"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

RUMANIA/General Problems of Pathology. Allergy. U.

Abs Jour : Ref Zhur - Biol., No 19, 1958, 89479

Author : Laszlo, I., Szentkiraly, E., Monok, S.
Inst : -
Title : Problems of Allergy and Immunity in Experimental Tuberculosis. The Allergen Action of Acid-fast Saprophytic Bacilli.

Orig Pub : Rev. med. (RPR), 1955, 1, No 1-2, 65-70.

Abstract : No abstract.

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

HORVATH, Eva, dr.; TUSA, Adam, dr.; ORLIK, Jozsef, dr.; MONOKI, Istvan, dr.; WINNER, Ferenc, dr.

Data on the dermatomyositis syndrome. Orv.hetil. 101 no.3: 83-86 Ja '60.

1. A marosvasarhelyi II. Belgyogyaszati Klinika es Borgyogyaszati Klinika.

(DERMATOMYOSITIS diag.)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKI, St., dr.; HORVATH, Eva, dr.; WIENER, Fr., dr.; FODOR, Fr., dr.

Heart diseases in collagen diseases. Med. inter., Bucur 13 no.2: 195-199 F '61.

1. Lucrare efectuata in Clinica a II-a medicala, Catedra de anatomie patologica si Catedra de biologie, Tg. Mures.

(COLLAJEN DISEASES complications)
(HEART DISEASES etiology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

HORVATH, Eva, dr.; MONOKI, S., dr.; WIENER, F., dr.

Clinical considerations on some malignant forms of vasculitis. Med. intern. 15 no.3:303-308 Mr '63.

1. Lucrare efectuata in Clinica a II-a medicala, I.M.F. Tg. Mures.
(THROMBOANGIITIS OBLITERANS) (PERIARTERITIS NODOSA)
(DIAGNOSIS, DIFFERENTIAL)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKI, St., dr.; LUKACSY, I., dr.; SZOCS, G., dr.; URSACHE, Ligia, dr.

Cardiological importance of some anterior thoracic deformities. Med. intern. (Bucur) 17 no.6:675-681 Je'65.

1. Lucrare efectuata in Clinica a II-a medicala, Institutul medico-farmaceutic, Tirgu Mures, (director prof. A. Horvath).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

TRUB, Israil' Ayzikovich; MONOKROVICH, Eduard Isaakovich; MIKHAYLOVA, Ye.N., redaktor; PINKHASOV, Ya.B., tekhnicheskiy redaktor

[Using waste industrial heat in greenhouses and hothouses] Ispol'zovanie otbrosnogo tepla promyshlennosti v teplitsakh i parnikakh. Tashkent, Gos. izd-vo Uzbekskoi SSR, 1955. 91 p. (MLRA 9:10)
(Greenhouses) (Heat engineering)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKROVICH, E.I.

Efficient system of using natural gas for heating and air conditioning. Izv. AN Ur. SSR.Ser.tekh.nauk no.1:33-39 '58. (MIRA 11:6)

1.Institut energetiki i avtomatiki AN UrSSR.
(Gas distribution)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKROVICH, E.I.

Combined heating and air-conditioning from central stations in Soviet Central Asia. Izv.AN Uz.SSR. Ser.tekh.nauk no.4:5-15 '58. (MIRA 11:11)

1. Institut energetiki i avtomatiki AN UzSSR.
(Soviet Central Asia—Heating from central stations)
(Soviet Central Asia—Air conditioning)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKROVICH, B.I.

Some problems in the field of district heating of cities in Central Asia. Izv.AN Uz.SSR,Ser.tekh.nauk no.1:39-47 '59. (MIRA 12:5)

1. Institut energetiki i avtomatiki AN UzSSR.
(Asia, Central--Heating from central stations)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKROVICH, E. I. Cand Tech Sci -- (dis)"Problems of the complex supplying of the housing and communal sector of the cities of Central Asia with heat and refrigeration." Alma-Ata, 1960, 19 pp, (Acad Sci KazSSR. Inst Power Engineering), 150 copies, (KL, 30-60, 138)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MOMOKHOVICH, N.I.; KRASHENINNIKOV, G.I.

Use of a simplified heat pump in a heat supply based on thermal waters. Izv.AN Ukr.SSR.Ser.tekh.nauk. no.3:3-11 '60. (MIRA 13:7)

1. Institut energetiki i avtomatiki AN UkrSSR.
(Heat pumps)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

RODIMKIN, Ye.D.; MONOKROVICH, E.I.; ORANSKIY, I.N., kand. tekhn. nauk, otv. red.; SOKOLOVA, A.A., red.; GOR'KOVAYA, Z.P., tekhn. red.

[Heating and cooking systems in cities of Central Asia] Teplosnabshenie i khladofikatsiia gorodov Srednei Azii; tekhniko-ekonomicheskie voprosy. Tashkent, Izd-vo Akad. nauk UzSSR, 1962. 172 p. (MIRA 16:5)

(Soviet Central Asia--Heating)
(Soviet Central Asia--Air conditioning)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOKROVICH, E.I.

Problem of peak power. Izv. AN Uz. SSR. Ser. tekh. nauk no.4:74-75 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

II

RUMANIA/Chemical Technology. Chemical Products and Their Applications. Synthetic Polymers and Plastics.

Abs Jour: Ref Zhur-Khim., No 8, 1959, 29513.

Author : Monolescu, S.
Inst :
Title : The Utilization of Plastics in the Production of Wet Test Meters.

Orig Pub: Metrol Apl, 5, No 2, 71-72 (1958) (in Rumanian)

Abstract: The author gives a brief description of the construction of wet test meters in which the rotating parts are made from polystyrene. -- L. Pesin.

Card : 1/1

295

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

"The Radiation Balance of Slopes."

paper presented at Symposium on Radiation and Atmospheric Ozone, Oxford, UK, 20-26 July 1959

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

KAZANSKIY, A.B.; MONON, A.S.

Determination of the amount of movement, heat, and moisture in turbulent currents from gradient measurement data. Meteor. i gidrol. no.12:3-8 D '62. (MIRA 15:12)

1. Institut fiziki atmosfery AN SSSR.
(Atmospheric turbulence)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONORI, I.

"The first altitude flight" p. 6, (REPULES, Vol. 6, No. 1, Jan. 1953, Budapest, Hungary)

SO: Monthly List of East European Accessions, L.C., Vol. 2, No. 11, Nov. 1953, Uncl.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

DENESI, Odon, okleveles epiteszmernok, Ybl-dijas; PAPP, Jozsef, okleveles epiteszmernok; VARADYNE GORGORICZ, Viola, okleveles epiteszmernok; MOMORI, Magda, grafikus; VOROS, Lajos, grafikus

General city planning of Pecs. Pecsi musz szeml 7 no.2/3:1-30 Ap-S '62.

1. Epitesugyi Miniszterium Pecsi Tervezo Vallalat Varosrendezesi Csoportja.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONORI, S.

TECHNOLOGY

PERIODICAL: ELELMEZESI IPAR. Vol. 12, no. 10, Oct. 1958

Monori, S. Investigation of the corrosion of oxidized aluminum and its suitability for canning foods. p. 300.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, No. 2, February 1959, Unclass.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONORI, Sandor; PRAGER, Marta

Certain characteristic properties of emulsions prepared with various emulsifiers. Elelm ipar 17 no.9:274-279 S '63.

1. Budapesti Muszaki Egyetem Elelmiszerkemia Tanszek.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

KISS, S.; KOVACH, A.G.B.; IRANYI, M.; ANTAL, J.; DOBA, M.; MONOS, E.

Effect of hypothalamic lesion on phosphatide metabolism in the liver. Acta physiol. hung. 15 no.4:303-312 1959

1. Institute of Physiology, Medical University, Budapest.
(PHOSPHOLIPIDS, metabolism)
(LIVER, metabolism)
(HYPOTHALAMUS, physiology)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 29391-66

ACC NR: AT6017809 SOURCE CODE: HU/2505/65/028/002/0139/0153

33

29

AUTHOR: Monos, Emil; Koltay, Edit; Kovach, Aristid G. B.

