LITUS, V.P.

Maintenance of continuous rails with reinforced concrete ties.
Put' i put. khoz. no.8:10 Ag '59. (MIRA 13:3)

1.Zamestitel' nachal'nika distantsii puti g.Minsk.
(Railroads--Maintenance and repair)

LITUS, V.P., inzh.

Improved paving of track crossings. Put' i put.khoz. 4 no.2: 19-20 F '60. (MIRA 13:5)

1. Zamestitel' nachal'nika distantsii puti, Minsk.
(Railroads--Crossings)

LITUS, V.P.

Insulating splice joints on tracks with reinforced concrete ties. Put' i put. khoz. 5 no. 1:5 Ja '61. (MIRA 14:5)

1. Zamestitel' nachal'nika distantsii, g. Minsk.
(Railroads—Track)

MENKES, B.; LITVAC, B.

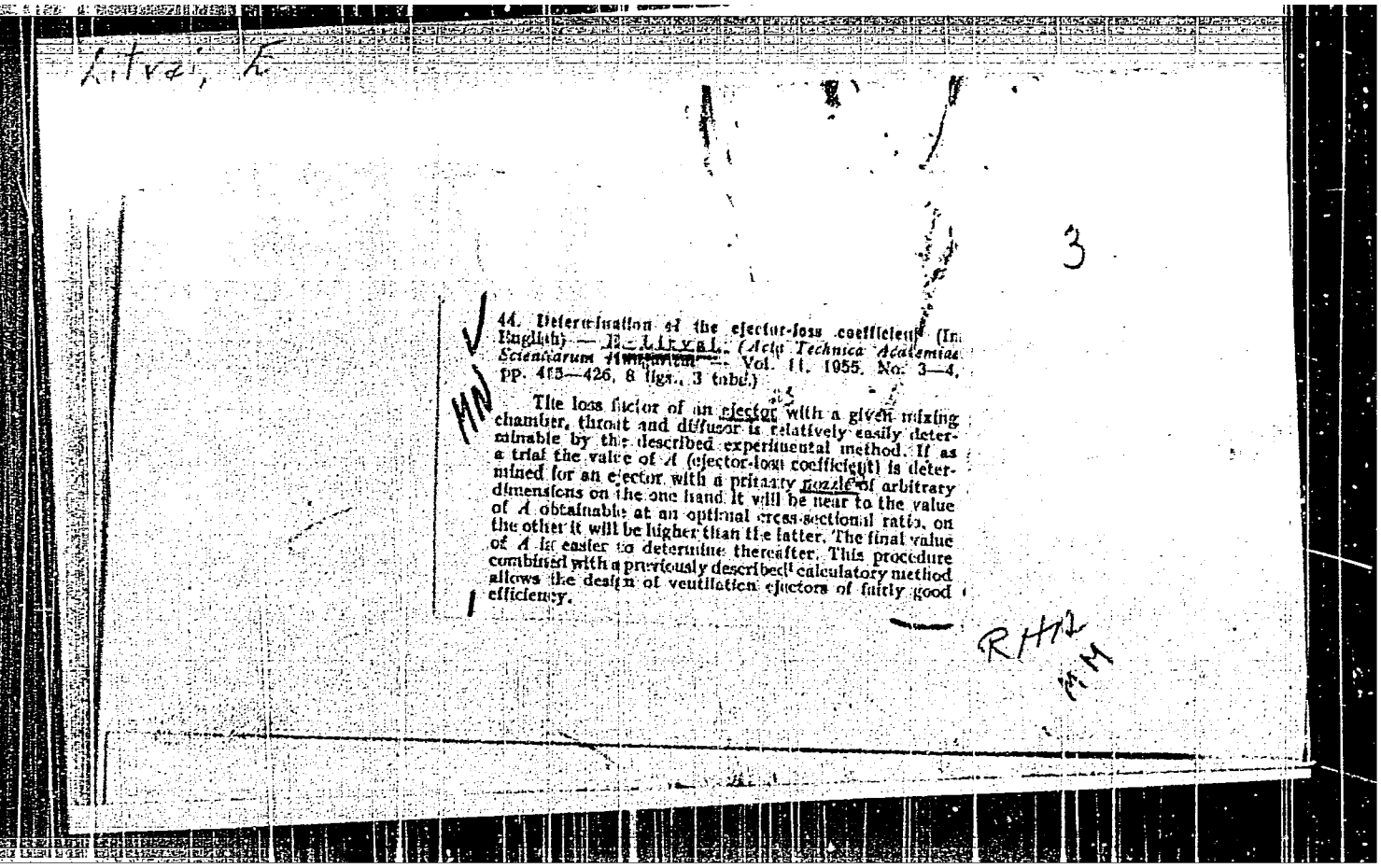
Phase contrast and electron microscope research on the necrobiotic process of the neuroblasts brought about by intraependymary injection of Janus green in the chick embryo. Rev Roum embryol 1 no.2:193-199 '64.

1. Medicial School, Timisoara.

HUNG

36. Calculation of ventilating ejectors (In English) — I. Litvai. (Acta Technica Academiae Scientiarum Hungaricae — Vol. 9, 1954, No. 1—2, pp. 131—134. 10 figs., 1 tab.)

Departing from the laws of energetics the paper analyzes phenomena taking place in ventilating ejectors operated at a pressure difference of not more than 500 kg/mm². The medium in motion is assumed to be incompressible, thus the results are applicable to jet pumps as well. As a final result a rapid and lucid method is presented by which the principal proportions of a ventilating ejector can be determined, meeting conditions of optimum efficiency. The loss factor, figuring as a parameter, can be determined experimentally.



44. Determination of the ejector-loss coefficient. (In English.) — E. Lévai. (*Acta Technica Academiae Scientiarum Hungaricae*. — Vol. 11, 1955, No. 3—4, pp. 415—426, 8 figs., 3 tabs.)

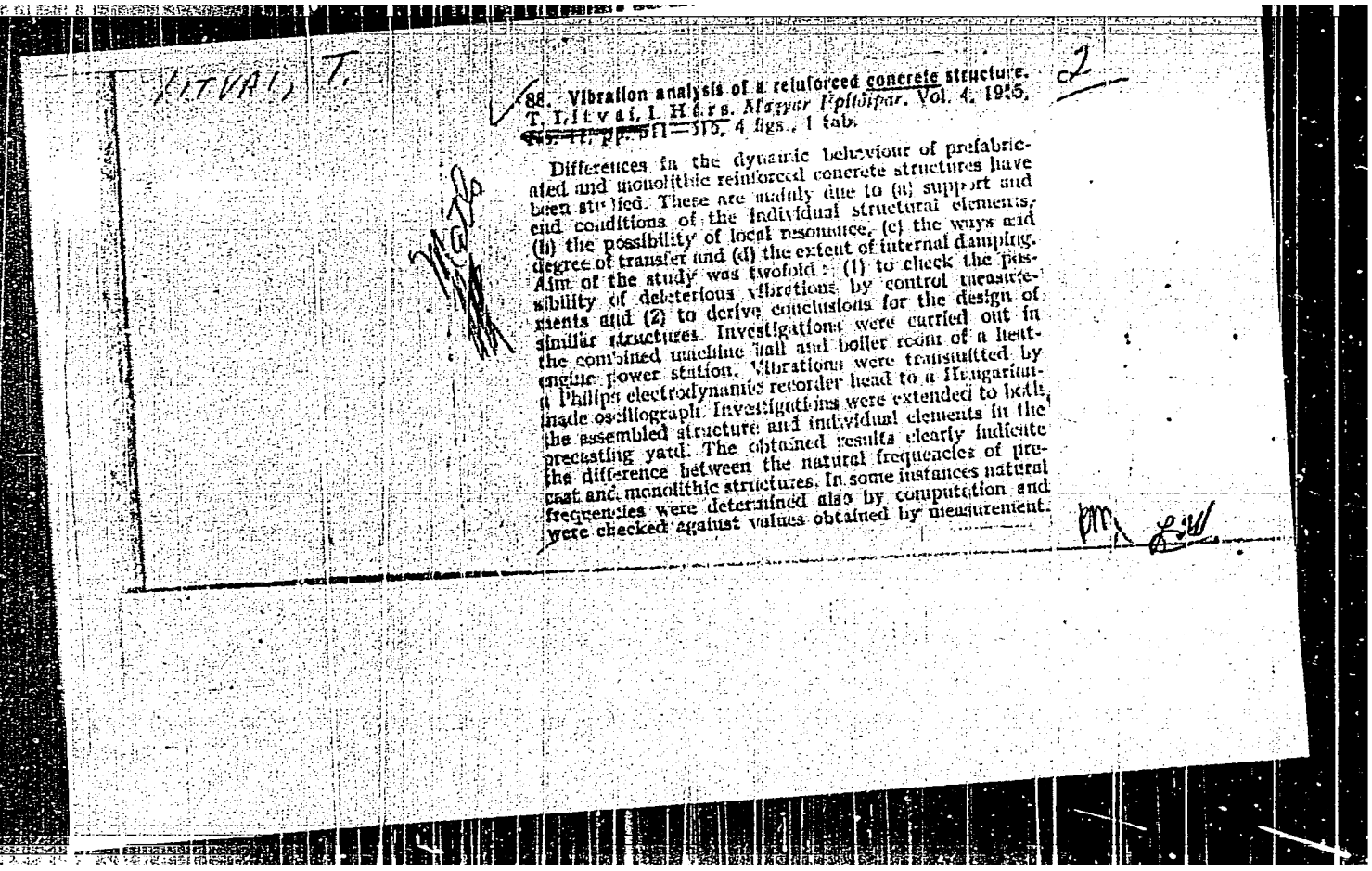
The loss factor of an ejector with a given mixing chamber, throat and diffusor is relatively easily determinable by the described experimental method. If as a trial the value of A (ejector-loss coefficient) is determined for an ejector with a primary nozzle of arbitrary dimensions on the one hand it will be near to the value of A obtainable at an optimal cross-sectional ratio, on the other it will be higher than the latter. The final value of A is easier to determine thereafter. This procedure combined with a previously described calculatory method allows the design of ventilation ejectors of fairly good efficiency.

