"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

20-6-22/48

Passivation and De-Passivation of a Lead Anode in Concentrated Perchloric-, Fluorboric- and Fluor-Silicic Acids.

When an anodic current of a value $i_a > i_{kr}$ passes, the depassivation decreases. This is apparently connected with the slowing down of the cathodic reduction process of PbO_2, as well as with the increase in the concentration of lead ions in the pores of the passivating layer. From the curves of figure 3 may be seen that for the maintenance of any stationary potential value within the range 0,8 to 2,2 in a previously passivated anode, an anodic current of the same value is necessary. At φ 0,8 the current due to depassivation tends toward reduction, whereas as φ 2,2 the separation of oxygen sets in and the current abruptly increases with the increase in potential. A stationary current within the range 0,8 to 2,2 can, as far as it prevents depassivation, be identified with the corrosion current of the galvanic pair PbO_2. The above-mentioned passivation of lead has a superficial similarity with the passivation of iron in sulfuric and nitric acid. But the mechanism of the maintenance of the passive state of the lead anode and the process of depassivation have another nature. The difference above all lies in the fact that in iron the stationary anode current is about 3 orders of magnitude smaller and is consumed in the formation of iron oxide. This oxide is then dissolved with a

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

Passivation and De-Passivation of a Lead Anode in Concentrated Perchloric-, Fluorboric- and Fluor-Silicic Acids. 20-6-22/48

constant speed. The above-mentioned current which is necessary for the maintenance of the passivity is in iron not used for suppressing the work of the layer consisting of a porous acid and of metallic lead, but for the formation of iron oxide which dissolves with a constant velocity.

ASSOCIATION: Scientific Research Institute for Element-Electrocoals (Nauchno-issledovatel'skiy elementno-elektrougol'nyy institut).

PRESENTED: By A. N. Frumkin, Academician, March 28, 1957

SUBMITTED: March 28, 1957.

AVAILABLE: Library of Congress.

Card 5/5

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

5(4)

AUTHOR: Iofa, Z.A. SOV/55-58-5-26/34

TITLE: Investigation of the Atmospherical Corrosion of Iron and of the Effect of Flying Inhibitors (Issledovaniye atmosfernoy korrozii zheleza i deystviya letuchikh ingibitorov)

PERIODICAL: Vestnik Moskovskogo universiteta, Seriya matematiki, mekhaniki, astronomii, fiziki, khimii, 1958, Nr 5, pp 171 - 180 (USSR)

ABSTRACT: The author introduces the notion of the corrosion aggressor (a corrosion-active material). It is stated that the corrosive action is essentially determined (especially in the initial stadium) by certain aggressors, e.g. H Cl, H Br, HJ, SO_2.

Hydrogen alone and moisture are not considered to be aggressors, since even for 100 % moisture in completely clean air the corrosion begins only after several months. The so-called inhibitors, the corrosion-preventive effect of which must not be explained only by hygroscopic properties have an effect opposite to the aggressors. The aggressor has an essential influence on the effect of the inhibitor. The following Soviet scientists consider the problems mentioned above :

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Investigation of the Atmospherical Corrosion of Iron and of the Effect of Flying Inhibitors SOV/55-58-5-26/34

G.V. Akimov, N.D. Tomashev, I.L. Rozenfel'd, A.I. Brodskiy, A.S. Fomenko, T.M. Abramova, I.Ye Yablokova, V.S. Bagotskiy, I.P. Anoshchenko, S.A. Balezin, V.P. Barannik, O.M. Gol'yanitskiy, K.A. Nesmeyanova, and S.A. Gintsberg.
There are 23 references, 19 of which are Soviet, 2 American, 1 French, and 1 English.

ASSOCIATION: Kafedra elektrokhimii (Chair of Electrochemistry)

SUBMITTED: December 14, 1957

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

20-119-5-36/59

AUTHOR: Iofa, Z. A.

TITLE: The Adsorption of Sulfur on Iron From Acid Solutions of Hydrogen Sulfide (Adsorbtsiya sery na zheleze iz kislykh rastvorov serovodoroda)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 5, pp. 971-974 (USSR)

ABSTRACT: In connection with the investigation of the mechanism of the processes connected with the stimulating and inhibiting effect of hydrogen sulfide on the corrosion of iron in the presence of certain organic compounds, the measurement of the adsorption of iron from these solutions was of interest. The adsorption was measured by means of the method of radioactive isotopes. From S^{35} and iron powder iron sulfide was produced which then was dissolved by a solution of H_2SO_4. The separating radioactive hydrogen sulfide was converted into 0, 1 N NaOH by blowing through. 0,05 - 0,7 Na_2S^* was obtained. A degassed plate of chemically pure iron or of Armco iron was brought into the

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

20-119-5-36/59

The Adsorption of Sulfur on Iron From Acid Solutions of Hydrogen Sulfide

H_2SO_4 + Na_2S^* solution for a certain time, then it was taken out, washed with distilled water and then dried. The radioactivity of the plates was measured by means of a counter. A table gives the mean results of the measurement of the adsorption of chemically pure iron at the gram equivalent per 1 cm^2 of real surface at t = 20°C. The experiments with Armco iron supplied analogous results. The addition of the inhibitor $N(C_4H_9)_4^+$ did not change the value of adsorption. The increase of the adsorption with progressing time in the case of an acid solution containing more than 10^{-4} N NaS without inhibitor obviously is connected with the increase of the surface in consequence of the . A diagram shows the change of the activity of the plate determined by separation of a metal layer from the surface. According to it a certain amount of sulfur (about 10 %) penetrates into the metal by more than 1,5 μ. The adsorbed sulfur binds more strongly with iron than with iodine. These facts as well as others given

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

The Adsorption of Sulfur on Iron From Acid Solutions of Hydrogen Sulfide 20-119-5-36/59

speak in favor of the fact that the kations of the inhibitor supply pairs which are solidly connected with the dipoles Fe-S forming on the surface of the iron. There are 1 figure, 4 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 12, 1957, by A. N. Frumkin, Member, Academy of Sciences, USSR

SUBMITTED: December 6, 1957

Card 3/3

~~GEROVICH, M. A.~~

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

GEROVICH, M. A.

