S/020/60/132/04/37/064
B004/B007

5.4600

AUTHORS: Birinteeva, T. P., Kabanov, B. N.

TITLE: The Structure of the Electric Double Layer on Platinum

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 4,
             pp. 868-871

TEXT: It was the aim of this paper to clear up the contradictions found
in published data. (Refs. 1-7) concerning the zero potential of platinum.
The authors measured the capacity of a smooth platinum electrode at
different current frequencies by using a method described in an earlier
paper (Ref. 8). Figs. 1 and 2 show the dependence of the capacity on the
potential in 0.01 N H_2SO_4 (Fig. 1) and 1 N Na_2SO_4 + 0.01 N H_2SO_4 (Fig. 2)
at frequencies of from 1 kc/s to 200 kc/s. At low frequencies a marked mini-
mum of capacity forms at a potential of about 0.5 v. This is ascribed to
a pseudocapacity. The minimum is the point of intersection of two curves
of adsorption capacity, corresponding to the discharge and ionization of
adsorbed H-atoms, on the one hand, and the adsorption and desorption of
oxygen, on the other. If the oxidation potential is shifted in the negative

Card 1/3

The Structure of the Electric Double Layer   S/020/60/132/04/37/064
on Platinum   B004/B007

direction, also the minimum is shifted (Fig. 3). For the purpose of
determining the real capacity of the double layer near the zero potential,
high frequencies could not be applied because of the high resistance
of the solution. The authors therefore confined themselves to operating
with 10 kc/s and reduced the hydrogen ion concentration in order to shift
the range of hydrogen adsorption toward negative potentials (Fig. 4). No
minimum was observed at zero point. The authors discussed this result,
and though they believe a blurring of the minimum by the physical and
chemical non-homogeneity of the surface to be possible, they do not believe
it capable of making the minimum disappear entirely. They came to the
conclusion that in the case of the Pt electrode the method of measuring
the capacity of the double layer by means of a-c current cannot be used
to determine the position of the zero potential. The most reliable data
are probably those obtained by the adsorption method. The authors mention
a paper by V. L. Kheyfets and B. S. Krasikov (Ref. 7), and thank Academician
A. N. Frumkin for discussing the results. There are 4 figures and 19
references: 15 Soviet, 2 British, and 3 German.

Card 2/3

·KABANOV, B.N·

$-42-$

PHASE I BOOK EXPLOITATION   SOV/5590

Konferentsiya po poverkhnostnym silam. Moscow, 1960.

Issledovaniya v oblasti poverkhnostnykh sil; sbornik dokladov na
    konferentsii po poverkhnostnym silam, aprel' 1960 g. (Studies
    in the Field of Surface Forces; Collection of Reports of the
    Conference on Surface Forces, Held in April 1960) Moscow, Izd-
    vo AN SSSR, 1961. 231 p. Errata printed on the inside of back
    cover. 2500 copies printed.

Sponsoring Agency: Institut fizicheskoy khimii Akademii nauk SSSR.

Resp. Ed.: B. V. Doryagin, Corresponding Member, Academy of Sciences
    USSR; Editorial Board: N. N. Zakhavayeva, N. A. Krotova, M. M.
    Kusakov, S. V. Nerpin, P. S. Prokhorov, M. V. Talayev and O. I.
    Fuks; Ed. of Publishing House: A. L. Bankvitser; Tech. Ed.:
    Yu. V. Rylina.

PURPOSE:. This book is intended for physical chemists.

Card 1/8

Studies in the Field of Surface Forces (Cont.)   SOV/5590

COVERAGE: This is a collection of 25 articles in physical chemistry
on problems of surface phenomena investigated at or in associa-
tion with the Laboratory of Surface Phenomena of the Institute
of Physical Chemistry of the Academy of Sciences USSR. The first
article provides a detailed chronological account of the Labora-
tory's work from the day of its establishment in 1935 to the
present time. The remaining articles discuss general surface
force problems, polymer adhesion, surface forces in thin liquid
layers, surface phenomena in dispersed systems, and surface forces
in aerosols. Names of scientists who have been or are now associ-
ated with the Laboratory of Surface Phenomena are listed with
references to their past and present associations. Each article
is accompanied by references.

TABLE OF CONTENTS:

Zakhavayeva, N. N. Twenty-Five Years of the Laboratory of
Surface Phenomena of the IFKhAN SSSR (Institute of Physical
Chemistry of the Academy of Sciences USSR)   3

Card 2/8

Studies in the Field of Surface Forces (Cont.)   SOV/5590

III. SURFACE FORCES IN THIN LAYERS OF LIQUIDS

Card 5/8

POPOVA, T.I.; KABANOV, B.N.

