S/057/60/030/008/007/019
B019/B060

AUTHORS: Gershuni, G. Z., Zhukhovitskiy, Ye. M.

TITLE: The Flow of a Conductive Liquid Around a Sphere in a Strong Magnetic Field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 8, pp. 925 - 926

TEXT: The authors consider the flow around a sphere of a conductive liquid with a low Reynolds number in a magnetic field. The field direction is assumed to lie in the direction of flow. They proceed from the steady-state equations (2) and (3) in nondimensional quantities, and obtain solutions (4) which, for weak magnetic fields, correspond to the results obtained by Chester (Ref. 1). The calculation of the coefficients is dealt with, and it is finally stated that with large field strengths resisting power grows proportionally with the field. There are 4 references: 3 Soviet and 1 American.

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The Flow of a Conductive Liquid Around a Sphere in a Strong Magnetic Field

S/057/60/030/008/007/019
B019/B060

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University).
Permskiy pedagogicheskiy institut (Perm' Pedagogical Institute)

SUBMITTED: February 22, 1960

Card 2/2

S/057/60/030/009/011/021
B019/B054

26.1410

AUTHORS: Gershuni, G. Z. and Zhukhovitskiy, Ye. M.

TITLE: Rotation of a Sphere in a Viscous Conducting Liquid in a Magnetic Field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol. 30, No. 9, pp. 1067-1073

TEXT: The authors study the motion of a viscous incompressible conducting liquid around a steadily rotating sphere in the presence of a magnetic field in the direction of the rotational axis. They assume the case of slow rotation in which the inertial forces can be neglected as compared with the viscous forces, i.e., they assume a low Reynolds number. The magnetic Reynolds number is also assumed to be low. The authors obtain expressions for the distribution of the velocity and the induced field, as well as formulas for the braking moment. In the case of weak fields, the braking moment increases proportionally to the square field strength. In the case of high field strengths, the dependence is linear. The problem arising with slow rotation of the sphere in a conducting liquid in a

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longitudinal magnetic field was solved in successive approximation by Yu. K. Krumin' (Ref. 1). He found a solution of this problem for weak fields in which the velocity distribution differs only slightly from that without a field. In the present paper, the authors obtain a general solution which also holds for strong fields. In this connection, the authors set up, in the first part, a linearized equation of motion of a viscous incompressible conducting liquid in dimensionless parameters. They obtain solutions for the velocity of the medium and the field strengths with the aid of Legendre polynomials and Bessel functions after a projection of the said equation of motion on the Z-axis which coincides with the rotational axis and the magnetic field direction. These general solutions are discussed for weak and strong fields. There are 3 Soviet references.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University).
Permskiy gosudarstvennyy pedagogicheskiy institut
(Perm' State Pedagogical Institute)

SUBMITTED: March 25, 1960

Card 2/2

83185

S/056/60/039/002/022/044
B006/B056

14.1800
24.7900

AUTHOR: Gershuni, G. Z.

TITLE: A Mechanism of Ultrasonic Absorption in Paramagnetic Metals Placed in a Magnetic Field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 39, No. 2(8), pp. 362-363

TEXT: In a medium that is located in an external magnetic field and whose susceptibility is temperature-dependent, temperature- as well as magnetization oscillations occur at every point of the medium during the passage of longitudinal sound waves. If the medium is conductive, currents are, besides, induced, which entail additional sound absorption. The author estimates the absorption of a plane wave in an isotropic medium, which is due to this effect. If $\vec{H} \parallel \vec{k}$ ($\vec{k}$ - sound wave vector), no current is induced. If $\vec{H} \perp \vec{k}$, the greatest effect is produced. In this case, a transverse current wave occurs, which propagates at sonic velocity, and which is polarized perpendicular to $\vec{H}$ and $\vec{k}$. Its amplitude is given by equation (1). The dissipation and the absorption coefficient are calculated from

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A Mechanism of Ultrasonic Absorption in Paramagnetic Metals Placed in a Magnetic Field

S/056/60/039/002/022/044
B006/B056

this relation. It is found that, if $\lambda/\delta \gg 1$ (δ = skin depth), i.e., if frequency is low, the absorption coefficient grows proportional to the square of the frequency. At high frequencies ($\lambda/\delta \ll 1$, practically at $\omega \sim 10^8 sec^{-1}$), a limit γ_m is attained, which is given by formula (2).

Field- and frequency dependence of the absorption coefficient are the same as in a conducting medium moving in a sound wave within a magnetic field (Ref. 2). The ratio between the absorption coefficient given by (2) and the coefficient of absorption due to Foucault currents equals $(aT/\mu)^2(\partial\mu/\partial T)^2$ (μ = magnetic permeability). This ratio is nearly always small; only paramagnetic rare earths have a comparatively large $\partial\mu/\partial T$ near ferro- and antiferromagnetic transition points, and the effect due to Foucault currents may become considerable as, e.g., in dysprosium at 180^0K, where $\partial\mu/\partial T \approx 0.01$ deg^{-1}. The parameter a is not experimentally known for rare earths, the data for "tabulated" metals (some of them are given) are of the order of unity. With $a \sim 1$, $(aT/\mu)^2(\partial\mu/\partial T)^2 \approx 3$. With $\sigma \sim 10^{16}$ sec^{-1}, $v \approx 3 \cdot 10^5$ cm/sec, $\rho = 8.6$ g/cm^3

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83185

A Mechanism of Ultrasonic Absorption in Paramagnetic Metals Placed in a Magnetic Field

S/056/60/039/002/022/044
B006/B056

and $H \sim 10^4$ oe, $\gamma_m \sim 10^{-3}$ cm^{-1}. Relaxation effects were not taken into account in this estimate. S. A. Al'tshuler is mentioned. There are 4 references: 1 Soviet and 3 US.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm' State University)

SUBMITTED: February 19, 1960

Card 3/3

GERSHUNI, G.Z.; ZHUKHOVITSKIY, Ye.M.

Conductive fluid flowing around a sphere in a strong magnetic field. Zhur.tekh.fiz. 30 no.8:925-926 Ag '60. (MIRA 13:8)

1. Permskiy gosudarstvennyy universitet i Permskiy pedagogicheskiy institut.
(Fluid dynamics) (Magnetic fields)

GERSHUNI, G.Z.; ZHUKHOVITSKIY, Ye.M.

Heat transfer through a vertical slit with a rectangular cross section in the case of strong convection. Inzh.-fiz. zhur. no.12:63-67 D '60. (MIRA 14:3)

1. Gosudarstvennyy universitet i Gosudarstvennyy pedagogicheskiy institut.

(Heat—Convection)

24 6714

S/056/62/042/004/033/037
B125/B102

AUTHORS: Gershuni, G. Z., Zhukhovitskiy, Ye. M.

TITLE: Convective instability spectrum of a conducting medium in a magnetic field

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 42, no. 4, 1962, 1122-1125

TEXT: The conditions for oscillatory convective instability of a conducting medium in a magnetic field are determined. A vertical plane layer of a conducting medium is heated from below in a magnetic field. The equilibrium is disturbed so that the velocity $\vec{v}$ and the perturbation of the field $\vec{H}$ are vertical. The temperature perturbation is $T = T(x,t)$, where x is the coordinate taken from the center of the layer in a transverse direction. The pressure gradient is zero, and all quantities depend on the time t as $e^{\lambda t}$. Then, the equations derived from the ordinary equations of magnetohydrodynamics

$$\lambda v = v'' + RT + M^2 H', \quad \lambda PT = v + T'', \quad \lambda P_m H = v' + H'' \qquad (1),$$

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Convective instability spectrum ...

(R = Rayleigh number, M = Hartmann number, P = Prandtl number, $P_m = 4\pi\sigma\nu/c^2$), have the solution $v = v_0 \sin\pi x$, $T = T_0 \sin\pi x$, $H = H_0 \cos\pi x$ (2), if $v = 0$, $T = 0$ holds for the ideally conducting boundaries $x = \pm 1$ of the layer. The equations for the eigenvalues λ of the perturbations (2) give the equations $R_1 = \pi^4 + \pi^2 M^2$ (7),

$$R_2 = \pi^4 \frac{(P + P_m)(1 + P_m)}{P_m^2} + \pi^2 \frac{1 + P_m}{1 + P} \frac{P^2}{P_m^2} M^2, \qquad (8),$$

and

$$b^2 = \pi^4 \frac{P}{P_m}\left(\frac{M^2}{\pi^4}\frac{P_m - P}{1 + P} - 1\right). \qquad (9)$$

for the branches of the stability curves for monotonic and oscillatory perturbations. (7) and (8) are straight lines in the plane (R, M^2). As V. S. Sorokin pointed out that oscillatory instability occurs with certain properties of the medium ($4\pi\sigma\chi/c^2 > 1$) and sufficiently strong fields ($M > \bar{M}$). The critical field strength $\bar{M}^2 = \pi^2(1 + P)(P_m - P)$ follows from the condition $R_1 = R_2$. This condition is evidently fulfilled for cavities of any shape. The necessary condition for the existence of an oscillatory

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instability reads

$$P_m/P > \int |T|^2 dV \int |\text{rot } \mathbf{H}|^2 dV \Big/ \int |\mathbf{H}|^2 dV \int |\nabla T|^2 dV \qquad (14),$$

the right-hand side being of the order of 1. There is 1 figure. The English-language reference reads as follows: S. Chandrasekhar. Phil. Mag., 43, 501, 1952.

