

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31404

injection of I, the content of Ca in the serum gradually increases, and then in the course of 2-3 weeks gradually falls. The content of inorganic phosphorus was low in almost all of the children (1.7-4 mg%) and during the introduction of I slowly returned to normal. An expressed correlation between the rate of complete recovery and the normalization of the phosphorus content in the blood was observed in only part of the children. The activity of the alkaline phosphatases in the sick children in comparison with healthy ones was higher; under the influence of the treatment, the characteristic course of the curve of the activity of the enzyme was established - a rise, with a subsequent slow fall to a norm, over 2 month. Aminoaciduria which was observed in children ill with rickets decreased with the introduction of I.

Card 2/2

TOOKOS, Ildiko; TIEFENBACH, Laszlo

Chemical analysis of milk plant waste waters and some
conclusions drawn from it. Elelm ipar 18 no.6:171-178
Je '64.

1. Scientific Research Institute of Water Resources
Development (for Tookos). 2. Milk Industry Enterprise of
Budapest and Vicinity (for Tiefenbach).

TIEGERMAN, T., dr.

Current status of the long-term anti-infective treatment of
chronic pyelonephritis. Med. intern. (Bucur.) 17 no.1:25-33
Ja '65

1. Lucrare efectuata in Clinica medicala a Spitalului de adulti
al Raionului "30 Decembrie", Bucuresti.

DIMITRIU, C. Gh., prof.; NESTOR, R., dr.; TIEGERMAN, T., dr.

Rheumatoid gout. Med. intern. (Bucur.) 16 no.6:641-648 Je'64

Renal functional exploration, a criterion for individualization of the treatment of rheumatoid arthritis. Ibid. 649-652

1. Lucrare efectuata in Clinica medicala a Spitalului de adulti al raionului 30 Decembrie (director: prof. C.Gh.Dimitriu).

~~TITLE~~

Changes in kymo-insufflation curves following introduction of certain drugs in sterile females. Cesk. gyn. 24[38] no.9:690-694 Nov. 1959

1. Ustav pro necl o matku a dite, Praha-Podoli, reditel doc. dr. M. Vojta.

(STERILITY, FEMALE, physiol.) (FALLOPIAN TUBES, pharmacol.)

1ST AND 2ND COPIES PROCESSES AND REPRODUCTION 3RD AND 4TH COPIES

AMS/A + B

FEB 1951

2.2-85 551.521.01

Tisch, Herbert. *Einflussung der Ultrarotstrahlung durch das Wetter nach Messungen während der Jahre 1932/34 zu Königsberg (Pr.).* [Effect of weather upon cosmic radiation according to measurements during 1932/34 at Königsberg (Pr.).] *Germany, Reichsanstalt für Wasserbau, Wissenschaftliche Abhandlungen, 6(2), 1938.* 21 p. 12 figs., 12 tables, numerous refs. **DLC**—The effect of various meteorological factors upon the intensity of cosmic radiation was investigated by means of an ionization chamber under completely shielded and partially shielded conditions. Sensitivity of apparatus increases with rising room temperature. Increasing barometric pressure, increasing water vapor pressure and increasing depth of snow cover reduce ionization intensity of radiation. Cloudiness increases ionization intensity, insolation diminishes it; maximum intensity of ionization during SW wind, minimum during NW wind. From 1932 to 1934 intensity of radiation declined 1.2 percent per month. Maximum ionization intensity at 3 o'clock sidereal time and minimum at 15 o'clock. On the basis of Central European Time, ionization intensity is greater during the day than at night. Daily march of ionization intensity is determined by daily march of water vapor pressure. **Subject Headings:** Meteorological influences, Cosmic radiation, Königsberg, G.A.R.—I.L.D.

ASU-55A METALLURGICAL LITERATURE CLASSIFICATION

FROM SUBMITTER TO SOURCE

1949000 #1 1949000 #101 1949000 #101 1949000 #101

TIEMNIKOW, F. E., prof. dr [Temnikov, F. Ye.]

Technological information. Przegl elektrotechn 40 no. 2:
77 F '64.

1. Moskiewski, Instytut Energetyczny, Katedra Automatyki i
Telemechaniki.

TIENDL, J.

3

Journal of Applied Chemistry
June 1954
Industrial Inorganic Chemistry

①
~~Metallurgy of tin, tin alloys, and tin coatings on steel. J. Tiendl (*Hutnické Listy*, 1954, 9, 95-98).—Methods of metallographic examination of Sn and Sn coatings on steel are reviewed. New technique in prep., polishing, and etching of specimens is described. S. K. LACHOWICZ.~~

TIEPŁOW, B.

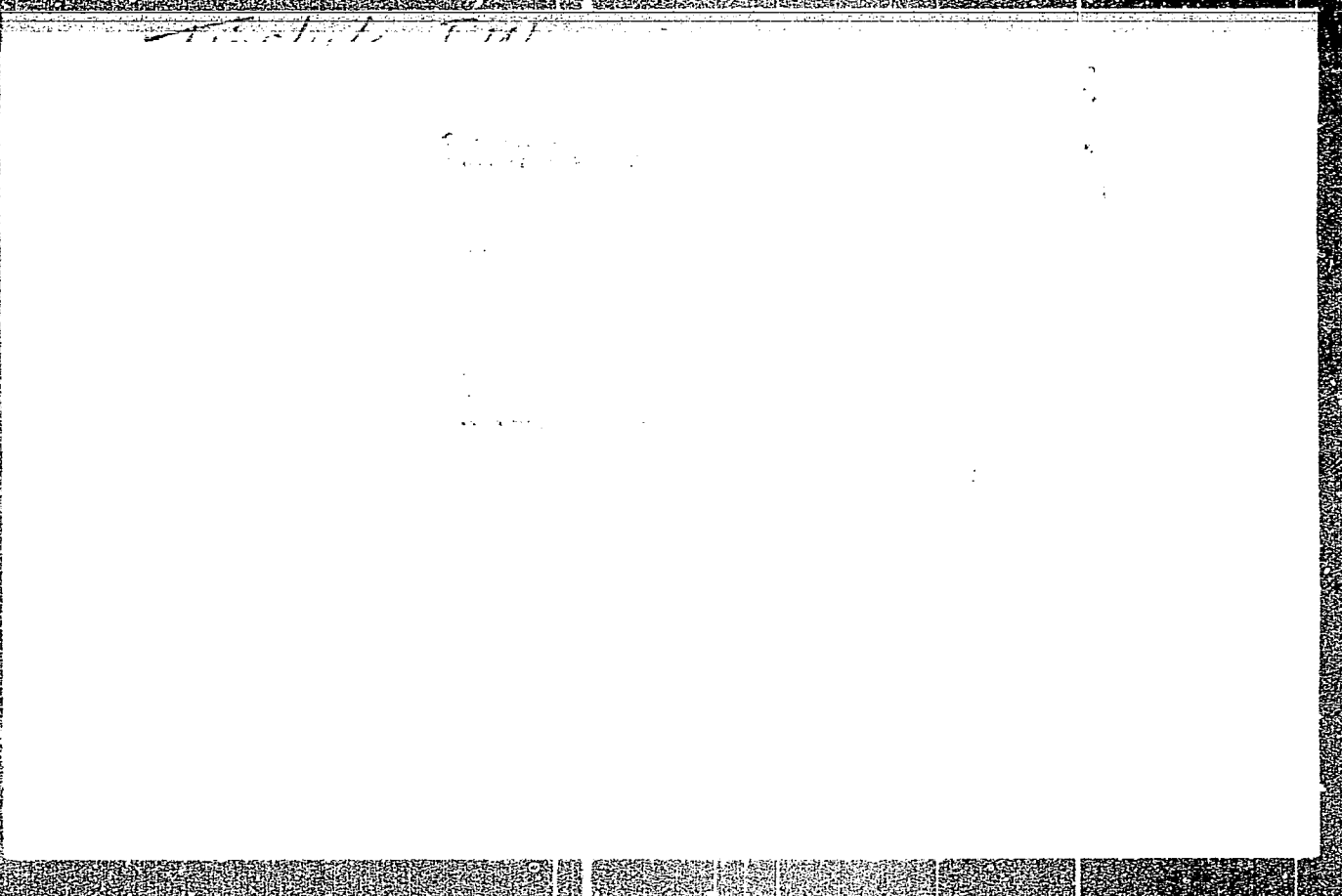
"Psychologia" (Psychology), by B. Tiepłow. Reported in New Books (Nowe Książki), No. 14, July 15, 1955

TIERECHOW, W.

Under the banner of May Day. p. 161

Combustion locomotives on heavily loaded sections of railroad lines.
p. 194 PRZEGLAD KOLEJOWY (Wydawnictwa Komunikacyjne) Warszawa. Vol. 7,
no. 5, May 1955

SOURCE: East European Accessions List, (EEAL), Library of Congress,
Vol. 4, no. 12, December 1955



TIETEIU, O.

TECHNOLOGY

REVISTA CONSTRUCTILOR SI A MATERIALELOR DE CONSTRUCTII. Vol. 10, no. 9,
Sept. 1958.

