KRAVTSOV, V. I.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Averkiyev, A. G. Kravtsov, V. I. Voynovich, P. A. Lapshin, G. N.	"A New Method of Hydraulic Study by Means of Models Under Air Pressure"	Ministry of Electric Power Stations and Electrical Industry

SO: W-30604, 7 July 1954

112-57-8-16332

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1957, Nr 8, p 42 (USSR)

AUTHOR: Kravtsov, V. I.

TITLE: Principal Problems and Trends in Research and Designing of Large Hydroelectric Stations (Osnovnyye zadachi i napravleniye issledovaniy i proyektirovaniya krupnykh GES)

PERIODICAL: Tr. 2-go nauch.-tekhnich. soveshchaniya po proyektir. i str-vu gidroelektrostantsiy (Transactions of the Second Scientific and Engineering Conference on Designing and Building of Hydroelectric Stations), Moscow-Leningrad, 1956, pp 227-253

ABSTRACT: Principal scientific and engineering activities of VNIIG imeni B. Ye. Vedeneyev have developed along the following lines: (1) substantiation of the minimum permissible size of hydroengineering installations and their layout; (2) development of the most perfect design methods for hydroengineering installations; (3) improving the construction of hydroengineering installations; (4) improving quality, cutting down costs, and creating new building materials; (5) improving labor methods and cutting down labor costs; (6) improving operating methods of hydroelectric stations; (7) generalization of designing and

Principal Problems and Trends in Research and Designing of Large Hydro- ....

building experience, and development of various GOST standards, specifications, and norms. The work of VNIIG consists of two parts: contractual jobs (60%) financed by interested organizations; and general-problem jobs (40%) financed by the Ministry. The contractual work deals with the solution of specific problems for individual hydroelectric stations, such as those for the Kakhovka hydroelectric station set forth in the article. The problem work deals with the solution of general prospective problems. The most interesting of them are described in the article; for example, Professor Baumgart's work on the light constructions of overflow dams. The results of practical applications of such solutions are presented. However, the experimental basis of the Institute allows solution of only 25-30% of the planned scientific and engineering projects; this fact served as a basis for the governmental decision on a considerable expansion and reconstruction of the Institute. This article presents the basic lines of further scientific and engineering work in these fields: (1) water streams; (2) filtration through soil strata; (3) soils and foundations of hydroengineering installations; (4) construction of hydro installations; (5) concrete and building

112-57-8-16332

Principal Problems and Trends in Research and Designing of Large Hydro- ....

materials; (6) fulfilling and organization of construction work; (7) operation of hydroelectric stations and other hydro installations; (8) water culture and utilities; (9) laboratory and experimental work; (10) direct servicing of construction work.

T.A.F.

Card 3/3

LOGINOV, F.G.; BASEVICH, A.Z.; BELOV, A.V.; VOZNESENSKIY, A.N.; GLEBOV, P.D.; KACHANOVSKIY, B.D.; KRAVTSOV, V.I.; LEVI, I.I.; MOROZOV, A.A.; NOSOV, R.P.; OKOROKOV, S.D.; PROSKURYAKOV, B.V.; STAROSTIN, S.M.; URAZOV, A.A.; CHERTOUSOV, M.D.; CHUGAYEV, R.R.; SHCHAVELEV, D.S.; YAGN, Yu.I.

V.S.Baumgart.; obituary. Gidr.stroi. 25 no.5:58 Je '56. (MLRA 9:9)
(Baumgart, Vladimir Sergeevich, d.-1956)

SOV/124-58-10-11591

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 129 (USSR)

AUTHORS: Kratsov, V.I., Yevdokimov, P.D.

TITLE: On Normal Soil Stress Distribution Underneath Rigid Foundations (K oprosu o raspredelenii normal'nykh napryazheniy grunte pod osh akh zhestkikh fundamentov)

PERIODICAL: Iz. Vses. n.-i. in-ta gidrotekhn., 1957, Vol 57, pp 71-76

ABSTRACT: A method is proposed for controlling contact stresses between a rigid foundation and the underlying soil by means of artificially created hydrostatic pressure in different cavities of the contact surface. This method cannot lead to the desired results owing to the fact that an increase in hydrostatic pressure above the existing contact pressure will result in a loss of contact and leakage of the pressurized liquid.

A. S. Strogano

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8(6), 14(6, 10) SOV/112-59-4-6666

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 4, p 40 (USSR)

AUTHOR: Kraytsov, V. I., and Pichuzhkin, A. A.

TITLE: All-Union Scientific-Research Hydro-Engineering Institute (VNIIG) imeni B. Ye. Vedeneyev

PERIODICAL: V sb.: Energ. str-vo SSSR za 40 let. M.-L., Gosenergoizdat, 1958, pp 272-287

ABSTRACT: Organization and development of the Institute, its activities and the hydraulic projects on which the Institute has worked are described. Principal research projects conducted by the Institute since 1931 are listed, and the results of their realization are shown. Institute activities in developing standards, organizing scientific and engineering information, etc., are described.

Ye.L.I.

Card 1/1

VOYNOVICH, P.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; KRAVTSOV, V.I., starshiy nauchnyy sotrudnik, kand.tekhn. nauk; PREOBRAZHENSKIY, N.A., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; SHVARTS, A.I., prof., doktor tekhnicheskikh nauk [deceased]

Head structures of the Upper Khariuzovskaya Hydroelectric Power Station on the Gromotukha River. Izv.VNIIG 61:31-42 '58. (MIRA 13:6)
(East Kazakhstan Province--Hydraulic power stations)

KRAVTSOV, V.I., starshiy nauchnyy sotrudnik, kand.tekhn.nauk; SAMOSTRELOV, P.V., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Experimental Institute of Models and Structures in the city of Bergamo, Italy. Izv.VNIIG 62:19-39 '59. (MIRA 13:6)
(Bergamo--Hydraulic engineering--Research)

KRAVTSOV, V. I.

KRAVTSOV, V. I. --"The Use of Oscillographic and Ordinary Methods to Investigate the Kinetics of Electrode Processes Occurring on Iron and a Cadmium Amalgam in Solutions of Sulfuric Acid." Leningrad, 1955. (Dissertation for the Degree of Candidate in Chemical Sciences).

So: Knizhnaya letopis', No 8, 1956, pp 97-103

Leningrad State Univ.
im A. A. Zhdanov

KRAVTSOV, V.I.

Polarization of metals soluble in acids. Vest.Lenun. 10 no.11: 149-152 N '55. (MLRA 9:3)

(Electrolytic corrosion)

DURDIN, Ya.V.; KRAVTSOV, V.I.

Oscillographic method for studying the kinetics of solution of iron in sulfuric acid. Vest.Len.un.11 no.4:127-131 F '56. (MLRA 9:7)
(Solution (Chemistry)) (Oscillograph)

KRAVTSOV, V. I.

OSELEDCHIK, B.M.; KRAVTSOV, V.I., red.; CHOTIYEV, S., tekhn.red.

[Modernization of lathes; generalizations from the accumulated experiences of machinery manufacturing plants] Modernizatsiia tokarnykh stankov; obobshchenie nakoplennogo opyta na mashinostroitel'nykh zavodakh. Frunze, Kirgizskoe gos.izd-vo, 1957. 141 p. (MIRA 11:6)
(Lathes)

KRAVTSOV, V.I.

DURDIN, Ya.V.; KRAVTSOV, V.I.

Investigating the kinetics of electrode processes taking place on the surface of metals soluble in acids. Part 1: Iron [with summary in English]. Vest. LGU 12 no.22:131-147 '57. (MIRA 11:2)
(Iron) (Polarization (Electricity))

KRAVTSOV, V. I.

AUTHORS: Durdin, Ya. V., and Kravtsov, V. I. 54-4-16/20

TITLE: The Investigation of the Kinetics of Electrode-Processes Taking Place on the Surface of Metals Soluble in Acids. I. Iron (Issledovaniye kinetiki elektrodnykh protsessov, protekayushchikh na metallakh, rastvoryayushchikhsya v kislotakh. I. Zhelezo).

PERIODICAL: Vestnik Leningradskogo Universiteta Seriya Fiziki i Khimii, 1957, Vol. 22, Nr 4, pp. 131-147 (USSR).