Anodic behavior of iron in alkaline solution in the presence of
anions. Zhur.fiz.khim. 35 no.6:1295-1300 Je '61.   (MIRA 14:7)

1. Akademiya nauk SSSR, Institut elektrokhimii.
   (Iron—Electric properties)

KABANOV, B.N.

LA diffusion de loxygene a travers le bioxyde du plomb pendant la polarisation anodique.

Report submitted to the Intl. Committee for Electrochemical Thermodynamics and Kinetics   Rome, Italy   24-29 Sep 1962

KABANOV, B.N.

Theory of zinc passivation. Izv.AN SSSR.^{O}td.khim.nauk no.6:
980-983 '62.   (MIRA 15:8)

1. Institut elektrokhimii AN SSSR.
                         (Zinc) (Passivation)

S/076/62/036/007/003/010
B101/B138

AUTHORS: Popova, T. I., Bagotskiy, V. S., and Kabanov, B. N. (Moscow)

TITLE: Anodic passivation of zinc in alkali. I. Measurements at constant current densities

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 7, 1962, 1432 - 1438

TEXT: The potential-time curves for rotating zinc anodes were oscillo-graphically recorded in 0.1 - 1 N KOH at 60 - 5000 rpm, 20°C, and current densities, i, of up to 340 ma/cm^2. The curve $1/Q_{pass}$ showed three sections Between 10 and 200 ma/cm^2, the total amount of electricity required for passivation rises linearly with i, and is not affected by changes in the rate of stirring; at i > 200 ma/cm^2, Q_{pass} becomes independent of i and reaches a limiting value which is independent of the stirring rate but diminishes with decreasing alkali concentration; at i < 10 ma/cm^2, Q_{pass} is larger than would correspond to a linear relation between Q_{pass} and i, and the stirring rate affects Q_{pass}. Conclusion: At medium and high i, the

Card 1/2

S/076/62/036/007/004/010
B101/B138

AUTHORS: Popova, T. I., Bagotskiy, V. S., and Kabanov, B. N. (Moscow).

TITLE: Anodic passivation of zinc in alkali. II. Potentiostatic
             and alternating current measurements; charging curves

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 7, 1962, 1439 - 1444

TEXT: The character of passivating layers was studied on the example of zinc
in alkali by potentiostatic recording of the polarization curves, recording
of the activation curves, and measurement of the impedance of the zinc
electrode. Results: Zn dissolves in anodic polarization up to -1.1 v
(versus hydrogen standard electrode); O_2 is liberated at potentials $> + 1.7$ v.

The form of the polarization curves is independent of the KOH concentra-
tion, but the dissolution rate rises with concentration. When the stirring
rate was increased from 6 to 83.5 r/sec the rate of dissolution in 0.5 N KOH
increased 2-3 times. There is a linear dependence between i (ma/cm^2) and
$\sqrt{\omega}$ (ω = angular velocity of the rotating anode). If the zinc anode is
passivated at potentials more positive than -0.3 v, activation is retarded.
After 60 min passivation at -0.2 or +0.4 v (i = 0.03 ma/cm^2), Q was 0.2 or
Card 1/2

S/020/62/142/001/018/021
B145/B101

AUTHORS: Vidovich, G. L., Leykis, D. I., and Kabanov, B. N.

TITLE: Mechanism of anodic oxidation of silver in alkali

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 1, 1962, 109-112

TEXT: A previous paper by the authors (DAN v. 124, no. 4, 1959, 855) showed that the anode current in anodic oxidation of silver in alkali at constant potential (0.32 v) decreased in the first minutes after switching on, remained constant for some time, and subsequently continued decreasing. The reasons for this course of the current-time curve are studied in this paper. The overvoltage curve of the $Ag \rightarrow Ag_2O$ process shows a sharp increase of the overvoltage potential at approximately 1.10^4 a/cm^2, indicating that a diffusion limiting current has been reached. Both the limiting current and its independence of the KOH concentration exclude a concentration polarization as regards the OH$^-$ ion. On the contrary, as was shown by measuring the impedance components of the electrode in alternating current at different frequencies, ω, there is a limitation of diffusion in the arising Ag_2O layer of approximately 5.10^{-7} cm thickness.