Influence of drying temperature on the properties of granular slag. p.601.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 53
~~May~~ 1959, Unclass.
March

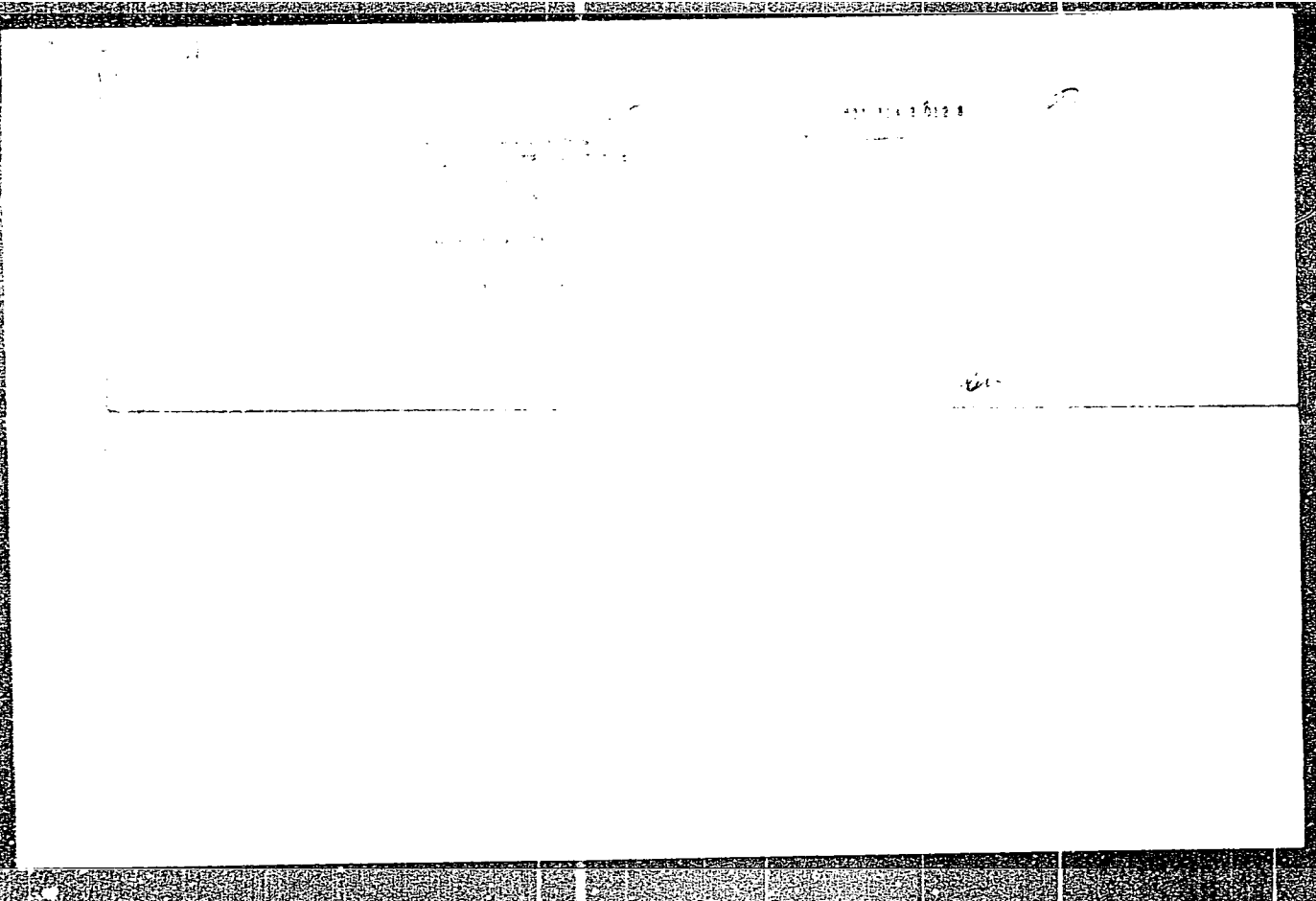
TIETIERUKOW, W.I., k.n.t.; GOLDSZTIEJN, L.I., inż.

A pump for active suspensions. Przegl mech 23 no. 21:625-627
10 N '64.

TIETZ, Artur, inz.; ZEMANEK, Jaroslav, inz.

Cold-pressure welding in replacing copper by aluminum. El
tech obzor 52 no.4:181-187 Ap '63.

1. Statni vyzkumny ustav silnoprude elektrotechniky Bechovice
(for Tietz). 2. Moravskoslezske elektrotechnicke zavody
Postrelmov, n.p. (for Zemanek).



TIETZ, Artur, inz.

Properties of aluminum connections and their testing. El
tech obzor 53 no. 1:43-44 Ja '64.

1. Statni vyzkumny ustav silnoprude elektrotechniky.

TIEZ, Artur, inž.

Connecting of aluminum in electrical engineering. Elektrotechnik
18 no.11:306-308 'N'63.

1. Státní výzkumný ústav silnoproudé elektrotechniky, Bechovice.

TIETZ, A.

TIETZ, A. Operational diagram of transformers. p.449

Vol. 45, no. 9, Sept. 1956
ELEKTROTECHNICKY OBZOR
TECHNOLOGY
Praha, Czechoslovak

So: East European Accession, Vol. 6, No. 2, 1957

... ..

The diagram is based on the relationship between the electrical parameters of the system, the function of the input and independent variables. They may be represented in the diagram by straight lines and arcs, the centres of which are found by simple graphical interpolation. The diagram is absolutely exact, apart from the system of the constant loss circles, in which a simplification was deliberately

introduced in order to avoid complicated constructions without appreciable improvement of the accuracy. In the equivalent π -type quadripole, the active resistances of the two transverse arms of the quadripole were neglected. This neglect is permissible for lines up to 400 km long. In any case, it produces an appreciable difference only in transmission conditions near to no-load operation.

B. K. KRACK

L 45969-66 EWP(e)/EWP(c)/EWP(v)/T/EWP(k)/EWP(l) IJP(c) WH/WH
ACC NR: AP6017951 (A) SOURCE CODE: GE/0018/66/000/001/0040/0042

AUTHOR: Tietz, H. -D. (Graduate engineer, Doctor; Magdeburg)

76

ORG: DGMA, Magdeburg, GDR

59

B

TITLE: Report on the First Symposium on Nondestructive Testing in Yugoslavia held in Opatija from 26 to 29 April 1965)

14

SOURCE: Feingerätetechnik, no. 1, 1966, 40-42

TOPIC TAGS: scientific conference, international conference, radiography, weld evaluation, ultrasonic inspection

ABSTRACT: Lectures presented at the 1st symposium on Nondestructive Testing, held in Opatija, Yugoslavia, between 26 and 29 Apr 65, are described briefly. D. Hourvat (Ljubljana) discussed problems in the standardization of industrial radiography; B. Valic (Slavonski Brod) wire and step-penetrometer testing; M. Pavicevic, F. Borell, and D. Srdoc (Vinca) a pocket dosimeter for x-ray and γ -radiation; L. Bircanin and D. Nemoda (Vinca) the manufacture of radioactive radiation sources; L. Krunic and J. Kamhi (Zagreb) the evaluation of welds with x- and γ -rays; W. Benz (Hattingen, GDR) a 12-MeV electron linear accelerator for thick specimens; H. J. Kopineck and G. Sommerkorn (GDR) the nondestructive testing of roll material; H. Weeber (Dusseldorf, GDR) improving the image in transillumination pictures; T. Konkoly (Budapest, Hungary) the evaluation of radiographic pictures; K. Winkler (Waldshut, GDR) materials testing with x-rays; J. Slaba (Prague) defectoscopy with the Czech 15-MeV