SAMUEL, Andras, dr.; KERTESZ, Imre, dr.; LITVAI, Mihaly, dr.; PFEIFFER, Margit, dr.

Late follow-up of mothers and infants after cesarean section. Magy. noorv. lap. no.5:301-308 S '61.

1. A Peterffy Sandor utcai Korhaz Rendelointezet (igazgato: Galocsi Gyorgy dr.) Szulonobeteg osztalyanak (foorvos: Palik Frigyes dr.) es gyermek psychoterapias rendelojenek (foorvos: Pfeiffer Margit dr.) kozlemenye.

(CESAREAN SECTION statist)



KITVAI, T.

88. Vibration analysis of a reinforced concrete structure. T. Kitvai, L. Horváth. *Magyar Épitőipar*. Vol. 4, 1955, No. 11, pp. 511–515, 4 figs., 1 tab.

Differences in the dynamic behaviour of prefabricated and monolithic reinforced concrete structures have been studied. These are mainly due to (a) support and end conditions of the individual structural elements, (b) the possibility of local resonance, (c) the ways and degree of transfer and (d) the extent of internal damping. Aim of the study was twofold: (1) to check the possibility of deleterious vibrations by control measurements and (2) to derive conclusions for the design of similar structures. Investigations were carried out in the combined machine hall and boiler room of a heat-engine power station. Vibrations were transmitted by a Philips electrodynamic recorder head to a Hungarian-made oscillograph. Investigations were extended to both the assembled structure and individual elements in the precasting yard. The obtained results clearly indicate the difference between the natural frequencies of precast and monolithic structures. In some instances natural frequencies were determined also by computation and were checked against values obtained by measurement.

EGYEDI, Laszlo; LITVAI, Tamas; KANTOR, Sandor

Situation and tasks of civil engineering and public utilities research. Epites szemle 6 no.2:43-47 '62.

1. Epitestufomanyi Intezet tagozatvezetoje (for Egyedi and Litvai). 2. Epitestudomanyi Intezet tudomanyos fomunkatarsa (for Kantor).

LITVAI, Tamas

Remark about Gyorgy Kunszt's article entitled "On the development of the work of the architectural research organization." Epites szemle 7 no.7:223-224 '63.

LITVAI, Tamas

Some questions of planning technical development. Epites szemle 7 no. 8:225-230 '64.

1. Section Head, Scientific Institute of Construction, Budapest.

LITVAI, Tamas

Brick panel construction construction systems. Magy ep ipar 13 no.11:678-682 '64.

LITVAK, A.

Litvak, A. "Features of the new," [Metallurgists and builders in the struggle for restoration of the "Zaporozhstal'" "" plant. Sketch. With editor's foreword] Oktyabr', 1949, No. 3, p. 135-52

SO: U-3566 , 15 March, 53 (Letopis 'Zhurnal 'nykh Statey, No. 14, 1949).

LITVAK, A.

Litvak, A. "Open Roads," (On the well known stonemason S. S. Maksimenko, an essay), Ogonek, 1949, No. 24, P. 2-3, with portrait

SO: U-5241, 17 December 1953, (Letopis ' Zhurnal 'nykh Statey, No. 26, 1949)

LITVAK, A.

Conversation on a serious topic. Sov.foto 18 no.10:5-11 O '58.
(Photography--Exhibitions)
(MIRA 11:11)

LITVAK, A.

Main subject. Sov. foto 19 no.2:1-3 F '59. (MIRA 12:3)
(Photography, Journalistic)

LITVAK, A.; NOVICHKOVA, I., red.; CHERTOVA, Zh., tekhn.red.

[Moscow] Moskva. Gos.izd-vo izobraz.iskus., 1960. 1 v.
(Moscow--Views) (MIRA 14:1)

BAROCHINA, B.Ya.; LITVAK, A.A.

Evaporation and heating of the coagulation both by contact with flue gases. Tekst.prom. 17 no.6:22-24 Je '57. (MLRA 10:7)

1. Starshiy nauchnyy sotrudnik Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Barochina). 2. Glavnyy mekhanik Gosudarstvennogo instituta po proyektirovaniyu predpriyatiy iskusstvennogo volokna (for Litvak).
(Rayon spinning)

BAROCHINA, I.Ya.; LITVAK, A.A.; GIRSHGORN, M.M.; SLOBODKINA, L.M.; YUNITSKIY, V.P.

Industrial testing of a new method for the evaporation of the precipitation bath. Khim.volok. no.1:50-52 '59. (MIRA 12:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut iskusstvennogo volokna (for Barochina). 2. Gosudarstvennyy institut po proyektirovaniya predpriyatiy iskusstvennogo volokna (for Litvak, Girshgorn). 3. Kalininskiy kombinat (for Slobodkina, Yunitskiy).
(Textile fibers, Synthetic)

LITVAK, A.A.; FISHMAN, G.I.

Purification of waste waters from viscose fiber plants. Zhur. VKHO 6 no.2:142-150 '61. (MIRA 14:3)
(Sewage---Purification)(Textile fibers, Synthetic)

LITVAK, A.

News photographers in formation. Sov.foto 21 no.11:4-8 N '61.
(MIRA 14:11)

(News photographers)

45628
S/141/62/005/006/013/023
E192/E382

24,2500

AUTHORS: Litvak, A.G., Miller, M.A. and Sholokhov, N.V.

TITLE: A more exact form of the averaged equation of motion for charged particles in the field of a standing electromagnetic wave

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika, v. 5, no. 6, 1962, 1160 - 1170

TEXT: The Van der Pol method can be used in describing the motion of a particle in the following manner:

$$\underline{r} = \underline{r}^{(1)} + \underline{r}^{(0)} \qquad (1)$$

where $\underline{r}^{(1)}$ is an oscillatory component and $\underline{r}^{(0)}$ is a slowly changing component. This description is valid when the motion is nonrelativistic:

$$\beta = v_0/c \sim \dot{r}^{(0)}/c \sim \dot{r}^{(1)}/c \ll 1 \qquad (2)$$

and when the oscillations of the particle are small in comparison with the characteristic dimension L_E of the field irregularity, i.e.

Card 1/4

A more exact form ....

$$\alpha \sim r^{(1)}/L_E \ll 1 \qquad (3) .$$

Further, the transit time of the particle through a non-homogeneous region should be much greater than the period of the field, i.e:

$$\gamma = v_o/\omega L_E \sim \dot{r}^{(0)}/\omega L_E \sim \dot{r}^{(1)}/\omega L_E \ll 1 \qquad (4) .$$

In the case of a monochromatic sinusoidal field the oscillatory component is described by:

$$\underline{r}^{(1)} = -(\eta/\omega^2)\underline{E}(\underline{r}^{(0)})e^{i\omega t} \qquad (5)$$

$$\underline{r}^{(1)} = -(i\eta/\omega)\underline{E}(\underline{r}^{(0)})e^{i\omega t}$$

and the slowly changing component is given by:

$$\frac{d^2\underline{r}^{(0)}}{dt^2} = -\nabla\Phi_o(\underline{r}^{(0)}) \qquad (6)$$

Card 2/4

A more exact form ....

where: $\Phi_o(\underline{r}^{(0)}) = |\eta \underline{E}/2\omega|^2$.