Card 1/3

Mechanism of anodic oxidation ...   S/020/62/142/001/018/021
                                           B145/B101

The active impedance component, R_0, of the Ag electrode increases
indefinitely with $1/\sqrt{\omega}$. The resistance equivalent to the concentration
polarization is approximately 100 times higher than in the concentration
polarization of the diffusing ion in solution. R_0 does not depend on the
KOH concentration. It may be concluded from these results that diffusion
is complicated in the oxide layer. Ag ions diffuse through the Ag_2O layer,
and the $Ag \longrightarrow Ag_2O$ process takes place on the boundary layer between

solution and Ag_2O. This process limited by diffusion does not continue
at the same rate until the Ag electrode is completely consumed but
passivation occurs, as is shown by the decrease in the anode current.
This may also be observed in a shift of the overvoltage curve toward lower
log i values for this period. The measurement of the active component of
impedance shows that there exists no concentration polarization for this
period. The following is suggested to explain passivation: Accumulation
of adsorbed oxygen on the oxide surface layer effects both a decrease of
the adsorption rate of oxygen and of the ionization rate of Ag atoms.
The resistance of the electrochemical process calculated from the inclina-
tion of the overvoltage curve (ψ - log i) and the value i increases

Card 2/3

VANYUKOVA, L.V.; ISAYEVA, M.M.; KABANOV, B.N.

Solubility and mechanism of solution of quadrivalent lead.
Dokl. AN SSSR 143 no.2:377-379 Mr '62.   (MIRA 15:3)

1. Institut elektrokhimii AN SSSR i Moskovskiy avtomekhanicheskiy
institut. Predstavleno akademikom A.N.Frumkinym.
                        (Lead oxides)
                        (Sulfuric acid)

KABANOV, B.N.; LEYKIS, D.I.; KISELEVA, I.G.; ASTAKHOV, I.I.; ALEKSANDROVA, D.P.

Cathodic introduction of alkali metals into electrodes in aqueous solutions. Dokl. AN SSSR 144 no.5:1085-1088 Je '62.

(MIRA 15:6)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

(Intermetallic compounds) (Electrochemistry)

KASHCHEYEV, V.D.; KABANOV, B.N.; LEYKIS, D.I.

Anode activation of iron. Dokl. AN SSSR 147 no.1:143-145 N '62.

(MIRA 15:11)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N. Frumkinym.

(Iron)
(Electrodes)

KABANOV, B.N.; VEYSBERG, E.S.; ROMANOVA, I.L.; KRIVOLAPOVA, E. V.

"Anodic Diffusion of Oxygen through Lead Dioxide."

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

Affiliated Research Storage Battery Institute, Podolsk, U.S.S.R.

VOROPAYEVA, T.N.; DERYAGIN, B.V.; KABANOV, B.N.

Determination of the points of zero charge by the method of
crossed polarized metallic threads. Izv.AN SSSR.Otd.khim.nauk
no.2:257-263 F '63.

(MIRA 16:4)

1. Institut fizicheskoy khimii AN SSSR.
            (Metals)   (Electromotive force)
                  (Electrolyte solutions)

POPOVA, T.I.; BOGOTSKIY, V.S.; KABANOV, B.N.

Effect of small amounts of metal impurities on the value of hydrogen overvoltage on zinc in concentrated alkaline solutions. Zhur. prikl. khim. 36 no.8:1743-1748 Ag '63.   (MIRA 16:11)

BIRINTSEVA, T.P.; KABANOV, B.N.

Zero charge potential on platinum. Zhur. fiz. khim. 37 no.11:
2600-2602 N'63.
(MIRA 17:2)

1. Institut elektrokhimii AN SSSR.

L 17524-63

ACCESSION NR: AP3004429   FWP(q)/EWT(m)/BDS   AFFTC/ASD   JD

AUTHORS: Kabanov, B. N.; Kasheheyev, V. D.   S/0020/63/151/004/0883/0885

TITLE: The mechanism of anodic activation of iron.   57   58

SOURCE: AN SSSR. Doklady, V. 151, no. 4, 1963, 883-885.

TOPIC TAGS: anodic activation, valence, iron, passive iron, anodic dissolution, perchloric acid, Fe^{2+}, Fe^{3+}, ClO_4^-, oxygen.

ABSTRACT: Authors determined the influence of the composition of the solution on anodic activation and on the valence of iron going into solution during anodic activation of passive iron in order to explain the mechanism of anodic dissolution of iron. In perchloric acid more than 99% of the current goes into the formation of Fe^{2+} ions and less than 1% into that of Fe^{3+} and ClO_4^- ions do not accelerate the rate of formation of Fe^{3+} ions. Authors concluded that ClO_4^- ions are capable of either strongly retarding the reaction $Fe^{2+} \rightarrow Fe^{3+}$ or, more probably, do not displace oxygen from the surface but only regroup it, and the anodic oxidation of Fe^{2+} proceeds on a small portion of the surface. "We wish to thank D. I. Leykis and B. M. Grafov for their participation in discussing the results of the experiments." Orig. art. has: 3 figures and 2 formulas.

ASSOCIATION: Institute of Electrochemistry, Academy of Sciences, USSR.