Card 1/2

L 5580-86

ACC NR: AP6017951

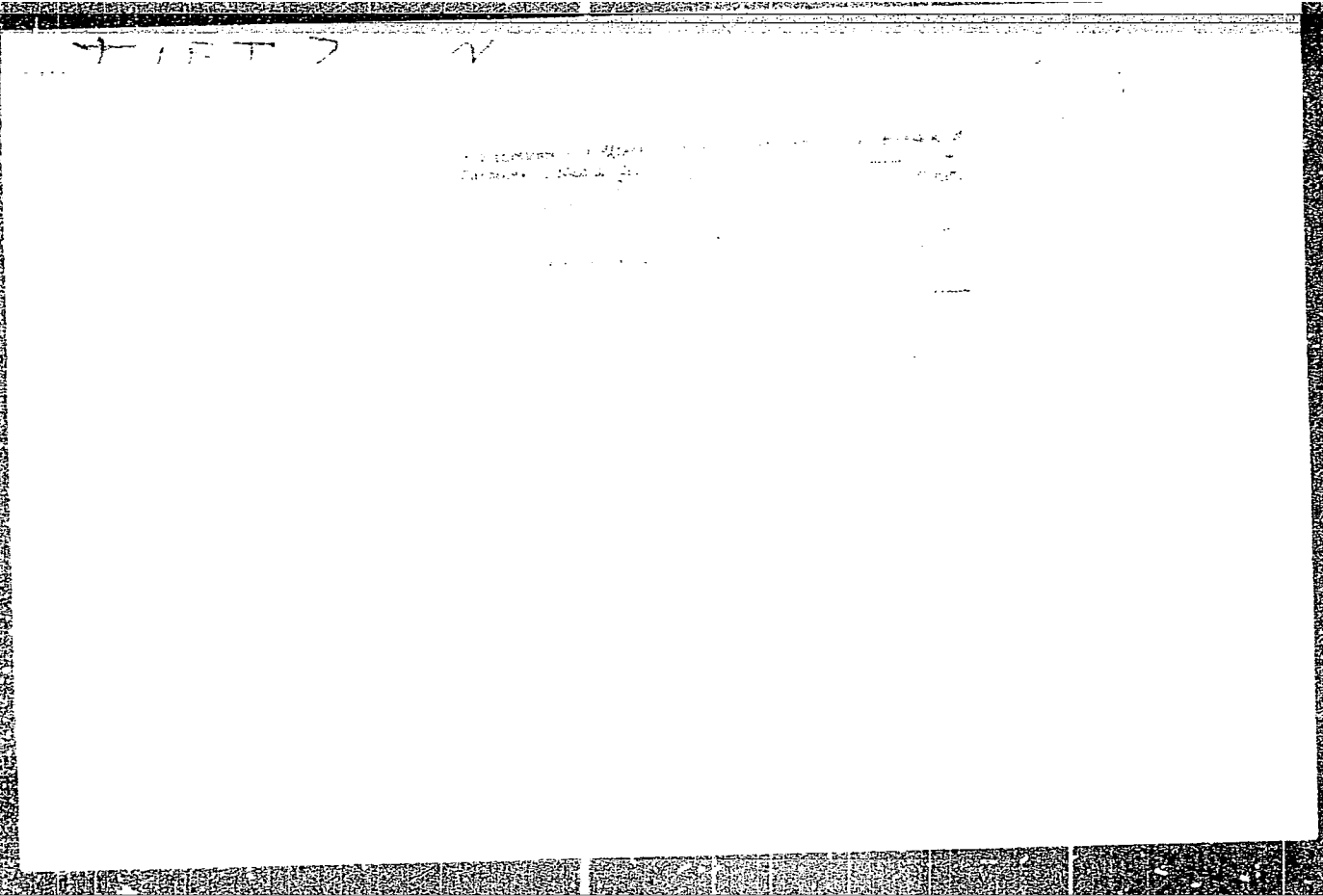
17

betatron; B. Jarec (Ljubljana) the ultrasonic testing of welds; R. Gerstner (Zirf, Austria) the accuracy of ultrasonic wall-thickness measurements; H. Vogt (Cologne, GDR) automatic ultrasonic testing; W. Lehfeldt (Heppenheim, GDR) automatic ultrasonic testing of sheet materials; G. Freyer and H.-D. Tietz (Magdeburg) ultrasonic pulse-echo devices; J. Obraz (Prague) automatic ultrasonic testing of thick-walled rolled stock; K. Fischer (Jena, GDR) the B-image in ultrasonic testing; M. Sipek (Ravne) propagation and damping of plate waves in steel plate; J. Kammagic (Zenica) a defect atlas for ultrasonic defectoscopy; M. Gorsek (Store) ultrasonic tests on spherical graphite castings; G. Drechsler (Reutlingen, German Federated Republic) modern methods for the nondestructive testing of moving material; L. Duben (Prague) electromagnetic testing of metallurgical specimens and machine parts; I. Mamuzik (Sisak) the manufacture and testing of magnetic oil emulsions; M. Sipek magneto-inductive techniques for the evaluation of surface phenomena on ferromagnetic rods; S. Prcic (Novi Sad) magnetic powder testing of tool-factory specimens; J. Pogacor (Ljubljana) the work of the 5th International Institute for Welding Technology; E. G. Fuchs (Budapest) a novel instrument for non-destructive microstructure testing of metallic construction materials; and A. Houbova (Bratislava, Czechoslovakia) discussed the status of nondestructive test methods in Czechoslovakia.

SUB CODE: 13,11,18

SUBM DATE: none

Card 2/2 blg



TIETZ, N.

SECRET

The importance of the...
for the... of...

TIETZ, Narcis, inz.; TOMAN, Vaclav, inz.; TUMA, Hamus, inz.

The importance and effect of electrolytes in isolating carbides from steel. Hut listy 12 no.6:517-521 Je '57.

1. Vyzkumny ustav materialu a technologie, Praha.

TIETZ, N.

The importance and effect of electrolytes during the isolation of carbides from steels. p.517.
(Hutnicke Listy, Vol. 12, No. 6, June 1957, Brno, Czechoslovakia)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957, Uncl.

TIETZ, N.

Photocolorimetric determination of zirconium with morin.

p. 722 (CHEMICKE LISTY) Vol. 51, no. 4, Apr. 1957,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

CZECHOSLOVAKIA/Optics - Optical Methods of Analysis

K-8

Abs Jour : Ref Zhur - Fizika, No 12, 1958, No 28838

Author : Turna H., ~~Tietz N.~~

Inst : Not Given

Title : Photocolorimetric Determination of Zirconium with the Aid of
Morin.

• Orig Pub : Collect. czechosl. chem. communs, 1958, 23, No 1, 142-146

• Abstract : Translation from Chem. listy, 1957, 51, 722

Card : 1/1

CZECHOSLOVAKIA/Analytical Chemistry - Analysis of
Inorganic Substances.

E-2

Abs Jour : Ref Zhur - Khimiya, No 8, 1958, 24782

being added to the solutions being analyzed. Photometry is conducted at $436\text{ m}\mu$ (light filters OB 2 and Wratten 50). Fe^{2+} , Cr^{3+} , Ni^{2+} , Co^{2+} , Al^{3+} (up to Al:Zr = 1:1) and traces of some other cations do not interfere with determination of Zr. Fe^{3+} must be reduced by addition of 1 ml of 2% aqueous solution of ascorbic acid. The interfering effect of the color of Cr^{3+} , Ni^{2+} , Co^{2+} and other cations is eliminated by means of a compensative solution (solution of the sample being analyzed, containing in lieu of I 1 ml CH_2OH). NaCl and NH_4Cl do not interfere. The method is rapid and particularly suited for analyses of steels and carbides.

Card 2/2

5

ACCESSION NR: AP4010413

Z/0034/64/000/001/0072/0073

AUTHOR: Tietz, N. (Engineer)

TITLE: Heat-resistant alloy resistant to effects of sulfur and products which originate during the production of carbon disulfide

SOURCE: Hutnicke listy, no. 1, 1964, 72-73

TOPIC TAGS: alloy, heat resistant alloy, heatproof alloy, refractory alloy, carbon disulfide production. (Class 18d, 2/40, PV 262-62 from 15 January 1962)

ABSTRACT: In addition to iron, the alloy contains 0.25 to 0.80% carbon, 0.40 to 0.70% manganese, 0.01 to 0.03% phosphorus, 0.01 to 0.04% sulfur, 4 to 6% silicon, 27 to 29% chromium, 8 to 10% nickel, 1.5 to 3% molybdenum, and 3 to 5% tungsten.

[Abstractor's note: this is a complete translation of the original article.]
Orig. art. has: no graphics.

ASSOCIATION: none

Card 1/4

I 34916-66 EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6026598

SOURCE CODE: CZ/0034/66/000/002/0131/0132

AUTHOR: Tietz, Narcis (Engineer) 44
BORG: State Research Institute for Construction Materials, Prague (Statni vyzkumny
ustav materialu)TITLE: Determination of Mg²⁷ in aluminum alloys and in cast iron¹⁴ by means of atomic
absorption spectrophotometry

SOURCE: Hutnicke listy, no. 2, 1966, 131-132

TOPIC TAGS: magnesium alloy, aluminum containing alloy, cast iron, spectrophotometry,
metal analysis

ABSTRACT: The described method is simple, sensitive, accurate and suitable for Mg concentrations of 0.05% to 10%. The method is suitable for all metallurgical laboratories, and for analyses of metals in machinery producing plants. Detailed instruction for the analysis are given. The author thanks Dr. I. Rubeska and Dr. B. Moldan at the laboratory of the Central Geologic Institute for assistance with the carrying out of the measurements and valuable comments. Orig. art. has: 2 tables. [JPRS: 34,779]

SUB CODE: 11, 20 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 007

Card 1/1 7795

Poland
CERN.

✓ Approximate analytic solution of the Thomas-Fermi equation for atoms. P. Łada (Ladv. Nikolis Czerwikus,

Torun, Poland). *J. Chem. Phys.* 22, 2391, 5, 1954. — The solution of the Thomas-Fermi equation for atoms is reducible to the solution of the equation $d^2\phi/dx^2 = x^{-2}\phi^3$, $\phi(0) = 1$, $\phi(\infty) = 0$. The following solution is proposed: $\phi = a^2/(x + a^2)$, where a is a constant and from the radial momentum distribution function is equal to 1. Some numerical values are compared with those of B. L. and C. F. (1954). *Rev. 38*.