Analysis of this equation is based on the assumption that there exists an integral:

$$(\underline{r}^{(0)})^2/2 + \Phi_o(\underline{r}^{(0)}) = \text{const} \qquad (7)$$

for the averaged energy of the system. An attempt is made to evaluate the validity of this method by introducing a more exact equation containing expansion terms of the third order. It is assumed that the particles move in linearly polarized standing waves, described by:

$$\underline{E}(\underline{r}, t) = E_o \underline{e}(\underline{r})\cos(\omega t); \quad \underline{H}(\underline{r}, t) = H_o \underline{h}(\underline{r}) \sin(\omega t) \qquad (8)$$

where E_o and H_o are the amplitudes and $\underline{e}$ and $\underline{h}$ are normalized field-distribution functions. First, it is found that Eq. (6) can be made more exact by introducing expansion terms with regard

Card 3/4

A more exact form ....

S/141/62/005/006/013/023
E192/E382

to parameters β and α, while the parameter $\chi = \beta/\gamma$ is an arbitrary quantity. The field components e and h are therefore expanded with respect to α and averaged equations of motion are derived on the basis of the relativistic equation. The averaged equations are employed to investigate the motion of a particle in a transverse electromagnetic standing wave and it is found that the exact formulae lead to an increase $\delta\Phi$ in the potential. This increment is a function of α, χ and β. Similar conclusions regarding the potential increment are arrived at in the case of a particle moving in the standing wave of the TM type. The exact formula can be primarily used for determining the accuracy of the first approximation (as calculated from Eq. 6).

ASSOCIATION: Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute of Gor'kiy University)

SUBMITTED: April 23, 1962

Card 4/4

L 6845-65 EWT(1) ASD(a)-5/RAEM(a)/ESD(dp)/ESD(t)/RAEM(t)

ACCESSION NR: AP4044112 S/0141/64/007/003/0562/0563

48
45

AUTHOR: Litvak, A. G.

TITLE: On nonlinear excitation of plasma waves

SOURCE: IVUZ. Radiofizika, v. 7, no. 3, 1964, 562-563

TOPIC TAGS: plasma wave excitation, traveling wave interaction, resonance excitation, magnetoactive plasma, isotropic plasma

ABSTRACT: It is shown that when a pair of strong plane electromagnetic waves propagate in an isotropic plasma, a plasma wave is produced, with a wave vector equal to the difference of the wave vectors of the original electromagnetic waves and with a frequency equal to the difference of the component frequencies. The derivation is obtained by analyzing the motion of a singly charged particle in a field constituting the superposition of the two traveling plane waves, and describing the plasma by means of the hydrodynamic

Card 1/2

L 6845-65
ACCESSION NR: AP4044112 3

equations. The resonance excitation of the plasma wave is possible if the frequency and wave vector of the resultant plasma wave satisfy the dispersion equations for plasma waves. The results can be generalized to the case of a magnetoactive plasma in which excitation of plasma waves at a frequency equal to the sum of the component frequencies is possible. "The author thanks M. A. Miller and A. A. Andronov for interest in the work." Orig. art. has: 10 formulas.

ASSOCIATION: Nauchno issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete (Scientific Research Radiophysics Institute at the Gor'kiy University)

SUBMITTED: 11Dec63 ENCL: 00

SUB CODE: ME NR REF SOV: 004 OTHER: 000

Card 2/2

L 15655-66 EWT(d)/EWT(l)/EEC(k)-2/ETC(F)/EPF(n)-2/EWG(m)/ETC(m)-6 IJP(c) AT/WS-2
ACC NR: AP6003199 SOURCE CODE: UR/0382/65/000/004/0031/0034

AUTHOR: Litvak, A. G.

ORG: none

TITLE: The effect of a high frequency field on the transverse propagation of waves in a magnetoactive plasma

SOURCE: Magnitnaya gidrodinamika, no. 4, 1965, 31-34

TOPIC TAGS: plasma electromagnetic wave, magnetoactive plasma

ABSTRACT: The effect of a high frequency field of a plane electromagnetic wave on the transverse propagation of low frequency waves in a magnetoactive plasma is investigated. The problem is formulated by the use of Lorentz and Maxwell equations in addition to a continuity equation. The kinetic pressure of charged particles is not considered and hydromagnetic approximation is employed. The dispersion relationship is obtained and plotted for comparison of the case where a high-frequency plane wave is present in the plasma and where no wave is present. The dispersion curves have two brahcnes (magnetoacoustic and extraordinary) both of which charac-

UDC: 533.951 : 538.4

Card 1/2

L 15655-66

ACC NR: AP6003199

terize instabilities when certain criteria are satisfied. The unstable region increases with the increase of the amplitude of the high frequency field. The dispersion relationship obtained here is not valid near the resonance. The author is grateful to M. A. Mitler for discussing the results and looking at the manuscript. Orig. art. has: 2 figures, 11 formulas.

SUB CODE: 20/ SUBM DATE: 240ct64/ ORIG REF: 005/ OTH REF: 000

Card 2/2

L 13178-66 EWT(1) GG

ACC NR: AP6002298 SOURCE CODE: UR/0141/65/008/006/1148/1154

AUTHOR: Litvak, A. G.

ORG: Scientific-Research Institute of Radiophysics, Gor'kiy University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Self-focusing of electromagnetic waves in plasma in a strong magnetic field

SOURCE: IVUZ. Radiofizika, v. 8, no. 6, 1965, 1148-1154

TOPIC TAGS: electromagnetic wave, electromagnetic wave focusing, plasma

ABSTRACT: The longitudinal propagation of 2-dimensional electromagnetic waves in an infinite nonlinear plasma placed in a strong magnetic field is studied. It is shown that a self-focusing of the electromagnetic field is possible with plasma being displaced from its axis and forming a plasma guide. The nonlinear effects cause self-focusing also in the case of a plasma waveguide. As the solution of the associated self-consistent problem involves considerable mathematical difficulties, only the case of small nonlinearity is dealt with. The field is determined by linear formulas; corrections to wave amplitude and phase velocity are treated by the perturbation theory. "The author wishes to thank M. A. Miller and V.I. Talanov for discussing the results and valuable advice." Orig. art. has: 34 formulas. [03]

SUB CODE: 20 / SUBM DATE: 06Apr65/ ORIG REF: 009/ OTH REF: 001/ ATD PRESS: 4188

Card 1/1

UDC: 621.371.182

L 27598-65 EWT(l)/EPA(sp)-2/EPA(w)-2/EEC(t)/T/EWA(m)-2 Pz-6/Pa-4/Pab-10/Pl-4
IJP(c) AT
ACCESSION NR: AP5003243 S/0057/65/035/001/0108/0116

AUTHOR: Litvak, A.G./ Petelin, M.I./ Yakubovich, Ye.I. 21 53 40 B

TITLE: On the electron and ion distribution functions for a plasma in a slightly nonuniform high-frequency field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.1, 1965, 108-116

TOPIC TAGS: plasma confinement, plasma heating, kinetic theory, high-frequency field

ABSTRACT: The electron and ion distribution functions for a completely ionized plasma confined in a high-frequency potential well are calculated with collisions taken into account. The thermal velocities are assumed to be small compared with the velocity of light. The kinetic equations are employed with collision integrals in the form given by L.D.Landau (ZhETF 7,203,1937). The equations of motion include the forces due to the applied high-frequency field and to the electric field arising from the average separation of charge. The coordinates and velocities of the particles are separated into oscillatory and "drift" components, and by suitably averaging over the former, kinetic equations are derived for the quasipar-

Card 1/2

L 27598-65

ACCESSION NR: AP5003243

2

ticles represented by the latter. These are solved on the assumptions that the number of particles in the body of the plasmoid is much greater than the number in the skin layer and that the mean free path of a particle greatly exceeds the dimensions of the region in which it is localized (the amplitude of the corresponding oscillatory component of the corresponding coordinate), and the distributions are found to be Maxwellian. The time variation of the ion and electron temperatures is calculated in the quasistationary approximation, and it is found that both ultimately increase with time, the electron temperature more rapidly than the ion temperature. The effects of loss of particles through the potential barrier and heating due to space dispersion are estimated in two appendices, and the H theorem is derived for particles described by Landau's collision integrals in a third. "The authors are deeply grateful to A.V.Gaponov and M.A.Miller for suggesting the work and for valuable advice." Orig.art.has: 41 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED:08Jan64 ENCL: 00 SUB CODE: ME

NR REF SOV: 014 OTHER: 004

Card 2/2

L 26975-65 EWT(1)/EPA(sp)-2/T/EEC(t)/EPA(w)-2/EWA(m)-2 Pz-6/Po-4/Pab-10/
ES-4 IJP(c) AT S/0057/65/035/001/0168/0169
ACCESSION NR: AP5003258

AUTHOR: Litvak, A.G./ Petelin, M.I./ Yakubovich, Ye.I. 21

TITLE: On ohmic heating of a partially ionized plasma by a uniform high-frequency field

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.1, 1965, 168-169

TOPIC TAGS: plasma, plasma heating, plasma temperature, steady state, weakly ionized plasma, fully ionized plasma

ABSTRACT: The heating of a three-component non-relativistic plasma (electrons, ions and atoms) by a high-frequency field is discussed briefly. The field is assumed directly to heat only the electrons. It is pointed out that a steady state is possible only when the concentration of neutral atoms greatly exceeds that of the charged particles and that in the steady state the electron temperature exceeds the ion temperature, which in turn exceeds the atom temperature. The energy loss by the neutral atoms, requisite for the existence of such a steady state, is not discussed nor do the equations presented contain a term describing it. The authors point out that the results of A.V.Gurevich (ZhETF 35,392,1958), who neglected collisions be-

Card 1/2

L 26975-65
ACCESSION NR: AP5003258

tween electrons and neutral particles and assumed that the ions and neutral particles had the same temperature, are valid only in a very narrow temperature interval. In a fully ionized plasma the sum of the electron and ion temperatures increases without limit, but their difference approaches a constant value.
Orig.art.has: 6 formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 08Jan64 ENCL: 00 SUB CODE: ME

NR REF SOV: 003 OTHER: 003

Card 2/2

L 34347-66 EWT(1) GG

ACC NR: AP6022088 SOURCE CODE: UR/0141/66/009/003/0629/0631

AUTHOR: Litvak, A. G.