Card 1/2

KIR'YAKOV, Gleb Zakharovich; PONOMAREV, V.D., akademik, retsenzent; SONGINA, O.A., doktor khim. nauk, retsenzent; KABANOV, B.N., doktor khim. nauk, retsenzent; KUSHNIKOV, Yu.A., kand. khim. nauk, retsenzent; ILYUSHCHENKO, V.M., kand. khim. nauk, retsenzent; KOZIN, L.F., kand. khim. nauk, otv. red.; IVANOVA, E.I., red.

[Electrode processes in sulfuric acid solutions of zinc]
Elektrodnye protsessy v sernokislykh rastvorakh tsinka.
Alma-Ata, Nauka, 1964. 186 p.   (MIRA 17:12)

1. Akademiya nauk Kaz.SSR (for Ponomarev).

BALASHOVA, N.A.; KABANOV, B.N.; KOVBA, L.D.

Lead transfer in a positive electrode of a lead accumulator.
Zhur. prikl. khim. 37 no. 4:906-908 Ap '64.   (MIRA 17:5)

ACCESSION NR: AP4019981   S/0020/64/154/006/1414/1416

AUTHORS: Astakhov, I.I.; Vaysberg, E.S.; Kabanov, B.N.

TITLE: Anodic corrosion of lead in sulfuric acid

SOURCE: AN SSSR. Doklady*, v. 154, no. 6, 1964, 1414-1416

TOPIC TAGS: lead oxidation, anodic lead oxidation, lead containing sulfuric acid, sulfuric acid, lead, $CoSO_9$, Na_2SO_4

ABSTRACT: While there are a number of articles on anodic oxidation of lead in sulfuric acid, and on the composition and structure of anodic films, there is a lack of data on the mechanics of their formation. The present work explains the growth of anodic films combining electrochemical and structural methods of investigation. For this purpose, films were studied which were formed on smooth lead electrodes with anodic polarization (current 2 ma/cm^2) for 3, 24 and 48 hours. The bath consisted of 2,8 N and 10.4 N H_2SO_4 solutions at 25 and 65C. In one case $CoSO_4$ was added. Corrosion products were determined by cathodic reduction in 1 N Na_2SO_4 solution. According to the results, anodic oxidation of lead in strong

Card   1/2

ACCESSION NR: AP4019981

solutions of sulfuric acid does not proceed at the pore bases and in micro-cracks of the dioxide film but rather by the lead inter-action with oxygen diffusing through the oxide film and forming PbO_4, PbO_x and $-PbO_2$. Formation of the latter as a result of lengthy anodic oxidation of lead is a secondary process. Apparently, $CoSO_4$ slows down the primary penetration of oxygen into the crystal lattice of lead and increases its passivation.

ASSOCIATION: Institut elektrokhimii AN SSSR (Electrochemical Institute AN SSSR); Podol'skiy filial nauchno issledovatel'skogo institute akkumulyatornoy promyshlennosti (Podolsk Branch of the Scientific Research Institute for the Battery Industry)

SUBMITTED: 05Oct63   DATE ACQ: 23Mar64   ENCL: 00

SUB CODE: GC   NR REF SOV: 007   OTHER: 011

Card 2/2

KACHAKOV, Ya.B.; TAMM, 'IKAYA, E.G.; KABANOV, B.N.

Role of barium sulfate in the negative plate of a lead acid
battery. Zhur. prikl. khim. 37 no.9:1936-1941 S '64.

(MIRA 17:10)

YAMPOL'SKAYA, E.G.; KABANOV, B.N.

Adsorption mechanism of the effect of expanders. Zhur. prikl. khim.
37 no.11:2536-2539 N '64.   (MIRA 18:1)

KISELEVA, I.G.; TOMASHOVA, N.N.; KABANOV, B.N.

Inclusion of alkaline metals into electrodes studied by the
potential - time curve method. Zhur. fiz. khim. 38 no.5:
1188-1194 My '64.   (MIRA 18:12)

1. Institut elektrokhimii AN SSSR. Submitted June 1, 1963.

ALEKSANDROVA, P.I.; KISHINKA, I.G.; KABANOV, B.N.

Effect of the inclusion of alkaline metals into electrodes
on hydrogen overvoltage. Zhur. fiz. khim. 38 no.6:1493-1500
Je '64.   (MIRA 18:3)

1. Institut elektrokhimii AN SSSR.

ZAK, A.I.; KABANOV, B.N.

Hydrogen overvoltage on aluminum and the inclusion of an alkaline
metal. Elektrokhimiia 1 no.1:68-71   Ja '65.   (MIRA 18:5)

1. Institut elektrokhimii AN SSSR.

L 8307-66 EWT(1)/EWT(m)/ETC/EWG(m)/T/EWA(m)-2
ACCESSION NR: AP5022143

UR/0364/65/001/009/1023/1028
541.13

AUTHOR: Kabanov, B. N.; Kiseleva, I.O.; Astakhov, I.I.; Tomashova, N.N.

