MOVSHOVICH, G.M.

Using aluminum cans in the canning industry. Kons. i ov. prom. 14 no.9:41-42 S '59. (MIRA 12:12)
(Cans, Aluminum)

MOVSHOVICH, G.M.

Apple juice manufacture on U.S. farms. Kons.i ov.prom.
14 no.12:35-38 D '59. (MIRA 13:3)
(United States--Apple juice)

MOVSHOVICH, G.M.

Development of the manufacture of dehydrated products in the U.S.A. (from "Canner and Packer," no.9, 1959). Kons. i ov.prom. 15 no.4:43 Ap '60. (MIRA 13:6)

(United States--Canning and preserving)

MOVSHOVICH, G.M.

New equipment for the aseptic preservation of food in the U.S.A.
Kons.i ov. prom. 15 no.6:41-43 Je '60. (MIRA 13:9)
(United States—Food, Canned--Sterilization)

MOVSHOVICH, G.M., kand.ekon.nauk

Consultation. Kons. i ov. prom. 15 no. 12:37-38 D '60.
(MIRA 14:1)
(Food, Canned—Accounting)

MOVSHOVICH, G.M.

Factory specializing in the production of pickles (cucumbers)(from "Canner-Packer," no.5, 1960). Kons.i ov.prom. 16 no.4:40-41 Ap '61. (MIRA 14:3)

(Louisville, Kentucky—Cucumbers—Preservation)

MOVSHOVICH, G.M., kand.ekon.nauk

Using the costs of processing indices in canning factories. Kons.i ov.prom. 16 no.5:38-42 My '61. (MIRA 14:5)
(Canning industry--Costs)

MOVSHOVICH, G.M.

How to increase labor productivity in the canning and preserving industry. Kons. i ov. prom. 16 no.6:30-33 Je '61. (MIRA 14:8)

1. TSentral'nyy nauchno-issledovatel'skiy institut konservnoy i ovoshchesushil'noy promyshlennosti.
(Canning industry—Labor productivity)

MOVSHOVICH, G.M.

Co-ordination conference on economics. Kons. i ov. prom. 16 no.9:43-45 S '61. (MIRA 14:8)
(Canning industry)

MOVSHOVICH, G.M.

Organization of the supply of canning plants with raw materials in the United States and France. Kons.i ov.prom. 17 no.10: 34-35 O '62. (MIRA 15:9)
(United States--Canning industry) (France--Canning industry)

MOVSHOVICH, G.M.

New developments in the drying of food products. Kon.i ov.prom. 17 no.11:40-43 N '62. (MIRA 15:11)
(Food--Drying)

MOVSHOVICH, G.M.

Structure of the canning industry in the U.S.A. Kons. i ov.prom. 18 no.9:39-40 S '63. (MIRA 16:9)
(United States--Canning industry)

MOVSHOVICH, I.A.

Technic of muscle plastic surgery in sequestrotomy of the hip and shoulder bones. Khirurgiia, Moskva no. 9:45-48 Sept 1952. (CIML 23:3)

1. Candidate Medical Sciences. 2. Of the Department of Operative Surgery (Head — Prof. V. A. Ivanov), Second Moscow Medical Institute imeni I. V. Stalin.

MOVSHOVICH, I.A., kandidat meditsinskikh nauk

Subcutaneous rupture of the retroperitoneal section of the duodenum. Khirurgiia, Moskva, no.5:81 My '55. (MLRA 8:9)

1. Iz kafedry obshchey khirurgii (zav.prof. K.P. Markuze) Vitebskogo meditsinskogo instituta)
(DUODENUM, rupture
subcutaneous of retroperitoneal section, surg.)

BLOKHIN, V.N., dots.; BOGDANOV, F.R., prof.; VAYNSHTEYN, V.G., prof.; GODUNOV, S.F., doktor med. nauk; MITBREYT, I.M., kand. med. nauk; MOVSHOVICH, I.A., kand. med. nauk; MOLODAYA, Ye.K., prof.; NIKIFOROVA, Ye.K., prof.; NOVACHENKO, N.P., prof.; ROZOV, V.I., prof.; CHAKLIN, V.D., prof.; YAZYKOV, D.K., prof.; PETROVSKIY, B.V., prof., otv. red.; SENCHILO, K.K., tekhn. red.

[Multivolume manual on surgery] Mnogotomnoe rukovodstvo po khirurgii. Moskva, Medgiz. Vol.11, book 1. [Surgery of the upper extremities] Khirurgiia verkhnei konechnosti. 1960. 518 p. (MIRA 15:3)

1. Chlen-korrespondent Akademii meditsinskikh nauk SSSR (for Bogdanov, Novachenko, Chaklin). 2. Deystvitel'nyy chlen Akademii meditsinskikh nauk SSSR (for Petrovskiy).
(EXTREMITIES, UPPER—SURGERY)

MOVSHOVICH, I.A.

Some problems of embryogenesis of the spine in man. Ortop.,travm. i protez. 21 no.1:44-51 Ja '60. (MIRA 13:12)
(SPINE)

MOVSHOVICH, I.A., kand.meditsinskikh nauk

Pathogenesis of scoliosis. Ortop. travm. i protez, 21 no. 7:23-31 Jl '60. (MIRA 13:10)

1. Iz klinicheskogo otdeleniya detskov ortopedii i travmatologii (zav. - chlen-korrespondent AMN SSSR prof. V.D. Chaklin) TSentral'nogo instituta travmatologii i ortopedii (dir. - deystv. chlen AMN SSSR prof. N.N. Priorov) na baze Moskovskogo ortopedicheskogo gospitalya (nachal'nik - doktor meditsinskikh nauk S.N. Voskresenskiy).
(SPINE—ABNORMITIES AND DEFORMITIES)

MOVSHOVICH, I.A., kand.med.nauk; VILENSKIY, V.Ya.; BOLKHOVITIN, S.V., inzh.; ALEKSANDROV, G.S.

Device for exercising movements of the hip joint. Ortop., travm. i protez. 22 no.3:54-56 '61. (MIRA 14:4)

1. Iz klinicheskogo otdeleniya detskoy ortopedii i travmatologii (zav. - chlen-korr. AMN SSSR prof. V.D. Chaklin) TSentral'nogo instituta travmatologii i ortopedii (dir. - deystv. chlen AMN SSSR prof. N.N. Priorov) i Moskovskogo ortopedicheskogo gospitalya (nach. - d-r med.nauk S.N. Voskresenskiy).
(HIP JOINT)

MOVSHOVICH, I.A., kand.med.nauk

Surgical anatomy of the thoracic segment of the spine in scoliosis. Ortop., travm.i protez. 23 no.5:21-29 My '62. (MIRA 15:11)

1. Iz kliniki detskoy ortopedii i travmatologii (zav. - chlen-korrespondent AMN SSSR prof. V.D. Chaklin) TSentral'nogo instituta travmatologii i ortopedii (dir. - deystvitel'nyy chlen AMN SSSR prof. N.N. Priorov [deceased]).
(SPINE—ABNORMITIES AND DEFORMITIES)

OSTROVERKHOV, Georgiy Yefimovich; LUBOTSKIY, David Naumovich; BOMASH, Yuliy Maksimovich; MOVSHOVICH, I.A., red.; LOPUKHIN, Yu.M., red.; LYUDKOVSKAYA, N.I., tekhn. red.

[Course of operative surgery and topographical anatomy]Kurs operativnoi khirurgii i topograficheskoi anatomii. [By]G.E. Ostroverkhov, D.N.Lubotskii, IU.M.Bomash. Moskva, Medgiz, 1963. 739 p. (MIRA 16:3)

(SURGERY, OPERATIVE)
(ANATOMY, SURGICAL AND TOPOGRAPHICAL)

KAPLAN, Aron Vul'fovich; MOVSHOVICH, I.A., red.

[Fundamentals of traumatology at an elderly age] Osnovy travmatologii pozhilogo vozrasta. Moskva, Meditsina, 1965. 250 p. (MIRA 18:6)

MOVSHOVICH, Il'ya Aronovich; LUKYANOV, S.N., red.

[Scoliosis; surgical anatomy and pathogenesis] Skolioz; khirurgicheskaia anatomiia i patogenez. Moskva, Meditsina, 1964. 254 p. (MIRA 17:7)

DUBROV, Yakov Grigor'yevich; MOVSHOVICH, I.A., red.

