The Excitation of a Smooth, Perfectly-conducting Solid of Revolution. Part I.

The latter, as well as S_m is a function of two points in space whose separation is Eq (16). In the important case of an axially symmetric field (m=0), two of the kernels (P_{012}, P_{021}) are zero and the equation system Eq (7) becomes two independent integral equations for TE and TM waves. The values of S_m may be found by graphical integration. As an example S_o and S_1 are shown as functions of ρ_o in Figure 1. As φ_o tends to zero the real part tends to infinity. The nature of the infinity is examined by separating out the term giving rise to the singularity, Eq (19). This integral may be solved in terms of complete elliptic functions. For m = 0, 1 and 2 the results are Eq (20) in terms of E(k), B(k) and K(k). It follows, from their properties (Ref 8), that all the S_m functions have the logarithmic singularity of Eq (22),

 where ρ_o and ρ_π are shown in Figure 2. The derivatives

The Excitation of a Smooth, Perfectly-conducting Solid of Revolution. Part I.

appearing in the kernell formulae offer no difficulty. Those involving S_m may be calculated using Eqs (23) and (26), the latter having been partially tabulated by the authors. Derivatives of coordinate functions involve no more than trigonometry. Expressions for the primary field in terms of azimuthal harmonics are given in Eq (30), the harmonic functions being defined in Eqs (31) to (34). The near field may be found from a formula similar to Eq (30), while the distant field is described more simply in Eqs (35) and (36).
There are 2 figures and 8 references, 5 of which are Soviet, 1 English and 2 German.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED: Originally: January 8, 1958
After revision: May 6, 1959

69953

9,9000 SOV/141-2-4-8/19

AUTHOR: Vasil'yev, Ye.N.

TITLE: The Excitation of a Smooth, Perfectly-conducting Solid of Revolution, Part II. EMW 21

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, 1959, Vol 2, Nr 4, pp 596 - 601 (USSR)

ABSTRACT: This is a continuation of the preceding paper. Two cases of axi-symmetric excitation are treated. The equations for electric flux are preferred since they give answers which can be more easily realized physically. The first example - a thin cylinder of finite length - is excited by a transverse slot. In Eq (7) of the preceding paper, $m = 0$ and that equation is taken which corresponds to a TM-wave, namely, Eq (1) of the present paper. The numerical solution of this equation first requires its substitution by that of Eq (3), according to the method of Krylov and Bogolyubov. The result is a set of linear algebraic equations, Eqs (4) and (5), for the flux density at each point on the curve which generates the solid of revolution. The advantage of this method is its simplicity and the fact that it is applicable to

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The Excitation of a Smooth, Perfectly-conducting Solid of Revolution. Part II.

equations whose kernels have singularities. The accuracy is poor but this is not usually a disadvantage in the problems where it is used. The non-diagonal elements of C_{sl} in Eq (5) may be calculated as products of interval lengths and the values of the integrand at the centre of the interval. The diagonal elements must be separately calculated as regular and singular parts. The latter is best arrived at by elliptic functions as in the previous paper. The numerical work has been done for cylinders 0.95 λ long with hemispherical ends. The diameters were 0.287 λ, 0.192λ and 0.096 λ . The interval length was 0.1 λ . The results, from an electronic computer are in Figures 1-3. As the diameter increases the attenuation of the wave propagated along the cylinder increases, as also does the maximum field, at the slot. The radiation diagrams, shown in Figures 1 and 2, are symmetrical when the slot is symmetrically placed but are displaced oppositely from the slot when the latter is displaced.

The Excitation of a Smooth, Perfectly-conducting Solid of Revolution. Part II.

When the displacement is extreme, two lobes appear. The accuracy of computation was verified, by an alternative integration, as 2-3% at points other than the slot and 7% at the slot. A similar calculation was made on a cylinder 0.287 λ in diameter when excited by a magnetic dipole $\lambda/8$ away from one end. The result is shown in Figure 4, where it is obvious that currents are induced only at the excited end and the rest of the cylinder is screened from the dipole. It is concluded that the method of proper functions is probably simpler for simpler structures and comparable for symmetrical spheroids but for more complicated arrangements is inferior to the procedure outlined here.

G.T. Markov is thanked for advice. There are 4 figures and 4 Soviet references.

69953
SOV/141-2-4-8/19

The Excitation of a Smooth, Perfectly-conducting Solid of Revolution. Part II.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED: Originally: January 8, 1958
After revision: May 6, 1959

Card 4/4

MARKOV, Grigoriy Timofeyevich. Prinimali uchastiye: TERESHIN, O.N., dotsent; VASIL'YEV, Ye.N., dotsent; DUPLENKOV, D.A., aspirant; SAZONOV, D.M., aspirant; NOSOV, O.N., inzh. PISTOL'KORS, A.A., retsenzent; DOLUKHANOV, M.P., prof., retsenzent; KOCHERZHEVSKIY, G.N., dotsent, red.; VORONIN, K.P., tekhn.red.

[Antennas] Antenny. Moskva, Gos.energ.izd-vo, 1960. 534 p. (MIRA 14:4)

1. Chlen-korrespondent AN SSSR (for Pistol'kors).
(Radio--Antennas)

DOLUKHANOV, Mark Pavlovich; GRUDINSKAYA, G.P., retsenzent; VASIL'YEV, Ye.N., retsenzent; BARTENEV, G.M., retsenzent; VORONOVA, A.I., red.; KARABILOVA, S.F., tekhn.red.

[Propagation of radio waves] Rasprostranenie radiovoln. Izd.2. Moskva, Gos.izd-vo lit-ry po voprosam svyazi i radio, 1960. 390 p. (MIRA 14:2)

(Radio waves)

S/194/62/000/003/048/066
D201/D301

AUTHOR: Vasil'yev, Ye. N.

TITLE: The vectorial wave equation in rotation coordinates

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 3, 1962, abstract 3zh131 (Tr. Mosk. energ. in-ta, 1961, no. 34, 206-211)

TEXT: The analysis of a vectorial wave equation in rotation coordinates is presented. In this coordinate system the Lame coefficient is independent of the azimuthal coordinate φ. As a result the dependence of the general solution on φ is given by a scalar function and by the derivative of this function. It is shown that the azimuthal field harmonics in rotation coordinates are orthogonal. In a particular case, when the field is independent of the azimuthal coordinate, an equation is obtained which has been derived in a different way earlier (RZhFiz, 1957, no. 4, 9584). [Abstracter's note: Complete translation.]

Card 1/1

S/058/61/000/011/022/025
A058/A101

AUTHORS: Vasil'yev, Ye. N., Seregina, A. R.

TITLE: Current distributions on thick vibrators

PERIODICAL: Referativnyy zhurnal, Fizika, no. 11, 1961, 299, abstract 11Zh334 ("Tr. Mosk. energ. in-ta", 1961, no. 34, 212-224)

TEXT: There are given some calculation details and the results of calculating current distributions on thick vibrators by the method proposed in an earlier work (RZhFiz, 1960, no. 7, 17891). Calculations were carried out for cylinders with radius kR = 0.3, 0.5 and 0.9 for generatrix length kL = 2.8, 5.9 and 9.2. The effect of cylinder length and slit width on current distribution was analyzed. Calculations were in good agreement with experiment.

Ye. Vasil'yev

[Abstracter's note: Complete translation]

Card 1/1

S/180/62/000/005/001/011
E075/E435

AUTHORS: Nasonov, P.Ya., Vasil'yev, Ye.N., Lur'ye, I.L., Knyazev, V.F. (Moscow)

TITLE: The reduction of iron oxides with hydrogen in a fluidized bed at an elevated pressure

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no.5, 1962, 29-36

TEXT: The reduction of mill scale and a Krivoy Rog ore fines with hydrogen in a fluidized bed at elevated pressures and low temperatures was investigated in order to elucidate the influence of pressure, the rate of feeding reducing gas, particle size of the starting material and temperature on the reduction process. The experiments were carried out in a laboratory apparatus made from stainless steel with a fluidized bed reactor, operating intermittently with 300 g samples. Experimental conditions: temperature from 490 to 650°C; pressure from 3 to 30 atm gauge; two rates of feeding hydrogen - 2.5 and 4.5 litre/sec. The process of reduction was controlled by measuring the decrease in

Card 1/3

the amount of hydrogen in the gas holder. In the lower pressure range (up to about 9 atm) an increase in pressure was found to lead to an intensification of the process, even without an increase in the rate of supply of hydrogen to the reactor. An increase in pressure from 3 to 4 atm had a considerably higher effect than an increase from 4 to 5 or from 5 to 6 atm (the corresponding increases in the consumption of hydrogen read from the graph were about 36, 14 and 13% respectively). In the higher pressure range the increase in the rate of reduction is due to an increase in the supply of hydrogen to the reactor which can be made without increasing dust losses. Optimal reduction temperatures at a pressure of the gaseous phase of 30 atm and a hydrogen feed rate of 0.3 litre/sec per 1 cm^2 of the free cross-sectional area of the reactor are: to obtain 70 to 75% reduction - 500 to 520°C; to complete the reduction process - 550 to 560°C. Under the above temperature conditions neither sintering of ore particles nor sticking of particles to the walls of the reactor was observed. For reducing scale the maximum temperature of the process can be raised to 650°C. Within the range of 0.3 to

The reduction of iron ...

0.10 mm the particle size of the scale has no influence on the reduction process. The iron powder produced is pyrophoric. The minimum annealing temperature of the iron powder necessary to remove its pyrophoricity without soaking and with a 30 minute soaking was found to be 780 and 750°C respectively. There are 4 figures.

SUBMITTED: March 15, 1962

Card 3/3

L 15614-63 EDS
ACCESSION NR: AP3004846 S/0141/63/006/003/0591/0607

46

AUTHOR: Vasil'yev, Ye. N.

TITLE: Exciting a finite-length cylinder by a Hertzian dipole

SOURCE: IVUZ. Radiofizika, v. 6, no. 3, 1963, 591-607

TOPIC TAGS: Hertzian dipole, cylinder exciting

ABSTRACT: This is a further development of a previous author's work (Tr. Moskovskogo energ. in-ta, Radiotekhnika i elektronika, 34, 212, 1961). An axially-nonsymmetric excitation of a finite-length cylinder by axial and radial Hertzian dipoles is investigated mathematically. The boundary problem is reduced to a number of independent integral equations that describe azimuth harmonics of the density of the surface electric current. Then, each integral equation is replaced by a set of linear algebraic equations and solved numerically. Distribution of amplitude and phase of the current density for various harmonics

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L 15614-63
ACCESSION NR: AP3004846

and dipole-cylinder arrangements are presented in the form of 36 graphs. "In conclusion, the author feels deeply grateful to L. N. Pokrovskaya, who actively participated in calculations, and to Yu. P. Nikitin, who carried out a great deal of work in programing the problem." Orig. art. has: 19 figures and 6 formulas.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power-Engineering Institute)

SUBMITTED: 05Oct62 DATE ACQ: 27Aug63 ENCL: 00

SUB CODE: PH NO REF SOV: 003 OTHER: 000

Card 2/2

VASIL'YEV, Ye.N.; SEREGINA, A.R.

Excitation of a thick cylinder with finite length. Radiotekh. i elektron. 8 no.12:1972-1979 D '63. (MIRA 16:12)

VASIL'YEV, Ye.N.; SEREGINA, A.R.; KAMNEV, V.G.

Axisymmetrical excitation of a cone with finite length. Izv. vys. ucheb. zav.; radiotekh. 7 no.2:243-246 Mr-Ap '64. (MIRA 17:8)

S/0148/64/000/003/0161/0168

ACCESSION NR: AP4022899

AUTHORS: Rustam, S. L.; Vasil'yev, Ye. N.

TITLE: Nitriding austenite stainless steel 25Kh18N8V2

SOURCE: IVUZ. Chernaya metallurgiya, no. 3, 1964, 161-168

TOPIC TAGS: steel, stainless steel 25Kh18N8V2, steel nitriding, nitrided layer hardness, nitrided layer depth, corrosion resistance, nitriding temperature, nitriding time, ammonia dissociation

ABSTRACT: The properties of nitrided stainless steel 25Kh18N8V2 (used in machine parts production) have been investigated. Its composition (in %) is: C--0.23, Cr--17.04, N--7.97, Mn--0.35, W--2.15. Samples 10 mm in diameter and 20 mm long were annealed for two hours at 820C ± 10, air cooled, and ground to surface smoothness of ▽8 - ▽9. After degreasing and reducing of the oxide film with ammonium chloride, the samples were suspended in a stainless steel container within a furnace. Ammonia was next blown into the container, and the samples were heated to 530, 550, 560, 570, 580, and 600C. They were nitrided for 20 hours and were

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ACCESSION NR: AP4022899

air cooled to 100-150C. At this point the flow of ammonia was stopped and the samples removed. The depth of the nitrided layer, the hardness, and the microstructure of metal were then studied. It was found that with ammonia dissociation of 25-35% the greatest depth of nitrided layer (0.15 mm) was attained at 600C and the smallest depth (0.09 mm) at 530C. The maximum hardness (1180 HV) was reached at 530C and the minimum (752 HV) at 600C. The temperature of 560C was taken to be optimal for the desired combination of these properties. When the period of nitriding was varied (20, 30, 40, 50, 100, and 145 hours), it was determined that the depth of the nitrided layer increased parabolically with the time of nitriding, reaching its maximum of 0.29 mm in 145 hours. The hardness of metal, however, decreased as the time lengthened (see Fig. 1 on the Enclosure). To establish the relation between the depth of layer and the degree of ammonia dissociation, the latter process was varied (15-25%, 25-35%, 35-45%, and 70-90%). The depth reached its maximum (0.1425 mm) at the dissociation rate of 15-25% and its minimum (0.115 mm) at 70-90%. The most desirable hardness was attained at the dissociation rate of 25-60%. For the best combination of depth and hardness, the dissociation of 25-40% was taken to be optimal. The change of hardness through the depth of nitrided layer was studied on the specimens processed for 30 hours at 560C with

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ACCESSION NR: AP4022899

ammonium dissociation of 23-35%. To determine the influence of nitriding on the corrosion resistance, the samples were nitrided for 20 hours at 560C, with dissociation of 15-25%, 25-35%, 35-45%, and 70-90%. In order to obtain comparative data, similar specimens of steel 30KhGSA were also nitrided. Corrosion produced by exposure to fresh and to sea water was investigated by surface inspection, and the time of exposure necessary to produce the first signs of corrosion was recorded. Steel 25Kh18N8V2 proved to be less resistant than steel 30KhGSA. Samples nitrided for 20 hours at 560C and at the dissociation rate of 25-35% showed no signs of corrosion after being exposed to warm fresh water and to sea water for 11 days. The greatest corrosion effects were noted on steel nitrided at 530, 580, and 600C. Graphs presented in Fig. 2 of the Enclosure give optimal conditions for nitriding machine parts made of steel 25Kh18N8V2. For parts with the nitrided layer 0.10-0.13 mm deep the nitriding should be continued for 20 hours at 560C with ammonia dissociation of 20-40%. For a depth of 0.14-0.20 mm, nitriding should be continued for 40 hours (with other conditions remaining unchanged). Parts so treated have surface hardness of 960 HV and resist corrosion in either cold or warm fresh water and in sea water vapor. Orig. art. has: 6 graphs and 1 table.

ASSOCIATION: Moskovskiy avtomekhanicheskiy institut (Moscow Institute of Automechanics)

Card 3/3

VASIL'YEV, Ye.N.; SEREGINA, A.R.; KAMENEV, V.G.

Excitation of an ideally conductive body of rotation with a sphere on its axis. Radiotekh. i elektron. 9 no.4:581-589 Ap '64. (MIRA 17:7)

ACCESSION NR: AP4042916 S/0057/64/034/008/1341/1344

AUTHOR: Vasil'yev, Ye.N.; Orlov, Yu.I.; Permyakov, V.A.

TITLE: Boundary conditions at the surface of a plasma with rapidly changing parameters

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.8, 1964, 1341-1344

TOPIC TAGS: plasma, plasma boundary layer, inhomogeneous plasma, plasma wave propagation

ABSTRACT: The authors discuss the boundary conditions for a plane electromagnetic wave obliquely incident from the vacuum onto the plane surface of a plasma in which the electron concentration is proportional to the distance from the surface and the collision frequency is independent of position. Under these conditions the gradient of the dielectric constant is a complex function, a, of well-known form of the wave frequency, the collision frequency, and the electron concentration gradient. Maxwell's equations are solved for plane waves incident on the boundary at an arbitrary angle, and the ratio of the electric to the magnetic field components in the boundary plane is calculated for two states of polarization of the incident wave:

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ACCESSION NR: AP4042916

with the electric vector, or with the magnetic vector parallel to the boundary. It is found that for sufficiently small values of k/a (k is the wave number of the incident wave in vacuo), this impedance is the same for both polarization states, is independent of the angle of incidence, and is proportional to $(k/a)^{1/3}$. For larger values of this parameter, higher order terms become important and the impedance varies with the angle of incidence and the state of polarization. The impedance was calculated for several angles of incidence onto a plasma in which the collision frequency is zero, of waves with the electric vector parallel to the boundary, and the results are presented graphically. Ostensibly the defined boundary conditions can be extended to other than plane waves and to slightly curved boundaries. Orig.art. has: 14 formulas and 2 figures.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow "Order of Lenin" Power Engineering Institute)

SUBMITTED: 08Jul63

ENCL: 00

SUB CODE: ME,EM

NR REF SOV: 001

OTHER: 000

2/2

VASIL'YEV, Ye.N.; SEREGINA, A.R.; KAMENEV, V.G.

Excitation of a thick cylinder with conical ends. Radiotekh. i elektron. 10 no.5:940-942 My '65. (MIRA 18:5)

L 4222-66 EWT(1)/T/FCS(k) WR

ACCESSION NR: AP5010378 UR/0108/65/020/004/0027/0031
621.396

AUTHOR: Vasil'yev, Ye. N. (Active member); Seregina, A. R. (Active member) 31 B

TITLE: Directional patterns of a slot antenna in a finite-length thick cylinder 25B

SOURCE: Radiotekhnika, v. 20, no. 4, 1965, 27-31

TOPIC TAGS: slot antenna, antenna directivity

ABSTRACT: Directional patterns are calculated and plotted of the slot antennas situated in the side and the end of a long (length exceeds 1.5--2 diameters) cylinder. The field within the slot is assumed to be axisymmetrical; the current distribution over the cylinder resembles a traveling wave with decreasing amplitude. The directional patterns for the near-end and center side slots and also for the end slots are plotted for several cylinder radii. "In conclusion, the authors wish to thank O. T. Markov for his perusal of the manuscript and comments and N. A. Yurkova who set up the program on a computer and helped in calculations." Orig. art. has: 7 figures and 4 formulas.

Card 1/2

L 4222-66

ACCESSION NR: AP5010378

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 29Jan64 ENCL: 00 SUB CODE: EC

NO REF SOV: 002 OTHER: 000

Card 2/2

L 16110-66 EWT(d)/T IJP(c)

ACC NR: AP5025111 SOURCE CODE: UR/0208/65/005/005/0841/0851

AUTHOR: Vasil'yev, Ye. N. (Moscow)

ORG: none

TITLE: Function encountered in the theory of diffraction

SOURCE: Zhurnal vychislitel'noy matematiki i matematicheskoy fiziki, v. 5, no. 5, 1965, 841-851

TOPIC TAGS: integral equation, Fourier series, function theory

ABSTRACT: The author studied the properties of the function S_m which was the m-th term of the Fourier series expansion in terms of φ of the function

$$\exp\left(-i\sqrt{\rho_1^2 - 2\nu^2\cos\varphi}\right) / \sqrt{\rho_1^2 - 2\nu^2\cos\varphi}$$

The expansion of S_m in terms of hypergeometric as well as Legendre and Henkel functions of half-integer indices were given. Some differential formulas and integral representations of S_m were also derived, and S_m was tabulated to four decimal places. The function S_m often occurred in connection with problems of

UDC: 517.564:535.4

Card 1/2

L 16110-66

ACC NR: AP5025111 4

diffraction on rotating bodies. It served to determine the kirnels of integral equations encountered there. The formulas obtained were used for the numerical computation of these integral equations. The author expresses his thanks to B.L. Kogan, A.R. Seregin, A.A. Falunin and G.M. Malushkov for assistance. Orig. art. has: 3 figures, 38 formulas and 1 table.

SUB CODE: 12/ SUBM DATE: 11Mar64/ ORIG REF: 009/ OTH REF: 003

mst
Card 2/2

VASIL'YEV, Yevgeniy Nikolayevich; MONYASHEVA, F.I., red.; SHCHEDRINA, N.L., tekhn. red.

[Capital investments financed from noncentralized funds] Kapital'nye vlozheniia za schet netsentralizirovannykh istochnikov. Moskva, Gosiurizdat, 1963. 50 p. (MIRA 16:12)

(Capital investments)

SHUM, Boris Maksimovich; VASIL'YEV, Ye.P., redaktor; LANOVSKAYA, M.P., redaktor izdatel'stva; PETROVA, E.S., tekhnicheskiy redaktor

[The fittings of rail and structural steel, large shape mills] Armatura rel'sobalochnykh i krupnosortnykh stanov. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1956. 218 p. (MLRA 9:10)
(Rolling mills)

BEL'SKIY, B.E. [deceased]; BUR'YANOV, V.F.; VASIL'YEV, Ye.P.; VITKINA, E.I.; GALLAY, Ya.S.; LEVIN, G.I.; MATVEYEV, Yu.M.; CHELYUSTKIN, A.B.; ROKOTYAN, Ye.S., red.; ISTOMIN, A.B., red.; GHUZIN, V.I., red.; NEPOMNYASHCHIY, N.I., red. izd-va; KARASEV, A.I., tekhn. red.

[Ferrous metallurgy in capitalistic countries] Chernaia metallurgiia kapitalisticheskikh stran. Pt.4. [Rolling mill production] Prokatnoe i trubnoe proizvodstvo. Bel'skii, B.E. and others. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii. 1958. 627 p. (MIRA 11:7)

1. Moscow. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Forging) (Rolling (Metalwork)) (Pipe, Steel)

MOROZOV, N.G.; uchitel' (selo Klyuchevki, Chelyabinskoy oblasti); PRUDNIKOV, S., uchitel'; GORB, Ye.V.; SIDORENKO, B.P., uchitel'; LAZAREV, V.; SVIDUNOVICH, A., uchitel'; RUBIN, M., metodist; VASIL'YEV, Ye.T., uchitel'

Letters to the editors. Geog. v shkole 23 no. 6:67-69 N-D '60. (MIRA 13:11)

1. 4-ya shkola shkoly g.Nevelya (for Prudnikov). 2. Direktor 16-y shkoly g. Vinnitsy (for Gorb). 3. 81-ya shkola g.Baku (for Sidorenko). 4. 11-ya shkola g.Tyumeni (for Lazarev). 5. Velemichskaya shkola Brestskoy oblasti (for Svidunovich). 6. Vinnitskiy oblastnoy institut usovershenstvovaniya vrachey (for Rubin). 7. Sanitorno-lesnaya shkola poselka Klyuchi, Kamchatskoy oblasti (for Vasil'yev).
(Geography)

VASIL'YEV, Ye.V., arkhitektor

Modifications of standard specifications for designing railroad stations. Transp.stroi. 7 no.5:23-26 My '57. (MIRA 10:11)
(Railroads--Stations)

VASIL'YEV, Ye.V., arkhitektor.

Some trends in railroad station construction abroad. Zhel.dor.transp. 39 no.6:80-84 Je '57. (MLRA 10:7)

(Railroads--Stations)

Vasil'yev V.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

a-1

Nephelometric micro-determination of magnesium. E. V. Vasil'yev. (Ukrain. Chem. J., [illegible], 9, 6—9).—0·3 g. of dolomite or 0·7 g. of limestone is dissolved in HCl, NH_4Cl and a mixture of aq. $K_4Fe(CN)_6$ and $(NH_4)_2C_2O_4$ are added to complete pptn. of Ca, when 0·1 vol. of conc. aq. NH_3 and H_2O to 50 c.c. are added, and the solution is filtered. 1 c.c. of the filtrate is added to a mixture of 1 c.c. of aq. NH_3, 30 c.c. of H_2O, and 10 c.c. of 0·2N-Na_2HPO_4, the solution is diluted to 50 c.c., and Mg is determined nephelometrically. The experimental error is 0—10%.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VASIL'YEV, Yu., starshina, sekretar' partiynoy organizatsii batarei.

We try to do our best. Komm.Vooruzh. Sil 1 no.13:49-50 Jl '61.
(MIRA 14:7)
(Russia--Army--Artillary)

VASIL'YEV, Yu., starshina sverkhsrochnoy sluzhby

We achieved our success this way. Komm.Vooruzh.Sil 3 no.24:45-48 D '62. (MIRA 15:12)
(Russia—Army—Artillery)

VASIL'YEV, Yu.

Communist Youth League should not stand apart. Prof.-tekh. obr. 20 no.12:9-11 D '63. (MIRA 17:1)

1. Otvetstvennyy organizator TSentral'nogo komiteta Vsesoyuznogo Leninskogo soyuza molodezhi.

VASIL'YEV, Yu.

Holding of several posts by pedagogical workers. Sots. trud 8 no.9:133-139 S '63. (MIRA 16:10)

VASIL'YEV, Yu., aspirant

Increasing the power and the economy of gas-turbine plants with free-piston gas generators. Mor.flot. 20 no.8:28-30 Ag '60. (MIRA 13:8)

1. Leningradskoye vysshaye inzhenernoy morskoye uchilishche im. admirala Makarova.
(Marine gas turbines)

VASIL'YEV, Yu.

"Luch-59" flashlamp. Sov.foto 20 no.2:35 F '60.
(MIRA 13:7)
(Photography, Flashlight--Equipment and supplies)

VASIL'YEV, Yu.

Practice in applying legislation on benefits to persons working in the Far North and equivalent territories. Sots. trud 6 no.9: 128-137 S '61. (MIRA 14:9)
(Russia, Northern—Labor laws and legislation)

VASIL'YEV, Yu.

Connection of an additional pulse lamp. Sov. foto 19 no.5:57-58 My '59. (MIRA 12:9)
(Photography, Flashlight)

VASIL'YEV, Yu.

Pulse transformer. Sov.foto 20 no.1:40 Ja '60.
(MIRA 13:5)
(Photography--Lighting) (Electron tubes)

L 42110-66 EWT(d)/EWT(m)/EWP(f)/T WW/WE

ACC NR: AP6023606 SOURCE CODE: UR/0308/66/000/007/0024/0025

AUTHOR: Vasil'yev, Yu. (Engineer); Belostotskiy, A. (Engineer)

26
B

ORG: none

TITLE: Improving the pickup of marine diesels with gas-turbine supercharging

SOURCE: Morskoy flot, no. 7, 1966, 24-25

TOPIC TAGS: marine engine, diesel engine, supercharged engine, supercharger, marine engineering

ABSTRACT: Engineers Yu. Vasil'yev and A. Belostotskiy, after discussing American methods for improving the pickup of diesels with supercharging, describe a Soviet method developed by specialists of the Machinebuilding Plant im. Malyshev, for which an Author Certificate has been issued. This supercharging method consists in the supply of additional air directly to the cylinders of the engine during a transition operation. The air can be supplied by control valves as well as by valves automatically operating during pressure drops. In the case of mechanically operated valves, a camshaft comes into operation with increased loading and opens air valves through which additional air enters the cylinders.

Card 1/5 UDC: 621.436.001.6

L 42110-66

ACC NR: AP6023606

Experiments revealed that a pneumatic valve-control method using the diesel's air-supply system was adequate only at rpm's near those encountered when starting (~90 rpm), and that at 500 rpm the valves did not open. Therefore, a system of automatically operated valves was used for improving the pickup of a D-100-type diesel generator equipped with a 10 D-100-1A gas-turbine supercharger.

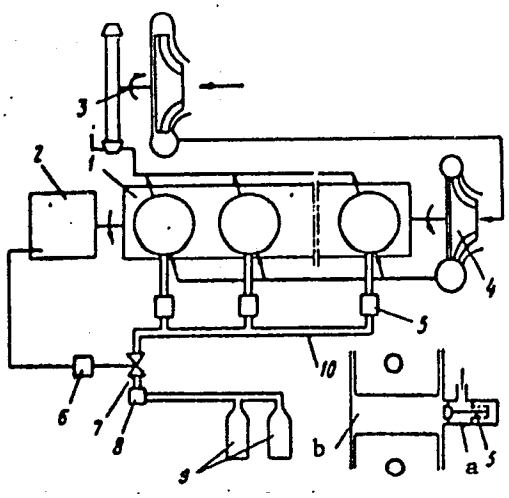

Fig. 1. Device for improving the pick-up of a diesel with gas-turbine supercharging

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The pickup-improvement device of this 10-cylinder two-cycle engine with two-stage supercharging (first stage, a turbosupercharger 3; second stage, a centrifugal gear-driven supercharger 4) consists of automatic valves 5 located on each cylinder, a control valve 7, an air reducer 8, cylinders with compressed air 9, and an air-supply line 10 (see Fig. 1). When the engine 1 is running steadily, the control valve 7 is closed and the pickup device is switched off. With a sudden increase in the load, on the generator 2, an impulse is sent to the device which opens the control valve 7. Compressed air from the cylinder 9 is reduced to the proper pressure in the reducer 8 and enters the air-supply line 10 through the control valve 7 and on into the chamber (a) of each automatic valve 5. When the pressure in the cylinder drops below the pressure in the chamber (at the beginning of the compression cycle), an additional amount of air enters the cylinders. This increases the filling of the cylinders and raises the air-surplus coefficient in them during the transition operation occurring with a sudden load increase, effecting a significant reduction in the transition period and an rpm loss and decreased smoke formation in the exhaust gases. With the end of the transition operation, the device 6 closes the control valve 7 and cuts off the additional air supply. The switching off of the control valve 7 by the device 6 can be accomplished by means of a time switching relay, the supercharging pressure, the rpm of the turbosupercharger, or by the diesel's rpm. The described device was proved on the plant's 10 D-100-1a diesel generator, and the transition

operation during the engine's loading between idling and 1600 kw at 750 rpm was studied. The fuel-supply checking device was advanced at a 1760-kw load, and additional air entered the recess (a) of the automatic valve under a pressure of 7 kg/cm^2.

A diagram (see Fig. 2) demonstrates the transition operation of the

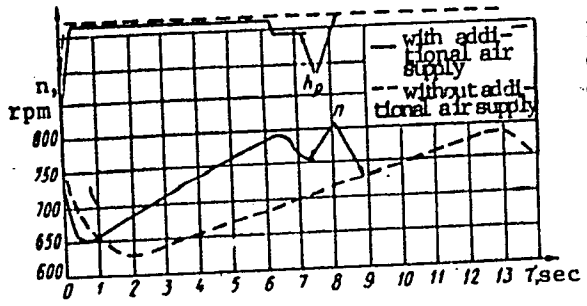

Fig. 2. Transition-operation oscillograms of a D-100-type diesel with a gas-turbine supercharger

n - rpm of diesel; h_p - the rack path of fuel pumps; —— with additional air supply: --- without additional air supply.

engine with and without an additional air supply. In the latter case, the transition period decreased from 14.7 to 7.5 seconds and the rpm drop decreased a little; therefore, the time the centrifugal rpm controller held the rack in a stop position decreased from 12.4 to 5.9 seconds. The rpm drop occurs only during the first period of a transition operation, when the

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ACC NR: AP6023606

controller's action is lagging. Using a two-impulse controller the retardation is practically zero. Thus, by using a two-impulse speed controller together with the device for additional supercharging, the transition period is shortened and the rpm drop with increased loading is decreased.

The described method of improving the pickup of diesel generators with turbosuperchargers is considered most promising since it makes it possible to maintain the necessary air-surplus coefficient in the cylinders during a transition period, significantly shortens it, and reduces the exhaust-smoke formation. Orig. art. has: 2 figures. [ATD PRESS: 5052-F]

SUB CODE: 13 / SUBM DATE: none

Card 5/5 af

ACC NR: AR6022470 SOURCE CODE: UR/0169/66/000/003/D022/D022

AUTHOR: Raykher, L. D.; Yasil'yev, Yu. A.; Kharaz, I. I.

TITLE: The method of controlled flat front and its field procedure as a modification of the MOV method of seismic prospecting

SOURCE: Ref. zh. Geofiz, Abs. 3D137

REF SOURCE: Tr. Ukr. n.-i geologorazved. in-t, vyp. 11, 1965, 100-105

TOPIC TAGS: seismic prospecting, geologic survey

TRANSLATION: The method of controlled flat front essentially consists of turning the flat front of the emitted seismic wave through a predetermined angle from the day surface to insure the parallelism of this front to the reflecting surface. In such a case, slopes of the line of shot moments and of the trace of the reflected wave are equal, though opposite in sign. The total time of retardation produced by this method may be determined from these two, provided that the principle of symmetry is complied with. Distances l between the points of shots, which contribute to the formation of a flat wave at depth H, can be determined from the formula:

$$l=\frac{1}{\cos\alpha}\sqrt{\frac{\lambda H}{N-1}},$$

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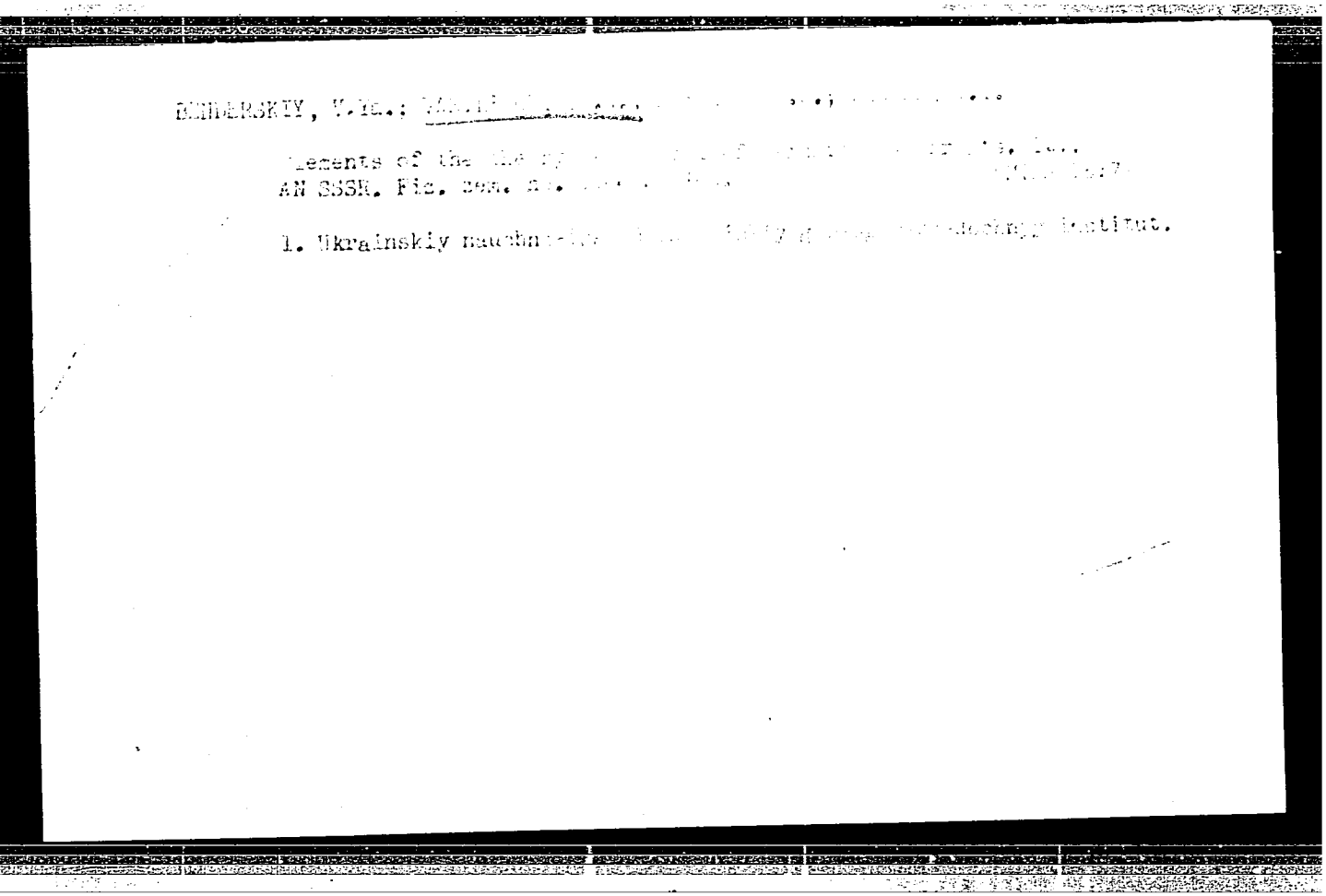
where λ is the wavelength, N is the number of flat waves in the emitted group, and α is the angle of inclination of the flat front. Distances between the reception points are selected in the same way as in the SPF method (RZh Gfiz, 1965, 2D160). As a rule the bases of emission and reception are coincident. Neighboring setups are serviced by one or more channels. G. Shekhtman.

SUB CODE: 08

VASIL'YEV, Yu.A.; RAYKHER, L.P.; SAGAIDAK, Ye.I.

Structure of the wave field of a straight-line homogeneous discreet II B group. Izv. AN SSSR. Fiz. zem. no.2:69-74 '65. (MIRA 18:6)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.



KONDERSKIY, V.Ye.: [illegible]

[illegible]
AN SSSR. Fiz. sem. [illegible]

1. Ukrainskiy nauchno[illegible] [illegible]-Donskoy Institut.

VASIL'YEV, Yu.A.; ZAMYATIN, Yu.S.; SIROTININ, Ye.I.; FOMUSHKIN, E.F.

Spectra of neutrons emitted in the fission of U^{235} at 0.45 and 90° angles to the line of flight of the fragments. Atom. energ. 9 no.6:449-454 D '60. (MIRA 13:12)
(Neutrons--Spectra) (Uranium--Isotopes)

82405

S/056/60/038/03/02/033
B006/B014

21.1100

AUTHORS: Vasil'yev, Yu. A., Zamyatnin, Yu. S., Il'in, Yu. I., Sirotinin, Ye. I., Toropov, P. V., Fomushkin, E. F.

TITLE: Measurement of Spectra and the Average Neutron Number in the Fission of U^{235} and U^{238} by 14.3-Mev Neutrons

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 3, pp. 671-684

TEXT: The present article deals in detail with the experimental investigations made in the energy range 0.4 - 5 Mev by means of the time-of-flight technique and a pulsed neutron source. The experimental arrangement is schematically shown in Fig. 1. The reaction $T(d,n)He^4$ served as primary neutron source in the target of an accelerator. The target was bombarded with 150-kev deuterons. The time-of-flight determination was carried out electronically by measuring the time integrals between the pulses in the detector. The deuteron impulses were obtained by modulation; i.e., by means of a sinusoidal

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82405

Measurement of Spectra and the Average Neutron Number in the Fission of U^{235} and U^{238} by 14.3-Mev Neutrons

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electric field (f = 2Mc/sec); the pulses of the 14.3-Mev neutrons lasted 3mμsec and had a frequency of 4 Mc/sec. On the average, 4 neutrons were obtained per pulse. Two fission chambers were used (with U^{235} (90 per cent) and U^{238} (natural isotope composition)); the chambers were filled with a mixture of argon and CO_2-gas (10 per cent) at 760 torr. A tolan crystal (diameter 80 mm, thickness 25 mm) with a photomultiplier of the type FEU-33 served as neutron detector. The efficiency of the detector was determined according to Hardy. Fig. 2 shows the efficiency as a function of the energy of three threshold energies: 0.2, 0.25, and 0.3 Mev. The electronic apparatus used to measure the pulse distribution in the detector with respect to time is described in detail. Fig. 3 illustrates a block scheme, Fig. 4 a recorded pulse versus time diagram. Fig. 5 shows the time distribution of the pulses recorded with the measurement of the neutron spectrum of the U^{238} fission. Besides neutrons and γ-rays of the fission the following were also recorded: 14-Mev primary neutrons, neutrons, and γ-quanta due to interaction between primary neutrons and parts of the apparatus, radiations of the activated

Card 2/4

B405

Measurement of Spectra and the Average Neutron Number in the Fission of U^{235} and U^{238} by 14.3-Mev Neutrons

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substances, neutrons, and γ-quanta due to primary neutron scattering, and 2.5-Mev neutrons from the accelerator. Details and accuracy of the "separation" of the measured values from the background are discussed. The neutron spectra of U^{235} and U^{238} fission are shown in Figs. 7a and 7b. All curves show a similar course: a steep ascent, a peak, and an even descent. Figs. 8a and 8b show the diagrams made for the analysis of the spectra in the coordinates ln (F(E)/E) and E_p. The spectra may be satisfactorily represented by

$$F(E) = \alpha \frac{E}{T^2} \exp(-E/T) + (1-\alpha) \frac{\exp(-w/T_f)}{\sqrt{\pi w T_f}} \exp(-E/T_f) \operatorname{sh} \frac{2\sqrt{wE}}{T_f} .$$

The analytical results are listed in Table 1. The following parameter values are indicated: for U^{235}, T_f = (1.06 ± 0.03) Mev; T = (0.37 ± 0.04) Mev; α (fraction of evaporated neutrons) = (0.16 ± 0.02)%; for U^{238}, T_f = (1.16 ± 0.03) Mev; T = (0.40 ± 0.04) Mev; α = (0.21 ± 0.02)%. The average number of neutrons emitted in the fission $\bar{\nu}$: 4.17 ± 0.30 (U^{235}) and

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82405

Measurement of Spectra and the Average Neutron Number in the Fission of U^{235} and U^{238} by 14.3-Mev Neutrons

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4.28 ± 0.30 (U^{238}), the ratio $\bar{\nu}(U^{238})/\bar{\nu}(U^{235}) = 1.03 \pm 0.03$. The following data were obtained: U^{235}; $d\bar{\nu}/dE_n = 0.112 \pm 0.011$ and U^{238}; $d\bar{\nu}/dE_n$ = $= 0.115 \pm 0.011$; (E_n - neutron energy). In conclusion, the authors thank Yu. Ya. Glazunov, A. N. Maslov, N. I. Nemudrov, V. A. Parshina, A. I. Reshetov, V. S. Khorkhordin, and V. N. Shikin for having participated in the measurements and for their assistance, V. A. Komarova for computer calculations. Mention is also made of the group of V. A. Ivanov, Yu. S. Zamyatnin, G. A. Bat', and L. P. Kudrin. There are 9 figures, 2 tables, and 21 references, 12 of which are Soviet.

SUBMITTED: August 5, 1959

Card 4/4

VASIL'YEV, Yu.A.; ZAMYATNIN, Yu.S.; IL'IN, Yu.I.; SIROTININ, Ye.I.; TOROPOV, P.V.; FOMUSHKIN, E.F.

Measuring the spectra and average number of neutrons in the fission of U^{235} and U^{238} induced by 14.3 Mev neutrons. Zhur.eksp.i teor.fiz. 38 no.3:670-684 Mr '60. (MIRA 13:7)

(Neutrons) (Nuclear fission) (Uranium--Isotopes)

AUTHORS: Vasil'yev, Yu. A. , Zamyatnin, Yu. S., Toropov, P. V., 89-12-9/29
Fomushkin, E. F.

TITLE: Measurement of the Neutron Spectrum in the Area below 0,5 MeV by Means of the Time of Flight Method (Izmereniye spektrov neytronov v oblasti energiy nizhe 0,5 MeV metodom vremeni proleta)

PERIODICAL: Atomnaya Energiya, 1957, Vol. 3 , Nr 12, pp. 542-544 (USSR)

ABSTRACT: By applying an impulse source of neutrons the secondary neutron spectrum is measured, which develops, if 14 MeV neutrons pass through layers of uranium. A fission chamber, which was connected with a 50 channel analyzer, was used as a neutron detector. The distance between source and detector was 6 m.
The energy spectra for the following samples were shown by a graph:
a) U^{235} : 2,7 cm thick ($\sim 1/5\,\lambda$ in)
b) U^{238} : 2,5 cm thick ($\sim 1/3\,\lambda$ in)
c) U^{238} : 8 cm thick ($\sim$ in)
The spectra obtained from a) and b) originate from a simple interaction between 14 MeV neutrons and the uranium nuclei: It can be assumed that in the measured area of energy the development of the secondary neutrons originate from evaporization from

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the stimulated conditions of the compound core.
For the case c) the development of a higher number of slow neutrons was ascertained. These are the consequence of a multiple-inelastic interaction which confirms the existence of low situated levels in the U^{238} nucleus. There are 3 figures and 3 references, 2 of which are Slavic.

SUBMITTED: July 2o, 1957

AVAILABLE: Library of Congress

APPROVED FOR RELEASE: 08/31/2001 CIA-RDP86-00513R001858920014-3"

VASIL'YEV, Ya.A.

Graphic analytical method of solving spacial problems in seismic prospecting by the reflection method. Izv. AN SSSR. Ser.geofiz. no.1:58-67 Ja '63. (MIRA 16:2)

1. Zapadno-Ukrainskaya Geofizicheskaya razvedochnaya ekspeditsiya.
(Seismic prospecting—Graphic methods)

IOFFE, A.Ya., kand. tekhn.nauk, red.; VASIL'YEV, Yu.A., red.;
GVIRTS, V.L., tekhn. red.

[Control of rejects and quality improvement of gray iron castings]Bor'ba s brakom i povyshenie kachestva otlivok iz serogo chuguna. Leningrad, 1962. 93 p. (MIRA 15:11)
(Iron founding) (Foundries--Quality control)

KASHIRSKIY, V. G., kand. tekhn. nauk; VASIL'YEV, Yu. A., inzh.

Some results of the pyrolisis of brown coal from the Eastern Regions of the U. S. S. R. Izv. vys. ucheb. zav.; energ. 7 no.5:122-126 My '64. (MIRA 17:7)

1. Saratovskiy politekhnicheskiy institut. Predstavlena kafedroy promyshlennoy teplotekhniki.

BABAYEV, S.G.; VASIL'YEV, Yu.A.

Lifetime of rotors and swivels. Mash. i neft. obor. no.9:3-7 '64. (MIRA 17:11)

1. VNIIPTneftemash, Baku.

RAYKHER, L.D.; VASIL'YEV, Yu.A.; KHARAZ, I.I.

Method and technique of field work using the plane front method.
Neft. i gaz. prom. no.3:11-13 Jl-S '64. (MIRA 17:12)

RAYKHER, L.D.; VASIL'YEV, Yu.A.; KHARAZ, I.I.; SAGALOVA, Ye.I.

Disturbances in pattern shooting on large prospecting areas.
Razved. i okh. nedr. 30 no.3:44-48 Mr '64 (MIRA 18:1)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.

L 62974-65 EWT(1)/EWA(n) GW

ACCESSION NR: AP5018286 UR/0387/65/000/006/0010/0022
550.834.5

AUTHOR: Benderskiy, V. Ya.; Vasil'yev, Yu. A.; Raykher, ... D.; Kharaz, I. I.

TITLE: Elements of the theory of variable control of seismic wave fronts

SOURCE: AN SSSR. Izvestiya. Fizika zemli, no. 6, 1965, 10-22

TOPIC TAGS: seismic wave, shock wave front, geologic exploration, hodograph

ABSTRACT: The theory of controlling the shape of seismic wave fronts by active interference of waves at the source of elastic vibrations is studied. This interference is accomplished by grouping charges over short distances, or by directed linear wave sources. An analytic solution is obtained for the direct and inverse three-dimensional problems of seismic prospecting by the reflected wave method. Point, line, and surface sources are discussed in detail for an arbitrary configuration of the reflecting surface. It is shown that a three-dimensional travel-time curve can be produced for a reflected wave with a predetermined shape by constructing a null isochron of the corresponding configuration. It is shown that the coordinates of the null isochron are continuous and single-valued functions of the coordinates of the reflecting surface and the three-dimensional travel-time curve of the

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ACCESSION NR: AP5018286

reflected wave. The null isochron, reflecting surface, and travel-time curve of the reflected wave are members of a single, closed system; if two of these parameters are given, the third can be uniquely determined. An analytic expression is given for the delay time which must be used with a group of charges in order to obtain the travel-time curve in a given form. Orig. art. has: 33 formulas, 4 figures.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut (Ukrainian Scientific Research Institute of Geological Exploration)

SUBMITTED: 12Jun64 ENCL: 00 SUB CODE: ES

NO REF SOV: 006 OTHER: 000

Card 2/2

VASIL'YEV, YU A

22441

S/089/60/009/006/001/011
B102/B212

26.2242

AUTHORS: Vasil'yev, Yu. A., Zamyatnin, Yu. S., Sirotinin, Ye. I., Fomushkin, E. F.

TITLE: Spectra of fission neutrons from U^{235} emitted at angles of 0, 45, and 90^{0} to the direction of flight of the fragments

PERIODICAL: Atomnaya energiya, v. 9, no. 6, 1960, 449-454

TEXT: The results of previous measurements of spectra of fission neutrons and their angular distribution with respect to the direction of flight of the fragments agree well with theoretical data (based on an assumption of isotropic neutron evaporation and Maxwell neutron distribution); but this theory furnishes values for the mean kinetic energy of the fragments, which are somewhat too low, and, therefore, the correctness of above assumptions may be doubted. In order to check it the authors have measured again the neutron spectra, and this paper reports on the results. The spectra of the neutrons emitted at 0, 45, and 90^{0} to the direction of flight of the fragments in 14.3-Mev neutron induced U^{235} fissions have been measured, and also their angular distribution has been determined. The

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time-of-flight method was utilized, the distance of flight was 75 cm and the resolution time 7 mμsec. A detailed description of this method and the equipment used is given in Ref. 9 (Yu.A.Vasil'yev i dr. Zh.eksperim. i teor.fiz. 38, 671 (1960)). However, the method employed here made use of a multi-layer fission chamber with fragment collimation as a fission-neutron source. A U^{235} layer had been deposited on both sides of an aluminum foil (having a thickness of 0.5 mm); the thickness of the layer was 6 mg/cm^2, and the total weight of the two layers amounted to 3.5 g. 0.75% of the fission taking place in the uranium have been recorded. The chamber was filled with a mixture of argon and carbon dioxide (10%) (pressure 760 mm Hg). The rise time of the pulses was about 0.1 μsec at a 1 kv electrode potential. Fig. 2 shows the experimental setup. Fig. 3 shows the neutron spectra $F(E_n)$ in arbitrary units measured at 0°, 45°, and 90°. Fig. 5 shows the spectra of neutrons emitted from the fission fragments. The angular distribution has been calculated by numerical integration with respect to the neutron energy (cf. Table). The angular distribution of the γ rays ($E_\gamma > 0.3$ Mev) produced during fission has also been calculated by assuming an isotropy relative to the direction of flight

of the fragments. Here are the values obtained: $n_f(0^\circ):n_f(45^\circ):n_f(90^\circ)$ = (1.31±0.07):(1.22±0.06):1.00. The neutron distribution showed a considerable anisotropy: $b_{14} = N(0^\circ)/N(90^\circ) = 3.23\pm0.12$. The following value has been obtained after subtracting the neutrons evaporated before a fission $b'_{14} = 4.03 \pm 0.23$; this value agrees within the limits of error with that obtained for thermal neutrons ($b_t = 4.35\pm0.19$). In order to describe these experimental results theoretically, calculations have been done and various assumptions have been made regarding the neutron spectra in the coordinate system of the fragments. However, no variant was able to yield satisfactory results that agreed with all three spectra which have been examined. The authors thank P. V. Toropov, Yu. Ya. Glazunov, A. N. Maslov, N. I. Nemudrov, V. A. Parshina, V. S. Khorkhordin, V. A. Komarova, M. P. Novikova, G. A. Peretokina, and L. A. Chernova for assistance. There are 6 figures, 1 table, and 14 references: 6 Soviet-bloc and 8 non-Soviet-bloc. The three references to English-language publications read as follows: Ref. 7: W.Stein.Phys.Rev. 108, 94 (1957); Ref. 10: S. Whetstone. Phys.Rev., 114, 581 (1959); Ref. 12: J. Terrell,

Card 3/4

S/089/60/009/006/001/011
B102/B212

Spectra of fission neutrons...

Phys.Rev., 113, 527 (1959).

SUBMITTED: February 29, 1960

Legend to Fig. 2: 1) U^{235} layer; 2) deuteron beam; 3) target; 4) collimators.

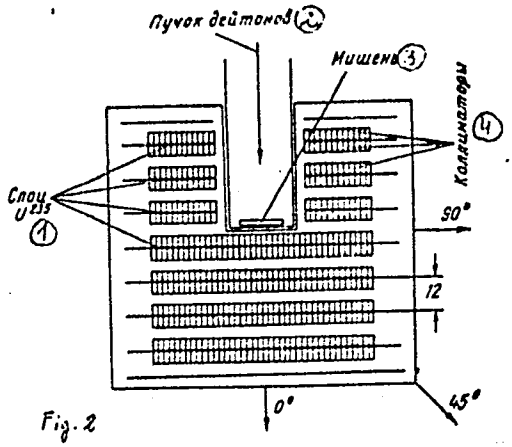

Fig. 2

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L 21793-66 EWT(1)/EWA(h) GW
ACC NR: AP6002919 (N) SOURCE CODE: UR/0286/65/000/024/0082/0082

AUTHORS: Raykher, L. D.; Benderskiy, L. Ya.; Vasil'yev, Yu. A.; Rapoport, M. B.; Kharaz, I. I.; Chervonskiy, M. I.

ORG: none

TITLE: A method for seismic exploration. Class 42, No. 177103 [announced by Ukrainian Scientific Research Geological Exploration Institute (Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 82

TOPIC TAGS: seismograph, seismology

ABSTRACT: This Author Certificate presents a method for seismic exploration with the use of controlled directional excitation systems (operating along any specified principle) and systems of vibration reception. The method increases the effectiveness of exploration and provides a unique selection of seismic waves from the irradiated objects. The interference systems in the vibration reception are coordinated with interference systems of the vibration excitation. This is accomplished by summing up displacements of any number of recordings based on a previously specified relationship which agrees with the vibration excitation principle.

SUB CODE: 08/ SUBM DATE: 20Jul64

UDC: 550.834

Card 1/1

VASIL'YEV, Yu.A.; RAYKHER, L.D.; SAGALOVA, Ye.I.

Conditions of formation of a sum wave induced by a linear arrangement of explosion points. Izv. AN SSSR. Ser. geofiz. no.8:1195-1203 Ag '64 (MIRA 17:8)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.

MAKAROV, Petr Vasil'yevich, prof.; VASIL'YEV, Yu.A., red.

[Chemistry of the cell] Khimiia kletki. Leningrad, Ob-vo po rasprostraneniiu politicheskikh i nauchnykh znanii RSFSR, 1963. 56 p. (MIRA 17:5)

1. Chlen-korrespondent AMN SSSR (for Makarov).

VASIL'YEV, Yu.A.

Solution of the direct spatial problem in the reflection method of seismic prospecting in the case of linear source of vibrations. Izv. AN SSSR. Ser. geofiz. no.3:397-405 Mr '63. (MIRA 16:3)

1. Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut.

(Seismic prospecting)

KISEL', F.M.; VASIL'YEV, Yu.A., elektromekhanik

We have facilitated the servicing of long-distance communication apparatus. Avtom. telem. i sviaz' 8 no. 3:34-35 Mr '64.
(MIRA 17:5)

1. Starshiy elektromekhanik Leningrad-Vitebskoy distantsii signalizatsii i svyazi Oktyabr'skoy dorogi (for Kisel').

VASIL'YEV, Yu.A.

Shape of hodographs of reflected waves in the case of a linear source of fluctuations. Geofiz. sbor. no.3:19-24 '62.
(MIRA 15:9)

(Seismic prospecting)

RAYKHER, L.D.; BENDERSKIY, V.Ya.; VASIL'YEV, Yu.A.; KHARAZ, I.I.

Increasing the geological efficiency of seismic prospecting in the inner zone of the cis-Carpathian trough and the southwestern part of the Russian Platform. Neft. i gaz. prom. 3:12-14 Jl-S '65. (MIRA 18:11)

VASIL'YEV, Yu.A., inzh.

EI-100 diesel electric power plants. Energomashinostroenie 6 (MIRA 13:9)
no.8:48 Ag '60.
(Electric power plants) (Diesel engines)

VASIL'YEV, Yu.A.; PAYKHER, L.D.; SAGALOVA, Ye.I.; KHARAZ, I.I.

The flat front technique in the method of reflected waves.
Prikl. geofiz. no.38:25-44 '64. (MIRA 18:11)

ACC NR: AR6016962 SOURCE CODE: UR/0169/65/000/012/D022/D022

AUTHOR: Raykher, L.D.; Vasil'yev, Yu.A.; Kharaz, I.I.; Gasilovskiy, K.S.; Sagalova, Ye. I.

TITLE: Methodology of flat front (SPF) and central rays (STsL) work techniques for regions with complex seismological conditions at depth

SOURCE: Ref. zh. Geofizika, Abs. 12D146

REF SOURCE: Tr. Ukr. n.-i. geologorazved. in-t, vyp. 10, 1965, 3-9

TOPIC TAGS: seismology, seismic prospecting, ~~seismic prospecting methodology~~, flat front seismic prospecting, central rays seismic prospecting

ABSTRACT: Results of research for the establishment of theoretical bases, methodology and observation techniques for the use of the STsL and the SPF methods for complex seismological conditions are presented. The basic volume of STsL work was done within the limits of the Outer zone of the Precarpathian deflection (9.1 km) and in the Postcarpathia (3.6 km). The distance between PB was taken as 100 m; a mixed grouping of 30 seismic detectors on a base of 30 and 60 m. was used. Use of this method both for recon and for detailed search is noted. Combination of the method with ordinary profiling is useful. For SPF, theory of spacial interpretation was developed and optimum sequence of operations determined for field work. SPF can be used either with profiling or independently in those cases where common methods do not guarantee the necessary reliability of the results. [Translation of abstract].

UDC: 550.834.5

Card 1/1 SUB CODE: 08

ACC NR: AT6028962 SOURCE CODE: UR/0000/65/000/000/0003/0025

AUTHOR: Raykher, L. D.; Vasil'yev, Yu. A.; Kharaz, I. I.

ORG: Ukrainian Scientific Research Institute of Geological Prospecting (Ukrainskiy nauchno-issledovatel'skiy geologorazvedochnyy institut)

TITLE: Application of linear vibration sources in the method of reflected waves

SOURCE: Vsesoyuznyy seminar po novoy metodike seysmorazvedki. Seysmorazvedka s primeneniyem gruppirovaniya vzryvov na dlinnykh bazakh i sposoba tsentral'nykh luchey (Seismic prospecting using the grouping of shots on long bases and the method of central rays); trudy seminara. Moscow, Izd-vo Nedra, 1965, 3-25

TOPIC TAGS: seismic modeling, seismic prospecting, seismography, underground explosion, geologic exploration, seismic wave, factorica

ABSTRACT: An analysis is made of travel-time curves of reflected waves generated by linear sources obtained by the plane wave-front method (SPF) and the directed plane wave-front method (UPF). It is pointed out that the shifting of the reflected wave limits the use of SPF, and in regions with steeply sloping interfaces it is advantageous to use UPF. In tracing faults the use of SPF and UPF makes it possible to

Card 1/2

ACC NR: AT6028962

improve detection of diffracted waves from the different shapes of the travel-time curves for reflected and diffracted waves. The choice of the shot-point parameters takes into account generation of interference and noise, the curvature of the reflecting interface, and the specific characteristics of the amplitude field of the reflected wave. By varying the shot spread parameters, it is possible to attenuate the even waves in the upper part of the cross section. Under laboratory conditions SPF and UPF may be compared by summing using special vibration patterns from single explosions within the geophone spread area. Studies are made of the method of processing seismograms, the interpretation of observed travel-time curves and their corrections, and methods of compiling cross sections. Analysis is performed of the accuracy of determination of geotectonic structure by SPF, UPF, and profiling by MOV. An example of successful use of UPF is given for a region with a complex geological structure. Orig. art. has: 9 figures and 9 formulas.

SUB CODE: 08/ SUBM DATE: 30Apr65/ ORIG REF: 017

Card 2/2

ACC NR: AP6025661 (A) SOURCE CODE: UR/0413/66/000/013/0126/0127

INVENTOR: Venediktov, V. A.; Yasil'yev, Yu. A.; Popov, N. I.; Markelov, Ye. V.; Veynblat, M. Kh.; D'yakov, A. P.; Shishakov, K. I.; Yusim, L. Ya.; Skvortsov, A. M.; Kireyev, Yu. A.; Guzanov, G. N.; Gerasimovich, S. G.

ORG: None

TITLE: A fluid device for damping torsional vibrations. Class 47, No. 183539 [announced by the Turbine Motor Plant (Turbomotornyy zavod)]

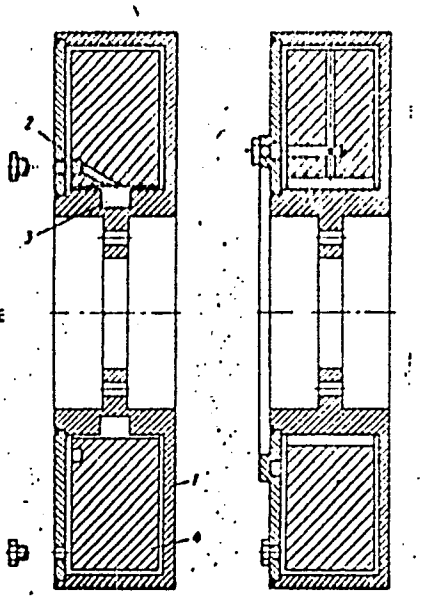
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 13, 1966, 126-127

TOPIC TAGS: vibration damping, hydraulic device, torsional vibration

ABSTRACT: This Author's Certificate introduces a fluid device for damping torsional vibrations. The unit consists of a housing with a hole for fluid delivery and a movable annular disc with a compensating cavity set inside the housing. The installation is designed for more reliable and simpler filling of the unit with fluid by providing the faces of the disc or the internal surface of the housing opposite the hole for fluid delivery with at least one annular groove connected to the compensating cavity by channels in the disc body.

Card 1/2 UDC: 621-752.2

ACC NR: AP6025661



1—housing
2—annular groove
3—compensating cavity
4—disc

SUB CODE: 13,20/SUBM DATE: 28Apr65

Card 2/2

FIOSHIN, M.Ya.; VASIL'YEV, Yu.B.; GAGINKINA, Ye.G.

Influence of the nature of the cation on the Kolbe electrosynthesis. Dokl. AN SSSR 135 no.4:909-912 '60. (MIRA 13:11)

1. Institut elektrokhimii Akademii nauk SSSR. Predstavleno akademikom A.N.Frumkinym.
(Reduction, Electrolytic) (Oxidation, Electrolytic)
(Acetates)

FIOSHIN, M.Ya.; GIRINA, G.P.; VASIL'YEV, Yu.B.; KHRULEV, M.V.; POLIYEVKTOV, M.K.; ARTEM'YEV, [illegible]

Additions of alcohols and their effect on Kobe's electrosynthesis. Dokl. AN SSSR 140 no.6:1388-1391 O '61. (MIRA 14:11)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N. Frumkinym.

(Chemistry, Organic--Synthesis) (Electolysis)

FIOSHIN, M.Ya.; VASIL'YEV, Yu.B.

Kinetics of anodic and chemical reactions in Kolbe electrosynthesis. Izv.AN SSSR.Otd.khim.nauk no.3:437-446 Mr '63. (MIRA 16:4)

1. Institut elektrokhimii AN SSSR.
(Chemistry, Organic--Synthesis) (Electrolysis)

VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrolytic oxidation of formic acid and its salts on a rotating platinum electrode. Dokl. AN SSSR 148 no.1:132-135 Ja '63. (MIRA 16:2)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N. Frumkinym.
(Formic acid) (Oxidation) (Electrodes, Platinum)

VASIL'YEV, Yu.B., kand. khim. nauk; PSHENICHNIKOV, A.G., kand. khim. nauk

International Congress on Electrochemistry in Moscow. Vest. AN SSSR 33 no.12:55-57 D '63. (MIRA 17:1)

YAO LU-AN' [Yao Lu-an]; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrochemical processes in the system quinone - hydroquinone. Zhur. fiz. khim. 38 no.1:205-208 Ja'64. (MIRA 17:2)

1. Institut elektrokhimii AN SSSR.

BESKOROVAYNAYA, S.S.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Adsorption of aliphatic alcohols on a smooth platinum electrode. Elektrokhimiia 1 no.6:691-695 Je '65. (MIRA 18:7)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Adsorption of methanol on a smooth platinum electrode. Elektrokhimiia 1 no.1:84-89 Ja '65. (MIRA 18:5)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Effect of the adsorption of foreign ions and molecules on the oxidation rate of organic substances on a platinum electrode. Elektrokhimiia 1 no.4:439-445 Ap '65. (MIRA 18:6)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrolytic oxidation of organic substances on a platinum electrode. Report No.2: Kinetics of oxidation of alcohols, aldehydes, and carboxylic acids with the estimation of the surface inhomogeneity of the platinum electrode. Izv. AN SSSR. Ser.khim. no.10:1778-1787 '65. (MIRA 18:10)

1. Institut elektrokhimii AN SSSR.

KHAZOVA, O.A.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Electrolytic oxidation of organic substances on a platinum electrode. Report 1: General aspect of potentiostatic curves and the nature of inhibition of electrochemical oxidation processes. Izv. AN SSSR. Ser. khim. no.9:1531-1539 '65. (MIRA 18:9)

1. Institut elektrokhimii AN SSSR.

YAO LU-AN' [Yao Lu-an'], KAZARINOV, V.Ye.; VASIL'YEV, Yu.B., RAGOZSKIY, V.S.

Kinetics of electrochemical processes in the system quinone - hydroquinone. Part 2: Effect of the adsorption of participants nonparticipating in the reaction. Elektrokhimiia 1 no.2:176-181 F '65. (MIRA 18:6)

1. Institut elektrokhimii AN SSSR.

YAO LU-AN' [Yao Lu-an]; KAZARINOV, V.Ye.; VASIL'YEV, Yu.B.; BAGOTSKIY, V.S.

Effect of adsorption on the rate of processes taking place on a platinum electrode in the system quinone - hydroquinone. Dokl. AN SSSR 151 no.1:151-154 Jl '63. (MIRA 16:9)

1. Institut elektrokhimii AN SSSR. Predstavleno akademikom A.N.Frumkinym.

(Quinone) (Hydroquinone) (Adsorption)