TLET? T.

TIETZ, T.

Hungary/Atomic and Molecular Physics - Physics of the Atom, D-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 34258

Author: Tietz, T.

Institution: Torun, Poland

Title: Calculation of the Eigenvalues of the Schroedinger Equation in a Limited Region

Original Periodical: Acta phys. Acad. sci. hung., 1955, 5, No 3, 347-352; Hungarian

Abstract: Using as examples the Schroedinger equations for hydrogen and for the linear anharmonic oscillator, the author shows the relationship between the eigenvalue and the numbers of zeros corresponding to the eigenfunction. The parameter α , which determines the eigenvalue, satisfies the inequality $-s \leq -\alpha \leq -s+1$. An analogous relationship holds, apparently, in all cases when the solution is represented in the form of a degenerate or complete hypergeometric function. The eigenvalue is obtained more accurately from the actual conditions at the boundary of the region.

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- 1 -

establish the known result [A. Eddys, *Higher transcendental functions*, vol. 1, McGraw-Hill, New York, 1953, p. 289; MR 15, 419] of real zeros of $F_1(a; c; v)$ when a and c are real.

A. Eddys.

DEAN
1954

Distr: 4E3d

21
21
Paramagnetic susceptibility of conduction electrons. T.
Tiers (Univ. Lodz, Poland). *J. Chem. Phys.* 28, 1261-2
(1958); *cf. Ann. Physik* 13, 180(1955).—T.'s calcs. were
compared with those of other authors for the paramagnetic
specific susceptibilities and the vol. paramagnetic suscepti-
bilities. Henry Leidheiser, Jr.

JK

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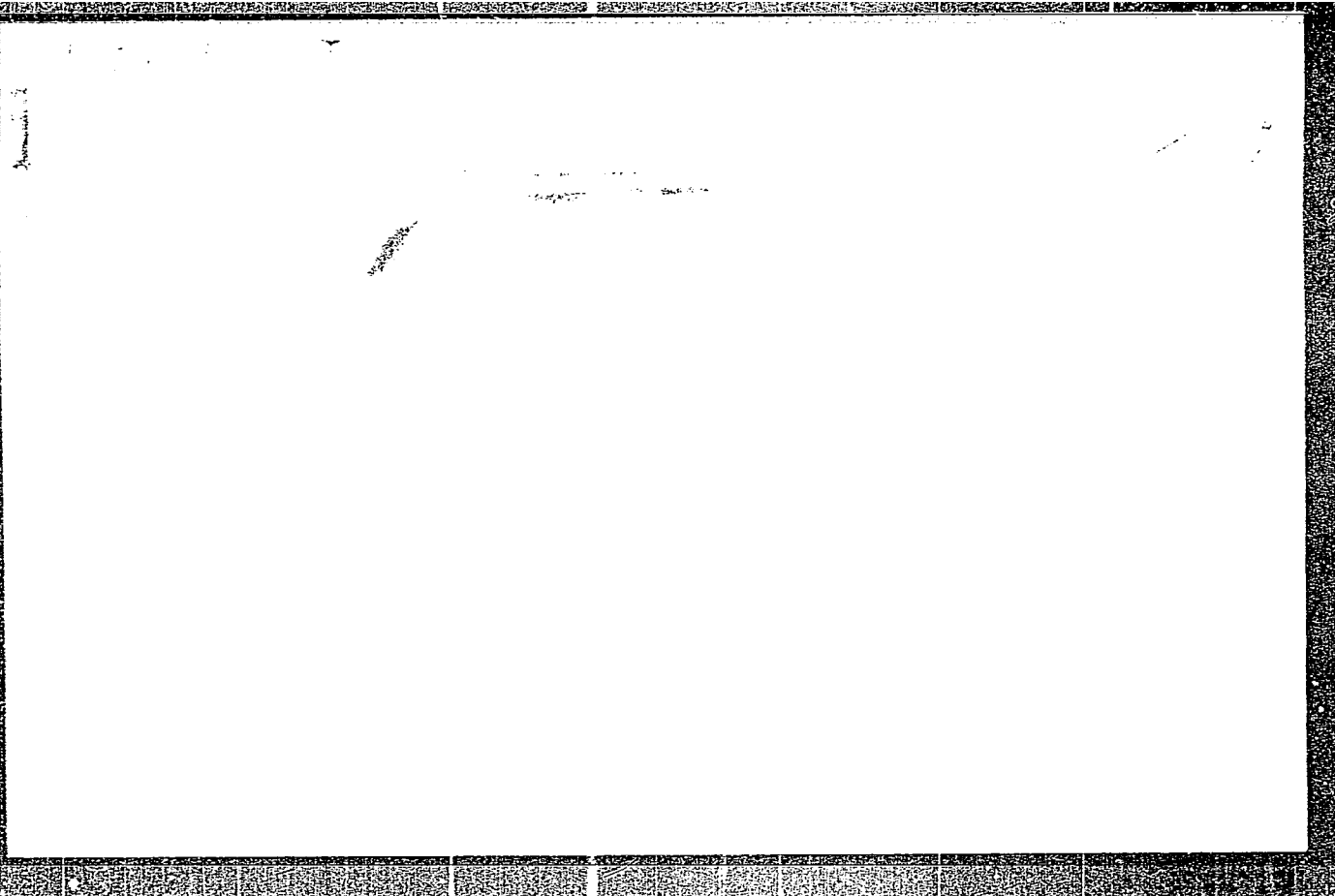
Tietz, T.

✓ Reply to Tietz' letter: "Approximate analytic solution of the Thomas-Fermi equation for atoms." H. C. Brinkman (~~Univ. of Michigan~~), *J. Chem. Phys.* 23, 1530 (1955); cf. *C.A.* 49, 12063a. Tietz (*C.A.* 49, 3044) modified B.'s method of solving the Thomas-Fermi equation applied to atoms. The approx. solutions do not differ much numerically for intermediate values of x , but T.'s solution has a simpler form. For $x \rightarrow \infty$ B.'s solution decreases too fast and T.'s decreases too slowly. B.'s equation is linear, which greatly facilitates the application of the method to ions. Reply to Brinkman's letter concerning my letter: "Approximate analytic solution of the Thomas-Fermi equation for atoms." T. Tietz (Univ. of Lodz, Poland). *Ibid.* 1560-1. — The application of B.'s method to the problems of the free pos. ion, the compressed neutral atom, and the solution of the Schrödinger equation for an approx. at. field is difficult, whereas T.'s method seems to be applicable.

Henry Leidheiser, Jr.

① RDA

Smid



TITS, T.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1392
 AUTHOR TITC, T.
 TITLE On the Selection of the Physically Applicable Solutions of the
 SCHROEDINGER equation for the Hydrogen Atom.
 PERIODICAL Zhurn.eksp.i teor.fis, 30, fasc.5, 948-949 (1956)
 Issued: 8 / 1956 reviewed: 10 / 1956

The wave function $\Psi(r, \vartheta, \varphi) = R(r)P_l^m(\cos \vartheta)e^{+im\varphi}$ leads (in atomic units) to the following differential equation for R:

$d^2R/dr^2 + (2/r)dR/dr + (2E+(2Z/r)-l(l+1)/r^2)R = 0$ (with $E < 0$). According to A.SOMMERFELD, Atomic Structure and Spectral Lines, vol.2; H.A.KRAMERS, Quantum Theory of the Electron and Radiation, Leipzig (1938), and F.RELLICH, Math.ZS. 49,719(1943/44) the second particular solution is not to be omitted in the case of $l=0$, because all particular solutions are normalizable. According to the author's opinion this is not correct.

It is intended to show here that, with $l=0$, there exists only one normalizable solution, and that at the point $r=0$ a certain boundary condition must be imposed in order to obtain the correct spectrum of eigen values. For $l=0$ there are the

following independent particular solutions: $R_1 = e^{-\rho/2} {}_1F_1(1-2Z/\mathcal{K}, 2, \rho)$;

$R_2 = e^{-\rho/2} \phi(1-2Z/\mathcal{K}, 2, \rho)$. The following abbreviations were used on this occasion: $2E = -\mathcal{K}^2/4$; $\mathcal{K} = r = \rho > 0$. ${}_1F_1$ is the confluent hypergeometrical progression and ϕ is the second independent solution of the confluent hypergeometric differential

Žurn. eksp. i teor. fis, 30, fasc. 5, 948-949 (1956) CARD 2 / 2

PA - 1392

equation. An integral equation is then given for ϕ , and the asymptotic form of this function for $q \rightarrow +\infty$ is $\phi(a, b, x) = x^{-a} [1 + O(1/x)]$. Therefore the here investigated second solution R_2 with $q = +\infty$ is $R_2 = e^{-q/2} q^{-[1 - (2Z/\mathcal{H})]} [1 + O(1/q)]$.

This formula shows that the second particular solution can be normalized. For small r it applies that $\lim_{q \rightarrow +\infty} R_2 = (e^{-q/2} / \Gamma [1 - (2Z/\mathcal{H})]) (1/q)$.