[Manual on traumatology] Posobie po travmatologii. Moskva, Meditsina, 1965. 258 p. (MIRA 18:3)

MOVSHOVICH, I.A., doktor med.nauk (Moskva, tsentr.Malaya Lubyanka, dom 14, kv.8)

Prognostic sign of progressing scoliosis. Ortop., travm. i protez. 26 no.4:26-30 Ap '65. (MIRA 18:12)

1. Iz kliniki detskoy ortopedii, na baze Moskovskogo ortopedicheskogo gospitalya (nachal'nik - doktor med.nauk S.N.Voskresenskiy) (nauchnyy konsul'tant kliniki - chlen-korrespondent AMN SSSR prof. V.D.Chaklin) TSentral'nogo instituta travmatologii i ortopedii (dir. - chlen-korrespondent AMN SSSR prof. M.V.Volkov).

MOVSHOVICH, I.D. [Movshovych, I.D.]

Margarine with yeast additive. Khar.prom. no.4:80-82 O-D '62.
(MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut torgovli i obshchestvennogo pitaniya.
(Oleomargarine--Preservation)

MOVSHOVICH, I.D.

Improving the keeping quality of food concentrates. Kons. i ov.prom. 17 no.4:15-18 Ap '62. (MIRA 15:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut torgovli i obshchestvennogo pitaniya.
(Ukraine--Food, Concentrated)

SOV-111-58-9-5/30

AUTHORS: Livshits, B.S., Candidate of Technical Sciences, Head of the Laboratory; Koyshovich, I.Kh. and Frolova, L.G., Engineers, Scientific Collaborators

TITLE: A Crossbar Dial Office (Koordinatnaya ATS)

PERIODICAL: Vestnik svyazi, 1958, Nr 9, pp 3 - 6 (USSR)

ABSTRACT: The author describes the K-57 block type rural crossbar dial office with a capacity of 10-40 numbers. Basic switching is carried out by multiple crossbar connectors with mechanical blocking and type RPMB and RPN relays. During operation with this system, current is drawn only by the microphones of the conversing subscribers. The office is made up of blocks of 10 numbers each, with a maximum capacity of 40 numbers. It is powered from a dc source with a rating of 60v. Daily current consumption is 0.8 to 1 amphrs/10 numbers. The author gives the skeleton structure of the office, describes its operating principles and constructional design. There are 3 photos, 1 circuit diagram and 1 schematic diagram.

Card 1/2

A Crossbar Dial Office

SOV-111-58-9-5/30

ASSOCIATION: NIITS

1. Telephone communications systems--Equipment 3. Telephone communications--Performance

Card 2/2

SOV/106-58-9-9/17

AUTHORS: Livshits, B.S., and Movshovich, I. Kh.

TITLE: Commutation Elements using a Relay with Magnetic Blocking (Elementy kommutatsii s ispol'zovaniyem rele s magnitnoy blokirovkoy)

PERIODICAL: Elektrosvyaz', 1958, Nr 9, pp 55 - 62 (USSR)

ABSTRACT: The cost of the power supplies for small automatic telephone exchanges is an appreciable fraction of the total cost. For example, a rural exchange with a capacity of 20 numbers costs 9500 roubles, of which 8000 are accounted for by power supplies. The relatively high expenditure on power supplies is traced to two causes: 1, the relatively large consumption of electrical energy by the station; 2, the stringent requirements on smoothing of the supply voltage. The heavy consumption of electricity also increases the annual running charges of a station. For the example quoted above this figure is 3000 roubles, more than 50% of which can be traced to electricity bills and the maintenance of supplies. The scientific research institute which looks after urban and rural telephone exchanges (NIITS), together with the

Card 1/4

Commutation Elements using a Relay with Magnetic Blocking

"Krasnaya zarya" (Red Dawn) factory has developed an automatic relay exchange with a capacity of 10 - 40 numbers in which the consumption of power is reduced 20 - 25 times in comparison with existing relay exchanges. This economy is achieved mainly on account of the wide use of a magnetic-blocking relay which does not require power to maintain the armature in the working position. The current type of 20-number automatic exchange contains 320 relays while the new type contains 416 including 215 of the new model (P P M b) whose cost is 10% higher than the ordinary kind (P P H). The cost of the complete station (12,500 roubles) is higher than that of the existing ones (9,500 roubles). Nevertheless, when power supplies are taken into account there is a saving of 21% in capital expenditure and 33% in running costs. The construction principles of the magnetic-blocking relay (P P M b) are shown in Fig 1. The general assembly is similar to the ordinary type (P P H) with a few modifications. The armature is split across its width and the gap is bridged both by a bronze plate and by a short bar magnet.

Commutation Elements using a Relay with Magnetic Blocking

The material of the bar magnet is AHK_o4 having the following magnetic properties: remanence, 12,300 gauss; coercive force, 500 oersted; specific magnetic energy, 150,000 erg/cm^3. The separation force on the armature in the working position is 100 - 200 gm (including the spring-stack loading). The tractive force from the unoperated position is 30 - 50 gm. The moving part of the armature is 55 mm long and the fixed part, 35 mm. The magnetic system of the relay is shown in Fig 2. Fig 2(a) shows the unenergised position when the bar magnet is in good contact with both parts of the armature. Fig 2(b) shows the additional flux caused by current in the operating winding. In Fig 2(v) the armature has been attracted and the operating current has fallen to zero. The bar magnet now makes poor contact with the moving portion of the armature. In Fig 2(g) current has been applied to the resetting winding and the magnet will be brought back to its original position. The sensitivity of the relay is that of its prototype (P P H). The ampere-turns needed to re-set the relay are 1/3 of those needed to operate it.

SOV/106-58-9-9/17

Commutation Elements using a Relay with Magnetic Blocking

Fig 3 shows circuits suitable for applying short-duration operating currents to the relay and also for re-setting it. Fig 4 shows a suitable diagram for serial and supervisory relays. Fig 5 illustrates the use of the relay as a test facility. Fig 6 shows the principle of a relay type selector. Fig 7 is a method of altering the loading of instruments in an economical manner. The table in the last paragraph gives details of bobbin combinations, showing the numbers of turns, wire sizes and weights. The relay was first brought into use in January, 1957. There are 7 figures and 1 table.

SUBMITTED: June 5, 1957

ASSOCIATION: NIITS, "Krasnaya zarya" factory

Card 4/4

LIVSHITS, B.S., Kand.tekhn.nauk, MOVSHOVICH, I.Kh., inzh.

Crossbar automatic telephone exchange with a capacity of 40 to 80 numbers. Vest. sviazi 20 no.4:15-16 Ap '60. (MIRA 13:7)

1. Nachal'nik laboratorii Nauchno-issledovatel'skogo instituta gorodskoy i sel'skoy telefonnoy svyazi (for Livshits).

(Telephone, Automatic)

LIVSHITS, Boris Samoylovich; MOVSHOVICH, Iosif Khaymovich; GOLUBTSOV, I.Ye., otv. red.; ULANOVSKAYA, N.M., red.; MARKOCH, K.G., tekhn. red.

[A relay block-type automatic telephone exchange with a capacity of 10-40 numbers] Releinaia blochnaia ATS emkost'iu 10 - 40 nomerov. Moskva, Svizz'izdat, 1962. 63 p. (MIRA 15:9)
(Telephone, Automatic)

ZHARKOVA, L.P.; MOVSHOVICH, [illegible], RUDZITIS, T.Ya.; GOLUBTSOV, I.Ye., [illegible] BUGACHEVA, G.V., red.; ROMANOVA, S.F., [illegible]

[Rural K-40/80 crossbar automatic telephone exchanges] Sel'skie koordinatnye ATC K-40/80; informatsionnyi sbornik. Moskva, Sviaz'izdat, 1963. 109 p. (MIRA 16:10)

1. Nauchno-issledovatel'skiy institut gorodskoy i sel'skoy telefonnoy svyazi Ministerstva svyazi SSSR (for Zharkova, Movshovich, Frolova). 2. Gosudarstvennaya elektrotekhnicheskaya fabrika, Riga (for Rudzitis).
(Telephone)

LIVSHITS, B.S.; MELAMUD, E.A.; YELEKOYEVA, E.K.; MOVSHOVICH, I.Kh.; KHANIN, G.B.; PODVIDZ, M.M., dots.; METEL'SKIY, G.B., otv. red.; OBRAZTSOVA, Ye.A., red.