ASSOCIATION: Permskiy gosudarstvennyy universitet (Perm State University)
Permskiy gosudarstvennyy pedagogicheskiy institut (Perm State Pedagogical Institute)

SUBMITTED: November 22, 1961

Card 3/3

S/040/63/027/002/008/019
D251/D308

AUTHORS: Gershuni, G. Z. and Zhukovitskiy, Ye. M. (Perm')

TITLE: On the convective instability of a two-component mixture in a gravitational field

PERIODICAL: Prikladnaya matematika i mekhanika, v. 27, no. 2, 1963, 301-308

TEXT: The authors investigate the problem stated, which so far has been largely ignored by theoretical and practical research workers. The problem of the stability of the convection of a two-dimensional vertical layer of the mixture heated from below is solved exactly on the basis of the convective equations of I. G. Shaposhnikov (PMM, v. 17, no. 5, 1953). The possibility of a state of equilibrium is demonstrated, and it is shown that, for equilibrium, the density gradient will be constant and vertical. In contra-distinction from the case of a pure medium, investigated by V. S. Sorokin (PMM, v. 17, no. 1, 1953) there are two possible types of disturbance of the equilibrium position which may arise ..

Card 1/2

i.e. monotonic and oscillatory disturbances. Equations are deduced, in terms of the ordinary and diffusional Rayleigh numbers, for the 'neutral' line and the 'neutral' oscillation respectively, (i.e. the line or oscillation which separates those disturbances which are damped from those which increase monotonically in the second case). It has so far been assumed that the equilibrium gradients of temperature and concentration are independent. In conclusion, the authors investigate the stability of equilibrium when these gradients are connected by some law. It is shown that for normal thermodiffusion only unstable relatively monotonic disturbances are possible, while for anomalous thermodiffusion oscillatory instability is possible, and also monotonic instability with heating from above. There are 3 figures.

SUBMITTED: November 28, 1962

ACCESSION NR: AP4015965 S/0040/63/027/005/0779/0783

AUTHORS: Gershuni, G. Z. (Perm'); Zhukhovitskiy, Ye. M. (Perm')

TITLE: Parametric excitation of convective instability

SOURCE: Prikl. matem. i mekhan., v. 27, no. 5, 1963, 779-783

TOPIC TAGS: parametric excitation, convective instability, temperature gradient, nonstationary equilibrium, auto oscillation, parametric resonance, heat equation, skin effect

ABSTRACT: Convective stability of a fluid in a gravity field is generally studied under the assumption that the equilibrium temperature gradient does not depend on time. Nonstationary equilibrium of fluid is also possible, where the equilibrium temperature changes with time by a law determined by nonstationary heating conditions. Apparently, stability of such nonstationary equilibrium has not yet been studied. The authors are interested particularly in the case where the equilibrium temperature gradient changes periodically with time. The fluid is represented as an auto-oscillating system with periodically changing parameter. Under such conditions, interesting phenomena of the parametric resonance type are to be expected. The authors investigate stability of equilibrium of a plane horizontal fluid layer

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ACCESSION NR: AP4015965

with periodically changing temperature gradient. Their solution shows clearly the characteristic peculiarities of the problem. Orig. art. has: 5 figures and 26 formulas.

ASSOCIATION: none

SUBMITTED: 27May63	DATE ACQ: 21Nov63	ENCL: 00
SUB CODE: AI	NO REF SOV: 003	OTHER: 003

Card 2/2

GERSHUNI, G.Z., ZHUKHOVITSKIY, Ye.M., ZAYTSEV, V.M.

Electronic structure of the azulene molecule. Zhur. struk. khim. 5 no.4:598-603 Ag '64. (MIRA 18:3)

1. Permskiy gosudarstvennyy universitet i Permskiy gosudarstvennyy pedagogicheskiy institut.

ACCESSION NR: AP4015965

with periodically changing temperature gradient. Their solution shows clearly the characteristic peculiarities of the problem. Orig. art. has: 5 figures and 26 formulas.

ASSOCIATION: none

SUBMITTED: 27May63	DATE ACQ: 21Nov63	ENCL: 00
SUB CODE: AI	NO REF SOV: 003	OTHER: 003

Card 2/2

GERSHUNI, G.V., [illegible]KHOVITSKIY, Ye.M., ZAYTSEV, V.M.

Electronic structure of the germane molecule. Zhur. struk. khim. 5 no.4:598-603 Ag '64. (MIRA 18:1)

1. Permskiy gosudarstvennyy universitet i Permskiy gosudarstvennyy pedagogicheskiy institut.

GERSHUNI, G.Z.; ZHUKHOVITSKIY, Ye.M.; ZAYTSEV, V.M.

Electronic structure of the methane molecule. Zhur. struk. khim. 5 no.4:598-603 Ag '64. (MIRA 18:9)

1. Permskiy gosudarstvennyy universitet i Permskiy gosudarstvennyy pedagogicheskiy institut.

GERSHUNI, G.Z. (Perm'); ZHUKHOVITSKIY, Ye.M. (Perm')

Parametric instability of the revolution of a fluid as a rigid body. Prikl. mat. i mekh. 28 no.5:829-834 S-O '64.
(MIRA 17:11)

GERSHUNI, G.Z. (Perm'); ZHUKHOVITSKIY, Ye.M. (Perm')

Parametric instability of the revolution of a fluid as a rigid body. Prikl. mat. i mekh. 28 no.5:829-834 S-O '64. (MIRA 17:11)

GERSHUN, A. L.

"Derivatives of 2-Phenyl-Benzothiazole-Analogues of Cyanine Dyes." Kiprianov, A. I., Utenko, I. K. and Gershun, A. L. (p. 865)

SO: Journal of General Chemistry (Zhurnal Obshchei Khimii) 1944, Volume 14, no. 7-8.

GERSHUNS, A.L.

Synthesis of barbiturates with heterocyclic radicals. Ukr.khim.zhur.17 no.2:274-279 '51. (MLRA 9:9)

1.Khar'kovskiy gosudarstvennyy universitet.
(Barbitururic acid)

GERSHUNS, A.L.; VERKINA, L.I.

Certain rearrangements in the furan series. Ukr.khim.zhur.17 no.2: 280-284 '51. (MLRA 9:9)

1.Khar'kovskiy gosudarstvennyy universitet.
(Furan) (Rearrangements (Chemistry))

GERSHUNS, A. L.

.7

(4)

A method of determining the temperature of appearance of liquid phase in mixtures of solid products. M. Kh. Guzman, A. L. Gershuns, and Ya. E. Geguzin (Ya. M. Gor'kii State Univ., Khatkov). *Zhur. Fizikal. Khim.* 26, 1223–4(1953).—Appearance of a liquid phase, such as a eutectic mixt., can be observed microscopically by the appearance of "contact melting" of a small piece of one solid phase on a thin layer of the 2nd on a suitable melting block.

V. N. Bednarski

10-12-54

Gershuns, A.L.

USSR.