ORG: Scientific Research Institute of Radiophysics at Gor'kiy University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: On the problem of self-focusing of electromagnetic waves in anisotropic nonlinear media

SOURCE: IVUZ. Radiofizika, v. 9, no. 3, 1966, 629-631

TOPIC TAGS: nonlinear optics, self focusing, nonlinear effect, plasma, nonlinear medium

ABSTRACT: A theoretical analysis is made of self-focusing of a two-dimensional TM wave in a simple anisotropic medium — a plasma exposed to an intense constant magnetic field. It is shown that when $\partial\varepsilon_{\parallel}/\partial E_z^2 = \varepsilon_1 > 0$ a self-focusing waveguide is maintained only when $\varepsilon_\infty < 0$ (the effective permittivity tensor $\hat{\varepsilon} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & \varepsilon_1 \end{pmatrix}$ and $\varepsilon_1 = \varepsilon_\infty + \varepsilon_1 E_z^2$, where ε_∞ is the permittivity in the absence of the field). However, a self-focusing plasma waveguide can be maintained when $\varepsilon_1 < 0$ (the electron density is at a maximum at the maximum of the field E_z). Therefore, the field of the

Card 1/2 UDC: 621.371.123

L 34347-66

ACC NR: AP6022088

electromagnetic wave propagated in the direction of an intense constant magnetic field produces additional ionization of the weakly ionized plasma and formation of an inhomogeneous plasma layer. The most interesting case is said to occur when this effect arises in a gas in the absence of prior ionization ($\varepsilon_\infty = 1$) as a result of a high-frequency breakdown in the field of the wave. Orig. art. has: 8 formulas and 2 figures. [CS]

SUB CODE: 20/ SUBM DATE: 30Nov65/ ORIG REF: 006/ OTH REF: 001/ ATD PRESS: 5033

Card 2/2 VLR

04608-67 EWT(1) EWP(e) CG/AT

ACC NR: AP6033283 SOURCE CODE: UR/0141/66/009/005/0900/0909

66
B

AUTHOR: Litvak, A. G.

ORG: Scientific-Research Radiophysics Institute of Radiophysics at Gor'kiy University (Nauchno-issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete)

TITLE: Self-focusing of electromagnetic waves in magnetoactive plasma

SOURCE: IVUZ. Radiofizika, v. 9, no. 5, 1966, 900-909

TOPIC TAGS: nonlinear optics, beam self focusing, beam trapping, magnetoactive plasma, ELECTROMAGNETIC WAVE, PLASMA WAVE PROPAGATION

ABSTRACT: Self-focusing of two-dimensional em waves in magnetoactive plasma was considered for the case of transverse propagation. An expression was derived for the tensor of nonlinear permittivity of magnetoactive plasma, and a qualitative investigation was made of a system of field equations in the phase plane. The field structure for certain values of plasma parameters was established by means of numerical methods. It was shown that field self-focusing in the vicinity of an electron gyro-resonance ($\omega_H \geq \omega$) is accompanied by an increase in the plasma concentration along the axis (formation of a plasma waveguide). Approximate analytical solutions of the field equations were obtained for certain critical cases. Orig. art. has: 5 figures and 38 formulas.

SUB CODE: 20/ SUBM DATE: 30Dec65/ ORIG REF: 009/ OTH REF: 002/ ATD PRESS: 5100

UDC: 533.951 : 621.371.18

Card 1/1 egh

SOURCE CODE: UR/0386/66/004/009/0341/0345

ACC NR: AP7000392

AUTHOR: Litvak, A. G.

ORG: Scientific Research Radiophysics Institute, Gor'kiy (Nauchno-issledovatel'skiy radiofizicheskiy institut)

TITLE: Self-focusing of powerful light beams by thermal effects

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 4, no. 9, 1966, 341-345

TOPIC TAGS: light radiation effect, laser application, laser beam, dielectric constant, heat effect

ABSTRACT: Inasmuch as earlier studies were restricted to self-focusing of powerful light beams as a result of the Kerr effect and electrostriction, the author calls attention to a possible self-focusing of light by heating of the medium in the field of the wave. Since the necessary condition for self-focusing is the requirement that the dielectric constant of the medium increase in the field region (i.e., $\partial\varepsilon/\partial T > 0$), it is shown that many substances, such as calcite, sapphire, fused quartz, water, etc. have a positive derivative $\partial\varepsilon/\partial T$ in a definite temperature and wavelength interval. An estimate of this effect is presented for the self-focusing by a field of constant amplitude (e.g., from a laser) applied suddenly at a given point of an isotropic cubic medium. The analysis shows that in this case the perturbation of the dielectric constant depends not on the pulse power, as in the Kerr effect, but on its energy, i.e.,

Card 1/2

ACC NR: AP7000392

the light beam is focused because the preceding part of the light pulse has acted on the medium. For example, the change of the dielectric constant of a representative medium on the beam axis, resulting from the passage of a light pulse, is of the order of magnitude $\delta\varepsilon \approx 4 \times 10^{-11} W/a^2$, where W is the total pulse energy in Joules and a the width of the beam in millimeters. This gives grounds for hoping to observe self-focusing of a laser beam operating in the spike mode. The possible self-focusing induced by a cw laser beam is also estimated. It is concluded that an experimental check of the estimates may ascertain in what class of substances is self-focusing of a powerful light beam by thermal effects possible. The author thanks V. I. Talanov for valuable advice and a discussion of the results. Orig. art. has: 4 formulas.

SUB CODE: 20/ SUBM DATE: 18Jul66/ ORIG REF: 007/ OTH REF: 004
ATD PRESS: 5107

Card 2/2

LITVAK, A.I.

USSR/Biology - Plant physiology

Card 1/1 Pub. 22 - 43/49

Authors : Gupalo, P. I., and Litvak, A. I.

Title : Importance of roots for the growth of potato shoots during the tuber germination period

Periodical : Dok. AN SSSR 102/1, 173-175, May 1, 1955

Abstract : Scientific data are presented on the importance of roots for the growth of potato shoots during the tuber germination period. Nine USSR references (1948-1954). Tables; illustration.

Institution : The Zhitomir Agricult. Inst.

Presented by : Academician A. L. Kursanov, February 10, 1955

LITVAK, A.K. (Moskva)

On an ejector arrangement with sonic-speed active jets. Izv.AN SSSR.Otd.tekh.nauk no.1:150-154 Ja '56. (MLRA 9:5)
(Jets--Fluid dynamics)

VORONIN, G.I.; LITVAK, A.K.

Experimental investigation of the relationship between local resistances of tubular heat exchangers and the shapes of inlets and outlets. Trudy Lab.dvig. no.4:7-19 '58. (MIRA 12:11)
(Heat exchangers--Testing)

LITVAK, A.K.

Calculating the flow of a viscous compressible gas in the presence of heat exchange. Trudy Lab.dvig. no.4:25-31 '58. (MIRA 12:11)
(Thermodynamics) (Fluid dynamics)

LITVAK, A.K.; POPOV, R.G.; STAROSTIN, A.P.

Investigation of highly concentrated aerosols. Trudy Inst. dvig. no.6:21-29 '62. (MIRA 16:5)

(Aerosols)

LITVAK, A.M., inzh.