ORG: Experimental Research Laboratory, Medical University of Budapest (Budapesti Orvostudomanyi Egyetem, Kiserleti Kutato Laboratorium)

TITLE: Adrenal blood flow and corticosteroid secretion I. Acute effect of hypophysectomy on adrenal blood flow and cortical hormone secretion in the anesthetized dog

22

SOURCE: Academiae scientiarum hungaricae. Acta physiologica, v. 28, no. 2, 1965, 139-153

TOPIC TAGS: hormone, dog, blood circulation, corticosteroid, blood pressure, endocrinology

ABSTRACT: The acute effects of hypophysectomy on corticosteroid secretion, adrenal blood flow, aortic blood flow at the level of the diaphragm and below the origin of the renal arteries, as well as on arterial blood pressure were investigated in dogs under pentobarbital anesthesia. In spite of the marked decrease in hydrocortisone and corticosterone secretion, the adrenal blood flow remained unchanged or was elevated. The arterial blood pressure decreased considerably in all cases. The average blood flow of the abdominal organs or posterior part of the body remained unchanged; the average peripheral resistance showed a decrease that was 15-20 per cent less than that in the adrenals.

Card 1/2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 29391-66

ACC NR: AT6019809

4

It was found that the adrenal blood flow may increase in spite of a diminished blood flow in the abdominal aorta. The authors thank T. Liptak for the help in statistical analysis and Miss Z. Ambrozy, Mrs Koharyi-Hamori and Gy. Szilassy for technical assistance. Orig. art. has: 7 figures and 2 tables. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 05Aug64 / ORIG REF: 009 / OTH REF: 040
SOV REF: 002

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

PALKOVITS, Miklos; MONOS, Emil ; FACHET, Jozsef

Effect of the experimental lesion of the subcommissural organ on the aldosterone production of the adrenal cortex. Kiserl. orvostud. 16 no.2:178-183 Ap'64

1. Magyar Tudomanyos Akademia Kiserleti orvostudomanyi Kutato Intezet es Budapesti Orvostudomanyi Egyetem Kiserleti Kutato Laboratoriuma.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 29392-66

ACC NR: AT6019810 SOURCE CODE: HU/2505/65/028/002/0155/0161

AUTHOR: Kovach, Aristid G. B.; Monos, Emil; Koltay, Edit

ORG: Experimental Research Laboratory, Medical University of Budapest (Budapesti Orvostudomanyi Egyetem, Kiserleti Kutato Laboratorium)

TITLE: Adrenal blood flow and corticosteroid secretion II. Effect of oxytocin on adrenal blood flow and corticoid secretion before and after acute hypophysectomy in the dog

SOURCE: Academiae scientiarum hungaricae. Acta physiologica, v. 28, no. 2, 1965, 155-161

TOPIC TAGS: blood circulation, corticosteroid, dog, hormone, endocrinology, blood pressure

ABSTRACT: The effect of intravenously-infused oxytocin on adrenal blood flow, hydrocortisone and corticosterone secretion, the blood flow in abdominal organs and in the posterior part of the body, as well as on blood pressure was investigated in dogs before hypophysectomy and 1/2-1 hour after it. Given at a rate of 0.5 U/min, oxytocin increased the adrenal blood flow without increasing the corticosteroid secretion in both normal and hypophysectomized animals. In the control animals, there was a slight decrease in arterial blood pressure. Blood flow in the abdominal organs showed a tendency to increase in the normal and to decrease in the hypophysectomized dogs. The authors thank Mrs. Anna Borosiczky Szass and Miss Magda Kelemen for technical assistance. Orig. art. has: 1 figure and 2 tables. [Orig. art. in Eng.] [JPRS]

SUB CODE: 06 / SUBM DATE: 05Aug64 / ORIG REF: 003 / OTH REF: 015

Card 1/1

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOS, Janos; REMENYI, Viktor

Announcement of a contest. Bany lap 95 no.6:432 Je '62.

1. Orszagos Magyar Banyaszati es Kohaszati Egyesulet Borsodi Csoportja elnoke (for Monos). 2. Orszagos Magyar Banyaszati es Kohaszati Egyesulet Borsodi Csoportja titkara (for Remenyi).

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONCS, Janos

Tasks and long-range plans in the Borsod County coal mining.
Borsod szemle 6 no.2:2-10 '62.

1. Borsodi Szenbanyaszati Trszt igazgatoja.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

BAKSHI, O.A.; MONOSHKOV, A.N.

Use of the "force - time" oscillogram in determining the effect of deformation due to impact. Zav. lab. 30 no.9:1122-1123 '64. (MIRA 18:3)

1. Chelyabinskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

BANSHI, G.A., kand. tekhn. nauk; [illegible], A.L., inzh.

Strength of mechanically macroheterogeneous welded joints under impact tension. Svar. proizv. no.7:28-31 Jl '65. (MIRA 18:8)

1. Chelyabinskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 27812-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/ETI/EWP(k)/EWP(h)/EWP(1) JD
ACC NR: AP6007162 SOURCE CODE: UR/0115/65/000/012/0022/0024

30
B

AUTHOR: Mikoshkov, A. N.

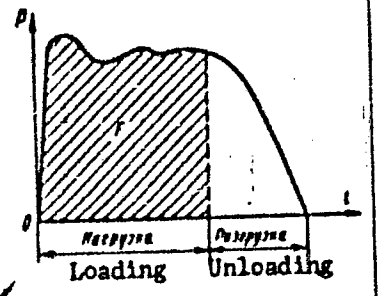
ORG: none

TITLE: Method of dynamic calibration of an impact-load-measuring outfit 14

SOURCE: Izmeritel'naya tekhnika, no. 12, 1965, 22-24

TOPIC TAGS: impact test, impact stress

ABSTRACT: A method is described for determining the force-scale coefficient K_p which is used for interpreting impact-load oscillograms. Such oscillograms show the force-time relation not only during the loading but also during the unloading period of the system (elastic energy). Hence, K_p should be determined only from the hatched area (see figure) which corresponds to the loading phase of by using a special electric-contact device responding to zero speed of the moving system. An experimental varification included an extension test of 3 specimens on a Charpy impact machine equipped with the above special device. The discrepancy between K_p values obtained by the above method and obtained from a static test was only 0.7%. Orig. art. has 1 figure and 7 formulas.



SUB CODE: 13 / SUBM DATE: none / ORIG REF: 005 UDC: 681.2.089.6:620.178.7

Card 1/1 PB

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

HUNGARY

KRISAR, Zoltan, Dr. KOTSIS, Lajos, Dr. DOBJANSCHI, Sandor, Dr. MONOSI, Mihaly, Dr. I. Hospital of Nagyvarad (Oradea), Department of Surgery (department head-chief physician: KRISAR, Zoltan, Dr) (Nagyvaradi (Oradeai) I. sz. Korhaz, Sebeszeti Osztaly).

"Correction of Esophageal Stricture, Caused by Alkali Burns, by Plastic Surgery Using Tissue From the Transverse Colon."

Budapest, Magyar Sebeszet, Vol XIX, No 4, Aug 66, pages 236-243.

Abstract: [Authors' Hungarian summary] Retrosternal reconstruction of the esophagus with transverse colon tissue was performed in 17 cases of esophageal stricture caused by alkali burns. One patient was lost because of peritonitis subsequent to suppurative pleuritis, 14 patients had an uneventful recovery. The late results were satisfactory both from the functional and esthetic aspect. The operation is performed in a single session and, in the presence of a good general condition, without previous stomach fistula. In one case, gastric resection was also performed simultaneously with the plastic operation. The technical and postoperative-nursing problems of esophageal plastic with transverse colon tissue, the sources of the eventual complications and the mode of their treatment are discussed. 1 Hungarian, 19 Western references.

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APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MOROSOV, A., inzh.; MAKHINYA, P., inzh.

Cast-iron powder saves machinery. Izobr.i rats. no.6:4 Je '62. (MIRA 15:6)

(Road machinery—Maintenance and repair)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOSOV, A.G., insh.

Small machines for making pipeline joints. Stroi. truboprov. 8 no.3:18-20 Mr '63. (MIRA 16:5)
(Pipelines—Design and construction)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 22188-66 EWP(k)/EWT(1)/T GG/JXT(C2)

ACC NR: AP6002856 SOURCE CODE: UR/0286/65/000/024/0005/0005

AUTHOR: Monosov, A. Ya.; Vashkovskiy, A. V.