ABSTRACT:

The experiments were carried out with an Armco iron (0.017 % C, 0.02 % Si and 0.006 % Mn) in a glass apparatus, in hydrogen atmospheric pressure, at 25° ± 0.1°C. By cutting in and out a directly polarized current the curves of the cathode-polarization and the oscillograms of the Armco iron contained in 2n H_2SO_4 have been obtained and studied. The tabulated results show, that the solution-velocities of iron calculated on 1 cm^2 of visible surface rise after some time, whereas the solution velocities calculated on the real surface go down. Latter, apparently, can be attributed to the increase of the lecessive voltage of the hydrogen on the iron, depending on the accumulation of the free carbon on the surface of the iron. From the oscillograms the quantities of the double-layer-capacity were obtained

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and thus the changes of the real surface were determined. The deviations of the cut-out-oscillogram at small polarization from the theoretical quantities can also be explained by the fact, that on the iron surface there is a hydrogen excessive voltage which is influenced by the slow discharge and the slow disappearance of the hydrogen from the iron surface. For the strong cathode-polarization a value b - 100 mV was obtained, for computations, however, the value b - 60 mV has to be used. This deviation can be explained by the influence of the diffusion of the atomic hydrogen into the solution upon the velocity of the total process of the hydrogen separation.
There are 8 figures, 3 tables, and 35 references, 22 of which are Slavic.

SUBMITTED: January 7, 1957.

AVAILABLE: Library of Congress.

Card 2/2

AUTHOR: Kravtsov, V.I., Loginova, I.S.

76-11-9/35

TITLE: On the Mechanism of the Dissolution of Cadmium and Cadmium Amalgam in Solutions of Acids (O mekhanizme rastvoreniya kadmiya i amal'gamy kadmiya v rastvore kislot)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 11, pp. 2438-2444 (USSR)

ABSTRACT: The most important criterion in the evaluation of the degree of equilibrium of electrode potentials is the dependence of the latter on the activity (concentration) of the ions determining the potential in the solution. Here the investigation of the dependence of potentials of the electrodes of cadmium and cadmium amalgam on the cadmium sulphate concentration in sulphuric acid is carried out. It is shown that the self-dissolution and the anode dissolution of cadmium and the amalgamated cadmium in sulphuric acid solutions develops with practically equilibrated potentials of the corresponding electrodes. The possibility is shown to determine the cadmium-sulphate concentration on the surface of the cadmium (amalgamated cadmium) dissolving in sulphuric acid from the φ-lg c_{CdSO_4} -curves. It is stated that the modification of

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On the Mechanism of the Dissolution of Cadmium and Cadmium Amalgam in Solutions of Acids

the activity coefficient of cadmium ions in solutions with an excess of sulphuric acid takes place "simbatically" with the modification of the average activity coefficient of the sulphuric acid. There are 5 figures, 1 table, and 12 references, 8 of which are Slavic.

ASSOCIATION: Leningrad State University imeni A.A.Zhdanov (Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova)

SUBMITTED: June 18, 1956

AVAILABLE: Library of Congress

AUTHOR: Kravtsov, V.I. 76-12-4/27

TITLE: Oscillographic Investigation of the Kinetics of Electrode Processes Taking Place on Metals Dissolving in Acids (Ostsillograficheskoye issledovaniye kinetiki elektrodnykh protsessov, protekayushchikh na metallakh, rastvoryayushchikhsya v kislotakh)

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 12, pp. 2627-2634 (USSR)

ABSTRACT: The rules governing the character of the metal potential change after the time after switching on (switching off) of the polarizing continuous current are investigated here and the corresponding equations are derived for the cases of small and large polarizations. The galvanostatic variant of the oscillographic method investigated here is simply designed here as oscillographic method. It results from the obtained equations (10) and (13) that the capacity of the double layer on the dissolving electrode can be determined both from the initial angle of inclination of the switch-on oscillogram, and from the switch-off oscillogram of the continuous current. With the investigation of the switching in of small polarizations the equation (17) is obtained. This equation expresses the change of the potential of a previously self-dissolving metal after the time after switching on of a small polarizing

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density of the current i. The extreme deviation for the electrode potential of the originally steady value amounts only to 10 mV for this density. It results from the obtained equations (17) and (18) that the constant does not depend on the density of the current i and that it can be determined from the relation $\Delta\varphi$ -t found experimentally. The equation (22) is obtained with the investigation of switching off of small polarizations. This equation describes the metal potential change with respect to time in the course of the production of its steady self-dissolving process after switching off of the continuous current i, polarizing it. It results from the equations (17) and (22) that both the switch-off and switch-on oscillograms of small polarizations with $|\Delta\varphi_\infty| < 10$ mV, which were recorded on the same electrode, after a corresponding transformation of coordinates, must correspond to a straight-line relationship with the same angle-coefficient K. When switching on great cathode-polarizations with $|\Delta\varphi_\infty| > 80$ mV, that term which takes account of the anode process, may be disregarded in the equation (9). The equation (24) is obtained. (The equation (9) is a differential equation which the electrode-charging-process describes at the switching on of the current i). In the case of switching in of great anode-polarizations, an analogous equation is obtained from the equation

(9). The analogous equations are obtained in the same way from the equation (12), which describes the decrease of the potential of electrodes after the switching out of the external polarizing current in the case of great cathodes or anode polarizations respectively. Equations (26) and (27).
The equations for the oscillograms at the commutation of current are derived in the second chapter. The rules governing the adjustment of the potential at the transition of the cathode-polarizing density of the current i_1 and of the potential $\varphi_{\infty 1}$, corresponding to this density, to the cathode-polarizing density of the current i_2, and to the potential $\varphi_{\infty 2}$ corresponding to this density are investigated. The obtained equations (29) and (30) describe the change of the potential of the electrodes at the commutation of the current in the range of great cathode-polarizations analogously to the previously quoted equations (24) and (26). In the case of a commutation of the anode densities of the current, equations analogous to the equations (29) and (30) are obtained, which differ from the latter only by having the inversed signs before $\Delta\varphi$ and $\Delta\varphi_{\infty}$ and by having the constant b in-

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Oscillographic Investigation of the Kinetics of Electrode Processes Taking Place on Metals Dissolving in Acids

76-12-4/27

stead of b_1 of the anode processes. The equations derived here are based on the assumption that the capacity of the double layer on the polarizing metal does not change with the change of the potential. The elaborate investigation was studied and discussed with professor Ya.V. Durdin. There are 36 references, 23 of which are Slavic.

ASSOCIATION: Leningrad State University imeni A.A.Zhdanov (Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova)

SUBMITTED: July 9, 1956

AVAILABLE: Library of Congress

Card 4/4

KRAVTSOV, V.I., starshiy prepodavatel'

Investigating the process of friction of clean surfaces during metal cutting. Izv. vys. ucheb. zav.; mashinostr. no.3/4:165-172 '58; (MIRA 12:5)

1.Frunzenskiy politekhnicheskiy institut.
(Metal cutting) (Friction)

KRAVTSOV V.I.

~~[illegible] A. T.~~

PHASE I BOOK EXPLOITATION SOV/2216

5(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, Ph.D. Lukovtsev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and O.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 electrodeposition 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.

KRAVTSOV, V.I.; CHZHAN CHUNI-AIN [Chang Chih-ai]

Kinetics of electrode processes taking place on metals soluble in the solution. Part 2: Nickel in sulfuric acid. Vest. LGU 14 no.10:114-122 '59. (MIRA 12:11)

(Chemical reaction, Rate of) (Nickel) (Sulfuric acid)

5(1)

SOV/80-32-4-45/47

AUTHORS: Kravtsov, V.I. and Polovoy, Yu.N.

TITLE: A Device for Preparing Salts From Metals by Their Anode Solution (Pribor dlya polucheniya soley iz metallov putem ikh anodnogo rastvoreniya)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 935-937 (USSR)

ABSTRACT: Metals are frequently used as initial products for preparation of pure salts. However, the spontaneous dissolution in acids of some metals proceeds very slowly. This pertains to such metals as Cd, Zn, Pb and Sn. Therefore the authors propose to apply the method of anode dissolution of metals and describe a device for obtaining $CdSO_4$ from granular cadmium. Cadmium rods serve as an anode and a cathode in this device into which sulfuric acid is poured. Direct current with a voltage of 15 v and intensity of 1.5 amp is applied. Dissolving granules of metal cadmium form the $CdSO_4$ solution which accumulates at the bottom of the device due to its greater specific gravity. The method has an advantage that a considerable part of impurities, present

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A Device for Preparing Salts from Metals by Their Anode Solution

in the initial metal, does not go over into the solution; their concentration decreases by as much as an order of magnitude in comparison with the initial concentration, according to results of the spectral analysis. The authors thank Professor Ya.V. Durdin for a number of valuable advices .
There are: 1 diagram and 7 references, 5 of which are Soviet and 2 English.

