

TEST AND THE APPROPRIATE PROCESSES AND PREPARED BY...

Testing gels with the glutinometer of Greiner. Yu. Oretzov, *Vestnik Kishinevskoi Prom. Ligei*, 1930, 138, 0, *Chem Zvezd*, 1932, II, 3823. The app. of Valenta and of Greiner for the detn. of the gel firmness of glue are described with cuts. Expts. indicate that the error in observation in the app. of Greiner is a min. and the sensitivity of the app. greater than that of Valenta's app. Tables and diagrams are prepd. on the basis of comparative expts. from which conversion of Valenta tests to Greiner degrees can be made. M. G. Moore

ASB 31A METALLURGICAL LITERATURE CLASSIFICATION

NOTE

VALUES WITH ONLY ONE

VALUES WITH ONLY ONE

~~OZERTSOVA, V.A.~~; POLYAKOVA, L.V.; SPIZHARSKIY, T.N.

Relief of the crystalline foundation of the southeastern part of the Siberian Platform, based on aeromagnetic data [data with summary in English]. Sov. geol. 2 no.5:66-72 My '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy geologicheskii institut.
(Siberian Platform—Geology, Structural)

OZERYANAYA, I.N.; STEPANOV, G.K.; MANUKHINA, T.I.; BELYAYEVA, G.I.

Behavior of EIA-1, EI-559A, EI-435, and EI-437B alloys in fused
carbonates. Trud' Inst. elektrokhim. UFAN SSSR no.5:79-87 '64.
(MIRA 18:2)

OZERYANSKAYA , N.M.; ZADOROZHNYAYA, N.A.

Antiviral properties of actinomycetes isolated from Ukrainian soil and studied in tissue culture. Antibiotiki 8 no.7:611-614
Jl'63 (MIRA 17:3)

1. Otdel antibiotikov (zav. A.B. Chernomordik) Kiyevskogo instituta epidemiologii i mikrobiologii.

OZERYANSKAYA, R.T., dotsent

Health of children following a single rheumatic fever attack.
Vop. okh. mat. i det. 6 no.5:27-30 My '61. (MIRA 14:10)

1. Iz kafedry detskikh bolezney (zaveduyushchiy - prof. S.F.Shirokov)
Kubanskogo meditsinskogo instituta (direktor - prof. V.K.Suprunov)
na baze klinicheskoy bol'nitsy Krasnodara (glavnyy vrach N.A.Valova).
(RHEUMATIC FEVER)

EXCERPTA MEDICA Sec 7 Vol 10/8 Pediatrics Aug 56

1598. OZERYANSKAYA R. T. and PETUKHOVA M. M. Child. Hosp. for Dysentery, Tumen. The influence of grippe on dysentery in children and its course in dysenteric children (Russian text) SOVETSK MED. 1955, 9 (41-43)

In March 1953, an epidemic of grippe occurred in the hospital for dysenteric children in Tumen; on clinical grounds it is assumed that the grippe was of viral origin. Neither in acute dysentery nor in convalescence was there any influence whatever of the grippe on dysentery. On the other hand, the course of the grippe was graver in such children and in many cases accompanied by complications. Thus of 86 such children, in 29 pneumonia occurred and in 23 otitis. Three of them died.
Najman - Zagreb (XX, 7)

L 38373-66 EWT(m)/T/EWP(t)/ETI IJP(c) DS/JD

ACC NR: AT6021370

(A)

SOURCE CODE: UR/2631/65/000/007/0091/0095

AUTHOR: Ozeryanaya, I. N.; Krasil'nikova, N. A.; Smirnov, M. V.; Danilin, V. N.

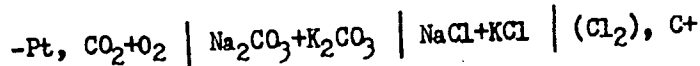
ORG: none

TITLE: Use of the oxygen reference electrode in molten carbonates

SOURCE: *AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy, no. 7, 1965, Elektrokhiimiya rasplavlennykh solevykh i tverdykh elektrolitov; termodinamika i kinetika elektrodnykh protsessov (Electrochemistry of fused salts and solid electrolytes; thermodynamics and kinetics of electrode processes), 91-95

TOPIC TAGS: platinum, oxygen, electrode potential, carbonate, chloride

ABSTRACT: In order to elucidate the stability of the potential of the platinum oxygen reference electrode in molten carbonates under various conditions, the emf of the galvanic cell



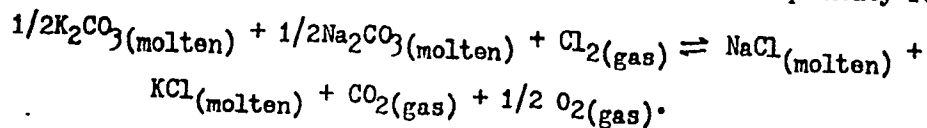
was studied at 770-1000°C as a function of temperature and composition of the gas mixture bathing the platinum. One of the half-cells was platinum bathed with a CO₂+O₂ mixture in a molten eutectic mixture of potassium and sodium carbonates, and

Card 1/2

L 38373-56

ACC NR: AT6021370

the other was a chlorine electrode in an equimolar mixture of potassium and sodium chlorides. The temperature dependence of the emf, $\mathcal{E} = 0.446 + 6.40 \times 10^{-4}T$ V, was found to be in good agreement with the thermodynamically calculated quantity for the reaction



This shows the reversibility of the platinum oxygen electrode in carbonate melts. The potential of the platinum electrode in the carbonate melt was studied as a function of the CO_2-O_2 mixtures bathing it. It is shown that for gas mixtures containing over 57.8 mole % CO_2 at temperatures below 900° , the potential of the platinum electrode is described by the equation

$$E = \text{const} + \frac{RT}{2F} \ln P_{O_2}^{1/2} \cdot P_{CO_2}$$

At lower partial pressures of CO_2 , particularly in pure oxygen, the potential of the platinum electrode becomes unstable and shifts markedly toward negative values. Orig. art. has: 3 figures and 12 formulas.

SUB CODE: 07/ 09/ SUM DATE: 23Aug65/ ORIG REF: 006/ OTH REF: 008

Card 2/2 MLP

ZALUKAYEV, L.P.; OZERYANAYA, I.N.; TOMILOVA, M.Ye.

Synthesis of 2, 4-dimethylbenzoquinolines. *Izv.vys.ucheb.zav.;*
khim.i khim.tekh. 5 no.1:174-175 '62. (MIRA 15:4)

1. Voronezhskiy gosudarstvennyy universitet i Rzhskoye vyssheye
inzhenerno-aviatsionnoye uchilishche.
(Benzoquinoline)

ACCESSION NR: AP4022724

S/0020/64/155/002/0418/0421

AUTHOR: Smirnov, M. V.; Volodin, V. P.; Ozeryanaya, I. N.