[Rural crossbar automatic exchange K-100/2000] Sel'skaia koordinatnaia ATS K-100/2000; informatsionnyi sbornik. Moskva, Sviaz', 1965. 136 p. (MIRA 18:11)

1. Nauchno-issledovatel'skiy institut gorodskoy i sel'skoy telefonnoy svyazi Ministerstva svyazi SSSR (for all except Metel'skiy, Obraztsova).

Movshovich, I. L.

USSR/Farm Animals - Silk-Worms. Q-9

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2700

Author : D.G. Voskoboyev, I.L. Movshovich, M.A. Rish, I.N. Shal'man

Inst : -

Title : Zootechnical Procedures for an Increase of the Productivity of the Mulberry Silk-Worm.

Orig Pub : Nauchn. tr. Uzb. s-kh. in-ta, 1956, 10, 291-300

Abstract : Kh. Tishayeva and A. Sultanova suggested an accelerated method of raising silk-worms. The advantages of this method were demonstrated on two breeds of the Mulberry silk-worm: the Soviet No 1, and the Belokokonnaya No 2 /White cocoon/. In the hatchery the temperature of the air was increased from 23 to 30°, and the relative humidity was decreased from 70 to 50-55°. The caterpillars consumed by 18-26 percent more feed than the control group (a hatchery with a standard regime). Caterpillars raised in a

Card 1/2

USSR/Farm Animals - Silk-Worms. Q-9

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2700

hatchery with a modified ragime showed that the food they had consumed moved faster along the digestive canal, and the digestibility of the nutritive elements in the feed remained the same as in the control group. Successive cross breeding was performed on the Bagdadskaya and the Bivol'tinskaya breeds. Female butterflies were cross bred with two or three males of different breeds in order to achieve selective fertilization. As a result, the number of deposits with physiological defects was reduced, new born caterpillars had more vitality, and the quality and technological aspects of the cocoons showed a marked improvement.

Card 2/2

USSR / Farm Animals. Cattle.

Q-2

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 45160

Author : Movshovich, I. L.
Inst : Not given
Title : The Improvement of the Local Zebu-like Cattle Through the Schwyz Breed at the Sovkhoz "Zeravshan".

Orig Pub : Sots. s. kh. Uzbekistana, 1957, No. 9, 44-48

Abstract : The crossbreeding of the local zebu-like cattle with the Schwyz breed was carried out at the sovkhoz "Zeravshan". The majority of the hybrids of the first generation thus obtained, of brown or brown-spotted color, were of hardy and solid constitution. Their average live weight was 380.4 kg.; milk yield for 300 days of lactation, 2,133.6 kg; percentage of milk fat 3.93%. The characteristics of the local zebu-like cattle were:

Card 1/2

MOVSHOVICH, I.L.

AKULOV, Leonid Sergeyevich; BEK-KAZAROV, Paylak Tigranovich; KAMINSKIY, Ya.A.; MOVSHOVICH, I.L.; ORLOV, G.F.; PASHKOV, B.I.; POLOVNIKOV, A.P.; CHERNOV, G.L.; SHAKULOV, S.A.; ISHKOVA, A.K., red.; LYUDSKOV, B.P.; SUDAK, D.M., tekhn. red.

[Layout and equipment for commercial enterprises] Ustroistvo i oborudovanie torgovykh predpriiatii. Moskva, Gos. izd-vo torg. lit-ry, 1958. 411 p. (MIRA 11:7)

(Stores, Retail)

WRITE BELOW THIS LINE

ACCESSION NR: AP4043421 S/0147/64/000/003/0067/0074

AUTHOR: Movshovich, I. M.

TITLE: Self-induced vibrations of axial-compressor blades

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 3, 1964, 67-74

TOPIC TAGS: axial compressor, blade vibration, compressor blade vibration

ABSTRACT: The problem of blade vibration in modern axial-compressor stages operating in a wide range of speeds, at high loads, and at high output is very complex. The fact that sets of blades manufactured according to the same specifications start to vibrate at different inlet pressure, and the presence of little known aerodynamical and mechanical interactions further complicate the problem. The first approximate solution may be reached by considering the motion of a single blade while substituting the effect of other adjoining blades by an external periodic force, whose frequency is equal to the frequency of the whole set of blades, i.e., to the arithmetic mean of the frequencies of all blades. Thus, the problem is reduced to forced vibrations of a self-excited system with one degree of freedom. The

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ACCESSION NR: AP4043421

above method is applied to a simple system of pure flexural vibrations, in which the airfoil contains the reduced mass of the blade and possesses the aerodynamic characteristics of its peripheral cross section. The aerodynamic forces are assumed to be constant. The established equation of motion for these conditions leads to the amplitude frequency equation of forced vibrations of the self-exciting system. Amplitude-frequency curves are plotted which give the dependence of the amplitude and the phase of the blade on the frequency. The proposed analysis of self-induced vibrations makes it possible to explain the variation of vibrational stresses in blades and phase shifts among the blades of a single blade rim. However, the analysis gives only the qualitative results and can be used only for comparison with other results. Orig. art. has: 23 formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 10Nov63 ATD PRESS: 3089 ENCL: 00

SUB CODE: PR NO REF SOV: 001 OTHER: 000

Card 2/2

MOVSHOVICH, K.V.

Simple method for coloring thrombycytes. Lab.delo 6 no.2:34-35 Mr-Ap '60. (MIRA 13:6)

1. Klinicheskaya laboratoriya Lipetskoy oblastnoy bol'nitsy (glavnyy vrach F.D. Boronin).
(BLOOD PLATELETS) (STAINS AND STAINING (MICROSCOPY))

MOVSHOVICH, K.V.

Correspondence courses for higher training of provincial medical laboratory workers. Zdrav. Ros. Feder. 5 no.6:23-24 Je '61. (MIRA 14:6)

1. Iz klinicheskoy laboratorii Lipetskoy oblastnoy bol'nitsy (glavnyy vrach K.V.Burtseva).
(LIPETSK PROVINCE--MEDICINE--STUDY AND TEACHING)

MOVSHOVICH, K.V.

Use of Panchenkov's capillaries in the determination of prothrombin time. Lab. delo [7] no.4:58 Ap '61. (MIRA 14:3)

1. Lipetskaya oblastnaya bol'nitsa.
(PROTHROMBIN)

MOVSHOVICH, M.N., inzh.

Guaranteed train runs without need for the removal of defective cars. Zhel. dor. transp. 46 no.1:75-76 Ja '64.

(MIRA 17:8)

1. Nachal'nik vagonnogo otdela Nizhneudinskogo otdeleniya Vostochno-Sibirskoy dorogi.

MOVSHOVICH, M. YE.

AUTHOR: Movshovich, M. Ye. 108-9-8/11

TITLE: On Temperature Coefficients of the Frequency of the Optimum-Thermocompensated Scheme (Temperaturnyye koeffitsiyenty chastoty optimal'no-termokompensirovannykh skhem).

PERIODICAL: Radiotekhnika, 1957, Vol. 12, Nr 9, pp. 63-68 (USSR)

ABSTRACT: It is referred to the paper of S. S. Arshinov in Radiotekhnika, 1948, Vol. 3, Nr 2 and shown that the temperature coefficients of the optimum thermocompensated scheme have to be determined by other equations than those obtained by S. S. Arshinov if the scattering of the parameter of the circuit elements is taken into account. Here the equations for the case of a complicated scheme with perfect thermocompensation, for such with imperfect thermocompensation and for the case of a simple scheme are derivated. It is shown that in the selection of a scheme with an optimum thermocompensation it is necessary in the first place to judge the amount of the possible yield under taking into account of the scattering of the parameter of the circuit elements, not the amount of the possible yield at nominal values of the temperature coefficients of the frequency. Here the three above mentioned equations are to be used. The in -

Card 1/2

On Temperature Coefficients of the Frequency of the Optimum Thermocompensated Scheme. 108-9-8/11

vestigations carried out show that the complicated thermo-compensated scheme does not offer better advantages than the simple schemes. There are 1 figure, 1 table, and 3 Slavic references.

SUBMITTED: January 5, 1956

AVAILABLE: Library of Congress

Card 2/2

MOVSHOVICH, M.Ye.