ORG: none

64
B

TITLE: Interaction of electromagnetic and ultrasonic waves

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 24, 1965, 5

TOPIC TAGS: superhigh frequency, magnetic field, ultrasonic vibration, ultrasonic field, ferrite, electromagnetic wave

ABSTRACT: This Author Certificate announces a previously unknown phenomenon of the interaction between electromagnetic oscillations and ultrasonic vibrations (which differ in frequency from the electromagnetic oscillations) in a magnetized ferrite. The discoveries include: 1) under the action of an electromagnetic field on ferrite there arise some electromagnetic oscillations and ultrasonic vibrations as well as the parametric excitations; 2) with the action on ferrite of ultrasonic vibrations and a superhigh frequency (frequency 2f) electromagnetic field, lower than the threshold of the parametric excitation, there arise electromagnetic oscillations (of

Card 1/2

2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

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ACC NR: AP6002856

a frequency f) in the ferrite. /Publication of a discovery registered by the Committee for the Affairs of Inventions and Discoveries at the Council of Ministers, SSSR. No. 42 (Application No. OT-2900 of 21 March 1963)/

SUB CODE: 20/ SUBM DATE: 21Mar63

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APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

S/109/62/007/005/011/021
D266/D307

9.4210

AUTHOR: Monosov, G.G.

TITLE: Paths of electrons in magnetron type devices

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 5, 1962, 851 - 858

TEXT: The purpose of the paper is to study the motion of electrons in crossed field devices and calculate from this the intercepted current. A two-dimensional model is employed and the following simplifications are introduced: 1) Space charge is negligible, 2) phase velocity of the circuit wave is much smaller than the velocity of light, 3) cyclotron frequency is much larger than the signal frequency, which means that the electron paths can be averaged over a cyclotron period, 4) only one space harmonic is present. For a magnetron the high frequency field is taken as the 'cold' field whilst for an M type backward wave oscillator the following electric intensity distribution is assumed. $E(x) = E(0)(1 - x/L)$ where L is the length of the interaction region. Taking into account both components of the electric field the equation of motion is solved for a

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Paths of electrons in magnetron ... S/109/62/007/005/011/021
D266/D307

number of initial phase angles and plotted for the BWO case. The electrons starting at zero phase angle move more quickly to the anode than others. If the a.c. field increases relative to the d.c. field the curvature of the trajectories increases. There are 4 figures.

SUBMITTED: September 25, 1961

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

40945

S/109/62/007/007/013/018
D266/D308

9.4210

AUTHOR: Monosov, G. G.

TITLE: Distribution of the amplitude of a UHF field along the interaction region of magnetron type devices

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962, 1157-1168

TEXT: The mathematical model is essentially the same as that adopted by J. Feinstein and G. S. Kino (Proc. IRE, 1957, 45, 10, 1364), but the author achieves better accuracy by taking account of potential energy and heat losses. From the equation of motion and the condition for the conversation of energy a nonlinear differential equation is derived and solved by numerical methods. It is shown that in the large signal region (microwave field comparable with the d.c. field) the variation of kinetic energy cannot be neglected. The role of other sources of energy is more important for higher values of the parameter $D = \sqrt{I_0 \beta X_c / E_0}$, where E_0 - d.c.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

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D266/D308

Distribution of the ...

field intensity, I_0 - d.c. current, K_c - Pierce's interaction impedance. The output power is calculated both for an M type TWT and BWO. It is shown for the BWO that for a given length of the interaction region, there is an optimum position of the electron beam. The reason for the existence of the optimum is that by approaching the negative electrode the potential energy of the electron beam increases, but at the same time the transfer of this potential energy decreases owing to the weaker microwave field found there. The optimum distance of the electron beam from the negative electrode is a monotonically decreasing function of the length of the interaction region. There are 11 figures.

SUBMITTED: September 25, 1961

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

S/109/63/008/002/007/028
D266/D308

AUTHOR: Monosov, G.G.

TITLE: Theory of magnetron type electronic devices having an emitting negative electrode

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 2, 1963, 248-256

TEXT: The purpose of the paper is to determine theoretically the field distribution, output power and efficiency of an M type device where a part of the negative electrode emits electrons. To simplify the calculations, the following assumptions are made: (i) Only two dimensions are taken into account. (ii) The interaction of the microwave field with the electrons can be represented in terms of the 'cold' field permitting a slow change in the amplitude. (iii) Space charge fields are small in comparison with the impressed field. (iv) The microwave field can be represented by a potential function. (v) Cyclotron frequency is much larger than signal frequency. (vi) Only one space harmonic is taken into account whose velocity agrees

Card 1/2

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

with the axial velocity of the electrons. (vii) Emitted current density is constant, i.e. emission in temperature limited. Subject to the above assumptions and using the method developed in an earlier paper by the author (Radiotekhnika i elektronika, 1962, v. 7, no. 7, 1157) two integro-differential equations are derived, the first valid in the region $0 \leq x \leq y$ (i.e. where electron emission takes place) and the second in the region $y \leq x \leq L$. For the large signal case (microwave field larger than d.c. field) the integro-differential equations are solved analytically by an approximate method. The distribution of microwave field intensity is calculated both for forward and for backward wave interaction from which gain output power and efficiency are determined. The relative lengths of the emitting and non-emitting parts of the negative electrode can also be designed using the formulas derived. It is found that even for infinitely long electrodes and neglecting ohmic losses the microwave intensity has an upper limit. This is due to the increase in the kinetic energy of the electrons. Maximum efficiency is 73% neglecting the kinetic energy. This is not valid, however, when the microwave field is comparable with the d.c. field. There are 9 figures.

SUBMITTED: February 21, 1962

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MOMOSOV M. S.

Report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (VNORiE), Moscow, 8-12 June, 1959

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

SUHL,H.; WALKER,L.R.; LOMIZE,L.G.,[translator]; MONOSOV,Ya.A.,[translator]; KOSTYLEVA,V.Ye.,[translator]; MIRDMANOV,G., redaktor; MOGILEVSKIY, Yu.A., redaktor; IOVLEVA,N.A., tekhnicheskiy redaktor

[Topics in guided wave propagation through gyromagnetic media. Translated from the English] Voprosy volnovodnogo rasprostraneniia elektromagnitnykh voln v girotropnykh sredakh. Perevod s angliiskogo L.G.Lomize, IA.A.Monosova i V.M.Kostylevoi. Moskva, Izd-vo inostrannoi lit-ry, 1955. 189 p.

(Radio waves) (Wave guides) (Electromagnetism) (MIRA 9:3)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOSOV, Y. A., Institute of Radio Techniques and Electeonics

"Ondes Electromagnetiques de grande amplitude en ferrites a l'aimantation alternative," a paper submitted at the International Congress on Ultra High Frequency Circuits and Antennas, Paris, France, 21-26, Oct 57

SO: C-3,800,391

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Monosov, Ya. A.

AUTHOR: Monosov, Ya.A. 109-4-6/20

TITLE: Certain Problems in the Theory of a Cylindrical Waveguide with a Ferrite Rod. (Nekotoryye voprosy teorii tsylindricheskogo volnovoda s ferritovym sterzhnem)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol.2, No.4, pp. 408 - 417 (USSR)

ABSTRACT: The system considered consists of a cylindrical waveguide having a radius r_0 and a cylindrical rod of a radius r_1, which is situated in the centre of the guide. The rod is made of a ferrite material and it is magnetised in the direction of the propagation of the waves (parallel to the axis z), so that its permeability is expressed by the tensor:

$$\|\mu\| = \begin{Vmatrix} \mu & -jk & 0 \\ jk & \mu & 0 \\ 0 & 0 & \mu_2 \end{Vmatrix} \qquad (1)$$

Solutions of the field equations of the system are considered [Refs. 2, 3, 4, 5] and it is pointed out that its propagation constant can be found from a transcendental equation of the type:

Card 1/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Certain Problems in the Theory of A Cylindrical Waveguide with a Ferrite Rod.

$$P_1 Q_2 - P_2 Q_1 = 0 \qquad (5)$$

where P_1, P_2, Q_1 and Q_2 are known functions of the geometrical and electrical parameters of the system. Approximate solutions of the transcendental equation for thin ferrite rods or for weakly-magnetised rods were found by a number of authors [Refs. 4, 6, 3]. The method employed by the author is based on the Newton approximation to the roots of the eq. (5) and it is applicable to the rods of any diameter and to the magnetising fields up to 150 Oe; its accuracy is better than 10%. Eq. (5) is first solved in the absence of a magnetising field ($k = 0$); the resulting propagation copstant is then corrected by a factor:

$$\Delta \gamma_{1,2} = - \frac{n \frac{k}{\mu} \xi_0 + \left(\frac{k}{\mu}\right)^2 \xi_1 + \left(1 - \frac{\mu_z}{\mu}\right) \xi_2}{\xi_3 + \xi_4} \qquad (10)$$

Card 2/3 where ξ_0, ξ_1, ξ_2, ξ_3 and ξ_4 are known functions

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Certain Problems in the Theory of a Cylindrical Waveguide with a Ferrite Rod. 109-4-6/20

of the geometrical and electrical properties of the system. The method can also be used in the evaluation of the angle of rotation of the polarisation plane, of the losses in the ferrite and the eccentricity of the field. The method is only valid in the absence of the reflected fields (perfect matching) in the ferrite-filled section of the guide.
There are 1 figure and 11 references, of which 6 are Slavic.