TITLE: Stationary potential and metal corrosion in fused salts

SOURCE: AN SSSR. Doklady*, v. 155, no. 2, 1964, 418-421

TROPIC TAGS: fused salts, metal ionization, thermodynamic equilibrium, electrode potential, saline medium, alkali metal, equimolar mixture, pure argon, corrosion current, polarizing current, beryllium, titanium, uranium

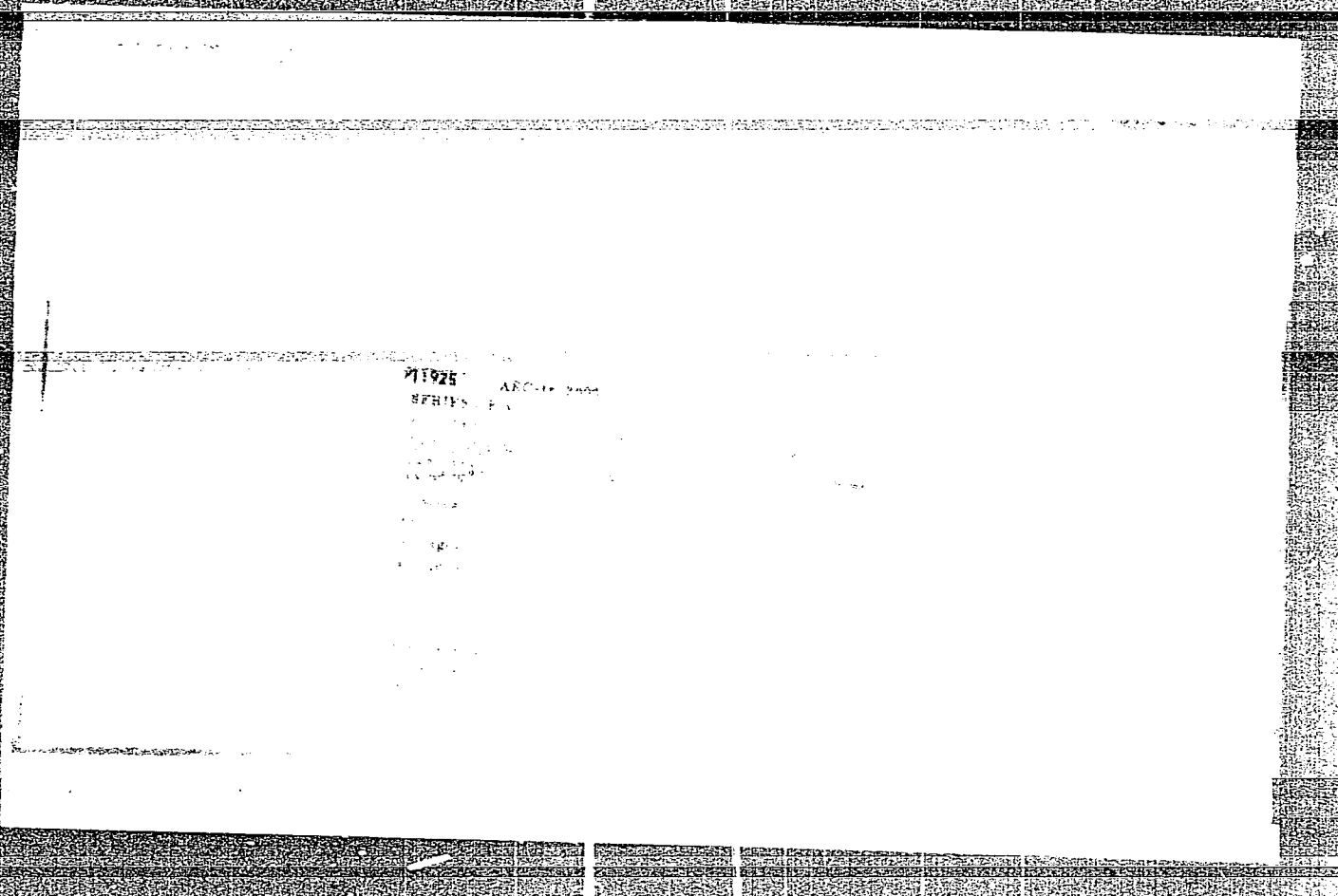
ABSTRACT: Metal corrosion is frequently found in fused salts in which the oxide and corrosion products exist in ionic form. A thermodynamic equilibrium should be established between the metal and its ions as well as between the oxidizer ions and the restored oxidizer form in the fusion layer adjacent to the metal at high temperatures. But the fusion layer adjacent to the metal is not in a state of equilibrium with the entire surrounding medium, and the corrosion process does not come to an end when a stationary potential is established. A stationary potential is an important quantitative characteristic of metal corrosion in fused salts, because this corrosion is an electrochemical process. The value of this process is that it can easily be measured. The oxidizers in a saline medium may be

Card 1/2

OZERYANSKAYA, A.L.

Surgical treatment of inflammatory tumors of the uterine adnexa. Akush. i gin. 39 no.5:117-120 3-0 '63. (MIRA 17:8)

1. Iz Sverdlovskogo nauchno-issledovatel'skogo instituta okhrany materinstva i mladenchestva (dir. - kand. med. nauk R.A. Malysheva, nauchnyy rukovoditel' - doktor med. nauk I.I. Benediktov).



OZERYANAYA, I. N.

USSR/Chemistry - Alkali Chlorides
as Solvents

Oct 51

"The Voltage Series for Heavy Nonferrous Metals and Their sulfides in Malted Chlorides of Alkali Metals," S. I. Rempel', I. N. Ozeryanaya, Inst of Phys of Metals, Ural Affiliate, Acad Sci USSR, Sverdlovsk.

"Zhur Fiz Khim" Vol XXV, No 10, pp 1181-1185.

Verified applicability of Cl and metal reference electrodes for detn of electrode potentials and emf of chem circuits in melts. Results of measurements support feasibility of B. P. Artamonov's method of prepn of reversible Cl electrode. Values of emf obtained for Pb/PbCl₂/Cl₂ circuit correspond closely to values obtained by other authors. In order of decreasing voltage for molten equimol mixtures of KCl and NaCl at 600-700°, metals and sulfides under study correspond to sequence Zn, ZnS, FeS, Fe, Co, Cu, Pb, Ag, PbS, Ni₃S₂, Bi, Ni, Cu₂S, and CoS †. Results obtained with Cl reversible reference electrode coincide with those obtained with Pb reference electrode reversible with respect to cation.

PA 194T13

ACC NR: AF6036115

SOURCE CODE: UR/0365/66/002/006/0700/0704

AUTHOR: Ozeryanaya, I. N.; Manukhina, T. I.; Belyayeva, G. I.; Burakova, E. A.; Smirnov, M. V.

ORG: Academy of Sciences SSSR, Ural Branch, Institute for Electrochemistry (Akademiya nauk SSSR, Ural'skiy filial, Institut elektrokhimii)

TITLE: Behavior of chromium nickel alloys in carbonate melts

SOURCE: Zashchita metallov, v. 2, no. 6, 1966, 700-704

TOPIC TAGS: chromium containing alloy, nickel containing alloy, corrosion rate, lithium compound, sodium compound

ABSTRACT: The experiments were carried out in a low melting binary eutectic mixture of lithium and sodium carbonates (melting point 497°). To suppress thermal decomposition and possible hydrolysis of the carbonates, the salts were melted in an atmosphere of carbon dioxide gas. The alloys investigated, EI-559A and EI-437B, are solid solutions in nickel of the following elements: EI-559A--18% Cr; 23% Fe; 3.5% Al; other elements about 1%: EI-437B--22% Cr; 4% Fe; 2.5% Ti; about 1% Al. Samples of the alloys, in the form of plates with a polished surface area of 8 cm^2 , were placed in an alundum crucible with the melt. After the experiment, the samples were washed of traces of salts in distilled water, and dried to constant weight. The weight increase

Card 1/2

UDC: 620.193.43

L 14038-66 EWT(m)/EWP(b)/EWP(t) IJP(c) WW/JD/JG/WB
ACC NR: AR5020045 SOURCE CODE: UR/0081/65/000/012/K005/K005

AUTHOR: Volodin, V.P.; Ozeryanaya, I.N.; Smirnov, M.V.

