AYVAZYAN, S.A.; ROZANOV, Yu.A.

Remarks on asymptotically effective linear estimates of regression coefficients. Trudy Mat. inst. 71:3-16 '64.

(MIRA 18:2)

L 8313-66 EWT(d)/T IJP(c)

ACC NR: AP5028006 SOURCE CODE: UR/0052/65/010/004/0713/0726

AUTHOR: Ayvazyan, S. A. 44,55

ORG: None

TITLE: The distinguishing between neighboring hypotheses on the form of the distribution density in the scheme of a generalized sequence test

SOURCE: Teoriya veroyatnostey i yeye primeneniya, v. 10, no. 4, 1965, 713-726

TOPIC TAGS: sequence, probability, distribution function 16,44,55 16,44,55

ABSTRACT: The author introduces an approximate version δ_0^* of an optimal generalized sequence test and investigates then its optimal properties (asymptotic with $\|\theta\| \to 0$). In particular, it is shown that its asymptotic effectiveness

$$e(\delta_0^*) = \lim_{\|\theta\| \to 0} \frac{M^{(\delta_0)}(0)}{M^{(\delta_0^*)}(0)},$$

comes extremely close to unity (in a majority of distribution cases it exceeds 95% and is never below 90—92%), while the asymptotic effectiveness of the Wald test in similar situations tends to zero with $\alpha \to 0$ and $\beta \to 0$. Author considers it his pleasant duty to express his gratitude to Yu. V. Prokhorov under whose supervision this work was performed. Orig. art. has: 34 formulas. 44 55

SUB CODE: MA / SUBM DATE: 04Aug65 / ORIG REF: 006 / OTH REF: 006

Card 1/1 UDC

AYVAZYAN, S.A. (Moscow)

Distinction between the neighboring hypotheses on the frequency distribution function in the scheme of the generalized sequential probability ratio test. Teor. veroiat. i ee prim. 10 no.4:713-726 '65.

(MIRA 18:12)

1. Submitted August 4, 1965.

AYVAZYAN, S.M.

Geophysical principles of relativism. Izv. AN Arm. SSR. Nauki o zem. 18 no.5:69-73 '65. (MIRA 18:9)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.

MKRTCHYAN, K.S.; AYVAZYAN, S.M.

Raw material resources and the melting system in Metsamor. Izv. AN Arm. SSR Nauki o zem. 17 no.6:73-81 '64 (MIRA 18:2)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Armyanskoy SSR i AN ArmSSR.

MKRTCHYAN, K.A.; BARSEGYAN, L.A.; OGANESYAN, Dzh.A.; AMJTYUNYAN, A.R.; AYVAZYAN, S.M.

Ancient mining and metallurgic structures of Metsamor (Armenia). Izv. AN Arm.SSR Nauki o zem. 17 no.2:69-74 '64.
(MIRA 17:8)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Armyanskoy SSR.

AYVAZYAN, S.M.

Toward the development of geology and mining. Izv. AN Arm. SSR. Nauki o zem. 18 no.1:61-73 '65. (MIRA 18:5)

1. Institut geologicheskikh nauk AN Armyanskoy SSR.

AYVAZYAN, V.A., kandidat meditsinskikh nauk

Urinary schistosomiasis (bilhar ziasis) Sov.med. 19 no.6:65 Je '55. (MLRA 8:9)

1. Iz urologicheskogo otdeleniya (zav. M.A.Karapetyan) pervoy Yerevanskoy klinicheskoy bol'nitsy (glavnyy vrach O.B. Arutyunyan).

(SCHISTOSOMIASIS, urinary)

AYVAZ'YAN, V. G., Dr. Tekh. Sci. and GUBIN, F. F., Prof.

"Report on Technico-Economic Studies in Hydropower Construction Projects," abstracted in Gidrotekh. stroi., Nos. 5/6, pp 28-29, 1946

Glavgidroenergstroy

AYVAZ'YAN, V.

"Methods of calculating power engineering economy in planning hydroelectric stations."

Dissertation for Doctor of Technical Sciences, Moscow Powerengineering Institute im. Molotov (MEI)

Subject: Hydropower Engineering

Gidrotekhnicheskoye, Stroitel'stvo, 12, 1946

AYVAZ'YAN, V. G.

AYVAZ'YAN, V. G. - Dr. Tech. Sci. - "Fundamentals for Making Computations on Hydrotechnical Ferroconcrete," Gidrotekhnicheskoye Stroitel'stvo, No. 6, 1948.

AYVAZ'YAN, V. G., Prof.

USSR/Engineering - Hydraulics, Turbines — Oct 51

"On the Methods for Analysis of Energy Losses in Blocks of Hydraulic Turbines," Prof. V. G. Ayvaz'yan, Dr Tech Sci

"Gidrotekh Stroi" No 10, pp 23-26

Reviews existing methods for conversion of efficiency factor of model to efficiency factor of turbine itself, emphasizes their deficiency and suggests new method based on sepn of energy loss into its components, according to their

201T106

USSR/Engineering - Hydraulics, Turbines (Contd) — Oct 51

causes, and on establishing formulas which permit calcn of these components with increase in dimensions and other hydraulic characteristics of turbine blocks.

201T106

AYVAZ'YAN, V. G.

"Conference on problems of projecting and laboratory testing of buildings of combined hydroelectric stations," Gidrotekhnicheskoye Stroitel'stvo, No. 3, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952, Uncl.

AYVAZYAN, V.G.

Subject : USSR/Hydraulic Engineering AID P - 3205

Card 1/1 Pub. 35 - 9/19

Author : Ayvaz'yan, V. G., Dr. Tech. Sci., Prof.

Title : On computing real hydraulic losses in a generating unit of a hydro power plant

Periodical : Gidr. stroi., 5, 27-31, 1955

Abstract : The article presents an analysis of the hydraulic losses occurring in the turbine and suggests methods for their computation. The author recommends a series of tests on the model turbine before computing the efficiency of the actual unit. Four diagrams.

Institution : None

Submitted : No date

KRZHIZHANOVSKIY, G.M., akademik; AYVAZYAN, V.G.; ALAMPIYEV, P.M.; BUTANOVSKIY, M.S.; VARTAZAROV, S.Ya.; VEYTS, V.I.; GUVIN, F.F.; DYMITRASHKO, N.V.; KARAULOV, N.A.; KOCHARYAN, G.A.; KRITSKIY, S.N.; LEBEDEV, M.M.; MURZAYEV, E.M.; MEL'DMAN, M.P.; SHCHENGELIYAN, P.G.; ERISTOV, V.S.

Sukias Efremovich Manaserian; obituary. Izv.AN SSSR. Ser.geog. no.5:143-144 S-O '56. (MLRA 9:11)

(Manaserian, Sukias Efremovich, 1881-1956)

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 7, p 57 (USSR) SOV/124-57-7-7868

AUTHORS: Ayvaz'yan, V. G., Kartvelishvili, N. A., Kuperman, V. L.

TITLE: Surge Tank of the Pneumatic Type (Uravnitel'nyy rezervuar pnevmaticheskogo tipa)

PERIODICAL: Tr. Mosk. energ. in-ta, 1956, Nr 19, pp 160-173

ABSTRACT: The problem of incorporating a pneumatic surge tank into the system of a hydro-electric powerplant with a subterranean powerhouse is investigated. It is pointed out that the use of a pneumatic surge tank in a specific case taken under advisement permits doing away with an above-the-ground location of the tank. It is further pointed out that such a pneumatic surge tank does not create any additional problems that could affect adversely the operation of the hydraulic power-generating units and permits retaining a controllability of the entire system analogous to that of a system equipped with a regular surge tank. The desirability of conducting an investigation on a model of a pneumatic surge tank is mentioned.

Card 1/1

G. V. Aronovich

AYVAZ'YAN, V.G., doktor tekhnicheskikh nauk, professor.

Construction of hydraulic structures abroad. Gidr.stroi.25 no.5: 51-56 Je '56. (Hydraulic engineering) (MLRA 9:9)

AYVAS'YAN, V.G., doktor tekhnicheskikh nauk, professor.

Statistical method of determining the volume of a water reservoir. Gidr.stroi. 25 no.10:37-41 N '56. (MLRA 9:12)
(Reservoirs)

AYVAZ'YAN, V.G., doktor tekhnicheskikh nauk, professor; ZOLOTOV, L.A., kandidat tekhnicheskikh nauk; SEMENKOV, V.M., inzhener.

Increasing the capacity of pressure spillways of "integral" hydroelectric power stations during maximum flood discharge. Gidr. stroi. 26 no.3:15-20 Mr '57. (MIRA 10:4)

(Hydroelectric power stations)

NIKITIN, Sergey Nikolayevich, dotsent, kand.tekhn.nauk [deceased]; KAROL', L.A., kand.tekhn.nauk, red.; SHIMKEVITS, I.Ya., inzh., red.; KRITSKIY, S.N., doktor tekhn.nauk, retsenzent; AYVAZYAN, V.G., prof., doktor tekhn.nauk, retsenzent; ALEKSANDROVSKIY, Yu.A., dotsent, kand.tekhn.nauk, retsenzent; OKLOV, V.A., red.; BORUNOV, N.I., tekhn.red.

[Principles of calculations connected with hydroelectric power] Osnovy gidroenergeticheskikh raschetov. Moskva, Gos.energ.izd-vo, 1959. 510 p. (MIRA 12:5)
(Hydroelectric power)

14(6)

AUTHOR: Ayvaz'yan, V.G., Doctor of Technical Sciences, Professor

SOV/98-59-3-7/17

TITLE: The Distribution of Rubbish Retaining Grates of Hydro-Electric Power Plant Buildings (O razmeshchenii sorouderzhivayushchikh reshetok zdaniy gidrostantsiy)

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 3, pp 38-42 (USSR)

ABSTRACT: Losses of energy occur every year in the exploitation of hydro-electric power plants due to large quantities of rubbish blocking the protecting grates installed at the entries of each turbine chamber (the case in most Soviet GES). The author reviews different methods of placing these grates, and proposes his own scheme in which grates protect not only the entries of turbine chambers but also the entries of waterspill chambers. The grates are inclined advanced in the direction of the head-waters, and fixed onto buttresses which are prolongations

Card 1/2

The Distribution of Rubbish Retaining Grates of Hydro-Electric Power Plant Buildings

SOV/98-59-3-7/17

of block buttresses. When some of grates are blocked with rubbish, water can always reach the turbine chamber through the apertures in the buttresses. Losses of pressure can happen in such cases but the turbine will still work without interruption. The author also describes other schemes of distributing grates, but stresses that the choice of any scheme depends entirely on specific local conditions in each separate case. There are 7 diagrams.

Card 2/2

30(1)

SOV/98-59-8-7/33

AUTHOR: Arvaz'yan, V.G., Doctor of Technical Sciences, Professor

TITLE: The Reinforcement of the Lower Waters of Spillway Dams on Foundations Subject to Erosion

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 8, pp 28-31 (USSR)

ABSTRACT: This is a discussion of a system for strengthening the lower waters of spillway dams. Fig.1 shows 2 variations of this method in diagram form. Variation a) consists of a reinforced basin at the end of the apron which prevents erosion of the latter by lowering the kinetic energy created by the discharged stream flow. The bottom of this basin is constructed of single or multi-layer concrete shooting and stones (selected for their resistance to erosion); the basin may also be replaced by a ridge behind which stones are deposited. While this system of reinforcement is now widely accepted as being the classic solution to the problem, the author questions the expediency of the method, subjecting some aspects of it to criticism. The need to reduce the velocity of the discharged water at the base of the spillway calls for a corresponding in-

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The Reinforcement of the Lower Waters of Spillway Dams on Foundations Subject to Erosion

crease in the height of the dam, while the relatively high position of the spillway apron renders it unable to stand up to the forces produced by wave movement and filtration pressure at the front part of the apron. The gradual slope of the recessed basin, necessitated by the high velocity of the discharged water, considerably increases the length of the reinforcement. Fig.1b illustrates a scheme by means of which the author suggests many of the faults of the former method are removed. The level of the apron is placed as high as possible, the height of the concrete dam thus being reduced, and at the lower end of the apron a sharply inclined basin is recessed, the base of which is reinforced by powerful concrete sheeting. The velocities involved in this method depend naturally on the height of the upper and lower waters and the angle of inclination of the basin. The advisability of constructing a second apron wall in the foundation of the basin is pointed out, especially when the majority of the water energy developed by the discharge flow is concentrated on the bottom, as opposed to the surface. Fig.2 shows a spillway apron constructed on these lines, which was described in

The Reinforcement of the Lower Waters of Spillway Dams on Foundations Subject to Erosion

a work compiled by the Moscow Branch of the VNIIG (All-Union Scientific Research Institute of Hydraulics) on the instructions of the Gidroenergoproyekt, and the author points out that this system is admirably suitable for low-pressure dams, which are now being constructed on a large scale. A brief survey of the question of the stone deposits used in the first system is then made, particular attention being paid to the problem of increasing their resistance to erosion; it is suggested that this could be best effected by altering the shape of the lower part of the inclination. The question is further complicated by the fact that as yet, the problem has not been solved of erosive action once the stone deposit layer has been worn away. Research on this new system of high-level spillway aprons has been conducted by Professor V.S. Baumgart, Candidate of Technical Sciences P.I. Gordiyenko, etc.; finally, a method of covering aprons with concrete sheeting, researched in 1939 by Candidate of Technical Sciences N.A. Preobrazhenskiy, is briefly mentioned. There are 2 diagrams.

ALEKSANDROV, B.; AYVAZ'YAN, V., doktor tekhn.nauk, starshiy nauchnyy sotrudnik; KARAULOV, N., doktor tekhn.nauk, strashiy nauchnyy sotrudnik; FEL'DMAN, M., doktor tekhn.nauk, strashiy nauchnyy sotrudnik

Biased attitude to the construction of hydroelectric power stations. NTO 3 no.8:19-22 Ag '61. (MIRA 14:9)

1. Chlen-korrespondent AN SSSR, zaveduyushchiy sektotom gidroenergetiki energeticheskogo instituta imeni G.M. Krzhizhanovskogo (for Aleksandrov). 2. Energeticheskiy institut imeni G.M. Khizhizhanovskogo (for Ayvaz'yan, Karaulov, Fel'dman).
(Hydroelectric power stations)

AYVAZ'YAN, V.G., doktor tekhn.nauk, prof.; YEGORSHIN, B.I., inzh.

Increasing the effectiveness of debris-retaining installations of combined hydroelectric power stations. Gidr.stroi. 31 no.2:32-37 F '61. (MIRA 14:3)

(Hydroelectric power stations)

TOMGOMYAN, N.S., kand. tekhn. nauk; CHILINGARYAN, L.A., kand. tekhn. nauk; SHAKHBAZYAN, Sh.A., kand. tekhn. nauk; AGAKHANYAN, G.A., kand. sel'khoz. nauk; KULOYAN, L.T., kand. tekhn. nauk; ARSHAKYAN, D.T.; BARKHUDARYAN, I.G.; SARKISYAN, S.G., kand. tekhn. nauk; MKHITARYAN, S.A.; OSEPYAN, A.M., doktor ekon. nauk, prof.; BEK-NAZAROV, B.I., kand. geogr. nauk, red.; AYVAZ'YAN, V.G., otv. red.; FEL'DMAN, M.P., otv. red.; AVETISYAN, A.A., tekhn. red.; CHAKHALYAN, TS.P., tekhn. red.

[Results of the combined studies of the Sevan problem]Rezul'taty kompleksnykh issledovanii po Sevanskoi probleme. Erevan, Izd-vo Akad. nauk Armianskoi SSR. Vol.3.[Water resources and power engineering]Vodnoe khoziaistvo i energetika. 1962. 330 p.
(MIRA 15:11)

1. Akademiya nauk Armyanskoy SSR, Erivan. Institut vodnykh problem.

(Sevan Lake region--Water resources development)
(Sevan Lake region--Power engineering)

BOLOTOV, V.V., doktor tekhn.nauk (Leningrad); AYVAZ'YAN, V.G., doktor tekhn.nauk (Moskva)

Methodology for determining the economic efficiency of hydroelectric power stations. Elektrichestvo no.9:88-92 S '62. (MIRA 15:9)

(Hydroelectric power stations)

KARAULOV, N.A., AYVAZYAN, V.G., ZHILIN, V.G.

Problems of optimum peak-load coverage in a complex power system, and modern ways of dealing with them in the conditions existing in the USSR.

Report submitted for the Symposium on Peak Load Coverage, Venice, Italy May 20-23 1963

AYVAZ'YAN, Y.G., prof.; VELIKANOV, A.L., kand. tekhn. nauk; KOROBOVA, D.N., mlad. nauchn. sotr.; FEL'DMAN, M.P., doktor tekhn. nauk; VASIL'YEV, Yu.P., red.

[Selection of power parameters and structural dimensions of hydroelectric power stations] Vybor energeticheskikh parametrov i razmerov sooruzhenii gidroelektrostantsii. Moskva, Nauka, 1965. 135 p. (MIRA 18:4)

1. Moscow. Energeticheskiy institut.

AYVAZ'YAN, V.G.

Technical and economic calculations in the design of complex hydroelectric developments. Probl. gidroenerg. i reg. rech. stoka no.11:65-77 '63. (MIRA 18:3)

L 11548-66 EWT(d)/EWP(k)/EWP(1) JT

ACC NR: AP6005028 SOURCE CODE: UR/0105/65/000/001/0091/0091

AUTHOR: Ayvaz'yan, V. G.; Aleksandrov, B. K.; Andrianov, V. N.; Beschinskiy, A. A.; Budzko, I. A.; Zhimerin, D. G.; Krasnov, V. S.; Krushilin, G. N.; Kulebakin, V. S.; Listov, P. N.; Markvardt, K. G.; Markovich, I. M.; Popkov, V. I.; Styrikovich, M. A.

ORG: none

TITLE: Professor Andrey Georgiyevich Zakharin

SOURCE: Elektrichestvo, no. 1, 1965, 91

TOPIC TAGS: electric power engineering, electric engineering personnel

ABSTRACT: A short biography of subject on the occasion of his 60th birthday in November 64. A close disciple of Krzhizhanovskiy, he now heads sector of general methodological problems and forecasting at ENIN (Institute of Power Engineering imeni Krzhizhanovskiy), and power engineering section within its scientific council. In 1927-1932, worked in designing and construction of power stations and industrial power installations in the Trans-Caucasus. In 1932, having graduated as electrical engineer from Tbilisi Polytechnical Institute, he switched to scientific work at All-Union Institute of Farm Electrification, and at ENIN since 1944. Became candidate of technical sciences in 1937; doctor, in 1948. Subject is credited with working out the methods for designing efficient and economical regional and local power systems, utilizing local power resources and coordinating them with the power grids. He participated in studies on electrification through 1980, and on

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UDC: 621.31:(0,75.5)

L 11548-66

ACC NR: AP6005028

2

the application of mathematical methods to solution of problems concerning fuel-power balance. In recent years, he has been concerned with linear programming, and long-term prediction with computer techniques. He authored about 80 scientific works, including monographs, textbooks and handbooks, and has been editing all ENIM publications. Is active in CEMA commissions and GOSPLAN USSR, devoting special attention to coordination of scientific research in power engineering. Has been awarded the Order of the Badge of Merit and other decorations. Orig. art. has: 1 figure.
[JPRS]

14

SUB CODE: 09 / SUBM DATE: none

HW
Card 2/2

AYVAZYAN, V. Ye.

Quantitative characteristics of the fall of temperature in the Armenian S.S.R. during the invasion of cold air masses. Trudy Tbil.NIGMI no.5:53-61 '59. (MIRA 13:6)
(Armenia--Atmospheric temperature)

GIGINEYSHVILI, V.M.; AYVAZYAN, V.Ye.

Aerosynoptic conditions of the origin of hail phenomena in Armenia. Trudy TbilNIGMI no.12:3-20 '63.

(MIRA 18:5)

S/022/60/013/005/005/008
C111/C222

24.4400 (1395, 1538, 1158)

AUTHOR: Ayvazyan, Yu.M.

TITLE: Motion Equations of Charged Bodies in the General Theory of Relativity

PERIODICAL: Izvestiya Akademii nauk Armyanskoy SSR. Seriya fiziko-matematicheskikh nauk, 1960, Vol. 13, No. 5, pp. 47 - 54

TEXT: Infeld (Ref. 6) showed that the motion equations can be obtained relatively easy from the field equations by assuming that the energy-impulse-tensor is proportional to the generalized δ-functions. The author generalizes the method of Infeld to charged bodies and obtains motion equations of two charged bodies.
In the considered case the equations of the gravitational field read :

$$(1) \qquad R^{\alpha\beta} - \frac{1}{2} g^{\alpha\beta} R = -8\pi \left(T^{\alpha\beta}_{\text{mech}} + T^{\alpha\beta}_{\text{el.m.}} \right) ,$$

where the letters in bold-face type denote the tensor density, and it is put k = 1, c = 1 (k-gravitational constant).
Assuming that there are only two charged bodies and that external electromagnetic fields are missing, furthermore that the bodies move on world lines

Motion Equations of Charged Bodies in the General Theory of Relativity

with the coordinates $\xi^{\alpha}(t)$, $\eta^{\alpha}(t)$, then with the assumption of Infeld and results of Tulkzuyev (Ref. 7) it follows that

$$(5)\quad T^{\alpha\beta}_{\text{mech}} = {}^{1}\mu\, \xi^{\alpha'} \xi^{\beta'}\, {}^{1}\delta(x^{s} - \xi^{s}) + {}^{2}\mu\, \eta^{\alpha'} \eta^{\beta'}\, {}^{2}\delta(x^{s} - \xi^{s}) \quad .$$

Here $\xi^{\alpha'} = \frac{d\xi^{\alpha}}{ds}$ etc, $\overline{ds} = (g_{\alpha\beta}\, d\xi^{\alpha}\, d\xi^{\beta})^{1/2}$, the prime denotes that ds is taken on the world line and singularities are separated, the left indices give the number of the body. From the expression of definition

$$(9)\quad T^{\alpha\beta}_{\text{el.m.}} = \frac{\sqrt{-g}}{4\pi}\left(F^{\alpha}{}_{\gamma} F^{\beta\gamma} - \frac{1}{4}\, g^{\alpha\beta} F^{\gamma\delta} F_{\gamma\delta}\right) \quad ,$$

for the energy-impulse-tensor of the electromagnetic field the author obtains

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Motion Equations of Charged Bodies in the General Theory of Relativity

(13) $$T^{\alpha 3}_{\text{el.m.};\beta} = - F^{\alpha}{}_{\beta} j^{\beta} \sqrt{-g} \ .$$

The expression

(8) $$\frac{dt}{ds} \int \left(T^{\alpha\beta}_{\text{mech}} + T^{\alpha\beta}_{\text{el.m.}} \right)_{;\beta} d^3x = 0$$

is called the motion equation of the first body, where it is integrated with respect to the coordinates of the first body over the whole three-dimensional space.
With the assumption

(18) $$\rho = e\delta(x^s - \xi^s)$$

and after the proof that μ is constant, the author obtains, after some transformations, the motion equation

(26) $$\overset{1}{\mu} \xi''^{\alpha} + \overset{1}{\mu} \left\{ \begin{matrix} \alpha \\ \mu\nu \end{matrix} \right\} \xi'^{\mu} \xi'^{\nu} - \overset{1}{e} \overline{F^{\alpha}{}_{\beta}} \xi'^{\beta} = 0$$

the spatial part of which is

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S/022/60/013/005/005/008
C111/C222

Motion Equations of Charged Bodies in the General Theory of Relativity

(29) $${}^{1}m\ddot{\xi}^{k} + {}^{1}e\overline{F^{0}}_{\beta}\dot{\xi}^{\beta}\dot{\xi}^{k} - {}^{1}m\left\{\overline{\begin{matrix}0\\ \mu\nu\end{matrix}}\right\}\dot{\xi}^{\mu}\dot{\xi}^{\nu}\dot{\xi}^{k} + {}^{1}m\left\{\overline{\begin{matrix}k\\ \mu\nu\end{matrix}}\right\}\dot{\xi}^{\mu}\dot{\xi}^{\nu} - {}^{1}e\overline{F^{\alpha}}_{\beta}\dot{\xi}^{\beta} = 0$$

From (29) the motion equation in Newton's approximation is obtained by an approximation (series development in terms of the parameter $\lambda = 1/c$, restriction to first terms).
There are 7 references: 2 Soviet, 1 German, 1 Polish, 1 English and 2 American.
[Abstracter's note: (Ref. 7) concerns W. Tulkzyjew, Bull.Acad.Polon., 1957, III, 5, 279]

ASSOCIATION: Institut matematiki i mekhaniki AN Armyanskoy SSR (Institute of Mathematics and Mechanics of the Academy of Sciences Armyanskaya SSR)

SUBMITTED: March 23, 1960

Card 4/4

AYVAZYAN, Yu.M.

Mass differences in isotopic multiplets. Izv. AN Arm. SSR. Ser. fiz.-mat. nauk 17 no.2:115-117 '64. (MIRA 17:9)

1. TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR.

ACCESSION NR: AP4038581 S/0022/64/017/002/0115/0117

AUTHOR: Ayvazyan, Yu. M.

TITLE: On mass differences in isotopic multiplets

SOURCE: AN ArmSSR. Izv. Seriya fiziko-matematicheskikh nauk, v. 17, no. 2, 1964, 115-117

TOPIC TAGS: isotopic multiplet particle, irreducible representation, interaction representation, degeneracy, infinitesimal operator, meson octet

ABSTRACT: Expressions were derived for mass differences in isotopic multiplet particles transformed by irreducible representations $D^8(1.1)$ and $D^{10}(3.0)$ of SU(3) groups. The interaction representation $(T_1^1+\alpha)^2+\beta$, is used in order to remove degeneracies in multiplet particle masses. T_1^1 is given in terms of the infinitesimal operator A_α^β of SU(3) group $T_1^1 = aY + bA_1^1 + c(A\cdot A)_1^1$. For $D^8(1.1)$ representation the following were selected as bases $(p, n, \Xi^0, \Xi^-, \Sigma^+, \Sigma^0, \Sigma^-, \Lambda)$ or $(K^+, K^0, -\bar{K}^0, \bar{K}^+, \pi^+, \pi^0, \pi^-, \eta)$. The latter leads to an expression for meson octets $M_{K^0} - M_{K^+} + M_{\bar{K}^+} - M_{\bar{K}^0} = M_{\pi^-} - M_{\pi^+}$. Similarily, it is shown that the

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ACCESSION NR: AP4038501

particles (Z, Ξ^*, Y_1^*, N^*) can be transformed by the ten-dimensional operator $D^{10}(3.0)$, with the following expressions for mass differences

$$M_{\Xi^{*0}} - M_{\Xi^{*-}} = M_{Y_1^{*0}} - M_{Y_1^{*-}} = M_{N^{*0}} - M_{N^{*-}},$$

$$M_{Y_1^{*+}} - M_{Y_1^{*0}} = M_{N^{*+}} - M_{N^{*0}}.$$

These results are valid for any interaction dependence on T_1^1. Orig. art. has: 13 formulas.

ASSOCIATION: TsNI Fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR (TsNI Engineering Physics Laboratory, AN Armenian SSR)

SUBMITTED: 04Oct63 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: GP NO REF SOV: 000 OTHER: 005

Card 2/2

ACCESSION NR: AP4042538

the Hertz vector has a single component in the x direction. An expression is obtained for the field H_z between the plates and it is shown that the TEM wave does not contain components with a frequency such that the time of passage of the filament between the plates is equal to or is an integer multiple of the period of the wave. An analogous result was obtained by B. M. Bolotovskiy and G. V. Voskresenskiy (ZhTF v. 43, no. 4, 1964, 704) for the excitation of an equidistant set of parallel perfectly conducting planes by a charged filament. It is also shown that the field outside the waveguide can be obtained by integration by the saddle-point method, and that as the spacing between the plates approaches zero the results become identical with those obtained by D. M. Sedrakyan (Izvestiya AN ArmSSR, seriya fiz.-mat. nauk, v. 16, 3, 1963, 115) for the diffraction of the field of a charged filament by one perfectly conducting plane. Orig. art. has: 35 formulas.

2/3

AYVAZYAN, Yu.M.

Radiation during the flight of a linear source over two ideally conducting parallel half-planes. Izv.AN Arm. SSR. Ser.fiz.-mat. nauk 17 no.3:81-86 '64. (MIRA 17:9)

1. TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR.

AYVAZYAN, Yu.M.; MERGELYAN, O.S.

Use of optical methods in determining the parameters of optically active media. Izv. AN Arm. SSR. Ser. fiz.-nauk 17 no.4:125-126 '64.
(MIRA 17:11)

1. Sentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR.

AYVAZYAN, Yu.M.; SEDRAKYAN, D.M.

Excitation of electromagnetic waves by a charged particle in a plane semi-infinite wave guide. Dokl. AN Arm. SSR 39 no. 2: 81-85 '64. (MIRA 17:9)

1. TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN ArmSSR. Predstavleno chlenom-korrespondentom AN ArmSSR G.M.Garibyanom.

AYVAZYAN, Yu.M.

Radiation from the open end of a system of semi-infinite ideally conducting half-planes. Dokl. AN Arm. SSR 39 no.5:279-282 '64 (MIPA 18:2)

1. TSentral'naya nauchno-issledovatel'skaya fiziko-tekhnicheskaya laboratoriya AN ArmSSR. Submitted June 2, 1964.

L 3417-65 EWT(1)

ACCESSION NR: AP5005166 S/0022/64/017/006/0123/0127

AUTHOR: Ayvazyan, Y. M.; Sedrakyan, I. M.

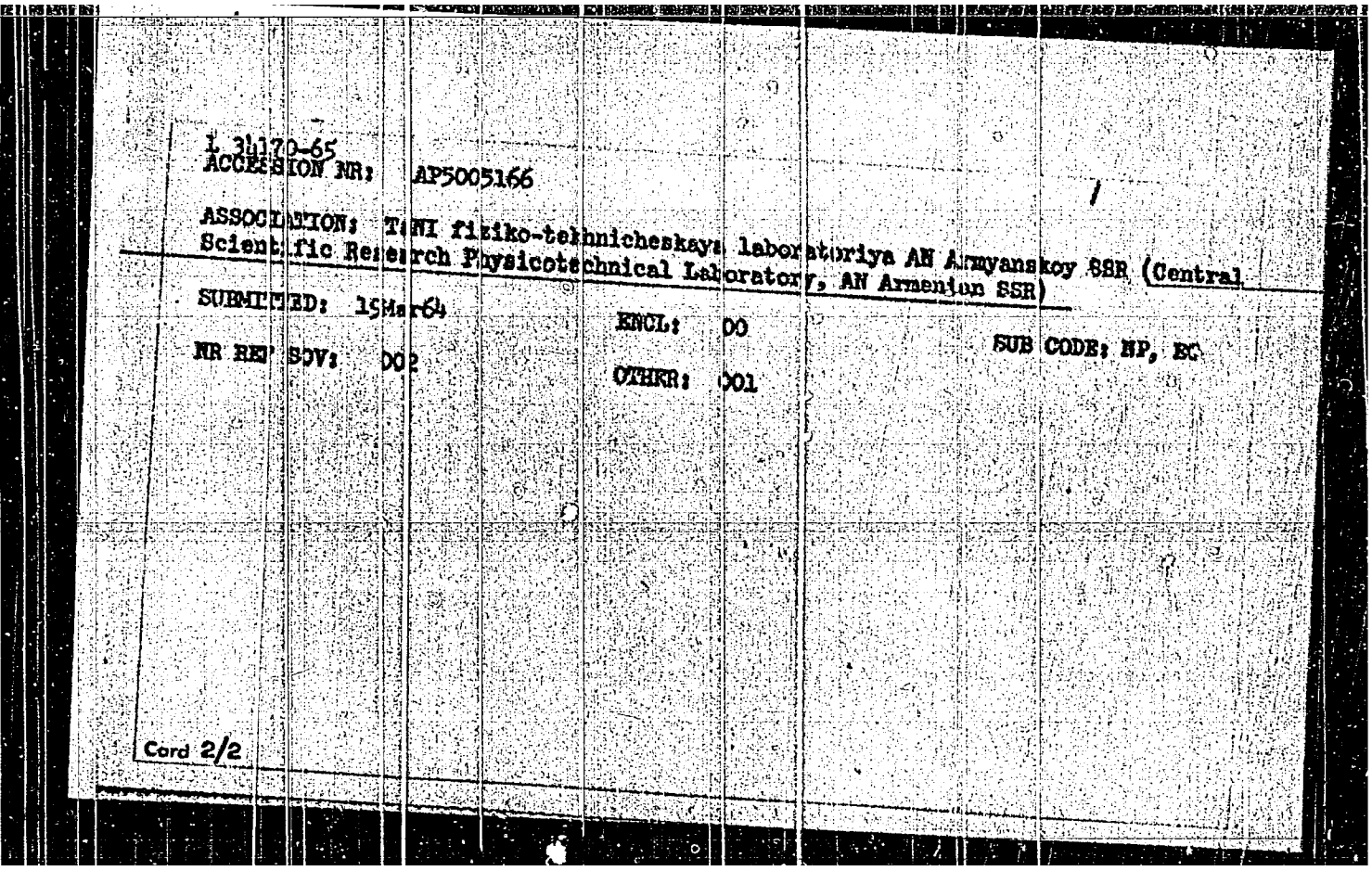
TITLE: On the diffraction of the field of a nonuniformly moving charged particle by a semi-infinite round waveguide

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 17, no. 6, 1964, 123-127

TOPIC TAGS: diffraction, charged particle, round waveguide, Hertz vector

ABSTRACT: The article deals with the radiation field produced by a charged particle moving nonuniformly along the axis of a semi-infinite round waveguide. The electric field intensity is calculated in terms of the Hertz vector, equations for which are derived and integrated by the saddle point method. A series is derived for the total radiated power, in which the principal term is the radiation due to uniformly moving particles, and the deviations from the results of uniform motion attenuate exponentially with increasing wave number. Orig. art. has: 11 formulas.

Card 1/2



L 34170-65
ACCESSION NR: AP5005166

ASSOCIATION: TsNI fiziko-tekhnicheskaya laboratoriya AN Armyanskoy SSR (Central Scientific Research Physicotechnical Laboratory, AN Armenian SSR)

SUBMITTED: 15Mar64 ENCL: 00 SUB CODE: NP, EC

NR REF SOV: 002 OTHER: 001

Card 2/2

L 58803-65 EWT(l)/EWT(m)/EWP(w)/EWA(d) EM

ACCESSION NR: AP5012166 UR/0032/65/018/001/0117/0125

AUTHORS: Arvazyan, Yu. M.; Sedrakyan, D. M.

TITLE: Excitation of a system of semi-infinite plates by linear sources

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 1, 1965, 117-125

TOPIC TAGS: waveguide system, transition radiation, electromagnetic wave diffraction, wave zone radiation

ABSTRACT: The article deals with the excitation of a system of semi-infinite plane waveguides, occurring when a linear source, such as a charged or current-carrying filament, moves out of one of the waveguides. The radiation produced in the wave zone by such a source is also considered, as well as the limiting case when the distance between the waveguide plates becomes equal to zero. In the latter case the result coincides with the intensity of transition radiation of a current-carrying filament emerging from a solid homogeneous

Card 1/2

L 58803-65
ACCESSION NR: AP5012166 2

metallic medium into vacuum. Original article has: 34 formulas

ASSOCIATION: TNIFTL AN Armyanskoy SSR; FIAN SSSR im. P. N. Lebedeva

SUBMITTED: 29May64 ENCL: 00 SUB CODE: EC, EM

NR REF SOV: 002 OTHER: 001

Card 2/2 MAP

L 23821-65 EWT(l)/EWG(m)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EEC(b)-2/EWA(m)-2
Pz-6/Po-4/Pab-10/Pl-4 IJP(c) AT

ACCESSION NR: AP5002848 S/0057/64/034/012/2193/2194

AUTHOR: Ayvazyan, K.M.

TITLE: Excitation of a plane semi-infinite waveguide by a steadily moving charged filament

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.12, 1964, 2193-2194

TOPIC TAGS: excitation, waveguide

ABSTRACT: The problem of excitation of two parallel, semi-infinite, ideally conducting semi-planes by a steadily moving charged filament is solved by reducing it to solution of a set of two functional equations or a system of conjugate integral equation, which can be solved exactly by the Wiener-Hopf method. The situation is pictured in the figure (Enclosure): the filament with linear charge density ρ moves at a constant velocity v past the two parallel semi-planes (y = ±b, x < 0) without intersecting them and at a distance a from the origin. The fields E and H are expressed in terms of the Hertz vector Π in the usual way and then Π is sought in the form

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L 23821-65
ACCESSION NR: AP5000845

$$\Pi(x, y, t) = \frac{1}{2\pi}\int \Phi(q, y, \omega)\exp(-iqx + i\omega t)\,dq\,d\omega.$$

The further operations are based on assumptions of continuity, vanishing of Π at infinity and consideration of the boundary conditions. These operations finally lead to expressions for the field H_z in the waveguide and outside the waveguide. An approximate expression is adduced for H_z for large $r = x/\cos\theta$. Orig.art.has: 8 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 10Jan64 ENCL: 01 SUB CODE: EM

NR REF SOV: 003 OTHER: 001

2/3

L 10556-66 EWT(d)/EWT(l)/T/EWA(m)-2 IJP(c)

ACC NR: AP5028292 UR/0022/65/018/005/0083/0089

AUTHOR: Ayvazyan, Yu. M.; Sedrakyan, D. M.

ORG: TsNI Physico-technical Laboratory, Armenian SSR (TsNI Fizikc-tekhicheskaya laboratoriya, AN Armyanskoy SSR)

TITLE: Emission of a point charged particle passing along the axis of a semi-infinite waveguide

SOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 5, 1965, 83-89

TOPIC TAGS: charged particle, waveguide, electric field, magnetic field, particle motion

ABSTRACT: The plane waveguide consists of two semi-infinite flat plates $x < 0$, $y = \pm b$. The z axis is directed normal to the plane of the sketch (See Fig. 1). It is assumed that a point charged particle flies out of the waveguide, moving along the x axis with a velocity $v_x = v$. It is necessary to solve the Maxwell equations with boundary conditions imposed by the presence of two semi-infinite ideally conducting half-planes. Consequently, to the solution of the nonhomogeneous equation must be added solutions of the d'Alembert equation which satisfy these boundary conditions. As a solution of the nonhomogeneous wave equation we choose the field of the charged particle passing along the axis of the plane semi-infinite waveguide

Card 1/4

L 10556-66

ACC NR: AP5021292

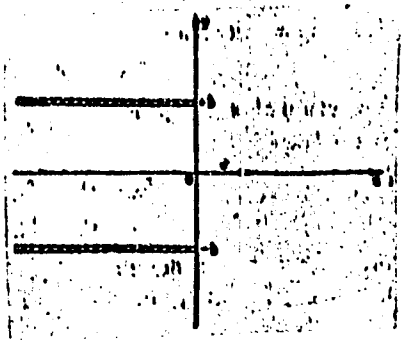


Fig. 1.

$$E^{0}_{x,z}(x, y, z) = \int_{-\infty}^{\infty} E^{0}_{x,z}(\omega, q, y)\, e^{i\left(\frac{\omega}{v}x - k_2 z - k\omega t\right)}\, dq d\omega$$

$$E^{0}_{x,z}(\omega, q, y) = R_{x,z}\left[e^{-l|y|} - \frac{\operatorname{ch} ly}{\operatorname{ch} lb}\, e^{-lb}\right] \qquad (1)$$

where

$$R_1 = -\frac{ie\omega\gamma^2}{2\pi lc^2}, \quad R_2 = \frac{ieq}{2\pi lv}, \quad l = \sqrt{k^2\gamma^2 + q^2}, \quad \gamma = \frac{1}{\sqrt{1-\beta^2}}, \quad k = \frac{\omega}{c},$$

Card 2/4

Here $E^0_{x,z}$ are the tangential components of the electrical field. The remaining components of the electromagnetic field can be expressed through them. The solution of the d'Alembert equation for these same components of the field is sought in the form

$$E_{x,z} = \int_{-\infty}^{\infty} \Phi_{x,z}(\alpha, q, \omega, y)\, e^{-i\alpha x - iqz + i\omega t}\, d\alpha dq d\omega. \qquad (2)$$

After extensive mathematical manipulation, the authors arrive at the following final expression for the angular distribution of the emission intensity at a frequency ω

$$I_\omega(\psi, \varphi) = \frac{e^2\beta^2}{2\pi^2 c} \frac{\cos^2(kb\sin\varphi\sin\psi)}{\mathrm{ch}^2 lb} \left| \frac{K^-\left(-\frac{\omega}{v}\right)}{K^-(-k\cos\varphi\sin\psi)} \right| \times$$

$$\times \frac{\cos^2\psi\cos^2\frac{\varphi}{2}(1-\beta\sin\psi) + \alpha_0^2\sin^2\frac{\varphi}{2}(1+\beta\sin\psi)}{\alpha_0^2(1-\beta\sin\psi\cos\varphi)^2} d\psi d\varphi, \qquad (19)$$

where

$$\alpha_0^2 = 1-\beta^2\sin^2\psi, \quad l = -\frac{k}{\beta}\alpha_0.$$

Card 3/4

L 10556-66

ACC NR: AP5028292

3

"In conclusion, the authors thank B. M. Bolotovskiĭ for useful advice." Orig. art. has: 19 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 09Jan65/ ORIG REF: 005/ OTH REF: 001

Card 4/4 pm

AYVAZYAN, Yu.M.

Diffraction of the field of an arbitrarily moving particle on a half-space. Dokl. AN Arm.SSR 40 no.3:155-158 '65.
(MIRA 18:12)

1. Submitted October 28, 1964.

AYVAZYAN, Yu.M.; SEDRAKYAN, D.M.

Radiation from a point charged particle flying along the axis of a semi-infinite plane wave guide. Izv. AN Arm. SSR. Ser. fiz.-mat.nauk 18 no.5:83-89 '65.

(MIRA 18:12)

1. TSentral'naya nauchno-issledovatel'skaya Fiziko-tekhnicheskaya laboratoriya AN ArmSSR. Submitted Jan. 9, 1965.

L 40923-65 EEC-4/EWA(h)/EWT(1)/EEC(t) Pg-4/Pi-4/Pj-4/Pl-4/Pm-4/Pac-4/Peb CG/
IHB

ACCESSION NR: AP5007290 S/0057/65/035/003/0459/0464

AUTHOR: Ayvazyan, Yu.M.; Sedrakyan, D.M.

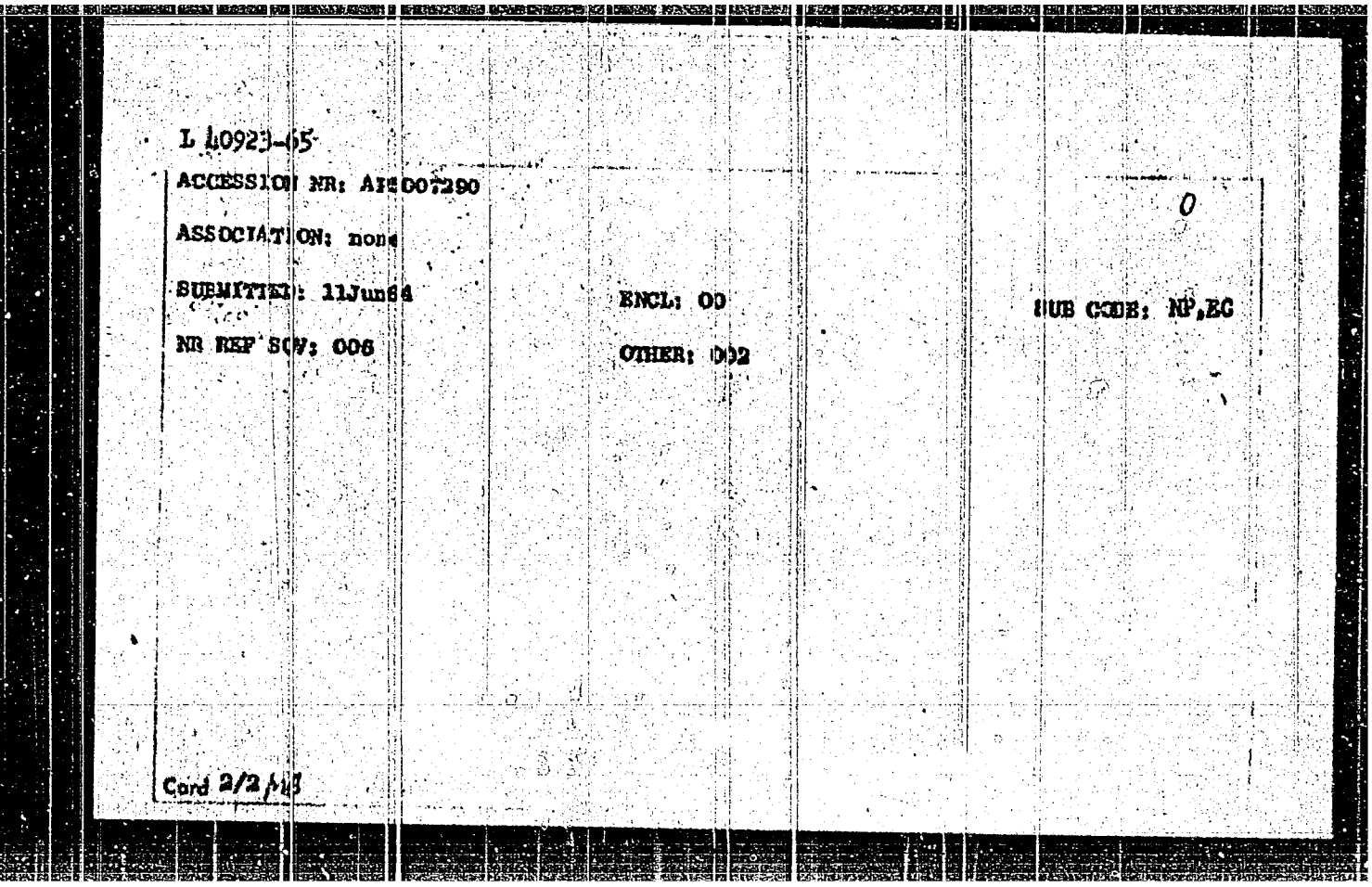
TITLE: Radiation from the open end of a plane semi-infinite waveguide

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.3, 1965, 459-464

TOPIC TAGS: charged particle, electromagnetic radiation, waveguide

ABSTRACT: By a plane semi-infinite waveguide the authors understand a system consisting of two opposed parallel conducting half-planes. The radiation of a point charge moving uniformly in a plane perpendicular to the walls of a semi-infinite plane waveguide is calculated by a variant of the Wiener-Hopf method employing the technique of D.S.Jones (Quart.J.Math.(2) 3, 189,195). The trajectory of the particle is assumed not to intersect the walls of the waveguide. Formulas are derived for the radiation field and the power radiated both inside and outside the waveguide. When the separation between the walls of the waveguide approaches zero, the formula derived for the radiated energy approaches that obtained by A.P.Kazantsev and G.I.Surdutovich (DAN, 143,74,1962) for the case of a charged particle passing a conducting half-plane. Orig.art.has: 26 formulas and 1 figure.

Card 1/2



L 40923-65

ACCESSION NR: AP5007290

0

ASSOCIATION: none

SUBMITTED: 11Jun64 ENCL: 00 SUB CODE: NP,EC

NR REF SOV: 006 OTHER: 002

Card 2/2 fb

AYVENKO, D.D.; PEDAN, A.A.; KOGAN, M.G.

Operations of the ammonia-lime section employing an external saturator and decnater. Koks i khim. no.2:30-32 '61. (MIRA 14:2)

1. Begleyskiy koksokhimicheskiy zavod.
(Dneprodzerzhinsk—Coke industry—By-products) (Ammonia)

AYVYAZAN, A. I., Doc Med Sci -- "Effect of gastric resections ~~of the stomach~~ when on the exocrine function of the pancreas and when on the blood." Len, 1961. (Len Pediatric Med Inst) (KL, 8-61, 257)

AYVAZYAN, A.V.

Primary cancer of the female urethra. Vop. onk. 6 no.4:87-89 Ap '60. (MIRA 14:3)

(URETHRA—CANCER)

MUSTEL', E.R.; AYVAZYAN, S.A.

Quantitative analysis of statistical regularities connecting flocculi and M-disturbances. Astron.zhur. 38 no.2:227-241 Mr-Ap '61. (MIRA 14:4)

1. Astronomicheskiy sovet AN SSSR i Matematicheskiy institut AN SSSR im. V. A. Steklova.
(Sun--Flocculi)
(Magnetic storms)

AYYERMANN, K., zhurnalist

From a reporter's point of view. Grazhd. av. 21 no.6:30 Je '64.
(MIRA 17:8)

AYZANOV, M.M.

Circuits - Circuit Elements

2768

621.396.645

Certain Additional Parameters of Valve [amplifier] Circuits.—M. M. Ayzanov. (*Radiotekhnika, Moscow,* May/June 1949, Vol. 4, No. 3, pp. 71-75. In Russian.) A general method is proposed for studying multi-stage amplifiers including feedback circuits. The amplifier is replaced by an equivalent quadripole system (Fig. 1) and various parameters of this system are derived.

1949

29823
S/020/61/140/006/022/030
B107/B101

11.8300

AUTHORS: Ayzatullin, T. A., Voronkov, V. G., and Zubov, V. P.

TITLE: Dependence of the limiting pressure of the explosiveness of gaseous hydrazoic acid on the spark pulse intensity

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 140, no. 6, 1961, 1356 - 1357

TEXT: It is assumed that the limiting pressure of the explosiveness drops with increasing spark energy and then reaches a constant value. This is explained by assuming the occurrence of two different ignition mechanisms (L. N. Khitrin, Fizika goreniya i vzryva (Physics of combustion and explosion explosion), M., 1957). It is shown in the present paper that these assumptions do not hold for gaseous hydrazoic acid. In this case the limiting pressure was found to decrease continuously with increasing spark pulse intensity. The experiments were carried out in an 11-cm diameter spherical glass vessel. Fused-in electrodes gave a 3 mm spark gap in the center of the vessel. The electrodes were connected to an auto-transformer secondary, while capacitors of defined capacitance were discharged over the primary. Hydrazoic acid was prepared by the reaction of pure stearic acid

Card 1/3

Dependence of the limiting pressure...

with sodium azide. The tests were carried out at room temperature. Result: The logarithm of the limiting pressure P of the explosiveness is a linear function of $1/C^{0.2}$ (C = capacitance). Fig. 1 gives P as a function of C. Another test series was carried out with a mixture of 25% hydrazoic acid and 75% calcium-chloride dried air. The results may be expressed by $\log P = A/C^n + B$, where A, B, and n are constants dependent on the respective mixture. The expression $\log (p/T^{1+2/n} = A/T_o + B$ derived by N. N. Semenov (N. N. Semenov, Tsepnyye reaktsii (Chain reactions), M. 1934) for thermal self-ignition evidently represents a more general rule applying not only to oxidation reactions and thermal self-ignition, but also to decomposition reactions and spark ignition of widely varying explosive systems. There are 3 figures and 8 references: 6 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: M. V. Blance, P. G. Guest, G. Elbe, B. Lewis, J. Chem. Phys., 15 11, 798 (1947).

Card 2/3

AYZATULLOV, M.I., kandidat veterinarnykh nauk.

Prevention and treatment of toxic dyspepsia in calves.
Veterinariia 33 no.12:41-46 D '56. (MLRA 9:12)

1. Kamanskiy Nauchno-issledovatel'skiy veterinarnyy institut.
(Calves--Diseases) (Dyspepsia)

USSR/Diseases of Farm Animals. Diseases Caused by Bacteria and Fungi. R

Abs Jour: Ref Zhur-Biol., No 5 1958, 21630.

Author : Ayzatullov, M. I.
Inst : Kazan' Scientific Research Veterinary Institute
Title : Use of Syntomycin and Disulfan for Treating Anaerobic Dysentery in Lambs

Orig Pub: Byul. nauchno-tekhn. inform. Kazansk. n.-i vet. in-ta, 1957, No 1, 14-15.

Abstract: Disulfan was administered to 32 animals in a 0.2 gr dose 2-3 times daily; 26 of the lambs recovered. Syntomycin was injected into 18 animals in a 0.1 dose 3-4 times daily; 17 animals recovered.

Card : 1/1

AYZBERG, R.Ye.; KAMYSHEV, N.N.

Salt dome uplifts in the Kara Kum and the age of their sediments. Geol.nefti i gaza 4 no.6:26-30 Je '60.
(MIRA 13:7)

1. Yugo-vostochnaya Karakumskaya geologicheskaya ekspeditsiya Upravleniya geologii i okhrany nedr pri Sovete Ministrov Turkmenskoy SSR.
(Kara Kum--Geology)

AYZBERG, R. Ye.

Correlation of Upper Jurassic and Lower Cretaceous sediments of the Kelif Usboy and southwestern spurs of the Gissar Range. Trudy Inst. geol. AN Turk. SSR 3:144-147 '60.
(MIRA 16:1)

(Kara Kum Canal region--Geology, Stratigraphic)
(Gissar Range--Geology, Stratigraphic)

AYZBERG, R.Ye.

Cretaceous sediments in the Amu Darya Valley portion of southeastern Turkmenia. Trudy VNIGNI no.35:144-161 '61. (MIRA 16:7)
(Amu Darya Valley--Geology, Stratigraphic)

AYZBERG, R.Ye.; GERMANYUK, M.M.; KAMYSHEV, N.N.

Trends in geological and geophysical prospecting for oil and gas in the Gaurdak-Kerki area. Geol. nefti i gaza vol. 4, no. 4:13-15 Ap '61. (MIRA 14:5)

1. Yugo-vostochnaya Karakumskaya geologicheskaya ekspeditsiya Upravleniya geologii i okhrany nedr Turkmenskoy SSR.
(Turkmenistan—Petroleum geology)
(Turkmenistan—Gas, Natural—Geology)

AYZBERG, R.Ye.; AMURSKIY, G.I.

Contemporary structural plan of the Kopetek fault zone. Geol. nefti i gaza 6 no.3:39-41 Mr '62. (MIRA 15:4)

1. Upravleniye geologii i okhrany nedr pri Sovete Ministrov Turkmenskoy SSR.
(Turkmenistan—Faults (Geology))

AYZBERG, R.Ye.; KOKORINA, L.K.; KOTS, V.G.

Buried extension of the meganticline in the southwestern Gissar Range. Sov. geol. 7 no.11:114-117 N '64. (MIRA 18:2)

1. Yugo-vostochnaya Karakumskaya geologicheskaya ekspeditsiya.

AYZEN, A.M.; KHAZANOVICH, A.I.

V.D. Soldatov and K.I. Oleinichuk's book "Food industry mechanic's handbook." Reviewed by A.M. Aizen, A.I. Khazanovich. Khleb. i kond. prom. 1 no.12:43-44 D '57. (MIRA 11:1)
(Food industry--Equipment and supplies)
(Soldatov, V.D.) (Oleinichuk, K.I.)

SOV/144-58-7-10/15

AUTHORS: Naumov, Adol'f L'vovich, Dr.Tech.Sci., Professor, and Ayzen, Arik Markovich, Engineer.

TITLE: No-load Investigation on a Magnetic Amplifier (Issledovaniye kholostogo khoda magnitnogo usilitelya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1958, Nr 7, pp 93-98 (USSR)

ABSTRACT: Calculation of the operating conditions of a magnetic amplifier with the direct current circuit open and with allowance for the weak magnetic saturation of the cores, consists in determining the instantaneous and effective values of current in the saturating choke and also the power consumption. The basis of the investigation of this problem is solution of a non-linear differential equation that expresses the relationship between current and voltage in the choke on the assumption that the graph of the magnetisation line is represented by a cubic parabola. The basis of the investigation is expression (1) which gives the relationship between current and voltage in a circuit of this kind. Here the magnetic flux linked with the coil is variable and is conveniently given by expression (2). The limits of

Card 1/3

No-load Investigation on a Magnetic Amplifier

application of these approximations are then considered. Expression (4) is then derived as the non-linear differential equation required to determine the current in the system. It is then shown how to solve this equation by the method of successive approximations, and ultimately expression (10) is derived for the current and (11) for the power consumption. The limitations of these formulae are briefly mentioned. Formula (10) was used to work out the results of tests to determine the relationship between current and voltage in two coils, one with a core of transformer steel and the other with a core of permalloy. The results of the tests are given in Tables 1 and 2; the experimental values of voltage and current are given in columns 1 and 2 of these tables. The theoretical and experimental values of current for given values of voltage are plotted in the graphs of Figs 1 and 2 and the value of the current calculated from theory is given in column 5 of the table. It is concluded that the method of making calculations of no-load conditions of a magnetic amplifier based on representing the magnetisation lines by a cubic parabola is applicable

TRUSHLYAKOV, V.P.; BEREZHINSKIY, A.I.; SPIVAK, M.Ya.; FINOGEYEV, I.A.; LIPETS, A.U.; AYZEN, B.G.; KOSTOVETSKIY, D.L.; BOLDZHI, K.I.; YAMPOL'SKIY, S.L.; FEDOTOV, D.K.; KIRILLOV, I.I.; OSHEROV, S.Ya.; PYSIN, V.A.; OGLOBLIN, G.A.; KANAYEV, A.A.; BULEGA, S.S.; BORUKHMAN, V.A.; IOEL'SON, V.I.

Inventions. Energ. i elektrotekh. prom. no.3:48-49 Jl-S '64.
(MIRA 17:11)

GELEV, Georgiy Naumovich; AYZEN, Arkadiy Markovich; KARPOVTSEV, Artem Nikolayevich; VASILENKO, A.A., doktor tekhn.nauk, retsenzent; NIKIFOROVA, R.A., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Handbook for designing chain transmissions] Spravochnik po raschetu tsepnykh peredach. Moskva, Mashgiz, 1962. 171 p. (MIRA 15:6)

(Chains)

LAZAREV, Nikolay Valentinovich; AYZEN, A.M., inzh., retsenzent; GELEV, G.N., retsenzent; NIKIFOROVA, R.A., inzh., red.; GORNOSTAYPOL'SKAYA, M.S., tekhn. red.

[Tables of dimensions for designing the profile of sprocket-wheel teeth; handbook] Tablitsy razmerov dlia postroeniia profilia zub'ev zvezdochek; spravochnik. Moskva, Mashgiz, 1962. 117 p. (MIRA 15:7)

(Chains—Tables, calculations, etc.)

ROKHLIN, Il'ya Aleksandrovich, kand.tekhn.nauk; LUKASHENKO, Ivan Andreyevich, kand.tekhn.nauk; AYZEN, Arkadiy Markovich. Prinimali uchastiye: DRANISHNIKOV, P.I., kand.tekhn.nauk; MINTSKOVSKIY, M.Sh., kand. tekhn.nauk. KOMAR, A.N. [deceased], red.; BERGER, K., red.; GARKAVENKO, L., tekhn. red.

[Handbook for construction engineers] Spravochnik konstruktora-stroitelia. Pod red. A.N.Komara. Kiev, Gostroiizdat USSR, 1963. 813 p. (MIRA 16:6)

1. Deystvitel'nyy chlen Akademiy stroitel'stva i arkhitektury SSSR i UkrSSR (for Komar).
(Building)

AYZEN, B.

Workers' dynasty. Prof.-tekh. obr. 22 no.9:7 S '65. (MIRA 18:9)

AYZEN, B.

"Give back to school its good name." Prof.-tekh. obr. 22 no.3:21 Mr '65. (MIRA 18:7)

AYZEN, G.S.; PCHELKINA, V.K.; SAL'TSEVA, M.T.

Dynamics of the bioelectric processes within the heart under the influence of acupuncture in the area of the Chinese points. Sbor. trud. GMI no.9:104-107 '62. (MIRA 17:2)

1. Kafedra gospital'noy terapii lechebnogo fakul'teta Gor'kovskogo meditsinskogo instituta (zav. kafedroy prof. V.G. Vogralik).

KARDAKOV, Yu..., kand. med. nauk, assistent; AYZEN, G.S., kand. med. nauk, assistent; SAL'TSEVA, M.T., kand. med. nauk, dotsent

Thyrotoxic heart. Sbor. trud. GMI no.15:93-120 '63.
(MIRA 17:5)

1. Kafedra gospital'noy terapii lechebnogo fakul'teta Gor'kovskogo meditsinskogo instituta imeni Kirova (for Sal'tseva).

KAMYSHEVA, Ye.P., kand. med. nauk, assistent; AYZEN, G.S., kand. med. nauk, assistent; PAROKHONYAK, Z.M., ordinator

Heart in diabetes mellitus. Sbor. trud. GMI no.15:121-143 '63.
(MIRA 17:5)

1. Kafedra gospital'noy terapii lechebnogo fakul'teta Gor'kovskogo meditsinskogo instituta imeni Kirova (for Kamysheva, Ayzen).
2. Gor'kovskaya oblastnaya klinicheskaya bol'nitsa imeni Semashko (for Parokhonyak).

LUR'YE, R.G., kand. med. nauk, assistent; AYZEN, G.A., kand. med. nauk, assistent; PARAKHONYAK, Z.I., ordinator

Heart during a pathological climacteric in women. Sbor. trud. GMI no.15:145-169 '63. (MIRA 17:5)

1. Kafedra gospital'noy terapii Gor'kovskogo meditsinskogo instituta imeni Kirova (for Lur'ye, Ayzen).

AYZEN, I., inzh.

Introduction of automatic pilots on seagoing ships. Mor. flot 21 no.4:23-24 Ap '61. (MIRA 14:4)

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