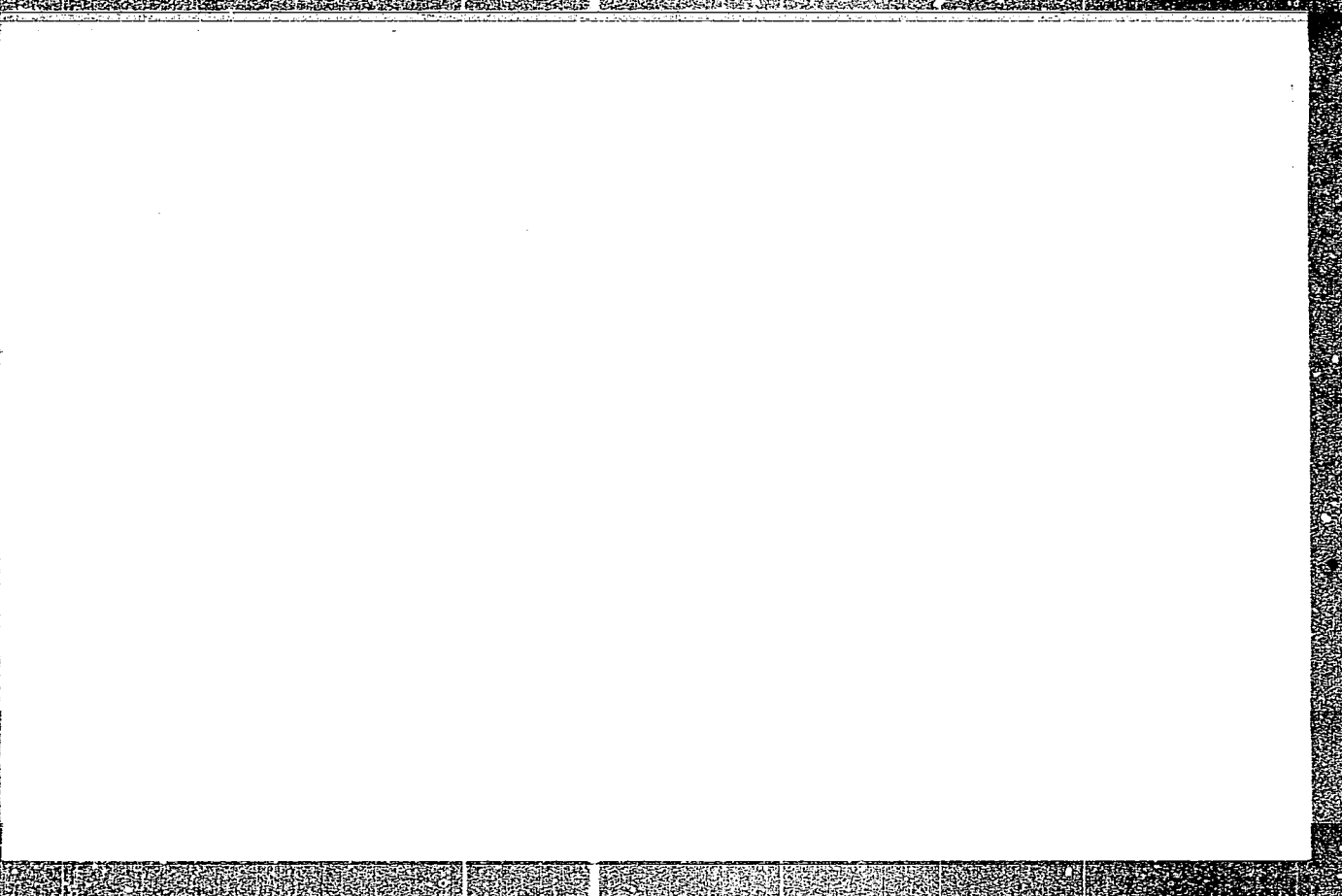
R_2 is therefore normalizable for all eigenvalues $E \neq 0$, and there always exists a normalizable solution. However, normalization conditions are insufficient for the determination of the correct spectrum of the eigenvalues. This deficiency can be removed by imposing a second boundary condition which expresses the steadiness of the solution at zero. If we demand $1 - (2Z/\mathcal{H}) = -n, n=0, 1, 2, \dots$, the ϕ is, as we know, reduced to LAGUERRE polynomials, and therefore R_2 is steady in the case of $r=0$. With $1 - (2Z/\mathcal{H}) = -n$ the functions of R_1 and R_2 are linearly dependent but with $1 - (2Z/\mathcal{H}) = n - n$ (or $-n$?) they are linearly independent.

With $l=0$, also WEYL'S theory requires an additional boundary condition. In the present case the demand for steadiness corresponds to the selection of a certain fully determined WEYL boundary condition for $r=0$. Thus, the demand for steadiness warrants a physically correct spectrum of the eigenvalues. Also the boundary condition in the case of $r=0$ may be explained quite simply by using the demand for self-adjointness.

INSTITUTION: University of Torun, Poland.

"APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001755530001-4



APPROVED FOR RELEASE: 03/14/2001

CIA-RDP86-00513R001755530001-4"

Tietz, T.

Acta Physica Academiae
Scientiarum Hungaricae
Vol. 7, Nr. 4, 1957

4
4E 30

ON THE DIAMAGNETISM OF THE THOMAS-FERMI ION

By T. TIETZ

LÓDZ UNIVERSITY, DEPARTMENT OF THEORETICAL PHYSICS, LÓDZ, POLAND

(Presented by P. Gombás. -- Received 30. IV. 1957)

In this paper the author derives a simple and accurate approximate formula for free positive ions. The accuracy of this formula is proved by comparison of the values calculated from it with the exact numerical values of Fermi. As a further example of the accuracy of this formula the diamagnetic susceptibility of the Thomas-Fermi ion is calculated as a function of the atomic number and valency of the ion. The experimental results for the susceptibilities of alkali and alkali earth metal ions are in good agreement with the theory.

2

EAST GERMANY/Theoretical Physics - Quantum Mechanics.

Abstr Jour : Ref Zhur - Fizika, No 6, 1959, 12173

Author : Nowak, W., Tietz, T.

Inst : University, Lodz, Poland

Title : Simplification of the Sommerfeld Method of Polynomials.

Orig Pub : Ann. Physik, 1958, 1, No 4-5, 296-298.

Abstract : The Sommerfeld method for determining the eigenvalues of the Schrodinger equation is based on representing the equation in the form $R = yf_1$, where y insures the satisfaction of the boundary conditions $R(\infty) = R(0) = 0$. The function f_1 is represented by a power series and the eigenvalues are found from the condition of cutoff of this series. The author considers when the equation for f_1 is in the form

Card 1/2

- 3 -

7. Tietz
Distr: 4E3d 21 21

Scattering power of atoms for x-rays and electrons from the statistical theory of the atom. T. Tietz (Univ. Lodz, Poland). *Ann. Physik* [7], 2, 41-8 (1938). Formulas are derived for the intensity of incoherent scattering of x-rays and electrons at a single Thomas-Fermi atom. R. N.

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OK

HUNGARY/Atomic and Molecular Physics - Physics of the Atom.

D

Abs Jour : Ref Zhur Fizika, No 12, 1959, 27051

Author : Tietz, T.

Inst : Institute of Theoretical Physics, University of Lodz,
Lodz, Poland

Title : Analytic Formula for Theory of Formation of Electron
Groups in the Periodic System of Elements

Orig Pub : Acta phys. Acad. scient. hung., 1958, 9, No 1-2, 73-77

Abstract : Using the approximation proposed by the author for the
Thomas-Fermi function $\varphi(x) = \sqrt{1 + (\pi/8)^{2/3} x^{3/2}}$,
an analytic formula is derived for the lower limit of
the values of the atomic number Z, at which the s, p,
d, and f electrons appear for the first time. -- V.V.
Batygin