53
B

ORG: none

TITLE: Corrosion of zirconium in a melt of alkaline-metal chloride

SOURCE: Ref. zh. Khimiya, Abs. 12K21 ^{55, 27}

REF SOURCE: Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, vyp. 6, 1965, 87-91

TOPIC TAGS: zirconium, corrosion, corrosion rate, potassium chloride, sodium chloride

TRANSLATION: Data is given on studies of Zr corrosion in melted equimolar mixtures of K and Na chlorides, which had been carefully freed of all traces of oxygen and humidity in atmospheric Ar. The temperature dependence of Zr stationary potential was found, and it was shown that within the limitations of possible errors the speed of corrosion, as determined by the direct method, is in good agreement with computations made on the basis of stationary potentials and anode polarization curves. M. Drukarov.

SUB CODE: 07, 11

Card

1/190

2

SHUBIK, V. M.; OZERYANSKAYA, I. G.; GOLUBEV, D. B. (Leningrad)

Comparative evaluation of some methods of laboratory diagnosis
of epidemic hepatitis. Vrach. delo no.7:101-104 JI '62.
(MIRA 15:7)

1. Kafedra infektsionnykh bolezney (zav. - prof. V. V. Kosma-
chevskiy) sanitarno-gigiyenicheskogo meditsinskogo instituta,
infektsionnaya bol'nitsa imeni S. P. Botkina, otdel mikrobiologii
(zav. - chlen-korrespondent AMN SSSR, prof. V. I. Loffe) instituta
eksperimental'noy meditsiny AMN SSSR, kafedra mikrobiologii
(nachal'nik - prof. A. A. Sinitskiy) Voenno-meditsinskoy ordena
Lenina akademii imeni S. M. Kirova.

(HEPATITIS, INFECTIOUS)

OZMRYANSKAYA, I.G.; YEVSEYINA, L.M.; KIRSHENBAUM, I.M.

Clinical importance of some laboratory methods in the diagnosis
of Botkin's disease. Trudy LPMI 30:150-159 '63.

(MIRA 18:3)

1. Bol'nitsa imeni Botkina v Leningrade (glavnyy vrach M.M.
Figurina, nauchnyy rukovoditel' prof. Ye.S.Gurevich).

KALYUZHNYAYA, L.D.; ZADOROZHNYAYA, N.A.; OZERYANSKAYA, N.M.

Distribution of actinomycetes with antiviral characteristics
in the soils of the Ukraine. Mikrobiologiya 32 no.3:507-512
My-Je'63 (MIRA 17:3)

1. Kiyevskiy institut epidemiologii i mikrobiologii.

OZERYANSKAYA, R. T.

"The Diagnosis of Bronchiectasis in Children," *Vop. Ped. i. Okhran. Mater. i. Est.*,

17, No. 1, 1949.

Mtr., Ch. Children's Diseases, Ivenov Med. Inst., -1949-.

OZERYANSKAYA, R.T.; HARITSINA, Ye.P.

Result of the treatment of toxic dysentery in children with syn-
thromycin. Vopr. pediat. 20 no. 5:25-28 Sept-Oct 1952. (GLML 23:3)

1. Candidate Medical Sciences for Ozeryanskaya. 2. Children's In-
fectious Hospital, Tyumen'.

OZERYANSKAYA, R.T., dots., BONDARENKO, A.A.

Experience with streptomycin therapy in tuberculous meningitis in children without subarachnoid administration [with summary in French] (MIRA 11:8)
Probl.tub. 36 no.5:64-69 '58

1. Iz kafedry detskikh bolezney (zav. - prof. S.F. Shirokov).
Kubanskogo meditsinskogo instituta (dir. - prof. V.K. Suprunov)
na baze Detskoj klinicheskoj bol'nitsy Krasnodara (glavnyj vrach
N.A. Valova).

(TUBERCULOSIS, MENINGEAL, in inf. & child.
ther., streptomycin, without subarachnoid admin. (Rus))

OZHEL

POLAND/Chemical Technology - Dyeing and Chemical
Processing of Textiles.

H-34

Abs Jour : Ref Zhur - Khimiya, No 12, 1958, 41997

Author : Ozhel
Inst : -

Title : Chemical Methods for Antishrinkage Finishing of
Cellulose Fabrics.

Orig Pub : Prezem. wlokienniczy, 1957, 11, No 9, 445-449

Abstract : The conditions and causes for a shrinkage of cellulose
fabrics, particularly from synthetic fibers are analy-
zed. Peculiarities of chemical processing are discus-
sed with HCOH, glyoxal, formaline derivatives, urea- and
melamino formaldehyde resins, X-2 product (application
of HCOH in the presence of oxyethyl-cellulose).
A characteristic of Polish products is given (Antinmol
FM Melaform BM-100). The problems of the Polish textile
industry in the field of antishrinkage field is discussed.

Card 1/1

OZERYANSKAYA, R.T.; kandidat meditsinskikh nauk; PETUKHOVA, M.M.

The course of influenza and its influence in children with
dysentery. Sov.med. 19 no.9:41-43 8 '55 (MLRA 8:12)

1. Po materialam Tyumenskoy detskoy dizenteriynoy bol'nitsy.
(INFLUENZA, in infant and child
compl. with dysentery, eff. & course)
(DYSENTERY, complications
influenza, its eff. & course in child.)

OZER'YEV, S.S.

Characteristics of the action of Orenburg mineral water on the
bile secreting function of the liver in an experiment and in the
clinic. Terap.arkh. 34 no.3:87-91 '62. (MIRA 15:3)

1. Iz kafedry propedevtiki vnutrennikh bolezney (zav. - prof.
K.I. Elingulashvili) Orenburgskogo meditsinskogo instituta.
(ORENBURG PROVINCE--MINERAL WATERS) (LIVER) (BILE)

1ST AND 2ND ORDERS PROCESSES AND PROPERTIES INDEX 1ST AND 2ND ORDERS

CO

12

The taking up of lead by canned foods. V. E. Ozetskil, V. N. Kefer and E. P. Koltvain-Rappoport. *Voprosy Pitaniya* 6, 96-102(1937); *Chem. Zentr.* 1937, II, 882. Pb is taken up (from the can) in larger amts. by proteins and carbohydrates and in less amts. by fats. Greater amts. are taken up by meat-pea mixts. than by tomato meat preps. There is a relation between the amt. of Pb dissolved and the Pb content of the alloy but it is not one of direct proportionality. The soln. of Pb is greater during sterilization. W. A. Moore

COMMON ELEMENTS

COMMON VARIABLES INDEX

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON LETTERS

COMMON NUMBERS

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

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

PROCESSES AND PROPERTIES INDEX

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The accumulation of copper in canned tomatoes at various stages in their preparation. V. E. Ozetskil and

V. N. Kefer. *Voprosy Pitaniya* 7, No. 3, 125-31 (1938).—
The greatest increase in Cu in canned tomatoes occurs in the pulping stage, especially if the metallic containers are not thoroughly polished. S. A. Kariala