Eutectics in quasi-equilibrium in systems of the anhydride-amine type. N. Kh. Glazman, A. L. Gershuns, L. S. Palatnik, O. E. Pikhtina, and R. S. Mil'ner (A. M. Gor'kii State Univ., Khar'kov). *Zhur. Fiz. Khim.* 27, 1304-10(1953); cf. *C.A.* 48, 7000b.—The appearance of a liquid phase (*P*) in binary org. systems (*A*-*B*) at the temp. T_x, 10-30° below the m.p. (T_e) of the eutectic (*A* + *C*) (or *B* + *C*), where either *A* or *B* is an amine, the other is an acid anhydride (or acid, or acid chloride), and *C* is the compd. formed in the reaction of *A* and *B*, was observed by the "bipolar contact" method; in this a crystal of *A* was placed on a thin layer of *B* at several known temps. on a microscope stage. T_x was the lowest temp. at which the liquid phase was seen. *P* was a quasi-equil. eutectic (*A* + *B*) whose eutectic point lay on the continued liquidus branch of the equil. diagram of the system (*A*-*B*). The rate of reaction of powd. mixts. of *A* and *B* upon sintering, measured as a function of temp., displayed a sudden, sharp rise as the increasing temp. reached T_x; this was due to the formation of an undercooled liquid phase. A phase diagram of the system phthalic anhydride (I)-β-naphthylamine (II) is given. The m.p. of *A*, *B*, and *C*, T_x, T_e, yield of *C* at the temp. T_x and concn. of *P* are tabulated for the systems I-anthranilic acid (III), I-*p*-aminobenzoic acid, I-II, I-*m*-nitroaniline (IV), I-*p*-nitroaniline (V), V-succinic anhydride (VI), VI-*o*-anisidine, VI-*m*-nitroaniline, IV-VI, VI-*p*-chloroaniline, VI-*p*-toluidine (VII), VI-1-naphthylamine (VIII), III-VI, VI-4-aminoantipyrine, VI-2-aminothiazole, V-maleic anhydride, VIII-"carbomethoxysulfinyl chloride" (IX), II-IX, and VII-IX. J. W. Loweberg, Jr.

GERSHUNS, A L

137-58-5-11184

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 326 (USSR)

AUTHOR: Gershuns, A.L.

TITLE: The 2.2'-Diquinolyl and its Employment in Photocolorimetric Determination of Copper in Metals and Alloys (2.2'-dikhinolil i yego primeneniye dlya fotokolorimetricheskogo opredeleniya medi v metallakh i splavakh)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii. Ukr. resp. pravl., 1956, Vol 4, pp 149-153

ABSTRACT: A method has been developed whereby small quantities of Cu can be detected in Al, Zn, Mg, and Silumin with the aid of 2.2' diquinolyl. In order to retain Zn and Al (pH 5-6) in the solution tartaric acid is added. The results can be reproduced in a one-step extraction operation only if the solution is vigorously agitated by means of a mechanical propeller-type mixer in a small vessel which is thermostatically controlled within the limits of 1-2°C. A table of determination of 0.005-0.05% of Cu is shown; the relative error amounts to 1.7-2.0%. The analysis involves the following steps: a weighed portion of the substance being tested is dissolved, hydroxylamine chloride is added, the

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137-58-5-11184

The 2.2'-Diquinolyl and its (cont.)

pH of the solution is brought to a value of 5-6, and the tinted 2.2' diquinolyl complex is extracted with isoamyl alcohol. After separating and centrifuging, the colored layer is analyzed photometrically on an FEK-M or an SF-4 at 545 mμ.

K. K.

1. Metals--Analysis 2. Copper--Determination 3. Colorimetry--Applications
4. Diquinolyl--Applications

Card 2/2

AUTHORS: Gershuns, A.L., Bashkevich, Yu.V. 32-7-4/49

TITLE: Photocolorimetric Determination of the Small Copper Quadrant by Means of 2,2' Dichinolil (Fotokolorimetricheskoye opredeleniye malykh kolichestv medi s pomoshch'yu 2,2' -dikhinolila)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 7, pp. 787-788 (USSR)

ABSTRACT: Dichinolil as a reagent is obtained by a catalytic dehydrocondensation of chinolin; it is then synthetized according to the method of Smirov. Dichinolil is soluble only in isoamilspirit whereby its reaction upon copper extract is increased with the solution of dichinol in isoamilspirit. Thus the content of copper in synthetic solutions, alloys and steel can be determined by its extraction. Some of the results are shown in table 1-2. Very small amounts of copper were detected in zinc, aluminum, magnesium and other metals by adding tartaric acid. The results show that a miscalculation of the copper content can only be less than 2 %.

ASSOCIATION: Institute for Chemical Science and Research at the State University of Kharkov, imeni A.M.Gor'kiy (Nauchno-issledovatel'skiy institut khimii Kharkovskogo gosudarstvennogo universiteta imeni A.M.Gor'kogo)

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Card 1/1

GERSHUNS, A.L.

Reactions of organic compounds with metal ions. Uch. zap. KHGU 95:167-177 '57. (MIRA 12:10)
(Organometallic compounds)
(Chemical tests and reagents)

SLYUSAREV, A.T.; GERSHUNS, A.L.

Synthesis of azomethine derivatives of pyrogallol aldehyde and the study of their reactions with metal ions. Ukr.khim.zhur. 24 no.5: 639-642 '58. (MIRA 12:1)

1. Khar'kovskiy gosudarstvennyy universitet imeni A.M. Gor'kogo, Nauchno-issledovatel'skiy institut khimii.
(Schiff bases)

GERSHUNS, A.L.

Effect of the structure of 2,2'-dipyridyl and its analogs on their reactions with metal ions. Trudy kom. anal. khim. 11:28-34 '60.
(MIRA 13:10)

1. Nauchno-issledovatel'skiy institut khimii Khar'kovskogo gosudarstvennogo universiteta im. A.M. Gor'kogo.
(Bipyridine) (Organometallic compounds)

GERSHUNS, A.L.; KALMYKOV, L.Z.

Photocolorimetric determination of silver by means of copper thiuramate and thiuram. Zav.lab. 26 no.2:152-153 '60. (MIRA 13:5)

1. Nauchno-issledovatel'skiy institut khimii pri Khar'kovskom gosudarstvennom universitete imeni A.M.Gor'kogo.
(Silver--Analysis)

ZLYUSAREV, A.T.; GERSHUNS, A.L.

Synthesis of anilides of gallic acid. Zhur.prikl.khim. 33 no.7:364-367 Jl '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut khimii Khar'kovskogo universiteta, i zhdanovskiy metallurgicheskiy institut.
(Gallic acid)

GERSHUNS, A.L.; VEREZUBOVA, A.A.; TOLSTYKH, Zh.A.

Photocolorimetric determination of copper by means of 2, 2'-bicinchoninic acid. Izv.vys.ucheb.zav.; khim.i khim.tekh. 4 no.1: 25-27 '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut khimii pri Khar'kovskom gosudarstvennom universitete, kafedra kachestvennogo analiza.
(Copper--Analysis) (Bicinchoninic acid)

GERSHUNS, A.L.; VAYL,Ye.I.; MIRNAYA, A.P.; RASTREPINA, I.A.; SIGALOVA, L.V.

Photocolorimetric method of determining mercury. Zav. lab. 27 no. 12:1465-1467 '61. (MIRA 15:1)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
(Mercury--Analysis)

SLYUSAREV, A.T.; GERSHUNS, A.L.

Spectrophotometric investigation of a complex formation of titanium with p-carboxygallanilide. Ukr.khim.zhur. 28 no.4:453-458 '62. (MIRA 15:8)

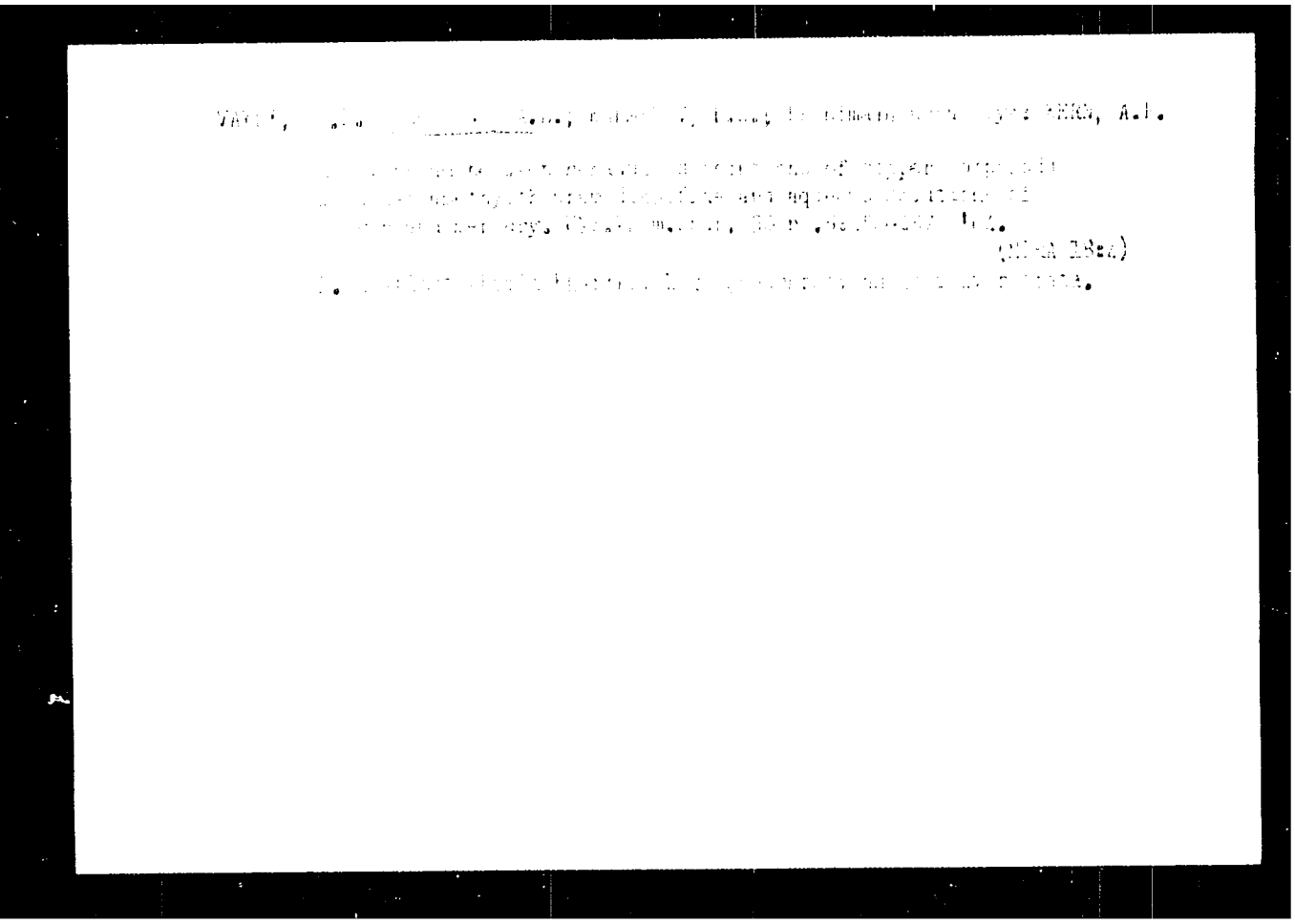
1. Zhdanovskiy metallurgicheskiy institut i Nauchno-issledovatel'skiy institut khimii Khar'kovskogo gosudarstvennogo universiteta.
(Titanium compounds--Spectra) (Gallic acid)

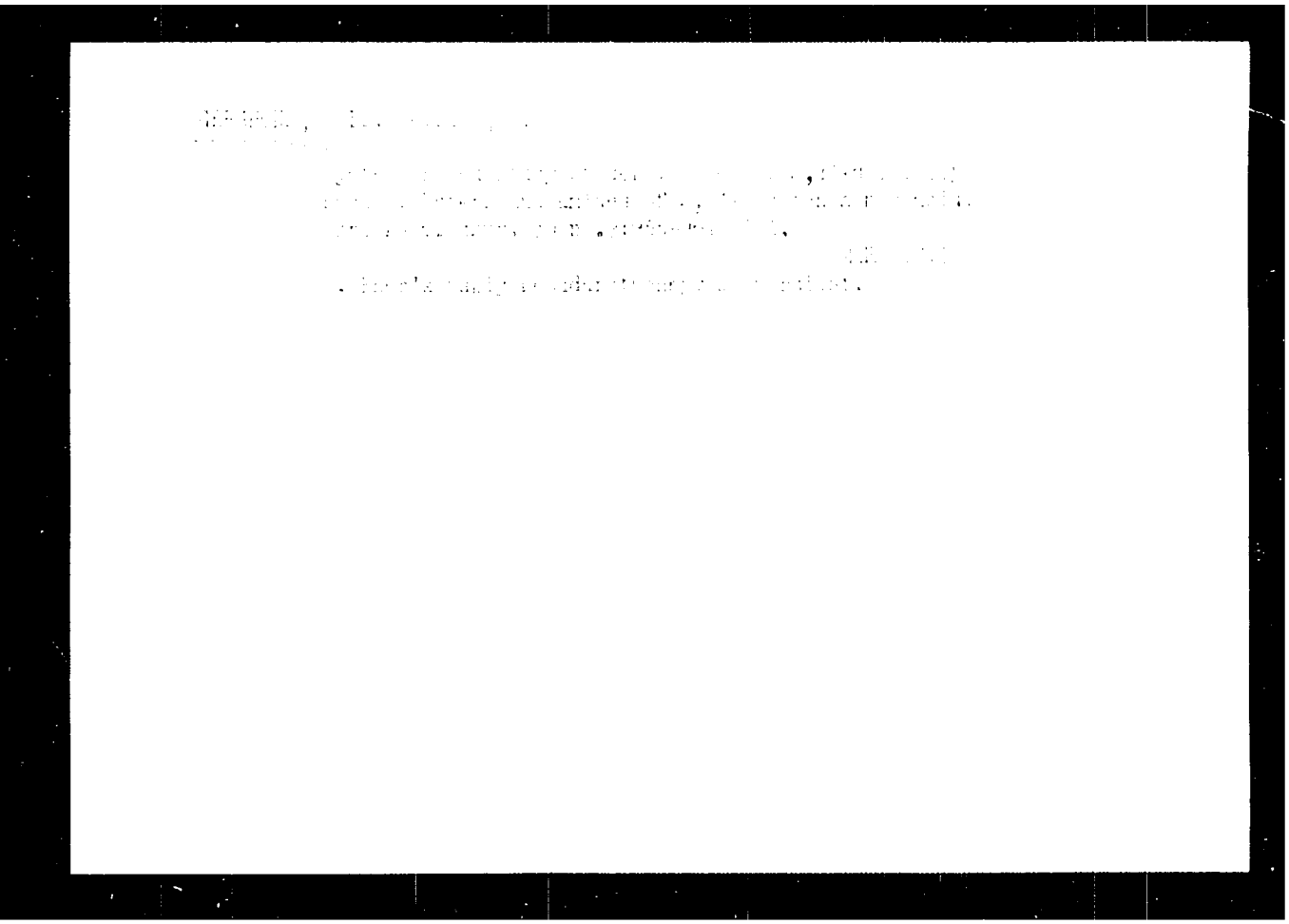
SLYUSAREV, A. T.; GERSHUNS, A. L.

Dissociation of p-carboxygallanilide. Ukr. khim. zhur. 28 no.3: 309-315 '62. (MIRA 15:10)

1. Zhdanovskiy metallurgicheskiy institut i Nauchno-issledovatel'skiy institut khimii Khar'kovskogo gosudarstvennogo universiteta.

(Gallic acid) (Dissociation)





GERSH[illegible], A.L.; [illegible], A.A.

Synthesis and study of the derivatives of 2,2'-di[illegible]. Part 2: Methyl-substituted 2,2'-bicinchoninic acids and 2,2'-bi[illegible]. Ukr. khim. zhur. 30 no.10:108[illegible]-10[illegible] [illegible]

([illegible])

1. Khar'kovskiy gosudarstvennyy universitet imeni Gor'kogo.

[redacted]

L 51866-65 EWT(1)/EWT(m)/EPF(c)/[illegible]
EWA(h)/EWA(c) [illegible]

S/0181/65/007/003/0931/0933

ACCESSION NR: AP5006915

AUTHOR: [illegible] A. I.; [illegible] A. [illegible]; [illegible] Ya. Ya.

TITLE: Influence of high pressure on the photoconductivity of some semiconductors

SOURCE: Fizika tverdogo tela, v. 7, no. 3, 1965, 931-933

TOPIC TAGS: semiconductor, photoconductivity, pressure effect, temperature effect, forbidden band

ABSTRACT: The authors investigated the influence of hydrostatic pressure up to 6000 atms on the photoconductivity of single-crystal CdS, HgI2, PbI2, and CdSe. The equipment used was similar to that described by the authors earlier (Tr. VII Soveshch. po lyuminestsentsii [illegible] (Trans. VII Conf. on Luminescence (Crystal Phosphors)), Moscow, 30 Jun - 8 Jul 1958, p. 59, [illegible] 1959). Pressure is shown to shift the principal maximum of photoconductivity in the long-wave direction, and by approximately the same amount. The widths of the forbidden band increase with increasing lattice compression in the case of CdSe and decrease in the case of HgI2 and PbI2. The coefficient of variation of the width of the for-

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L 45186-65 EWT(1)/EWT(m)/EPF(c)/[illegible]
EWA(h)/EWA(c) Pz-6/Pi-4/[illegible] JD/[illegible]/AT

S/0181/65/007/003/0931/0933

ACCESSION NR: AP5006915

AUTHOR: [illegible] A. I.; Gerat, A. I.; [illegible] Ya. Ya.

TITLE: Influence of high pressure on the photoconductivity of some semiconductors

SOURCE: Fizika tverdogo tela, v. 7, no. 3, 1965, 931-933

TOPIC TAGS: semiconductor, photoconductivity, pressure effect, temperature effect, forbidden band

ABSTRACT: The authors investigated the influence of hydrostatic pressure up to 6000 atm on the photoconductivity of single-crystal Cu_2O, HgI_2, PbI_2 and CdS. The equipment used was similar to that described by the authors earlier ([illegible]) (Trudy VIII soveshch. po lyuminestsentsii (kristallofosfory) (Trans. VIII Conf. on Luminescence (Crystal Phosphors)), Moscow, 26 Nov. - 3 Dec. 1958, [illegible] 1959). Pressure is shown to shift the principal maximum of photoconductivity in the long-wave region, and by approximately the same amount. The widths of the forbidden band increase with increasing lattice compression in the case of Cu_2O and decrease in the case of HgI_2 and PbI_2. The coefficient of variation of the width of the for-

Card 1/2

L 45186-65 EWT(1)/EWT(m)/[illegible]
EWA(h)/EWA(c) Pz-6/Pi-4/[illegible] IJP(c) JD/[illegible]

S/0181/65/007/003/0931/0933

ACCESSION NR: AP5006915

AUTHOR: [illegible], A. I.; [illegible], A. [illegible]; Kirk, Ya. Ya.

TITLE: Influence of high pressure on the photoconductivity of some semiconductors

SOURCE: Fizika tverdogo tela, v. 7, no. 3, 1965, 931-933

TOPIC TAGS: semiconductor, photoconductivity, pressure effect, temperature effect, forbidden band

ABSTRACT: The authors investigated the influence of hydrostatic pressure up to 6000 atm on the photoconductivity of single crystals of Cu_2O, [illegible], PbI_2 and [illegible]. The equipment used was similar to that described by the authors earlier (Tr. VII soveshch. po lyuminestsentsii (Kristallofosfory) (Trans. VII Conf. on Luminescence (Crystal Phosphors)), Moscow, 26 Jun. - 3 Jul. 1958, p. 90, Tartu, 1959). Pressure is shown to shift the principal maximum of photoconductivity in the long-wave direction, and by approximately the same amount. The widths of the forbidden band increase with increasing lattice compression in the case of Cu_2O and decrease in the case of HgI_2 and PbI_2. The coefficients of variation of the width of the for-

Card 1/2

GERSUMOV, A. S.

USSR/Engineering Mar 48
Railroads
Cars, Railroad

"District Council of Chief Engineers of the Central District," A. S. Gersumov, Cand Tech Sci, 1 p

"Tekh Zhel Dor" No 3

Reports conference held in Feb 48. Among subjects discussed: fulfillment of Five-Year Plan, freight cars, radio communication between stations, car-repair shops, station organization and mechanization, and points requiring attention.

2/49734

USSR/Engineering (Contd) Mar 48

tion of chief engineers in locomotive, car, and track departments.

2/49734

GERSY, Istvan

Aid to stereoscopic viewing of aerial photographs. Geod kart 15 no.6:467 '63.

PHASE I BOOK EXPLOITATION SOV/4734

Gerszonowicz, S.

Vyklyuchateli peremennogo toka vysokogo napryazheniya (High-Voltage A-C Circuit Breakers) Moscow, Gosenergoizdat, 1958. 535 p. 11,000 copies printed. [Translated from the English].

General Ed.: G.V. Butkevich, Professor; Translator: A.M. Bronshteyn, Candidate of Technical Sciences; Ed.: V.V. Mikhaylov; Tech. Ed.: K.P. Voronin.

PURPOSE: This book is intended for specialists, ie., engineers operating electric power systems, planners and designers in the electrical apparatus industry, and teachers and students in related fields of electrical engineering.

COVERAGE: This is a translation from the 1949 English language edition of a book which was originally published in Spanish. In the Foreword to the Russian edition, the translator and the editor state that, although the revised English text appeared in 1949, the book still contains very useful material much of which is not found in Soviet literature. In particular, chapters 10 and 12

Card 1/2

introduce standards and norms of various countries for high-voltage circuit breakers and give a critical comparison of them; chapter 14 suggests original methods of selecting circuit breakers, and chapter 11 discusses the effects of the aperiodic component in the switched-off current on the breaker's disconnecting capacity. This chapter also discusses the various approaches to the evaluation of disconnecting capacity in the USA and in the majority of other countries. This last problem is of such importance that several countries, among them the USSR, adopted the rule for their revised standards for high-voltage circuit breakers that tests for disconnecting capacity be introduced with currents containing not less than 50 percent of the aperiodic component. However, considering the fact that during the years since the English edition appeared several new developments and important improvements have been made in this field, the editors have decided to supplement the Russian edition with data on the latest achievements and on trends in the future development of high-voltage circuit breakers. The supplement also contains a description of Soviet-made circuit breakers and a table summarizing their characteristics. Some reference material on Soviet norms and standards is included in the text. The supplement ends with an additional list of 20 references: 4 Soviet (including 1 translation), 10 English, 5 German, and 1 Polish.

AVAILABLE: Library of Congress (TK2842.G417)

JP/rsm/gmp
1-2-61

GERT, A.I.

Conference of technicians of Novosibirsk factory laboratories. Zav. lab. 26 no.3:389 '60. (MIRA 13:6)

1. Nachal'nik otdela tekhnicheskoy informatsii TSential'nogo byuro tekhnicheskoy informatsii Novosibirskogo sovnarkhoza.
(Novosibirsk--Testing laboratories)

GERT, A.P.; BULEKOV, N.G.

Determining the optimal [illegible] longwall according to the maximum labor productivity by the mathematical statistics method. Nauch. trudy KNIUI no.14:45-[illegible] '62. (MIRA 18:4)

PESIN, N.Ya.; MASTER, A.A.; SELYUKOV, V.P.; [illegible]

Analysis of the degree of difficulty in development operations in Karaganda Basin mines. Nauch. trudy KNIUI no.[illegible] '64. (MIRA 18:4)

PEGIN, N.Ya.; BRALIN, Zh.B.; ALOTIN, L.M.; ZAITOV, M.A.; GERT, A.P.

Analysis of the degree of difficulty in underground haulage operations in Karaganda Basin mines. Nauch. trudy KNIUI no.14: 480-496 '64. (MIRA 18:4)

GERT, I.M.; BABAD-ZAKHRYAPIN, A.A.

Certain characteristics of diffusion processes in the formation of coatings by the condensation method. Fiz. met. i metalloved. 17 no.4:601-604 Ap '64. (MIRA 17:8)

GERT, L.M.; BABAD-ZAKHRYAPIN, A.A.

Certain characteristics of diffusion processes in the formation of coatings by the condensation method. Fiz. met. i metalloved. 17 no.4:601-604 Ap '64. (MIRA 17:8)

GERT, L.M.; BABAD-ZAKHRYAPIN, A.A.

Certain characteristics of diffusion processes in the formation of coatings by the condensation method. Fiz. met. i metalloved. 17 no.4:601-604 Ap '64. (MIRA 17:8)

GERT, I.M.; BABAD-ZAKHRYAPIN, A.A.

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GERT, L.M.; BABAD-ZAKHRYAPIN, A.A.

Certain characteristics of diffusion processes in the formation of coatings by the condensation method. Fiz. met. i metalloved. 17 no.4:601-604 Ap '64. (MIRA 17:8)

GERT, R.

"Operational Overloads Causing Breakdowns in Electric Transmission Lines and Protection Against Them." p. 211, Praha, Vol. 4, no. 5, May 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GERT, R.

"Operational Overloads Causing Breakdowns in Electric Transmission Lines and Protection Against Them." p. 211, Praha, Vol. 4, no. 5, May 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

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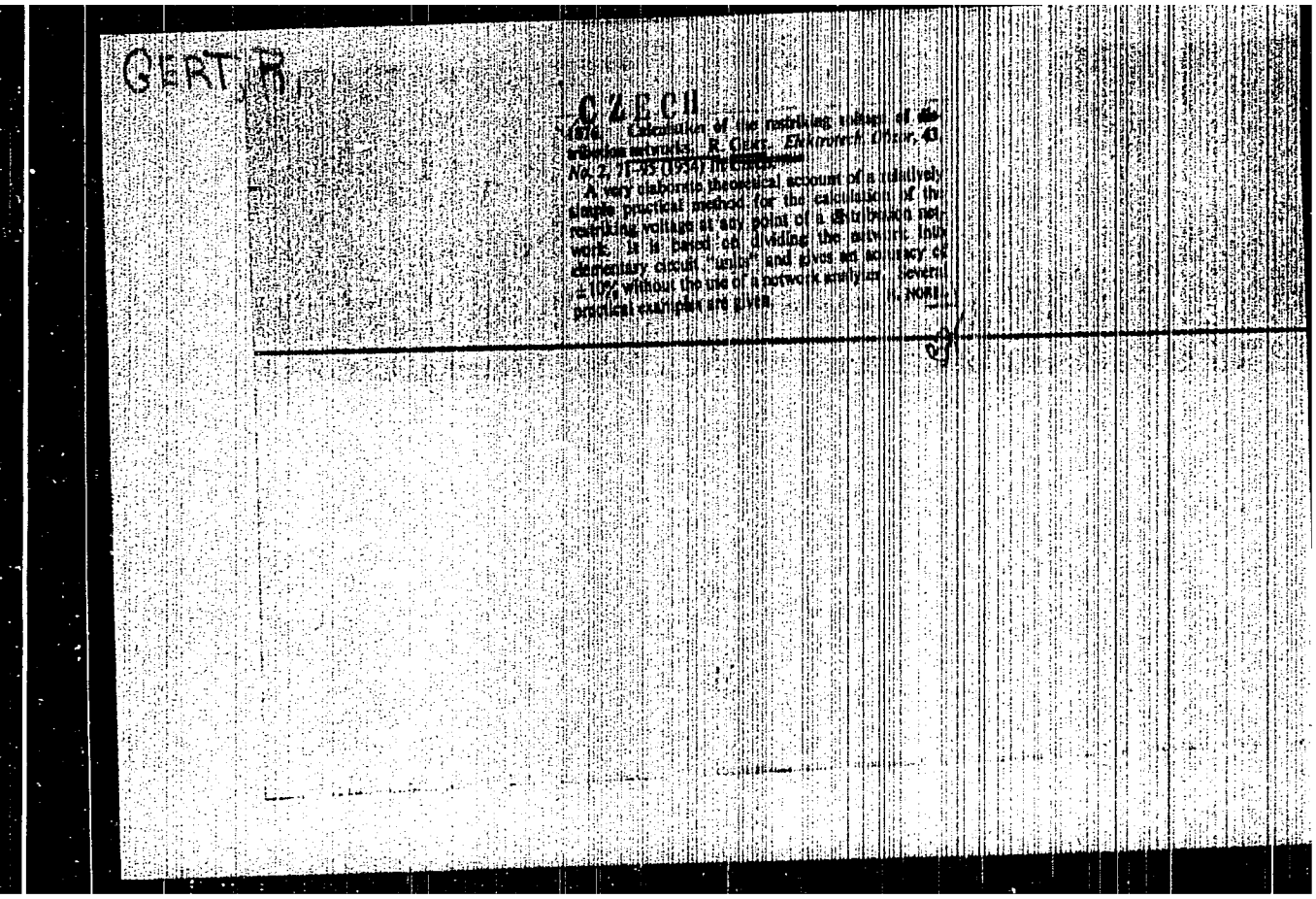
"Operational Overloads Causing Breakdowns in Electric Transmission Lines and Protection Against Them." p. 211, Praha, Vol. 4, no. 5, May 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress

GERT, R.

"Operational Overloads Causing Breakdowns in Electric Transmission Lines and Protection Against Them." p. 211, Praha, Vol. 4, no. 5, May 1954.

SO: East European Accessions List, Vol. 3, No. 9, September 1954, Lib. of Congress



CZRT, .

Operational overloadin· causes a serious defect. p.3[illegible]

ENERGETIKA. (Ministerstvo energetiky a Ceskoslovenska vedecka technicka spolecnost pro energetiku pri Ceskoslovenske akademii ved) Praha, Czechoslovakia
Vol.5, o.k, Apr.1955

Monthly List of East European Accessions (EEAI) LC, Vol.8, no.11
Nov. 1959
Uncl.

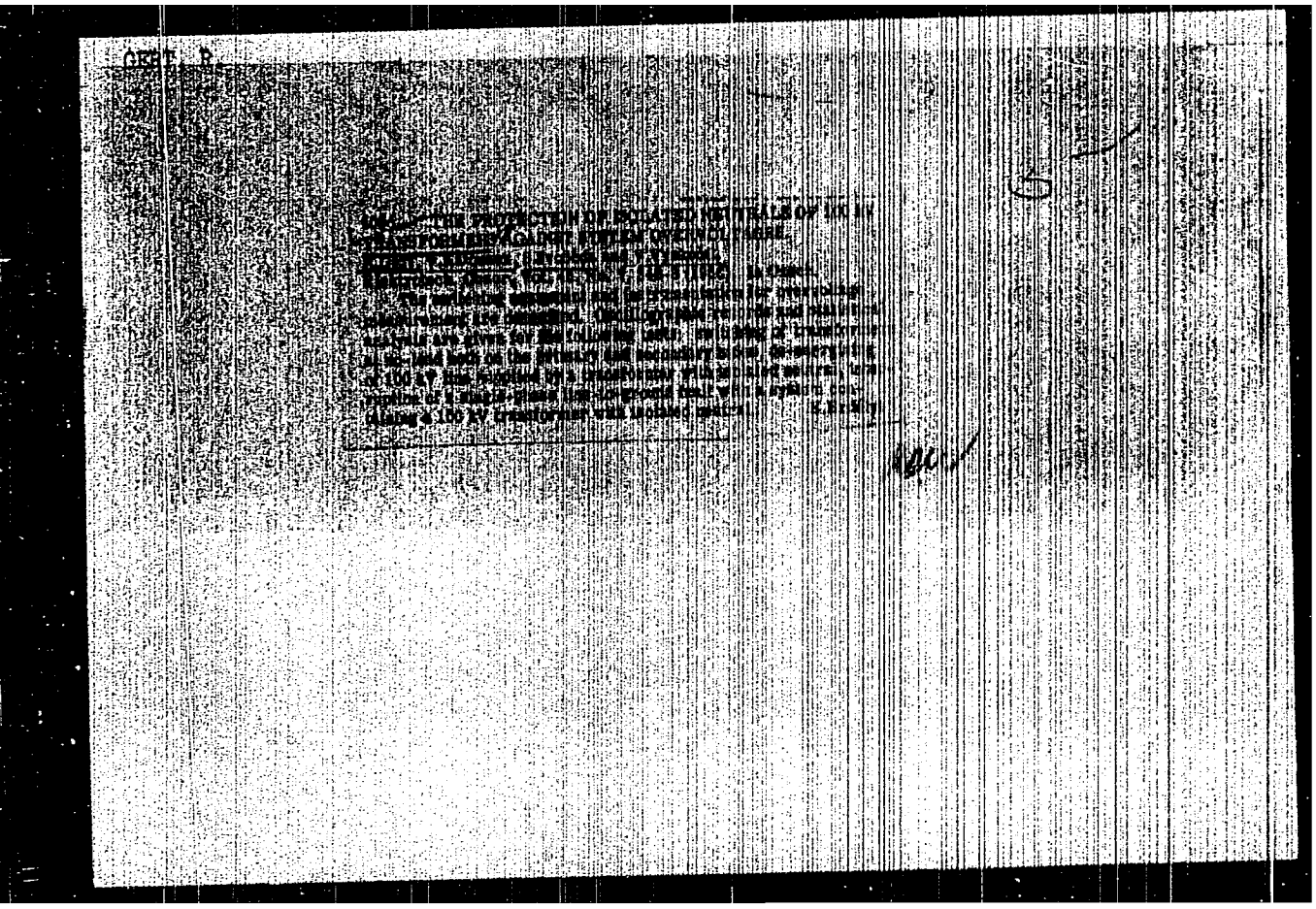
GERT - R

621.316.5.064.3E (437)

2168. INVESTIGATIONS OF THE RECOVERY VOLTAGE IN CZECHOSLOVAKIAN POWER SYSTEMS. [illegible]. Elektrotech. Obzor, Vol. 44, No. 12, 641-51 (1955). In Czech.

Three experimental methods and one theoretical method of determining recovery voltages were used on 100 kV, 22 kV and 6 kV systems operated by one company. The r.r.r.v. values were found theoretically for 919 circuit-breakers and then confirmed by experiment wherever possible. Agreement between experiment and theory was satisfactory. The results obtained were also evaluated graphically and statistically.

Electrical Research Association



GERT, R

621.3[illegible].064.[illegible] : 621.317.799

4478. RESULTS OF RECOVERY VOLTAGE INVESTIGATIONS ON CZECHOSLOVAK POWER SYSTEMS AND TEST SPECIFICATION PROPOSALS FOR HIGH VOLTAGE CIRCUIT BREAKERS. R. Gert. Elektrotech. Obzor, Vol. 4[illegible], No. [illegible], 125-[illegible] ([illegible]). In Czech.