Fastening down precast reinforced concrete parts of thermal electric plants during transportation by rail. Energ. stroi. no.27:31-36 '62. (MIRA 15:9)

1. Moskovskiy filial Vsesoyuznogo instituta po proyektirovaniyu organizatsiy energeticheskogo stroitel'stva.
(Precast concrete--Transportation) (Electric power plants)

S/024/61/000/004/004/025
E032/E314

AUTHORS: Stechkin, B.S. and Litvak, A.K. (Moscow)

TITLE: On the Flow of Viscous Gas in a Cooled Cylindrical Tube

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Energetika i avtomatika, 1961, No.4, pp.16-19

TEXT: The flow of gas in a cylindrical tube, including the effects of friction and cooling, has been investigated by many workers during the last decade. However, the present authors state that no sufficiently simple and accurate solutions for technological application are as yet available. The method put forward in the present paper can be used to provide such solutions and consists of the following. Instead of deriving an exact solution for a cylindrical channel, an attempt is made to determine the exact solution for two limiting cases, namely, a slightly contracting channel and a slightly expanding channel. It is clear that the true

Card 1/8

solution lies between these two limiting solutions and although the exact solution cannot be determined, one might guess that the error in the arithmetical average of the two solutions would be less than one-half of the difference between the limiting values. In mathematical terms the problem can be formulated as follows. The basic equations for the one-dimensional stationary flow of a viscous cooled gas in a cylindrical tube are the continuity equation (Eq.1), the energy equation (Eq.2), the Bernouilli equation (Eq.3), the equation of state (Eq.4) and the fundamental equation of the hydrodynamic heat-transfer theory (Eq.5):

On the Flow of ....

p - static pressure;
Ω - channel perimeter;
x - channel length measured from the beginning of the tube,
α - emissivity;
T_c - wall temperature;
T - temperature of the stream;
γ - density;
$d_o = 4F/\Omega$;
ζ - impedance;
R - gas constant;
Nu - Nusselt criterion;
Pe - Pekle criterion;
$\delta G = F\gamma wd\tau$ is the correction given by

(6)

Card 4/8

Eq (6) on page 17 attached to Mat'l

On the Flow of ....

$$F\gamma w = \text{const} \tag{1}$$

$$\Omega dx\alpha\,(T_e - T)\,d\tau = \delta G c_p dT + \delta G d\,\frac{w^2}{2g}A \tag{2}$$

$$-\frac{dp}{\gamma} = d\,\frac{w^2}{2g} + \frac{dx}{d_0}\zeta\,\frac{w^2}{2g} \tag{3}$$

$$p = \gamma RT \tag{4}$$

$$\mathrm{Nu} = \frac{1}{8}\zeta\,\mathrm{Pe}\,E, \quad \alpha = \frac{1}{8}\zeta c_p \gamma w E \tag{5}$$

In these equations the symbols have the following meaning:
G - mass transport,
F - cross-sectional area;
w - velocity;
τ - time;
c_p - specific heat at constant pressure;
A - thermal equivalent of mechanical energy;
g - acceleration due to gravity;
Card 3/8

On the Flow of ....

where w' is the velocity on the boundary of the laminar layer, and
Pr - is the Prandtl criterion.
The ratio w'/w may be assumed to be approximately equal to 1/3 and for diatomic gases E ≈ 1.1 . Eq. (1) yields

$$wpF/RT = \text{const.}$$

The first exact solution is attained by considering the flow not in a cylindrical tube but in a slightly expanding channel in which pF = const., such that p drops by not more than 5%. Using the notation:

$$M_1^2 = w_1^2/kgRT_1$$

where the subscript 1 refers to the entrance to the tube and $c_p - c_v = AR$ where $k = c_p/c_v$, it is found that

Card 5/8

On the Flow of ....

$$\frac{dT}{T-T_0}+\frac{(k-1)M_1^2}{T_1}\frac{TdT}{T-T_0}=-0.55\,\zeta\frac{dx}{d_0} \qquad (7)$$

$$\frac{dp}{p}\frac{1}{kM_1^2}\frac{2T_1}{T}+2\frac{dT}{T}=-\zeta_0\frac{dx}{d_0} \qquad (8)\ .$$

It follows from these equations that

$$\frac{1}{k}\frac{dp}{p}\frac{1.1}{M_1^2}\frac{T_1}{T}+1.1\frac{dT}{T}=\frac{dT}{T-T_0}+\frac{(k-1)M_1^2}{T_1}\frac{TdT}{T-T_0} \qquad (9)\ .$$

This equation can be immediately integrated. The second simple and exact solution corresponding to the case of a slightly expanding channel is obtained by assuming that w = const. In that case, the original equations (2) and (3) are simplified and the pressure drop is given by:

Card 6/8

On the Flow of ....

$$\frac{dp}{p} = \frac{1}{1.1}\frac{w^2}{g}\frac{1}{RT}\frac{dT}{\delta T} \qquad (14)$$

where

$$\delta T = T - T_c \ .$$

Using the substitution

$$M_c^2 = w^2/kgRT_c$$

it is found that

$$\frac{dp}{p} = \frac{kM_c^2}{1.1} dT \left(\frac{1}{T - T_c} - \frac{1}{T}\right) \qquad (15)$$

which can be immediately integrated. The latter solution

Card 7/8

S/024/61/000/004/004/025
E032/E314

On the Flow of ....

gives an overestimate of the losses. It is particularly convenient in technological applications since it can be used to estimate with a known margin of error the hydraulic losses at a given wall temperature, gas input and temperature at the end of the tube. There are 2 figures.

SUBMITTED: April 27, 1961

Card 8/8

LITVAK, A. M.

Plastic surgery of extensive defects of the wall of the bladder with a pediculated omentum reinforced by a free musculo-aponeurotic homotransplant, preserved in paraffin. Urologiia no.3:39-43 '61. (MIRA 14:12)

1. Iz kafedry operativnoy khirurgii (zav. - prof. A. F. Nadein) Leningradskogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S. M. Kirova i Kolpinskoy gorodskoy bol'nitsy.

(BLADDER--SURGERY) (OMENTUM--TRANSPLANTATION)
(MUSCLE--TRANSPLANTATION)

LITVAK, Arkadiy Moiseyevich.

[Soviet workers-innovators] Rabochie-ratsionalizatory v sovetskoi strane. Moskva, 1947. (MLRA 7:12)
(Efficiency, Industrial)

LITVAK, ARKADIY KOLESNIKOVICH

Stroka pyatiletki; povest' o bitve za stol'noy list. MoskvaProfizdat, 1948.

114 p. 17 cm.

LITVAK, ARKADIY MOISEYEVICH.

Stroka Pyatiletki; Povest' O Bitve Za Stal'noy List. (An Item of the Five Year Plan; Story of the Struggle for Steel Plate. Moskva) Prof Izdat, 1948. 114 P.

So: 624N/5
783.3
.L7

LORAMASHVILI, I.N., inzh.; LITVAK, A.M., inzh.

Mobile structures to be used on construction sites. Gor.khoz. Mosk. 32 no.8:32-33 Ag '58. (MIRA 11:9)
(Automobile--Trailers) (Motorbuses)

LITVAK, A.M.

Elongation of the omentum for the revascularization of organs. Urologiia no.3:39-42 '62. (MIRA 15:5)

1. Iz khirurgicheskogo otdeleniya (zav. V.A. Khrustaleva) Kolpinskoy gorodskoy bol'nitsy i kafedry operativnoy khirurgii i klinicheskoy anatomii (zav. - prof. A.P. Nadein) Gosudarstvennogo ordena Lenina instituta usovershenstvovaniya vrachey imeni S.M. Kirova.
(GENITOURINARY ORGANS—SURGERY) (OMENTUM—TRANSPLANTATION)

LITVAK, A.T.; POTUPAYEV, V.N.; MARKOVSKIY, F.I.

Use of a resonance screening machine for dewatering the coal slurry. Koks i khim. no.5:19-21 '60. (MIRA 13:7)

1. Luganskiy mashinostroitel'nyy zavod im.Parkhomenko (for Litvak).
2. Dnepropetrovskiy gornyy institut (for Potupayev).
3. Dnepropetrovskiy koksokhimicheskiy zavod (for Potupayev).
(Coal preparation—Equipment and supplies)

LITVAK, A.Ye., inzh.

Choosing gear ratios for the machinery of single-bucket excavators using a turbine transformer. Strel. i dor. mash. 6 no.9:11-13 S '61. (MIRA 14:10)
(Excavating machinery)
(Gearing)

LITVAK B.

SHCHELOKOV, N.; GAL'PERIN, V., red.; LITVAK, B., red.; KAPITSA, V., tekhn.red.

[Industry of the Moldavian S.S.R.] Promyshlennost' Moldavskoi SSR. Kishinev, Gos.izd-vo Moldavii, 1957. 113 p. (MIRA 11:6)
(Moldavia--Industries)

LITVAK, B.

[One hundred and thirty centners of grapes per hectare] 130 tsentnerov vinograda s gektora. Kishinev, Partiinoe izd-vo TsK KP Moldavii, 1962. 18 p. (MIRA 15:7)
(Moldavia--Viticulture)

LITVAK, B. G.

