VORONTSOV, Ye. I.

Quantitative spectrum analysis in spectral excitation by large pulse discharges. Izv. AN SSSR Ser.fiz.18 no.2:262 Mr-Ap '54.   (MIRA 7:11)
(Spectrum analysis)

Vorontsov, Ye. I.

PHASE I BOOK EXPLOITATION   SOV/1700

24(7)

Lvov. Universitet

Materialy X Vsesoyuznogo soveshchaniya po spektroskopii, 1956.
t. 1: Atomnaya spektroskopiya.(Materials of the 10th All-Union
Conference on Spectroscopy, 1956. Vol 2: Atomic Spectroscopy)
[Lvov] Izd-vo L'vovskogo univ., 1958. 568 p. (Series: Its
Naukovyi zbornik, vyp. 9)) 3,000 copies printed.

Additional Sponsoring Agency: Akademiya nauk SSSR. Komissiya po
spektroskopii.

Editorial Board: S.L. Landsberg, Academician, (Resp. Ed.);
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(Deceased), Doctor of Physical and Mathematical Sciences; A.Ye.
Zimmerman, Doctor of Physical and Mathematical Sciences;
M.: S.L. Gazer; Tech. Ed.: T.V. Sarunyuk.

PURPOSE: This book is intended for scientists and researchers in
the field of spectroscopy, as well as for technical personnel
using spectrum analysis in various industries.

COVERAGE: This volume contains 177 scientific and technical studies
of atomic spectroscopy presented at the 10th All-Union Confer-
ence on Spectroscopy in 1956. The studies were carried out by
members of scientific and technical institutes and include
extensive bibliographies of Soviet and other sources. The
studies cover many phases of spectroscopy: spectra of rare earths,
electromagnetic radiation, physicochemical methods for controlling
uranium production, physics and technology of gas discharge,
optics and spectroscopy, abnormal dispersion in metal vapors,
spectroscopy and the combustion theory, spectrum analysis of ores
and minerals, photographic methods for quantitative spectrum
analysis of metals and alloys, spectral determination of the
hydrogen content of metals by means of isotopes, tables, and
statistical study of variation in the parameters of calibration
curves, determination of traces of metals, spectrum analysis in
metallurgy, thermochemistry in metallurgy, and principles and
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Card 2/31

Materials of the 10th All-Union Conference (Cont.)   SOV/1700

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39290

S/048/62/026/007/005/030
B104/B138

26.2311

AUTHOR: Vorontsov, Ye. I.

TITLE: Study of pulsed discharge

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya,
            v. 26, no. 7, 1962, 862-865

TEXT: The maxima of current density on the electrode surfaces were
estimated from the current strength in localized and nonlocalized
discharges, and also from the current density distribution across the
cavities formed in the electrodes by the discharge. The shape of
discharge traces on electrodes made from refractory or fusible alloys
depends on melting point, ductility, degree of oxidation, etc. If the
discharge is localized by a perforated disk current density is more than
doubled. Experiments with discharge voltages of 300 and 600 v showed
that the current density at the electrodes remains almost unchanged. The
current density required for suppressing undesired impurity effects
cannot be obtained because of the spreading of the discharge. During a
pulsed discharge flares develop and vanish continuously at the

Card 1/2

Study of pulsed discharge

S/048/62/C26/007/005/050
B104/B138

electrodes. They are caused by the electron emission which occurs in all new sections of the spark gap due to changes in conductivity. These changes are due to strong fields on surface spires of the electrodes and to propagation of shock waves. There are 2 figures and 1 table.

Card 2/2

VORONTSOV, Ye.I.

Study of pulse discharges. Izv. AN SSSR. Ser. fiz. 26 no.7:
862-865 Jl '62.

(Electric discharges)   (MIRA 15:8)

ن0556

9. 3/50

SOV/81-59-20-71195

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 20, p 142 (USSR)

AUTHOR: Vorontsov, Ye.I.

TITLE: Investigations of Some Physical Processes Taking Place in a Powerful Low-Voltage Impulse Spark Discharge γ\

PERIODICAL: Fiz. sb. L'vovsk. un-t, 1958, Nr 4(9), pp 154 - 157

ABSTRACT: The results are laid down of the study of the wandering of a low-voltage electrical impulse over the surface of the electrodes and the character of the passing of substance into the discharge cloud. The discharge was photographed with a SKS-1 movie camera and investigated by means of a rotating mirror. It has been assumed that the wandering of the discharge is caused by the intense ionization of the gas medium during the passing of electric current through it. It has been shown by experiment that in air as well as in helium the discharge ionization spreads to the same distance from the electrodes and takes place due to the scattering of discharge channel ions by shock waves. The introduction of inductance into the impulse generator circuit contributes to the quieter course of the impulses and reduces the wandering of the discharge. The character

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65856

SOV/81-59-20-71195

Investigations of Some Physical Processes Taking Place in a Powerful Low-Voltage
Impulse Spark Discharge

of the passing of electrode substance into the cloud has been studied for an impulse,
the wandering of which has been limited by a disk with an opening. A dark non-
luminous space has been detected in the cloud, the formation of which is connected
with the character of passing the electrode substance into the spark gap. The action
of a powerful discharge determines the explosive character of the passing substance in
the form of individual particles or small drops of molten metal in a relatively cold
state, which causes also the presence of a dark space. An increase in discharge
energy increases the rate of the movement of electrode substance from the disk opening.
The rate of the movement of the substance depends also on the metal taken as lower
electrode. According to the rate of movement the metals are arranged in the following
series: Fe, Ni, Co, Cu, Mg, Pb, Sn, where Fe has the lowest rate, Sn the highest. The
relation between the change of the space of the localized discharge and the melting
point for various metals has been noted. It is assumed that in the usual arc discharge,
when the current density is insignificant, the substance passes into the discharge gap
directly from the surface of the electrodes in the form of metal vapors.

L. Kaporskiy

Card 2/2

VORONTSOV, Ye.I.

Investigating some physical processes in the low-voltage dis-
charge of a strong pulse spark. Fiz.sbor. no.4:154-157 '58.
                                            (MIRA 12:5)
            (Electric discharges)

4.

ALEKSANDROVA, A.S.; VOROBTSOV, Ye.I.; RIMLYAND, S.S.

Using a pulse generator. Fiz.sbor. no.4:231-238 '58.
(MIRA 12:5)

(Electric discharges)   (Spectrum analysis)

VORONTSOV, Ye. I
Optical Methods of Analysis

Dissertation: "Quantitative Spectral Analysis During Excitation of the Spectrum by a
Powerful Electric Pulse Discharge." Cand Tech Sci (no institute affiliation given),
1953. (Referativnyy Zhurnal, Fizika, Moscow, Mar 54)

SO: SUM 213, 20 Sep 1954

Vorontsov, Ye.

MCHEDLOV-PETROSYAN, O,, doktor tekhnicheskikh nauk; BUNAKOV, A, inzhener;
VORONTSOV, Ye., inzhener.

Effect of early loading on the strength of cement mortars. Stroi.mat.,
izdel.i konstr. 1 no.6:28-29 Je '55.   (MIRA 9:1)
(Mortar)

VORONTSOV, Ye. M.

Vorontsov, Ye. M. - "On the zoogeography of the Prikam'ye of Molotov Oblast",
Uchen. zapiski Gor'k. gos. Un-ta, Issue 14, 1949, p. 53-71, - Bibliog: p. 70-71.