SUBMITTED: October 23, 1957

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5(4)
AUTHOR: Kravtsov, V. I. SOV/76-33-1-28/45

TITLE: Oscillographic Investigation of the Kinetics of Electrode Processes on Metallic Electrodes (Ostsillograficheskoye issledovaniye kinetiki elektrodnykh protsessov, protekayushchikh na metallicheskikh elektrodakh)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 1, pp 165-173 (USSR)

ABSTRACT: Investigations of electrode processes on solid metallic electrodes become difficult by the change of the surface extension and activity degree of the metallic electrode while plotting the polarization curves (Refs 1-7). V. A. Royter, V. A. Yuza, Ye. S. Poluyan, and L. D. Kopyl (Refs 8-10) successfully used the oscillographic method in these investigations. For analyzing the oscillograms on switching on and off the direct current the authors mentioned last used an equation with a non-pertinent supposition. Papers by Gerischer (Gerisher)(Refs 12-14) show that this supposition is non-pertinent. Papers by Audubert (Odyuber)(Ref 17), Mattsson and Lindström (Lindstrem)(Ref 18), Sroka and Fischer (Fisher) (Ref 19), and O. A. Yesin and L. I. Antropov (Ref 20) showed

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different results for the constants α and β as compared to the paper mentioned above (Ref 10). For this reason the investigations under discussion were carried out. The reaction of a copper electrode was tested in a 1 n $CuSO_4$ + 1 n H_2SO_4 solution in a hydrogen atmosphere at 25°C. The oscillograms were plotted in the proximity of the equilibrium potential of the copper electrode (310 mv). G. T. Andreyeva measured the influence of the hydrogen atmosphere. It is stated that the polarization of the copper electrode is determined by the delayed current of the discharge-ionization and the concentration changes in the active sections of the electrode surface. The value $i_c = 3.7 \cdot 10^{-3}$ A/cm^2 (Fig 5) was calculated for the exchange current from the linear function $\Delta\varphi - t^{1/2}$, and, in accordance with Killson (Ref 27), the amount of the active electrode surface was stated as 1-3%. There are 5 figures, 1 table, and 27 references, 16 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: July 5, 1957

ZINOV'YEV, V.A.; KRAVTSOV, V.I.

Anodic solution of cadmium in sulfuric acid solutions containing cadmium sulfate. Vest. LGU 15:95-100 '60. (MIRA 13:2)
(Cadmium) (Sulfuric acid) (Cadmium sulfate)

S/076/60/034/009/031/041XX
B020/B056

AUTHORS: Chzhan Chzhi-bin, Kravtsov, V. I., and Durdin, Ya. V.

TITLE: Kinetics of Electrode Processes on Solid Electrodes. I. Anodic Polarization Curves for Nickel in Sulfuric Acid

PERIODICAL: Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9, pp. 2041 - 2054

TEXT: It was the purpose of the present work to determine the true function $i(\varphi)$ without disturbing moments for the anodic dissolution of a metal as well as the investigation of the activation of a metallic electrode under the effect of anodic polarization. A nickel electrode in H_2SO_4 was investigated, where it is known that in the anodic polarization of Ni in H_2SO_4 no noticeable concentration polarization or passivation is observed within a rather wide range of current density. The activation of Ni-electrodes by an anode current, on the other hand, is known. The $i(\varphi)$ and $\varphi(t)$ curves were recorded by means of an electric measuring device with the help of a cathode voltmeter and a figure-eight loop oscilloscope with two-

Kinetics of Electrode Processes on Solid Electrodes. I. Anodic Polarization Curves for Nickel in Sulfuric Acid

S/076/60/034/009/031/041XX
B020/B05[illegible]

cascade-d.c.-amplifier. The electrodes were provided by a rolled foil of pure Ni of "Hilger" trade-mark, which had been made available by Professor Ya. M. Kolotyrkin. In the present paper, the results obtained in 1 N and 10 N H_2SO_4 at 25 $\pm$ 0.1° are given. The potential of the nickel anode changed very consiserably in time after a current of constant density was switched on. The curve abe in Fig. 1 describes the change in the potential of the previously automatically dissolved nickel electrode in 1 N H_2SO_4 immediately after the anodic polarization current with a density of 0.04 ma/cm^2 had been switched on. Curve 1 in Fig. 2 is the "steady" anodic polarization curve $\varphi = f(\log I)$, which had been drawn on the basis of the potential on an Ni-anode in 1 N H_2SO_4 after having been held for a long time under steady conditions and various densities of the current I. From Fig. 2 it follows that in curve I there is no linear section; however, on the curves $\varphi = f(\log I)$ linear sections were experimentally found, to which coefficients b_{av} of 10 to 30 mv corresponded. The anodic polarization curve II in Fig. 2 was drawn on the basis of the results obtained by the "change-

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over" method on an electrode held at i = 2 ma/cm^2. Curve II, in contrast to curve I, has a large linear section, to which there corresponds an angular coefficient of b_1 = 92 mv. The results obtained by oscilloscopic measurements on automatically dissolving electrodes are given in a table, from which it follows that the difference between the φ = f(log i) curves, recorded in the same 10 N H_2SO_4-solution, is 56 mv. Irrespective of the considerable spread of the individual points, Fig. 3 shows that the volume of the double layer on the Ni-electrode is only little dependent on the potential in a large potential range. Fig. 4 shows the characteristic φ = f(log i) curves, recorded on one and the same electrode after a long-time holding at three different current densities. Table 2 shows the mean values of the coefficients b_1, which correspond to the φ = f(log i) curves, recorded on an Ni-electrode previously held at various densities of the activating current. The curves C - φ in Fig. 5 correspond to the same surface states of the nickel electrode as the anodic curves in Fig. 4. Fig. 6 shows the steady φ = f(log I)-anode curves, recorded on nickel in 1 N and 10 N H_2SO_4. The data of the anodic change-over oscillograms in 1 N and 10 N H_2SO_4 are given in Tables 3 and 4. The dependence of the potential of the nickel

anode on the logarithm of the true current dersity of the preceding anodic polarization is given in Fig. 7. Mention is made of V. A. Yuza, L. D. Kopyl, V. A. Royter, Ye. S. Poluyan, A. T. Vagramyan, and A. N. Frumkin. There are 7 figures, 4 tables, and 31 references: 16 Soviet, 1 US, 6 British, and 8 German.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

SUBMITTED: December 26, 1958

KRAVTSOV, V.I.

Device for recording potential - time curves in the event of instantaneous changes of polarizing current densities. Zhur. fiz. khim. 35 no.5:1144-1146 My '61. (MIRA 16:7)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.
(Electric meters, Recording) (Electrochemistry)

S/020/61/136/005/027/032
B101/B206

AUTHORS: Kravtsov, V. I. and Yermolova, A. F.

TITLE: Steady potentials of zinc and amalgamated zinc in sulfate solutions containing variable amounts of zinc and hydrogen ions

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1146-1149

TEXT: A. N. Frumkin (Ref. 1) showed that during dissolution of metals in acid electrolytes, both equilibrium potentials and non-equilibrium potentials can occur, depending on the ratio of the electrodic processes proceeding on the dissolving metal. Therefore, an attempt has now been made to find out whether a transition from non-equilibrium to equilibrium potential is possible by changing the concentration of acid and zinc ions during the dissolution of Zn in sulfuric acid. Na_2SO_4 containing different amounts of H_2SO_4 and $ZnSO_4$ served as electrolyte, the total concentration H_2SO_4 + Na_2SO_4 equaling 1 N. Polycrystalline zinc with

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Steady potentials of zinc and ...

$1 \cdot 10^{-4}$% impurities served as electrode. Measurements were made at 25°C in a hydrogen atmosphere. The potentials mentioned are related to the zero potential of the hydrogen electrode. Fig. 1 shows the steady potential φ'_o as a function of log $[Zn^{++}]$ for different concentrations of H_2SO_4.