SUBMITTED: August 28, 1956.

AVAILABLE: Library of Congress.

Card 3/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

DONOSOV, YA A

109-5-4/22

AUTHOR: MONOSOV Ya.A.

TITLE: Characteristics of Faraday's Effect in a Cylindrical Waveguide with a Ferrite Spindle. (Kharakteristiki effekta Faradeya v tsilindricheskom volnovode s ferritovym sterzhnem - Russian)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol 2, Nr 5, pp 547-550 (U.S.S.R.)

ABSTRACT: Results are given of the calculation of the characteristics of magnetic rotation of a wave-polarization plane in ferrite which is placed in a cylindrical waveguide. It is shown that the angle of rotation of the wave-polarization plane is in no linear relation to the radius of the ferrite spindle and that it increases with increasing radius. But in a certain region of filling values the angle of rotation depends very little on the filling radius and the frequency of electromagnetic oscillations. This is of great importance for the utilization of Faraday's effect in high-frequency engineering. Moreover the parameters of magnetic rotation of the wave-polarization plane depend in a high degree on the dielectric constant of ferrite. In sufficiently thin ferrite spindles the angle of rotation considerably increases with increasing ε. The analysis of decay components in ferrite and the ellipse of the wave field connected with them indicates the predominant part which the magnetic decay component plays. It can be shown that the relation of the ferrite parameters to the given characteristics of the equipment is based on the magnetic rotation of the wave-polarization plane. It is demonstrated that the an-

Card 1/2

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Characteristics of Faraday's Effect in a Cylindrical Wave- 109-5-4/22
guide with a Ferrite Spindle.

gle of rotation depends on the concentration of wave energy in ferrite and on the structure of the wave field in the ferrite section. An increase in the concentration of wave energy in ferrite and the approach of the wave-field structure to one of a linearly-polarized wave lead to a substantial increase in Faraday's effect. Both given factors are connected with the retardation of wave-phase velocity in the waveguide with a ferrite spindle.
(12 illustrations and 6 Slavic references).

ASSOCIATION Not Given.
PRESENTED BY
SUBMITTED 28.5.1956
AVAILABLE Library of Congress.
Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

109-8-2/17

AUTHOR: Monosov, Ya.A.

TITLE: Large Amplitude Electro-magnetic Waves in Ferrites with Variable Magnetizing Fields. (Elektromagnitnyye volny s bol'shoy amplitudoy v ferrite pri peremennom podmagnichivanii)

PERIODICAL: Radiotekhnika i Elektronika, 1957, Vol. II, No.8, pp. 951-959 (USSR).

ABSTRACT: Analysis of the electro-magnetic fields in ferrites at ultra-high frequencies is based on the well-known theory of Polder [Ref.1], but this theory deals only with small and constant fields. In the following, an attempt is made to apply the theory to the case when the magnetizing field is comparabl with the ultra-high frequency field and when it is a function of time. Theoretically, the problem is formulated as follows: the ferrite medium is subjected to the action of two fields at frequencies ω and Ω so that the total external field is expressed by equations:

Card 1/5

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

109-8-2/17

Large Amplitude Electro-magnetic Waves in Ferrites with Variable Magnetizing Fields.

$$\vec{H}^0 = \vec{H}_1^0 \cos \omega t + \vec{H}_2^0 \cos \Omega t, \qquad (1)$$

where $\vec{H}_1^0 = H_{x1}^0 \vec{i}_x + H_{y1}^0 \vec{i}_y + H_{z1}^0 \vec{i}_z$;

$$\vec{H}_2^0 = H_2^0 \vec{i}_z ;$$

where $\omega \gg \Omega$. It is necessary to find a solution for the equation of motion for the ferrite medium. The equation of motion (without taking into account the attenuation) is:

$$\frac{d\vec{M}}{dt} = \mu_0 \gamma \left| \vec{M} \vec{H} \right|, \qquad (2)$$

where:

$$\mu_0 = 4\pi \cdot 10^{-7} \text{ H/m};$$

$$|\gamma| = 1.57 \cdot 10^{11} \text{ coul/H}$$

$$\vec{H} = \vec{H}_1 + \vec{H}_0;$$

$$\vec{H}_1 = (H_{1x}\vec{i}_x + H_{1y}\vec{i}_y + H_{1z}\vec{i}_z) \cos \omega t;$$

Card 2/5

$$\vec{H}_0 = H_2 \vec{i}_z \cos \Omega t + \vec{H}_a ;$$

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again, where H_a is a field pertaining to the magnetic-crystallization energy of the ferro-magnetic crystal; H_1 and H_2 take into account the de-magnetizing factor and $\vec{M} = \vec{M}_1 + \vec{M}_0$ is the full magnetic moment of the domain. For the ferrite media, whose permeability has the characteristic as shown in Fig.2, the solution of the equation of motion for the magnetizing frequencies can be expressed as:

$$M_z(\Omega t) = \frac{\frac{\omega_p}{2\pi}}{\sqrt{\left(\frac{\omega_p}{2\pi}\right)^2 + \Omega^2}} \chi^{H_z} \cos(\Omega t - \alpha), \qquad (10)$$

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where:

$$tg\ \alpha = \frac{\Omega}{\omega_p}\ 2\pi$$

in which ω_{p_0} is a critical frequency (which is of the order of 10^6 to 10^9 c/s). On the other hand, the characteristic of the ferrite can be expressed by the tensor:

$$\left\| \mu \right\| = \left\| \begin{matrix} \mu & -jk & 0 \\ jk & \mu & 0 \\ 0 & 0 & \mu_z \end{matrix} \right\| \qquad (13)$$

where:

$$\frac{\mu}{\mu_0} = \frac{\mu_z}{\mu_0} = 1,$$

$$\frac{k}{\mu_0} = \frac{\mu_0 |\gamma| H_0}{\omega} \chi^{(\Omega)} e^{j(\Omega t - \alpha)}.$$

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

109-8-2/17

Large Amplitude Electro-magnetic Waves in Ferrites with Variable Magnetizing Fields.

From the above theoretical investigations, it follows that above certain critical frequencies ω_p, the parameters of the medium follow the magnetizing field, but there is a certain phase-shift. This phase-shift is linearly-related to the amplitude of the magnetizing field and does not depend on the amplitude of the ultra-high frequency field. The above results were fully confirmed by carrying out an experimental investigation at the wavelength of 3 cm. The experimental equipment is shown diagrammatically in Fig.3 and three curves of the phase shift angle ϕ^0 against H (the magnetizing field) are shown in Fig.4. Fig.5 shows a curve (1) of the change of the phase-shift $\Delta\phi$ for an increased high-frequency power, while curve 2 shows $\Delta\phi$ for ferrite kept at a temperature of 150 ^{0}C. The author expresses his appreciation to A.A. Pistolkors and to Prof. A.L. Mikaelyan for their kind attention.
There are 8 non-Slavic references, and 5 figures.

SUBMITTED: January 22, 1957.

AVAILABLE: Library of Congress.

Card 5/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

SOV/109-3-11-13/13

AUTHORS: Monosov, Ya.A. and Turov, Ye.A.

TITLE: Seminar on Ferromagnetic Resonance (Seminar po ferromagnitnomu rezonansu)

PERIODICAL: Radiotekhnika i Elektronika, 1958, Vol 3, Nr 11, p 1407 (USSR)

ABSTRACT: Between February 8 - 13, 1958, a seminar on ferromagnetic resonance was held at the Institut fiziki metallov (Institute of Physics of Metals) in Sverdlovsk. The seminar was attended by physicists and scientists from Sverdlovsk, Moscow, Leningrad, Khar'kov and Perm. A number of works were read and discussed. These dealt with the following problems of the ferromagnetic resonance:

1) The theory of spin waves and various types of magnetisation oscillations in ferromagnetics.
2) Relaxation processes and the width of the line of the ferromagnetic resonant absorption.
3) Properties of the ferromagnetic resonance in metals.
4) Thermo-dynamic theory of the ferromagnetic resonance and the effect of magnetic crystallo-graphic anisotropy.

Card1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Seminar on Ferromagnetic Resonance SOV/109-3-11-13/13

5) Non-linear effects in ferrites during the ferromagnetic resonance and the prospects of their applications.