5(4) PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 368 p. Errata slip inserted. 2,500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

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

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

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

Bagotskaya, I.A., and A.I. Oshe (Institute of Electrochemistry, Academy of Sciences, USSR). Effect of Atomic Hydrogen Diffusion on the Potential of Polarized Iron Electrodeposits on It 82

Vishomirskis, R.M., and Yu. Yu. Matulis (Institut khimii i khimicheskoy tekhnologii AN Lit. SSR-Institute of Chemistry and Chemical Technology, Academy of Sciences, Lithuanian SSR). Role of Inorganic Ions in The Process of Electrolytically Separating Hydrogen From Acid Solutions at a Rotating Cathode 86

Iofa, Z.A., and E.A. Maznichenko (Moskovskiy gosudarstvennyy universitet-Moscow State University). Influence of the Nature of Cations on Overvoltage During the Separation of Hydrogen From Alkaline Solutions at a Mercury Cathode 91

Kuchinskiy, Ye. M., and I. Ye. Veselovskaya. Dependence of Hydrogen Overvoltage on the Surface Condition of an Iron Cathode in an Alkaline Solution 96

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Durdin, Ya. V., L. Kish, and V.I. Kravtsov, (Leningradskiy gosudarstvennyy universitet imeni A.A. Zhdanova - Leningrad State University imeni A.A. Zhdanov). Use of the Oscillographic Method in Investigating the Kinetics of Electrode Processes Which Take Place at the Surface of Dissolving Metals 102

Losev, V.V., and A.M. Khopin, (Institute of Electrochemistry, Academy of Sciences, USSR). Using Radioactive Indicators to Study Processes of Ionization and Discharge of Metals Ions at Amalgam Electrodes 116

Podvyazkin, Yu. A., and A.I. Shlygin (Moscow State University) Charging Curves of Powdery Catalysts and Adsorbants 125

Discussion [G.S. Khash, L.I. Krishtalik, A.L. Rotinyan, N.P. Zhuk, I.P. Anoshchenko, V.V. Krasnoyarskiy, M.A. Gerovich (Deceased), A.G. Stromberg and contributing authors] 128

Card 6/34

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

SOV/156-59-2-13/48

5(2), 24(3)

AUTHORS: Iofa, Z. A., Braun, Z. P.

TITLE: On the Hydrogen Overvoltage on a Cadmium Cathode in Solutions of Caustic Potash (O perenapryazhenii vodoroda na kadmiyevom katode v rastvorakh yedkogo kaliya)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 273-276 (USSR)

ABSTRACT: The results achieved by V. Genta and G. Belmondi (Ref 1) in this field are doubted and compared with the measurements of Ya. M. Kolotyrkin and L. A. Medvedeva (Ref 5). The present paper deals with an examination. The results of measurements are given in the coordinates η and lg i for KOH-solutions of from 0.2 to 9.3 n by figure 1 and from 9.3 to 15.4 n by figure 2. A table gives the measured constants. Figures 1 and 2 show that the overvoltage decreases to a concentration of caustic potash of 9.3 n, at higher concentrations, however, it increases. Figure 3 shows the dependence of the overvoltage on the logarithm of the activity of the KOH-solution. The values are considerably lower than the data of reference 1

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

SOV/156-59-2-13/48

On the Hydrogen Overvoltage on a Cadmium Cathode in Solutions of Caustic Potash

and somewhat higher than those of reference 5. On the basis of the theory of retarded discharge and separation of hydrogen in a double layer an equation for the overvoltage is derived which corresponds to the measuring results between 0.2 and 6 n. Between 9.3 and 15.4 n the values of measurement increase, however, higher than calculated. This may be explained by the fact that the water molecules participating in the electrochemical reaction are only influenced by a part of the lines of force of the double-layer field, and the cations introduce less water molecules into the double layer as a result of the reduced hydration; this is not taken into account in consequence of the simplifications made in connection with the derivation of the equation. There are 3 figures, 1 table, and 9 references, 4 of which are Soviet.

PRESENTED BY:: Kafedra elektrokhimii Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Chair of Electrochemistry, Moscow State University imeni

Card 2/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

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SOV/156-59-2-13/48

On the Hydrogen Overvoltage on a Cadmium Cathode in Solutions of Caustic Potash

M. V. Lomonosov)

SUBMITTED: January 15, 1959

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

5(4) SOV/76-33-4-24/32

AUTHORS: Past, V. E., Iofa, Z. A.

TITLE: Determination of the Capacity of the Mercury Cathode From the Drop in Potential After Switching off the Polarization Current (Opredeleniye yemkosti rtutnogo katoda po spadu potentsiala posle vyklyucheniya polyarizuyushchego toka)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 4, pp 913-919 (USSR)

ABSTRACT: If adsorbed hydrogen (I) at the Hg-electrode be in equilibrium with the (I)-ions in the solution, the charging of the electrode surface with (I) is bound to rise with an increase in the cathode potential, so that an observation of the adsorbed (I)-ions at high polarization must be easier than at a low one. The investigation under review makes use of a new oscillographic arrangement to measure the drop of the electrode potential in short time intervals (10^{-3} - 10^{-5} sec) after interruption of the polarization current. In this connection, the capacity of the Hg-electrode was determined at higher current densities than in reference 7 (some measuring results were already reported (Ref 9)). The special cathode oscillograph was designed by Engineer V. I. Protserov. It may be seen from the circuit diagram of a part of the arrangement that a 6PZ lamp is made use of. Mention is made of two curves of the voltage drop of

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

SOV/76-33-4-24/32

Determination of the Capacity of the Mercury Cathode From the Drop in Potential After Switching off the Polarization Current

a condenser with a capacity of 2 μF, which was discharged at a resistance of 1500 Ω (Figs 1, 2). After the voltage drop curve and an equation (3) the authors computed the electrode capacity. An amalgamated copper wire was used as an electrode to determine the capacity of the Hg-electrode in 1 n H_2SO_4 solutions and it was found (Table) that the capacity of the Hg-electrode in the overtension range of from 0.975 to 1.30 v amounts to 17.7 ± 1 μF/cm^2 in the average and does not depend on the density of the polarization current in the range of from $i_o = 2.10^{-4}$ to $1.25.10^{-1}$ a/cm^2. This proves that the drop of the overtension after the current interruption in this case is only caused by the discharge of the ions of the double layer and that no adsorbed (I) gathers at the electrode surface on polarization (in quantities that may be determined with the method described). Finally, gratitude is expressed to Academician A. N. Frumkin. There are 4 figures, 1 table, and 16 references, 11 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: October 2, 1957

Card 2/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

5(4)

AUTHORS: Past, V. E., Iofa, Z. A.

SOV/76-33-6-10/44

TITLE: Investigation of the Condition of the Surface of Nickel- and Iron Cathodes on the Basis of the Potential Drop After a Current Interruption (Issledovaniye sostoyaniya poverkhnosti nikelevogo i zheleznogo katodov po spadu potentsiala posle vyklyucheniya toka)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1230-1237 (USSR)

ABSTRACT: Nickel and iron polarized on the cathode were submitted to investigation by the aid of oscillographic curves of the potential drop after a current interruption. Both apparatus and measuring procedure applied herein have already been described. (Ref 4). Electrodes (E) of spectrally pure nickel and iron, that were subjected to preliminary treatment, were used for the operation. Experimental results show that the capacity (C) of the Ni- and Fe electrode depends on the electrode potential and on time elapsed since interruption of the polarization current. A derivation of the equation of the drop curve of the potential (P) after the current interruption is shown, which agrees with the recombination theory by A. N. Frumkin. The minimum values of (C) of 19 - 24 $\mu F/cm^2$ for the Ni cathode in acid and alkaline solutions as well as 27-28 $\mu F/cm^2$ for the Fe cathode in acid solutions may be regarded to be near the

Card 1/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

Investigation of the Condition of the Surface of Nickel- and SOV/76-31-6-14/14
Iron Cathodes on the Basis of the Potential Drop After a Current Interruption

values of the (C) of the double layer on these metals. The (C) of the iron electrode, however, markedly exceeds the (C) of the double layer in the case of alkaline solutions with high cathode polarizations. A rise of the (C) in comparison with a drop in the cathode potential is explained by the ionization reaction of the adsorbed electrochemically active hydrogen, the amount of which increases with a decrease in the cathode potential. The relatively low value of (C) as compared with the (C) of the hydrogen film shows that only a small surface portion of the Ni- and Fe electrode is covered with adsorbed hydrogen, which ionizes in the investigated potential range. The cathode surface filling with electrochemically active hydrogen is somewhat larger in the alkaline medium than in the acid medium. However, it amounts at most to 0.05 for the nickel electrode and to 0.2 for the iron electrode. Finally, gratitude is expressed to Academician A. N. Frumkin. There are 3 figures and 16 references, 11 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: October 2, 1957

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

5(4) SOV/20-125-5-31/61

AUTHORS: Tsa Ch'uang-hsin, Iofa, Z. A.