Using p-n-p and n-p-n semiconductor triodes in push-pull output stages. Radiotekhnika 14 no.2:57-62 F '59. (MIRA 12:1)
(Transistor amplifiers)

26205
S/106/60/000/002/006/009
A055/A133

9.4310

AUTHORS: Shapiro, D. N.; Movshovich, M. E.

TITLE: Amplification parameters of transistorized frequency converters

PERIODICAL: Elektrosvyaz', no. 2, 1960, 38 - 44

TEXT: The authors describe an experimental method to measure the y-parameters of transistors operating as frequency converters. A special device was designed permitting direct measuring of g_{11} signal (active component of y_{11} signal), g_{22} if (active component of y_{22if}), g_{11} het (active component of the converter input admittance for the heterodyne-frequency current) and the moduli $|y_{21}$ conv$|$ and $|y_{12}$conv$|$ of admittances y_{21} conv and y_{12} conv. The parameters were measured at f_{if} = 465 kc and f_{signal} = 150 ÷ 1600 kc. The device permitted to introduce the heterodyne voltage into the emitter circuit and the signal voltage into the base circuit, and vice versa. Conductance g_{11} signal was determined by the magnitude of the transistor input circuit shunting effect on the resonance circuit tuned to frequency f_{signal}, the transistor output circuit being short-circuited and the heterodyne voltage being applied either to the emitter

Amplification parameters of transistorized ....

circuit or to the base circuit. Conductance $g_{11\ het}$ was measured in an analogous manner. Conductance $g_{22\ if}$ was determined by the transistor output circuit shunting effect on the circuit tuned to f_{if}, the transistor input circuit being short-circuited and the heterodyne voltage being applied either to the emitter circuit or to the base circuit. For measuring $|y_{21\ conv}|$, the voltage U_{signal} (at f_{signal}) was applied to the transistor input. The heterodyne voltage acted either in the emitter circuit or in the base circuit. A 100-ohm resistance, across which U_{if} was measured, was connected to the transistor output. Under such conditions:

$$|y_{21\ conv}| = \frac{|U_{signal}|}{100|U_{if}|}.$$

$|y_{12\ conv}|$ was measured only with the heterodyne voltage applied to the emitter circuit, the base being (from the point of view of the signal voltage) the input electrode of the triode. Voltage U_{if} was applied to the output terminals of the triode, the base circuit being practically closed to ground (a 27-ohm resistance was inserted into this circuit). Therefore:

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Amplification parameters of transistorized ....

$$|y_{12\ conv}| = \frac{|U_{signal}|}{27\,|U_{if}|},$$

where U_{signal} is the signal-frequency voltage drop across the 27-ohm resistance. The authors analyze, in particular, the role played by the parameter $y_{12\ conv}$ characterizing the feedback from the converter output to the converter input circuit through the transistor. They prove theoretically that, in the first approximation, it is possible to neglect the reverse conversion and to consider $y_{12\ conv} = 0$. They also prove that, in the practical case of the П6Г (P6G)-triode used in their experiments, $y_{12\ conv}$ can indeed be neglected. The general results of the measurements lead to the following conclusions: 1) In transistorized frequency-converters, the power amplification factor proves considerably greater when the signal voltage is introduced into the base circuit than when it is introduced into the emitter circuit. In this respect, converters are analogous to amplifiers. 2) The maximum value of the power amplification factor occurs, in converter operation (in the case of "P6G"-transistors), when $U_{het} \approx (0.2 \div 0.5)$v and $I_e = (0.2 \div 0.8)$ ma. 3) At frequencies above f_{if}, the maximum power amplification factor of the triode in converter operation is greater than in amplifier

Card 3/4

Amplification parameters of transistorized ....

operation. 4) When U_{het} is introduced into the base circuit, the power drawn from the heterodyne supply proves somewhat smaller than when U_{het} is introduced into the emitter circuit. The obtained results make it possible to judge on the expediency of using a diode frequency converter in transistorized receivers. The maximum power amplification factor of a diode converter and of an if-amplifier stage using "P6G"-transistors must be of the order of 62. Comparing this value with the data obtained for converter operation, the authors conclude that, from the point of view of the amplification properties, the use of the diode converter in the frequency range of 150÷1600 kc is not expedient. There are 3 figures, 2 tables and 2 Soviet-bloc references.

SUBMITTED: June 10, 1959.

[Abstractor's note: The following subscripts are translated in the text: conv (converter or conversion) stands for пр ; signal stands for с ; e (emitter) stands for э ; het (heterodyne) stands for г ; if (intermediate frequency) stands for пч .]

Card 4/4

SHAPIRO, D.N.; MOVSHOVICH, M.Ye.

Amplification parameters of a transistor frequency converter. Elektrosviaz' 14 no.2:38-44 F '60. (MIRA 13:5)
(Frequency changers)

MOVSHOVICH, M. Ye.; SHAPIRO, D. N.

Use of stabilized transistors in IF amplifier stages. Elektrosvyaz' 14 no.9:36-41 S '60. (MIRA 13:9)
(Transistor amplifiers)

20091

S/106/60/000/012/004/009
A055/A033

9.4310 (and 1143, 1150, 1160)

AUTHOR: Movshovich, M. E.

TITLE: Parameters of Semi-Conductor Triodes Operating in Frequency Conversion Circuits

PERIODICAL: Elektrosvyaz', 1960, No. 12, pp. 29-37

TEXT: The object of the present article is to establish formulae connecting the various parameters of semi-conductor triodes, i. e. formulae analogous to the well-known formulae connecting the corresponding parameters of electron tubes. The first part of the article is purely theoretical and deals with an ideal semi-conductor triode. The author develops several equations allowing to calculate, for instance, the various conductances (g_{11}, g_{21}, g_{22}) in the case of semi-conductor triodes operating: 1) in amplification circuits, 2) in frequency conversion circuits. This theoretical analysis is effected separately for semi-conductor triodes working in the low-frequency range and in the high-frequency range. In the second part of the article, the author considers the possible errors introduced into his formulae by certain assumptions underlying his theoretical calculations.

Card 1/2

S/106/60/000/012/004/009
A055/A033

Parameters of Semi-Conductor Triodes Operating in Frequency Conversion Circuits

Thus he assumed, for instance, that the currents of the emitter, of the collector and of the base (i_{em}, i_{col} and i_1) of the low-frequency semi-conductor triodes vary within the limits where their dependence upon the voltage e_{em} is an exponential function. This however, is only a rather rough approximation, as shown in Appendix 1 to the article. The author examines therefore the effect of these sources of error upon the semi-conductor conductances, such as they were calculated by means of his purely theoretical formulae. The results of an experimental investigation enabled the author to render his theoretical formulae still more accurate with respect to the practical operating conditions of semi-conductor triodes. In conclusion, the author says that his article is by no means exhaustive and represents merely one of the first attempts to approach the solution of the problem in question. There are 6 figures, 1 table and 2 Soviet references.

SUBMITTED: June 24, 1960

Card 2/2

27779
S/106/61/000/008/003/006
A055/A127

9, 2560 (1040, 1154, 1161)

AUTHORS: Movshovich, M. E., Labutin, V. K.

