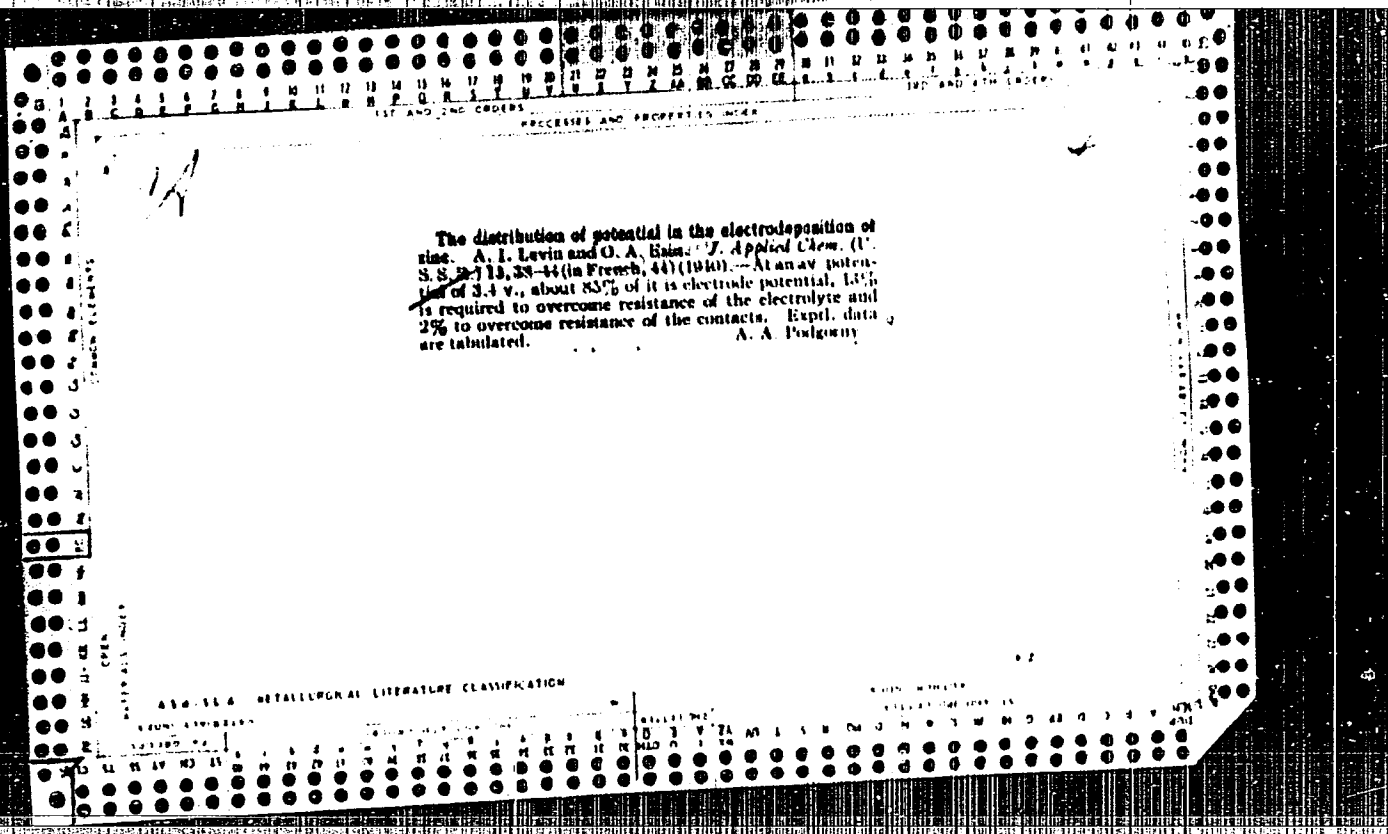
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101 AND 100 GROUPS

PACKAGES AND SUBPACKAGES

101 AND 100 GROUPS

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CA

Polarization in the cathodic precipitation of bismuth.
O. Kain, M. Loshkarev, Z. Levitina and K. Rusimov.