Linear dependence according to the Nernst equation was found for $[H_2SO_4] = 10^{-4}$ N and $[Zn^{++}]$ between $3 \cdot 10^{-3}$ and $1 \cdot 10^{-1}$ N. In the case of amalgamated zinc (Fig. 2), the linear dependence is maintained at higher concentrations of H_2SO_4 than is the case with zinc. The deviation from linearity is explained by the increasing effect of the hydrogen ions. The following is written down:

$k_1 [H^+]_s \exp(-\alpha_1 F \varphi'_o/RT) = k'_2 \exp(\beta_1 F \varphi'_o/RT) - k_2 [Zn^{++}]_s \exp(-\zeta_1 F \varphi'_o/RT)$ (1).

$[H^+]_s$, $[Zn^{++}]_s$ are the concentrations on the electrode surface. With thorough intermixing of the electrolyte, this concentration can be set equal to the concentration $[H^+]_o$, $[Zn^{++}]_o$ in the volume of the solution.

The steady potential φ'_o is more positive than the equilibrium potential

φ_o: $\Delta\varphi = \varphi'_o - \varphi_o$. Assuming $\left[H^+\right]_o = 1$ and substituting $\varphi'_o = \varphi_o + \Delta\varphi$ in (1), the following relation is found for the discharge rate I'_o of the hydrogen ions: $I'_o \left[H^+\right]_o \exp(-\alpha F \Delta\varphi/RT) = i_o(\exp \beta_1 F \Delta\varphi/RT - \exp(-\alpha_1 F \Delta\varphi/RT)$ (2). i_o is the exchange current at a given concentration $\left[Zn^{++}\right]_o$. The solution of Eq. (2) reads

$\Delta\varphi = a + k\left\{\log\left[1 - \exp(-2F\Delta\varphi/RT)\right] + pH\right\}$ (3), where

$a = -2.3RT/\left[E(\alpha+\beta_1)\right] \log(i_o f_{H^+}/I'_o)$; $k = 2.3RT/F(\alpha+\beta_1)$ (4). a is constant at $\left[Zn^{++}\right]$ = const; f_{H^+} = const. Eq. (3) was valid for amalgamated zinc, whether the solution was intermixed by bubbling of hydrogen or by means of a magnetic stirrer. When using zinc electrodes, thorough intermixing caused a positive shift of their potential (Table 2). A deviation from Eq. (3) was observed during the dissolution of the zinc electrode in a strongly acid electrolyte. The deviation is traced back to activation of the electrode surface, which sets in at a high rate of dissolution. A. L. Rotinyan, N. P. Fedot'yev, and Li Un Sok are mentioned.

Card 3/6

S/020/61/136/005/027/032
B101/B206

Steady potentials of zinc and ...

There are 3 figures, 2 tables, and 12 references: 12 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: July 20, 1960, by A. N. Frumkin, Academician

SUBMITTED: July 9, 1960

Legend to Fig. 1. Steady potential of zinc at H_2SO_4 concentrations of:
1) 10^{-4} N; 2) $5 \cdot 10^{-4}$ N; 3) 10^{-3} N;
4) 10^{-2} N; 5) 10^{-1} N

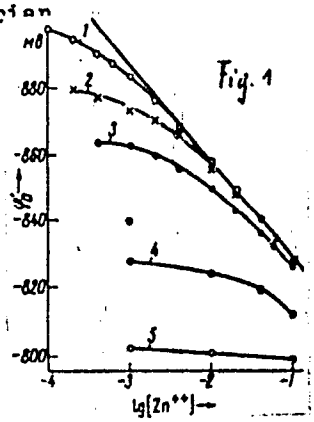


Fig. 1

Fig. 1

Card 4/6

Steady potentials of zinc and ...

Legend to Fig. 2. Steady potential of amalgamated zinc at H_2SO_4 concentrations of: 1) 10^{-3} N; 2) 10^{-2} N; 3) 10^{-1} N; 4) $2 \cdot 10^{-2}$ N; 5) $5 \cdot 10^{-1}$ N; 6) 1 N

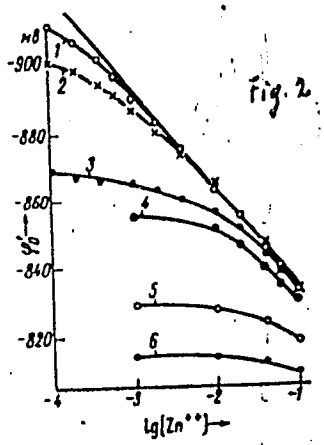


Fig. 2

Card 5/6

S/020/61/136/005/027/032
B101/B206

Steady potentials of zinc and ...

Legend to Table 2. Potential shift $\Delta\varphi_{mix}$ (mv) owing to intermixing of electrolyte.

Таблица 2

Сдвиги потенциала цинкового электрода $\Delta\varphi_n$ (мв), наблюдавшиеся под влиянием перемешивания *

$[ZnSO_4]$, N	$[H_2SO_4]$, N					
	10^{-4}	10^{-3}	$4\cdot10^{-3}$	10^{-2}	$2\cdot10^{-2}$	10^{-1}
10^{-2}	2,0	4,5	8,0	9,5	9,0	0,5
10^{-2}	1,0	4,0	6,5	10,0	8,5	0,5
10^{-1}	0	1,5	8,0	9,5	5,0	0,5

Table 2

Card 6/6

S/054/62/000/002/010/012
B117/B101

AUTHORS: Kravtsov, V. I., Yang P'en-chao

TITLE: The kinetics of anodic dissolution of nickel in acid sulfate electrolytes with variable pH

PERIODICAL: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1962, 107 - 116

TEXT: The anodic dissolution of high-purity electrolytic nickel in acid (pH = 0.4 - 3.25) solutions (1-x) N Na_2SO_4 + x N H_2SO_4 was studied by the galvanostatic method. The electrolytic cell and method of measurement were as previously described (ZhFKh, 34, 2041, 1960; Vestnik LGU, no. 22, 131, 1957). The rate of anodic dissolution of nickel was referred to the unit of true electrode surface. Analysis of the "nonstationary" anodic polarization curves φ - log i showed that owing to preliminary polarization an increase in current density was attended by a shift towards negative potentials and that the slope b_A (87 ± 5 mv), corresponding to the linear sections of these curves was independent of pH. Analysis of the "stationary" anodic polarization curves φ - log i* showed a linear

Card 1/3

The kinetics of anodic dissolution...

relationship between the potential and the logarithm of the "true" current density and the slope b_{st} = 39 mv. The rate of anodic polarization of nickel was independent of pH in the range of pH = 0.40 - 1.75. An increase of pH between 1.75 and 3.25 accelerated the process at constant potential. $(\partial\varphi/\partial pH)_{i_A}$ = -45 mv holds for this range. Comparison between the "stationary" polarization curves determined here for thermally treated nickel and those for rolled nickel (ZhFKh, 34, 2041, 1960) showed satisfactory agreement. Based on the experimental results a mechanism of anodic dissolution of nickel in sulfate electrolytes was suggested. NiOh was assumed to form on the nickel surface. Under steady conditions, this reaction is reversible. The second stage, forming $NiOH^+$, is irreversible, but the third, forming Ni^{2+}, is reversible again. From the theory of retarded discharge the rate of anodic ionization was expressed by $i_A = k[NiOH]\exp(\beta F\varphi/RT)$ (where β is the transfer coefficient characterizing the effect of the potential on the separation of an electron from the NiOH group). After several transformations, the equation

$$-(\partial\varphi/\partial pH)_{i_A} = (\partial\varphi/\partial \log i_A)_{pH} = 2.3[RT/(1+\beta)F] \qquad (8)$$

Card 2/3

The kinetics of anodic dissolution...

was derived. This equation agrees well with the experimental results, and resembles the mechanism suggested by J. O'M. Bockris, D. Drazic, A. R. Despic (Electrochim. acta, 4, 325, 1961) for the anodic dissolution of iron. In strongly acid electrolytes the NiOH groups are instable, and SO_4^{2-} groups replace the OH^-. In this case the rate of anodic dissolution of metals will not depend on the pH of the solution but on the anion concentration. There are 4 figures and 1 table.

SUBMITTED: October 30, 1961

Card 3/3

KRAVTSOV, V.I.; YAN PIEN'-CHZHAO

Kinetics of the anodic solution of nickel in acid sulfate electrolytes of variable pH. Vest.LGU 17 no.10:107-116 '62. (MIRA 15:5)

(Electrodes, Nickel) (Electromotive force)
(Hydrogen-ion concentration)

KRAVTSOV, V.I.; LOKSHTANOVA, O.G.