TITLE: Analysis of two equivalent circuits of transistors

PERIODICAL: Elektrosvyaz', no. 8, 1961, 35-39

TEXT: The authors analyze the T-shaped and the Π-shaped equivalent circuits consisting of a small number of frequency-independent elements. The y-parameters of the circuits are calculated as functions of the component elements, the authors' aim being to estimate the difference between the calculated and experimental values of these parameters in the case of "P-14" and "P-15" transistors. T-shaped equivalent circuit - I_e is here the d-c component of the emitter current and i_e its a-c component, r_e is the emitter junction resistance $\alpha = \alpha_o/1 + j\gamma$ is the transistor current amplification factor at the frequency of the amplified signal (α_o being the low-frequency value of the common-base transistor current amplification factor); f_α is the current amplification boundary frequency of the common-base transistor; $\gamma = f/f_\alpha$ is the relative frequency of the signal. It is assumed that the equivalent circuit reproduces with sufficient fidelity the transistor's amplification properties within the

Card 1/5

S/106/61/000/008/003/006
A055/A127

Analysis of two equivalent circuits of transistors

frequency range:

$$0.2\, f_\alpha < f < 0.8\, f_\alpha \qquad (1)$$

Recalling that:

$$y_{11} = g_{11} + i\omega C_{11}; \quad y_{12} = g_{12} + i\omega C_{12}$$
$$y_{21} = g_{21} + i\omega C_{21}; \quad y_{22} = g_{22} + i\omega C_{22} \qquad (2)$$

and using the Y-matrix for the T-shaped equivalent circuit of the common-emitter transistor, the authors obtain.

$$g_{11} = \frac{(r_e + r_{bb'})(1 + \gamma^2)\gamma^2}{r^2}; \quad C_{11} = \frac{1}{} \frac{r_e (1 + \gamma^2)\gamma}{r^2}$$

$$g_{12} = \frac{r_e r_{bb'} \omega_\alpha C_k (1 + \gamma^2)\gamma^2}{r^2}; \quad C_{12} = - C_k \frac{r_e(1 + \gamma^2)[r_e + \gamma^2(r_e + r_{bb'})]}{r^2} \qquad (4)$$

$$|y_{21}|^2 = g_{21}^2 + b_{21}^2 = \frac{1 + \gamma^2}{r^2}$$

Card 2/5

Analysis of two equivalent circuits of transistors

$$g_{22} = \frac{r_{bb'}\,(r_e + r_{bb'})\,\omega_\alpha\, C_k(1+\gamma^2)\,\gamma^2}{r^2}\,; \qquad (4)$$

$$C_{22} = C_k \frac{(r_e + r_{bb'})(1+\gamma^2)\,[r_e + \gamma^2\,(r_e + r_{bb'})]}{r_e}$$

where:

$$r^2 = (\gamma\, r_{bb'})^2 + [r_e\,\gamma^2(r_e + r_{bb'})]^2.$$

Π-shaped equivalent circuit. - It is possible to prove that the y-parameters of this circuit are given by the following equations:

$$\left.\begin{aligned} g_{jl} &= g_{jl\infty} + \frac{\Delta g_{jl}}{1+\left(\frac{\omega}{\omega_{cp}}\right)^2_{av}} \\ C_{jl} &= C_{jl\infty} + \frac{\Delta C_{jl}}{1+\left(\frac{\omega}{\omega_{cp}}\right)^2_{av}} \end{aligned}\right\}, \qquad (5)$$

Card 3/5

Analysis of two equivalent circuits of transistors

where $j = 1;\ 2$ and $i = 1;\ 2$. $g_{ji\infty}$, Δg_{ji}, $C_{ji\infty}$ and ΔC_{ji} depend here only on the elements of the equivalent circuit, their value being given in a table.

$$\omega_{av} = \frac{1 + r_{bb'}\,(g_{be} + g_{b'k})}{(C_{b'e} + C_k)\,r_{bb'}} \tag{6}$$

and $$g_1 = g_{b'e} + g_{b'k}; \qquad C_1 = C_{b'e} + C_k\ . \tag{7}$$

Pritchard (see English-language references) said that the equivalent circuit of Fig. 2 is accurate for frequencies $f \leqslant 0.5\ f_\alpha$. The individual parameters of the transistor can, however, be determined with fair accuracy, with the aid of this circuit, at higher frequencies also. On the other hand, Drouilhet (see English-language references) said that, at $\alpha_0 \approx 1$, the maximum oscillating frequency is

$$f_{osc\ max} = \sqrt{\frac{f_\alpha}{30\ r_{bb'}\ C_k}}, \tag{10}$$

whereas, according to the authors, it is:

$$f_{osc\ max\ circuit} = \sqrt{\frac{f_\alpha}{25\ r_{bb'}\ C_k}}, \tag{11}$$

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27779
S/106/61/000/008/003/006
A056/A101

Analysis of two equivalent circuits [illegible]ransistors

At the end of the article the authors give the numerical results of a practical calculation based on their formulae and compare them to the experimental results (in the case of a "P-14" transistor). This comparison leads to the following conclusions: 1) Within the mentioned frequency range, the calculations based on the equivalent circuit formulae are accurate enough in the case of both T-shaped and Π-shaped circuits. 2) The greatest difference between calculated and experimental data occurs in the case of the g_{12}, g_{22} and g_{11} parameters. On the average, differences of (10 - 30)% can be expected. Therefore, both equivalent circuits can be used, as first approximation, for the calculation of amplifiers using "P-14" and "P-15" transistors. There are 4 figures, 3 tables, 2 Soviet-bloc and 2 non-Soviet-bloc references. The references to English-language publications read as follows: Pritchard. Electric networks representation of transistor's survey. IRE-Transactions, 1956, v. CT-3, no. 1. Drouilhet. Predictions based on maximum oscillators frequency. IRE-Transactions, 1955-VI, CT-2, no. 2.

SUBMITTED: October 24, 1959

[Abstracter's note: The following subscripts are translated in the text and formulae: e (emitter) stands for $\ni$; b (base) stands for δ; av (average) stands for φ; k is left for collector.]

Card 5/5

MOVSHOVICH, M.Ye.

Minimum limiting levels of transistor limiters. Radiotekhnika 16 no.4:63-66 Ap '61. (MIRA 14:9)

1. Deystvitel'nyy Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi A.S. Popova.
(Transistor circuits)

MOVSHOVICH, M.Ya.

Maximum stable coefficient of amplification of a cascaded amplifier. Radiotekhnika 16 no.9:19-23 S '61. (MIRA 14:9)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi im. A.S. Popova.
(Amplifiers (Electronics))

35378
S/108/62/017/003/004/009
D299/D301

9.3230 (1040, 1132, 1159)

AUTHOR: Movshovich, M.Ye., Member of the Society (see Association)

TITLE: Analysis of two-loop parametric frequency converters

PERIODICAL: Radiotekhnika, v.17, no. 3, 1962, 26 - 36

TEXT: The gain factor, the bandpass and the noise characteristics of two-loop parametric converters are investigated from the point of view of the general theory of conversion and of the general theory of linear networks. In the majority of works on the subject, the theory of linear networks found only limited application, although it is widely used for other types of converters (tube-, diode-, transistor-). It is assumed that the impedances of the network are zero at all frequencies, except at the 3 frequencies f_{mix}, $f_{osc.}$ and $f_{het.}$. The relationships between the complex amplitudes of the currents and voltages are derived. The possible values of the power gain at resonance frequency are determined. From the formulas obtained it is evident that the power gain factor can assume a wide

Card 1/3

range of values, depending on the degree and type of connection between the converter and the elements of the external circuit. Further, it is shown that a two-loop parametric converter can be used as a negative resistor for increasing the propagation constant of the circuit. The noise sources in the circuit under consideration are analyzed, and formulas for the noise factor are derived. Further, the resonance characteristics are considered; formulas are derived which permit determining the resonance characteristics for various types of connection between the converter and the external elements. Conclusions: In considering the characteristics of two-loop parametric converters, no new methods are required in addition to those already in use in tube- and transistor engineering. Hence, it is feasible to develop a single computational method for tube-, diode-, transistor- and parametric converters. There are 12 figures and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: Heffner, Wade. Journal appl. phys., v. 29, no. 9, 1958.

Card 2/3

Analysis of two-loop parametric ... S/108/62/017/004/009 D299/D301

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov) [Abstractor's note: Name of Association taken from first page of journal]

SUBMITTED: March 31, 1961 (initially)
September 18, 1961 (after abridgment)

Card 3/3

9.2520

S/108/62/017/005/007/007
D407/D301

AUTHOR: Movshovich, M. Ye., Member of the Society (see Association)

TITLE: Cross modulation in resonance transistor amplifiers

PERIODICAL: Radiotekhnika, v. 17, no. 5, 1962, 72-79

TEXT: Tubes and transistors are compared with regard to the maximum permissible noise-amplitude for a given cross-modulation coefficient. All the investigations were carried out for transistors with common emitter. Formulas are derived, under simplifying assumptions, for the conductivity g and the current I. These formulas show that if the cross-modulation arises as a result of the nonlinearity of the emitter-junction characteristic only, then the cross-modulation coefficient k_{cr} decreases with increasing I_c (the constant component of the collector current). It was found that the use of transistors may lead not only to amplitude cross modulation, but also to frequency cross-modulation. With increasing internal resistance of the signal generator, the cross-modulation coeffi-

Card 1/3

S/108/62/017/005/007/007
D407/D301

Cross modulation in ...

cient decreases. Analogous considerations apply to transistor converters. The cross-modulation coefficient was measured for 3 types of transistors (10 transistors of each type). Figures show the results of measurements of U_n (the maximum permissible values of the noise voltage) for k_{cr} = 2%. The dependence of k_{cr} on U_n and on g was also measured. The experiments confirmed to a large extent the following theoretical conclusions: If the cross-modulation arises as a result of the nonlinearity of the emitter characteristic only, then: a) k_{cr} should be the same in transistors with common base and common emitter, respectively; b) with small I_{em}, k_{cr} should be 2% if $U_n \approx 5$ millivolt; c) k_{cr} decreases with increasing I_{em}. In the high-frequency region, k_{cr} decreases with increasing f_{sign} and f_n; k_{cr} decreases with g. Experiment showed that under normal operating conditions a cross-modulation coefficient of 2% is possible for a noise voltage $U_n \approx 7 - 20$ millivolt. With regard to cross-modulation, transistors are more vulnerable elements than tubes.