SUBMITTED: April 28, 1958

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOSOV /a A

report submitted for the Centennial Meeting of the Scientific Technological Society of Radio Engineering and Electrical Communications im. A. S. Popov (NTORE), Moscow, 5-12 June. 1957

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

24.2200,24.7900

77193
SOV/109-5-1-6/20

AUTHOR: Monosov, Ya. A.

TITLE: On the Theory of Nonlinear Phenomena in the Ferrites at Super-High Frequencies. Part I. Parametrically Related Magnetostatic Oscillations in Ferrite at Pumping Action

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 1, pp 59-74 (USSR)

ABSTRACT: The main subject of this study is long-wave electromagnetic oscillations of a small ferrite sample at frequencies ω_1 and ω_2 in the presence of a powerful pumping of frequency $\omega_3 = \omega_1 + \omega_2$. The purpose of this study is to develop a method for calculation of the additional absorption in the ferrites at super-high frequencies. (1) Method of Solution. A ferrite sample in the form of a spheroid of rotation is placed in the under-magnetizing field acting along the oz-axis and in the alternating magnetic field of

Card 1/21

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

On the Theory of Nonlinear Phenomena in the Ferrites at Super-High Frequencies. Part I. Parametrically Related Magnetostatic Oscillations in Ferrite at Pumping Action

77193
SOV/109-5-1-6/20

frequency ω_3 circularly polarized in the plane XOY. Well-known equations given in Reference 5 of this abstract describe the electrodynamic state existing under these conditions. According to these equations a magnetostatic potential ψ:

$$\vec{h} = \operatorname{grad}\psi. \qquad (4)$$

is introduced and Equation (5) is obtained.

$$\nabla^2\psi = -4\pi \operatorname{div}\vec{M}. \qquad (5)$$

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77194
SOV/109-5-1-7/20

AUTHORS: Zubkov, V. I., Monosov, Ya. A.

TITLE: Some Problems in the Theory of Parametric Amplifiers

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 1, pp 75-89 (USSR)

ABSTRACT: In the study, the natural frequencies (frequencies of parametric coupling) and resonance curves of parametrically coupled circuits are investigated. (1) Oscillations in parametrically connected systems. The system shown in Fig. 1a is under discussion. Circuits 1, 2, and 3 are named signal, auxiliary, and boosting circuits, respectively, just as in Reference (4) of this abstract. Let ω_1' be the frequency of the generator, ω_2' be the frequency of emf in the auxiliary circuit, and let ω_3 be the frequency of the pumping generator. Then, the following set of equations holds:

Card ~~1/16~~

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

24.2200, 24.7900

77136
SOV/109-5-1-9/20

AUTHORS: Menosov, Ye. A., Vashkovskiy, A. V.

TITLE: Experimental Investigation of Nonlinear Phenomena in Ferrites at SHF

PERIODICAL: Radiotekhnika i Elektronika, 1960, Vol 5, Nr 1, pp 105-116 (USSR)

ABSTRACT: The paper is an experimental study of nonlinear phenomena taking place in ferrite at certain critical amplitudes of the SHF field. The phenomena consist in the appearance of an additional absorption region and in the widening of the basic resonance absorption line. The investigation of the above phenomena was conducted at a high power level in the range of 3-cm waves. The block diagram of the measuring installation used for the study of additional absorption is shown in Fig. 1.

Card 1/11

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

77780
SOV/109-5-2-13/20

AUTHOR: Monosov, Ya. A.

TITLE: On the Theory of Nonlinear Phenomena in Ferrite at SHF. Part II. Parametric Phenomena in Ferrite

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol 5, Nr 2, pp 278-287 (USSR)

ABSTRACT: Reference is made to part I of this study where long wave phenomena in a small ferrite spheroid under the influence of pumping were discussed. A conjoint solution in first approximation of equations covering pumping amplitudes was found:

$$\left.\begin{aligned} \operatorname{curl}\vec{h} &= 0, \\ \operatorname{div}\vec{h} &= 0, \end{aligned}\right\} \qquad (1)$$

$$\frac{d\dot{M}_E}{dt} = -|\gamma|[\dot{M}_E\vec{H}] \qquad (2)$$

Card 1/5

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONGSOV, Ya. A.

6

V.A. FOK L.A. VAINSHTEYN

a. VA Fok and LA Vainshtein - 'Cross-Sectional Diffusion in Short-Wave Diffraction on Convex Cylinder.'

A.L. MIKHAELYAN

b. AL Mikhaelyan - 'Phenomenon of Interconnection of Magnetized Ferrite Patterns.'

c. EE Kotsanelenbaum - 'Diffraction on Wide Aperture in Wide-Wave Guide.'

d. YaA Monsov - 'On Theory of Parametric Resonance in Ferrites on USF.'

GI Makarov - "The Propagation of Electromagnetic Waves in Smooth Ionospheric Layers."

reports to be submitted for the Intl. Symposium on Electromagnetic Theory and Antennas, Copenhagen, Denmark, June 1962.

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOSOV, Ya. A.

"On theory of Parametric resonance in ferrites on U. H. F."

Paper to be presented on RADIO (SCIENTIFIC) UNION, INTERNATIONAL (URSI) - Symposium on Electromagnetic theory and Antennas - Copenhagen, Denmark, 25-30 Jun 62

1. Institute of Radio Engineering and Electronics, Academy of Science USSR

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

9,2572

S/109/62/007/006/020/024
D234/D308

AUTHORS: Monosov, Ya. A. and Dmitriyenko, A. N.

TITLE: Limitation of the possibility of creating a ferrite magnetostatic amplifier owing to the influence of spin waves

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 6, 1962, 1050-1053

TEXT: The limitation can be estimated in a comparatively simple way by neglecting the mutual influence of long and short wave oscillations of magnetization in ferrites and then comparing their threshold levels of parametric excitation. It is concluded that if the relaxation constant of short wave oscillations is approximately equal to that of long wave oscillations, a parametric ferrite amplifier of magnetostatic type appears to be impossible in case of transverse polarization of the pumping field. If the first constant is smaller than the second, there is a limitation for both transverse and longitudinal pumping, and if it is larger, the limitation

Card 1/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

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Limitation of the ... S/109/62/007/006/020/024
D234/D308

of amplification factor due to spin waves is weakened. There are 3 figures.

SUBMITTED: July 25, 1961 (initially)
January 13, 1962 (after correction)

Card 2/2

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

40942

S/109/62/007/007/010/018
D271/D308

9,2572

AUTHOR: Monosov, Ya. A.

TITLE: Theory of the magnetostatic ferrite amplifier for UHF

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962, 1130-1139

TEXT: Characteristic data, viz. threshold excitation level, gain and bandwidth for a parametric amplifier using magnetized ferrite subjected to a pumping field are calculated and expressed in terms of parameters of the ferrite and resonator. A spherical resonator with a small ferrite sphere magnetized along its Oz axis is considered. High level magnetic pumping field is directed along the same axis. Equations are formulated for the regions inside and outside the ferrite, and a system of equations is derived which describes parametric phenomena in the ferrite. Attenuations in the ferrite and resonator are taken into account, as well as the oscillation source. An approximate expression for the gain is obtained from the equality of the ratio of input and output power and of the

Card 1/3

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

ratio of reactive energies stored in the resonator, with and without pumping field. The threshold of parametric excitation is analyzed and the condition of critical coupling is discussed. The ratio of ferrite and resonator dimensions, the resonator magnification factor and the ferrite magnetization must exceed certain critical values which are lower when the frequency is higher and the mode number lower. Hence the great practical interest in the mode 2,0. When the coupling exceeds the critical value, both double- and single-frequency modes exist and conditions are derived for both modes. The threshold level is lower in the double frequency mode if the Q-factor of the resonator is increased. The gain is determined for both modes of operation. For 2,0 oscillations the single-frequency operation corresponds to synchronous amplification at half-pumping frequency, and difficulties arise because the gain depends on phases of signal and pumping frequency; double-frequency operation is free of this disadvantage. The gain-bandwidth product depends on the mode of operation and increases, in both cases, as coupling approaches the critical value. The supervision and advice of A. A. Pistol'kors are acknowledged, and H. Suhl (J. Appl. Phys.,

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

Theory of the magnetostatic ... S/109/62/007/007/010/018
D271/D308

v. 28, no. 11, 1957, 1225) is indicated as the originator of the analyzed system.

SUBMITTED: November 9, 1961

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40943

S/109/62/007/007/011/018
D271/D308

9.2572

AUTHORS: Zubkov, V. I. and Monosov, Ya. A.