Kinetics of electrode processes on solid electrodes. Part 3
Zhur. fiz. khim. 36 no.11:2362-2367 N'62. (MIRA 17:5)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

KRAVTSOV, V.I.; SIMAKOV, B.V.

"Galvanostatic Study of Electrochemical Reactions at Instantaneous Changes in the Current Density."

Report presented at the 14th meeting CITCE, Intl. Comm. of Electrochemical Thermodynamics and Kinetics, Moscow, 19-25 Aug 63.

The University, Leningrad, U.S.S.R.

KRAVTSOV, V.I.; ZVEREVICH, G.V.

Galvanostatic study of the processes of electrodeposition and anodic solution of zinc in zinc perchlorate solution. Vest. LGU. 18 no.16:103-109 '63. (MIRA 16:11)

KRAVTSOV, V.I.; MASLYAKOVA, I.O.; GOMBOZHAV, Zh.

Galvanostatic study of the cathodic process of hydrogen evolution on cobalt and nickel in acid sulfate electrolytes. Zhur.fiz.khim. 37 no. 10:2333-2336 O '63. (MIRA 17:2)

KRAVTSOV, V. I.; SIMAKOV, B. V.

Kinetics of electrode processes in the system chloroplatinate ion-chloroplatinite ion. Vest. LGU 19 no.10:90-100 '64. (MIRA 17:7)

KRAVTSIV, V.I.; PETROVA, G.M.

Galvanostatic investigation of the processes involved in the charge-exchange of chloride complexed of iridium. Dokl. AN SSSR 154 no.2:433-436 Ja'64. (MIRA 17:2)

1. Leningradskiy gosudarstvennyy universitet im. A.A. Zhdanova. Predstavleno akademikom A.N. Frumkinym.

[illegible], L. I.

Effect of adsorption processes on [illegible] the galvanostatic curves in the course of electrochemical dissolution at the first inflection stage. Zhur. fiz. khim. 38 no.6:1[illegible] Je '64.

(MIRA 18:3)

1. Leningradskiy gosudarstvennyy universitet imeni Zhdanova.

PAVLOV, I.V., kand. tekhn. nauk; KRAVTSOV, V.I., inzh.

Effect of the a.c. traction network on the industrial structures.
Zhel. dor. transp. 46 no.8:44-48 Ag '64.
(MIRA 17:11)

KRAVTSOV, V.I.; SIMAKOV, B.V.

Effect of chlorine ions on the adsorption of oxygen on platinum, rhodium, and iridium. Vest. LGU 20 no.4:103-105 '65.
(MIRA 18:4)

KRAVTSOV, V.I.; SIMAKOV, B.V.

Kinetics of electrode processes in the chloroplatinate ion - chloroplatinite ion system. Vest. LGU 20 no.10:76-85 '65. (MIRA 18:7)

L 45527-66 EWT(m)/EWP(j)/T/EWP(t)/ETI IJP(c) JD/RM

ACC NR: AR6013710 SOURCE CODE: UR/0058/65/000/010/D072/D073

58
B

AUTHOR: Kravtsov, V. M.

TITLE: Temperature dependence of the rate of propagation of longitudinal waves in CBr_4

SOURCE: Ref. zh. Fizika, Abs. 10Zh487

REF SOURCE: Sb. Primeneniye ul'traakust. k issled. veshchestva. Vyp. 20, M., 1964, 95-100

TOPIC TAGS: carbon compound, bromide, longitudinal wave, wave propagation, phase transition, temperature dependence, ultrasonic wave, ultrasonic velocity

ABSTRACT: By measuring the velocity of propagation of longitudinal waves, the author investigated a phase transition of the oriented melting type in CBr_4 single crystals. Measurement was made of the temperature dependence of the velocity of longitudinal waves in CBr_4 above the temperature of the orientated melting. The measurements were made at frequencies 3.2-4 Mcs. The value obtained for the temperature coefficient of velocity above the phase transition point (46.9C) is $(2.05 \pm 0.14) \times 10^{-3}$ deg^{-1}. The results of the investigation of the phase transition are compared with data by other authors. From the values of the speed of sound the author calculates the elastic constants, which are compared with those obtained from the Born theory. It is noted that the change in the velocity of ultrasound during the phase transition can be due essentially to the change in the intermolecular distance. Bibliography, 23 titles. V. Iyamov. [Translation of abstract]

SUB CODE: 20

Card 1/1

L 45530-66 EWP(j)/EWT(l)/EWT(m) RM

ACC NR: AR6013714 SOURCE CODE: UR/0058/65/000/010/H074/H074

41
B

AUTHOR: Kravtsov, V. M.

TITLE: Investigations of the absorption of longitudinal waves in single crystals of carbon tetrabromide and paradichlorobenzene

SOURCE: Ref. zh. Fizika, Abs. 10Zh498

REF SOURCE: Sb. Primeneniye ul'traakust. k issled. veshchestva. Vyp. 20. M., 1964, 101-105

TOPIC TAGS: carbon compound, bromide, single crystal growing, organic crystal, ultrasonic velocity, ultrasound absorption, temperature dependence

ABSTRACT: Apparatus is described for growing single crystals of carbon tetrabromide and paradichlorobenzene from the melt by the temperature-gradient method. Single crystals with lengths up to 25 mm were obtained, in which the velocity and damping of ultrasound were measured by an echo-pulse method at frequencies 3, 9, and 15 Mcs. Results are presented of the measurement of damping in CBr_4 and in paradichlorobenzene at the indicated frequency. In the paradichlorobenzene, as the temperature changed from room temperature to the melting point, the absorption did not change even in the case of the polymorphic transformation near the temperature 30.8C. The polymorphic transformation point was identified by the abrupt jump in the speed of sound. Measurements of the sound absorption and velocity near the temperature of the orientated melting, 47.8C (which was observed by other authors by the method of quadrupole nucle-

Card 1/2

L 45530-66

ACC NR: AR6013714 O

ar resonance), disclosed no singularities whatever. For CBr_4, no temperature dependence of the damping was likewise observed. The damping of ultrasound in CBr_4 is larger than in paradichlorobenzene. V. Lyamov. [Translation of abstract]

SUB CODE: 20

Card 2/2

L 42967-66 EWT(m)/EWP(j)/T IJP(c) RM

ACC NR: AR6024995 SOURCE CODE: UR/0081/66/000/007/S010/S010

30
B

AUTHOR: Kravtsov, V. M.

15 15

TITLE: Temperature dependence of the velocity of sound in polytetrafluoroethylene

SOURCE: Ref. zh. Khimiya, Part II, Abs. 7S64

REF SOURCE: Uch. zap. Mosk. obl. ped. in-ta, v. 147, 1964, 161-164

TOPIC TAGS: sound propagation, polytetrafluoroethylene

ABSTRACT: The temperature dependence of the velocity of sound in PTFE was studied in the range of phase transitions. The measurement technique has been described (RZhKhim, 1962, 9B287), but in order to increase the accuracy, the minima of the resultant vibration were used instead of the maxima. The temperature dependence of the sound velocity shows a slight minimum in the region of the phase transition at 20°. The phase transition at 30° causes a change in the temperature coefficient of the sound velocity. V. Yusfin. [Translation of abstract]

SUB CODE: 11,20

Card 1/1

L 32986-66 EWT(l)/EWT(m)/EWP(j)/T LIP(c) WW/RM

ACC NR: AR6016268 SOURCE CODE: UR/0058/65/000/011/H061/H061

AUTHOR: Kravtsov, V. M.