TITLE: On the Joint Action of Organic Cations and Halogen Anions Upon the Liberation of Hydrogen on a Mercury Electrode (O sovmestnom deystvii organicheskikh kationov i galoidnykh anionov na vydeleniye vodoroda na rtutnom elektrode)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 5, pp 1065 - 1068 (USSR)

ABSTRACT: The present paper aims at explaining the mechanism of the joint action of organic cations and halogen-anions. Such complicated systems frequently occur in practice, and therefore it was of interest to find out whether the effects produced by the action of single ions upon the kinetics of the electrochemical reduction of hydrogen ions are conserved in the solution in the case of the simultaneous occurrence of the above-mentioned ions. A diagram shows the curves η - lg i, which were plotted according to a previously described method (Ref 3). Polarization of the electrode was carried out at a constant potential (φ = const) for the lifetime of the drop. Experiments were carried out at a

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temperature of 20 ± 1°. For comparison, an equilibrium hydrogen electrode in 2N HCl + 2N KCl was used. In the potential range in which it is possible to measure hydrogen overtension on the drop-shaped mercury electrode adsorption of Cl^--ions is low, and effect caused by it on overtension is not observed. An addition of cations $N(C_4H_9)_4^+$ increases overtension considerably. The ions of iodine, which are adsorbed within a considerable potential range at low current densities, decrease overtension. In this case the addition of the cations $N(C_4H_9)_4^+$ leads to a certain additional decrease of overtension within the range of low values of overtension. With increasing current density overtension increases considerably and attains a higher value than in the case of the solution 2N HCl + 2N KCl + $N(C_4H_9)_4^+$. With a further increase of current density, the effect of the increase of overtension disappears and the curve $\eta - \lg i$ agrees with the curve of such solutions which contain no organic cations. Obviously, the range of lower values of η within

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the range of low polarizations corresponds to the preferred adsorption of iodine anions. The effect observed of the reciprocal increase of the effect produced by the adsorbed ions may be explained by the fact that on the surface of the electrode a secondary adsorption of surface-active ions with opposite charge occurs. Secondary adsorption increases the adsorption of such ions which are adsorbed mainly within the given potential range. This explanation of the reciprocal effect of ions is also confirmed by the results obtained by measuring the differential capacity of the electrical double layer on a mercurydrop-electrode in the same solutions. A similar effect is produced by the anions of iodine at high polarizations. The authors thank Academician A. N. Frumkin for his interest and advice in connection with this investigation. There are 4 figures and 7 references, 5 of which are Soviet.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

On the Joint Action of Organic Cations and Halogen Anions Upon the Liberation of Hydrogen on a Mercury Electrode SOV/20-125-5-31/61

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: December 8, 1958, by A. N. Frumkin, Academician

SUBMITTED: December 1, 1958

Card 4/4

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

5(4)

AUTHORS: Tsa Ch'üarg-hsin, Iofa, Z. A. SOV/20-126-6-45/67

TITLE: On the Effect of Adsorbed Anions Upon Hydrogen Overvoltage (K voprosu vliyaniya adsorbirovannykh anionov na perenapryazheniye vodoroda)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 6, pp 1308-1311 (USSR)

ABSTRACT: This paper refers to the theory of delayed discharge (Ref 1) and the equation (1) for the overvoltage η derived herefrom as well as to an experiment (Ref 2) to compare the curves of overvoltage with the electrocapillary curves. At present it is possible to investigate the structure of the Helmholtz double layer by improved methods of measurement, as e.g. measurement of differential capacity. This method helps to render the effect mentioned in the title more precise. Figure 1 shows the curves of the H-overvoltage η in dependence on lgi for acid solutions, containing KCl, KBr, or KJ. The curves were obtained on a mercury drop electrode according to the method given by reference 3. Figure 2 shows the curves of differential capacity of the same solutions. The reaction of the differential capacity to anion adsorption is more sensitive than that of overvoltage.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

Figure 3 gives the dependence of the charge density ε on η. The curves given are in good agreement and yield the same results for the potentials deviating from linearity. The empirical relation $\left(\frac{\Delta \lg i}{\Delta \varepsilon}\right)_{\eta} \approx 0.5$ was found in the potential range in which the adsorption of anions is still inconsiderable. This relation was directly derived from equation (1). It is suggested to establish a quantitative relation between the effect of anions upon overvoltage of hydrogen and the change in the charge density ε. The boundary voltage is not sensitive enough for slight modifications in the structure of the double layer, whereas differential capacity reacts already to structural modifications that are not yet noticeable on the polarization curve. The η - lg i - curves plotted in the same solutions on a great stationary mercury cathode showed no

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

On the Effect of Adsorbed Anions Upon Hydrogen Overvoltage SOV/20-126-6-45/67

hysteresis loop, in contrast to the data of reference 2. The authors thank Academician A. N. Frumkin for his advice. There are 3 figures and 5 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: March 20, 1959, by A. N. Frumkin, Academician

SUBMITTED: March 12, 1959

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

ROZENFEL'D, Iosif L'vovich; GOLUBEV, A.I., doktor tekhn.nauk, otv.red., retsenzent; IOFA, Z.A., prof., doktor khim.nauk, retsenzent; VEDENKIN, S.G., prof., retsenzent; BANKVITSER, A.L., red.izd-va; MAKUNI, Ye.V., tekhn.red.

[Atmospheric corrosion of metals] Atmosfernaia korroziia metallov. Moskva, Izd-vo Akad.nauk SSSR, 1960. 371 p. (MIRA 14:1)

(Corrosion and anticorrosives)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; TOMASHOVA, G.N. (Moskva)

Simultaneous action of sulfides and organic compounds on the acid corrosion and brittleness of iron. Zhur.fiz.khim. 34 no.5: 1036-1043 My '60. (MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet im.M.V.Lomonosova.
(Iron--Corrosion) (Sulfides) (Organic compounds)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

LARIN, L.A.; IOFA, Z.A.

Mechanism of enhanced corrosion at the tree-phase boundary.
Zhur.fiz.khim. 34 no.7:1470-1477 Jl '60.
(MIRA 13:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Iron--Corrosion)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

~~5(4)~~ 18.8300

67959
SOV/20-130-1-37/69

AUTHORS: Khua Bao-din, Shen' Sin-su, Iofa, Z. A., Mikhaylova, E. I.