TITLE: Overvoltage and mechanism of cathode intrusion of alkali metals into solid electrodes

SOURCE: Elektrokhimiya, v. 1, no. 9, 1965, 1023-1028

TOPIC TAGS: alkali metal, cation, intermetallic compound, electrode

ABSTRACT: The discharge of cations of alkali metals accompanied by the formation of intermetallic compounds according to the reaction Me+mMe=BMe$_m$ (where Me are Ag, Cd, Al, Zn, or Pb, and B are the ions of alkali metals), was studied recently and called the cathode intrusion of alkali metals into electrodes. The dependence of the rate of this reaction on the potential and structure of electrode material was studied to determine the mechanism of intrusion. The information on the reaction rate was obtained from data on the increase with time of the hydrogen overvoltage. The measurements were made in the 1 and 10 N NaOH electrolyte on pure lead or on the lead and sodium compound produced preliminarily by electrolysis or melting. The hydrogen overvoltage on the lead electrode in the 1 N NaOH

Card 1/3

L 8307-66
ACCESSION NR: AF5022143

electrolyte reached the maximum possible value after cathode polarization for 30-60 minutes. The rate of intrusion, because of a rapid liberation of hydrogen, could not be determined directly, and was calculated by extrapolation. The average density of alkaline metal intrusion into pure lead was thus determined as $i_0=10^{-10}$ amp /sq cm at $\varphi=-1.3$ v. The reaction rate was measured directly on the lead-sodium electrodes (3.5 - 10% Na): $i_0=10^{-3}$ amp /sq cm at $\varphi=-1.3$ v. This large difference in the values of i_0 in pure lead and in lead-sodium electrodes was caused by the fact that the intrusion rate increased with the increased number of vacancies in the metal lattice near the surface of electrodes. The equilibrium vacancies, generated on the surface of the metallic electrode or diffused from its depth, could provide only for a very small intrusion rate of 10^{-10} amp/sq cm. The larger intrusion rates occured only in the presence of a large number of vacancies in excess of the equilibrium concentration of vacancies. The number of vacancies was large in an alloy structure or in the presence of a large number of defects in the structure of the electrode metal. Changing only the conditions of the electrode surface (adsorption of As, Hg, and Te on the electrode surface, polishing or etching of the electrode) had little effect on the intrusion rate. Orig. art. has: 6 figure and 1 formula.

Card 2/3

L 8307-66

ACCESSION NR: AP5022143

ASSOCIATION: Institut elektrokhimii Akademii nauk SSSR (Institute of Electro-
chemistry, Academy of Sciences SSSR)

SUBMITTED: 21Nov64/--Sep65   ENCL: 00   SUB CODE: MM, NP

NO REF SOV: 008   OTHER: 002

Card 3/3

KABANOV, B.N.; ASTAKHOV, I.I.; KISELEVA, I.G.

Electrochemical inclusion of alkaline metals. Usp.khim. 34
no.10:1813-1830 O '65.   (MIRA 18:11)

1. Institut elektrokhimii AN SSSR.

КАВИНУ В Г

SIDANOV, I.A., inzh.; KABANOV, B.P., inzh.

Supplying 220v current on a high tension line for repair work
on a de-energized substation. Energetik 5 no.9:20-22 S '57.

(MIRA 10:10)

(Electric lines)

KABANOV, B.P., inzh.

Improve the quality of type ShT-35 insulators. Energetik 5 no.12:
18-19 D'57.   (MIRA 10:12)
          (Electric insulators and insulation)

GRIGOR'YEV, Yu.I., inzh.; KOSTYUK, V.V., inzh.; KABANOV, B.P., inzh.

Operation of automated remote control for main SRT engines.
Sudostroenie 30 no.9:44 S '64.   (MIRA 17:11)

L 6441-66

ACC NR: AP5026203   SOURCE CODE: UR/0142/65/008/004/0494/0497

AUTHOR: Kabanov, D. A.

ORG: none

TITLE: Theory of tunnel-diode resistor-coupled amplifier

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 4, 1965, 494-497

TOPIC TAGS: amplifier, solid state amplifier, tunnel diode amplifier

ABSTRACT: The current-voltage characteristic of a parallel-type tunnel-diode
amplifier is approximated by the A. Ferendeci and W. Ko nonlinear function
(PIRE, 1962, 50, 8, 1852) and the effect of bias voltage on the amplifier gain,
stability, input-output resistance, and other characteristics is theoretically
explored. The tunnel diode is replaced by an equivalent parallel circuit comprising
a nonlinear resistance and a constant p-n-junction capacitance. It is found that
the passband of the above amplifier becomes narrower, the input resistance decreases,
and the output resistance increases, as the amplifier gain increases. Orig. art.
has: 4 figures and 25 formulas.