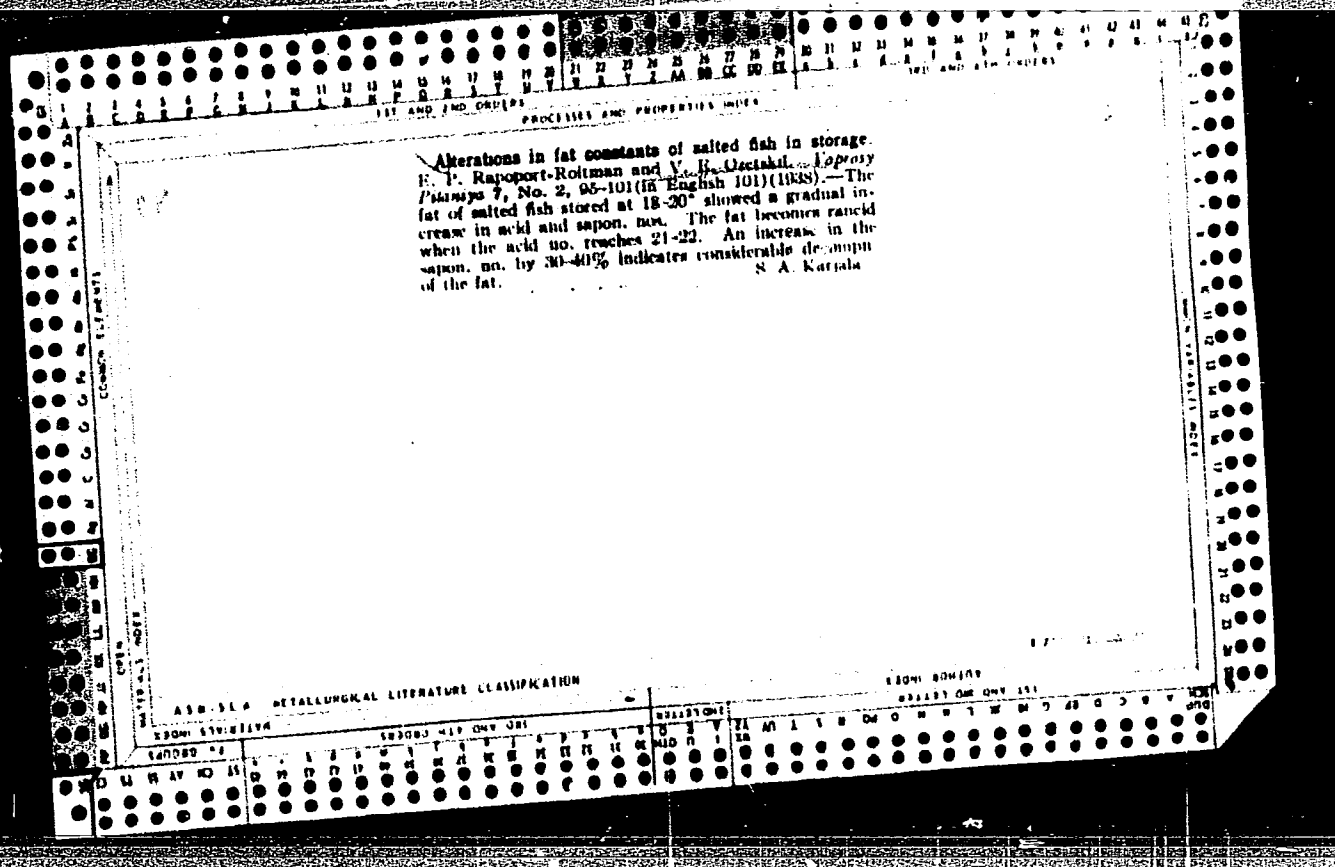
ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

CONVENTIONAL ELEMENTS

PERIODIC TABLE

GROUPS

PERIODS



KOSINSKI, Leszek; OZGA, Genowefa

Development of Poland's population in the years 1950-1960. Przegł
geogr 33 no.4:631-647 '61.

OZGEN, A., Muhlis; GURTURK, Salahatin

Chronic glanders successfully treated with sulfadiazine and streptomycin. Srpski arh. celok. lek. 83 no.11:1334-1335 Nov 55.

1. II Dept of Int. Med., Fac. of Med., Istanbul. Head: Prof. E. Frank, M.D.

(GLANDERS, ther.

streptomycin & sulfadiazine. (Ser))

(STREPTOMYCIN, ther. use,

glanders, chronic. (Ser))

(SULFADIAZINE, ther. use

same.

OZHDANIY, L.; PANTUYEV, V.S.; KHACHATURIAN, M.N.; CHUVILO, I.V.

The total cross section for interaction of neutrons with protons
at the energy of 8.3 BeV. Dubna, Izdatel'skii otdel Ob"edinennogo
in-ta iadernykh issledovani, 1961. 5 p.
(No subject heading)

OZHDANIY, L.; PANTUYEV, V.S.; KHACHATURYAN, M.N.; CHUVILO, I.V.

The total cross section for interaction of neutrons with protons
at the energy of 8.3 BeV. Dubna, Ob"edinennyi in-t iadernykh is-
sledovani, 1961. 5 p. (MIRA 14:11)
(No subject heading)

OZHDIYANI, L.; PANTUYEV, V.S.; KHACHATURYAN, M.N.; CHUVILO, I.V.

Total cross section of proton-neutron interaction at an energy
of 8.3 Bev. [with summary in English]. Zhur. eksp. i teor. fiz.
42 no.2:392-394 F '62. (MIRA 15:2)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions)

OZHDYANI, L.; PANTUYEV, V.S.; KHACHATURYAN, M.N.

Tracking a neutral particle beam by means of a gamma source.
Prib. i tekhn. eksp. 6 no.2:173-174 Mr-Ap '61 (MIRA 14:9)

1. Ob'yedinennyy institut yadernykh issledovaniy.
(Particles (Nuclear physics))

S/120/62/000/005/012/036
E032/E314

AUTHORS: Ozhdyani, L., Pantuyev, V.S. and Khachatryan, M.N.

TITLE: Application of spark discharges in scintillation technique

PERIODICAL: Pribory i tekhnika eksperimenta, no. 5, 1962,
80 - 83

TEXT: Generally, the auxiliary electronics in scintillation and Cerenkov counters are adjusted with the aid of pulse generators. This is time-consuming and inconvenient. The authors report in the present paper a method in which a relatively simple device may be used to adjust the counting apparatus under conditions very similar to the accelerator running conditions. In this method short light pulses produced by spark discharges are simultaneously applied to a large number of counters and this simulates the passage of charged particles through the counters. Various spark generators were investigated and it was found that the best results (shortest light pulses) were obtained with high pressures and low molecular weights. Discharges in air at atmospheric pressures were also investigated.
Card 1/2

Application of spark

S/120/62/000/005/012/036
E032/E314

Rise times of the order of 3-4 n sec were obtained with hydrogen and air. The pulses were triggered-off by a hydrogen thyatron or a simple RC integrating circuit. Improved frequency characteristics were achieved by using a multi-electrode system of the form shown in Fig. 6.6 This system can be used to obtain a repetition frequency of 10^6 c.p.s. or more. Another system employed is illustrated in Fig. 7a, in which 1 is the spark gap, 2 the counter envelope, 3 phosphor, 4 the light pipe, 5 photomultiplier for the cathode and 6 is a magnetic shield. Various essentially conventional delay-line arrangements are also described. The general conclusion is that spark generators may be successfully used for the adjustment of pulse electronics operating in the nsec range. There are 11 figures.