TITLE: Temperature dependence of the speed of sound in polytetrafluoroethylene

SOURCE: Ref. zh. Fizika, Abs. 11Zh425

REF SOURCE: Uch. zap. Mosk. obl. ped. in-ta, v. 147, 1964, 161-164

TOPIC TAGS: acoustic speed, ~~phase transition~~, temperature dependence, acoustic measurement, thermostat, POLYTETRAFLUOROETHYLENE

ABSTRACT: The temperature dependence of the speed of sound (c) in the polymer polytetrafluoroethylene was measured near the phase transitions (at 20 and 30C). A modification of a method previously proposed was used (RZhFiz, 1962, 1G398). A block diagram of the apparatus is given. The change in frequency was from 3 to 4 Mcs at $l \sim 1.5$ mm and $c \sim 1320$ m/sec; the length of the sample l was determined accurate to ±0.01 mm, and the frequency of the minimum accurate to ±1 kcs at a thermostating accuracy ±0.02C. A plot of the temperature dependence of c is given; it shows a small minimum in the phase-transition region at 20C. The phase transition at 30C is manifest by a change in the temperature coefficient of c. To check on the influence of the thermostating conditions, c was measured by an analogous method at 500 kcs with an error not larger than 1.5%. It is established that the results for 500 kcs and for 3 - 4 Mcs coincide in the entire temperature range of the measurements. I. Nikolayeva. [Translation of abstract]

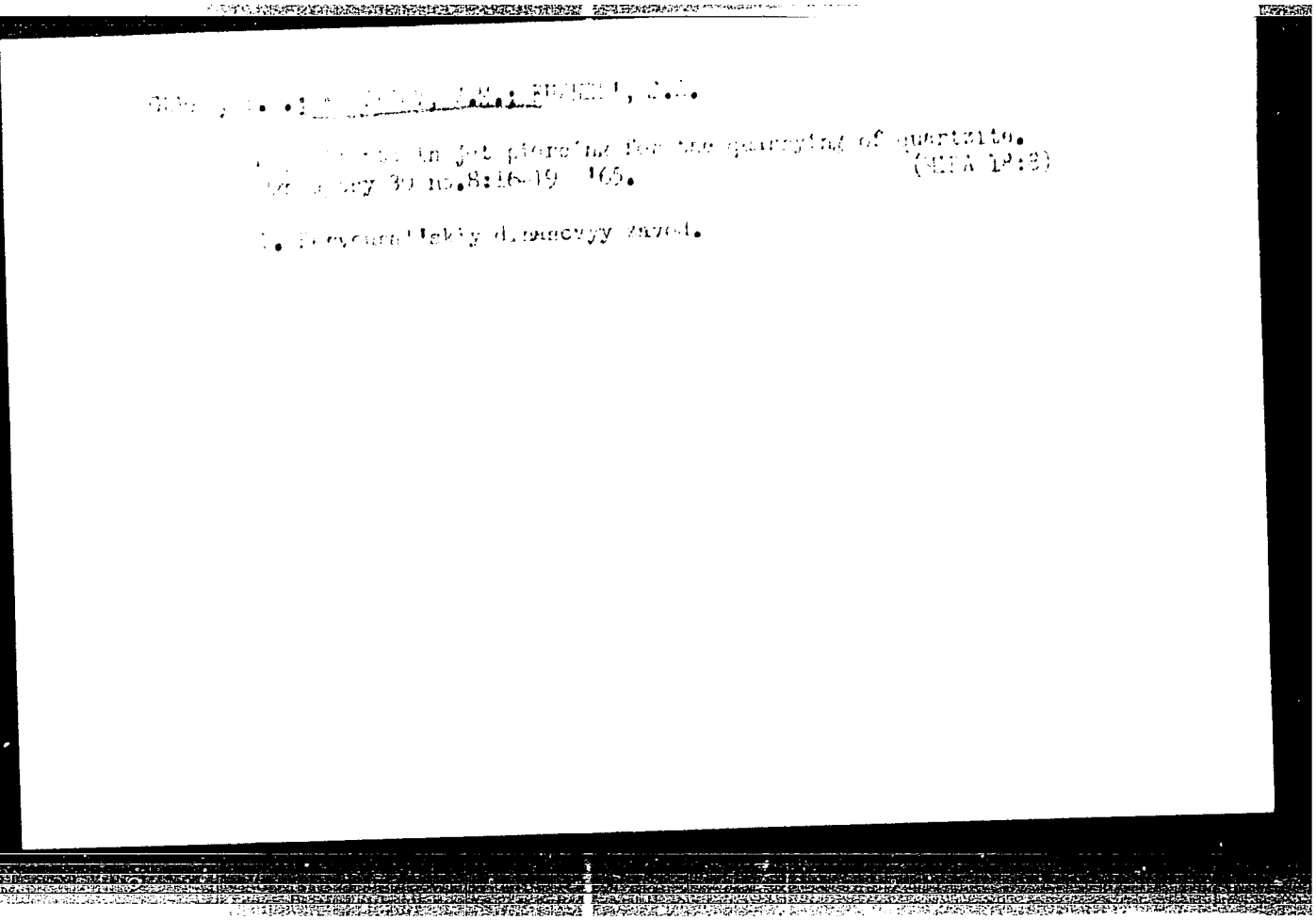
SUB CODE: 20

Card 1/1

SEMANOV, V.I., kand. tekhn. nauk; [illegible]

Results of some experimental studies on the drill ability of Pervoural'sk quartzite by thermal piercing. Izv. vys. ucheb. zav., gor. zhur. 8 no.7:[illegible] '65. (MIRA 18:9)

1. Sverdlovskiy gornyy institut imeni [illegible] (for Semanov, [illegible]). 2. Nauchno-issledovatel'skiy i proyektno-konstruktorskiy institut gornogo i obogatitel'nogo oborudovaniya (for Vinogradov, Krivoshchekov). 3. Glavnoye proizvodstvennogo ob"yedineniya (for Krivoshchekov, Kuznetsov). Rekomendovana kafedroy sooruzheniy shakhtnogo stroitel'stva Sverdlovskogo gornogo instituta.



TOMASHIN, A.K.; KIRYUSHKIN, K.I.; SHIPITSYN, A.V.; KRAVTSOV, V.M.; POMINOV, S.Ya.; BUSHUYEV, T.I.

Basic trends in the development of tank farms; results of the discussion of the article by A.G.Dubiaga and others, published in "Neftianoe khoziaistvo" no.8, 1960; conclusion. Neft. khoz. 39 no.4:60-64 Ap '61. (MIRA 14:6)
(Petroleum—Storage)
(Dubiaga, A.G.)

KRAVTSOV, V.M. (Azerbaydzhanskaya SSR).

In reference to the proof of the theorem on the sum of plane angles of a convex polyhedral angle. Mat. v shkole no.5:45 S-O '58. (MIRA 11:10)

(Angle)

KRAVTSOV, V.M.

Sound dispersion near the points of phase transition of the second kind. Akust. zhur. 9 no.2:239-241 '63.
(MIRA 16:4)

1. Moskovskiy oblastnoy pedagogicheskiy institut imeni N.K. Krupskoy.
(Absorption of sound)

DROBASHCHENKO, Ivan Tikhonovich; KSENOFONTOV, Aleksandr Nilovich; KRAVTSOV, V.N., prepodavatel', red.; MAKHOTENKO, B.S., prepodavatel', red.; MIRSKAYA, V.V., red.izd-va; IL'INSKAYA, G.M., tekhn.red.

[Fundamentals of electronics and radio engineering] Osnovy elektroniki i radiotekhniki. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1961. 283 p. (MIRA 14:6)

1. Rostovskiy gorno-elektromekhanicheskiy tekhnikum (for Kvartsov). 2. Novocherkasskiy khimiko-tekhnologicheskiy tekhnikum (for Makhotenko).

(Electronics) (Radio) (Transistors)

STRYUKOVSKIY, L.S.; KRAVTSOV, V.N.; DZHANDYBAYEV, F.

Not less than a 1000-m advance along a longwall in a year. Ugol' Ukr. 7 no.7:43-44 Jl '63. (MIRA 16:8)

1. Shakhta "Ukraina" tresta Kommunarskugol'.
(Coal mines and mining—Labor productivity)

MOSHCHINSKAYA, N.K.; KRAVTSOV, V.S.

Diaryl methanes and their derivatives. Part 10. Use of diaryl methanes for the preparation of anthracene homologs. Ukr. khim.zhur. 29 no.9:957-962 '63. (MIRA 17:4)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.

MOSHCHINSKAYA, N.K., doktor khim. nauk; KISLITSYNA, Z.G., kand.tekhn. nauk; KRUKOVSKIY, S.P.; MASHKEVICH, O.I.; POTIYEVSKAYA, S.A.; KRAVTSOV, V.S.; KUTSYGINA, V.V.; ZEMLYANSKAYA, L.K.

New binders in the production of particle boards. Bum. i der. prom. no.2:14-15 Ap-Je '64. (MIRA 17:9)

KRAVTSOV, V.S.

DVOSKIN, V.L.; STARTSEV, I.N.; DUGINA, N.A., tekhnicheskiy redaktor; KRAVTSOV, V.S., redaktor.

[Forging manipulator] Kovochnyi manipuliator. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry[Uralo-Sibirskoe otd-nie] 1953. 16 p. (MLRA 7:8)

1. Uralo-Sibirskoye otdeleniye Mashgiza (for Kravtsov)
(Forging machinery)

KRAVTSOV, V.S.