SUB CODE: EC/   SUBM DATE: 09Jul64/   ORIG REF: 002/   OTH REF: 002

Card 1/1   UDC: 621.382.2:621.375.122

ACC NR: AP6033212   SOURCE CODE: UR/0142/66/009/004/0417/0422
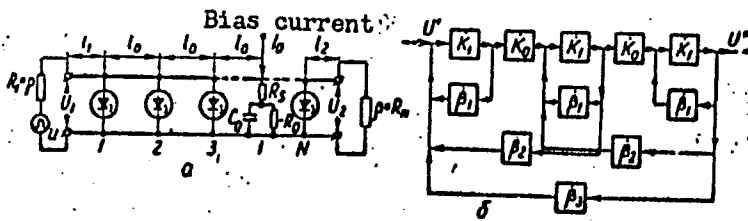
AUTHOR: Kabanov, D. A.

ORG: none

TITLE: Tunnel-diode TW amplifier

SOURCE: IVUZ. Radiotekhnika, v. 9, no. 4, 1966, 417-422

TOPIC TAGS: electronic amplifier, amplifier design, nanosecond pulse amplifier, tunnel diode

ABSTRACT: Based on theoretical elements given by S. J. Mason (PIRE, 1956, 44, 7, 920) and D. Seitzer (Archiv der el. Übertragung, 1963, 9, 17, 403), a theory of approximation of nanosecond pulses by a multistage tunnel-diode amplifier is set forth. A large amplification area can be achieved by using a TW circuit (see figure, left); this circuit is represented by its equivalent

Card 1/2   UDC: 621.382

ACC NR: AP6033212

(see figure, right) containing two discontinuities. The latter are formed by tunnel diodes that have identical parameters; signal distortion depends on the parameters of the discontinuities only. Formulas are derived for the gain, transient-response time, and amplification-area advantage over the single-stage tunnel-diode amplifier. It is shown how the multistage amplifier passband can be widened by introducing an inductance in series with tunnel diodes. Orig. art. has: 3 figures and 30 formulas.

SUB CODE: 09 / SUBM DATE: 22Dec65 / ORIG REF: 001 / OTH REF: 002

Card   2/2

L 43041-66   EWT(d)/FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(k)   IJP(c)   WG/WH

| ACC NR: AP6029519 | SOURCE CODE: UR/C432/66/000/004/0040/0042 |

AUTHOR: Bayborodin, Yu. V. (Candidate of technical sciences); Kravchenko, V. I.; Kabanov, E. N.; Karpenko, A. S.; Kozin, A. V.; Petrenko, R. A.; Shaposhnikov, B. V.

ORG: none

TITLE: A Q factor modulator for a ruby laser

SOURCE: Mekhanizatsiya i avtomatizatsiya upravleniya, no. 4, 1966, 40-42

TOPIC TAGS: solid state laser, laser modulation, laser pulsation

ABSTRACT: A Q factor modulator that increases the output pulse power of a ruby laser by 10^3 is described. The modulator is made up of an optical head and an electronic unit. The optical head consists of a rotating prism with total internal reflection that acts as one of the mirrors of the laser optical resonator; it is driven at angular speeds up to 26×10^3 rpm by a dc motor. The electronic unit consists of a square wave generator, a comparator circuit, two time delay networks, a trigger circuit, a dc motor, and a power supply. The modulator operates in the following manner: at a given angular position of the prism with respect to the laser beam, light from a lamp is focused through a lens and illuminates a photosensitive diode. The output pulse of the photodiode is amplified and fed to the comparator. When the rotational speeds of the motor and the prism are equal, the comparator initiates a pulse that lights the laser pumping lamp and thus triggers the laser. At the same time, the

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ACC NR: AP6029519   ⊘

motor is stopped and the laser is not triggered again until the motor builds up its
speed until it is equal to that of the prism. The motor has an automatic disconnect
relay which stops it in 5 to 7 seconds if a faulty condition occurs in the circuit.
As a result of work with the modulator, optimum parameters for the optical resonator,
rotation speed of the reflector, and pumping power have been determined in order to
obtain maximum output pulse power. Orig. art. has: 2 figures.   [IV]

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 001 ATD PRESS

                                                                      5067

Card   2/2

VOl'NOV, V., inzh.; KABANOV, F., inzh.

Studying the creep of concrete in a span structure. Avt.dor. 23
no.6:10 Je '65.   (MIRA 18:8)

KAZARNOVSKIY, Ya.S.; KARKHOV, N.V.; KABANOV, F.I.; OVCHARENKO, B.G.