The recovery voltage at the terminals of an ideal circuit breaker characterises, according to the author, the influence of the power system on the interrupting process during a short circuit. As the recovery voltage depends on the location of the breaker in the system, tests should be carried out at different points. The [illegible] standards do not contain such requirements. To substantiate the author's suggestions in this respect, recovery voltages of different systems, including the 220 kV grid, were measured and recorded. General conclusions drawn from the statistical analysis of the amplitude factors and recovery voltages lead to proposed standards for the assessment of recovery voltages when circuit breakers are being tested for interrupting capacity.

E. Kr[illegible]

3

GERT, R.

"Problems of the coordination of insulattion in high-voltage networks.

p. 28 (Elektrotechnicky Obzor. Vol. 47, no. 1, Jan. 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC,Vol. 7, No. 6, June 1958

GERT R.

621.315.17 : 621.316.57

6117. OVERVOLTAGES DUE TO THE DISCONNECTION OF UNLOADED TRANSFORMERS AND LINES, DUE TO CLEARING OF GROUND FAULTS AND DUE TO SWITCHING OF CAPACITOR BANKS. R.Gert.
Elektrotech. Obzor, Vol. 47, No. 6, 292-304 (1958). In Czech.

Statistical evaluation of three years observations of switching surge tests. Various types of circuit breakers for voltages from 6 to 220 kV were used. Distribution curves of overvoltages are given for the cases of disconnecting unloaded transformers, of disconnecting unloaded lines and of clearing ground faults. Frequency ranges of the oscillations are stated. The disconnection of transformers at no load is treated by analysis. Highest overvoltages occur on interrupting sinusoidal inductive currents and on interrupting capacitor banks. Method of grounding the transformer neutral and the capacitances connected to the secondary of a transformer influence the magnitude of switching overvoltages. N.Klein

GERT, Richard, inz., kandidat technickych ved; JIRKU, Jaroslav, inz., kandidat technickych ved; ZALOUSAK, Vaclav, inz., kandidat technickych ved; POPOLANSKY, Frantisek, inz., kandidat technickych ved

Protection of high-tension transformers against overvoltage. El tech obzor 50 no.11:639-650 N '61.

1. Vyskumny ustav energeticky, zakladni pracoviste, Brno.

GERT, Richard, inz., kandidat technickych ved

General assembly of International Electrotechnical Commission in Interlaken, 1961. El tech obzor 51 no.1:55-56 Ja '62.

GERT, Richar, inz., C.Sc.

General meeting of the International Electrotechnical Comission in Interlaken, 1961. El tech obzor 51 no.2:96. F '62.

GERT, Richard, inz., kandidat technickych ved.

Stress by overvoltage, protection from overvoltage and insulation dimension in high-voltage plants up to 110 kv. El tech obzor 51 no.8:419-421 Ag '62.

GERT, R.; JIRKU, J.

Research on internal overvoltage. Energetika Cz 11 no.10:529 O '61.

ZAJIC, V., inzh.; PANEK, J., inz., C.Sc.; GERT, R., inz., C.Sc.; JIRKU, J., inz., C.Sc.

Switching of large shunt capacitor banks for reactive power compensation. Bul EGU no.5/6:1-10 '62.

1. Statni vyzkumny ustav silnoproude elektrotechniky, Bechovice (for Zajic and Panek) 2.Vyzkumny ustav energeticky, Brno (for Gert and Jirku).

GERT, R., inz., C.Sc.; JIRKU, J., inz., C.Sc.; KALOUSEK, V., inz., C.Sc.; VYSKOCIL, V., inz., C.Sc.

Statistical survey of overvoltages, the coordination of insulation between phases, and the electric strength to switching surge. Bul.EGU no.5/6:10-22 '62.

GERT, R., inz., C.Sc.; KOSTELECKY, L., inz.

Operational characteristics of the VMC 10 kV circuit breaker as determined in the field laboratory of the Power Research Institute in Sokolnice. Bul EGU no.5/6:22-31 '62.

GERT, Richard, inz., kandidat technickych ved

Conclusions drawn from statistics of troubles and damage of high-voltage switch plants in the German Federal Republic. El tech obzor 51 no.10:537-539 O '62.

GERT, Richard, inz., kandidat technickych ved

New trends in the design of switch boxes, series 10, 20 and 30. El tech obzor 52 no.2:110-111 F '63.

GERT, R., inz., kandidat technickych ved

Switching process in high-voltage lines and testing of switches.
El tech obzor 52 no.4:205-206 Ap '63.

[redacted], [redacted], Ing. [redacted].

[redacted] voltages between phases and insulation measurement between phases. El tech obzor 53 no.9:485-491 S '64.

[redacted] Research Institute of Power Engineering, Brno.

ZAYTS, V. [Zajic, V.] (Chekhoslovakiya); [illegible] (Chekhoslovakiya); GERT, F. (Chekhoslovakiya); [illegible], I. [illegible] (Chekhoslovakiya)

Switching of large condenser batteries in transverse reactive power compensation. Vykl. vys. napriaz. no.4:181-205 [illegible]

(MIRA 17:10)

L 50761-65 EWA(h) Pab DD

ACCESSION NR: AP5016372 CZ/0017/64/000/009/0485/0491

AUTHOR: Gert, Richard (Engineer, Candidate of sciences)

TITLE: Switching overvoltage between phases and the choice of the interphase insulation levels

SOURCE: Elektrotechnicky obzor, no. 9, 1964, 485-491

TOPIC TAGS: phase modulation, antenna switching, array beam switching

Abstract [German article, author's English summary]: Compared are results of research on the switching overvoltage between phases, carried out in Czechoslovakia and some other countries. A statistical analysis is made and probability curves are drawn of the dependence between the overvoltage magnitude between phases and the overvoltage magnitude to the ground for various switching operations. A proposal is made for determining the insulation levels between phases. Orig. art. has 10 graphs, 12 formulas, and 1 table.

ASSOCIATION: Vyskumny ustav energeticky, Brno (Power Research Institute)

SUBMITTED: 28Apr64 ENCL: 00 SUB CODE: EC

NO REF SOV: 001 OTHER: 007 ATD PRESS

Card 1/1

L 1028-66

ACCESSION NR: AP5025937 CZ/0017/65/054/005/0257/0264

AUTHOR: Gert, Richard (Engineer, Candidate of sciences); Bartonickova, Zdenka (Graduate physicist) 20 B

TITLE: Statistical treatment of switching surges

SOURCE: Elektrotechnicky obzor, v. 54, no. 5, 1965, 257-264

TOPIC TAGS: electric power production, statistics

ABSTRACT: [Authors' Russian and English summaries, modified]: The article discusses the question of which values (from all three phases or only the highest value of each test, should be taken for statistical evaluation and representation of switching surge measurements, and whether the generation of a given overvoltage amplitude has the same probability for each phase. On the basis of tests, suggestions are made for the statistical evaluation of overvoltages. A table is given which summarizes the data which seem necessary for a complete characterization of field tests. The authors thank Comrade Engineer L. Kostelecki and Comrade J.

Card 1/2

L 1028-66

ACCESSION NR: AP5025937

0

Haulicki, who provided the related measurements in the network research laboratory and Comrade V. Svitackova who carefully evaluated and processed the oscillograms." Orig. art. has 4 figures, 4 formulas, 7 graphs, and 1 table.

ASSOCIATION: Vyzkumny ustav energeticky, Brno (Power Research Institute)

SUBMITTED: 12Feb65 ENCL: 00 SUB CODE: EE, MA

NO REF SOV: 002 OTHER: 004 JPRS

Card 2/2

31643
S/207/61/000/006/020/025
A001/A101

10 6300

AUTHOR: Gert, T. Ya. (Moscow)

TITLE: On stability of oscillations of a clamped heated panel with allowance for excessive aerodynamical pressure, according to the linearized theory

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 6, 1960, 163 - 164

TEXT: The author considers an infinite plane panel rigidly clamped along edges $x = 0$ and $x = l$ and freely resting on transverse ribs y separated from each other by a certain distance. A supersonic gas flow moves along the x-axis above the panel. It is assumed that in the median plane of the panel arise thermal stresses due to aerodynamic heating and the panel starts to oscillate. Stability of these oscillations is investigated by studying the differential equation of 4th order in partial derivatives for buckling w in direction of the z-axis. Using an expression for excessive pressure according to the linearized theory the author arrives at an integro-differential equation. This equation is reduced, by the method proposed by Tung Ming-tieh (Some problems of aero-

Card 1/2

On stability of oscillations ...

elasticity. Dissertation for Candidate degree, MGU, 1958), to an ordinary differential equation which represents a boundary problem for some function $g(x)$. Critical frequencies ω^0 are to be sought for among the eigenvalues of this problem, which are calculated by numerical methods. There is 1 figure and 1 Soviet-bloc reference.