YASENEV, D.A.; YARTSEN, G.M.; DUGINA, N.A., tekhnicheskiy redaktor; KRAVTSOV, V.S., redaktor.

[Aid to the operator of the SE-3 excavator. V pomoshch mashinistu ekskavatora SE-3. Sverdlovsk, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry [Uralo-Sibirskoe otd-nie] 1953. 50 p. (MLRA 7:8)

1. Uralo-Sibirskoye otdeleniye Mashgiza (for Kravtsov)
(Excavating machinery)

YAGNYATINSKIY, S.O.; MUSIN, M.M.; KRAVTSOV, V.S., vedushchiy redaktor; DUGINA, N.A., tekhnicheskiy redaktor.

[Automatic lines for grinding bearing parts] Avtomaticheskie linii dlia shlifovaniia detalei podshipnikov. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 31 p. (MIRA 8:1)
(Grinding and polishing) (Roller bearings)

KUZNETSOV, A.P.; GORELOV, V.M., inzhener, redaktor; KRAVTSOV, V.S., redaktor; DUGINA, N.A., tekhnicheskiy redaktor.

[Drilling] Sverlenie. Pod red. V.M. Gorelova. Izd.2-e perer. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1955. 45 p. (Nauchno-populiarnaia biblioteka rabochego stanochnika no.13) (MLRA 8:10)
(Drilling and boring)

L 9402-66 EWT(m)/ EWP(j) RM

ACC NR: AP6000326 SOURCE CODE: UR/0286/65/000/021/0014/0014

INVENTOR: Kravtsov, V. S.; Moshchinskaya, N. K.; Miryan, N. I.

ORG: none

TITLE: Preparative method for 2-vinylanthracene. Class 12, No. 175935

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 21, 1965, 14

TOPIC TAGS: vinylanthracene, dehydrogenation

ABSTRACT: An Author Certificate has been issued for a preparative method for 2-vinylanthracene. To widen the range of suitable raw materials and to simplify the process, 2-methyl-4-ethyldiphenylmethane [sic] is dehydrogenated over activated-charcoal or manganese-oxide catalyst on pumice carrier at 600C. [SM]

SUB CODE: 07/ SUBM DATE: 29May63/ ATD PRESS: 4159

Card 1/1 UDC: 547.672.2.07

KRAYTSOV, V.V.

Mechanisms of changes in the blood picture in prolonged nociceptive stimulation. Biul. eksp. biol. i med. 60 no.11: 34-36 N '65. (MIRA 19:1)

1. Blagoveshchenskiy i Luganskiy meditsinskiye instituty (nauchnyy rukovoditel' raboty - prof. S.M. Dionesov). Submitted June 8, 1964.

ACC NR: AT6035248 SOURCE CODE: UR/3043/66/000/005/0260/0293

AUTHOR: Kravtsov, V. V.

ORG: none

TITLE: Integral equations in diffraction problems

SOURCE: Moscow. Universitet. Vychislitel'nyy tsentr. Sbornik rabot, no. 5, 1966. Vychislitel'nyye metody i programmirovaniye (Computing methods and programming), 260-293

TOPIC TAGS: integral equation, wave diffraction, algorithm

ABSTRACT: The problem of wave diffraction is one of the oldest in physics, and interest in it has grown with the rapid development of the radiophysics of high-frequency waves, radar, sonar, and long-distance radio communication. The problem also involves matters of antenna design and construction. The so-called physical theory of diffraction is the most widely used method of dealing with diffraction problems. This theory is a further development of the methods of geometrical optics and an attempt to penetrate the longer wave region. Despite its usefulness it has no rigorous mathematical basis. The mathematical problem of diffraction reduces to solving a wave equation (in the scalar case) or Maxwell equations (in the electromagnetic case) with certain initial and boundary conditions corresponding to the specific type of incident field and obstacle shape. It is exactly solved only for a limited number

Card 1/2

ACC NR: AT6035248

of bodies (sphere, infinite cylinder, wedge, and a few more). Computer technology has made it possible to propose less idealized and more practical solutions. It is urgent that algorithms be developed for high-speed computer solution of the diffraction problem. The present paper has as its aim the development of a uniform algorithm for investigating problems of diffraction of waves of varying nature (acoustic and electromagnetic, stationary and nonstationary). The basic working apparatus is integral (more exactly, integro-functional) equations of the first kind of the Fredholm type with regular nucleus. These are chosen because integral equations of the second kind have a strongly polar nucleus, which complicates numberical calculations. In a number of cases moreover, e.g., the surface of a body of revolution, integral equations of the first kind permit transition from two-dimensional to unidimensional equations, simplifying the computations. Orig. art. has: 118 formulas.

SUB CODE: 12, 20/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001

Card 2/2

USSR / Human and Animal Physiology. Blood Chemistry. T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 69988

Author : Kravtsov, V. V.
Inst : Not given
Title : The Problem of Changes in the Content of Erythrocytes and Hemoglobin in the Peripheral Blood in Prolonged Nociceptive Stimulation

Orig Pub : Byul. Eksper. Biol. i Med., 1957, Vol 43, No 2, 30-34

Abstract : In seven dogs and five rabbits studies were made of the role of the spleen in changes of blood composition. Splenectomy prior to and after the infliction of prolonged nociceptive stimulation (NS) did not eliminate the increase in the number of erythrocytes (E) and Hgb in the peripheral blood. Studies of the myelogram upon prolonged NS revealed increased activity of the bone marrow (increased proliferation of erythroblasts with basophilic and polychromatophilic

Card 1/2

USSR / Human and Animal Physiology. Blood Chemistry. T

Abs Jour : Ref Zhur - Biol., No 15, 1958, No. 69988

cytoplasm, and reticulocytosis). Increases in the number of E and in the Hgb level were related to increased erythropoiesis under the influence of the prolonged NS. The spleen appeared to play no essential role as a depot of erythrocytes. -- M. B. Gol'dberg

Card 2/2

KRASNOSEL'SKIY, M.A. (Moskva)

Method for solving the diffraction problem (two-dimensional case). Zhur. vych. mat. i mat. fiz. 4 no.2:354-358 Mr-Ap '64. (MIRA 17:7)

STRIZHAK, V.I. [Stryzhak, V.I.]; YAREMIK, A.P. [IAremik, O.P.]; KRAVTSOV, V.V.

Inelastic collision cross sections of 14 Mev neutrons colliding with atomic nuclei [in Ukrainian with summary in English]. Ukr. fiz. zhur. 3 no.2:190-195 Mr-Ap '58. (MIRA 11:6)

1.Institut fiziki AN URSR.
(Neutrons) (Nuclei,Atomic) (Collisions (Nuclear physics))

43933
S/188/62/000/006/003/016
B187/B102

AUTHOR: Kravtsov, V. V.

TITLE: Integral equations for the harmonics on the surface of a body of revolution

PERIODICAL: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 6, 1962, 11-19

TEXT: When any wave $u_0(M)$ hits the closed surface S of a body of revolution on which $r = f(z)$, $a \leq z \leq b$, the total field will be $u(M) = u_0(M) + v(M)$. $v(M)$ is determined by the boundary value problem $\Delta v + \varkappa^2 v = 0$, $v|_S = u_0|_S$, $\frac{\partial v}{\partial R} + i\varkappa v = O(1/R)$ for $R \longrightarrow \infty$. Other boundary conditions can be treated in a similar way. The function $v(M)$ is determined by its values on S and by its derivatives in the directions of the normal to the surface by means of Green's formula. The author generalizes a method established by N. N. Govorun (DAN SSSR, 126, no. 1, 49, 1959; 132, no. 1, 91, 1960) to obtain a first-kind Fredholm integral equation for the determination of

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v(M). This equation has a kernel without any singularities:

$$\int_a^b \left\{ r' A^{-\frac{2\nu+1}{4}} H^{(2)}_{\nu+\nu_0}(kA^{1/2}) \frac{\partial v_\nu}{\partial n} - v_\nu(z) \frac{\partial}{\partial n} \left(r' A^{-\frac{2\nu+1}{4}} H^{(2)}_{\nu+\nu_0}(kA^{1/2}) \right) \right\} \times$$

$$\times f(z) \sqrt{1 + f'^2(z)}\, dz = 0, \qquad (1)$$

where $A = (z - \eta)^2 + r^2$, $a < \eta < b$. The H are Hankel functions, $\vec{n}$ is the unit vector directed along the surface normal to the outside, $v_\nu(z)$ are the harmonics of v(M) upon S. Thus,

$$v(M)|_S = \sum_{\nu=-\infty}^{\infty} v_\nu(z) e^{i\nu\varphi}, \qquad \frac{\partial v}{\partial n}\Big|_S = \sum_{\nu=-\infty}^{\infty} \frac{\partial v_\nu}{\partial n}(z) e^{i\nu\varphi}$$

When this steady case is to depend on time it is formally subjected to a Fourier transformation with the aid of the Kirchhoff-Sobolev formula, resulting in an integro-functional equation. An electromagnetic wave is dealt with also. This procedure is a translation of the results found for the scalar case into a vectorial analog. The field outside S is given in

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terms of the field strengths $\vec{E}$ and $\vec{H}$ upon S according to the Stratton-Ch'u formulas. It is pointed out that the equations always have solutions when the boundary conditions of the differential equations can be fulfilled. The uniqueness of the solutions obtained is demonstrated.