SO: U-4631, 16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 24, 1949).

VORONTSOV, Ye.M.; ORLOVA, Yu.Ya.; TVOROGOVA, M.M.; KHOKHLOVA, N.A.

Changes in the ornithofauna of the forest section of the Pustyn'
Biological Station of Gor'kii University. Ornitologiia no.4:117-121
'62.
                                                        (MIRA 16:4)
              (Chernukha District—Birds)

VORONTSOV, Ye.M.

Dynamios of the abundance of forest birds in the Pustyn' Biological
Station of the Gorkiy University. Ornitologiia no.7:459-461 '65.

(MIRA 18:10)

3190   VORONTSOV, YE.M OPYT

Ekologo-geogr - aficheskogo analiza ornitofauny smeshannykh lesov
evropeyskoy chasti SSSR. Char'kov, Izd-vo Char'k un-ta, 1954.238 s.s.
ill. 21 sm. (N-vo Byssh Obrazovaniya SSSR. Gor'k Gos. Un-T) 1.500
ekz. 6R. 50K., per. 1R - Bibliogr: S 228-236 - (54-57137)p 598.2 +
591.9(253) (47) + (016.3)

VORONTSOV, Ye.M.

Zoogeographical associations and origins of the formation of ornithofauna of the taiga belt. Izv.Vses.geog.ob-va no.4:345-353 Jl-Ag'55.
(Taiga) (Birds—Geographical distribution)   (MLRA 8:10)

YESIN, O.A.; VORONTSOV, Ye.S.; CHUCHMAREV, S.K.

Diffusion of phosphorus and calcium in the fusions CaO - Al_2O_3 - SiO_2 and CaO - P_2O_5. O.A. Zhur. fiz. khim. 31 no.10:2322-2327 O '57. (MIRA 11:3)

1.Ural'skiy politekhnicheskiy institut im. S.M. Kirov a.
(Diffusion) (Phosphorus) (Calcium)

Vorontsov, Ye. S.

24-2-24/28

AUTHORS: Vorontsov, Ye. S. and Yesin, O. A. (Sverdlovsk).

TITLE: On the mechanism of diffusion in liquid slags.
         (O mekhanizme diffuzii v zhidkikh shlakakh).

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh
         Nauk, 1958, No.2, pp. 152-155 (USSR).

ABSTRACT: By means of the radio-active tracers P^{32}, S^{35}, Ca^{45} and Fe^{59},
         the simultaneous diffusion of S, Ca, Fe and P was studied
         in the liquid slags $CaO-Al_2O_3-SiO_2$ and in solid alloys of
         $CaO-P_2O_5$.   It was found that the diffusion coefficients
         increased with decreasing crystallographic radii of the
         ions; appreciable deviations from the Stokes-Einstein
         equations were observed for P and it is concluded that
         five-valent P diffuses simultaneously with oxygen in the
         form of electro-neutral particles, i.e. in the form which
         is intermediate between a complex anion and a simple
         cathion.   It was established that the experimentally
         determined coefficient of diffusion of the cathion of
         calcium differs little from the value calculated from
         the electric conductivity on the basis of the Nernst-
         Einstein equation; this and also the fact that the energies
         of the diffusion activation and of the conductivity are
Card 1/2 values near to each other indicate the existence of

On the mechanism of diffusion in liquid slags.   24-2-24/28

preferential individual displacement of calcium cathions.
Unequal shapes of diffusing particles in P and Ca are
explained by differing covalency fractions as regards the
relations between these cathions and the oxygen anions.
There are 2 figures, 1 table and 7 references -
5 English, 2 Russian.

SUBMITTED: June 17, 1957.

AVAILABLE: Library of Congress.

Card 2/2

VORONTSOV, Ye.S.; BYSTROVA, I.S.

Kinetics and the mechanism of iron reduction by hydrogen from molten magnetite. Izv.vys.uchob.zav.; chern. met. 8 no.4:18-24 '65.   (MIRA 18:4)

1. Chelyabinskiy politekhnicheskiy institut.

VORONTSOV, Ye.S. (Chelyablnsk); BYSTROVA, I.S. (Chelyablnsk)

Mechanism and kinetics of the dissociation of calcium carbonate.
Izv. AN SSSR. Met. no.1:25-32 Ja-F '65.   (MIRA 18:5)

VORONTSOV, Ye.S.; YERMAKOV, A.V.

Comparative investigation of the rates of copper oxidation
and its reduction from oxides by the electric conductivity
method. Izv. vys. ucheb. zav.; tsvet. met. 7 no. 4:53-59 '64
(MIRA 19:1)

1. Chelyabinskiy politekhnicheskiy institut, kafedra fiziko-
khimicheskikh issledovaniy metallurgicheskikh protsessov.

VORONTSOV, Ye. S.

Mechanism and kinetics of topochemical reactions occurring
with the decrease of the volume of solid phases. Usp.khim.
34 no.11:2020-2038 N '65.   (MIRA 19:1)

1. Politekhnicheskiy institut, Chelyabinsk.

VORONTSOV, Ye.S.; YERMAKOV, A.V.

Study of equilbirium in the system oxide - metal - gas by
the electric conductivity method. Zhur.prikl. khim. 37
no. 5:1160-1162 My '64.   (MIRA 17:7)

SOV/81-59-7-24173

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 7, p 352 (USSR)

AUTHORS: Vorontsov, Ye.S., Yesin, O.A.

TITLE: The Application of Radioactive Indicators to the Study of Diffusion in Liquid Slags

PERIODICAL: Tr. Ural'sk. politekhn. in-ta, 1958, Nr 73, pp 57 - 73

ABSTRACT: To elucidate the structure of liquid phases, diffusion (D) of Ca and S separately was investigated and that of either Ca and P or Fe and Ca simultaneously was also studied. Liquid blast-furnace slag of the composition (in %): CaO 40, Al_2O_3 20, SiO 40 served as medium. The experiments were carried out in the isothermal zone of the furnace with a carbon resistance at a temperature of 1,200 - 1,600°C. The method of "labeled atoms" was employed for revealing the results of D. P^{32} was introduced into slag in the form of tricalcium phosphate, S^{35} in the form of sulfides, Ca^{45} and Fe^{59} in the form of oxides. Slag was molten in a crucible (C) and kept for 15 - 20 minutes, then a little piece of slag (50 - 75 mg) with the substance, the D of which was

Card 1/2

SOV/81-59-7-24173

The Application of Radioactive Indicators to the Study of Diffusion in Liquid Slags

investigated, was preliminarily heated and carefully introduced onto the surface of the melt. The experiment lasts from 1 to 9 hours. It was established that in liquid slags of the $CaO-Al_2O_3-SiO_2$ system the mass transfer of Ca, P and S in a graphite C takes place at temperatures of 1,300 - 1,600°C at the expense of surface D. The material of C is badly wetted by slag, and the boundary: melt-C is a passageway for diffusing perticles. In the case of introducing the sulfur isotope ($\sim$ 1%) into slag the wettability of C increases and the D rate of sulfur decreases 3 - 4 times. In the case of using C made of Al_2O_3 the wettability increases and the D rate of Ca, S and P in this case was less than in a graphite C. The investigation of the simultaneous mass transfer of P and Ca, as well as of Ca and Fe, showed that their conditional diffusion coefficients are values of one order of magnitude. P and Fe are transferred somewhat more rapidly than Ca.