Production of synthesis gas by high temperature conversion of
hydrocarbon gases at high pressure. Khim.prom. no.6:396-404 Je
'62.   (MIRA 15:11)
        (Hydrocarbons)   (Water gas)

KABANOV, F.I.; KARKHOV, N.V.; KAZARNOVSKIY, Ya.S.; OVCHARENKO, B.G.;
Prinimal uchastiye: ZUYEV, V.I.

Production of process gas by the high temperature conversion
of natural gas at elevated pressure. Khim.prom. no.9:547-555
Ag '62.   (MIRA 15:9)
                    (Gas, Natural)
             (Gas manufacture and works)

KABANOV, Feliks Ivanovich; TRIFONOV, D.N., red.; MAZEL', Ye.I.,
tekhn. red.

[Radioactive isotopes in chemistry] Radioaktivnye izotopy
v khimii. Moskva, Gosatomizdat, 1963.   68 p.
                                                (MIRA 16:12)
    (Radioisotopes—Industrial applications)

KABANOV, E.I., KASARNOVSKIY, Ya.S., KALECHOV, N.V., ZUYEV, V.I.

Production of technological gas by means of high-temperature
vapor-oxygen conversion of petroleum fuels under increased
pressure. Khim. prom. 41 no.8:567-594 Ag '65.

(MIRA 18:9)

KABANOV, G.A.

Stabilization of the radiation dose level of a generating betatron.
Izv.vys.ucheb.zav.;fiz. no.2:81-84 '60.   (MIRA 13:8)

1. Tomskiy politekhnicheskiy institut im. S.M.Kirova.
                    (Betatron)

KABANOV, Georgiy Ivanovich; SIDOROVA, L.A., red.; KOZLOVSKAYA, M.D., tekhn.red.

[My experience in making and using teaching aids in geometry]
Moi opyt izgotovleniia i primeneniia posobii po geometrii.
Moskva, Gos.uchebno-pedagog.izd-vo M-va prosv. RSFSR, 1958. 159 p.
(MIRA 12:3)
(Geometry--Study and teaching)   (Teaching--Aids and devices)

BEZSONOV, P.A. (Moskva); BELYAYEV, V.I. (Kolomna); BUDANTSEV, P.A.
    (Orenburg); KABANOV, G.I. (Melekess); MAYOROV, S.V. (Moskva);
    MURAVIN, K.S. (Moskva); PREDEIN, P.G..(Gubakha, Permskoy oblasti);
    SIKORSKIY, K.P. (Moskva); TARASYUK, V.Ye. (Kiyev); KHABIB, R.A.
    (Samarkand).

Discussing plans of programs. Mat.v shkole no.1:4-24 Ja-F '60.
                                                    (MIRA 13:5)

1. Zaveduyushchiy kafedroy vysshey matematiki Moskovskogo instituta
khimicheskogo mashinostroyeniya (for Bezsonov).
            (Mathematics--Study and teaching)

KABANOV, G.K.

Microstructure of belemnite guards and their mineral composition.
Biul. MOIP. Otd.geol. 37 no.3:131-132 My-Je '62.   (MIRA 15:10)
                (Belemnites)

KABANOV, G.K.

Phragmocone of Pseudobelus bipartitus from the Valangin of the
Crimea. Paleont. zhur. no.4:121-123 '63.   (MIRA 17:1)

1. Paleontologicheskiy institut AN SSSR.

ZONENSHAYN, L.P.; BERTEL'S-USPENSKAYA, I.A.; SAFRONOV, V.S.; NEYMAN, V.B.;
GENDLER, V.Ye.; CHURIKOV, V.S.; YEREMIN, N.I.; KOGAN, B.S.; YAKOVLEVA,
M.N.; LANGE, O.K.; KABANOV, G.K.; KUZNETSOVA, K.I.; SINITSYNA, I.N.;
SMIRNOVA, T.N.; VENKATACHALAPATI, V.; MASLAKOVA, N.I.; BELOUSOVA, Z.D.;
YAKUBOVSKAYA, T.A.; YURINA, A.L.; RYBAKOVA, N.O.; MOROZOVA, V.G.;
BARASH, M.S.; FONAREV, V.I.; NIKONOV, A.A.

Activity of the Geological Sections of the Moscow Naturalists'
Society. Biul. MOIP. Otd. geol. 39 no.6:127-151 N-D '64.
(MIRA 18:3)

KLB·NOV, G.K.

Second Conference on the Study of Mollusks. Paleont. zhur.
no.3:149-151 '65.   (MIRA 18:9)

AUTHOR: Kabanov, G. L.