ASSOCIATION: Kafedra matematiki (Department of Mathematics)

SUBMITTED: March 9, 1962

KRAVTSOV, V.V.

Integral equations for current harmonics on the surface of soldis of revolution. Vest.Mosk.un. Ser.3:Fiz.,astron. 17 no.6:11-19 N-D '62. (MIRA 15:12)

1. Kafedra matematiki Moskovskogo gosudarstvennogo universiteta.
(Electric currents) (Integral equations)

KRAVTSOV, V.V. (Moskva)

High-frequency asymptotic behavior of a nonsteady-state diffraction problem (region of light). Zhur. vych. mat. i mat. fiz. 3 no.5:955-957 S-O '63. (MIRA 16:11)

ACCESSION NR: AP4024568 S/0208/64/004/002/0354/0358

AUTHOR: Kravtsov, V. V. (Moscow)

TITLE: Method for solving the diffraction problem

SOURCE: Zhurnal vy*chislitel'noy matematiki i matematicheskoy fiziki, v. 4, no. 2, 1964, 354-358

TOPIC TAGS: diffraction, boundary value problem, nonorthogonal series, exterior boundary value problem

ABSTRACT: The diffraction problem for two-dimensional regions is considered. The solution of this problem is well known only for cases where the region permits the separation of variables in the Helmholtz equation. A more general method is described in this paper. A simply connected region bounded by a closed Lyapunov curve is considered. Boundary conditions of the I, II, or III kind are imposed. Green's formula reduces the problem to the solution of a Fredholm integral equation of the first kind. The existence of solutions follows from theorems for exterior boundary value problems. A uniqueness proof for these solutions is given, and a method for constructing series solutions for the integral equations is presented.

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ACCESSION NR: AP4024568

This method is compared with that of nonorthogonal series (L. V. Kantorovich, V. I. Kry*lov. Priblizhenny*ye methody* vy*sshego analiza. M., Gostekhizdat, 1952). A second series solution is given in the case where the field frequency is large. The results may be generalized to three-dimensional scalar and electromagnetic problems and to multiply connected regions. "The author thanks A. G. Sveshnikov for his direction and A. N. Tikhonov for his valuable advice." Orig. art. has: 34 equations.

ASSOCIATION: none

SUBMITTED: 24Sep62 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: MM, PH NO REF SOV: 004 OTHER: 001

Card 2/2

KRAVTSOV, V.V.

Effect of prolonged nociceptive (pain) stimuli on the healing of experimental skin wounds. Biul. eksp. biol. i med. 57 no.3: 112-115 Mr '64. (MIPA 17:11)

1. Kafedra normal'noy fiziologii Blagoveshchenskogo meditsinskogo instituta (nauchnyy rukovoditel' - prof. S.M. Dionesov). Predstavlena deystvitel'nym chlenom AMN SSSR N.N. Zhukovym-Verezhnikovym.

KRAVTSOV, Ya.M.; FUTERGENDLER, S.I.

Some data on diamonds found in the form of polycrystalline aggregates. Zap. Vses. min. ob-va 89 no.4:464-466 '60.
(MIRA 13:11)

1. TSentral'naya ekspeditsiya Vsesoyuznogo nauchno-issledovatel'skogo geologicheskogo instituta, Leningrad.
(Diamonds)

KUKHARENKO, A.A.; KRAVTSOV, Ya.M.

Geochemistry of zirconium and beryllium in ultrabasic alkaline rocks. Dokl.AN SSSR 134 no.4:931-934 O '60. (MIRA 13:9)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova. Predstavleno akad. A.A.Polkanovym.
(Zirconium)
(Beryllium)
(Kola Peninsula--Rocks, Igneous)

IZOKH, E.P.; KRAVTSOV, Ya.M.

Significance of spectrum analysis of biotites for correlating granites and determining their metal potential in the Far East. Trudy VSEGEI 73:89-98 '62. (MIRA 15:9)
(Soviet Far East--Granite--Spectra)
(Soviet Far East--Biotites--Spectra)

KRAVTSOV, Ya.V.; LIVCHAK, I.F.; PASHCHENKO, N.Ye.

Use of new heating units in modern construction. Vod. i san. tekh. no.8:28-31 Ag '61. (MIRA 14:9)
(Radiators)

28(5)
SOV/115-59-4-5/27

AUTHORS: Kravtsov, Ye.A. and Shchurov, A.F.

TITLE: Measuring Deformations by Portable Indicators (Izmereniye deformatsiy perenosnymi indikatorami)

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 4, pp 9-10 (USSR)

ABSTRACT: Using stationary instruments for measuring structural deformations of construction elements is not always possible or advantageous. At the Gor'kovskiy inzhenerno-stroitel'nyy institut (Gor'kiy Construction Engineering Institute), the authors designed portable indicators for measuring the deformation of beams, concrete structure, etc. They consist of modified dial indicators as shown in figures 1 and 2. The accuracy of these instruments is equal to the accuracies of the dial indicators used. There are 2 diagrams.

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KRAVCHUK, Ya.T.

Council of Construction and Architecture. Izv.ASiA no.4:153-155 '59. (MIRA 13:6)

1. Uchenyy sekretar' Soveta Akademii stroitel'stva i arkhitektury SSSR.
(Zhukovskiy--City planning)

KRAVTSOV, YE. P.

PA 20/49T85

USSR/Mining Methods
Coal

Dec 48

"Preliminary Results of the Draining of the Poplevino Coal Fields," Ye. P. Kravtsov, D. M. Khokhlovkin, Mintopstroy, S. A. Krivorog, Soyuzshakhtoosusheniye, 4 pp

"Ugol'" No 12 (273)

Coal field is located in Skopinsk Rayon, Ryazan Oblast, near the Oktyabr'Ugol Trust and has access to Moscow-Donbass railroad. Describes the enterprise, and past production. Map shows disposition of tunnels and results of water pumping from the shafts.

[redacted]

20/49T85

KRAVTSOV, Ye. P. - PETUKHOV, N. N.

Moscow Basin - Coal-mining Machinery

Mechanization of preparatory tunneling work in the Moscow coal basin.
Mekh. trud. rab. 7 no. 2, 1953

9. Monthly List of Russian Accessions, Library of Congress, May 1953, Uncl.

KRAVTSOV,Ye.P., inzhener, laureat Stalinskoy premii

Precast structures made of reinforced concrete tunnel-tubing used as vertical mine shafts. Bet.izhel.-bet no.5:177-183 Ag '55. (MLRA 8:9)

(Precast concrete construction) (Shaft sinking)

KRAVTSOV, Ye. P., inzh.

Reinforced concrete STK tubings for shaft lining. Krepl. gor. vyr. ugol'. shakht no. 1:23-51 '57. (MIRA 11:7)
(Shaft sinking)
(Reinforced concrete construction)

KOPELYANSKIY, G.D., kandidat tekhnicheskikh nauk; KRAVTSOV, Ye.P., inzhener.

Using extra-stiff concrete mixtures for making reinforced concrete products. Bet. i zhel.-bet. no.3:91-97 Mr '57. (MLRA 10:4)
(Concrete)

KRAVTSOV, Ye.P., inzhener.

STK reinforced concrete tubbings for the support of mine shafts.
Shakht.stroi. no.6:4-9 Je '57. (MLRA 10:7)
(Shaft sinking) (Reinforced concrete constructions)