TITLE: Amplification of UHF oscillations whose frequency is higher than the pumping frequency using ferrites (Theory)

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962, 1140-1151

TEXT: Parametric excitation in ferrites is analyzed, with emphasis on higher than pumping frequencies; the pumping field is parallel to the magnetizing field; new possibilities of amplification and of converting lower frequencies into higher than pumping frequencies are investigated. A spherical ferrite body is magnetized along its Oz axis, and the magnetic field at pumping frequency ω_0 is linearly polarized along the same axis. Fundamental field equations lead to an infinite system of differential equations for magnetostatic potentials; these are solved using Legendre functions and a system

Card 1/3

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of equations is obtained which describes a parametrically coupled oscillating system with an infinite number of degrees of freedom. An equivalent system of RLC circuits is given. The threshold of parametric excitation and the tuning conditions are obtained from the above equations taking into account ferrite losses. The relationship between the threshold level and tuning conditions is discussed and it is concluded that higher than pumping frequencies cannot be separated from self-oscillations, unless auxiliary circuits are used, e.g. based on selective properties of the resonator in which the ferrite is placed. Amplification of below-pumping frequencies, conversion of below-pumping to above-pumping frequencies and amplification of above-pumping frequencies are compared and it is found that the effect decreases in the above order. The possibility of conversion to higher than pumping frequencies, making use of resonator selectivity, is analytically investigated and it is shown that the conversion factor is generally much smaller than the amplification coefficient although a judicious choice of parameters permits a lossless conversion. The frequency of particular interest is the lowest of the possible frequencies which

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Amplification of UHF ... S/109/62/007/007/011/018
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are higher than the pumping frequency. There are 2 figures.

SUBMITTED: September 12, 1961 (initially)
December 14, 1961 (after revision)

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42116

S/109/62/007/010/003/012
D271/D308

AUTHOR: Monosov, Ya.A.

TITLE: Fluctuation radiation of a small ferrite body at ferromagnetic resonance

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 10, 1962, 1730 - 1737

TEXT: Thermal radiation of a ferrite element, small in comparison with wavelength, is analyzed, and it is shown that radiation power greatly increases at resonance, for all modes. The problem is of importance for the development of low-noise parametric ferrite amplifiers. Thermal electromagnetic fluctuations in a magnetized ferrite element cause radiation which is assumed to be associated with magnetic losses while dielectric losses are neglected. The energy of fluctuation radiation is calculated by S.M. Rytov's method (Teoriya elektricheskikh fluktuatsiy i teplovogo izlucheniya (Theory of Electric Fluctuations and Thermal Radiation), AN SSSR, 1953). The method makes use of the concept of 'lateral magnetization' which describes the phenomena of thermal fluctuations in a medium with magnetic

Card 1/3

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losses. Fundamental equations are written out for the internal and external regions, and their solution is produced in the form of differential equation for the quasi-magnetostatic potential ψ_{nm} where n and m are mode indices. Relation between amplitude of radiated field and amplitude of thermal electromagnetic functions within ferrite is derived for the 2,0 mode which is of particular interest for ferrite amplifiers. The amplitude near resonance is so much greater than the amplitudes of non-resonant modes that these can be neglected when the resonant mode is present. The ferrite radiation power is calculated for a resonance of the 2,0 mode and found proportional to the ration $M_0/\Delta H$ and to the electrical dimensions of the ferrite element taken to the $(2n + 1)^{th}$ power. The radiation power is very small. In practice, the ferrite body is placed in a resonator; both are assumed spherical and the energy generated by the ferrite in the resonator is calculated, for single- and double-frequency operations. In double-frequency conditions, the density of fluctuation energy is much greater than in single-frequency operation, and it does not depend on saturation magnetization. A.A. Pistol'kors and S.M. Rytov are thanked for discussing the work with

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Fluctuation radiation of a small ... S/109/62/007/010/003/012
D271/D308

the author.

SUBMITTED: July 31, 1962 (initially)
November 22, 1961 (after revision)

Card 3/3

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42117

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D271/D308

71

AUTHOR: Monosov, Ya.A.

TITLE: Theory of the noise factor of ferrite microwave amplifiers

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 10, 1962, 1738 - 1748

TEXT: The noise factor of a ferrite parametric magnetostatic amplifier is calculated and the influence of the main parameters is discussed. In practice, when operational conditions are rationally chosen, long-wave fluctuations of magnetization at signal and ancillary frequencies, and resonator wall conductance fluctuations are main sources of noise. The noise factor is calculated for a spherical ferrite body (radius a) placed in a spherical resonator (radius r_o). Fluctuation oscillations of a regenerated ferrite element are calculated using the concept of lateral magnetization which describes the phenomena of thermal fluctuations in the ferrite. Field equations are formulated and solved, by successive approximations, in non-linear approximation relatively to pumping frequency. Fluc-

Card 1/2

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tuation radiation of resonator walls is calculated using the concept of lateral random surface field which describes thermal fluctuations in resonator walls. Spectral density of fluctuation energy in a resonator with a regenerated ferrite element is analyzed taking into account both single- and double-frequency operating conditions. The final formula for the noise factor is discussed and the following conclusions are reached: in single-frequency operation, the ferrite should be chosen with a narrow resonance line and great saturation magnetization, the resonator Q-factor should be high and load Q - low, ferrite radius related to wavelength - large and resonator radius - small. In double-frequency operation the resonance line width of the ferrite should be small, working frequency - high, coupling to the load - high. Amplifier noise decreases as $(a/r_o)^5$.

The large noise factor is explained as a weak reaction of the regenerated ferrite to the external resonator field, compared with a strong reaction to the internal field. A.A. Pistol'kors and S.M. Rytov are thanked for discussion. There are 3 figures.

SUBMITTED: July 31, 1961 (initially)
October 28, 1961 (after revision)

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S/109/63/008/003/027/027
D271/D308

AUTHORS: Moncsov, Ya. A., and Zubkov, V. I.

TITLE: Noise in parametric ferrite amplifiers and UHF converters using supra-pumping frequencies

PERIODICAL: Radiotekhnika i elektronika, v. 8, no. 3, 1963, 533-535

TEXT: The authors calculate the noise factor of parametric magneto-static amplifiers at supra-pumping frequencies. The work is a continuation of a previously published paper by Monosov (Radiotekhnika i elektronika, v. 7, no. 7, 1962, 1140). The relation between the noise factor and pumping power is plotted. In a frequency converter, noise consists of constituents at all signal frequencies which are converted to the output frequency in the same manner as the signal frequencies themselves, with the same conversion parameters. In an amplifier in which $\omega_3 > \omega_0$ (where ω_0 is the pumping frequency), basic noise is

Card 1/3

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amplified by a factor K_{13} which is much greater than K_{33} by which the signal is amplified. Noise factors are calculated for an amplifier F_{11} in which $\omega_1 > \omega_0$, for a converter from ω_1 to ω_k, F_{ik}, and for an amplifier in which $\omega_3 > \omega_0$, F_{33}. The expression used for F_{ik} is

$$F_{ik} = \frac{\sum_{l=1}^{\infty} U_{flk} + \sum_{l=1}^{\infty} U_{rlk}}{U_{in\ ik}}, \qquad (2)$$

where U_{fli} is spectral density of radiation from the ferrite at frequency ω_l recalculated for ω_i; U_{rli}--spectral density of radiation from resonator walls at frequency ω_l recalculated

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for ω_1; $U_{in\ 1i}$--spectral density of input noise energy at ω_1 amplified in the resonator with ferrite and recalculated for ω_1. A converter from infra- to supra-pumping frequencies can have a noise factor as low as that of an amplifier operating at infra-pumping frequencies. Amplifiers operating at supra-pumping frequencies and converters from supra- to infra-pumping frequencies are bound to have a high noise factor. There is 1 figure.