J. Applied Chem. (U. S. S. R.) 13, 50-55 (in French, 05) 1 (1940).—The polarization in chloride and nitric acid solns. is due principally to concn. and can be suppressed to a considerable degree by an intensive mixing. Comparatively slight polarization, which was not suppressed by mixing, was characterized by sharp increase in the region of low c. d., and comparatively slight increase in the region of high c. d. The first was connected with the corrosion phenomenon and the second with the crystal processes. The deposition of Bi from H₂SO₄ solns. was accompanied by a retarded discharge. Addn. of cellulose sulfate residues increased the polarization of Bi without changing its character. A. A. Podgorny

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INCL

7

CR

Slow discharge in processes of electrolytic reduction of multivalent ions. G. Kain. *Acta Physicochim. U. R. S. S.* 13, 123-44(1940)(in English).—Theoret.-math. B. discusses the relative positions of the potential-energy curves and the corresponding distribution of electron levels, and the form of the relation between overvoltage and c. d. The coeff. γ may be pos., neg., zero or fractional and is a criterion not of the presence of overvoltage, but only of its variation with i . For high values of η the equation derived is identical with that for concn. polarization. The theory of electron transition permits satn. c. ds. in the slow discharge for all values of γ . F. H. R.

METALLURGICAL LITERATURE CLASSIFICATION

CA

4

Electrode polarization in electrolytic preparation of potassium ferricyanide. O. E. B. Derzhayev and N. Ladygin. *J. Applied Chem. (U. S. S. R.)* 13, 971-7 (in French, 1977) (1940).—The cathodic and anodic polarizations for the reaction $Fe(CN)_6^{4-} \rightarrow Fe(CN)_6^{3-}$ were measured at Ni and Pt electrodes in aq. contg. various concns. of $K_3Fe(CN)_6$ and $K_4Fe(CN)_6$. The agitation of electrolyte decreased polarization and greatly increased the limiting c. d. At the same time it was observed that the polarization did not depend on the material of the electrode, provided there was no film formed on the latter. Concn. polarization only takes place. A. A. P.

ASB-514 METALLURGICAL LITERATURE CLASSIFICATION

YESIN, O.

USSR

Sverdlovsk

Laboratory of Theoretical Electrochemistry, Ural'sk Industrial
Institute, (-1940-)

"Polarization during the Overcharging of Titanium Ions."

Zhur. Fiz. Khim. Vol. 14, No. 5-6, 1940

Oct. 22, 1951

YESIN, O. A.

"On the Proton Transfer During the Electrolytic Discharge of Hydrogen Ions,"
Acta Phys., 16, Nos. 3-4, 1942

YESIN, O. A.

"On the Character of the Cathodic Polarization of Zinc," Acta Phys., 16, No. 1-2,
1942

Lab. of Electrochemistry, Ural Industrial Inst., Sverdlovsk

YESIN, O: KOZHENCOV, V.

Laboratory of Theoretical Electrochemistry, Ural Industrial Institute (-1941-)

"On Proton Migration During the Electrolytic Discharge of Ions of Hydrogen." Zhur.
Fiz. Khim. Vol. 17, No. 1, 1943.

BR-52059019

SO: Monthly List of Russian Accessions, Library of Congress, _____ 1953, Uncl.

Anodic polarization in electrolytic production of per-
 manganate. G. Gais, N. Lalygin and V. Zikov. *J.*
Applied Chem. (U. S. S. R.) 16, No. 9/10, 41: 25(1944)
 (French summary). -- Measurements were made on anodic
 polarization in the process of oxidation of manganate into
 permanganate on Pt, Ni and Cu electrodes in aq. solu-
 tions of various concns. of Mn. A sharp drop of polariza-
 tion and increased limiting c. d. were achieved by stirring
 of the anolyte. It was shown that polarization and limit-
 ing c. d. are independent of the material of the electrode.
 The data confirm the applicability in this case of the equa-
 tion of concn. polarization; direct proportionality was
 shown between limiting c. d. and concn. of K_2MnO_4 . It
 is thus shown that this oxidation process is accompanied
 only by concn. polarization. G. M. Kosolapoff

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION