81782

The Problem of Magnetic Susceptibility
of Metallic Lithium

S/181/60/002/02/30/033
B006/B067

its susceptibility (it has a body-centered cubic lattice). χ_1 is given by formulas (3) - (7), where the denotation introduced in Ref. 1 is used. These terms are calculated by the approximation method of Bardeen, A. G. Samoylovich, and V. Barkhatov. The results are discussed for each term individually. The following was obtained: The main portion of diamagnetic susceptibility is represented by χ_1; it was found that $\chi_1 = -0.148$; $\chi_2 = -0.025$; $\chi_3 + \chi_4 = -0.121$, which indicates the strong coupling of conduction electrons in lithium; $\chi_d = \chi_1 + \chi_2 + \chi_3 + \chi_4 = -0.294$; $\chi_5 = 0.0171 \frac{\alpha}{|\Delta E|}$, $\alpha = 15.2$ ev, $|\Delta E| = 0.52$ ev. In conclusion, the author thanks L. L. Korenblit for discussions. There are 2 tables and 4 references: 3 Soviet and 1 American.

ASSOCIATION: Institut fiziki poluprovodnikov AN SSSR (Institute of Semiconductor Physics of the AS USSR). Chernovitskiy gosudarstvennyy universitet (Chernovtsy State University)

SUBMITTED: September 12, 1959

Card 2/2

SAMOYLOVICH, A.G.; NITSOVICH, M.V.

Scattering on dipoles. Fiz. tver. tela 5 no.10:2981-2984 O '63.
(MIRA 16:11)

1. Chernovitskiy gosudarstvennyy universitet.

NITSOVICH, V. M.

AUTHORS: Samoylovich, A. G., Klinger, M. I.,   57-12-13/19
             Nitsovich, V. M.

TITLE: On the Correlation Between the Electrons in Narrow
             Admixture Zones of Semiconductors (O korrelyatsii mezhdu
             elektronami v uzkikh primesnykh zonakh poluprovodnikov).

ABSTRACT: In this paper, the influence of the correlation between
             the electrons on the electron distribution in a narrow
             admixture zone and on the electron distribution according
             to quasi-momenta. The investigation is started from the assump-
             tion, that only electrons situated in one admixture centre
             may interact with each other. From the result obtained,
             (equation) it can be seen, that in the case of $A^x = 0$ (no
             correlation) the ordinary statical formulae by Fermi-Dirac
             (with an exactitude including A^{x2}) are obtained. In the
             case of $A^x \to \infty$, (infinite correlation, implying the
             absolute impossibility of finding two electrons in one
             admixture atom) a further formula is deduced from the former
             one. The formulae deduced here, show, that the correlation

Card 1/2

On the Correlation Between the Electrons in Narrow Admixture   57-12-13/19
Zones of Semiconductors

between the electrons leads to a considerable scattering
of the electrons within the zone and promotes the occurrence
degeneration. A more exact investigation of the influence
of the correlation between electrons on the kinetics of
processes in the narrow admixture zone will be conducted by
V. M. Nitsovich in another place.

ASSOCIATION: Institute for Semiconductors AN USSR, Leningrad
(Institut poluprovodnikov AN SSSR Leningrad)

SUBMITTED: March 27, 1957

AVAILABLE: Library of Congress

Card 2/2

NITSOVICH, V. M. Cand Phys-Math Sci -- (diss) "Certain problems of the

theory of semiconductors with narrow impurity areas." Chernovtsy, 1958.

7 pp (Min of Higher Education UkSSR. Chernovtsy State Univ. Chair of

Physics of Semiconductors), 150 copies Bibliography: p 7 (11 titles)

(KL, 52-58, 98)

-9-

AUTHOR: Nitsovich, V. M.   SOV/126-6-1-3/33

TITLE: Some Aspects of the Theory of Narrow Impurity Band
            Semiconductors (Nekotoryye voprosy teorii poluprovodnikov
            s uzkoy primesnoy zonoy)

PERIODICAL: Fizika Metallov i Metallovedeniye, 1958, Vol 6, No 1,
            pp 23-39 (USSR)

ABSTRACT: The properties of the electron gas in a narrow impurity
            band, and in a semiconductor with such a band, are
            examined, using the effective mass method to calculate
            the chemical potential. State distribution densities
            are given for cubic and body-centred lattices, plus the
            temperature variation of conductivity for various degrees
            of narrow-band filling, and for various energy gaps
            between the impurity and conduction bands. The theoret-
            ical treatment follows that of Ref.(3), only the results
            for the body-centred case being given (in deriving the
            equations for the chemical potential). Detailed
            consideration is then given to the model in Figure 1;
            it is shown that the Coulomb repulsion between two
            electrons on the same atom cannot be neglected if the
            impurity band is narrow, but the exact width at which

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SOV/126-6-1-3/33
Some Aspects of the Theory of Narrow Impurity Band Semiconductors

it must be allowed for is not determined. Part 3 of the paper deals with detailed results on the chemical potential, as functions of band width b (Fig.2), temperature (Fig.3) and gap between conduction and impurity bands (Fig.4). The fourth section deals with the limitations of the effective-mass method; the treatment is applicable if $\bar{\mu} > -2b$, as is actually found. Part 5 deals with the state density distribution, and Eq.(38) gives the result for a cubic lattice; Fig.7 shows the results for cubic and body-centred lattices (curves A and B respectively). Part 6 deals with the electrical conductivity; the results are taken from Ref.(14), and the argument is not presented in full detail. Fig.8 relates to a function occurring in the cubic case (the only one considered in full). The meanings of Figs.9-12 are clear; σ_1 relates to the

Card 2/3   impurity conductance, σ_2 to the conduction-band

Some Aspects of the Theory of Narrow Impurity Band Semiconductors

SOV/126-6-1-3/33

conductance.
There are 14 references, 9 of which are Soviet, 5 English and 12 figures and 56 numbered equations.

ASSOCIATION: Chernovitskiy gosudarstvennyy universitet
(Chernovtsy State University)

SUBMITTED: November 27, 1956.

1. Electron gas--Properties   2. Semiconductors--Theory

Card 3/3

AUTHOR: Nitsovich, V. M.   57-28-6-12/34

TITLE: On the Theory of Kinetic Phenomena in
               Semiconductors With a Narrow Impurity Zone
               (K teorii kineticheskikh yavleniy v poluprovodnikakh
               s uzkoy primesnoy zonoy)

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1958, Vol. 28, Nr 6,
               pp. 1201-1206 (USSR)

ABSTRACT: In the present work previously obtained results were
               utilized for the purpose of deriving the formulae for
               the electric conductivity, the constant of the Hall
               (Kholl-) effect, and of the thermoelectromotive force
               in semiconductors with a narrow impurity zone. Results
               obtained are compared with experimental data (references
               4 and 5). The following model served as a basis for
               calculations: A monovalent admixture was investigated, the
               electrons of which are distributed over the levels in the
               narrow impurity donor zone which is in the conductive
               zone. It was taken into account that a certain part of the
Card 1/3   electrons is in the compensating admixture. The valence

On the Theory of Kinetic Phenomena in   57-28-6-12/34
Semiconductors With a Narrow Impurity Zone

zone was not taken into account. The chemical potential
was calculated from the conversation theorem for electrons

$$N_0 = N_1(\mu) + N_2(\mu) \tag{1}$$

The width of the narrow impurity zone exercices only
little influence upon the temperature dependence of the
chemical potential. The electric conductivity in the
narrow impurity zone decreases with a drop of temperature
(figure 1). From the same figure it may be seen that
correlation among the electrons exercises considerable
influence upon conductivity. Calculations showed that with
a change of the width of the narrow impurity zone the
inclination of the curve in $\ln\sigma$, $\frac{1}{T}$ does not change. What

changes are merely the values of conductivity. In the
temperature interval of from 20 to $6^\circ K$ the narrow impurity
zone exercises no influence upon the course of the
temperature of the Hall (Kholl) constant. The reduction
of the Hall constant within the temperature range of

Card 2/3 $5 - 3,5^\circ K$ is connected with the fact that within this range

On the Theory of Kinetic Phenomena in
Semiconductors With a Narrow Impurity Zone   57-28-6-12/34

the conductivity of the impurity zone becomes considerably
greater than in the conductive zone (figure 1).
Thermoelectromotive force depends to a considerable
extent on the width of the zone (figure 2). Temperature
dependence agrees qualitatively with the experimental data
determined for it (reference 5). The author thanks
Professor A. G. Samoylovich for supervising this work.
There are 2 figures and 7 references, 5 of which are Soviet.

ASSOCIATION: Chernovitskiy gosudarstvennyy universitet
                 (Chernovtsy State University)

SUBMITTED: July 4, 1957

                 1. Semiconductors—Impurities   2. Electrons—Diffusion
                 3. Semiconductors—Electrical properties   4. Mathematics

Card 3/3

NITSOVICH, V. M

ACCESSION NR: AP3006819   S/0185/63/008/008/0877/0882

AUTHOR: Nitsovych, V. M.

TITLE: Statistical properties of an electron gas with a narrow energy band

SOURCE: Ukrains'kyy fizychnyy zhurnal, v. 8, no. 8, 1963, 877-882

TOPIC TAGS: electron gas, Fermi-Dirac statistics, Fermi gas, impurity band, semiconductor properties, chemical potential, density-of-states, statistical sum, face-centered lattice, semiconductor energy band

ABSTRACT: Anomalies in the electrical, galvanometric and other properties of semiconductors are often due to narrow impurity bands, and this article treats the statistics of an electron gas in such bands. Since energy spectra are determined only for the edges of the narrow bands, methods of treatment based on effective masses cannot be used. A formula was derived for the calculation of the statistical sum, the chemical potential and the number of states in a band with energy equal to or less than a given energy, epsilon, and a density-of-states distribution within the narrow band for substances with a face-centered lattice.

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ACCESSION NR: AP3006819

It is shown that in the face-centered lattice, for which the energy is not symmetric, the density-of-states distribution is assymetric with respect to the center of the band. "The author expresses great thanks to Prof. A. G. Samoylovy*ch for his discussion of this work." Orig. art. has 17 numbered equations.

ASSOCIATION: Chernivetsky*y Derzhuniversy*tet (Chernivetsky*y State University)

SUBMITTED: 04May62, revised   DATE ACQ: 30Sep63   ENCL: 00
           30Jan63

SUB CODE: 00   NO REF SOV: 006   OTHER: 00

Card 2/2

NITSOVICH, V.M. [Nitsovych, V.M.]

Statistical properties of an electron gas in a narrow energy
band. Ukr. fiz. zhur. 8 no.8:877-882 Ag '63.   (MIRA 16:11)

1. Chernovitskiy gosudarstvennyy universitet.

ACCESSION NR: AP4040931   S/0185/64/009/006/0617/0628

AUTHOR: Samoylovych, A. O. (Samoylovich, A. O.), Nitsovych,V.M. (Nitsovich,V.M.)

TITLE: Theory of conductivity in semiconductors with a narrow impurity zone.

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 9, no, 6, 1964, 617-628

TOPIC TAGS: Semiconductors impurity band, impurity conduction, compensated
semiconductor, doped semiconductor, Hall coefficient, thermal E.M.F.,electrical
conductivity, electron tunneling, electron hopping, quasi-impulse method

ABSTRACT: Transport phenomena are considered for doped and compensated
semiconductors with a narrow impurity zone located within the intrinsic forbidden
zone. The work of Mott and Twose (Adv. Phys. 10, No. 38, 107, 1961) is expanded
and refined. Introductory remarks explain that narrow impurity zones cannot be
treated as bands in the Bloch wave scheme, but that localized wannier functions
and a Heitler-London scheme must be used. Further, since the zone is so
complicated, havind different effective masses at top and bottom, the effective
mass approach breaks down. Feynmann's method is used to untangle the non-
commuting energy operators that appear in expansions of exponential thermodynamic
functions. The repulsive forces of filled (charged) compensating impurities on

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ACCESSION NR: AP4040911

the impurity charge carriers is a prime consideration in the derivations. Its
net effect is to contribute to the degeneracy of the charge carrier (electron)
gas. This phenomena, as well as the effect of electron spin, was overlooked by
Price in his appendix to the article of H. Koenig and O. R. Cunter-Monr sic
(J. Phys. Chem. Solids, 2, 263, 1952) and the oversight lead to incorrect results.

The conductivity sigma, all constant R and thermal E. M. F alpha were calculated
from the general results. At low temperatures, where impurity effects predominate,
the slopes of the theoretical expressions for R and sigma agree closely with
experimental results. The theoretically calculated activation energy of 1.1×10^{-3}
eV also agrees closely with the experimental value of 1.6×10^{-3} eV. The theoretical
hold best for low compensation ratios. It is concluded from the close fits of
theoretical and experimental curves [experimental data from H. Fritzsche, K.
Lark-Horowitz, Phys. Rev. 113, 999, 1959] that the anomalies in the thermal
dependencies of the transport coefficients are manifestations of the repulsive
effects of compensators and the correlation of electrons at low temperatures.
The Mott scheme of impurity conduction involved a "hopping" between filled and
empty impurity sites in which the phase relations between the initial and final
electron states were not preserved. The authors' method of calculation, that of
"quasi-impulses" [quasi-momentum?], required that phase relations be preserved.

Card 2/3

SAMOYLOVICH, A.G. [Samoilovych, A.H.]; NITSOVICH, V.M. [Nitsovych, V.M.]

Theory of conductivity of semiconductors with a narrow impurity zone. Ukr. fiz. zhur. 9 no.6:617-628 Je '64.