✓

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy
(Joint Institute for Nuclear Studies)

SUBMITTED: December 26, 1961

Card 2/72

llllll

S/120/62/000/006/023/029
E032/E114

9.4160

AUTHORS: Ozhdyani, L., Pantuyev, V.S. and Khachatryan, M.N.

TITLE: Time characteristics of photomultipliers with large photocathodes

PERIODICAL: Pribory i tekhnika eksperimenta, no. 6, 1962, 119-120

TEXT: The characteristics of the $\Phi\text{Э}\gamma$ -44 (FEU-44) and $\Phi\text{Э}\gamma$ -45 (FEU-45) photomultipliers, which have large photocathode areas and are therefore suitable for Cherenkov and scintillation counters, were investigated. The photocathodes are semi-transparent (Sb-Cs) with a maximum sensitivity at 4 000 Å, a quantum yield of about 10% at 4047 Å and an amplification factor of about 10. They are both very sensitive to external fields and require careful screening. Their properties were determined with the aid of the spark generator described in a previous paper (Ya.M. Fogel', V.F. Kozlov, A.A. Kalmykov and V.I. Muratov, Zh. eksperim. i teor. fiz., v. 36, 1959, 1312) (spark length 1 ns). It was found that these photomultipliers were capable of producing pulse rise-times of 10-15 ns and were suitable for Cherenkov and scintillation counters working with fast coincidence circuits.

Card 1/2

S/056/62/042/002/014/055
B102/B138AUTHORS: Ozhdyani, L., Pantuyev, V. S., Khachatryan, M. N.,
~~Chuvilo, I. V.~~

TITLE: Total neutron-proton interaction cross section at 8.3 Bev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42,
no. 2, 1962, 392-394

TEXT: The neutron-proton interaction cross sections at $\bar{E}_n(\text{lab}) = 8.3_{-1.3}^{+1.2}$ Bev have been measured in good geometry ($\theta/2 = 0.228^\circ$). The neutral beam was produced in a 10-cm thick Be-target inside the vacuum chamber of the OIYaI proton synchrotron. The beam had to pass through the 5-cm opening of a 250 cm long steel collimator (divergency $\leq 0.07^\circ$). The gamma quanta contained in the neutral beam due to π^0 decays were eliminated by two lead filters, the charged particles by a field of 18,000 oe (Fig. 1). Apart from these impurities the beam contained only neutrons and a negligible amount of K_2^0 mesons. The neutron detector consisted of an anticoincidence scintillation counter, a 10-cm Al converter, three coincidence scintillation counters and a lead glass Cherenkov spectrometer.

Card 1/1 2

GAFT, Ya.M.. kand.med.nauk; Primalni uchastiye: BRANZBURG, N.A., vrach;
GOL'TS, I.P., vrach; GORELIK, Ye.S.. vrach; ZVONKINA, O.M., vrach;
LIVSHITS, R.I., vrach; LUR'YE, Ye.L., vrach; OZHE, N.B., vrach;
RYBAL'SKAYA, V.G., vrach; CHELNOKOVA, A.K., vrach; LAVORSKIY, A.V.,
vrach

Dynamics of the tuberculous process in patients transferred to the
third group of dispensary registration. Probl. tub. 38 no.3:3-8
'60. (MIRA 14:5)

1. Iz protivotuberkuleznogo dispansera No.4 Moskvy (glavnyy vrach -
zasluzhenny vrach RSFSR S.M.Zamukhovskiy).
(TUBERCULOSIS)

REZUKHINA, T. N.; LEVITSKIY, V. A.; OZHEGOV, P.

Thermodynamic properties of iron aluminate. Zhur. fiz. khim.
37 no. 3:687-688 Mr '63. (MIRA 17:5)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

OZNEGOV, SERGEY IVANOVICH ED.

N/5
871.204
.00

ORFOGRAFIЧЕСКИЙ СЛОВАРЬ РУССКОГО ЯЗЫКА (ORTHOGRAPHIC DICTIONARY OF THE RUSSIAN LANGUAGE) ПОД РЕД. С.И. ОЗНЕГОВА И А.Б. ШАПИРО. МОСКВА, ГОС. ИЗДАВО ИНОСТРАН-
НЫХ И НАЦИОНАЛЬНЫХ СЛОВАРЕЙ, 1956.

1259 P.

AUTHOR OZHEGOV, S.I. PA - 2458
TITLE On the Methodical Establishment of the Rules of Russian Orthography.
(Uporyadochenie russkoy orfografii)
PERIODICAL Vestnik Akademii Nauk SSSR, 1957, Vol 27, Nr 1, pp 30 - 38, (U.S.S.R.)
Received 5/1957 Reviewed 5/1957
ABSTRACT Establishment of standard rules of orthography is one of the main problems and at the same time a characteristic of the cultural standards of a nation. The first basic work was begun by Lomonosov in 1802. The Russian Academy had published the first Grammar entitled "Russian Grammar" (Rossiyskaja grammatika) at the same time. Further considerable improvements of Russian orthography were added by A.Kh. Vostokov and N.I. Grech, the most important work in this respect being accomplished not earlier than in the second half of the 19th century by Ya.K. Grot in his work "The Problems of Russian Orthography during the Period from Peter the Great to present times". However, he did not wish to act as a reformer of Russian orthography himself. In 1904, a special commission was established at the Academy of Science which worked for many years on the regulation and simplification of Russian orthography. The suggestions made by this commission, in particular by the well-known scientists F. Fortunatov and A. Shakhmatov could not be accepted. Only the Bolshevik revolution of October 1917 brought about a turning point in the question of the simplification of Russian orthography. In accordance with orders from the first Bolshevik Government the suggestions of the Russian Academy for the elimination of archaic forms from the Russian language were enforced.

Card 1/2

OZHNEGOV, S. I.

Speech

Speech culture section of the Linguistics Institute of the Academy of Sciences of the U.S.S.R. and its tasks. Vop. iaz. No. 1, 1953.

Monthly List of Russian Accessions, Library of Congress
June 1953. UNCL.

OZHEGOV, V.

Maintain the discipline. Avt. transp. 36 no.9:48 S '58.

(MIRA 11:10)

1. Nachal'nik Votkinskoy avtotransportnoy kontory.
(Drinking and traffic accidents)

OZHEGOV, V.B.

Generating functions of sequences of Euler - Bernstein
polynomials. Izv. AN Est. SSR. Ser. fiz.-mat. i tekhn.
nauk 13 no.2:115-120 '64. (MIRA 17:9)

1. Institute of Mechanics, Leningrad.

OZHEGOV, V.B.

Some extremum properties of generalized Appell polynomials.
Dokl. AN SSSR 159 no.5:985-987 D '64 (MIRA 18:1)

1. Leningradskiy mekhanicheskiiy institut. Predstavleno akademi-
kom S.N. Bernshteynem.

81216
S/043/60/000/13/04/016
C111/C222

16.3000

AUTHOR: Ozhegov, V.B.