TITLE: The Influence of the Halogen Ions on the Corrosion of Stainless Steel 18-8 in Sulphuric Acid

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 130, Nr 1, pp 129-132 (USSR)

ABSTRACT: S. M. Babitskiy and Kh. L. Zeytlin (Ref 2) established that the addition of small amounts of halogen salts considerably reduces the dissolution of stainless steel type 18-8 in sulphuric acid solution. This inhibiting effect of the halogen ions was studied among others by Z. A. Iofa et al. (Refs 4-7) with pure Fe. These research workers proved that the halogen ions are chemically adsorbed on the Fe-surface and that they form layers which retard the electrochemical reaction, especially the discharge of H-ions. These facts do not apply completely to the steel type 18-8 since above all the chlorine ions destroy the passivating film and therefore should accelerate the dissolution of steel in H_2SO_4. To explain the reaction of the halogen ions with stainless steel investigations were carried out at the two institutions mentioned in the Association. The results obtained in China on the rate of dissolution of steel type 18-8 in 10 n H_2SO_4 without

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further additions, and with additions of NaCl, KBr and KJ are given in figures 1 and 2. They show that the halogen ions retard the dissolution and that an optimum concentration exists for each halogen compound, in which this effect becomes the most strongly manifest (Table 1). The polarization curves taken at the Kafedra elektrokhimii (Chair for Electrochemistry) of the Soviet Association (Figs 3, 4) show that the chlorine ions compensate the passivation of steel and that the retardation of corrosion is solely the result of the high hydrogen overvoltage. In KBr and KJ, however, steel is passivated. When the concentration of KBr and KJ exceeds the optimum concentration these compounds have the same effect as NaCl, i.e. they prevent the passivation of steel. In KJ also a reduction of the H-overvoltage takes place. This reversal of the effect in KJ is explained by the formation of a layer of iodine anions on the metal. Table 2 gives the dissolution rate of steel in 10 n H_2SO_4. The results

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The Influence of the Halogen Ions on the Corrosion of Stainless Steel 18-8 in Sulphuric Acid

SOV/20-130-1-37/69

obtained are important for the theory of passivation since they confirm the part played by the adsorption phenomena. The analysis is given for steel type 18-8 (in %): Ni 9.3, Cr 16.8, C 0.14, Si 0.25, Mn 0.84, Ti $<$0.05, S 0.019, P 0.013. There are 4 figures, 2 tables, and 12 references, 11 of which are Soviet.

ASSOCIATION: Institut prikladnoy khimii Akademii nauk KNR Chanchun' (Institute of Applied Chemistry of the Academy of Sciences of the Chinese People's Republic Chanchung) Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: July 30, 1959 by A. N. Frumkin, Academician

SUBMITTED: July 30, 1959

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

68823

5.4600

S/020/60/131/01/038/060
B004/B011

AUTHORS: Tza Chyuan-sin', Iofa, Z. A.

TITLE: Investigation of the Adsorption of Surface-active Ions on a Zinc Electrode by the Method of Measuring the Differential Capacitance

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 1, pp 137 - 140 (USSR)

ABSTRACT: The aim of the present paper was that of investigating the structure of the electric double layer on the zinc electrode by measuring the differential capacitance, as first applied by T. I. Borisova, B. V. Ershler, and A. N. Frumkin (Ref 1). In solid metals, capacitance changes with the frequency of the measuring current, which fact, according to reference 2, is caused by a screening-off action of microcracks in polycrystalline metal. For this reason, measurements were made with single zinc crystals. As is shown in figure 1, the dispersion of capacitance on the single crystal is negligible in a wide frequency range. Capacitance changed between 0.4 - 10 kc by 5 - 8%. In strongly dilute solutions, the dispersion of capacitance was somewhat higher, which fact, however, was caused by the capacitance between the measuring bridge and the ground,

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68823

Investigation of the Adsorption of Surface-active Ions on a Zinc Electrode by the Method of Measuring the Differential Capacitance

S/020/60/131/01/038/060
B004/B011

and which, according to B. B. Damaskin (Ref 9) could be compensated by switching on a compensating condenser. The influence of the metal surface on the dispersion of capacitance is clearly observable from the comparison with curve 3 for polycrystalline zinc presented in figure 1. Figure 2 compares the dependence of capacitance C on the potential φ for monocrystalline zinc with the data derived from D. C. Graham (Ref 10) for Hg and Ga. The curve $C(\varphi)$ for monocrystalline zinc in the presence of the surface-active ion $N(C_4H_9)_4^+$ (Fig 3) likewise shows the same course as in the case of mercury. Organic cations are strongly adsorbed by zinc. Both in the case of the Hg electrode and Zn, desorption occurs only with a strongly negative potential (φ = -1.58 v), but unlike in Hg no peak of desorption is observable. Figure 4 shows the dependence of the hydrogen overvoltage on the logarithm of the current density on the single zinc crystal. Again, an analogy with the Hg electrode (Ref 15) is observed. The presence of iodine ions lowers the overvoltage, as was observed by Ya. V. Durdin and Ye. G. Tsventarnyy (Ref 16)

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68823

Investigation of the Adsorption of Surface-active Ions on a Zinc Electrode by the Method of Measuring the Differential Capacitance

S/020/60/131/01/038/060
B004/B011

in the case of chlorine and bromine ions on an amalgamated zinc electrode. The addition of $N(C_4H_9)_4^+$ ions increases overvoltage in just the same way as occurs with the mercury electrode. The authors quote a paper by B. S. Krasikov and V. V. Sysoyeva (Ref 4), and thank Academician A. N. Frumkin for his interest in this paper. There are 4 figures and 16 references, 15 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: November 17, 1959 by A. N. Frumkin, Academician

SUBMITTED: November 16, 1959

Card 3/3

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; KOMLEV, L.V.; BAGOTSKIY, V.S.

Hydrogen overvoltage on a zinc electrode in alkaline solutions. Effect of the concentration of a potassium hydroxide solution. Zhur. fiz. khim. 35 no.7:1571-1577 Jl. '61. (MIRA 14:7)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova i Vsesoyuznyy nauchno-issledovatel'skiy institut istochnikov toka.

(Hydrogen) (Overvoltage)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IVANOV, V.F.; IOFA, Z.A.

Kinetics of the electroreduction of iron on the dropping mercury electrode. Dokl.AN SSSR 137 no.5:1149-1152 Ap '61. (MIRA 14:4)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Frumkinym.
(Iron) (Reduction, Electrolytic)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

SOBOL', V.V.; IOFA, Z.A.

Study of the surface of an iron electrode by measuring the potential drop after the break of current flow. Dokl.AN SSSR 138 no.5:1151-1154 Je '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Frumkinym.
(Electrodes, Iron)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

MAZNICHENKO, E.A.; DAMASKIN, B.B.; IOFA, Z.A.

Effect of alkali metal cations on hydrogen overvoltage on mercury in acid solutions. Dokl.AN SSSR 138 no.6:1377-1380 Je '61. (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom A.N.Frumkinym.
(Electrochemistry)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

S/020/61/140/006/025/030
B107/B101

AUTHORS: Ivanov, V. F., and Iofa, Z. A.