(MIRA 17:11)

1. Chernovitskiy gosudarstvennyy universitet.

L 10653-66   EWP(j)/T/EWP(t)/EWP(k)/EWP(n)/EWP(b)/EWA(c)   JD/HW/DJ/RM
ACC NR: AP5028434   SOURCE CODE: GE/0029/65/000/011/0647/0649

AUTHOR: Hittel, J. (Zwickau); Gartner, G. (Zwickau); Mockel, J. (Zwickau)

ORG: Central Institute of Manufacturing Technology in Machine Building, Karl
Marx Stadt, Division of forming techniques, Zwickau (Mitteilung aus dem Zentral-
institut für Fertigungstechnik des Maschinenbaus, Karl-Marx-Stadt, Bereich
Umformtechnik)

TITLE: Glass foam as lubricant carrier in steel extrusion

SOURCE: Neue Hutte, no. 11, 1965, 647-649

TOPIC TAGS: steel, steel extrusion, hot extrusion, extrusion lubricant, glass
lubricant, lubricant carrier, glass foam carrier

ABSTRACT: East German glass foam (usually used as building material) was found
to be unsuitable as a lubricant in steel extrusion when used alone owing to a
high content of silicon dioxide and carbon, the latter originating from the foaming
medium. However, it was found that the same glass foam is an excellent carrier of
other lubricants such as glass powder. Foam-glass disks 73 mm in diameter and
2—3 mm thick containing pores 0.1—4.0 mm in diameter were rolled in glass powder
so that the latter filled the open pores. Then the disks were used in a regular
manner in the extrusion of carbon steel at 1100C with a reduction of 82—96.5% in
a vertical 500-ton press. The extruded bars had a perfect surface and accurate
dimensions, and the service life of dies increased by 75%. Since regular glass

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L 10653-66

ACC NR: AP5028434   /

foam is not suitable for extrusion at temperatures of 800—900C (extrusion of
nonferrous metals), another series of experiments has been initiated in which
foamed plastics in combination with a liquid, but viscous, lubricant will be
used. Orig. art. has: 2 figures.   [DV]

SUB CODE: 13/ SUBM DATE: 10May65/ OTH REF: 005/ ATD PRESS: 4/6 9

Card 2/2

ACCESSION NR: AP4034915

S/0181/64/006/005/1369/1374

AUTHORS: Nitts, V. V.; Papulova, Z. O.; Sosnovskaya, I.; Sosnovskiy, Ye.

TITLE: Structure investigation by neutron diffraction on a fast pulse reactor

SOURCE: Fizika tverdogo tela, v. 6, no. 5, 1964, 1369-1374

TOPIC TAGS: neutron diffraction, crystal structure, fast pulse reactor, oxygen parameter, reactor IBR

ABSTRACT: The authors investigated the applicability of a fast pulse reactor IBR, as used at the Laboratoriya neytronnoy fiziki Ob"yedinennogo instituta yaderny*kh issledovaniy (Laboratory of Neutron Physics of the United Institute of Nuclear Studies) for structural studies of crystals. The average power of the instrument is 1 kv, and a beam of incident white light is employed. The energy spectrum of neutrons scattered at the incident angle was measured according to transit time. The technique gave high intensity and low background. Neutron diffraction spectra were obtained for powdered samples of Al, Zn, and ZnO. The results show that great precision may be obtained for structural analysis. By this method it was found that the oxygen parameter of ZnO is 0.374 (a refinement of the value previously

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ACCESSION NR: AP4034915

taken, 0.375, the average of 0.360 and 0.390). In comparison with the standard
powder method using a water-cooled, water-moderated reactor of 2000 kw, the fast
pulse reactor shows considerable gain in time of measurement (because of the high
intensity and low background). "The authors thank F. L. Shapiro for proposing the
topic and for his useful discussions. They also thank B. Buras for scientific
consultation and S. Maby*var.ts and V. V. Golikov for their aid in the work." Orig.
art. has: 6 figures and 1 table.

ASSOCIATION: Ob"yedinennvty institut yaderny*kh issledovaniy, Dubna (United
Institute of Nuclear Research)

SUBMITTED: · 18Nov63   ENCL: 00

SUB CODE: NP, OP   NO REF SOV: 002   OTHER: 004

Card   2/2

ZALIVIN, N.N.; NITTS, Ye.F.

Contactless temperature transducer of calender rolls. Kauch.i rez.
21 no.8:48-49 Ag '62.   (MIRA 16:5).

1. Nauchno-issledovatel'skiy konstruktorsko-tekhnologicheskiy
institut shinnoy promyshlennosti, Omsk.
                    (Rubber industry—Equipment and supplies)

ZABORENKO, K.B.; BOGATYREV, I.O.; NITTSOL'D, D.

Periodic production of thorium X from preparations of radiothorium by the method of ion exchange chromatography. Radiokhimiia 5 no.5: 638-639 '63.

(MIRA 17:3)

ZABORENKO, K.B.; NITTSOL'D, D.; KOROBKOV, V.I.

Use of the method of microautoradiography for studying the distribution of radium in films of high molecular weight substances. Radiokhimiia 5 no.5:642-643 '63.   (MIRA 17:3)

CATRINA, I.; MIHELI., H. D.; IORDACHE, Cerina; NITU, Cernelia

    Biochemical and physiological studies on the drying phenomenon
of oaks. Studii cerc biochimie 5 no.1:25-37 '62.

    1. Institutul de cercetari forestiere si Institutul de biochimie
al Academiei R.P.R., Bucuresti.

NITU, Constantin

Communists are in front. Constr Buc no.756:3   4 July '64.

1. Assistant Secretary of the Party Committee, I.C.M. No.5,
General Directorate of Construction and Assembly, Bucharest.

L 10481-66

ACC NR: AP6003547   SOURCE CODE: RU/0011/65/009/001/0032/0035

AUTHOR: Nitu, C.—Nitu, K. (Engineer)   38
                                                                        B

ORG: none

TITLE: Solution of an optimizing problem by means of analog machines

SOURCE: Automatica si electronica, v. 9, no. 1, 1965, 32-35

TOPIC TAGS: analog computer, computer application, computer calculation

ABSTRACT: In an article "for the young engineer" the author illustrates the methodo-
logy of solving an optimizing problem by means of analog devices. Both the case of
a linear and that of a non-linear optimizing problem are considered. Orig. art. has:
4 figures, 5 formulas. [JPRS]

SUB CODE: 09 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 001
SOV REF: 001

HW

Card 1/1   UDC: 621-503.51:518-51621.372

COUNTRY   : RUMANIA   I
CATEGORY   : Plant Physiology. Water Conditions.

ABS. JOUR: : RZhBiol., No. 3   1959, No. 10607

AUTHOR   : Georgescu, C. C., Nitu, Gh.
INST.   : -
TITLE   : The Study of Sap in Healthy and Dessicated
                   Austrian Pine.

ORIG. PUB.   : Bul. stiint. Acad. RFR. Sec. biol. si stiinte agric.
                   Ser. bot., 1957. 9. No. 1, 87-103

ABSTRACT   : Sap flow in 31 trees (aged 55-60 years) of healthy and
                   withering pine was studied in Mediash rayon (RFR). 0.2%
                   aqueous fuchsin solution was being injected into the area
                   trunks at the height of 0.5 meters above the ground sur-
                   face for 3 and 6 hours with the aid of Sevirtaev-Korzet-
                   skiy syringe. Fuchsin moved through cambium and in a
                   small amount through the heartwood and through the entire
                   xylem ring. In the narrow annual rings, fuchsin moved
                   faster than in the wide ones. The curve of the rate of
                   the pigment movement during a day is similar to the curve
                   of transpiration. The rate of the translocation of

CARD: 1/3

COUNTRY   :   I
CATEGORY   :

ABS. JOUR.   : RZhBiol., No.   1959, No. 10607

AUTHOR   :
INST.   :
TITLE   :

ORIG. PUB.   :

ABSTRACT   : fuchsin was decreasing with the withering of the crown:
               in trees with the crown 75% withered, the rate of trans-
               location equals 0.06-0.09 meters per hour in comparison
               with 0.5-1.36 meters per hour in healthy trees. The ab-
               sorption of fluid was increasing with the withering of
               the crown. In the branches, the pigment moved 3-5 times
               faster than in the trunk. On the southern side of the
               crown, the movement of the sap is more intensive than on

CARD: 2/3   8

COUNTRY   : RUMANIA
CATEGORY   : Plant Physiology. Water Conditions.

ABS. JOUR.   : RZhBiol., No. 3   1959, No. 10606

AUTHOR   : Nitu, Gh.
INST.   : -
TITLE   : On the Ascending Sap Flow in Aspen.

ORIG. PUB.   : Rev. paourilor, 1957, 71, No. 1, 13-1S

ABSTRACT   : The ascending movement of sap was studied in 8 aspen trees
                 by the method of injecting 0.3% fuchsin solution into the
                 trunks at different height. The rate of the sap flow at
                 the base of the stem comprised 2-3.1 meters per hour. The
                 sap moves faster in the trunk at the level of the tree
                 crown. The rate of the sap movement depends on the plant
                 species, temperature, and the humidity of the air. The
                 ascending movement of the sap was observed only in the
                 rings of cambium, the movement in its outer part proceed-
                 ing faster than in the inner part. Only the process of

CARD:1/2

GEORGESCU, C.C.; NITU, Gh.; TUTUTNARU, V.

Research on the water circulation in the oak Quercus robur L. in the
course of its drying. Studii cerc biol veget 12 no.4:475-495 '60.
(EEAI 10:5)
1. Membru corespondent al Academiei R.P.R. (for Georgescu)
        (Oak)

MITU, I.

Aspects of the international trade of foliage-tree timber. p.258.

INDUSTRIA LEMNULUI. (Asociatia Stiintifica a Inginerilor si Tehnicienilor
din Rominia si Ministerul Industriei Lemnului)
Bucuresti, Rumania
Vol. 6, no. 7, July 1959.

Monthly list of Eastern European Accession Index (EEAI) LC vol. 8, No. 11
November 1959
Uncl.

COMEA, Ana; VOLOVICI, C; MUCENIC, Iulia; NITU, I.

Pedological complex of Calmatui Valley. Dari seama sed 46:
429-446 '58/59 [publ. '62].

COREA, Ana; VOLOVICI, C.; MUCENIC, Iulia; NITU, I.;

    Soil of the low plain of Siret. Dari seama sed 47:421-439
    '59/60 [publ. '62].

COREA, Ana; VOLOVICI, C.; MUCENIC, Iulia; NITU,I.; BRATOSIN, Niculina;
    BUGEAC, Elena; IACOB, Eugenia; VASILESCU, Marcela; BALABAN,Lidia;
    COLIOS, Elena; PETRESCU, Adriana; POPESCU, Florica; SAFTA, Rodica;
    MAC, Hareta.

The Oradea plain and hilly soils. Dari seama sed 48 ████88
60/61 [publ. '62]

FRIEDLANDER, E.M.; NITU, R.

Production of high energy neutral pions in $\pi^- - Xe$ collisions at 9 BeV. Comunicarile AR 13 no.9:317-320   S'63.

1. Membru corespondent al Academiei R.P.R. (for Friedlander).

ILIESCU, C.C., prof.; ROMAN, L., dr.; ILIESCU, M., dr.; IACOBINI, P., dr.;
NITU, S.; CONSTINTINESCU, S.; CONSTANTINESCU, A.; GHEORGHIU, C.

The action of unsaturated fatty acids on blood lipids in
arteriosclerosis. Med. intern. 14 no.12:1433-1442 D '62.

1. Lucrare efectuata la ASCAR, Bucuresti.
          (BLOOD LIPIDS)   (ARTERIOSCLEROSIS) (FATTY ACIDS)
                     (BLOOD CHOLESTEROL)

RUMANIA

ILIESCU, C.C., Professor; ILIESCU, Matei, MD; DOMOCOS, G., MD;
    IACOBINI, P., MD; CONSTANTINESCU, S., Chemist; NITU, S., Chemist

"Essential Hyperlipaemia Associated with Atherosclerosis
    (Effects of Nicotinic Axt Acid."

NITU, T., ing.

Achievements and experience gained in the Suceava region in
the execution, maintenance, and exploitation of ponds and
storage reservoirs. Hidrotehnica 8 no. 5:173-178 My '63.

NITU, T., ing.

Toward the reversible utilization of the draining system in the Suceava region. Hidrotehnica 7 no.1:29-33 Ja '62.

NITU, T., ing.

Considerations on the existing drainage works in the Suceava region.
Hidrotehnica 7 no.10:345-350 O '62.

NITU, Th., ing.

Some results obtained by applying the work of intermanagement organization in the Suceava region. Rev geodezie 8 no. 3: 65-70 '64.

1. Suceava Regional Office of Planning and Land Organization.

COMANESCU,T., ing.; HUMILEA, I., ing.; NITU,V., ing.

Considerations on the choice of the optimum tension utili-
sation for electric drives in the oil extraction industry.
Petrol si gaze 14 no.9:448-456 S'63.

NITU, V., conf. ing., candidat in stiinte tehnice

Progress in the design and construction of thermal power stations.
Energetica Rum 12 no. 8:373-380 Ag '64.

1. Director of the Institute for Electric Power Study and
Planning, Bucharest.

COMANESCU, Toma, ing.; HOHULEA, Ion, ing.; NITU, Vasile, ing.

Selection of optimum voltage for electric equipment used
in the petroleum industry. Ipari energia 5 no.3:67 M '64.

BRAUNER,R., prof.; NITU, Victoria, dr.; HOANCA,O. dr.; MIHNEA, I.dr.

Serum glycoproteins in atherosclerosis. Med. intern. 16 no.1:
39-46   Ja'64

1. Lucrare efectuata in clinica medicala a Spitalului
"Brincovenesc" (director: prof. R. Brauner).

GALEA, Gh., conf.; NITU, Victoria, dr.; HOANCA, O., dr.; GALEA, I., dr.;
POPESCU, Ana, chimist; ENACHE, M., dr.

Contribution to the study of hepatic cytonecrosis. Med. intern. 14
no.4:445-454 Ap '62.

1. Lucrare efectuata in Clinica medicala a Spitalului "Brincovenesc"
(prof. R. Brauner).
(LIVER CIRRHOSIS)   (HEPATITIS)   (NECROSIS)
(BLOOD ALKALINE PHOSPHATASE)   (DEHYDROGENASES)   (ISOMERASES)
(ALDOLASE)   (AMINOTRANSFERASES)   (ENZYME TESTS)
(IRON METABOLISM)   (AMINOACIDURIA)   (URIC ACID)

MITU, V.

MITU, V. Aspects of the problems of interrupters, high tensions, and construction of electric lines, at the 1-th session of the International Conference on Large Electric Systems. p. 940

Vol. 4, no. 12, Dec. 1956
ELECTROTEHNICA
TECHNOLOGY
RUMANIA

So: East European Accession, Vol. 4, No. 5, May 1957

MITU, V.

Mathematical expressions of security in the operation of electric circuits.

p. 189 (Academia Republicii Populare Romine. Institutul de Energetica. Studii Si Cercetari De Energetica. Vol. 6, no. 3, July/Sept. 1956. Bucuresti, Rumania)

Monthly Index of East European Accessions (EEAI) IC. Vol. 7, no. 2, February 1958

NITU, V.

Conditions for the replacement of copper with aluminum in choke coils. p.77.
(ELECTROTEHNICA. Vol. 5, No. 3, Mar. 1957, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957
Uncl.

NITU, V.I.,ing.; VASILESCU, N.,ing.

Current trends in designing thermoelectric plants in Rumania.
Energetica Rum 8 no.8:359-365 Ag '60.

NITU, Vasile, ing., candidat in stiinte tehnice

A new system for the power plants and transformer stations with 6 and 10 kv. tensions. Energetica Num 9 no.11:433-439 N '61.

(Hydroelectric power stations)

NITU, Vasile, candidat in stiinte tehnice

Norms for the technological project of thermoelectric stations, power systems, thermal and electrical nets in the U.S.S.R.. Reviewed by Vasile Nitu. Energetica Rum 10 no.6:263-264 Je '62.

NITU, V.I., candidat in stiinte tehnice ing.; BRADESCU, M., mat.;
COSTIN, Em., ing.

Statistical and probabilistic methods in electric power systems.
Energetica Rum 12 no.11:549-562 N '64.

GEORGESCU, A., ing.; NITU, V.I., ing.; BURDUCEA, C., ing.

Power engineering in Great Britain. Energetica Rum 12
no.12:633-639 D '64.

EDUARD, Gheorghe, ing.; FRANCISC, Boros, ing. ROSELESE, ...
VASILE Dragos. ; SANDA C.; RADULESCU, C.; OLTEANU, C., ing:
IONESCU, Ion; ALEXANDRU, Bernat; CVASNIEVSCHI, E.; NITU, V.I., ing.

Reserves of reduction of material consumption in constructions.
Probleme econ 18 no.2:152-157 F '65.

1. Director, "Laminorul" Plant, Braila (for Eduard). 2. Director,
"Mondial" Factory, Lugoj (for Francisc). 3. Head of the Technical
Office, "Mondial" Factory, Lugoj (for Roseliese). 4. Director,
Scaeni Glass Factory (for Vasile). 5. Director, "Victoria" Dis-
trict Enterprise of Local Industry, Tirgoviste (for Sanda). 6.
Chief Engineer, "Victoria" District Enterprise of Local Industry,
Tirgoviste (for Radulescu). 7. Director, Regional Trust for
Constructions, Arges (for Olteanu). 8. Chief Engineer, Regional
Trust for Constructions, Arges (for Ionescu). 9. Director,
Regional Trust for Local Constructions, Bucharest (for Alexandru).
10. Chief Engineer, Regional Trust for Local Constructions,
Bucharest (for Cvasnievschi). 11. Director, Institute for Power
Projects and Studies, Bucharest (for Nitu).

616.921.5:576.8.097.35

RUMANIA

SOLOMON, I., GRIGORIU, Th., SCHEAU, Alla, DUVAN, Xenia, and
NITULESCU, C., of the State Inspectorate for Hygiene and Labor
Safety (Inspectia de Stat pentru Igiena si Protectia Muncii),
Bucharest.

"A Study of the Average Level of Antigrippal Antibodies By
Means of the HAI Reaction on Sample Mixtures of Sera."

Bucharest, Studii si Cercetari de Inframicrobiologie, Vol 17,
No 2, 66, pp 129-132.

Abstract: The authors studied the average level of HAI anti-
grippe antibodies on 33 sample mixtures of sera, each being
obtained from approximately 2,000 to 2,500 individual sera
from residents of Bucharest. The average level of antibodies
determined from the sample mixtures agreed with the results
obtained with individual serum samples (geometric mean of the
individual titers), indicating that this method can be used to
advantage to determine the immunological profile of a population.
Includes one table, one figure and two Russian refe-
rences. -- Manuscript submitted 24 February 1965.

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- 23 -

TANASESCU, G.; ORGHIDAN, Georgeta; NITULESCU, Florica

A new blood dealbuminizer. Rumanian M Rev. no.4:6-8 '61.
       (HEMATOLOGY)   (SULFATES) (SULFURIC ACID)
                (SERUM ALBUMIN)

RUM/9-59-9-4/46

18(5)
AUTHOR: Niţulescu, Florin, Engineer

TITLE: Finishing Rolls for Round Steel Bars Rolling

PERIODICAL: Metalurgia şi construcţia de maşini, 1959, Nr 9,
            pp 748-755 (RUM)

ABSTRACT: Round steel has to be rolled with minus tolerances
            for greater economy of material. In view of the
            higher efficiency of the machine tools, processing
            the hot-rolled steel bars, the tolerances are with-
            in more severe limits. To meet the increasing re-
            quirements of precision rolling, the rolling-mill
            engineers were obliged to apply new and advanced
            methods for the hot rolling of steel bars. The main
            factors on which the restricted-tolerance hot-rol-
            ling of round steel depends are the following: de-
            sign of the finishing and prefinishing rolls, the
            operational method and the guidance system applied
            at the rolling mill. This article deals with the
            special problems of the design of finishing and pre-
Card 1/4   finishing rolls for round steel rolling. The author

Finishing Rolls for Round Steel Bars Rolling

RUM/9-59-9-4/46

begins with the description of the design of the
round finishing roll. He deals with the calculation
of steel contraction during cooling, the tolerances
prescribed in the standards, the "jump" s of the
cylinder as shown in Fig 3a, the number of round
sizes which must be rolled with the same roll, the
difference of broadening Δb between the two ends
of the rolled bar, depending on the diameter d_c and
length of the bar (Figs 1 and 2); the wear "u"^{c}of
the roll which is also taken into account in the
calculation of the height h; and the deflection "f"
of the cylinder. The author then gives the formulae
for the calculation of the width b and height h of
the round finishing roll. Another equation, to-
gether with Fig 3b, gives the calculation of the
width increase due to the jump, Δ s. In practice,
the value of $\Delta s = d_c$ (0.0075-0.0025). The values
of the tolerances admitted δd are taken from the
corresponding standards. For b the plus tolerance
is taken, for H the minus tolerance. In continuing,

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RUM/9-59-9-4/46

Finishing Rolls for Round Steel Bars Rolling

the author presents the main design methods. The
first method is to design the roll with a radius
$R > \dfrac{d_c}{2}$, which is used for finishing round gauges

for 5 to 60 mm round steel bars. Another method is
the enlarging of the roll by circular arcs of radii
$R = \dfrac{d_c}{2}$, as shown in Fig 4. A third method is present-
ed in Fig 6, referring the design involving
an enlarging with a greater diameter for a
depth of $\frac{1}{4}$ only. Another method of enlarging is
that described by Fig 7. In chapter B, the author
deals with the design and calculation of the finish-
ing oval rolling gauges, Figs 9, 17. He presents
the calculation of the "coefficients of reduction
of the diameters," based on a publication by Bakhtinov
/Ref 1/. Some values presented are said to be prac-
tically experimented, for example the ratio
$q_1 = \dfrac{b_{k1}}{h_1}$ (see Fig 18) is being tested at Combinatul

Card 3/4

Finishing Rolls for Round Steel Bars Rolling   RUM/9-59-9-4/46

Siderurgic Hunedoara (Steelworks of Hunedoara). The finishing flat oval represented in Fig 20 was tested by M.V. Zhuralev /Ref 1/. The "Rustavi" plant of USSR built prefinishing hexagonal rolls for large-section steel bars (160 to 350 mm diameter) to be rolled on the blooming mill. The data of that gauging are indicated in Table 1. The diagram of variation of the ratio $\dfrac{b_{k1}}{h_1}$ as a function of the bar diameter is presented in Fig 22. Further data are given for the design and calculation of the square prefinishing gauge for steel rolling, represented in Fig 23. There are 12 diagrams, 12 graphs, 1 table, and 5 references, 4 of which are Soviet and 1 German.

Card 4/4

NEEULESCI   NITULFSCU, I.

RUMANIA/Cosmochemistry - Geochemistry - Hydrochemistry.   D.

Abs Jour   : Ref Zhur - Khimiya, No 8, 1958, 24603

Author   : Nitulescu, I., Manea, A.
Inst   : -
Title   : Structural Connection of Pyrite with Petrographic
Components of Coal in the Jiului Valley.

Orig Pub   : Rev. minelor, 1957, 8, No 6, 253-254, 292-297

Abstract   : In relation to coal, two varieties of pyrite have been
determined: a syngenetic and an epigenetic which was
deposited along the fissures and planes of stratifica-
tion during the filtration of iron containing solutions.

Card 1/1   15

Nitulescu, I.

The action of nicotinic acid on thyroid and hypophyseal changes produced in cabbage goiter of rabbits. I. Nitulescu, L. Wasserman, and E. Copal. *Acad. rep. populare Romane. Filiala Jaşi, Studii cercetari şliin/.* 3, 251-70 (1952).—A study was made of the action of nicotinic acid (I) on the morphological changes produced in rabbits kept on an exclusive cabbage diet. Moderate doses (15 mg. per kg. body wt.) of I administered subcutaneously daily partially reëstablish the normal morphological aspect of the thyroid (dimensions of the follicles, accumulation of the colloids) and of the hypophysis (increase of the no. of the eosinophils, dilatation of the capillaries). Large doses of I cause the appearance of hyperplasia of the thyroid (great, irregular, and serrated follicles with epithelial proliferations, and a colloid representing vacuoles of resorption) and important changes of the level of the hypophysis (increased proportions of the eosinophils and angiomatous aspect of the vascular network). These effects of I probably are closely assocd. with the changes produced in the thyroid and hypophysis by the goiterogenic substances in the cabbage and are controlled by the cerebral cortex. Emanuel Merdinger

Nitulescu, I.

Studies of the chloro-glycemic equilibrium in ulcerous disease. I. Nitulescu, Gh. Tudoranu, P. Balanuta, C. Roventa, and E. Mihai. *Acad. rep. populare Romine Filiale Iasi, Studii cercetari stiint.* 3, No. 1/4, 93-04(1952).— The variations of the chloro-glycemic equil. was studied in 56 patients with ulcers in whom artificial hyperglycemia was produced. In 28 cases the chloride content increased with the increase of glucose in the blood. An inverse ratio was found in diabetic persons. It was concluded that ulcerous disease involves the whole organism.   E. Merdinger

NICULESCU, I., prof. dr.

A point in the controversial discussion of the etiology of
pellagra; the works of Dr. I.Neagoe. Rev. st.med., med. int.,
Bucur. 6 no.4:122-128 Oct-Dec 54.

1. Comunicat la sesiunea I.M.F., Iasi, 4-6 iunie 1954.
        (PELLAGRA, etiology & pathogenesis
            research, hist. in Rumania, contribution of Neagoe)
        (BIOGRAPHIES
            Neagoe, I.)

T

Country : RUMANIA
Category: Human and Animal Physiology. Internal Secretion.
           Thyroid Gland

Abs Jour: RZhBiol., No 19, 1958, 88953

Author   : Nituescu, I.; Wasserman, L.; Klingher-Wasserman, D.;
            Gavrilita, L.
Inst   : Rumanian Academy, Iasi Affiliate
Title   : The Protective Action of Vitamin A in Dystrophy of
            the Thyroid Gland, Caused by Thiourea Derivatives.

Orig Pub: Studii si cercetarii stiint. Acad. RPR Fil. Iasi Med.,
           1956, 7, No 1, 1-16

Abstract: Methylthiuracil was administered in doses of 5 mg/
           100 g to rats for a period of 15 days. Typical
           changes resulted in the thyroid gland and in the
           hypophysis. These changes were less marked (parti-

Card   : 1/2

NITULESCU, I., acad.

Investigations concerning the coupled antagonistic reflexes by which the cerebral cortex controls the activity of metabolic equilibria. Rumanian M Rev. no.1:204-205 Ja-Mr '61.

1. The Institute of Medical Research of the R.P.R., Academy, Jassy Branch. Director: Acad. I. Nitulescu.
(REFLEX)   (CEREBRAL CORTEX physiology)
    (BLOOD SUGAR physiology)

NITULESCU, I., ing.; MOCANU, Ana, ing.; FILI.'EANU, Livia, ing.; ANGHEL,
Lucia, geolog; SAPORTA, Ecaterina, ing.

Quantitative mineralogical analysis of technological ore
tests. Rev min 15 no.11:595-601 N '64.

NITULESCU, J., Academ.; WASSERMAN, L.; KLINGHER-WASSERMAN, D.

Effect of nicotinic acid on the evolution of avitaminosis
in rats. Bul. stiint. sect. med. 8 no.1:49-61 Jan-Mar 56.

(VITAMIN A DEFICIENCY, experimental
    eff. of nicotinic acid on develop. & course).
(NICOTINIC ACID, effects
    on exper. vitamin A defic.)

ALBOIU, Marieta; NITULESCU, Marcela; PADURARU, Aneta

The drying up of the rivers in the Cris Basin. Studii hidrol 3:15-23
'62.

MOCIORNITA, C.; DINCA, A.; NITULESCU, M.

Seasonal and monthly flow repartition on the Rumanian rivers
in an average year. Studii hidrol 5:3-23 '63.

NITULESCU, M.; MOCIORNITA, C.; DINCA, A.; VIRCOL, L.; VOICU, Gh.; MIHAILESCU,
      Gh.; NAE, D.; BARBAT, V.; MIHAIL, M.; MUSETESCU, P.; CORBAN, V.;
      MATEESCU, M.

      Monograph on the hydrology of the hydrographic basins of the Isa,
      Viseu, Sapinta, Tur Rivers.

NITULESCU, V., Prof.

Anti-helminth preventive measures for use in rural areas. Rev.
st. med., med. int., Bucur. 6 no.2:65-75 Apr-June 54.
      (HELMINTH INFECTIONS, prev. & control
         in Russia, methods for use in rural areas)
      (WATER SUPPLY
         irrigation water supply, decontamination in prev. of
         helminth infect. in Russia)

NITULESCU, V.; POZSGI, N.; SORESCU, A.; PANAITESCU, D.; HACIG, A.;
SOLOMON, P.