SUBMITTED: July 31, 1962

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 21568-66 EWT(1)/EWT(m)/T/EWP(t) [redacted] JD

ACC NR: AP6008750

SOURCE CODE: UR/0386/66/003/006/0250/0252

AUTHOR: Monosov, Ya. A.; Surin, V. V.; Tulaykova, A. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences, SSSR (Institute radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Investigation of high-frequency oscillations in single-crystal magnesium manganese ferrite

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 6, 1966, 250-252

TOPIC TAGS: ferrite, magnesium compound, nonlinear effect, single crystal, ferromagnetic resonance, spin wave spectrum

ABSTRACT: To show that the oscillations accompanying nonlinear ferromagnetic-resonance processes in yttrium iron garnets (YIG), previously reported by one of the authors (Monosov, with A. V. Vashkovskiy, IEE Conf. Publ. no. 13, 63, 1965), should be observed in all ferrites, the authors have experimentally investigated the high-frequency oscillations in single-crystal MgMn ferrite at 9300 Mc, with the microwave field transversely polarized and the constant magnetic field ranging from 700 to 3000 oe. The sample was placed in a resonator, and was close in shape to a plate 0.5 mm thick. The high-frequency oscillations were detected with a spectrum analyzer using the reflected microwave power. The tests show that: (1) The oscillations have a threshold, at which the pump power is double that of YIG. The dependence of the amplitude on the

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ACC NR: AP6008750

constant magnetic field is reminiscent of the dependence of the additional-absorption curve. The observation of the oscillations can be used to determine certain characteristics of the nonlinear resonance, such as the width of the spin-wave resonance curve. (2) The amplitude of the oscillations saturates with increasing pump power, and its value is 20--30 dB lower than in YIG. (3) The oscillation spectrum extends over a certain frequency region. As the pump threshold increases the frequency region shifts from 0.5--0.9 to 1.8--2.2 Mc. The threshold pump power increases with increasing sample dimensions, owing to the deterioration of the thermal conditions in the sample. The pump threshold for different samples may therefore differ from those obtained by a factor 1.5--2. It is also observed that the intensity of the hf oscillations depends markedly on the sample orientation. Orig. art. has: 3 figures.

SUB CODE: 20/ SUBM DATE: 03Feb66/ ORIG REF: 001/ OTH REF: 002

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L 32208-66 FBD/EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) WG
ACC NR: AP6020793 SOURCE CODE: UR/0386/66/003/012/0476/0480

58
56
B

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences USSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Retarded nonstationary reradiation of electromagnetic signals by a parametrically regenerated ferrite

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 3, no. 12, 1966, 476-480

TOPIC TAGS: parametric amplifier, ferrite, parametric oscillator

ABSTRACT: The authors report observation, for the first time, of nonstationary parametric amplification of electromagnetic oscillations half the pump frequency in magnetized ferrite. The instant of emission of the amplified signal was delayed somewhat relative to the pump front. The experiments were made with single-crystal yttrium-iron-garnet samples of 1-3 mm size and of various shapes (unfinished chips, discs, spheres). They were placed in a cavity with Q ~ 600 tuned to the pump frequency f = 9340 Mcs. The signal of 4670 Mcs was applied and extracted with a coupling loop. The pump power was 0.2-1.3 W, which is higher than the threshold for parametric excitation of spin waves but insufficient for noticeable

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parametric regeneration of magnetostatic oscillations in the ferrite. The non-stationary amplification took place at several fixed values of the magnetic field, ranging from 1000 to 2700 Oe. The tests show that there exists a certain active time interval during which retarded reradiation at the same frequency takes place in the presence of a signal of frequency f/2. No reradiation is observed if the input signal lies outside this active interval. Inside the interval, reradiation took place at a delay of about 80 μsec, in the form of a radio pulse with carrier f/2 and a steep leading front. To observe the effect it is necessary that the pump be turned on continuously. The least interruption of the pump prevents re-radiation. The power gain, defined as the ratio of the maximum aplitude of the reradiated radio pulse to the amplitude of the input signal, fluctuated with the pump power from 4 to 25 db, the maximum gain corresponding to a pump power of 0.35 watts. The authors thank Professor V. V. Migulin for continuous interest in the work and useful advice, and V. M. Mikhaylov for help with the experiments. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 14Apr66/ OTH REF: 001

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

L 45096-66 EWT(1)/EEC(k)-2/T/EWP(k) IJP(c) WG/RTW

ACC NR: AP6024883 SOURCE CODE: UR/0056/66/051/001/0222/0229

AUTHOR: Monosov, Ya. A.

ORG: Institute of Radioengineering and Electronics, AN SSSR (Institut radiotekhniki i elektroniki AN SSSR)

TITLE: Certain properties of nonlinear ferromagnetic resonance

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v.51, no.1, 1966, 222-229

TOPIC TAGS: ferromagnet, ferrite, ferromagnetic resonance, parametric amplifier, magnetoelasticity, SPIN WAVE

ABSTRACT: A theory of nonlinear ferromagnetic resonance (NFMR) is proposed which takes into account the inertial mechanism of variation of the longitudinal component of the macroscopic magnetization vector. Instability of NFMR is recognized and the universality of the effect is established above the excitation threshold. The instability is of a harmonic nature. Due to magnetostriction, the instability is usually accompanied by lattice oscillations which induce scattering of parametrically excited spin waves. This in turn results in electromagnetic emission of UHF waves from the crystal which are predominantly of the nature of noise. The results obtained satisfactorily explain the

Card 1/2

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ACC NR: AP6024883

large number of "anomalous" experimental data on NFMR obtained during the last few years. Orig. art. has: 16 formulas and 2 figures. [CS]

SUB CODE: 20/ SUBM DATE: 21Jan66/ ORIG REF: 009/ OTH REF: 011

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

ACC NR: AP7003530 SOURCE CODE: UR/0386/67/005/001/0003/0006

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences SSSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Echo pulses in yttrium iron garnet

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki. Pis'ma v redaktsiyu. Prilozheniye, v. 5, no. 1, 1967, 3-6

TOPIC TAGS: yttrium iron garnet, ferrite, radar echo, microwave component

ABSTRACT: The authors present results of experiments aimed at observing echo pulses in an axially magnetized ferrite parallelepiped, and indicating that the observed effect is nonlinear. A single-crystal yttrium iron garnet in the form of a parallelepiped was used in the experiments. The microwave signals were fed and picked-off by coupling loops comprising continuations of the internal conductors of coaxial cables. The experiments were made at 1 GHz and the microwave signal peak power ranged from fractions of a milliwatt to hundreds of milliwatts. The ferrite sample was glued to a brass plate, on the opposite side of which was secured an electroacoustic converter to apply lateral elastic oscillations to the ferrite. The magnetizing field was directed along the largest axis of the parallelepiped. When the magnetizing field was varied from 350 to 370 Oe, echo pulses are observed in addition to the exciting microwave pulse. The observed echo-pulse duration does not depend on the duration of the

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ACC NR: AP7003530

exciting pulse (if the latter exceeds 1 μsec) and amounts to approximately 1 μsec. The echo-pulse delay time does not change when the duration of the exciting pulse is varied from 1 to 20 μsec. The delay time depends on the peak power of the exciting pulse, rising from 1 to 4 μsec as the power is multiplied 50-fold. The observed echo pulses are strongly influenced by lateral elastic hf signals (f = 300 kHz). By properly choosing the frequency of the external signal, the amplitude of the first echo pulse can be increased by 10 - 15 db. A number of the observed characteristics (range of magnetization fields in which the echo pulses are observed, strong dispersion, character of dependence of the delay time on the magnetizing field) are similar to those of magnetostatic echo pulses, but other characteristics (independence of echo-pulse duration of the duration of the exciting pulse, shift of echo pulse with change in duration of the exciting pulse following its trailing edge) are unusual. It is possible that the anomalous behavior of the observed echo signals is due to the same causes as the nonstationary delayed re-emission. The authors thank Professor V. V. Migulin for interest in the work and useful advice, and G. B. Mikhin for help with the experiments and preparing the mock-up. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 27Sep66/ ORIG REF: 002/ OTH REF: 002

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

ACC NR: AR6036909 (A,N) SOURCE CODE: UR/0181/66/008/011/3377/3379

AUTHOR: Tulaykova, A. A.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, AN SSSR, Moscow (Institut radiotekhniki i elektroniki AN SSSR)

TITLE: Hysteresis of oscillations that accompany nonlinear ferromagnetic resonance

SOURCE: Fizika tverdogo tela, v. 8, no. 11, 1966, 3377-3379

TOPIC TAGS: magnetic hysteresis, ferromagnetic resonance, parametric resonance, yttrium iron garnet, nonlinear effect, magnetization, microwave oscillation

ABSTRACT: The authors discuss the hysteresis of the high frequency oscillations (~1 MHz) that accompany nonlinear processes in single-crystal yttrium garnet at a frequency equal to half the pump frequency. The hysteresis of these oscillations which are observed at pump powers greatly exceeding threshold was investigated under continuous pump operation at a frequency of 9350 MHz. The sample was placed in a homogeneous magnetic microwave field transverse to the magnetizing field. The tested yttrium garnet single crystal was irregular in shape, close to that of a plate measuring 2.8 x 1.7 x 0.7 mm. The high frequency oscillations were revealed by the reflected microwave power. The amplitude of the high frequency oscillations, plotted against the magnetizing field, exhibits a hysteresis on the low-frequency side, and a region of width of approximately 150 Oe. The hysteresis region goes through a maximum with increasing pump power, and then vanishes. Hysteresis is revealed also

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ACC NR: AP6036989

in the plot of the threshold pump level against the magnetizing field. No explanation can be offered as yet for this hysteresis, which is shown to be insensitive to changes in the plate dimensions. This hysteresis is different from the hysteresis of the nonlinear spin-wave resonance, whose width in yttrium garnets amounts to several tenths of an oersted, whereas the width of the hysteresis described here reaches 200 Oe. The authors thank G. F. Filat'yev for help with the experiment. Orig. art. has: 2 figures.