TITLE: Amalgamation of iron-group metals on a mercury dropping electrode

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 6, 1961, 1368 - 1371

TEXT: It was investigated in which form iron, nickel and cobalt are deposited on a mercury dropping cathode. Preliminary tests on an 0.05 N iron solution at pH~1 with a stationary mercury electrode and a current density of 0.1 a/cm^2 showed that from 10 N $CaCl_2$ or 10 N LiCl hydrogen is liberated simultaneously with the deposition of Fe immediately after switching on, while from saturated Na_2SO_4 and from 10 N $Ca(ClO_4)_2$ hydrogen is liberated only after 10 - 15 min. The type of reduction thus also depends on the anion of the background. Measurement of the potential as a function of the time of electrolysis confirmed this finding (Fig. 1). Further investigation was done by an oscillopolarograph type ЦЛА-01

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(TsLA-01), dropping time 5-6 sec, retarding period, t, 2-3 sec; retarding potential, φ_r, -1.8 v, scanning rate, V, between 1 and 8 v/sec. With nickel, anodic redissolution occurs after the reduction (Fig. 2). This was not possible, however, with iron and cobalt. A Kemula electrode with hanging mercury drop was therefore applied using $1 \cdot 10^{-3}$-$5 \cdot 10^{-3}$ N solutions, t = 2 sec to 2 min, V = 0.125 v/sec. With φ_r between -1.6 v and -1.8 v, an insignificant peak at φ= +0.06 v was obtained for the anodic redissolution of iron. With φ_r between -1.1 v and -1.2 v, however, a strong peak was obtained at φ = -0.47 v (Fig.3). Cobalt gave similar results: At φ_r above -1.5 v, the cobalt peak disappears and the mercury peak increases and shifts towards more positive φ (Fig.4). The results may be summarized as follows: Metals precipitated at low cathodic polarization dissolve anodically at the potentials -0.47 v (Fe), -0.3 v (Ni), and -0.15 v (Co). To explain the observed effects, the authors assume that at low polarization the metal is deposited as microcrystal on the mercury surface, the subsequent process then depending on the wettability of the microcrystal by mercury. The oxidation state is of great significance in this connection: At increased acidity or increased polarization the oxide

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

film is removed from the surface of the crystals, facilitating colloidal dissolution of the microcrystal in the mercury. The authors thank A. N. Frumkin, Academician, for discussion. There are 4 figures and 9 references: 6 Soviet-bloc and 3 non-Soviet-bloc. The three references to English-language publications read as follows: W. Kemula, Proceedings of the 2-nd International Congress of Polarography, Cambridge, 1959; H. Davis, H. Shalgosky, J. Polarographic Soc., no. 1, 12 (1960); N. Tanaka, R. Tamamushi, M. Kodama, Bull. Chem. Soc. Japan, 33, no. 1 (1959).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

PRESENTED: May 19, 1961, by A. N. Frumkin, Academician

SUBMITTED: May 8, 1961

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

KORSHUNOV, V.N.; IOFA, Z.A.

Decomposition kinetics of alkali metal amalgams in alkaline solutions of electrolytes. Dokl. AN SSSR 141 no.1:143-146 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V. Lomonosova. Predstavelno akademikom A.N.Frumkinym.
(Amalgams)
(Electrolysis)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

FRUMKIN, A.N., akademik; KORSHUNOV, V.N.; IOFA, Z.A.

Decomposition kinetics of alkali metal amalgams in buffer solutions. Dokl. AN SSSR 141 no.2:413-416 N '61. (MIRA 14:11)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
(Amalgams) (Electrochemistry)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

S/076/62/036/011/021/021
B101/B180

AUTHORS: Iofa, Z. A., and Wei Pao-ming

TITLE: Effect of pH on the rate of corrosion and anodic dissolution of cobalt

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 11, 1962, 2558-2560

TEXT: Curves were plotted for the cathodic and anodic polarization of high-purity cobalt in 6 N and 1 N H_2SO_4, and in 1 N solutions of H_2SO_4 + Na_2SO_4 with different pH using a Hg/H_2SO_4 standard cell. Results: (1) With increasing pH, the steady-state potential becomes more negative, the current of self-dissolution becomes smaller, the cathode potential increases, and the anode potential drops, i. e., the hydrogen overvoltage increases and the ionization voltage drops. (2) Co is passivated at pH > 3.12. Conclusions: The acceleration of the anodic ionization process at constant potential and increasing pH is due to the catalytic action of OH^- ions adsorbed on the Co surface: $Co + OH^- \rightleftharpoons (CoOH)_s + e$. The resulting catalyst $(CoOH)_s$ initiates the reaction:

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$Co + OH^- + (CoOH)_s \longrightarrow CoOH^+ + (CoOH)_s + 2e$. Then, $CoOH^+ + H^+ \rightarrow Co^{2+} + H_2O$ follows in acid, and $CoOH^+ + OH^- \longrightarrow Co^{2+} + 2HO^-$ in alkaline medium. The anode current is given by: $i_a = ka^2_{OH^-} \exp\left[(2\beta + 1)\varphi_a F/RT\right]$, and the anode potential by: $\varphi_a = k + RT.2.3 \log i_a/(2\beta+1)F - 2RT2.3 \log a_{OH^-}/(2\beta + 1)F$. From this, b_a the slope of the anodic polarization curve is calculated: $b_a \cong 0.058/(2\beta + 1)$, and $d\varphi_a/dpH \approx -0.116/(2\beta + 1)$. Substituting the experimental data $b_a = 0.026$ v, and $d\varphi_a/dpH = -0.052$ v gives the same value, 0.61, for the transfer coefficient β, proving the accuracy of the equations. The anodic ionization of Co is a second-order reaction referred to the hydroxyl ion activity. There are 2 figures and 1 table.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: April 19, 1962

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; NESTERENKO, T.A.

"Effect of Anion Adsorption on the Action of Inhibitors of the Acid Corrosion of Iron and Cobalt."

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

Moscow State University, U.S.S.R.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; VEY BAO-MIN

Effect of adsorbed halogen ions and organic cations on the electrochemical reactions taking place during acid dissolution of cobalt. Zhur.fiz.khim. 37 no.10:2300-2304 O '63. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

PODLOVCHENKO, B.I.; IOFA, Z.A.

Chemisorption of ethanol and acetaldehyde on platinum and the effect on it of the supporting anions. Zhur. fiz. khim. 38 no.1:211-214 Ja'64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IVANOV, V.F.; IOFA, Z.A.

Nonpolarographic peaks on a dropping mercury electrode in the electroreduction of iron group metals. Zhur. fiz. khim. 38 no.4:1026-1030 Ap '64. (MIRA 17:6)

1. Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; BATRAKOV, V.V.; KHO NGOK BA

Effect of the adsorption of anions on the action of inhibitors of acid corrosion of iron and cobalt. Zashch.met. 1 no.1:55-62 Ja-F '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

MIKHAYLOVA, E.I.; IOFA, Z.A.

Effect of halogen anions and some organic compounds on the electrochemical behavior of nickel in acid solutions. Elektrokhimiia 1 no.1:107-110 Ja '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

BATRAKOV, V.V., IOFA, Z.A.

Measurement of the impedance of an iron electrode by means of alternating current. Elektrokhimiia 1 no.2:123-129 F '65. (MIRA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.A.; MAKAROVA, V.A.