I. Mikhaylova

Card 2/2

VORONTSOV, Ye. S.; YESIN, O.A.

Use of radioactive tracers to study diffusion in liquid slags.
Trudy Ural.politekh.inst. 73:57-73 '58.   (MIRA 12:8)
        (Diffusion)   (Radioactive tracers)   (Slag)

AUTHOR:

TITLE: On the Surface and Volume Diffusion in Molten Slags (O poverkh- nostnoy i ob'yemnoy diffuzii v rasplavlennykh shlakakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 2, pp. 16-23 (USSR)

ABSTRACT: The present paper by means of the radioactive isotopes P^{32}, Ca^{45}, S^{35} and Fe^{59} investigates the surface and volume diffusion in molten slags and the wandering off rate of the components of the slags. The diffusion mechanism of phosphorus and calcium in acid furnace slag in graphite and corundum crucibles was ex- plained. It turned out that the diffusion coefficients D_P and D_{Ca} are almost the same, and that the diffusion coefficient of phosphorus is only a little higher. The experiments with solid slag samples showed that calcium and phosphorus diffuse at measurable rates. Phosphorus diffuses in acid furnace slag as a simple anion form, whereas calcium diffuses mostly as monoatomic cation. The diffusion of calcium and iron in the melt $CaO-Al_2O_3-$

Card 1/2 SiO_2 was investigated in corundum crucibles. The dependence of

SOV/163-58-2-3/46

On the Surface and Volume Diffusion in Molten Slags

$\lg D$ on $\frac{1}{T}$ shows that with an increase in temperature the free volume of the slag melt increases. In the experiments carried out it was shown that the dependence of

$\lg D$ on $\frac{1}{T}$ is possible in the following cases:

1) $\frac{d(\lg D)}{d(1/T)}$ decreases with an increase in temperature.

ASSOCIATION: Uralskiy politekhnicheskiy institut (Ural Polytechnical Institute)

SUBMITTED: October 4, 1957

Card 2/2

VORONTSOV, Ye.S. (Chelyabinsk); YERMAKOV, A.V., (Chelyabinsk)

Comparative investigation of the rate of iron oxidation and of
its reduction from oxides by the electroconductivity method.
Izv. AN SSSR. Met. i gor. delo no.5:23-29 S-O '63.

(MIRA 16:11)

VORONTSOV, Ye.S.

Mechanism of the reduction of iron from its oxides. Izv.
vys. ucheb. zav.; chern. met. 7 no.2:13-18 '64.

1. Chelyabinskiy politekhnicheskiy institut.
(MIRA 17:3)

AUTHORS: Nikitin, Yu. P., Yesin, O. A.,   SOV/76-32-6-38/46
             Vorontsov, Ye. S.

TITLE: On the Determination of the Diffusion Coefficients in
             Molten Oxides (K opredeleniyu koeffitsiyentov diffuzii
             v rasplavlennykh okislakh)

ABSTRACT: The influence exerted by the convection heat transfer
             renders the determination of the diffusion coefficient
             especially at higher temperatures very difficult, so that
             it is necessary to employ several independent methods which
             are based on rules different in principle, in order to
             obtain correct results. In order to meet the demands of
             metallurgy, silicate industry and geochemistry the authors
             of the present paper carried out measurements by means of
             radioactive indicators on the one hand and by means of the
             electrode polarization with a. c. on the other hand. The
             authors used for the experiments a CaO - Al_2O_3 - SiO_2

Card 1/3   melt at 1500° as well as an Fe^{59} isotope and the diffusion

On the Determination of the Diffusion CoefficientsSOV/ 76-32-6-38/46
in Molten Oxides

coefficient from the radiation measurements calculated
according to a mentioned equation. Parallel to this
investigation slags of the same system were investigated
by means of the polarization with a. c. of different
frequencies from liquid electrodes of ferro-alloys; this was
done in order to determine the so-called ohmic and capacitive
resistance of the electrodes. The final results were obtained
graphically and according to a given equation; from the
comparison (given in form of a table) of the values obtained
according to either method may be seen that it is possible
to obtain sufficiently good values for the diffusion
coefficient. There are 1 table and 5 references,   which
are Soviet.

ASSOCIATION: Ural'skiy Politekhnicheskiy institut im. S.M. Kirova,
Sverdlovsk (Ural Polytechnical Institute imeni S.M.
Kirov, Sverdlovsk)

SUBMITTED: May 6,1957

Card 2/3

On the Determination of the Diffusion Coefficients SOV/76-32-6-38/46
in Molten Oxides

1. Oxides--Diffusion   2. Diffusion--Determination   3. Heat transfer
4. Slags--Polarization

Card 3/3

VoronTsov, Ye. S

AUTHORS: Yesin, O. A., Vorontsov, Ye. S., Chuchmarev, S. K.   76-10-23/34

TITLE: The Diffusion of Phosphorus and Calcium in the Melts $CaO-Al_2O_3-SiO_2$ and $CaO-P_2O_5$ (Diffuziya fosfora i kal'tsiya v rasplavakh $CaO-Al_2O_3-SiO_2$ i $CaO-P_2O_5$).

PERIODICAL: According to the method of radioactive indicators the simultaneous diffusion of Ca and P in $CaO-Al_2O_3-SiO_2$ and $CaO-P_2O_5$-melts was investigated at temperatures of from 1000 to 1500°C. It was found that in the case of a bad wetting of the crucible walls (graphite) the dislocation velocity of P and Ca is considerably higher than in the case of a sufficient wetting (Korundiz). The nominal coefficients of the diffusion differ in these cases by almost two orders of magnitude. It was found that the nominal coefficients of the diffusion are in all cases investigated near to each other: in the case of presence and of lacking of a surface diffusion as well as in the case of common and separated investigation of the movements of P and Ca. The relatively great phosphorus dislocation

CARD 1/2   velocity in the case of lacking of an exterior electric

The Diffusion of Phosphorus and Calcium in the Melts   76-10-23/34
$CaO-Al_2O_3-SiO_2$ and $CaO-P_2O_5$

field and the data in the references concerning the
practically absolute immovability of the latter in the
case of a current passage through the melt admit the
conclusion that phosphorus diffuses in contrast to
calcium in an uncharged form. There are 4 figures,
5 tables, 8 Slavic references.

ASSOCIATION: Ural Polytechnical Institute imeni S. M. Kirov, Sverdlovsk
(Ural'skiy politekhnicheskiy institut im. S. M. Kirova,
Sverdlovsk).

SUBMITTED: September 24, 1956

AVAILABLE: Library of Congress

CARD 2/2

ACC NR: AP6035695   (N)   SOURCE CODE: UR/0413/66/000/019/0043/0043

INVENTOR: Vorontsov, Ye. S.; Pashkeyev, I. Yu.; Mikhaylov, G. G.; Shishkov, V. I.

ORG: none

TITLE: Method of copper foil production. Class 18, No. 186527 [announced by the Chelyabinsk Polytechnic Institute (Chelyabinskiy politekhnicheskiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 19, 1966, 43

TOPIC TAGS: copper foil, shaped copper foil, shaped copper foil production copper, metal foil, sheet metal

ABSTRACT: This Author Certificate introduces a method of copper-foil production. To obtain foil of various thicknesses and configurations without strain hardening, the copper blank is subjected to oxidation at 750—800C for 1—1.5 hr with subsequent reduction of the oxide film in a hydrogen atmosphere at 500—600C for 3—5 min, and separation of cooled foil from the blank.