Problems connected with helminthological research in mining
regions. Stud. cercet. inframicrobiol., Bucur. 7 no.1-2:
193-202 Jan-June 56.

(HELMINTH INFECTIONS, epidemiol.
in mining regions of Rumania)
(MINING
helminth infect. in miners of Rumania, epidemiol.)

NITUSOV, Ye. V.

15033

USSR/Electricity - Motors, Electric   Feb 50
                    Drives, Electric

"Electric Motor Regulators With Critical Self-
Excitation," Ye. V. Nitusov, Moscow Power Eng
Inst Imeni Molotov, 6 pp

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 2

Considers behavior of three types of self-exci-
tation: series, shunt, and compound, in elec-
trical motors used in automatic regulation sys-
tems, and their relative merits. Minimum coef-
ficients of power amplification are fully and
sufficiently prescribed for number of practical

USSR/Electricity - Motors, Electric   Feb 50
                  (Contd)

158T33

cases involving electrical drives with electrical
motor control. Submitted 30 Jul 49 by Acad
V. S. Kulebakin.

158T33

NITUSOV, YE. V.

AID P - 943

Subject   : USSR/Electricity

Card 1/1   Pub. 27 - 12/25

Author   : Litvak, L. V., Kand. of Tech. Sci., Dotsent and
                Nitusov, Ye. V., Doc. of Tech. Sci., Prof., Moscow

Title   : A generalized equation of the mechanical characteristic
                of short circuited asynchronous motors

Periodical   : Elektrichestvo, 10, 63-66, O 1954

Abstract   : The author present the derivation of the equation of the
                function μ =f(s), proceeding from the equivalent circuit
                and accounting for the saturation of the teeth layer and
                for the skin effect. They derive all needed equivalent
                circuit parameters and coefficients from the catalog data.
                Five diagrams, 6 references (1939-1950).

Institution : Not given

Submitted   : Ap 21, 1954

NITUSOV, Ye.V

KOSTENKO, M.P.; KULEBAKIN, V.S.; LARIONOV, A.N.; PETROV, G.N.;
NITUSOV, Ye.V.; BOGOYAVLENSKIY, V.N.; RUDAKOV, V.V.; KOLBASNIKOV,
N.V.

N.V. Gorokhov; obituary. Elektrichestvo no.1:95 Ja '56.(MLRA 9:3)
        (Gorokhov, Nikolai Vladimirovich, 1896-1955)

NITUSOV, Ye.V., professor.

On the measurement of power in three-phase systems. Trudy MEI
no.18:132-134 '56.   (MIRA 10:1)
(Electric measurements) (Electric circuits)

KULEBAKIN, V.S.,akad.,otv. red.; CHILIKIN, M.G.,doktor tekhn. nauk,prof.;
~~NITUSOV, Ia.K.~~,doktor tekhn. nauk,prof.; IOFFE, D.M.,red. izd-va.;
~~KUZ'MIN~~, I.F.,tekhn. red.

[Transactions of the Conference on the Automatic Control of
Alternating-Current Electric Drives] Trudy soveshchaniia po
avtomatizirovannomu elektroprivodu peremennogo toka 25-28 maia,1955 g.
Moskva, Izd-vo Akad. nauk SSSR, 1958. 398 p.   (MIRA 11:12)

1. Soveshchaniye po avtomatizirovannomu elektroprivodu toka. 1955.
               (Electric driving)
               (Automatic control)

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S. So o0

SOV/112-60-1-3.198

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1960, Nr 1, p 117
(USSR)

AUTHOR: Mitusov, Yu.Ye.

TITLE: Natural Oscillations in a System of Alternating Current
            Electromagnets With a Capacitor

PERIODICAL: Tr. Soveshchaniya po avtomatizir. elektroprivodu peremen.
            toka, 1955. Moscow, AS USSR, 1958, pp 377 - 384

ABSTRACT: Natural oscillations of the armature of an electromagnet with
            a coil connected in series with a capacitance to the terminals
            of an AC source are considered. When pulled in the armature
            stretches a spring which, when the pulling in is finished,
            brings it to the initial state again. The reciprocating motion
            of the armature repeats with a regular periodicity, as the
            feeding voltage remains constant. From the study of experimental
            dynamic traction characteristics it follows, that the force for
            pulling in the armature is greater than the releasing force;
Card 1/3   consequently such a system is able to perform a useful work while

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Natural Oscillations in a System of Alternating Current Electromagnets With a Capacitor

pulling in. On the basis of an analysis of equations and experimental data, it was found out that the ambiguity of dynamic characteristics can be physically explained in principle by three overlapping phenomena: the commensurability of the time of motion of the armature with the duration of transient processes; the presence of a speed component of electromotive force; the presence of natural oscillations in the electrical part of the system. The natural oscillations almost do not manifest themselves separately from pulsations caused by the motion of armature. They only appear at a sharp stop of the armature. In the case of absence of friction and restrictions in motion, the frequency of mechanical oscillations of the system depends on the mass and rigidity of the spring only, and the amplitude of oscillations depends on the electric network parameters. In presence of armature motion restrictors the frequency increases with a decrease of the possible amplitude, and the dependence of frequency on the network parameters begins to show up. Because of an interrelation of electric and mechanical parameters, the conception of

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Natural Oscillations in a System of Alternating Current Electromagnets With
a Capacitor

ferr)-mechanical resonance of voltages or currents is introduced. The system
can be used as a drive for reciprocating motion with the length of travel
from 20 to 30 mm.
2 references.

I.I.S.

Card 3/3

NITUSOV, Ye. V.

ANVEL'T, Moyya Yur'yevich; GERASIMOV, Viktor Grigor'yevich; ZAYDEL', Khristina Eduardovna; KOGEN-DALIN, Vladimir Viktorovich; LYSOV, Nikolay Yegorovich; MOROZOV, Dmitriy Nikolayevich; NITUSOV, Yevgeniy Vasil'yevich; PANTYUSHIN, Vasiliy Sergeyevich, prof.; PUKHLYAKOV, Yuriy Kharlampiyevich; SMIRNOV, Vladimir Aleksandrovich; UTKIN, Ivan Vasil'yevich; SHAROKHIN, Grigoriy Ivanovich; KASATKIN, A.S., retsenzent, red.; BORUNOV, N.I., tekhn.red.

[Electrical engineering; general course] Elektrotekhnika;
obshchii kurs. Pod red. V.S.Pantiushina. Moskva, Gos.energ.
izd-vo, 1959. 632 p.
                (Electricity)   (MIRA 13:1)

NITUSOV, Ye.V., prof., doktor tekhn.nauk, otv.red.; KOVAL'SKAYA, I.F.,
tekhn.red.

[Electric machines; types of electric machines] Elektricheskie
mashiny; vidy elektricheskikh mashin. Moskva, 1960. 26 p.
(Sbornik rekomenduemykh terminov, no.52).   (MIRA 13:4)

1. Akademiya nauk SSSR. Komitet tekhnicheskoy terminologii.
          (Electric machinery)

NITUSOV, Yu.Ye., inzhener.