TITLE: Visualization of shock waves in rarefied gases based on after-glow properties

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodinam-
 "i vysokikh temperatur" (Physical gas dynam-
temperatures ...

... tube, afterglow, shock wave visualiza-

ABSTRACT: A description is given of an experimental method for the
study of rarefied gas ... by means of the phenomenon of afterglow

Card 1/2

ACCESSION NR: AT4048017

electrodeless high-frequency pulse discharge is used for the excitation of afterglow. The ranges of pressure and shock-wave intensity

ASSOCIATION: none

SUBMITTED: 06Mar64   ENCL: 00   SUB CODE: ME

OTHER: 009   ATD PRESS: 3114

L 20812-65   EWT(1)/EWP(m)/FCS(k)/EWA(h)   Pd-1/P1-4   SSD(b)/BSD/AFWL/AEDC(a)/
SSD/ASD(f)-3/ASD(p)-3/AFETR/ESD(gs)   HLK
ACCESSION NR: AT104-018   S/3000/64/000/000/0150/0156

AUTHOR: Kabanov, G. L.

TITLE: Measurement of the velocity of shock waves in rarefied gases

SOURCE: AN SSSR. Energeticheskiy institut. Fizicheskaya gazodinamika i svoystva
gazov pri vysokikh temperaturakh (Physical gas dynamics and properties of gases at

ABSTRACT The velocity of shock waves is usually measured either by a camera (framing

Card 1/2

L 20812-65
ACCESSION NR: AT4048018

include anticoincidence circuits for noise suppression and to distinguish the front of the

ASSOCIATION: Energeticheskiy institut AN SSSR (Power Engineering Institute, AN SSSR)

SUBMITTED: 06Mar64   ENCL: 00   SUB CODE: ME

NO REF SOV: 005   OTHER: 001

Card 2/2

KABANOV, I.

Installing steel construction elements with the SE-3 excavator. p. 393.

INZENYRSKE STAVBY. Praha, Czechoslovakia. Vol. 3, no. 9, Sept. 1955.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 2, Feb. 1960.
Uncl.

KABANOV, I. A.

KABANOV, I.A., inzhener.

Experiment in installing metal construction elements with the SE-3 excavator. Stroi.prom. 32 no.7:44-46 Jl '54. (MLRA 7:7)

(Building, Iron and steel) (Cranes, derricks, etc.)

KABANOV, I.A., inzhener; DUDAVSKIY, A.I., ekonomist.

Increasing labor productivity in structural steel erection work.
Stroi.prom.32 no.11:20-22 N '54.   (MLRA 7:11)

1. Iz opyta raboty tresta Leningradstal'konstruktsiya.
         (Building. Iron and steel)

KABANOV, I.A.; SAKHOVSKIY, M.M., kand.tekhn.nauk, laureat Stalinskoy
premii

Using the method of rolling in assembling shells of air
preheaters for blast furnaces. Prom.stroi. 8 no.7:17-23
'60.   (MIRA 13:7)

1. Nachal'nik Ukrglavstal'konstruktsii Ministroya USSR (for
Kabanov).   (Air preheaters)

KABANOV, Ivan Andreyevich; RABINOVICH, Sergey Yul'yevich; SAKHNOVSKIY,
      Mikhail Mikhaylovich; TITOV, Aleksandr Mikhaylovich; SURYGINA, E.,
      tekhn.red.

[New processes for the manufacture and assembly of sheet-metal
elements of blast furnaces] Novaia tekhnologiia izgotovleniia
i montazha listovykh konstruktsii domennoi pechi; iz opyta orga-
nizatsii "Ukrglavstal'konstruktsii" Ministerstva stroitel'stva
USSR. Kiev, Gos.izd-vo lit-ry po stroit. i arkhit. USSR, 1960.
39 p.   (MIRA 14:1)
            (Blast furnaces—Design and construction)
                (Sheet-metal work)

KABANOV, I.A.

Introduction of progessive welding practices in the building industry.
Avtom. svar. 14 no.3:61-67 Mr '61.   (MIRA 14:2)

1. Ukrglavstal'konstruktsiya.
                    (Structural frames—Welding)

KABANOV, I.A., inzh.

Experience with the introduction of advanced welding techniques into construction. Prom. stroi. 39 no.3:28-30 '61.   (MIRA 14:4)

1. Nachal'nik Ukrglavstal'konstruktsii Minstroya USSR.
          (Electric welding)

GLEYBERMAN, B. Ya., inzh.; KABANOV, I.A., inzh.

Assembling structural units for an open-hearth shop in the
V. I. Lenin Factory. Prom. stroi. 39 no.4:5-11 '61. (MIRA 14:6)
                 (Krivoy Rog—Open-hearth furnaces)

197

JOO, T.
TO
KABANOV, I.A

END