SUB CODE: 13/ SUBM DATE: 25Jun65/

Card   1/1   UDC: 621.785.33:621.785.34.062-416.002.2

BUNAKOV, A.G., inzhener; VORONTSOV, Ye.Ye., inzhener; MCHEDLOV-PETROSYAN, O.P., inzhener.

Relations of the optimum loading time of mortars to the hardening period of cement. Stroi.prom. 34 no.2:43 F '56.   (MIRA 9:5)
                         (Concrete)

VORONTSOV, Yuriy, serzhant

Let us talk about the development of conduct. Starsh.-serzh. no.11:
29 O[i.e. N] '61.   (MIRA 15:2)
                              (Military discipline)

9.4330 (1137, 1143, 1150)

AUTHORS: Vorontsov, Yu.I., and Rzhevkin, K.S.

TITLE: Tunnel diodes in amplifying circuits (Survey)

PERIODICAL: Radiotekhnika i elektronika, v. 6, no. 11, 1961,
             1779 - 1804

TEXT: Considering the great interest shown lately towards tunnel
diode amplifiers, the authors try, in the present article, to eva-
luate the results so far obtained and the possible future develop-
ments for the systematic study of problems related to the operation
of such system. All data given or discussed in the article are ba-
sed either on published works or on the results of investigations
by the authors. The survey is divided into 4 parts: 1) Amplifying
properties of a tunnel diode; 2) Non-linear properties of tunnel
diodes; 3) Noise performance of tunnel diode amplifiers; 4) Con-
struction of tunnel diode amplifiers. 1a: Basic amplification theo-
ry of a tunnel diode amplifier is considered (as based on English-
language publications); 1b: Main tunnel diode amplifier circuits

Card 1/5

30286
S/109/61/006/011/001/021
Tunnel diodes in amplifying ...   D201/D304

are broadly discussed, a distinction being made between the inser-
tion gain and nominal gain of the amplifier; 1 Parallel amplifier
connection is discussed. The expression for insertion gain is de-
rived as a function of the cut-off frequency of the diode and of
the equivalent cct parameters; 1d: Parallel resonant amplifier; the
equation for the resonance insertion gain is derived. It is poin-
ted out that

$$\Delta \omega \sqrt{K_{inr}} \propto \frac{1}{RC} \qquad (9)$$

(K_{inr} being the insertion gain of resonance amplifier) which is
often used, is only approximate, but may be applied in most prac-
tical cases for the evaluation of frequency and gain of properties;
1e: Series connected tunnel diode amplifier. An expression for the
insertion gain is derived and discussed. A graph of the insertion
gain against frequency is given, based on published data; 1f: A
short analysis of circuits for SHF amplification, based on distri-
buted constants amplification, in through and reflex circuits; 2a:
A short discussion of the non-linear properties of tunnel diodes.

Card 2/5

Tunnel diodes in amplifying ...

S/109/61/006/011/001/021
D201/D304

An approximate expression is used for the conductance $G(V)$;

$$G(V) = \alpha(V - V_0)^2 - G_0 \tag{13}$$

where α = const. and V_0 is the operating point voltage. Hence the effective conductance G_{eff} averaged over one period is derived from energy considerations as

$$G_{eff} = G_0(1 - \frac{3}{4} \frac{\alpha A^2}{G_0}) \tag{17}$$

where A is the amplitude of a.c. signal; 2b: The discussion of temperature effect is based on data published in English-language literature; 3a: Discussion of shot-noise, thermal noise and noise factor in tunnel diode amplifiers, based on data published in English-language literature. The low frequency noise, proportional to 1/f is disregarded. 4: Construction of tunnel diode amplifiers is discussed, typical diode mounts, as described in literature are analyzed, together with pass-band filter construction for broadening the pass-band, the hybrid ring amplifiers etc. Using the cct

Card 3/5

of Fig. 21 in R.P. Trambarulu (Ref. 47: Esaki diode amplifiers at 7.11 and 26 kMc, Prok. I.R.E., 1960, 48, 12, 2022), the authors studied amplifiers operating at frequencies of 6.8; 9.7; 10.8 and 25.8 kMc/s. The results of fundamental measurements are given in a table. The gain variation obtained (by means of an adjustable matching screw controlling the position of the coupling loop) was between 5 and 38 db, the pass band decreasing with gain. The amplifier working at 10.8 kMc/s had a pass band of the order of 300 mc/s with K = 5 db and 8 mc/s with K = 28 db. The diodes were made of gallium arsenide with a specific resistivity $\rho = 15 \times 10^{-4}$ ohm.cm. The value of I_{max} was 0.5 lmA and the ratio I_{max}/I_{min} was $\gg 3$. As to the distributed amplifiers, the authors state that there is considerable difficulty in obtaining complicated tunnel p-n transitions and the required stability. The authors express their gratitude to V.V. Migulin for advice and remarks. There are 22 figures, 1 table and 51 references: 6 Soviet-bloc and 45 non-Soviet-bloc. The 4 most recent references to the English-language publication read as follows: M. Schuller, W.W. Gartner, Large-signal circuit theory of negative-resistance diodes, in particular tunnel diodes, Card 4/5

30286

S/109/61/006/011/001/021
D201/D304

Tunnel diodes in amplifying ...

Proc. I.R.E., 1961, 49, 8, 1268; H.R. Kaupp, D.R. Crosby, Calcula-
ted wave forms for tunnel diode locked pair, Proc. I.R.E. 1961, 49,
1, 146; S.B. Geller, P.A. Mantek, Tunnel diode large-signal simula-
tion study, Proc. I.R.E., 1961, 49, 4; R.F. Trambarulo, Esaki diode
amplifiers at 7.11 and 26 kMc. Proc. I.R.E., 1960, 48, 12, 2022.

SUBMITTED: June 7, 1961

Fig. 21.

Legend: 1 - Circulator; 2 -
coupling loop; 3 - input;
4 - output; 5 - cylindrical
resonator.
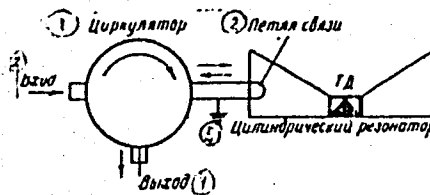
Card 5/5

elektronika, 1963, v. 3, no. 1., 23... shows that such ....
steep-front rectangular pulses and 1 serve as threshold amplifiers, short-pulse
generators, and memory elements. Orig. art. has: 6 figures and 7 formulas.

VORONTSOV, Yu.I., POLYAKOV, I.V.

Study of the operation of high-speed triggers with tunnel
diodes using a modeling technique. Radiotekh. i elektron.
9 no.7:1246-1257 Jl '64   (MIRA 17:8)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo uni-
versiteta im. M.V. Lomonosova.

L 19J2O-C>
ACCESSION NR   A P5030460

VORONTSOV, Yu.I.; POLYAKOV, I.V.

      Simple method for measuring the parameters of tunnel diodes.
      Prib. i tekh. eksp. 8 no.6:159-161 N-D '63.

                                    (MIRA 17:6)

      1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo
      universiteta.

TOPIC

VORONTSOV, Yu.I.

Properties of delay lines with tunnel diodes. Radiotekh. i elek-
tron. 9 no.4:590-595 Ap '64.

(MIRA 17:7)

ACCESSION NR: AP4042521   S/0109/64/009/007/1246/1257

AUTHOR: Vorontsov, Yu. I.; Polyakov, I. V.

TITLE: Investigating high-speed tunnel-diode triggers by a simulation method

SOURCE: Radiotekhnika i elektronika, v. 9, no. 7, 1964, 1246-1257

TOPIC TAGS: trigger, tunnel diode, tunnel diode trigger, high speed trigger

ABSTRACT: The study of high-speed tunnel-diode triggers is technically difficult; hence, a study of simulated characteristics on a low-frequency model was attempted. The conditions of similitude of bridge triggers with an allowance for spurious parameters were determined; the combined parameter Cu^2_m /LI^2_m was varied within $2.5 \times 10^{-4} - 2.5$; no parameter spread was taken into account. The starting current was varied from 5 to 20% I_m, and the quantity rI_m, from 12 to 90 mv. It was found that: (1) In the cases when $Cu^2_m/LI^2_m > 1$, the effect of inductance in the arms of the bridge trigger is negligible and the trigger max

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ACCESSION NR: AP4042521

operating frequency is determined by the time constant of the tunnel diode; when, however, $Cu^2{}_m / LI^2{}_m \ll 1$, the inductance plays a decisive role, and the max clock frequency is practically independent of the tunnel-diode capacitance; (2) Increasing the load resistance from its critical to twice the critical value widens the frequency band by 1.5 times; the frequency band doubles for the infinite-resistance load. Orig. art. has: 7 figures and 6 formulas.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 08May63

SUB CODE: EC, DP

NO REF SOV: 001

ENCL: 00.

OTHER: 005

Card 2/2

ACCESSION NR: AP4043687   S/0109/64/009/008/1516/1517

AUTHOR: Vorontsov, Yu. I.; Polyakov, I. V.

TITLE: Efficient method of widening the range of clock frequencies of a tunnel-diode bridge trigger

SOURCE: Radiotekhnika i elektronika, v. 9, no. 8, 1964, 1516-1517

TOPIC TAGS: trigger, bridge trigger, diode, tunnel diode, tunnel diode bridge trigger

ABSTRACT: The clock-frequency range is often limited by spurious oscillation appearing in the trigger circuit. A circuit stabilization is suggested by connecting a resistor across the tunnel diodes. An experimental verification revealed that the upper clock-frequency limit can be raised by 5 times, which makes the upper frequency practically equal to that of a noninductive trigger. Orig. art. has: 2 figures.

Card 1/2

ACCESSION NR: AP4043687

ASSOCIATION: Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta im. M. V. Lomonosova (Physics Faculty, Moscow State University)

SUBMITTED: 21Jun63   ATD PRESS: 3077   ENCL: 00

SUB CODE: EC   NO REF SOV: 001   OTHER: 000

Card 2/2

ACCESSION NR: AP4006837   S/0120/63/000/006/0159/0161

AUTHOR: Vorontsov, Yu. I.; Polyakov, I. V.

TITLE: Simple method of measurement of tunnel diode parameters

SOURCE: Pribory* i tekhnika eksperimenta, no. 6, 1963, 159-161

TOPIC TAGS: tunnel diode parameter, tunnel diode, voltampere characteristic, negative resistance, p-n junction

ABSTRACT: The most widely used method for measuring tunnel-diode parameters — the cathode-ray curve tracer method — requires special techniques to suppress parasitic oscillations, particularly in the case of higher-current (over 10 ma) diodes. A new method is suggested in this article for measuring currents and voltages at the maximum and minimum points on the current-voltage characteristic from the size and shape of relaxation oscillations generated by the tunnel diode in a special circuit. The voltages and currents are scale-measured on an oscilloscope screen. The tunnel-diode capacitance is measured by a resonance-oscillation method (an external h-f oscillator is used)

Card 1/2

ACCESSION NR: AP4006837

at the maximum- and minimum-voltage points with the correct bias voltage automatically maintained.' The accuracy of the new instrument as determined by a comparison with d-c measurement results, which were considered exact, is characterized by the following errors: 10-15% for minimum currents and voltages, 3-5% for maximum currents and voltages, 5-10% for capacitance. Orig. art has: 3 figures.

ASSOCIATION: Moskovskiy gosudarstvenny*y universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 03Jan63   DATE ACQ: 24Jan64   ENCL: 00

SUB CODE: SD   NO REF SOV: 003   OTHER: 001

Card 2/2

VORONTSOV, Yu.I.; POLYAKOV, I.V.

Effective method for broadening the band of cycle frequencies of a
bridge-type trigger circuit using tunnel diodes. Radiotekh. i elektron.
9 no.8:1516-1519 Ag '64.   (MIRA 17:10)

1. Fizicheskiy faku'tet Moskovskogo gosudarstvennogo universiteta.

VORONTSOV, Yu.I.

Propagation velocity of stationary signals in lines with nonlinear re-
sistance. Radiotekh. i elektron. 9 no.9:1709-1711 S '64.

(MIRA 17:10)

1. Fizicheskiy fakul'tet Moskovskogo gosudarstvennogo universiteta
im. M.V.Lomonosova.

VORONTSOV, Yu.M., aspirant

Clinical and X-ray diagnosis of tuberculosis of the internal female
sex organs. Ped., akush. i gin. 23 no.5:49-53 '61.   (MIRA 14:12)

1. Kafedra akusherstva i ginekologii vrachebnogo fakul'teta (zave-
duyushchiy - zasluzhennyy deyatel' nauki prof. I.I.Grishchenko
[Hryshchenko, I.I.] Khar'kovskogo medinstituta (rektor - dotsent B.A.
Zadorozhnyy [Zadorozhnyi, B.A.] i kafedra rentgenologii i meditsinskoy
radiologii (zaveduyushchiy - prof. A.A.Lemberg) Ukrainskogo instituta
usovershenstvovaniya vrachey (rektor - dotsent I.I.Ovsiyenko
[Ovsiienko, I.I.]).
                (GENERATIVE ORGANS, FEMALE—TUBERCULOSIS)
                    (DIAGNOSIS, RADIOSCOPIC)

82901

24.3100

S/120/60/000/02/052/052
E032/E314

AUTHORS: Valeyev, Kh.S., Vorontsov, Yu.N. and Morozov, M.G.

TITLE: Spark Generator with a Flash Duration of Less Than
             1 μs

PERIODICAL: Pribory i tekhnika eksperimenta, 1960, No 2,
             pp 122 - 123 (USSR)

ABSTRACT: A device is described which can be used to produce
             light flashes having a duration of less than 1 μs.
             The device is used to obtain photographic records of
             the flow pattern in an ultrasonic aerodynamic tube.
             The principle of the instrument was described by
             Fitzpatrick and Hubbard (Ref 1) and Beams et al
             (Ref 2). A general scheme is illustrated in
             Figure 1. The device consists of a capacitor with
             a spark gap 2 , a high resistance R (equal to
             200 MΩ), a DC voltage source and a blocking device
             1 which earths the capacitor when the supply is
             switched off. A cylindrical capacitor with a calcium
             titanate dielectric having an electrical strength of
Card1/3   18 - 22 kV/mm, a resistivity of $10^{14} - 10^{15}$ Ω cm and a

82901

S/120/60/000/02/032/052
E032/E314

Spark Generator with a Flash Duration of Less Than 1 µs

dielectric constant of 140 - 150 was employed. Other
materials which can be employed are solid solutions of
barium titanate, strontium titanate and "SVT material"
Figure 2 shows the illuminating device. It consists
of a capacitor and a spark gap formed by the leads 1
and 2 , having 1.5 mm dia tungsten electrodes at the
ends. The dielectric 5 of the capacitor was made of
calcium titanate and the electrode 4 of silver.
In order to reduce the impedance, the length of the
leads to the spark gap was kept as small as possible.
Tungsten was chosen in order to reduce afterglow. The
device is held in position by the metal holder 3 ,
fixed to an earthed base and is charged through the
line 7 . The charge is excited by a high-voltage
generator (AKI-50) through a resistor of 200 $M\Omega$ (glass
tube 2.5 x 2.5 mm^2, ~1 m in length, filled with
alcohol and using fused molybdenum electrodes). At a
voltage of 16 - 20 kV and a spark gap of 5-10 mm the

Card 2/3

82902

S/120/60/000/02/032/052

E032/E314

Spark Generator with a Flash Duration of Less than 1 μs

discharge frequency lay between 0.3 and 0.5 cps (in
atmosphere at NTP). The illuminator was used to obtain
photographic records of processes in an ultrasonic
aerodynamic tube. The processes could also be estimated
visually in view of the low frequency involved.
There are 3 figures and 2 English references.

ASSOCIATION: Gosudarstvennyy issledovatel'skiy elektrokeramicheskiy
institut (State Research Institute for Electroceramics)

SUBMITTED: January 25, 1959

Card 3/3

Voro ntsov, Yu. N.

VORONTSOV, Yu.N.; REZVOV, K.M.

Technical aspects of the production of plunger pairs. Avt.i trakt.
prom. no.11:33-39 N '57.   (MIRA 10:12)
                        (Automobiles--Fuel systems)

DEMIKHOVA, T.V.; VORONTSOV, Yu.V.

   Stability of periclase-spinelide linings during the converting of
   copper matte. TSvet. met. 36 no.9:37-41 S '63.   (MIRA 16:10)

VORONTSOV-VEL'YAMINOV, A. I.

Organizing the locomotive section Petrograd, Red. sretsial ' nykh izdanii, 1922.   95 p.

Yudin TF550.V95

1. Railroads - Russia - Rolling - stock.

VORONTSOV, Yu.N.; KRUK, B.A.

Relationship between hydraulic tightness and the gap between plunger and bushing. Avt.prom. no.1:33-35 Ja '60.
(MIRA 13:5)

1. Gosudarstvennogo soyuznogo ordena Trudovogo Krasnogo Znameni Filial nauchno-issledovatel'skogo avtomobil'nogo i avtomotornogo instituta po toplivnoy apparature.
(Automobiles--Fuel systems)

VORONTSOV-VEL'YAMINOV, B. A.

"A Catalogue of Planetary Nebulae and its Statistical Study,". 1934, Vol. 11, No. 1; Astronomical Journal.
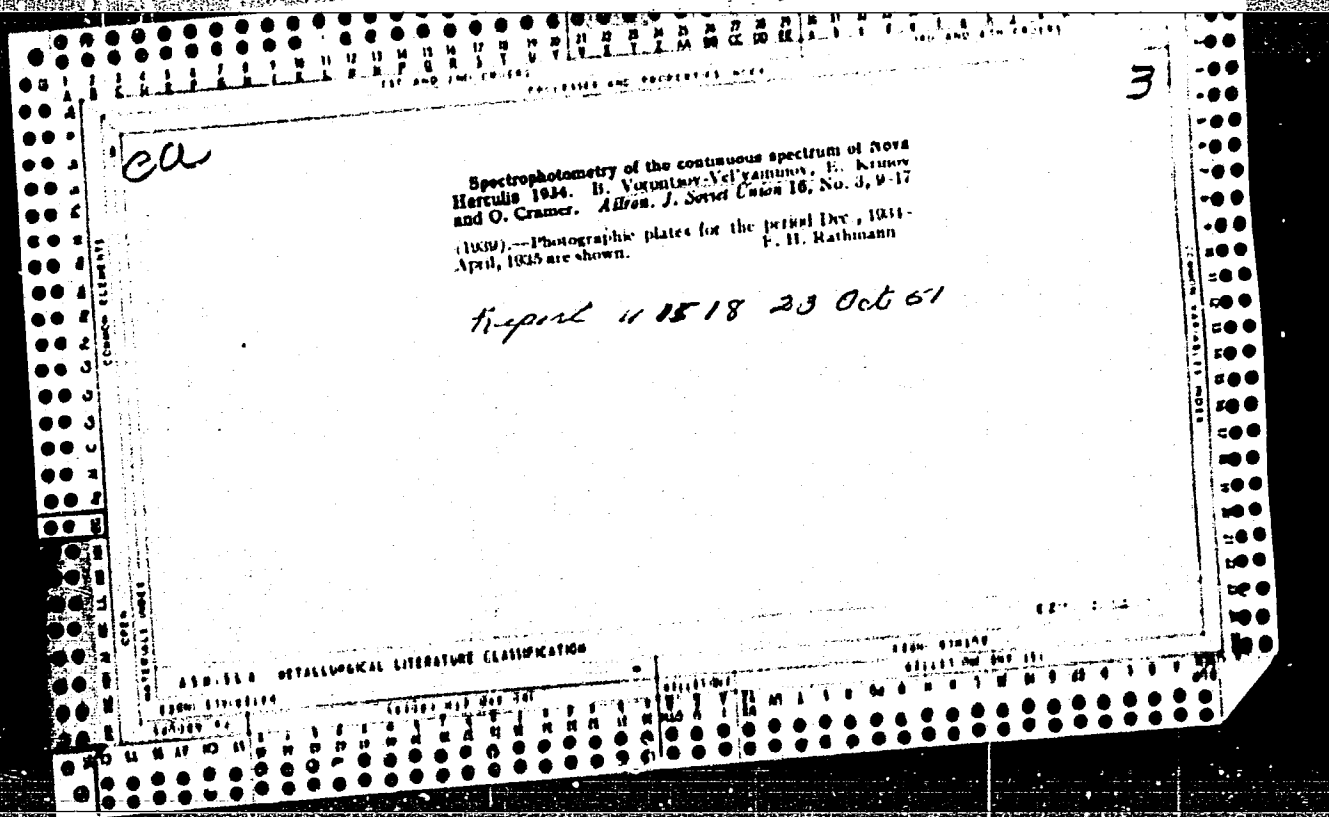
CA

3

Revised spectrophotometric temperature of nova Hercu-
lis 1934. H. Vorontsov-Vel'yaminov. *Astron. J. Soviet
Union* 16, No. 2, 17-20(1939). The max. temp. was
12,000°, the effective (Pannekoek) temp. 7,500 + 500°.
Ultraviolet radiation in excess of that for black-body radia-
tion is ascribed partly to continuous H emission and partly

to extended atms. Bands due to CN appear at the time
of max. brightness.   P. H. Rathmann

Report u 1518   23 Oct 51

ASM-SLA   METALLURGICAL LITERATURE CLASSIFICATION

Spectrophotometry of the continuous spectrum of Nova Herculis 1934.   B. Vorontsov-Vel'yaminov, E. Krunov and O. Cramer.   *Astron. J. Soviet Union* 16, No. 3, 9-17 (1939).—Photographic plates for the period Dec., 1934-April, 1935 are shown.   F. H. Rathmann

Report # 1518   23 Oct 61

METALLURGICAL LITERATURE CLASSIFICATION

VORONTSOV-VEL'YANINOV, B.A.; SAVEL'YEVA, M.V.