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Card 2/3

S/108/62/017/005/007/007
D407/D301

Cross modulation in ...

There are 8 figures and 8 references: 5 Soviet-bloc and 3 non-Soviet-bloc (including 1 translation).

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A. S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A. S. Popov) [Abstracter's note: Name of Association taken from first page of journal.]

SUBMITTED: July 12, 1960

VB

Card 3/3

L 19947-63 BDS

ACCESSION NR: AP3006947 S/0106/63/000/009/0016/0025

46

AUTHOR: Movshovich, M. Ye.

TITLE: Effect of strong noise on the transfer constant of diode frequency converters

SOURCE: Elektrosvyaz', no. 9, 1963, 16-25

TOPIC TAGS: noise, transfer constant, frequency converter, converter, heterodyne oscillator, diode converter

ABSTRACT: Theoretical and experimental investigation is reported of diode converters subjected to strong noise influence; assumptions made: (a) diodes are nonlinear resistances, and (b) matching transformers are perfect devices. Simple, balanced, and ring converters are considered; they are terminated with a resonant load or a resistance. Formulas for a "jamming factor" and a "cross-interference factor" are based on both theoretical considerations (static

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L 19947-63
ACCESSION NR: AP3006947

characteristics) and some experimental data obtained from D2B, D9B, D10A, D-12, D-102, D106A, D403A, and DK-S1 diodes. The above factors are defined in terms of input noise voltage and special parameters developed in the article. Experiments conducted with a ring diode (D92h, D2B, D403A) converter at 230-kc signal frequency, 500-kc noise, 600-kc i.f., 370-kc and 0.3-0.8-v heterodyne oscillator frequency and voltage, showed that the cross-interference factor was 5-20% with a noise voltage of 55-200 mv (resonant load) or 150-500 mv (resistance load). It is concluded that the effect of strong noise depends on the converter circuit (lower for the ring and balanced circuits than for the simple), on the nature and magnitude of load, on the shape of the diode static characteristics, and on the form and magnitude of heterodyne voltage. "In conclusion, I regard it my pleasant duty to thank L. N. Afanas'yeva and M. M. Palevchik who carried out a considerable part of the experimental work." Orig. art. has: 12 figures, 17 formulas, and 2 tables.

ASSOCIATION: none

Card 2/3

MAV[illegible]OVICH, M.Ye.

Calculation of the [y]-parameters of transistors operating in a frequency conversion mode. Elektrosviaz' 17 no.12:52-57 D '63. (MIRA 17:2)

MOVSHOVICH, M.Ye.

Design of two-stage parametric frequency converters. Radiotekhnika 19 no.2:28-37 F '64. (MIRA 17:6)

1. Deystvitel'nyy chlen Nauchno-tekhnicheskogo obshchestva radiotekhniki i elektrosvyazi imeni A.S. Popova.

ACCESSION NR: AP4040458 S/0108/64/019/006/0032/0039

AUTHOR: Movshovich, M. Ye. (Active member)

TITLE: Instability of the parametric frequency converter

SOURCE: Radiotekhnika, v. 19, no. 6, 1964, 32-39

TOPIC TAGS: converter, frequency converter, parametric frequency converter, frequency converter stability

ABSTRACT: In this continuation of the author's previous work (Radiotekhnika, v. 17, nos. 3 and 5, 1962, v. 19, no. 2, 1964; Elektrosvyaz', no. 12, 1963)[y] - parameters of the parametric element are theoretically determined under conditions of a strong modulated or nonmodulated noise. The frequency converter makes use of the nonlinear capacitance of a reverse-biased p-n junction. Variations of the transfer constant of the converter, at $f = f_{if} - f_h$ and $f = f_h - f_{if}$, due to noise and unstable heterodyne voltage are investigated; here, f is the

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ACCESSION NR: AP4040458

desirable-signal frequency, f_{if} is the intermediate frequency, and f_h is the heterodyne frequency. An experimental verification with a p-n-diode converter is reported, as well as the results of capacitance measurements in reverse-biased P-403 and P-411 diodes. Orig. art. has: 6 figures, 22 formulas, and 2 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 04Jan63 DATE ACQ: 06Jul64 ENCL: 00

SUB CODE: EC NO REF SOV: 004 OTHER: 000

Card 2/2

L 51961-65 EWT(1)/EWA(h) Pab

ACCESSION NR: AP5011568 UR/0106/65/000/004/0031/0037

AUTHOR: Movshovich, M. Ye.

TITLE: The effect of local oscillator noise on the noise factor of diode frequency converters

SOURCE: Elektrosvyaz', no. 4, 1965, 31-37

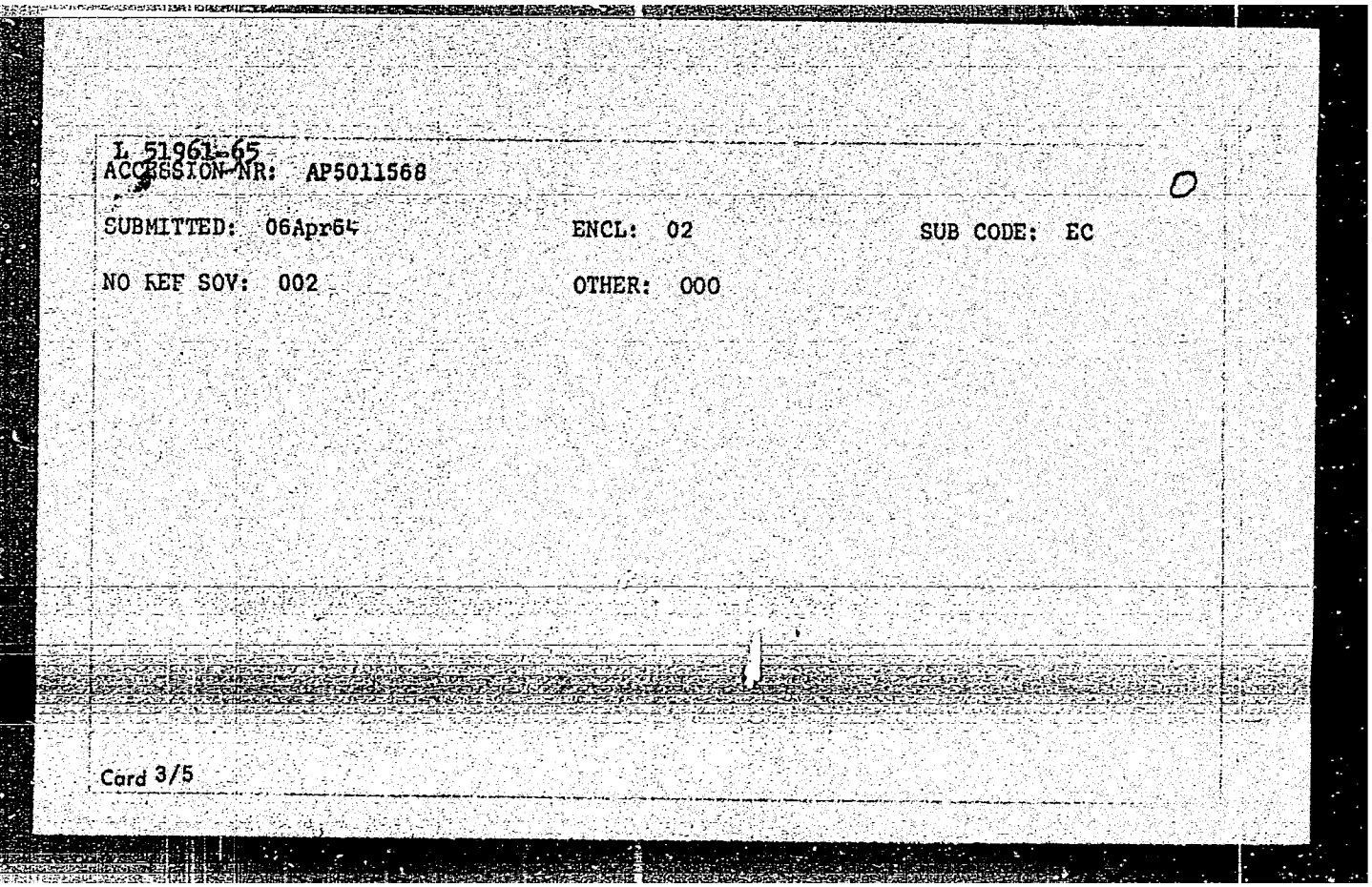
TOPIC TAGS: frequency converter, semiconductor diode, noise analysis, noise figure, signal to noise ration, quadrupole