USSR/Medicine - Tissue Therapy May 51

"Thermos-Refrigerator for Preserving Tissues According to Academician V. P. Filatov's Method," B. G. Litvak, Propedeutic Med Clinic, Molotov Med Inst

"Khirurgiya" No 5, p 84

States that Filatov's tissue therapy was applied with good results at the institute since 1948 for threating slowly healing wounds and ulcers, obliterating endarteritis, infiltrates, chronic osteomyelites, contractures. Prefers preservation of tissue (at +2 to +60) by Filatov's

198T49

USSR/Medicine - Tissue Therapy (Contd) May 51

method to preservation by other methods (e.g., Krauze's with 2% chloramine, Skosogorenko's). Describes thermos flask filled with ice in which tissue is suspended for preservation.

198T49

LITVAK, B.G.

Rumania/General Biology. Individual Development B

Abs Jour : Ref Zhur-Biol., No 13, 1958, 57151

Author : Menkes B., Litvak B.
Inst : Not Given
Title : Investigation of Vitellin Blood Circulation in the Chicken Embryo. Vitellin Blood Circulation Hemopoiesis in the Vitellin Sac

Orig Pub : Studii si cercetari histint., Acad. RPR, Baza Timisoara, Sec. stiinte med., 1956, 3, No 1-2, 29-37

Abstract : Investigation of the formation of capillaries in the wall and folds of the vitellin sac and their connection with the vitellin blood circulation in the period of the development of the chicken embryo was conducted following the injection of India ink into the vessels, and the

Card 1/2

2:3

tat. The blood and hemopoietic vessels were demonstrated on macro- and microphotos on the 7th, 10th, 12th, 13th, 15th, and 17th day of incubation, and the folds of the vitellin sac on the 15th day of incubation with the central artery in the sac and the spiral and the nearby arterial system of hemopoietic capillaries were seen.

Card 2/2

LITVAK, B.G.

Rumania/General Biology. Individual Development B

Abs Jour : Ref Zhur-Biol., No 13, 1953, 57143

Author : Elial Gh., Litvac B., Otetea St.
Inst : Not Given
Title : Experimental Investigation of the Mechanism of the Formation of the Extraembryonic Fluid (New Plasma) in the Chicken Embryo

Orig Pub : Studii si cercetari stiint Acad. RPR. Baza Timisoara. Ser. stiinte med., 1955, 3, No 3-4 113-120

Abstract : Three groups of experiments carried out on embryos of Leghorn chickens in connection with the problem of the formation of extraembyonic fluid are reported. Literary data on the quantitative correlation of the protein, yolk, and extraembryonic fluid as well as data on the

Card 1/2

21

ACC NR: AR6035567 SOURCE CODE: UR/0044/66/000/009/V041/V041

AUTHOR: Litvak, B. L.

TITLE: Certain problems of the design and calculation of continuous-digital-servosystem dynamics

SOURCE: Ref. zh. Matematika, Abs. 9V266

REF SOURCE: Tr. Mosk. in-t neftekhim. i gaz. prom-sit, vyp. 59, 1966, 60-66

TOPIC TAGS: servosystem, digital servosystem, continuous servosystem, logic circuit, quantization, level quantization

ABSTRACT: The possibility of reducing a digital servosystem (DSS) to a continuous servosystem (both in the case of a parallel code and, more important, of a serial code) is investigated. It is shown that in calculating the dynamics of low-power continuous DSS the use of the D--decomposition method makes it possible to obtain higher accuracy without complicating the design. The author demonstrates that 1) the use of a serial code in the DSS results in a considerable economy of elements. The economy is especially high with the conversion of a

UDC: 681.142.001.3:51

Card 1/2

ACC NR: AR6035567

parallel code into a serial code, and vice versa, by means of a distributor controlling all the logic "AND" circuits of the converters; 2) even with a serial code, DSS can be reduced to continuous DSS; 3) for a wide variety of continuous DSS, the D-decomposition method is advisable since it permits the design of a system which, in addition to meeting quality requirements, will also provide maximum accuracy. Moreover, it makes it possible to consider in advance level quantization beforehand by determining the limit value of the amplification factor beyond which this quantization (nonlinearity) will count. [Translation of abstract]

[DW]

SUB CODE: 09/

Card 2/2

L 42951-65 EWA(k)/EBD/EWG(r)/EWT(l)/EEC(k)-2/EEC(t)/T/EEC(b)-2/EWP(k)/
EWA(m)-2/EWA(h) Pf-4/Pi-4/Pl-4/Pm-4/Pn-4/Po-4/Peb IJP(c) WG

ACCESSION NR: AP5010042 UR/0368/65/002/002/0138/0141

AUTHOR: Kaminskiy, A. A.; Kornyenko, L. S.; Litvak, D. M.; Osiko, V. A.; Prokhorov, A. M.

TITLE: A $CaF_2:Dy^{2+}$ CW laser pumped by a point-source light

SOURCE: Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 138-141

TOPIC TAGS: paramagnetic laser, dysprosium doped laser, solid laser, point source pumping, laser pumping, CW laser

ABSTRACT: The design and certain characteristics of a CW $CaF_2:Dy^{2+}$ laser pumped by a point-source are described. A superhigh-pressure continuous xenon lamp, the DKSSh-1000, placed in an OKL-3a standard cine projection illuminator, was used as the point source of light. The block diagram of the laser is shown in Fig. 1 of the Enclosure. The xenon lamp was supplied by a PN-145 16.2-kv dc generator. The condenser system with the active medium (Dy^{2+}) was placed in a glass Dewar flask located at the second focus of an elliptic mirror. The image of the illuminating lamp was projected at the leading edge of the condenser. The condenser was prepared from natural fluorite whose edges were polished and parallel within at least 15". The resonator cavity consisted of silver mirrors, one of which had a