Arrangement of an electromagnetic vibrator. Elektrichestvo no.5:
81-84 My '56.   (MLRA 9:8)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
                        (Vibrators)

NITUSOV, YU. YE.

135-10-2/19

AUTHORS: Bratkova, O.N., Candidate of Technical Sciences; Nitusov, Yu. Ye., Engineer, and Bachelis, I.A., Engineer

TITLE: A New Contact Machine with Stored Energy (Novaya kontaktnaya machina s nakopleniyem energii)

PERIODICAL: Svarochnoye Proizvodstvo, 1957, No 10, pp 7-9 (USSR)

ABSTRACT: The new contact welding machine is a welding transformer designed collectively, by the three inventors (authors' certificate No.106207) at the Chair "Electrical Engineering and Electrical Equipment" of MVTU imeni Bauman. The essence of the design consists of a movable central core rigidly connected with resilient elements (these were springs in the experimental unit shown by Figure 1) which contract under the pressure exerted by the core when current passes through the transformer windings. In this way, energy is stored in the magnetic field and in the springs. When the primary circuit is interrupted, the magnetic field weakens and the springs repel the core, whereby a portion of the energy stored in the springs is transferred into the welding circuit. The article includes a mathematical analysis of the system. The work by A.I. Moskvitin (1) was utilized by the authors in their investigation of

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A New Contact Machine with Stored Energy   155-10-2/19

       the processes connected with the movements of the core. The
conclusions are made that the system stores and gives into the
welding circuit 1.5 tp 2 as much energy as a transformer with
a stable core (at equal mass of material used for building the
transformers). It enables control of the welding current im-
pulse shape and the speed of energy increase which is converted
into welding heat between the electrodes. It decreases con-
siderably the arc formation on the contacts being led apart,
and results in better uniformity of quality of the welding
spots, which eliminates a serious drawback of existing machines
which store energy in the magnetic field alone.
There are 5 diagrams and 4 references, all of which are Russian

ASSOCIATION: MVTU imeni Bauman.

AVAILABLE: Library of Congress

Card 2/2

MITUSOV, Yu. Ya., Cand Tech Sci—(diss) "Theoretical and experimental study of an electron magnetic vibrator with condenser." Len, 1957. 17 pp with drawings (Min of Higher Education USSR. Leningrad Order of Lenin and Order of Labor Red Banner Higher Tech School im Drunze), 100 copies (KL 45-58, 148)

— 96 —

H. Tusov, Vy. Ye.

PHASE I BOOK EXPLOITATION   307/1433

8(2); 28(1)

Soveshchaniye po avtomatizirovannomu elektroprivod peremennogo toka, Moscow, 1955

Trudy... (Transactions of the Conference on Automated A-C Electric Drives) Moscow, Izd-vo AN SSSR, 1958. 398 p. 4,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut avtomatiki i telemekhaniki.

Resp. Ed.: V.S. Kulebakin, Academician, and N.O. Chilikin, Doctor of Technical Sciences, Professor; Ed. of Publishing House: D.M. Ioffe; Tech. Ed.: I.F. Kuz'min.

COVERAGE: The conference was organized on the initiative of the Institute of Automation and Telemechanics of the Academy of Sciences, USSR, and the Moscow Power Engineering Institute. The conference had as its aim the planning of the most progressive ways of developing automatic control of electric drives. The first conference on the subject of automated electric drive took place more than ten years before the present one and was concerned with d-c electric drives. The results of this conference were found to be most valuable in the task of re-building postwar Soviet industry and in furthering industrial development. Present technical development of Soviet industry demands high speeds, simplicity of construction, reliability of operation, and economy. The squirrel-cage induction motor with frequency control appears to be the most promising type of controlled a-c drive. For wide application of this drive in the Soviet economy there is a need of developing new types of frequency converters. Some interesting studies were made in this connection at the Institute of Automation and Tele-mechanics of the USSR Academy of Sciences and its Leningrad branch, at the Moscow Power Engineer Institute, the Central Design Bureau of the "Elektroprivod Plant, the State Design Institute of the Ministry of Construction of the RSFSR, and in other design organizations. These studies were discussed at the present conference. The transactions contain material concerning the theory and design of reactor, pulse, and frequency methods of controlling a-c electric drives. Candidate of Technical Sciences, I.Y. Urkin and Engineer V.A. Kokurova participated in the preparation of this collection of papers. The volume was reviewed by Professor Ya. V. Rivaov, Doctor of Technical Sciences. Some of the papers include a bibliography.

TABLE OF CONTENTS:

Transactions of the Conference (Cont.)   307/1433

Urkin, I.Y., Engineer. Self-oscillations in Systems With a-c Electromagnets and a Capacitor

The author describes the design, development, and experimental studies carried out by the MVTU imeni Bauman on reciprocating application of vibrators is fractore. Industrial application changes in the vi-expanding, rapidly. Previously a change by change of supply source frequency. Now it is possible to change the vibrator frequency using special circuits in which the frequency of vibrations differs from supply frequency. The circuit in which self-oscillations are excited consists of an a-c electro-magnet connected in series with a capacitor which has a specially adjusted capacitance. This method is sufficient for vibrations with useful ampli-tude up to 30 mm. The regulation is achieved by variable capacitance and voltage and by series and parallel resistance. There are 2 references, 1 of which is Soviet and 1 English

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Card 39/51

NITUSOV, Yu.Ya., kand.tekhn.nauk

Network for increasing the initial traction force of an electromagnet.
Elektrichestvo no.4:58-60 Ap '63.   (MIRA 16:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.
                           (Electromagnets)

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Abs Jour   : Ref Zhur - Biol., No 3, 1958, 10057

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Inst   : -
Title   : Conditions Necessary for Development of Ascaris and
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Orig Pub   : Acad. RPR, 1956, 7, No 3-4, 553-561

Abstract   : Observations of egg development in Petri dishes with an
              agar nutrient medium showed that the development at 20°
              is better than that at 29 and 37°. Eggs on thicker me-
              dia (2% agar) develop more rapidly than on thinner ones
              (0.2% agar). 100% humidity favors development of Tricho-
              cephalus eggs, but limits development of Ascaris eggs.

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EXCERPTA MEDICA   Sec 10 Vol 10/12 Obstetrics   Dec 57

2162. NITZULESCU V., FILIP E. and ZILBER-STEINBACH M. Cat. de Para-
zitol. Med. I.M.F., Bucureşti. *Asupra agenţilor micotici cauzatori de vulvo-
vaginite. Mycotic agents inducing vulvo-vaginitis DERM.-
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In the present account the authors relate the results of mycological researches
effected on a series of species of blastosporiferous fungi, isolated from cases of
vulvo-vaginitis. The majority of these fungi (55.5%) belonged to the species Candi-
da tropicalis. A small number (11.1%) belonged to the species Candida chalmersi
and only 33.3% to the species Candida albicans. The Candida tropicalis is general-
ly considered to be a pulmonary parasite and was found with unexpected frequency
in the vaginal mycoses. The vaginal habitus of the species Candida tropicalis has
not been described heretofore. (Yeasts and pseudoyeasts may also be present in
the non-diseased vagina. It is necessary to distinguish between candidiasis being
causal or merely present. Ed.)   (XIII, 10)