ABSTRACT: The theories of frequency conversion and linear noisy quadrupoles are used to determine the effect of heterodyne interference on the noise factor of simple, balanced, and ring types of frequency converters (see fig. 1 of the Enclosure) and to define the optimum value of signal to noise ratio in the load. The circuit shown in fig. 2 of the Enclosure is considered. The analysis is straightforward; the source and load are considered to be short circuited at all frequencies except that of the signal and that of the frequency converter, the diodes are assumed to be active non-linear resistances, and ideal transformers are used to match the source and load to the diodes. An equation is derived for the optimum

Card 1/5

signal/noise ratio. This optimum ratio is shown to be identical for simple, balanced, and ring converters and depends only on the diode parameters, amplitude of the local oscillator drive voltage, and the ratio $\frac{E}{\sqrt{2\bar{e}^2}}$ where E is the amplitude of the local oscillator voltage and $\bar{e}$ is the average voltage produced by the noise component of the local oscillator voltage in the interval $\left(f+\frac{\Delta F}{2}\right)-\left(f-\frac{\Delta F}{2}\right)$ where f is the local oscillator frequency and ΔF is the effective passband of the circuit shown in fig. 1 of the Enclosure. It is shown that the maximum signal/noise ratio cannot exceed twice this optimum value if the local oscillator voltage is such that the diode is not driven out of its straight-line volt-ampere characteristic. The optimum signal/noise ratio is achieved, therefore, through optimization of the local oscillator drive voltage. An example of calculation for a ring frequency converter is given at the end of the article. Orig. art. has: 7 figures, 12 equations.

ASSOCIATION: none



L 51961-65
ACCESSION NR: AP5011568

SUBMITTED: 06Apr64 ENCL: 02 SUB CODE: EC

NO REF SOV: 002 OTHER: 000

Card 3/5

L 51961-65

ACCESSION NR: AP5011568 ENCLOSURE: 01

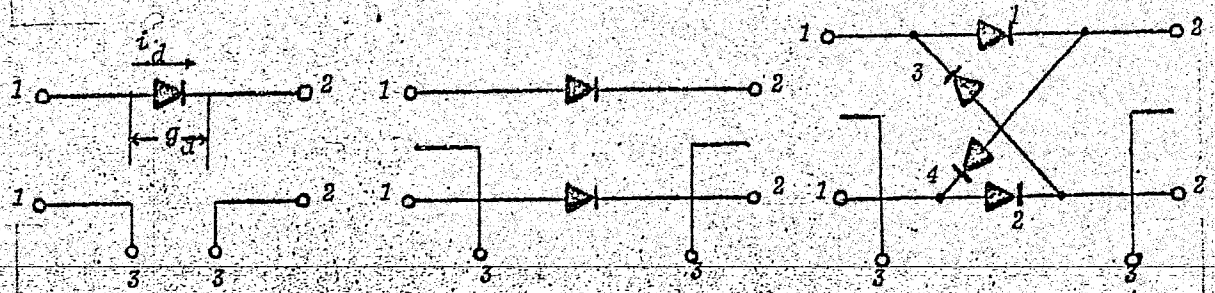


Fig. 1

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L 51961-65

ACCESSION NR: AP5011568

ENCLOSURE: 02

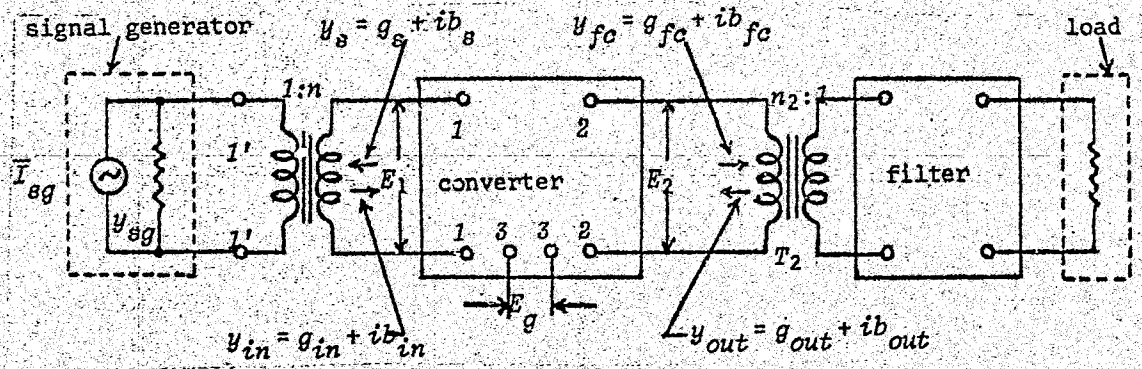

Fig. 2

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L 44458-66 EWT(l)/EWA(h)

ACCESSION NR: AP5018027 UR/0106/65/000/007/0049/0054
621.319.491.001.24:621.314.26

AUTHOR: Movshovich, M. Ye.

TITLE: Design of composite capacitive diode converters

SOURCE: Elektrosvyaz', no. 7, 1965, 49-54

TOPIC TAGS: frequency converter

ABSTRACT: Balanced, series, and parallel circuits of capacitive diode frequency converters are theoretically considered. The spectral composition of terminal voltages and the power gain are analyzed. It is found that the characteristics of the above composite converters materially differ from those of simple diode frequency converters. Thus, the former will not suppress odd conversion products under most practical conditions. The operating power gain of the composite converter largely depends on their circuit; the maximum operating power gain, with z_{sign} and z_{if} resistive and $\frac{\omega_{sign}}{\omega_{het}} \geq 0.1$, is by one order of magnitude lower than that of conventional diode converter; with z_{sign} and z_{if} represented

Card 1/2

L 4458-66

ACCESSION NR: AP5018027

0

by resonant circuits, the power gain of the composite converters may be by one order of magnitude higher. An experimental verification of the formulas is claimed. Orig. art. has: 6 figures and 25 formulas.

ASSOCIATION: none

SUBMITTED: 22Jun64 ENCL: 00 SUB CODE: EC

NO REF SOV: 005 OTHER: 001

Card 2/2 DP

L 36718-65

ACCESSION NR: AP5004422 S/0108/65/020/001/0040/0048

AUTHOR: Movshovich, M. Ye. (Active member) 12 B

TITLE: Noise factor of diode frequency converters

SOURCE: Radiotekhnika, v. 20, no. 1, 1965, 40-48

TOPIC TAGS: noise factor, frequency converter, semiconductor diode

ABSTRACT: The total noise of a semiconductor (point-contact) diode has conventionally been calculated from this formula $\overline{i_m^2} \approx 2e(I_d + 2I_0)\cdot\Delta f$, which represents a noise generator shunting the diode; here, i_d is the diode current, and i_0 is the reverse-biased diode current. This formula has been regarded variously and can be taken as more or less reliable only in a narrow frequency band. Hence, a modification is suggested by the author: $\overline{i_m^2} = 2e\Delta f(I_d + 2I_0)\cdot k$, where k is a