Card 1/2

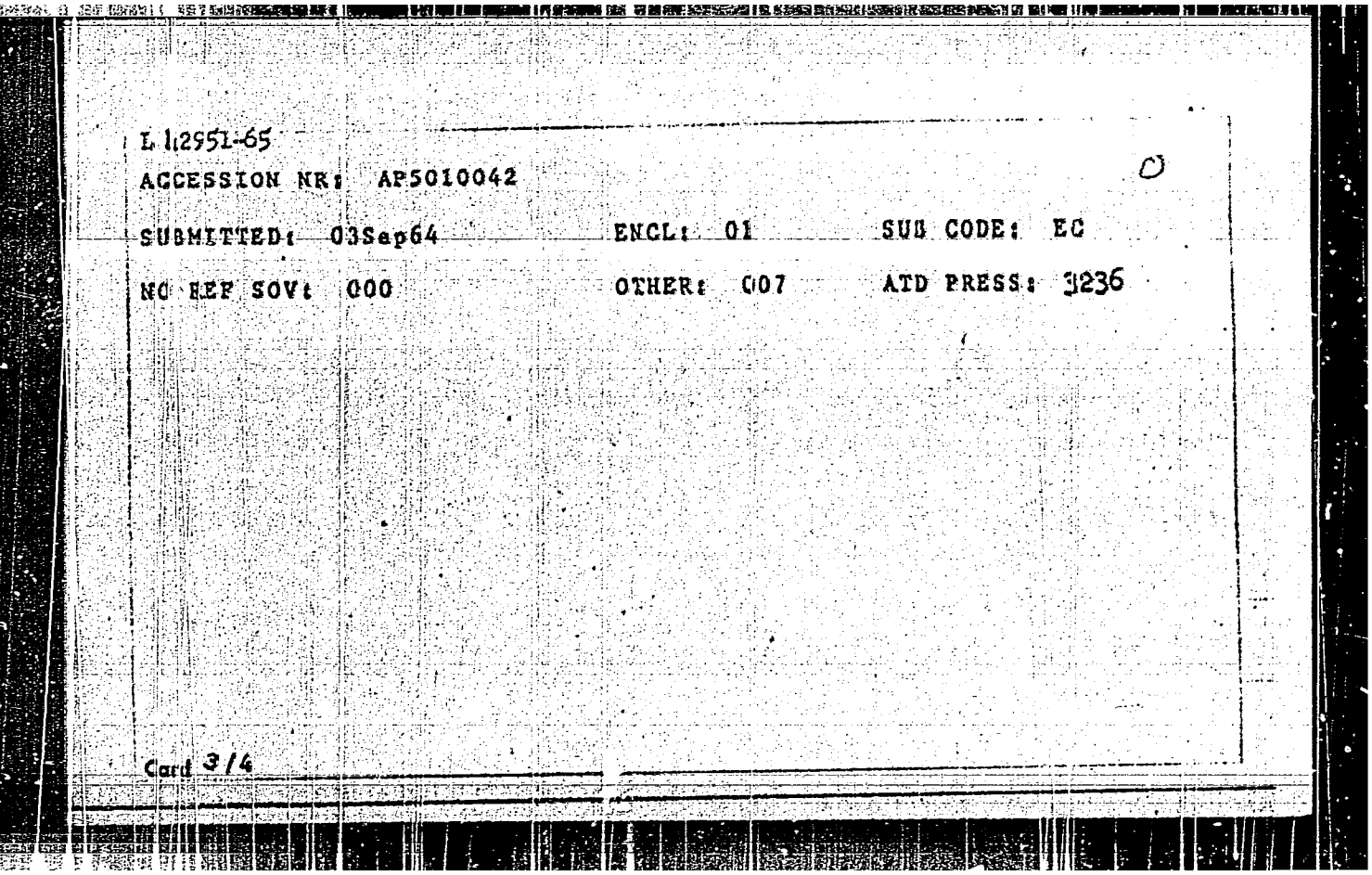
L 12951-65

ACCESSION NR: AP5010042

transmissivity of approximately 5%. To reduce scattering, all the condenser sides were silver coated. Stimulated emission of Dy^{2+} in CaF_2 was observed at 23,590 ± 10 and was due to the $^5I_7 \rightarrow {}^5I_8$ transition. The lifetime of the excited $^5I_7$ level at 300K was ~ 120 usec and at the liquid nitrogen temperature, 14 msec. The beam divergence was approximately 5°. The proposed system utilizes available superbright point sources of light and simplifies the problem of eliminating the unnecessary portion of radiation from the excitation spectrum by means of standard plane filters. To improve the transmittance of the point source, the standard elliptical aluminum-coated mirror can be replaced by a mirror with an interference coating. This will increase the efficiency of the entire system by 30%. The use of mirrors with diameters up to 450 mm will further increase efficiency by 10—15%. To reduce the excitation threshold, the crystal ends should be terminated with multilayer dielectric mirrors and the condenser should be made of an optically homogeneous material with a large refractive index. The design of the pumping system and the characteristics of the pump lamp are such as to increase the volume of active material several-fold, which will result in an increased output. The system can be used readily for the excitation of lasers operating on other active materials. Orig. art. has: 2 figures. [YK]

ASSOCIATION: none

Card 2/4



L 12951-65

ACCESSION NR: AP5010042

SUBMITTED: 03Sep64 ENCL: 01 SUB CODE: EC

NO REF SOV: 000 OTHER: 007 ATD PRESS: 3236

Card 3/4

L 27649-66 EEC(k)-2/EWA(h)/EWP(k)/EWT(l)/EWT(m)/FBD/T IJP(c) WH/WG

ACC NR AP6018495 SOURCE CODE: UR/0368/65/003/002/0114/0122

64
60
B

AUTHOR: Kaminskiy, A. A.; Korniyenko, L. S.; Litvak, D. M.

ORG: none

TITLE: Possibility of exciting a continuous-action optical laser

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 2, 1965, 114-122

TOPIC TAGS: laser, mercury lamp, ruby laser, light excitation, xenon lamp motion picture projector

ABSTRACT: The proper selection of sources of light excitation is important in the development of continuous-action optical lasers. In this connection the authors present formulas suitable for evaluating the excitation thresholds and give data on the spectral emission of Soviet-produced lasers. Further, experimentally obtained absolute figures on the power that can be obtained over different spectral intervals with the aid of the OKL-3a motion-picture projector are given. This projector is used since at present there are no selective emitters with sufficient power to excite lasers, and, hence, sources emitting over a broad spectral range have to be used. A comparison of the theoretical evaluations and experimental findings on measurements of the spectral distribution of emission shows that a mercury lamp may be recommended for

Card 1/2 UDC: 535.89

L 27649-65

ACC NR: AP6018495

exciting ruby, while a xenon lamp may be recommended for exciting Nd^{3+}, U^{3+}, and Dy^{2+}. It is also expedient to use a tungsten lamp to excite Dy^{2+}. The authors thank A. K. Shevchenko for his valuable observations, A. S. Kovalev for his help in conducting the experiment, and L.D. Kolpakov for his preparation of the basic details of the experimental equipment. Orig. art. has: 2 figures, 25 formulas, and 3 tables. [JPRS]

SUB CODE: 20, 09 / SUBM DATE: 09Jun64 / ORIG REF: 003 / OTH REF: 012

Card 2/2 UC

L 2328-66 EWA(k)/FBD/EWT(1)/EWT(m)/EPF(c)/EEC(k)-2/T/EWP(k)/EWP(b)/EWA(m)-2/EWP(t)/EWA(h) SCTB/IJP(c) WG/JD

ACCESSION NR: AP5025093 UR/0368/65/003/003/0261/0262
621.385

AUTHOR: Kaminskiy, A. A.; Litvak, D. M.

TITLE: The DKSSh-1000 xenon lamp as a powerful light source under heavy overload

SOURCE: Zhurnal prikladnoy spektroskopii, v. 3, no. 3, 1965, 261-262

TOPIC TAGS: light source, DKSSh 1000 lamp, DKSSh 1000 xenon lamp, pulse light source, high power light source, laser pump, laser pump lamp, laser lamp

ABSTRACT: The DKSSh-1000 high-pressure xenon lamp was used as a high-power pump for a laser described elsewhere by the authors (Zhurnal prikladnoy spektroskopii, v. 2, no. 2, 1965, 138-141). DRSh- and DKSSh-type lamps are manufactured by Soviet industry with a single power rating of 1000 watts and have a rather low light efficiency of about 10%. Since this is inadequate in most applications, the DKSSh-1000 lamp was subjected to experiments on power overloads for short periods of time. The lamp was driven by a PN-400 direct-

Card 1/3

current generator of 110 v and 400 amp. The overload pulses, formed by shorting a water-cooled resistor in the lamp circuit, had durations of 0.05, 0.2, 0.25, 0.3, and 0.5 sec. At a current of 200 amp and a voltage of about 40 v, the power was about 8 kw. By increasing the current to 400 amp, the voltage rose to 65 v, while the power reached the value of 27 kw, which corresponds to a brightness of about 3×10^9 nt. Under normal conditions for the DKSSh-1000, the brightness at the center of the discharge is about 200×10^6 nt, with a luminous surface of the cone of 15.8 mm^2. When rated power was exceeded more than 20 times, the brightness reached a value of 2.6×10^9 nt and the luminous surface of the cone increased to 24.5 mm^2. The life of the lamp, which is rather variable even under normal conditions, was not investigated under overload conditions. In these experiments, the lamps worked reliably under an 8-fold overload for about 1.5 sec, and under a 20-fold overload for about 0.2 sec. Intense water cooling of the lamp is necessary under overload conditions. Orig. art. has: 2 figures. [FP]

L 2328-66
ACCESSION NR: AP5025093 O

ASSOCIATION: none

SUBMITTED: 22Jan65 ENCL: 00 SUB CODE: EE, EC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4107

Card 3/3

KHRENOV, Aleksey Dmitriyevich,; LITVAK, D.S., red.; RAKOV, S.I., tekhn. red.

[Handbook for young forging machine and punch operators] Spravochnik molodogo kuznetsa-shtampovshchika. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 256 p. (MIRA 11:10)
(Sheet-metal work)

DANILEVSKIY, Vladimir Viktorovich; ITKIN, I.M., nauchnyy red.; LITVAK, D.S., red.; RAKOV, S.I., tekhn.red.

[Reference book for the young mechanical engineer] Spravochnik molodogo tekhnologa-mashinostroitelia. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1958. 414 p. (MIRA 12:3)
(Mechanical engineering--Handbooks, manuals, etc.)

LITVAK, D.S.

MAKIYENKO, Nikolay Ivanovich; NOVIKOV, Mikhail Pavlovich; DEMENT'YEV, V.I., nauchnyy red.; KOPTEVSKIY, D.Ya., red.; LITVAK, D.S., red.; RAKOV, S.I., tekhn. red.

[Assembly of machinery] Sborka promyshlennoi produktsii. Izd.2., ispr. i dop. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 494 p. (MIRA 11:7)

(Machinery—Erecting work)

ALEKSANDROV, Vladimir Nikolayevich; KULIKOV, Ivan Grigor'yevich; NARYSHKIN, A.A., nauchnyy red.; LITVAK, D.S., red.; TOKER, A.M., tekhn.red.

[Tinsmith] Slesar'-zhestianshchik. Moskva, Vses.uchebno-pedagog. izd-vo Proftekhizdat, 1960. 223 p. (MIRA 14:3)

(Tinsmithing)

TSEGEL'SKIY, Vladimir Leopol'dovich; ALEKSEYEV, Ye.K., laureat Leninskoy premii, nauchnyy red.; LITVAK, D.S., red.; TCKER, A.M., tekhn.red.

[Electric welder] Elektrosvarshchik. Moskva, Vses.uchebno-pedagog. izd-vo Proftekhizdat, 1960. 243 p. (MIRA 13:7)
(Electric welding)

MEDVEDYUK, Nikolay Ivanovich; TIKHONOV, V.I., nauchnyy red.; LITVAK, D.S., red.; PERSON, M.N., tekhn.red.

[Metalwork:] Mednitskie i zhestianitskie raboty. Izd.4., perer. i dop. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 335 p. (MIRA 13:6)

(Metalwork)

DANILEVSKIY, Vladimir Viktorovich; ITKIN, I.M., nauchnyy red.; LITVAK, D.S., red.; TOKER, A.M., tekhn. red.