Card 1/1

- 36 -

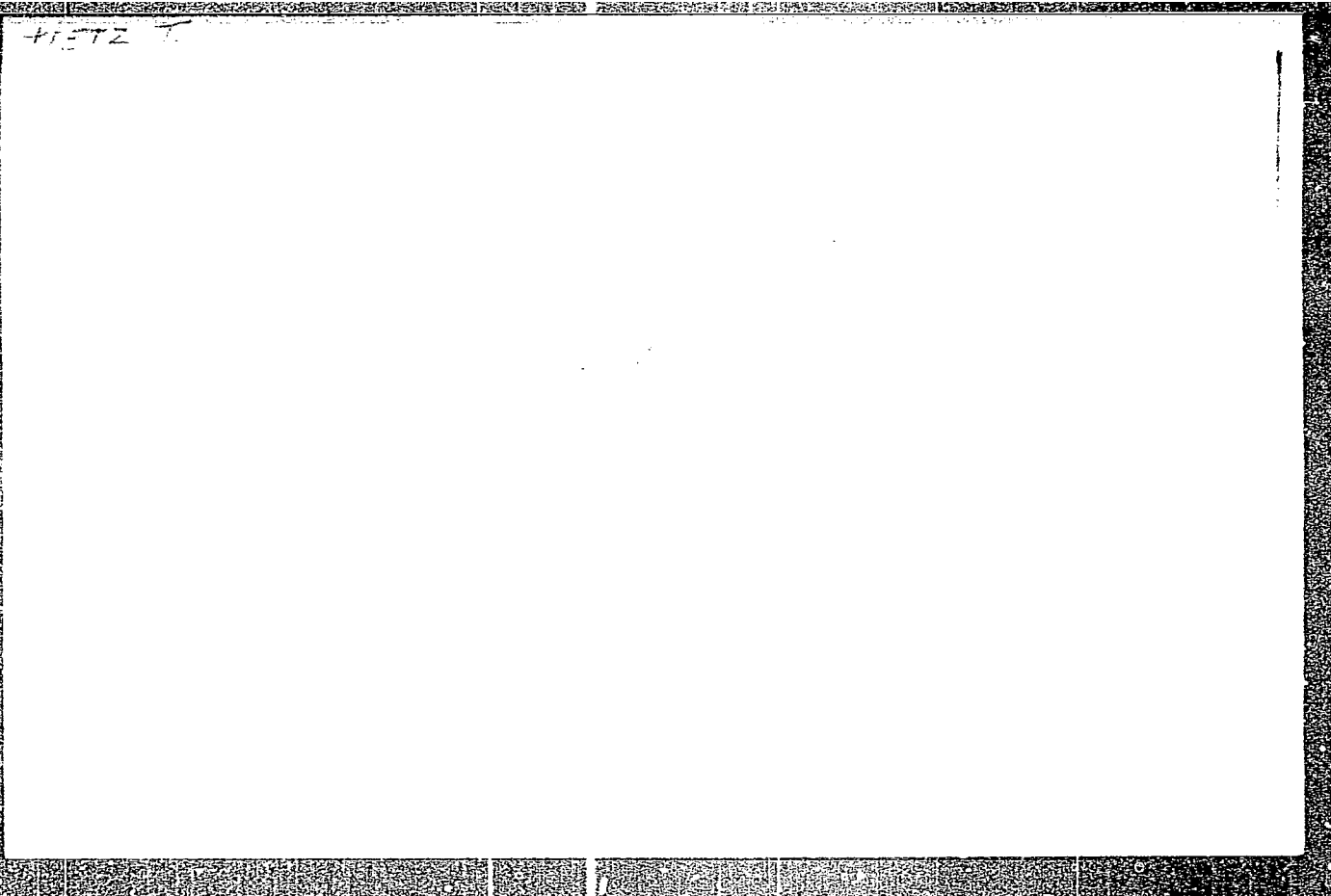
HUNGARY/Atomic and Molecular Physics - Physics of the Atom. D

Abs Jour : Ref Zhur Fizika, No 9, 1959, 19967

atomic number. The obtained formula is in good agreement with the numerical calculations. -- V.P. Trobitsyu

Card 2/2

- 25 -



THE IR

Approximate analytical solution of the Schrödinger equation for the Thomas-Fermi potential for the s states. T. Tietz (Univ. Lodz, Poland). *J. Chem. Phys.* 29, 681-6 (1958). Simple and accurate wave functions were given for the $1s$, $2s$, and $3s$ states. The eigenvalues agree quite well with the precise eigenvalues of Latter (*C.A.* 49, 1544b) for the Thomas-Fermi potential. Henry Leidheisen

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Tietz, T

~~The total effective cross section and the diffusion-scattering cross section of Hartree potentials. T. Tietz (Univ.~~

~~Lodz, Poland). Ann. Physik [7], 2, 387-92 (1959). - Theoretical-math. Analytical approxns. are derived for the effective cross section and the diffusion-scattering cross section of neutral atoms for electrons by means of Born's first approxn. Rudolf N. ...~~

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2-9E3C
9E3D
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J

RR

Phase shifts in the statistical theory of the atom. ²¹
Tietz (Univ. Lodz, Poland). *Ann. Physik* [7], 3, 106-12
(1959).--Theoretical-math. Rudolf Nitsche
Distr: hE3d
PmR 3

TIEZ, T

Distr: 4E3c 2 cys

✓ Calculation of the differential elastic cross section for complex atoms for the self-consistent field. T. Tietz (Univ. Lodz, Poland). *Acta Phys. Acad. Sci. Hung.* 10, 251-2 (1959) (in English).—By using the Gáspár approxn. for the ratio effective nuclear charge/at. no. (G., *CA* 47, 9135e) in the Thomas-Fermi potential formula an analytic expression for the differential elastic cross section is obtained.

E. M. Leobl

gt

3
1-RS
2

TIEZ, T.

Thomas-Fermi model for diatomic hydrides. T. Tietz
(Univ. Łódź, Poland). *J. Chem. Phys.* 30, 1104-1110 (1959).
By using the Kobayashi and Taima table (*Mem. Fac. Liberal
Arts Educ. Kagawa Univ.*, Part II, No. 33(1957)) for the 2
Thomas-Fermi functions, the no. of free electrons, force
const., and the M diamagnetic susceptibilities were calcd.
for the diat. halides of the elements. H. Leidheiser, Jr.

3
MEC

1111, T.

✓ Theory of the effective range. T. Dietz (Univ. Lodz, Poland). *Ann. Phys.* 6, 150-2(1960).—Theoretical math. A formula is derived for the phase shift of the Yukawa potential which allows the calcn. of the interaction cross section of neutron-proton scattering at low energies.

R. Nitsche

3
DPC

TIEIZ, T.

4
IJP(2)

✓
/ Scattering of electron beams with neutral atoms for
different Thomas-Fermi potentials. T. Tietz (Univ.
Lodz, Poland). *Ann. Physik* 6, 282-8 (1960).—Theoretical-
math. Exact and approx. formulas for the differential
elastic scattering cross section at different Thomas-Fermi
potentials are derived and compared with Hartree's values.
R. Nitsche

TIETZ, T.

Pair-production cross section for high photon energies for the Thomas-Fermi and Hartree atom. T. Tietz (Univ. Lodz, Poland). *Acta Phys. Acad. Sci. Hung.* **11**, 47-51 (1960) (in English).—The total cross-section formula for pair production in the field of an atom of at. no. Z for high photon energies E , ($E \gg 137mc^2Z^{-1/2}$) is derived, anal. representations of the Thomas-Fermi function $\phi(x)$ and the Hartree functions Z_p/Z being used. The numerical values calcd. for the total cross section for pair production for Hg agree well with the values of Fraser (*CA* 46, 9433c) and Bethe and Heitler (*CA* 28, 7140^a). C. Olivier-Rutgers

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4

TIETZ, T.

1

3

Penetrability of a Thomas-Fermi potential barrier. Tietz (Univ. Lodz, Poland). *Acta Phys. Acad. Sci. Hung.* II, 53-7 (1960) (in English).—The effect of the surrounding electrons on the nuclear-barrier penetration probability is considered. For a free neutral atom the Thomas-Fermi potential barrier is accepted, and the probability that a particle will penetrate this potential barrier is calcd.; Langer's approxn. is used, and the angular momentum of the penetrating particle is taken into account. The effect of the surrounding electrons causes the lowering of the barrier height and the decrease of the thickness to be penetrated. The theory is applied to the evaluation of the penetration probability of an α -particle in a Rn^{222} nucleus.

1/1
22

C. Olivier-Rutgers

TIETZ, T.

Phase shift analysis of combined Coulomb and nuclear scattering
Acta phys Hung 11 no.3:235-238 '60. (EBAI 9:10)

1. Institute of Theoretical Physics, University Lodz, Lodz,
Poland. Presented by A.Konya.
(Protons)

TIETZ, T.

~~On the eigenvalues and eigenfunctions~~ of the Schrodinger equation for
the Thomas-Fermi potential. Acta phys Hung 11 no.4:391-400 '60.
(EBAI 10:2)

1. Physikalisches Institut der Universitat Lodz, Lodz, Polen.
Vergelegt von A.Konya.
(Eigenfunctions) (Potential, Theory of)
(Differential equations)

TIETZ, T.

An exact method for finding the phase shifts of the Dirac's equations for non-singular potential. Acta phys Hung 11 no.4:417-418 '60.

(EEAI 10:2)

1. Department of Theoretical Physics, University Lodz, Lodz, Poland
(Dirac equation) (Potential, Theory of)

TIETZ, T.

Phase shiftsof high-energy Dirac and Klein-Gordon particles. Acta
phys Hung 12 no.1:85-88 '60. (EBAI 10:2)

1. Department of Theoretical Physics, University Lodz, Lodz, Poland
(Dirac equation) (Particles)

S/058/62/000/004/126/160
A061/A101

AUTHOR: Tietz, T.

TITLE: Paramagnetic susceptibility of conduction electrons, calculated by analytic formulas for the theory of the formation of electron groups in the periodic system of elements

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 68, abstract 4E582
("Acta phys. Acad. scient. hung.", 1960, v. 12, no. 4, 291 - 295,
English; Russian summary)

TEXT: The paramagnetic susceptibility of conduction electrons of some elements is calculated. The number of free electrons determining paramagnetism, which is assumed to differ from that of atoms, is found by formulas obtained by the author in his theory of the formation of electron groups in atoms (RZhFiz, 1956, no. 10, 28255; 1959, no. 12, 27051; 1960, no. 8, 19774). The values of susceptibility found by calculation are in good agreement with experimental data.