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L 36718-65

ACCESSION NR: AP5004422

current-independent factor whose values for Soviet-made diodes are tabulated. By using a theory of linear noisy quadripoles, formulas are developed for simple, balanced, and ring-type frequency converters; also, an allowance is made for the load noise and load coupling with the converter. The formulas are claimed to have been verified by experiments with D2B and D106 diodes at 0.1—1 Mc; a discrepancy of 1.1—1.5 times was observed. "In conclusion, the author wishes to thank E. P. Bekeris who performed a considerable part of the experimental work." Orig. art. has: 8 figures, 17 formulas, and 3 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific and Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 04Jan63 ENCL: 00 SUB CODE: EC

NO REF SOV: 005 OTHER: 002

Card 2/2

L 2189-66 EWT(1)/EWA(h) JM

ACCESSION NR: AP5020762 UR/0108/65/020/008/0052/0057
621.382.3

AUTHOR: Movshovich, M. Ye. (Active member) 39 B

TITLE: The coefficient of transistor noise during frequency conversion 25 25

SOURCE: Radiotekhnika, v. 20, no. 8, 1965, 52-57

TOPIC TAGS: transistor, transistorized circuit, frequency conversion, frequency converter

ABSTRACT: Some authors estimated earlier the transistor noise; their theoretical analysis, however, referred to transistor amplification operation. This makes difficult a fast estimate of the value of appropriate transistor parameters while working as converters. The difficulties are compounded by the fact that the other authors investigated only the simplest equivalent transistor noise circuit. Investigations presented in the present paper are carried out on the basis of the Jacoletto noise circuit. Calculations show that the minimum transistor noise coefficient is twice as large as during its amplifier operation. Conditions are given for the minimum noise operation. Tests carried out and tabulated by the

Card 1/2

L 2189-66

ACCESSION NR: AP5020762

author on eight P-14 and eight P-403 transistors show that the results are in good agreement with the theoretical predictions. Orig. art. has: 15 formulas, 4 figures, and 2 tables.

ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi (Scientific-Technical Society of Radio Engineering and Electrocommunication)

SUBMITTED: 15Oct63 ENCL: 00 SUB CODE: EC

NO REF SOV: 006 OTHER: 003

Card 2/2 DP

L 47206-66 EWT(1)

ACC NR: AR6026497 SOURCE CODE: UR/0274/66/000/004/B048/B048

AUTHOR: Movshovich, M. Ye.

TITLE: Comparative analysis of three different circuits ring-type diode frequency converters

SOURCE: Ref. zh. Radiotekhnika i elektrosvyaz' , Abs. 4B317

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 26, 1965, 97-102

TOPIC TAGS: radio noise, transmission coefficient, frequency converter

ABSTRACT: A comparative analysis was made for a transmission coefficient, power transmitted from a heterodyne, optimum harmony conditions, and for the noise coefficient of three different converters. [Translation of abstract] [NT]

SUB CODE: 17/

Card 1/1 fv UDC: 621.396.622

L 20789-66 EWA(h)/EWT(1)

ACC NR: AP6004997 SOURCE CODE: UR/0106/66/000/001/0023/0030

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AUTHOR: Movshovich, M. Ye.

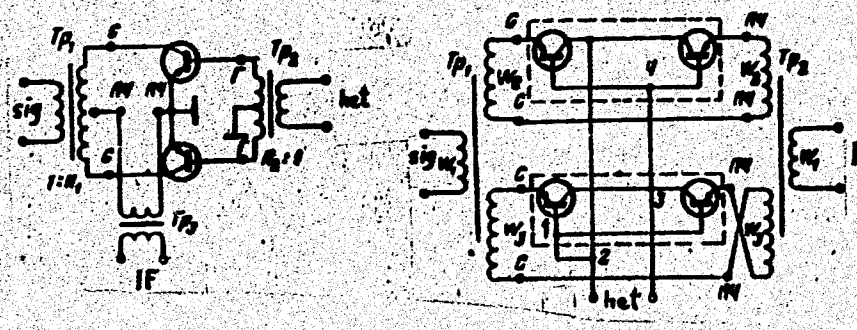
ORG: none

TITLE: Frequency converters designed with transistors operating as switches

SOURCE: Elektrosvyaz', no. 1, 1966, 23-30

TOPIC TAGS: frequency converter, transistorized frequency converter

ABSTRACT: As no method of design of switch-type (or gate-type) transistorized frequency converters is available in those publications known to the author, such a method and pertinent experimental data are offered. Engineering design formulas (for transfer factor and resistor values) are



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developed for 2-transistor (left) and 4-transistor (right) circuits (see figures). The formulas and results of an experimental verification with P-402 transistors at 10—1000 kc show that: (a) the 4-transistor circuit has better characteristics (e.g., lower heterodyne-voltage leak-through) than the 2-transistor circuit; (b) the double-frequency voltage represents a larger part of the output; (c) the 4-transistor circuit can compete with diode-type converters at frequencies under 100 or 300 kc. "In conclusion, the author wishes to thank I. N. Nasarov for carrying out most of the experimental work." Orig. art. has: 7 figures, 32 formulas, and 2 tables. [03]

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Card 2/2

MOVSHOVICH, P.M.

Cascade drive for wool-spinning machines with a basic and stratified speed regulation. Biul.-tekh.-ekon.inform.Gos.nauch.-issl.inst. nauch.i tekh.inform. 18 no.9:33-35 S '65. (MIRA 18:10)

NOVSHEVICH, P.M., inzh.; KHAVKIN, V.P., inzh.

Effectiveness of dual control in drives with [illegible] stages.
Elektrotekhnika 35 no.9:26-27 S '64.
(MIRA 17:11)

MOVSHOVICH, P.M., inzh.

Dynamics of the machine-rectifier stage. Nauch.-issl.trudy VNIILTEKMASH, no.11:32-38 '64.

Design of a control system for the spinning-machine drive. Ibid.:39-46 (MIRA 18:6)

[illegible], A. I.

[illegible], A. I.: "The clinical significance of the loss before birth of the fetal fluids." Stalinsk State Inst. for the Advanced Training of Physicians. Chair of Obstetrics and Gynecology. Chair of Obstetrics and Gynecology [illegible] Stalinsk, 195[illegible]. (Dissertation for the Degree of Candidate in Medical Sciences).

Source: Knizhnaya letopis' No. 28 195[illegible] Moscow

MOVSHOVICH, R.I., dots.

Causes of antepartal loss of amniotic fluid. Sov.med. 22 no.11: 102-106 N' 58 (MIRA 11:11)

1. Iz Stalinskogo instituta usovershenstvovaniya vrachey.
(AMNIOTIC FLUID
antepartum loss (Rus))
(PREGNANCY, compl.
amniotic fluid loss, causes (Rus))

MOVSHOVICH, R.I., dotsent

Nomenclature used for defining the time of loss of the amniotic fluid. Kaz.med.zhur. no.3:35-36 My-Je '62. (MIRA 15:9)

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(OBSTETRICS--TERMINOLOGY) (AMNIOTIC FLUID)

MOVSHOVICH, R.I., dotsent; SADOVSKAYA, N.M.

Treatment of diseases of the cervix uteri in a maternal health center. Vop.pkh.mat. i det. 7 no.12: 52-55 D'62. (MIRA 16:7)

1. Iz kafedry skushertva i ginekologii (zav.-prof. A.M.Mazhbits) Novokuznetskogo instituta usovershenstvovaniya vrachey.
(UTERUS--DISEASES) (ELECTROSURGERY)

MOVSHOVICH, R.I., dotsent

Method of ovariopexy. Sov.med. 26 no.12:95-97 D '62.
(MIRA 16:2)

1. Iz Novokuznetskogo instituta usovershenstvovaniya vrachey.
(OVARIES—SURGERY)

MOVSHOVICH, R.I.

Labor in women of small stature. Vop.okh.mat. i det. 8 no.2: 90 F'63. (MIRA 16:7)

1. Iz kafedry akusherstva i ginekologii Novokuznetskogo instituta usovershenstvovaniya vrachey.
(NO SUBJECT HEADINGS)

MOVSHOVICH, B.I., dotsent; SHKOL'NIKOVA, N.I.

Diathermic conization in some diseases of the cervix uteri.
Sov. med. 27 no.10:118-122 O '63.

1. Iz kafedry akusherstva i ginekologii (zav.-prof. ...).
Mazhbits) Novokuznetskogo instituta usovershenstvovaniya vrachey
(rektor - dotsent G.L. Starkov).