Spectrophotometry of the supernova in NGC 4,496. Astron.tsur. 38 no.3:555-558 My-Je '61.   (MIRA 14:6)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K.Shternberga.
(Stars, New)

KALASHNIKOV, V. F.; VORONTSOV-VEL'YAMINOV, B. A.

"Definitive curve describing the variation in brightness of nova lacertae 1910," Astron. Zhur., 16, No 5, 1939.

Report U-1518, 23 Oct 1951

VORONTSOV-VEL'IAMINOV, Boris Aleksandrovich,
1904-

A course in practical astrophysics Moskva, Gos. izd-vo tekhn.-toret. lit-ry, 1940

C A

Possibility of testing the expansion theory of novae by
the absorption of line contours. B. A. Voronstsov-
Vel'yaminov. *Astron. J. Soviet Union* 17, No. 1, 20 35
(1940)(in English).—Theoretical math. The discrep-
ancies between the observed line contours and those calcd.
on the basis of the expanding-atm. theory cannot be ex-
plained as due to limb-darkening.   P. H. Rathmann

REPORT U 1518   23 oct 51

CA

A comparison of different developers relative to the size of grains and to the characteristic curve of the photographic emulsion. B. A. Vorontsov-Vel'yaminov and M. S. Murasheva. *Astron. J. Soviet Union* 17, No. 1, 36-8 (1940).—Of 5 developers tested, p-phenylenediamine gave the smallest grain and lowest contrast. A fine grain metol developer gave the highest contrast but normal grain size.   P. H. Rathmann

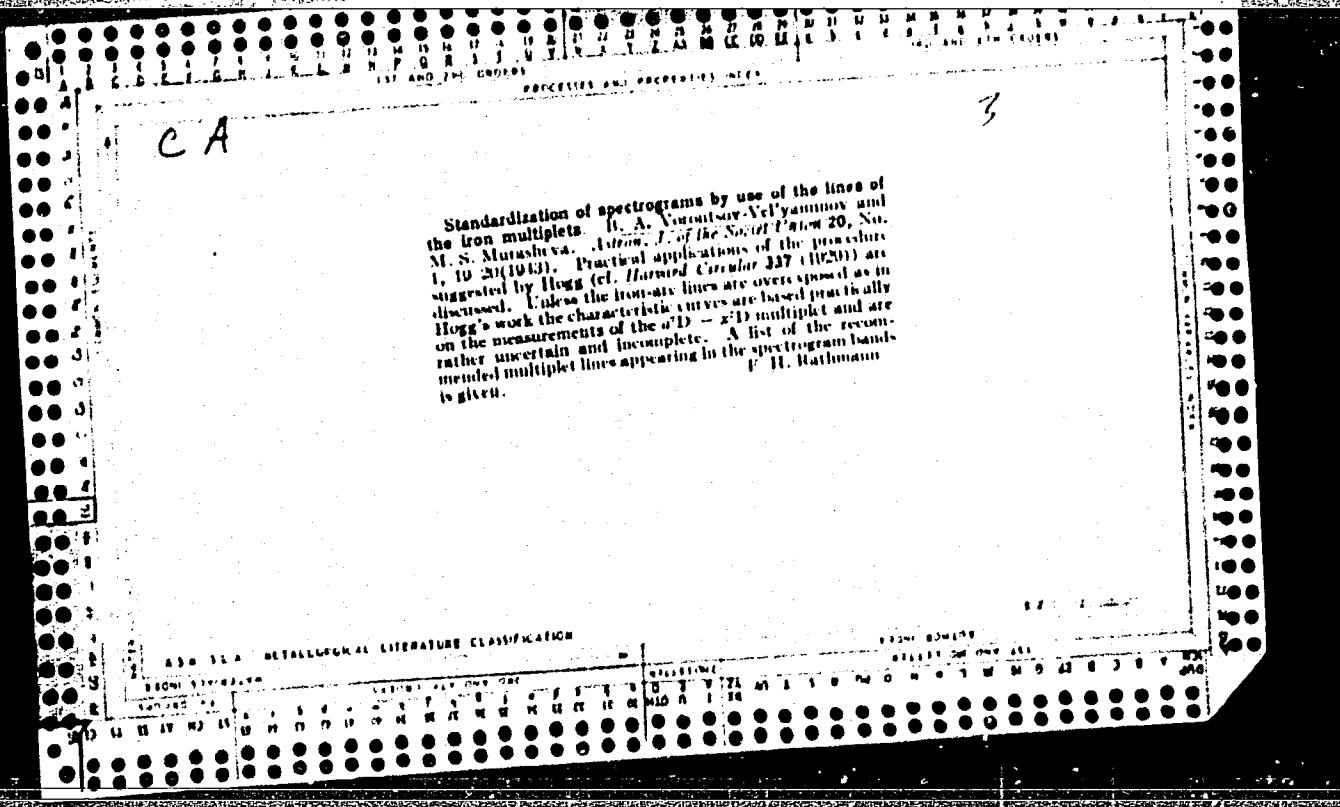Report U-1518   23 Oct 61

METALLURGICAL LITERATURE CLASSIFICATION

VOROHTSOV-VEL'YAMINOV, B. A.

"Tercentenary of Newton's birth," Astron. Zhur., 19, No 5, 1942.

Report U-1518, 23 Oct 1951

C A

Standardization of spectrograms by use of the lines of the iron multiplets. B. A. Vorontsov-Vel'yaminov and M. S. Murasheva. Astron. J. of the Soviet Union 20, No. 1, 19 31(1913). Practical applications of the procedure suggested by Hogg (cf. Harvard Circular 337 (1930)) are discussed. Unless the iron-arc lines are overexposed as in Hogg's work the characteristic curves are based practically on the measurements of the α"D − x"D multiplet and are rather uncertain and incomplete. A list of the recommended multiplet lines appearing in the spectrogram bands is given.
 — H. Rathmann

METALLURGICAL LITERATURE CLASSIFICATION

VORONTSOV, Yo.M.; KHOKHLOVA, N.A.

Development of the bird population of Gorkiy Reservoir.
Ornitologiia no.6:306-310 '63.   (MIRA 17:6)

VORONTSOV, Yu.; GARMAZ, V., elektrik; SHUTIK, I.; PRESMAN, B.; ZHIVILIN, P.

If we take the task seriously. Izobr.i rats. no.7:34-36 Jl '60.
(MIRA 13:8)

1. Chleny reydovoy brigady Minskogo kamvol'nogo kombinata.
2. Nachal'nik rovnichnogo tsekha Minskogo kamvol'nogo kombinata
(for Vorontsov). 3. Sotrudnik mnogotirazhki "Za kommunisticheskiy
trud" (for Shutik). 4. Sotrudnik zhurnala "Izobretatel' i
ratsionalizator" (for Zhivilin).
(Minsk--Textile industry)

VORONTSOV, Yu.I.; POLYAKOV, I.V.