R. Suris

[Abstracter's note: Complete translation]

Card 1/1

TIBBS, G.
SOURCE: (J. Supp); Given Name

Country: Poland

Academic Degrees: /not given/

Affiliation: Institute for Theoretical Physics of the University
(Institut fuer Theoretische Physik der Universitaet), Lodz

Source: Leipzig, Annalen der Physik, Vol 7, No 5-6, 1961, pp 258-262, 263-267.

Date: "The Influence of the Electron Shell of the Scattered Atom on
the Asymmetry Effect."

"The Influence of the Electron Shell on the Bremsstrahlung in
the Hartree and Thomas-Fermi Theory of Atom."

PIETS, T.

~~SURNAMES~~, Given Names

Country: Poland

Academic Degrees: /not given/

Affiliation: Institute for Theoretical Physics of the University, Lodz
/no original language version given/

Source: Leipzig, Annalen der Physik, Vol 7, No 7-8, 1961, pp 425-428.

Data: "Computation of the Interaction Energy of Two Identical Negative Singly Ionized Ions with a Noble-Gas Electron Structure Using Fermi-Amaldi Model."

TIEZ, T.

SOURCE (in caps); Given Names

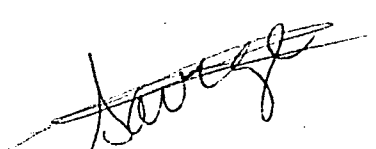
Country: Poland

Academic Degrees: not given

Affiliation: Institute for Theoretical Physics at the University, Lodz
/no original language affiliation given/

Sources: Leipzig, Annalen der Physik, Vol 8, No 1-2, 1961, pp 99-103.

Data: "Asymptotic Phase Shifts and Differential Cross-Section of
Electrons in Atoms with Lattner's Potential."



TIETZ, T.

The uncertainty principle and the Bohr theory. Acta phys Hung 13 no.3:
363-365 '61.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

TIETZ, T.

An analytical expression for the potential energy function of diatomic molecules. Acta phys Hung 13 no.3:359-361 '61.

1. Department of Theoretical Physics, University Ledz, Ledz, Poland.

3/058/63/000/001/033/120
A160/A101

AUTHOR: Tietz, T.

TITLE: An analytical expression for determining the phase shifts in the statistical atom theory

PERIODICAL: Referativnyy zhurnal, Fizika, no. 1, 1963, 3 - 4, abstract ID17 ("Ann. Phys. DDR", no. 5 - 6, 1962, 9, 295 - 300)

TEXT: A theoretical investigation was conducted of the scattering of electrons on the atoms. The scattering potential is taken in approximation of Hartree and by statistical atom theory. The Thomas-Fermi potential for free neutral atoms is approximated by Moliere and Rosenthal. With the help of Pais' approximation an analytical expression for the phase of the coherent scattering of electrons on atoms was obtained. It is a more accurate quasiclassical expression for the phase shifts. A comparison was carried out with the results of the numerical calculations for He and for the atoms with $Z = 80$. It is shown that Pais' approximation improves the conformity between the numerical and quasiclassical methods. For small scattering shifts, the results found well coincided with the numerical calculations. Ye. Pshenichnev

[Abstracter's note: Complete translation]
Card 1/1

TIETZ, T.

A continuous absorption coefficient of negative hydrogen and lithium ions. Acta phys Hung 14 no.1:1-9 '62.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.
Presented by Albert Konya.

TIETZ, T.

Electronic polarizabilities of free, neutral atoms in the Thomas-Fermi theory. Acta phys Hung 14 no.4:381-382 '62.

1. Department of Theoretical Physics, University Lodz, Lodz, Poland.

TIETZ, T.

A direct proof for the condition of the method of the stationary phase integral for radial Schrodinger equation. Acta phys Hung 14 no.4:383-385 162.

1. Department of Theoretical Physics, University Lódz, Lodz, Poland.

TITTS, T. [Tietz, T.]; VOYCHEK, L. [Wojtczak, L.]

Formula for the calculation of phase shifts in the case of Thomas-Fermi and Hartree potentials. Zhur. eksp. i teor. fiz. 43 no.1:87-88 J1 '62. (MIRA 15:9)

1. Institut teoreticheskoy fiziki pri universitete v Lodzi, Pol'sha. (Quantum field theory)

11111, 1.

35

1. Contribution to the Physics of the Motion of Crystallized Solutions of the Chemical Elements and Crystals (with A. RABINOVICH) of the Institute of Pure Mathematics (Institut für Reine Mathematik) of the German Academy of Sciences (Deutscher Akademischer Wissenschaften), Berlin, Germany, 1951.
2. Contribution to the Thermodynamics of Crystalline Polymers, Annalen der Physik (Berlin), 1952, pp. 1-12.
3. On the Calculation of the and of Crystalline Polymers by means of the Proper Functions, Annalen der Physik (Berlin), 1952, pp. 13-15.
4. Distribution of Crystalline Impurities in the Growth of Single and Multiple Crystals, Annalen der Physik (Berlin), 1952, pp. 16-18.
5. On the Nuclear Anisotropy of the Action of Single Crystals, Annalen der Physik (Berlin), 1952, pp. 19-21.
6. The Anisotropy of the Action of Single Crystals, Annalen der Physik (Berlin), 1952, pp. 22-24.
7. The Anisotropy of the Action of Single Crystals, Annalen der Physik (Berlin), 1952, pp. 25-27.
8. The Anisotropy of the Action of Single Crystals, Annalen der Physik (Berlin), 1952, pp. 28-30.
9. The Anisotropy of the Action of Single Crystals, Annalen der Physik (Berlin), 1952, pp. 31-33.
10. Changes in Defect Concentration in Silver Halides with Temperature, Annalen der Physik (Berlin), 1952, pp. 34-36.

TIETZ, T.

The pair production cross section for high photon energies for the Thomas-Fermi and Hartree atom. Acta phys Hung 11 no.1:47-51 '60.

(EEAI 9:10)

1. Department of Theoretical Physics of the University Lodz, Lodz, Poland. Presented by A.Konya.

(Photons) (Atoms) (Electrons)

TIETZ, T.

The penetrability of a Thomas-Fermi potential barrier. Acta phys
Hung 11 no.1:53-57 '60. (EEAI 9:10)

1. Department of Theoretical Physics, University, Lodz, Lodz,
Poland. Presented by A.Konya.
(Atoms) (Electrons) (Particles) (Alpha rays)

TIETZ, T.

Elastic scattering of electrons by an approximate potential of the self-consistent field for ions in the first and second born approximation. Acta phys Hung 11 no.3:259-264 '60. (EEAI 9:10)

1. Institute of Theoretical Physics, University Lodz, Lodz, Poland.
Presented by A.Konya.
(Electrons) (Ions)

TIETZ, T.

The variation of the diamagnetic susceptibility of water with temperature in the Thomas-Fermi model. T. Tietz (Univ. Lodz, Poland). *J. Chem. Phys.* 31, 274-5 (1959).
The no. of free electrons per water mol. was calcd. at 10° intervals from 0 to 100°. From these values the variation of the diamagnetic susceptibility of water with temp. was calcd. on the basis of the Thomas-Fermi model. The results obtained agreed well with the exptl. values of Cabrera and Fahlenbrach (*C.A.* 27, 4143). Henry Leidheiser, Jr.

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TIETZ, T.

A new method for finding the phase shifts for the Schrodinger equation. Acta phys Hung 16 no.3:289-292 '63.

1. Department of Theoretical Physics, University of Lodz,
Lodz, Poland.

TIETZ, T.

País approximate formula for the phase shift and electron scattering in the Thomas-Fermi theory. Acta phys Hung 16 no.1:1-6 '63.

1. University Lodz, Department of Theoretical Physics, Lodz, Poland. Presented by Albert Konya.

TIETZ, T.

The scattering and polarization of electrons by Hartree and Thomas-Fermi atoms. Acta phys Hung 16 no.1:7-12 '63.

1. University Lodz, Department of Theoretical Physics, Lodz, Poland. Presented by Albert Kohn.

TIETZ, Tadeusz

Feliks Joachim Wisniewski, 1890-1963. Postepy fizyki 15
no.5:475-477 '64.

1. Department of Theoretical Physics, University, Lodz.

TIETZ, T.

Scattering amplitude of high energy Klein-Gordon and Dirac particles. Acta phys Hung 17 no.3:383-385 '64.

1. Department of Theoretical Physics, University of Lodz, Lodz, Poland.

TIETZ, T.

A simple potential curve for diatomic molecules. Acta
physica Pol 26 no.3/4:353 S-O '64.

1. University, Lodz.

TIFBENKEL', M.O.

Gear-teeth chamfering cutters with hard-alloy tips. Mashinostroitel'
no.12:19 D '61. (MIRA 14:12)
(Metal-cutting tools)

TIFEA, V.