Effect of halogen ions and organic surface-active substances on hydrogen-ion discharge reaction on a copper electrode in acid solutions. Elektrokhimiia 1 no.2:230-233 F '65. (MIRA 18:6)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

ROSHCHUPKINA, L.M.; KHONINA, V.F.; IVANOV, V.F.; IOFA, Z.A.

Origination of the catalytic current maxima in the electroreduction of iron group metals on a mercury dropping electrode. Elektrokhimiia 1 no.8:982-985 Ag '65. (MIRA 18:9)

1. Tul'skiy politekhnicheskiy institut i Moskovskiy gosudarstvennyy universitet imeni M.V.Lomonosova.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

BATRAKOV, V.V.; P'YANKOVA, A.P.; IOFA, Z.A.

Behavior of an iron electrode in alkaline solutions at low temperatures. Zhur. fiz. khim. 38 no.5:1340-1343 My '64. (MIRA 18:12)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova. Submitted July 3, 1963.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

L 1150-66 EWT(m)/EPF(c)/EWP(t)/EWP(b) IJP(c) JD/WB/

ACCESSION NR: AP5023666 UR/0076/65/039/009/2182/2187
620.191/.193

AUTHOR: Iofa, Z. A.; Huo Ngo-pa; Vasil'yeva, M. K.

TITLE: Effect of sulfur-containing compounds on iron corrosion in acid solutions

SOURCE: Zhurnal fizicheskoy khimii, v. 39, no. 9, 1965, 2182-2187

TOPIC TAGS: corrosion inhibitor, iron, sulfuric acid, hydrogen sulfide, organic sulfur compound, sulfur compound, thiocyanate

ABSTRACT: The effect of hydrogen sulfide and other compounds containing sulfur on the adsorption of corrosion inhibitors (organic bases) by iron from sulfuric acid solutions was studied by means of the drop in the differential capacity of the double layer. The differential capacity was determined by an alternating current. An analysis of the polarization curves showed the mechanism of adsorption reinforcement and the generation of a strong inhibiting influence of organic bases on the corrosion of iron in acid solutions in the presence of corrosion stimulants such as hydrogen sulfide, sulfo acids, and other sulfur-containing compounds. The effect of potassium thiocyanate and thiourea and its derivatives on the acid corrosion of

Card 1/2

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

L 1150-66

ACCESSION NR: AP5023686

3

iron was also investigated. Orig. art. has: 6 figures, 1 table, 5 formulas.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

44,55

SUBMITTED: 29May64 ENCL: 00 SUB CODE: GC,MM

NO REF SOV: 010 OTHER: 002

Card 2/2 JD

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IVANOV, V.F.; IOFA, Z.A.

Effect of the adsorption of surface active ions on the reduction of iron group metals on the dropping mercury electrode. Zhur.-fiz.khim. 36 no.5:1080-1083 My '62. (MIRA 15:8)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Surface-active agents) (Metals) (Reduction, Electrolytic)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFA, Z.I.

The mechanism of the reaction of inhibitors in the corrosion of iron in acid solutions and the part of haloid ions in this process. Vest. Mosk. un. Ser. mat. mekh., astron., fiz., khim. 11 no.2:139-151 '56. (MIRA 10:12)

1. Kafedra elektrokhimii Moskovskogo gosudarstvennogo universiteta.
(Inhibition (Chemistry)) (Iron--Corrosion) (Halogens)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFAN, B., arkhitektor

Bring beauty to everyday life. Mest.prom. i khud.promys 1 no.1:19
0 '60. (MIRA 14:3)
(Art, Decorative) (Art industries—Exhibitions)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFAN, B.M.

KARGIN, V.A.

5(3) P4 PHASE I BOOK EXPLOITATION SOV/1589

Akademiya nauk SSSR.

Khimiya bol'shikh molekul; sbornik statey (Chemistry of Large Molecules; Collection of Articles) Moscow, Izd-vo AN SSSR, 1958. 299 p. (Series: Akademiya nauk SSSR. Nauchno-populyarnaya seriya) 30,000 copies printed.

Compiler: G.V. Skloveskiy; Resp. Ed.: A.V. Topchiyev, Academician; Ed. of Publishing House: V.A. Boyarskiy; Tech. Ed.: I.N. Guseva.

PURPOSE: This book is intended for a wide circle of readers including those who have had no training in chemistry. It can also serve as a manual for propagandists, teachers, and journalists.

Card 1/8

Chemistry of Large Molecules (Cont.) SOV/1589

COVERAGE: This collection of articles reflects the trend for the future development of the Soviet chemical industry as indicated by the May plenary session of the Central Committee of the Communist Party within the framework of the new Seven Year Plan. These articles were published in newspapers and journals. The authors, scientists and industry workers, developed the theme of accelerated development of the chemical industries, and sciences, with stress on the manufacture of synthetic fibers, plastics, and other materials. Some of the articles were abridged, revised, or enlarged. The articles were selected so as to give an adequate survey of the chemistry and technology of high-molecular-weight compounds and their use in industry, agriculture, and in the manufacture of consumers' goods. Mentioned are raw materials for the production of polymers. This book belongs to the popular-science series of the Academy of Sciences. Similar volumes are intended for future publication. No references are given.

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APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

VOLODIN, P.A.; ZHURAVLEV, A.M.; IOVAN, B.M.; KADINA, I.G.; PEKAREVA, N.A.; STRIGALEV, A.A.; MIMKEVIN, G.B., red.; OSELEDETS, Z.M., red.; PAVLENKO, M.V.; BRUSINA, A.M., tekhn.red.

[New districts of Moscow] Novye raiony Moskvy. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1960. 284 p. (MIRA 13:7)

(Moscow--City planning)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFAN, B.M.

Planning and building the northeastern part of Severnoye Izmaylovo. Gor.khoz.Mosk. 35 no.5:7-10 My '61. (MIRA 14:6)

1. Rukovoditel' 6-y magistral'noy masterskoy instituta "Mosproyekt." (Moscow—City planning)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

KOSHKIN, V.G., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.; MUNTS, V.O., kand. arkh.; RUDINA, M.A., arkh.; SILUANOVA, G.V., arkh.; SHORYGINA, N.V., kand. khim. nauk. Prinimali uchastiye: BOGUSLAVSKIY, A.I., inzh.; ZARUBITSKIY, A.Ye., inzh.; LIVSHITS, A.M., inzh.; MASHINA, N.N., inzh.; OTLIVANCHIK, A.N., kand. tekhn. nauk; ROMANOVA, L.A., inzh.; CHERKINSKIY, Yu.S., inzh.; ANDREYEV, V.S., retsenzent; IOFAN, B.M., retsenzent; KRIPPA, A.I., arkh., retsenzent; GURVICH, E.A., red.izd-va; BRUSINA, L.N., tekhn. red.

[Catalog of finishing materials and articles] Katalog otdelochnykh materialov i izdelii. Pod red. M.P.Makotinskogo. Moskva, Gosstroiizdat. Pt.1.[Plastics; polymer finishing materials and articles] Plastmassy; polimernye otdelochnye materialy i izdeliia. 1962. 119 p. (MIRA 16:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Andreyev, Iofan, Krippa).
(Finishes and finishing--Catalogs) (Plastics)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

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1ST AND 2ND ORDERS

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IOFAN, S. S.