[Handbook for young technologists and mechanical engineers] Spravochnik molodogo tekhnologa-mashinostroitelia. Izd.2., ispr. Moskva, Vses. uchebno-pedagog. izd-vo Proftekhizdat, 1960. 414 p. (MIRA 15:4)
(Mechanical engineering)

ANAN'YEV, Sergey Levanovich; YELIZAVETIN, Mikhail Alekseyevich; MALOV, A.N., nauchn. red.; LITVAK, D.S., red.; DORODNOVA, L.A., tekhn. red.

[Manufacture of hydraulic drives] Proizvodstvo gidravlicheskikh privodov. Moskva, Vses. uchebno-pedagog. izd-vo Proftekhizdat, 1961. 125 p. (MIRA 14:8)

(Oil--Hydraulic machinery)

YELIZAVETIN, Mikhail Alekseyevich; MALOV, A.N., nauchnyy red.; LITVAK, D.S., red.; PEREDENIY, S.P., tekhn. red.

[Mechanization and automation in the manufacture of machinery] Mekhanizatsiia i avtomatizatsiia v mashinostroenii. Moskva, Vses. uchebno-pedagog. izd-vo Proftekhizdat, 1961. 211 p. (MIRA 14:7)
(Automation) (Machinery industry--Technological innovations)

BRUSHTEYN, Boris Yefimovich; DEMENT'YEV, Vladimir Ivanovich; LITVAK, D.S., red.; CHI YUN-shuy[Ch'in Yung-shui], red.; BARANOVA, N.N., tekhn. red.

[Fundamentals of machining on lathes]Osnovy tokarnogo dela. Izd.4., dop. Moskva, Proftekhizdat, 1962. 325 p. (MIRA 16:1)

(Lathes) (Turning)

LITVAK, D.V.

AUTHOR: Litvak, D.V. 123 - 1 - 46.

TITLE: Metal Alloys for Excavators and Trenching Plows, and Their Classification (Metallicheskiye splavy dlya ekskavatorov i kanavokopateley i ikh klassifikatsiya).

PERIODICAL: Tr.Mosk. geolog-razved. in-ta, 1956, 30, 40-49. (USSR)

ABSTRACT: Classification of metal alloys used in manufacturing of excavators is given, and properties of separate groups are outlined. Tables of properties of: cast and deformed carbon steels with normal content of Mn cast carbon steels with increased Mn content, carbonized alloyed steels, cast and deformed alloyed steels, gray iron, brass and bronze are given, and their use in various parts of excavators indicated. B.O.L.

Card 1/2 Ref.Zh., Mashinostroyeniye, Nr.1, 1957, Item 46.

123 - 1 - 46.

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

LITVAK, F. I., STUPINA, E. V.

Therapeutic use of citral in hypertension. Klin. med., Moskva 28:8, Aug. 50. p. 88-9

1. Of the Clinic of Diagnosis and Special Pathology with Therapy, Yaroslavl' Medical Institute, Yaroslavl'.

CLML 19, 5, Nov., 1950

LITVAK, F. I.

USSR.

The effect of thiocyanates upon blood cholesterol in hypertension. F. I. Litvak and L. M. Somina (Med. Inst., Yaroslav). [redacted], No. 3, 30-6(1954).—An NH4SCN level of 4-6 mg./100 cc. serum very often caused a drop in blood cholesterol. This level is reached by daily administration of 0.3 g. of thiocyanate. In the sclerotic phase of hypertension thiocyanate caused hypercholesteremia. In other forms it was possible to lower cholesterol with smaller doses of thiocyanate. Higher doses were not only toxic but raised the cholesterol level at the same time. On the whole, administration of thiocyanates is beneficial, both cholesterol and blood pressure being lowered. This is especially true of the so-called labile phases of hypertension.
A. Mirkin

- Chair Faculty Therapy

MESHCHERSKAYA, K.A.; BORODINA, G.P.; KOROLEVA, N.P.; LITVAK, F.I.; OSTROVSKAYA, L.A.

Effect of β-sitosterol on the course of experimentally induced atherosclerosis in rats and rabbits. Farm.i toks. 22 no.5:434-440 S-O '59. (MIRA 13:3)

1. Kafedra farmakologii, biokhimii, patanatomii i fakul'tetskoy terapii Blagoveshchenskogo meditsinskogo instituta.
(STEROLS pharmacol.)
(ARTERIOSCLEROSIS exper.)

LITVAK, I.

Improve the electric equipment of cranes. MTO 2 no.2:42-44 F '60. (MIRA 13:5)

1. Glavnyy inzhener zavoda "Dinamo" imeni S.M.Kirova, Moskva.
(Cranes, derricks, etc.) (Electric driving)

KIRILLOV, P.; LITVAK, I.

Radio relay from airplanes. Radio no.11:38-39 N '57. (MIRA 10:10)
(Radio relay systems)

LITVAK, I.M.

USSR / Acoustics. Physiological Acoustics. Speech and Singing. J-8

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7553

Author : Varshavskiy, L.A., Litvak, I.M.
Inst : Scientific Research Institute of Ministry of Radio Industry, USSR, Leningrad
Title : Investigation of Formant Composition and Certain Other Physical Characteristics of Sounds of Russian Speech

Orig Pub : Probl. fiziol. akustiki, 3, M.-L., Izd-vo AN SSSR, 1955, 5-17

Abstract : Certain results of an investigation of the physical characteristics of the sounds of Russian speech pertaining to their temporal characteristics and their formant composition are given. The temporal characteristics are determined from oscillographic records of individual words and entire phrases. The duration of the individual sounds were determined both in words as well as in phrases, where this duration is reduced noticeably for vowels. Thus, in words the minimum duration of vowels is on the average 0.18 seconds (middle accented " ", and the maximum is

Card : 1/3

USSR / Acoustics. Physiological Acoustics. Speech and Singing.

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7553

Abstract : 0.26 seconds (initial accented "a"), while in phrases the durations are 0.16 and 0.18 seconds respectively. The durations of consonants ranges from 0.02 to 0.24 seconds. The fundamental results that pertain to the determination of the formant composition of sounds of speech. For this purpose there were employed two methods: the analysis of the spectrograms of sounds of speech in words and synthesis of artificial sounds of speech. In view of the inhomogeneity of the spectrograms for various speakers pronouncing the same sound, and of the frequently incorrect form of the envelope of the spectrum, it was possible to draw from the material of the spectrograms only approximate conclusions concerning the characteristic regions of concentration of energy of the spectrum (formants) for various sounds; in many cases the presence of 5 -- 6 such regions were observed. More definite data were obtained by synthesizing speech sounds; for this purpose filters are used to cut out definite frequency bands (one or two) shifted over the entire sound range, from a spectrum having a high

- 99 -

Card : 2/3

USSR / Acoustics. Physiological Acoustics. Speech and Singing. J-8

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7563

Abstract : harmonic content with a definite fundamental frequency, corresponding to the spectrum of the oscillations of the vocal cords. The reproduced sound was listened to by a group of auditors, and the relative number of the latter, identifying the reproduced sound at some position of the band with one in the same definite vowel, was taken as a measure of the phonetic discernibility of this band. That position and that width of the frequency bands, at which this value reached a maximum, determined the position and the width of the formants. It was thus established that for many vowels (a, o, "y", "и") one formant, insuring 86 -- 98% of coincident estimates, is enough.

For the vowel "э" it turned out necessary to have two formants, and for the sound "е", the sufficiently high percentage of coincident estimates obtained requires apparently three formants. The width and the position of the formant bands turned out to be little dependent on the fundamental frequency. The

Card : 3/4 - 100 -

USSR / Acoustics. Physiological Acoustics. Speech and Singing.

Abs Jour : Ref Zhur - Fizika No 3, 1957, No 7553

Abstract : formants of certain sounds from the consonant groups (sh, s, kh, f) were determined analogously and in this case the source was a noise generator. For certain other consonants (zh, z, l, m, n, r) the formants were determined approximately, by comparing the natural sound with the synthesized one.

On the basis of the experiments performed, a summary graph is compiled, which shows the placement of the formants of the investigated sounds.

Card : 4/4

LITVAK, I.M.

Professor S.M.Kalmanovskii. Khirurgiia, Moskva, no.4:80-81 Ap '50. (CLML 19:2)

LITVAK, I.M.

A case of intestinal obstruction following resection of the stomach. Khirurgiia, Moskva No.5:58-59 May 50. (CLML 19:4)

1. Of the Department of Hospital Surgery (Head -- Prof. S.M.Kalmanovskiy) Chelyabinsk Medical Institute.

LITVAK, I.M.; BARABANOV, M.I.

Study of the technological conditions for the preparation of food pectin from pulp. Trudy KTIPP no.21:3-10 '59. (MIRA 14:1)
(Pectin)