SUBMITTED: September 1, 1961

Card 2/2

31250
S/207/61/000/005/010/015
D237/D303

10.6400

AUTHOR: Gert, T.Ya. (Moscow)

TITLE: Buckling of an infinite flat panel on aerodynamic heating

PERIODICAL: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 5, 1961, 71 - 75

TEXT: When an infinite rectangular panel is placed in a supersonic flow of gas, boundary layer friction causes heating which results in thermal stresses, leading to the buckling of the panel. It is assumed that the panel is rigidly fixed at x = 0 and x = l_1 Fig. 1 and resting on the ribs y = 0, ± b, ± 2b, ... Uniform heating was assumed on the whole surface and the temperature was assumed constant, in the y-direction and with respect to time. The stresses in the panel were

$$X_{x1} = E\alpha T X_x^*, \qquad Y_{y1} = E\alpha T\left[Y_y^* + \frac{4p}{l_1^2}\left(x - \frac{l_1}{2}\right)^2\right] \tag{1.16}$$

Card 1/4

Buckling of an infinite flat ...

where X_x^*, Y_y^* are dimensionless magnitudes, α = lin. coeff. of thermal expansion, and p is given by $(1/P = 1 + (4k_1h_1\ell_2/k_2h_2\ell_1)$. If stresses exceed those given by (1.16) a bending w(x, y) appears, which satisfies

$$\frac{\partial^4 w}{\partial x^4} + 2\frac{\partial^4 w}{\partial x^2 \partial y^2} + \frac{\partial^4 w}{\partial y^4} = \frac{1}{D}\left(q + N_x\frac{\partial^2 w}{\partial x^2} + N_y\frac{\partial^2 w}{\partial y^2}\right) \qquad (2.1)$$

$$\left(D = \frac{Eh^3}{12(1-\sigma^2)}\right)$$

where $N_x = X_{x1}h_1$, $N_y = Y_{y1}h_1$; (2.3)

incident aerodynamic pressure is

$$q(x, y) = A\frac{\rho U^2}{\sqrt{M^2-1}}\sin\frac{\pi n y}{b}\int_0^x \frac{d^2 f}{d\xi^2} J_0\left[\frac{\pi n (x-\xi)}{b\sqrt{M^2-1}}\right] d\xi \qquad (2.6)$$

Expanding J_0, neglecting terms higher than the third, and integrating the obtained expression the author obtains an ordinary differential equation, which is then transformed into

Card 2/4

Buckling of an infinite flat ...

$$\frac{d^4g}{dx^4} - 2a^2\pi^2\frac{d^2g}{dx^2} + a^4\pi^4\frac{d^2g}{dx^2} + s(\beta^2+1)\left\{a^2\pi^2\left[Y_v^* + 4p\left(x - \frac{1}{2}\right)^2\right]\frac{d^2g}{dx^2} - \right.$$
$$\left. - X_x^*\frac{d^2g}{dx^2}\right\} - r\frac{\beta^2+1}{\beta}\left(\frac{d^4g}{dx^4} - \frac{a^2\pi^2}{2\beta^2}\frac{d^2g}{dx^2} + \frac{3}{8}\frac{a^4\pi^4}{\beta^4}g\right) = 0 \qquad (2.11)$$

(2.11)

for n = 1, where β is the critical stream velocity, at which buckling appears. A numerical solution by Galerkin's approximation method is quoted for an example. The problem was set by L.A. Galin. There are 3 figures and 5 references: 4 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: N.J. Hoff, Thermal buckling of supersonic wing panels. JAS, 1956, 23, no. 11.

SUBMITTED: June 29, 1961

Card 3/4

L 14805-65 EWP(e)/EWT(m)/EPF(c)/EPR/EWP(b) Pc-4/Pr-4/Pe-4 JD/JW/JG/WH
ACCESSION NR: AP4049091 S/0072/64/000/011/0045/0045

AUTHOR: Vogel, W.; Gerth, K.

TITLE: Optical fluophosphate glass. No. 27169

SOURCE: Steklo i keramika, no. 11, 1964, 45

TOPIC TAGS: optical glass, nonsilica glass, phosphate glass, fluophosphate glass, glass optical property

ABSTRACT: An Author Certificate has been issued for glass systems with a refractive index of 1.35—1.50 and an Abbe number of 50—71 which are composed of alkali and beryllium fluorides and lead phosphate or fluoride. In addition, the glass may contain up to the following proportions of other compounds: Al_2O_3, 15 wt%; AlF_3, 10 wt%; $BaPO_3$ and/or KPO_3, 12 wt%; ThF_4, 50 wt%; CeF_3 and/or LaF_3, 5 wt%.

ASSOCIATION: VEB Jenaer Glaswerk Schott u. Gen.

SUBMITTED: 25Mar64 ENCL: 00 SUB CODE: MT, OP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3140

Card 1/1

ACC NR: AP6034884 SOURCE CODE: PO/0015/66/000/008/0219/0219

AUTHOR: Vogel, W.(Doctor); Gerth, K.

ORG: VEB Jena Glassworks Schott Gen. Jena Glassworks Schott Gen. Jena, (NRD) (VEB Jenaer Glaswerk Schott Gen. Jena) (NRD)

TITLE: Fluorophosphate optical glass with low light refractive index and high Abby number, GE Pat. No. 1/00. 49610 [announced by VEB Jena Glassworks Schott Gen. Jena (NRD) (VEB Jenaer Glaswerk Schott Gen. Jena (NRD) (VEB Jenaer Glaswerk Schott Gen. Jena (NRD))]

SOURCE: Szklo i ceramika, no. 8, 1966, 219

TOPIC TAGS: optic glass, fluorophosphate, light refraction index, fluorosilicate glass, metal fluoride glass

ABSTRACT: The patent deals with fluorophosphate optical glass which is colorless and which because of the high content of metal fluorides and fluorosilicates has very low viscosity in the melted state. Evaporation of the components of the glass during the melting process takes place to a degree sufficient for further industrial utilization. By properly varying the chemical composition, glass with a light refractive index from 1.45 to 1.53 and Abby number from 55 to 80 can be obtained. Because of these properties, the glass is suitable for use in micro-optical instrumentation and, by virtue of its good resistance to humidity, may be employed in external lens systems. This glass

ACC NR: AP6034884

is characterized by a composition consisting of $ME^{(I)}P - Me^{(II)}SiP_6 - Al(PO_3)_3$, where $Me^{(I)}$ indicates lithium, sodium, or potassium, and $Me^{(II)}$ indicates manganese, calcium, strontium, barium, cadmium, zinc, lead, or aluminum. Further details on the composition are given.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

GERTHEISZ, Antal

Questions of forestry on the columns of "Magyar Gazda," 1841-1847. Erdo 11 no.9:410-415 S '62.

1. Tudomanyos munkataras, Orszagos Mezogazdasagi Konyvtar.

SZABO, Istvan, dr.; GERTHEISZ, Antal; KOLOSSVARY, Szbolcsne; RIEDL, Gyula

Hungary's forestry librarianship. Erdo 11 no.9:415-419 S '62.

1. Konyvtaros, Erdomernoki Foiskola, Sopron (for Szabo).
2. Tudomanyos munkatars, Orszagos Mezogazdasagi Konyvtar (for Gertheisz).

GERTHEIS, Antal

Dividing rod suitable for indicating changes in the magnetic field. Erdo 13 no.4:191 Ap'64

[redacted] GERTHER, A

YUGOSLAVIA / Chemical Technology, Chemical Products and Their Application. Part 3. - Medicaments, Vitamins, Antibiotics. H-16

Abs Jour : Ref. Zhur. Khimiya, No 4, 1958, 12259.

Author : Dragutin Barkovic, Antun Gerther.

Inst : Not given

Title : To The Question of Arsenic Determination in Colored Organic Medicinal Preparations.

Orig Pub : Farmac.glasnik, 1957, 13, No 3-4, 131 - 134.

Abstract : The organic substances are destroyed with a mixture of perhydrol and concentrated H_2SO_4 in presence of $FeCl_3$ as a catalyst for the As determination in methylene blue and methylrosaniline chloride. Argochrome, red streptocid, rosaniline chloride, as well as (in presence of $FeCl_3$ and $AgNO_3$)

Card 1/2

GERTIG, Bela, dr.

Agricultural geography of Somogy County. Foldr kozl 10 no.1: 45-69 '62.