7

Volumetric determination of small amounts of zinc

A. G. Bosin and S. S. Iofan. J. Applied Chem. (U. S. S. R.) 10, 367-70(in French 370)(1937). Zn ion is sepd. from the cations of the 1st three analytical groups by the Schoorle reagent as $HgZn(CNS)_4$; this is decomposed with Na_2S in the presence of H_2SO_4. The HgS formed is treated with excess of standard I soln. and the excess I is detd. in the usual manner. The method is suitable for the detn. of from 0.6 mg. to several cg. of Zn. Seventeen references.

A. A. Podgorny

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

TOFAN, S.S.

12

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The determination of zinc in food products. A. G. Bosin and S. S. Tofan. *Voprosy Pitaniya U. S. S. R.* 7, No. 4-5, 173-9(in French, 179)(1938).—Schoorl's reagent is used for the sepn. of Zn from the cations of the 1st 3 analytical groups in the form of the complex $Zn[Hg(CNS)_4]$. This is decompd. with Na_2S in the presence of H_2SO_4, resulting in the formation of HgS. The latter is isolated, and treated with excess of I_2, the excess being titrated with $Na_2S_2O_3$ in the presence of CS_2. S. A. Karjala

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFAN, S. S., BASHMAKOVA, T. A., PAVLOVA, Z. K., and GURFEYN, L. N.

"Experimental Substantiation of the Maximum Permissible Concentration of Nitrochlor-benzene in Water when Releasing Runoff Water into Reservoirs," paper presented at the Scientific Conference of the Leningrad Sanitation Institute, 8-10 May 1956.

U-3,054,017

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

GUS'KOVA, V.N., kand. med. nauk; IOFAN, S.S., khimik

Conditions governing the discharge of purified effluents from ash pits of thermal electrical stations. Gig. i san. 24 no.4:74-76 Ap '59. (MIRA 12:7)

1. Iz Instituta radiatsionnoy gigiyeny.
(SEWAGE,
purified effluents in electric stations (Rus))

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFANOV, D.; YAROSH, O.

Letter of Arkhyp Teslenko. Visnyk AN URSR 24:54-55 D '53.
(MLRA 7:3)
(Teslenko, Arkhyp, 1882-1911)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A.

Insomnia, its cause and treatment. Rab.i.sial.30 no.8:3 of cover Ag '54. (MIRA 8:12)

(Insomnia)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A.

IOFE, A., doktar.

Novocaine therapy. Rab. i sial. 34 no.1:3 of cover Ja '58.
(NOVOCAINE--PHYSIOLOGICAL EFFECT) (MIRA 11:1)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A., doktor

Stomach ulcers. Rab. i sial. 35 no.8:23 Ag '59. (MIRA 12:12)
(STOMACH--ULCERS)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A., vrach

Chronic catarrh of the stomach. Rab. i sial. 37 no.1:22 Ja '61. (MIRA 14:2)

(STOMACH—CATARRH)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A., doktor

The diseases of kidneys. Rab. i sial. 37 no. 5:23 My '61. (MIRA 14:4)

(KIDNEYS—DISEASES)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A., vrach

Congenital heart failure. Rab.i sial. 38 no.8:20 Ag '62.
(MIRA 15:9)

(HEART FAILURE)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A.

Exudative diathesis. Rab. i sial. 39 no.2:22 F '63.
(MIRA 16:4)

(DIATHESIS)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, A.

Semiconductors are becoming useful in life. p. 41

PEZHKA PROMISHLENOST. (Ministerstvo na teznkata promishlenost) Sofiia, Bulgariia, Vol. 8, No. 7, July 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 8, No. 12, December 1959
Uncl.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, B.G. (Moskva)

Nocturnal enuresis. Fel'd. i akush. 23 no.4:22-25 Ap '58.
(URINE--INCONTINENCE) (MIRA 11:4)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, B.G., (Moscow)

Influenza in small children and its prevention. Med.sestra no.10:17-18 O '55. (MLRA 8:12)
(INFLUENZA) (INFANTS--CARE AND HYGIENE)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, B.G.(Moskva)

Care of infants. Fel'd. i akush.no.1:52-55 Ja. '56. (MLRA 9:4)

(INFANTS(NEWBORN)--CARE AND HYGIENE)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

MAYZEL', I.Ye., prof.; IOFE, B.G., vrach

Is it necessary to send children to the south? Zdorov'e 6 no.6:30 Je '60. (MIRA 13:7)

(CHILDREN--CARE AND HYGIENE)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

MAYZEL', I.Ye., prof.; IOFE, B.G., vrach

Leafy shade. Zdorove'e 6 no.7:30 Je '60. (MIRA 13:7)
(SUN BATHS)

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, B.G. (Moskva)

Hemolytic disease in newborns (Rh incompatibility). Fel'd. i akush. 27 no.1:10-16 Ja '62. (MIRA 15:3)
(ERTHYROBLASTOSIS FETALIS)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G. L.

Textile Industry and Fabrics

"Industrial geography of USSR." Reviewed by V.V. Linde, G.L. Iofe. Tekst. prom. 12 no. 4, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

14-57-6-12971

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6, p 165 (USSR)

AUTHOR: Iofe, G. L.

TITLE: History of Russian Cotton Production Prior to the Last Decade of the Nineteenth Century (K istorii razvitiya khlopkovodstva v Rossii do 90 godov XIX veka)

PERIODICAL: Sb. nauch-issled. rabot. Tashkentsk. tekstil'n. in-t, 1955, Nr 2, pp 44-55

ABSTRACT: In the second quarter of the eighteenth century, Russia was adjusting her commercial relations with the East and importing increasingly large amounts of "cotton paper." The substitution of "cotton paper" woof for flax was widely applied at the end of the eighteenth century, first in Shuya and later in Ivanovo. Acquisition of the trans-Caucasian region (1798-1824) made it possible to grow cotton in Russia.

Card 1/2

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14-57-6-12971

History of Russian Cotton Production (Cont.)

Experimental cotton cultures were also introduced into the Khersonskaya and Tavricheskaya gubernii (districts). The author notes the growing importance of joining Central Asia to Russia, and particularly the progress made there in cotton growing. Russian specialists recommended the substitution of medium-fiber and thin-fiber cotton plants for cheap Asiatic cotton plants, and the use of agricultural techniques. The farmers of Uzbekistan and Tadzhikistan began to cultivate intensively new types of cotton plants with open bolls. Completion of the railroad linked the area more closely with the interests of Russian capitalism. Cotton import duties, levied in 1878, contributed to a great increase in Central Asian cotton production (14.3 thousand tons in 1888; 43.7 thousand tons by 1890). Since the last decade of the nineteenth century, Central Asia has become the center of the Russian cotton industry.

Card 2/2

D. K.

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"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L., dots.

Effect of waste components on the quality of yarn. Sbor. nauch.-issl. rab. TTI no.4:101-119 '57. (MIRA 11:9)
(Cotton waste) (Cotton yarn)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L., dots.