SUB CODE: 20/ SUBM DATE: 06May66

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

ACC NR: AP6[illegible]

SOURCE CODE: UR/0056/66/051/005/1288/1291

AUTHOR: Lisovskiy, F. V.; Monosov, Ya. A.

ORG: Institute of Radio Engineering and Electronics, Academy of Sciences SSSR (Institut radiotekhniki i elektroniki Akademii nauk SSSR)

TITLE: Nonstationary delayed re-emission of electromagnetic signals from a ferrite in the case of parametric regeneration

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 5, 1966, 1288-1291

TOPIC TAGS: ferrite, parametric converter, yttrium iron garnet, microwave oscillator, spin wave

ABSTRACT: This is a continuation of earlier work (ZhETF Pis'ma v. 3, 476, 1966) reporting observation of nonstationary retarded re-emission of electromagnetic signals by parametrically regenerated ferrites. The present article describes the experiments in greater detail and presents the dependence of the time characteristics of the process on the pump power. It is noted that there exists an "active" time interval after turning on the pump frequency, in which the presence of a signal at half the pump frequency gives rise to re-emission. The experiments were made with single-crystal yttrium iron garnet (YIG) with saturation magnetization 1750 G and a resonance-curve width 2 - 3 Oe. The ferrite samples had various shapes and were placed in a resonator tuned to the pump frequency f = 9340 MHz. Nonstationary delayed re-emission of the

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ACC NR: AP6037054

electromagnetic oscillations by the ferrite was observed at several definite values of the constant magnetic field, the range of variation of which was 1000 - 2700 Oe, and in a wide range of pump power levels. The pump power level was somewhat higher than the threshold of parametric excitation of the spin waves and much lower than the threshold of the excitation of magnetostatic oscillations in the ferrite. A selection phenomenon was observed, wherein the active interval was delayed relative to the pump front by 1 - 5 μsec, and the instant of the appearance of the re-emission relative to the active interval was delayed by 5 - 50 μsec. The results have also shown that the application of an elastic force on the sample affected the duration of the active interval and the delay times. The authors thank Professor V. V. Migulin for continuous interest in the work and useful advice, and also B. M Mikhaylov for help with the experiment. Orig. art. has: 5 figures.

SUB CODE: 20/ SUBM DATE: 07May66/ ORIG REF: 003/ OTH REF: 005

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APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

SHEVYREV, V.Ye.; ANIKINA, A.S.; KOBOYEV, I.P.; MONOSOVA, A.P.; PANFILOV, N.D.; ROMANSKIY, A.K.; SAVEL'YEV, N.N., otv. za vypusk; LARIONOVA, V.I., tekhn.red.

[The 40th anniversary of the Karelean A.S.S.R.; statistics] 40 let Karel'skoi ASSR; statisticheskii sbornik. Petrozavodsk, Gosstatizdat, 1960. 112 p.
(MIRA 13:11)

1. Karelian A.S.S.R. Statisticheskoye upravleniye. 2. Nachal'nik Statisticheskogo upravleniya Karel'skoy ASSR (for Shevyrev). 3. Statisticheskoye upravleniye Karel'skoy ASSR (for Anikina, Koboyev, Monosova, Panfilov, Romanskiy).
(Karelia--Statistics)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MOHOSOVA, F.Ye.

Connection between the summation of excitations and the accommodative ability of nerves. Uch.zap.Len.un.no.138: 304-308 '52.
(MLRA 9:6)

1.Kafedra fiziologii zhivotnykh Leningradskogo gosudarstvennogo universiteta imeni A.A.Zhdanova.
(NERVES)

APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7"

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LATMANIZOVA, L.V.; RAKOV, A.I.; IVANOV, G.G.; MEL'NIKOV, R.A.; MOHOSOVA, F.Ye.

Physiological study of functional peculiarities of the human nervous system in cancer of the stomach. Biul.eksp.biol. i med. 41 no.3: 18-22 Mr '56. (MLRA 9:7)

1. Iz kafedry fiziologii i anatomii (zav.-prof. L.V.Latmanizova) Pedagogicheskogo instituta, 2-go khirurgicheskogo otdeleniya (zav.-prof. A.I.Rakov) i klinicheskoy laboratorii (zav. G.G.Ivanov) Instituta onkologii AMN SSSR, Leningrad. Predstavlena deystvitel'nym chlenom AMN SSSR N.N.Petrovym.

(STOMACH, neoplasms
electrocorticography in)
(ELECTROENCEPHALOGRAPHY, in various dis.
electrocorticography in cancer of stomach)

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LOSEVA, A.G.; KHAZENSON, L.B.; D'YACHKOVA, Ye.A.; MONOSOVA, S.M.

Closed outbreak of diseases caused by enteropathogenic Escherichia coli of the serological type O111. Trudy Len. inst. epid. i mikrobiol. 21:33-39'60. (MIRA 16:6)

1. Iz kafedry pediatrii I Leningradskogo meditsinskogo instituta, sektora epidemiologii i laboratorii kishechnykh infektsiy Leningradskogo instituta epidemiologii, mikrobiologii i gigiyeny imeni Pastera, Pervoy Leningradskoy detskoy bol'nitsy i Sanitarno-epidemiologicheskoy stantsii Oktyabr'skogo rayona Leningrada.
(LENINGRAD—ESCHERICHIA COLI)
(LENINGRAD—INTESTINES—DISEASES)

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MONOSTORI, A

CA

25

PROCESSES AND PROPERTIES INDEX

The effect of dyeing on the strength of wool yarns and fabrics. Antal Monostori. *Anyagvizsgálati Közlöny* 15, 29-64(1957).—Some kinds of dyes (e. g., Brilliant Wellblau O Extra, Indigo BaSF Pulver K, Rosin GGP and Tartrasin O) decrease the strength of fabrics. Rhodamin B and Tartrasin O in a strongly acid bath have a good effect. The greatest decrease of strength were 20-29% on tearing and 17-28% on stretching. Boiling during the dyeing procedure sometimes increases strength since various ppts. are formed which sediment within the fibers.

S. S. de Finály

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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MONOSTORI-A

Mach 1

Theoretical examination of the working of combing segments used on Heilmann combers. (In English) A. Monostori. *Acta Technica Academiae Scientiarum Hungaricae*, Vol. 12, 1955, No. 1–2, pp. 3–46.

On the premise of certain obvious abstractions and restricting the notion of combing to the removal of fibres shorter than a pre-set length, the author determines the number of layers in the sliver lap to be combed and its variation during the process of combing, working on the assumption of a purely geometric fibre rearrangement, i.e. at invariable specific fibre density involving constant interfibre friction. For simpler mathematical treatment the notion of the idealized segment having an infinite number of needle rows set infinitely close to each other is introduced. The specific amount of short fibres removed, the degree of combing attained and the variation of the rate of short fibre (mil) removal along the segment are determined. The equation of condition of a segment yielding a predetermined degree of combing has been deduced and therefrom the relation between the combing work and the desired degree of combing derived. Various segments of constant needle row characteristics of uniform noilage load, of uniform combing force and of uniform absolute combing work are compared. The basic principles determining the design of needle rows and the design of equal strength (with respect to the needles) primarily for segments of uniform noilage load is dealt with. The application of these calculations to segments of a finite number of needle rows and finally the principle of experimental methods for determining the values of the two principal proportion factors figuring in the the theoretic deductions are established.

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MONOSTORI, Andra

Application of spray-drying systems in preparing fine ceramic powders. Epitoanyag 15 no.5:184-187 My '63.

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"APPROVED FOR RELEASE: 03/13/2001 CIA-RDP86-00513R001135120001-7

MONOSTORI, Gyula, dr.

A new weapon against alcohol. Auto motor 16 no.4:23
21 F '63.

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