Characteristics of a tunnel diode detector. Radiotekh. i elektron.
7 no.10:1843-1844 O'62.   (MIRA 15:10)
    (Radio detectors)   (Transistor circuits)

VORONTSOV, Yu.I.; RZHEVKIN, K.S.

In reply to A.A. Rizkin's letter on "Nonlinearity of the characteristics of a tunnel diode." Radiotekh. i elektron 7 no.6:1064 Je '62.

(MIRA 15:6)

(Tunnel diodes)   (Rizkin, A.A.)

42125

S/109/62/007/010/012/012

D234/D308

AUTHORS: Vorontsov, Yu.I., and Polyakov, I.V.

TITLE: Properties of a tunnel diode detector

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 10, 1962,
             1834 - 1844

TEXT: The authors refer to I.A. Lesk, K.N. Holonyak, U.S. Davidson
and M.W. Aarons (Wescon Convention Record, IRE, 1959, 3, 3, 9) where
unusually high detection coefficients are stated to be observed with
small signals, and explained by the properties of the current-volta-
ge characteristic of the tunnel diode near the origin of coordina-
tes. In order to check this, the authors made calculations and ex-
perimental studies of a tunnel diode detector in the frequency ran-
ge 20 kc/s - 700 Mc/s. The results show that the detector behaves
in full agreement with the static characteristic of the tunnel diode
and the detection coefficient does not exceed unity. At some frequen-
cies the constant voltage was found to be larger than the measured
high frequency voltage. The authors assume that this is due to the
resonance in the circuit formed by the capacity of the tunnel diode
Card 1/2

Properties of a tunnel diode detector   S/109/62/007/010/012/012
D234/D308

C and the inductance of the link between the terminals of the HF
voltmeter and the diode (L). Calculations are stated to show that
the curve obtained by Lesk and others for 400 Mc/s can be obtained,
for instance, with L = about 5×10^{-9} henry and C = about 40 pF,
loss resistance of the diode = 0.2 ohms and the resistance of the
p-n junction at the zero of the characteristic = 250 ohms. It is
concluded that, under certain conditions, ordinary diodes in detec-
tors can be replaced by tunnel diodes. Graphs of detector characte-
ristics of a tunnel diode detector and ordinary diode detectors for
small signals and of full characteristics of two types of tunnel
diode detectors (one with a single diode and one with two diodes
in series) are included.

SUBMITTED: May 3, 1962

Card 2/2

S/194/62/000/006/103/232
D288/D308

9,4330

AUTHORS: Vorontsov, Yu.I., Petrov, V.M., and Rzhevkin, K.S.

TITLE: Measurement of tunnel diode parameters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-4-63 p (V sb. Poluprovodnik pribory i ikh primeneniye, no. 7, M., sov. radio, 1961, 115-126)

TEXT: Methods of measuring tunnel diode (TD) parameters are described. An equivalent circuit of TD is assumed as shown in the Figure. A bridge circuit was used which enabled oscillographic observation of the volt-amp characteristic; to plot the static characteristic point by point; to measure the differential resistance of TD at any point of its volt-amp characteristic. The measurement of the differential capacitance was undertaken by resonance method at frequencies in 5 - 20 Mc/s range. The measurement of parasitic parameters L, r and C_n was done at UHF with a coaxial test line. Measurement of these parameters of a TD as a LF network was done at 1 Gc/s; for

Card 1/2

Measurement of tunnel diode parameters   S/194/62/000/006/103/232
D288/D308

a TD as a UHF network – at 3 Gc/s. Measuring methods are described
and discussed, the fundamental circuits for the TD connection for
various measurements are given, a table of parameters of several TD
samples is included. 2 references. [Abstracter's note: Complete
translation.]

Card 2/2

VORONTSOV, Yu.M., aspirant

Hysterosalpingography as a method for the diagnosis of tuberculosis
of the internal genital organs in women. Trudy Fan. nei. inst.
no.50:110-119 '62.   (MIRA 1963)

1. Kafedra akusherstva i ginekologii (zav. - prof. I.I.Grishchenko)
lechebnogo fakul'teta Kievskogo meditsinskogo instituta i
kafedra rentgenologii i meditsinskoy radiologii (zav. - prof. L.A.
Lemberg) Ukrainskogo instituta usovershenstvovaniya vrachey.

DEMIKHOVA, T.V.; BALAKH, I.K.; VORONTSOV, Yu.V.

Service of basic refractories in copper-smelting converters.
Trudy Inst. met. i obogashch. AN Kazakh. SSR 4:109-124 '62.
(MIRA 15:8)

(Converters) (Refractory materials)

VORONTSOV, V. N.

Cand Tech Sci - (diss) "Study of technological variations of the mechanized manufacture of rods with regard to the small-series character of mass production." Kiev, 1960. 22 pp; (Ministry of Higher and Secondary Specialist Education USSR, Order of Lenin Kiev Polytechnic Inst); 165 copies; price not given; (KL, 6-61 sup, 215)

VOROTSOV - VEL'YAMINOV, B. A.

The origin of celestial bodies. Moskva, Gos. iz-vo tekhniko-teoreticheskoi lit-ry, 1949. 31 p. (Nauchno-populiarnaia biblioteka)

1. Solar system.

VORONTSOV-VEL'YAMINOV, B.A., professor; KULIKOVSKIY, P.G., redaktor;
TUMARKINA, N.A., tekhnicheskiy redaktor; AKHLAMOV, S.N., tekhnicheskiv
redaktor.

[The universe] Vselennaia. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry.
1947. 488 p. [Microfilm]   (MLRA 7:12)
          (Cosmography)

612/ N/5

VORONTSOV-VEL'YAMINOV, B. A.

"The Whitish-Blue Series on Rossel's Chart," Astronomical Journal, 1947, No. 2.

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich, 1904-

[Astronomy; textbook for the 10th class of secondary schools]
Astronomiia; uchebnik dlia 10-go klassa srednei shkoly. Izd. 2.
Moskva, Gos. uchebno-pedagog. izd-vo, 1948. 183 p.   (MIRA 7:6)
        (Astronomy)

VORONTSOV-VEL'YAMINOV, Boris Aleksandrovich, 1904-

Gaseous nebulae and new stars Moskva, Izd-vo Akademii nauk SSSR, 1948. 588 p. (50-38167)

QB851.V85

1. Nebulae.
2. Stars.

VORONTSOV-VEL'YAMINOV, B. A.

Vorontsov-vel'yaminov, B.A. "Physics of astral atmospheres,"
Observation Section, in symposium: Astronomiya v SSSR za
tridtsat' let, Moscow-Leningrad, 1948, p. 120-26

SO: U-2888 Letopis Zhurnal'nykh Statey, No. 1, 1949

VORONTSOV-VEL'YAMINOV, B. A.

Vorontsov-vel'yaminov, B. A. "The gaseous nebulae and variable stars,"
in symposium: Astronomiya v SSR za tridtsat' let, Moscow-Leningrad,
1948, p. 165-78

SO: U-2888, Letopis Zhurnal'nykh Statey, No. L, 1949.

1. VORONTSOV-VEL'YAMINOV B. A.

2. USSR (600)

4. Physics and Mathematics

7. Gas Nebulae and New Stars, B. A. Vorontsov-Vel'yaminov, (Acad Sci USSE, Moscow-
Leningrad, Acad Sci USSR Press, 1949). Reviewed by V. V. Sobolev "o 6 1949.

9. Report U-3081, 16 Jan. 19)53, Unclassified.