TITLE: On Convolutions of Functions in Some Classes of Functions Represented by Stieltje Integrals

PERIODICAL: Vestnik Leningradskogo universiteta, Seriya matematiki, mekhaniki i astronomii, 1960, No. 13, pp. 32 - 40

TEXT: Let K be a certain function class of functions $f(z) = \sum_{n=0}^{\infty} c_n z^n$

regular in $|z| < 1$. Let $A = \{ \alpha_n \}_0^{\infty}$ be a given number sequence. The

expression $f(z) = f_1(z) * f_2(z) = \sum_{n=0}^{\infty} \alpha_n c_n^{(1)} c_n^{(2)} z^n$ is denoted by the

author as an A-convolution of two functions $f_{\nu}(z) = \sum_{n=0}^{\infty} c_n^{(\nu)} z^n$,

$f_{\nu}(z) \in K, \nu = 1, 2$.

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On Convolutions of Functions in Some
Classes of Functions Represented by
Stieltje Integrals

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and if $A = \left\{ \frac{1}{n} \right\}_1^\infty$, then from $f_1, f_2 \in T_r$ it follows that $f_1 * f_2 \in T_r$.

The author mentions G.M. Goluzin. There are 6 references : 4 Soviet,
1 American and 1 Japanese.

Card 3/3

X

CHINAKAL, N.A., otv. red.; ALEKSANDROV, V.P., kand. ekon. nauk,
red.; OZHEGOV, Yu.P., kand. filos. nauk, red.; SHCHERBAKOV,
A.I., red.

[Some problems concerning the strengthening of the role of
science in the building of communism; materials for a sci-
entific and practical conference] O nekotorykh voprosakh
usilenia roli nauki v stroitel'stve kommunizma; materialy
k nauchno-prakticheskoi konferentsii. Novosibirsk, 1965.
(MIRA 18:5)
226 p.

1. Akademiya nauk SSSR. Sibirskoye otdeleniye. Institut gornogo
dela. 2. Institut gornogo dela Sibirskogo otdeleniya AN SSSR,
Novosibirsk (for Shcherbakov, Chinakal). 3. Kafedra filosofii Si-
birskogo otdeleniya AN SSSR, g. Novosibirsk (for Ozhegov).

1. GINSBURG, I. P., BORETSKAYA, B. A., OZHEGOVA, A. I., LUNEGOVA, A. N.
2. USSR (600)
4. Manganese Ores - Polunochnoye Deposits.
7. Study of the composition of manganese ores of the Polunochnoye deposit.
(Abstract.) Izv. Glav. upr. geol. fon. no. 2, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

Microfilm frame containing a document snippet. The document text is:

Ozhegova, M. I., Potapenko, S. V., and Soloninko, I. S.
KRIVOT KRYL' PER' KAMBRIAN METAMORPHOUS QUARTZITES
AND VEIN QUARTZES AS RAW MATERIALS FOR SILICA BRICK.
Ogneupory, 7 [6] 415-26 (1939) —The chemical, physical,
and ceramic properties of the quartzites studied are dis-
cussed in detail.

Microfilm frame labels include: 1ST AND 2ND LETTER, 2ND LETTER, 3RD AND 4TH ORDERS, MATERIALS GROUPS, METALLURGICAL LITERATURE CLASSIFICATION, COMMON ELEMENTS, and COMMON VARIABLES INDEX.

OZHEGOVA, V.Ye.

Nutrition of fish and increasing the productivity of lakes in
Vakhsh Valley. Dokl. AN Tadzh. SSR no. 4:27-30 '52. (MLRA 9:9)

1. Institut zoologii i parazitologii Akademii nauk Tadzhikskoy
SSR. Predstavleno chlenom-korrespondentem AN Tadzhikskoy SSR.
(Vakhsh Valley--Fish culture)

OZHEGOVA, V. Ye.

Benthos of the Farkhad Reservoir. Trudy AN Tadz. SSR 21:99-109
'54. (MLRA 9:12)

1. Institut zoologii i parazitologii imeni akademika Ye.N.Pav-
lovskogo.
(Farkhad Reservoir--Fresh-water biology)

MAKSUNOV, V.A.; OZHEGOVA, V.Ye.

History of hydrobiological and ichthyological research in Tajikista.
Trudy AN Tadsh.SSR. 33:77-91 '55. (MLRA 9:8)
(Tajikistan--Fresh-water biology)

OZHEGOVA, V. Ye.

Data on the feeding of fishes in the Farkhad Reservoir. Trudy AN
Tadsh. SSR 33:93-115 '55. (MLRA 9:8)
(Farkhad Reservoir--Fishes--Food)

OZHEGOVA, V. Ye.

OZHEGOVA, V. Ye. "On the Form of the Biological Regime at Farhad Reservoir on the Syr-Dar'ya." Acad Sci USSR. Zoological Inst. Stalinabad, 1956. (Dissertation for the Degree of Candidate in Biological Science)

So: Knizhnaya Letopis', No. 19, 1956.

OZHEGOVA, Valentina Yermilovna; MAKSUNOV, V.A., otv.red.; VINOGRADSKAYA,
S.N., red.izd-va; FIOLOV, P.M., tekhn.red.

[Formation of the biological regimen in Farkhad Reservoir on
the Syr Darya] O formirovani biologicheskogo rezhima Farkhad-
skogo vodokhranilishcha na Syr-Dar'e. Stalinabad, Izd-vo Akad.
nauk Tadzh.SSR, 1959. 117 p. (Akademia nauk Tadzhikskoi SSR.
Stalinabad. Trudy, vol.101) (MIRA 12:11)
(Farkhad Reservoir--Fresh-water biology)

OZHEGOVA, V.Ye.

Material on the hydrobiology of rice fields in the vicinity of
Stalinabad. *Trudy AN Tadjh.SSR* 112:13-26 '59. (MIRA 13:11)

1. Institut zoologii i parazitologii AN Tadjhikskoy SSR imeni
akademika Ye.N.Pavlovskogo.
(Stalinabad District--Hydrobiology)

OZHEGOVA, V.Ye.

Benthos of Kayrakum Reservoir; based on materials of 1957-1960.
Trudy Inst. zool i paraz. AN Tadzh. SSR no.26:124-147 '63
(MIRA 17:3)

1. Institut zoologii i parazitologii imeni akademika Ye.N.
Pavlovskogo AN Tadzhikskoy SSR.

OZHEGOVA, V.Ye.; SINEL'NIKOVA, A.A.; ANDRIYEVSKAYA, S.A.

Materials on the fauna of the bodies of water in the inundated
area of Kayrakum Reservoir. Trudy Inst. zool. i paraz. AN
Tadzh. SSR no.2685-17 '63 (MIRA 17:3)

1. Institut zoologii i parazitologii imeni akademika Ye.N.
Pavlovskogo AN Tadzhikskoy SSR.

OZHEKHOVICH, F.

Fuels ①

British Abst.
B I
Aug. 1953
Petroleum

✓ Geology and its importance for petroleum research. F. Ozgovic
(Nafita, Zagreb, 1953, 4, 1-11). O. POTTER.

5-11-54
JP

OZHEKHOWSKAYA

POLAND / Chemical Technology. Safety and Sanitation. H

Abs Jour: Ref Zhur-Khimiya, No 12, 1958, 40145.

Author : Ozhekhowskaya.
Inst : Not given.
Title : Sulfur Compounds as Fire Hazards.

Orig Pub: Ochrona pracy, 1957, 11, No 3, 14, 15, 29.