Moscow School of Sericulture. Sbor. nauch.-issl. rab. TTI no.4: 196-199 '57. (MIRA 11:9)
(Moscow--Sericulture--Study and teaching--History)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L.

Oldest textbook on the mechanical technology of fibrous materials. Izv.vyz.ucheb.zav.;tekh.tekst.prom. no.5:140-141 '60. (MIRA 13:11)

1. Tashkentskiy tekstil'nyy institut.
(Textile industry)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L.

F.V.Chizhov, sericulture expert. Izv. vys.ucheb.zav.; tekh.tekst.-prom. no.6:142-143 '61. (MIRA 15:1)

1. Tashkentskiy tekstil'nyy institut.
(Chizhov, Fedor Vasil'evich, 1811-1877)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L., dotsent

Sericulture and silk manufacture in Russia during the transition period from handicraft to factories. Sbor.nauch.-issl.rab.TTI no.12:175-198 '61. (MIRA 15:11)

(Silk manufacture)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, G.L., dotsent

From the history of Kiev sericulture; on the occasion of the 150th anniversary of the birth of F.V.Chizhov. Sbor.nauch.-issl. rab.TTI no.12:275-288 '61. (MIRA 15:11)
(Kiev Province--Sericulture) (Chizhov, Fedor Vasil'evich, 1811-1877)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, I.I., inzh.; KOMAROV, A.M., inzh.

Effect of auxiliary equipment on work indices of block systems with 150 and 200 Mw. ratings. Teploenergetika 12 no.6:2-10 Je '65. (MIRA 18:9)

1. Gosudarstvennyy trest po organizatsii ratsionalizatsii rayonnykh elektrostantsiy i setey.

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

25(1) PHASE I BOOK EXPLOITATION SOV/3161

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti, Kiyevskoye oblastnoye pravleniye

Zashchitno-dekorativnyye i spetsial'nyye pokrytiya metallov (Protective, Decorative, and Special Coatings for Metals) Kiyev, Mashgiz, 1959. 291 p. 4,200 copies printed.

Editorial Board: P. K. Lavorko, N. I. Litvak, and A. P. Rychis (Resp. Ed.); Ed. of Publishing House: M. S. Soroka; Chief Ed. (Southern Division, Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for technical personnel in the field of protective coatings for metals.

COVERAGE: The papers in this collection, presented at a conference of the NTO Mashprom held in Odessa, deal with the mechanization and acceleration of metal-coating and plating processes performed by spraying, electrolytic, and other methods. Quality control of protective coatings is also discussed. No personalities are mentioned. References follow several of the papers.

Bogtsova, I. P., Engineer (Moscow). White Bronze Plating and Electropolishing of Copper Alloys as a Substitute for Silver Plating 174

Budyartsev, K. T. Selection of Coatings for Clamping Terminals of Electrical-installation Equipment 178

Bastyushenok, S. S., Engineer (Leningrad). Instrument for Controlling the Thickness of Electroplating During the Process of Deposition 186

Yuts, L. S., Engineer (Moscow). Photoelectrochemical Method of Engraving Iron and [illegible] Plates for Machines and Instruments 191

Gorodina, M. S., Engineer (Moscow). Aluminizing of Steel Reflectors by Spraying With Aluminum in Vacuum 198

Galyayev, P. P., Candidate of Chemical Sciences (Moscow). Technological Achievements and Improvements in Equipment Design Made by NIIKhIMMASH During the Fifth Five-Year Plan in the Field of Chemical and Electrolytic Treatment of Metals 208

Fedorov, V. A., Engineer (Leningrad). Mechanization and Acceleration of Electroplating Processes 218

Butter, E. G., Engineer (Gor'kiy). Present State and Fields of Application for Electrostatic Painting in the Machine-building Industry 223

Gubenskiy, V. A., Engineer (Moscow). Painting of Products in a High-voltage Electric Field 230

Zabadev, V. I., Engineer (Gor'kiy). Introduction of New Painting Materials and Methods at the Gor'kiy Avtozavod (Gor'kiy Motor Vehicle Plant) [illegible]

Mushkin, G. N., Engineer (Leningrad). Rapid Drying of Paint and Lacquer Coats Through Application of Commercial-Frequency Currents 259

Livshits, M. N., Engineer (Moscow). Automated Painting, Enameling, and Glazing of Deeply Recessed Products by Electrostatic Spraying 271

Darashko, G., Candidate of Technical Sciences (Moscow). Painting of Industrial Products in France 284

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

JOFE, M.; ENDZELINA, M., red.; MIRONOVS, A., tekhn. red.

[Alcoholism and its control] Alkoholisms un cina pret to. Riga, Latvijas Valsts izdevnieciba, 1959. 36 p. [In Latvian]

(MIRA 14:12)

(ALCOHOLISM)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

IOFE, M. S.

"Obliterating Disease of the Vessels. Pathogenesis, Clinical Aspects, and Treatment."
Sverdlovsk State Med Inst, Sverdlovsk, 1954
(Dissertation for the Degree of Doctor of Medical Sciences)

SO: Knizhnaya Letopis', No. 32, 6 Aug 55

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

ROGOZIN, G.M.; TSYNKOV, M.Yu., kand. sel'skokhozyaystvennykh nauk; LOBANOVA, A.A., kand. sel'skokhozyaystvennykh nauk; RUMYANTSEVA, T.V.; TRUDOLYUBOV, B.A., kand. sel'skokhozyaystvennykh nauk; KUDRYAVTSEV, P.N., doktor sel'skokhozyaystvennykh nauk; LITOVCHENKO, G.R., kand. sel'skokhozyaystvennykh nauk; KOLOBOV, G.M.; IOFE, M.Sh.; KHITRENKOV, G.G., doktor sel'skokhozyaystvennykh nauk; BADIR'YAN, G.G., doktor sel'skokhozyaystvennykh nauk; IVANOVA, A.A.; MAKAROV, A.P.; ALTAYSKIY, I.P.; SPIRIDONOV, A.L., kand. sel'skokhozyaystvennykh nauk; ZHUYKOV, G.G.; BANNIKOV, N.A., red.; IVANOVA, A.N., red.; ZUBRILINA, Z.P., tekhn. red.

[Economics and organization of stockbreeding on collective farms] Ekonomika i organizatsiia zhivotnovodstva v kolkhozakh. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1958. 550 p. (MIRA 11:7)
(Stock and stockbreeding)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

GUDKOV, A.; BUSURIN, Ya.; IOFE, N.; PALKIN, G., kand. sel'khoz. nauk; TUNITSKIY, A., red.; KOROTAYEVA, D., tekhn. red.

[Manual on private livestock and poultry raising] Spravochnik po individual'nomu zhivotnovodstvu i ptitsevodstvu. Moskva, Izd-vo VTsSPS Profizdat, 1946. 182 p. (MIRA 14:8)
(Stock and stockbreeding) (Poultry)

APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6"

"APPROVED FOR RELEASE: 08/10/2001 CIA-RDP86-00513R000618620011-6

1. IOFE, N. S.

2. USSR 600

4. Poultry

7. Better organize the service of collective farm animal husbandry experts to poultry sections, Ptisevodstvo, No. 1, 1953.

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

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