(2)

RUMANIA

Prof E. ABUREL, Dr G. ZERVOS, Dr A. RUSU, Dr V. TIFEA and Dr S. PANA;
First Obstetric and Gynecologic Clinic (Clinica I de obstetrica si
ginecologie) "Filantropia," College of Medicine and Pharmacy, Bucharest.

"Immunology and Therapy of Trichomonas vaginalis."

Bucharest, Microbiologie, Parazitologie, Epidemiologie, Vol 8, No 2,
Mar-Apr 63; pp 145-152.

Abstract [English summary modified]: Intradermal testing with antigen
prepared from clinical isolate: 163 of 262 tests were positive including
16 false positives; there were also 12 false negatives. Same antigen
used as vaccine by pricking intravaginal mucosa in 100 women with severe
trichomonal vaginitis: excellent clinical results in 89; side effects
mild: low fever in 5, slight erythema in 10. In vitro and clinical
(4 patients) preliminary experiments with an effective hyperimmune serum
are also reported.

1/1

TIFERIS, G. L.

Carbonization of products made of cement and the like, with a calcareous bonding material. A. M. Fainberg and G. L. Tiferis, U.S.S.R. 69,250, Nov. 30, 1947. To increase the mech. strength of structural objects made with calcareous cements or mixes, they are preliminarily dried and then satd. with CO₂ until they attain a porosity of 10%. For, this process waste gases from lime kilns can be used.

M. Hosh

CA

20

Carbonization of products made of cement and the like, with a calcareous bonding material. A. M. Paliberg and G. L. Tiferis. U.S.S.R. 69,250, Nov. 30, 1947. To increase the mech. strength of structural objects made with calcareous cements or mixes, they are preliminarily dried and then satd. with CO₂ until they attain a porosity of 100%. For this process waste gases from lime kilns can be used. M. Houch

L 25392-65 BWT(1)/EEC(t) Peb IJP(c)

ACCESSION NR: AP5002157

S/0120/64/000/006/0089/0093

AUTHOR: Borovitskiy, S. I., Starodumov, M. N.; Tiflov, V. I.

17
B

TITLE: Control unit for an outfit for detecting a nuclear magnetic resonance by the spin-echo method

21

SOURCE Pribory i tekhnika eksperimenta, no. 6, 1964, 89-93

TOPIC TAGS: nuclear magnetic resonance, spin echo method

ABSTRACT: When master-oscillator pulses with period T_0 are applied to the input of the control unit (see Enclosure 1), one of these four programs is formed at the output: (1) Program I which corresponds to the method of detecting spin-echo signals described by H. Y. Carr, et al. (Phys. Rev., 1954, 24, 630). (2) Program II produces two pulses with a variable distance between them. (3) Program III produces the magnetic moment zero. (4) Program IV produces the magnetic moment zero. (5) Program V produces the magnetic moment zero.

Card 1/3

L 25382-65

ACCESSION NR: AP5002157

permit determining T_1 ; (3) Program III yields three 90° pulses used for determining T_1 ; the interval between the first two pulses is τ_1 while the third pulse can be shifted; (4) Program IV yields two pairs of pulses with τ_1 interval within each pair and a variable distance between the pairs; this program is particularly suitable for measuring T_1 of the order of tens or hundreds of seconds. Tests showed that the control unit operates reliably with pulses of 4-7 μ sec or more duration in a period of repetition of 2 msec or longer. The output-pulse amplitude was about 60 v, their duration within $\pm 10\%$ spread. Count art. has: 3 figures.

ASSOCIATION

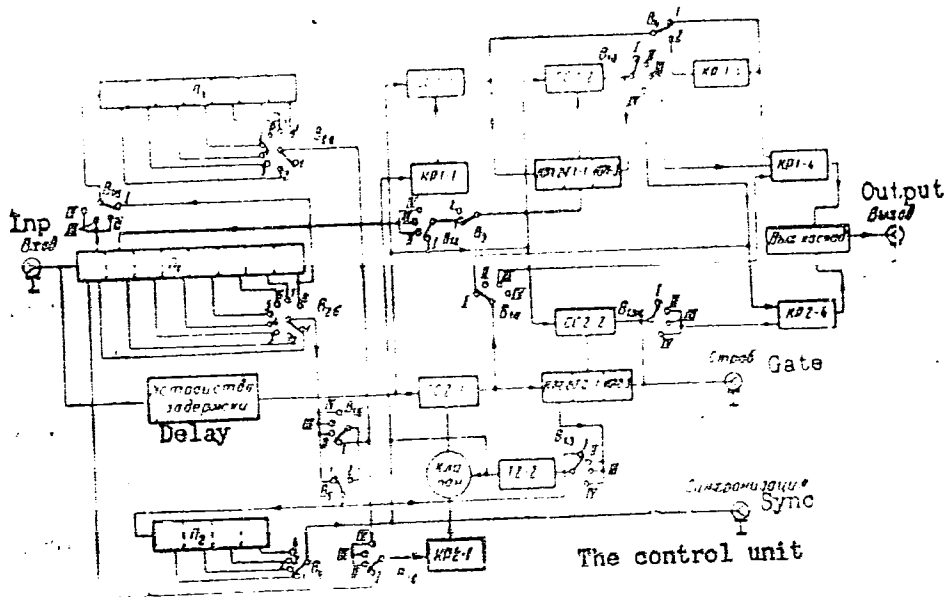
SUBMITTED 10 Dec 61

ANALYSIS

CLASSIFIED NP

L 25392-65
ACCESSION NR: AP5002157

ENCLOSURE: 01



Card 1

GUSEV, V.M.; TIFLOVA, L.A.; GUSEVA, A.A.; BEDNYI, S.N.

Notes on fleas and ticks in Askania-Nova. Trudy Nauch.-
issl. protivochum. inst. Kav. i Zakav. no.5:268-275 '61.
(MIRA 17:1)

TIFLISSKIY, L.P. (Moskva)

In the world of radioactive isotopes. Priroda 50 no.8:117 Ag '61.

(MIRA 14:7)

(Radioisotopes)

IOFF, I.G.; GERSHKOVICH, N.L.; ZAGNIBORODOVA, Ye.N.; LABUNETS, N.F.;
LEBDEV, A.D.; MIKULIN, M.A.; SKALON, O.I.; TIFLOV, V.Ye.; SHVARTS, Ye.A.;
YURKINA, V.I.; YAGUBYANTS, I.M.

New species of fleas (Suctoria-Aphaniptera); third report. Med.paraz.1
paraz.bol. no.5:460-465 S-0 '53. (MIRA 6:12)
(Fleas)

NIKOLAYEV, N.I., otv. red.; LENSKAYA, G.N., zam. otv. red.; PASTUKHOV, B.N., zam. otv. red.; FENYUK, B.K., zam. otv. red.; ISHUNINA, T.I., red.; AKIYEV, A.K., red.; DOMARADSKIY, I.V., red.; DROZHEVSKAYA, M.S., red.; ZHOVTYY, I.F., red.; KOROBEKOVA, Ye.I., red.; KRAMINSKIY, V.A., red.; KRATINOV, A.G., red.; LEVI, M.I., red.; LOBANOV, V.N., red.; MIRONOV, N.P., red.; PETROV, V.S., red.; PLANKINA, Z.A., red.; PYPINA, I.M., red.; SMIRNOV, S.M., red.; TER-VARTANOV, V.N., red.; TIFLOV, V.Ye., red.; FEDOROV, V.N., red.; PARNES, Ya.A., red.; PRONINA, N.D., tekhn. red.

[Especially dangerous natural focus infections] Osobo opasnye i prirodnoochagovye infektsii; sbornik nauchnykh rabot protivochumnykh uchrezhdenii. Moskva, Medgiz, 1962. 271 p.

(MIRA 16:5)

(COMMUNICABLE DISEASES)

TIFLOV, V.Ye.; DAVYDOV, G.S.

Fleas of some rodents in southwestern Tajikistan.

Trudy Inst. zool. i paraz. AN Tadzh. SSR 22:70-75

'62.

(MIRA 15:11)

(Tajikistan--Rodentia)

(Water metabolism)

TIFLOV, V. Ye.

Fate of bacterial cultures in the organism of fleas. Mat. k pozn.
fauny i flory SSSR. Otd. zool. no. 39:181-198 '64.

(MIHA 17:6)

IOFF, I.G. [deceased]; TIFLOV, V. Ye.; FEDINA, O.A. [deceased]

List of flea species (Suctoria) in Stavropol Territory. Mat. k
pozn. fauny i flory SSSR. Otd. zool. no.39:24-30 '64.
(MIRA 1964)

TIFLOV, V.Ye.; GUBINA, N.Ye.

New flea conserving liquid for plague tests; preliminary report.
Mat. k pozn. fauny i flory SSSR. Otd. zool. no.39:199-204 '64.
(MIRA 17:6)

TIFLOV, V.Ye.

Bibliography on fleas of the U.S.S.R. Trudy Nauch.-issl.
protivochum. inst. Kav. i Zakav. no.5:305-328 '61.
(MIRA 17:1)