Abstract: Fires and explosions in petroleum and coal-tar chemical industry might be caused by the self-ignition of volatile carbon compounds as the result of the hydrogen sulfide reaction upon the metallic equipment (E). The investigations showed the presence of FeS and S in the residues taken from receivers and from columns used for crude

OZHELER'YEV, I.I., inzh.

Mechanism used for interlocking automobile springs. Izobr.v
SSSR 3 no.1:9-10 Ja '58. (MIRA 11:1)
(Automobiles--Springs)

L 19703-63

BDS

ACCESSION NR: AP3006463

S/0109/63/008/009/1594/1601

47

AUTHOR: Avak'yants, G. M.; Atakulov, B.; Mury*gin, V. I.; Osheredov, A. D.;
Teshabayev, A.

TITLE: Active and reactive currents in an asymmetrical electron-hole junction with high injection levels

SOURCE: Radiotekhnika i elektronika, v. 8, no. 9, 1963, 1594-1601

TOPIC TAGS: semiconductor, electron-hole junction, asymmetrical junction

ABSTRACT: A theoretical investigation is presented of the majority-carrier (electron) current in the base of an asymmetrical p-n junction. It is claimed that no "adequately complete and rigorous statement of this problem" has ever been published. It is assumed that: (a) the hole band is highly alloyed; (b) the electron (base) band is relatively lightly alloyed; (c) a strong electron recombination band exists within the junction. On the basis of the expressions for generation/recombination hole and electron currents in the junction, an equation for the voltage drop across the p-n junction is set up and solved. Static and dynamic current-voltage characteristics are described analytically; diode reactance

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AVAK'YANTS, G.M.; ATAKULOV, B.; MURYGIN, V.I.; OZHEREDOV, A.D.;
TESHABAYEV, A.

Active and reactive current component in a nonsymmetrical p-n
junction at high injection levels. Radiotekh. i elektron. 8
no.9:1594-1601 S '63. (MIRA 16:9)

1. Tashkentskiy gosudarstvennyy universitet im. V.I.Lenina.
(Transistors) (Semiconductors)

Continued from p. 1

JA 2749

USSR/Medicine - Sterilization, Surgical Jun 1947
Medicine - Surgery

"Characteristics of Surgical Diseases in Invalids
of the Patriotic War," A. Ozherel'ev, 6 pp

"Hospital Delo" No 6

Discusses various diseases, such as ankylosis,
contractions of the joints, etc., with percentage
of cases of each.

14T33

OZHEREL'YEV, A. A.

A Technical Guide on the Study of Peat Bogs (Published by the Gen Peat Exp. St. Min. of Agri, RSFSR)

1944. Instruktsiya po Samogotovkam i Primeneniyu Sfagnovogo Mkha (Sfagnuma) dlya Perevyazochnykh Tseley (Instructions on the Preparation and Use of Sphagnum Moss for Medical Dressings). Three editions, 2 pages. by Neyshadt, M.I. and Ozherel'yov, A. a.

SO: Botanicheskiy Zhurnal, Vol XXV, No 1, pp 100-110,
Jan-Feb 1950, Russian bimo per, Moscow/Leningrad (U-5511,
12 Feb 1954)

BEBCHUK, L.G., inzh.; OZHEREL'YEV, A.Ya., inzh.

Reducing the effect of the secondary spectrum on the quality
of an image. [Trudy] MVTU no.102:66-69 '61. (MIRA 14:8)
(Aberration)

AZATYAN, V.V.; AKOPYAN, I.A.; HALIMIDYAN, A.B.; OMBERNI'LY, B.V.

Detection of oxygen atoms in a rarefied flame of carbon monoxide with oxygen in the presence of small addition of hydrogen. Dokl. AN SSSR 141 no.1:129-130 W '61.

(SUVA 14:11)

1. Institut Khimicheskoy fiziki AN SSSR. Prof. V.M. Kondrat'yevym.

(Carbon monoxide)

(Oxygen)

(Hydrogen)

(Combustion)

30031
S/020/61/141/001/016/021
B140/B101

11-5100

AUTHORS:

Azatyan, V. V., Akopyan, L. A., Nalbandyan, A. B., and
Ozherel'yev, B. V.

TITLE:

Detection of oxygen atoms in the rarified flame of carbon
monoxide in oxygen in the presence of small hydrogen ad-
mixtures

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 1, 1961, 129 - 130

TEXT: The authors discuss the problem of detecting free atoms in CO com-
bustion at low temperatures with small H₂ admixtures as catalyst. For
this purpose, the method of electron paramagnetic resonance was used. To
avoid a recombination of atoms into molecules, the test tube was washed
with hydrofluoric acid and distilled water, and finally covered with a
layer of potassium tetraborate. For several days, a CO and O₂ flame
containing H₂ admixtures was passed through the tube. By this process a
600 - 650°C flame was obtained at pressures of up to 1.5 - 2 mm Hg. The
tests were conducted with stoichiometric amounts of CO and CO₂ containing
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9.4220

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SOV/109-5-3-19/26

AUTHORS: Benderskiy, V. A., Ozherel'yev, B. V.

TITLE: Concerning Analysis of a Klystron Automatic Frequency Control Circuit

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 3, pp 502-507 (USSR)

ABSTRACT: Reflex klystrons are widely used for radiospectroscopic investigations. The necessary wide-range frequency stabilization is assured by supplying the modulating voltage directly to the reflector, and coupling the klystron frequency to the frequency of an external high-Q resonator. The selection of parameters is made experimentally, which consumes much time and does not always lead to optimum results. The present paper proposes a method of calculating such a circuit. 1. Determination of Critical Retardation of the System. The klystron frequency is a function of reflector voltage U and the summary destabilizing factor α :

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where k_r , k_a , k_d , k_f are transmission coefficients of the resonator, amplifier, phase detector, and RC-filter, respectively. Substituting (3) into (2) and solving for δf , the basic equation of the system of automatic frequency regulation of the klystron is derived as:

$$\delta f = \frac{\frac{\partial f}{\partial \alpha} \delta \alpha}{1 - \overline{k_r k_a k_d k_f S_{11}}} = \frac{\frac{\partial f}{\partial \alpha} \delta \alpha}{1 - \overline{B}} \quad (4)$$

The stabilization coefficient is:

$$k = 1 - \overline{B}. \quad (5)$$

For excitation of the regulating system the phase shift must be a multiple of 2, but the transmission coefficient at the assumed generation frequency must be greater than or equal to one. As the basic phase shift is

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determination of critical frequency of excitation is obtained:

$$\omega_{crit} = \frac{1}{\tau_1} \sqrt{\frac{S_D k_a}{\alpha} - \frac{a^2 + 1}{2a^2}}, \quad (9)$$

where $\alpha = \tau_2/\tau_1 > 1$; $S_D = k_r \cdot k_a$ k_d is the slope of discriminator curve. The critical phase shift without filter is:

$$\theta_{crit} = \arctg \frac{\alpha + 1}{\sqrt{ka}} \approx \frac{\alpha + 1}{\sqrt{ka}}. \quad (11)$$

After some simplifications and substitutions the critical delay time is found:

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$$\tau_{crit} = \frac{\tau_1 (\alpha + 1)}{k} \quad (12)$$

A comparison of the expressions for ω_{crit} , θ_{crit} ,
 τ_{crit} is given for:

	ONE-STAGE FILTER	TWO-STAGE FILTER	
ω_{crit}	$\frac{S_D S_H}{\tau}$	$\frac{1}{\tau_1} \sqrt{\frac{S_D S_H}{\alpha}}$	
θ_{crit}	$\frac{\pi}{2}$	$\frac{\alpha + 1}{\sqrt{k\alpha}}$	(13)
τ_{crit}	$\frac{\pi\tau}{2S_D S_H}$	$\frac{\tau_1 (\alpha + 1)}{k}$	

From (13) it appears that besides the basic property--
suppression of combined harmonics caused by pulsations
of anode current in an automatic frequency control system--

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a two-stage filter shows a higher stability coefficient and no risk of self-excitation, as compared with a one-stage filter. 2. Calculation of Discriminator Slope Curve. With low power imposed on the resonator, the function can be considered quadratic. The potential imposed at the amplifier input is:

$$U_c = \frac{\beta p R}{1 + (x_0 + m \sin \Omega t)^2} \quad (14)$$

where β is transmission coefficient of detector per current; R is resistance of the crystal barrier layer; Ω is modulation frequency; m is modulation index (ratio of deviation amplitude to resonator transmission band); x_0 is average initial mistuning. By expanding (14) into series and finding the amplitude of the first harmonic, which after amplification and synchronous detection is converted into a direct potential U_{cont} controlling the klystron frequency,

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$$U_{\text{cont}} = \beta p I I_0 k_d k_f \frac{2x_0 m}{(1+x_0^2)^2} \quad (15)$$

The discriminator slope and stabilization factor of the system may be determined using (15):

$$S_D = \frac{dU_{\text{cont}}}{df} = \frac{1}{\Delta f_0} \frac{dU_{\text{cont}}}{dx_0} = \frac{1}{\Delta f_0} \beta p I I_0 k_d k_f \frac{2m(1-3x_0^2)}{(1+x_0^2)^3}, \quad (16)$$

$$k \approx S_D S_{11} = \frac{S_{11}}{\Delta f_0} \beta p I I_0 k_d k_f \frac{2m(1-3x_0^2)}{(1+x_0^2)^3} \quad (17)$$

From (17) it is possible to find the effective operation band of the automatic frequency control under conditions of constraint, as is the case in the radiospectroscope.

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This can be determined by finding the dependence of k on the initial mistuning x_0 :

$$k(x_0) = k_{x_0=0} \frac{1 - 3x_0^2}{(1 + x_0^2)^3} \quad (18)$$

When x varies from 0 to 0.3 the stabilization coefficient shows only a small decrease ($k_{x_0=0.3} = 0.56 k_{x_0=0}$), but with further increase of x , k decreases rapidly, and at $x_0 > 0.57$, the klystron frequency is destabilized.

This imposes limitation on the increase of the Q-factor of the resonator (e.g., for initial instability of the system frequency of 10^{-4} , the maximum Q-factor shall not exceed 5000). 3. Analysis of Transient Processes in the Automatic Frequency Control Circuit. In a two-stage system the initial mistuning is assumed Δf_1 ,

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and the parameter changes are:

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$$\left. \begin{aligned} \Delta f(t) &= \Delta f_L - S_D U_{cont} \\ U_D &= S_D \Delta f, \\ U_D &= U_{cont} + (\tau_1 + \tau_2) \frac{dU_{cont}}{dt} + \tau_1 \tau_2 \frac{d^2 U_{cont}}{dt^2} \end{aligned} \right\} \quad (19)$$

where U_D is the potential at the output of the discriminator imposed on the filter. The differential equation for $\Delta f(t)$ is:

$$\tau_1 \tau_2 \frac{d^2 \Delta f}{dt^2} + (\tau_1 + \tau_2) \frac{d \Delta f}{dt} + k \Delta f = \tau_1 \tau_2 \frac{d^2 \Delta f_L}{dt^2} + (\tau_1 + \tau_2) \frac{d \Delta f_L}{dt} + \Delta f_L \quad (20)$$

The initial mistuning can be considered independent of time, and the equation may be written:

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$$\tau_1 \tau_2 \frac{d^2 \Delta f}{dt^2} + (\tau_1 + \tau_2) \frac{d \Delta f}{dt} + k \Delta f = \Delta f_2 \quad (21)$$

which is easily solved taking initial conditions into consideration:

$$\Delta f|_{t=0} = \Delta f_2; \left(\frac{d \Delta f}{dt} \right)_{t=0} = 0, \quad (22)$$

$$\Delta f = \Delta f_2 \left[\frac{1}{k} + e^{-\xi t} \sin \chi t \right], \quad (23)$$

where

$$\xi = \frac{\alpha + 1}{2\alpha} \frac{1}{\tau_1}; \chi = \omega_{crit} \quad (24)$$

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From (23) the setting time can be determined as the time during which the mistuning will reach 0.1 of its minimum:

$$e^{-\alpha t} = 0.1; \quad t_{set} = \frac{4.6 \alpha \tau_1}{\alpha - 1}. \quad (25)$$

4. Schematic of Calculations and Its Experimental Verification. The following sequence of calculations is suggested: (1) From (11) and (25) τ_1 and τ_{crit} as functions of stabilization factor and setting time:

$$\tau_1 = \frac{t_{set}(\alpha + 1)}{4.6\alpha}, \quad \tau_{crit} = \frac{t_{set}(\alpha + 1)^2}{4.6\alpha k}. \quad (26)$$

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(2) Knowing the slope of the reflector characteristic, the slope of the discriminator characteristic is found

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from $S_D = k/S_k$. (3) Knowing S_D we find the sought-for coefficient of the resonant amplifier k_a . (4) For a better stability reserve, a transmission band for the amplifier is selected in accordance with:

$$\tau_{st} \gg \frac{2}{\Delta\Omega}. \quad (27)$$

The table below gives parameters of an automatic frequency control system with initial parameters $Q = 5 \times 10^3$, $\beta_R = 1 \text{ mv}/\mu\text{w}$; $p = 5 \mu\text{w}$; $S_k = 1.5 \text{ mc/v}$; and asymmetry parameter α equals 2.5. For verification of the proposed method a system was built as shown on Fig. 1. The system is designed for a stabilization coefficient of 200, modulation frequency is 1100 kc, and amplifier transmission band is 15 kc. A three-stage amplifier with type 6 K3 pentodes was used. The stabilization factor is 180. The help of V. G. Veselago and A. G. Semenov is acknowledged. There is 1 table;

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Table 1. Parameters of automatic frequency control system.

k	$t_{set} \cdot 10^3, sec$	$\tau_1 \cdot 10^3, sec$	$\tau_2 \cdot 10^3, sec$	$\tau_{rit} \cdot 10^3, sec$	$B_0, v/mc$	$k_0 \cdot 10^{-4}$	$\Delta \Omega, Kc$
50	2,0	6	1,5	4,2	33	3,3	4,8
100	2,0	6	1,5	2,1	67	6,7	9,6
150	2,0	6	1,5	1,4	100	10,0	14,3
200	2,7	8	2,0	1,4	134	13,4	14,3
250	4,0	12	3,0	1,7	187	18,7	11,8

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Caption to Fig. 1. Layout of automatic frequency control of a klystron: (T₁) oscillator, 1100 kc; (T₂) buffer amplifier; (T₃, T₄) broad-band phase inverters; (T₅) support voltage amplifier; (T₆) phase detector; (T₇, T₈, T₉) resonance amplifiers.

1 figure; and 3 Soviet references.

SUBMITTED: July 8, 1959

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