621.313.322.045.5

4903. **Asymmetry in coil windings of hydro-generators.** P. M. IVANOV. *Elektr. Stantsii*, 1954, No. 5, 41 [redacted]

Unlike bar windings, coil windings [redacted] themselves to easy repair. Sometimes replacement of damaged coils is delayed and instead the operation of the generator continues after disconnection of the damaged coil in one of the parallel branches of the winding. The loading of the generator must then be reduced. Equations are given for finding the new permissible load. Less load reduction is necessary if not only the damaged coil is disconnected but also corresponding coils in the other two phases of the same branch. Hints for finding these coils are given. [redacted]

IVANOV, N.P.; YEREMEYEV, A.S.; LYUTER, R.A.; KAPLAN, M.Ya.; IPATOV, P.M.

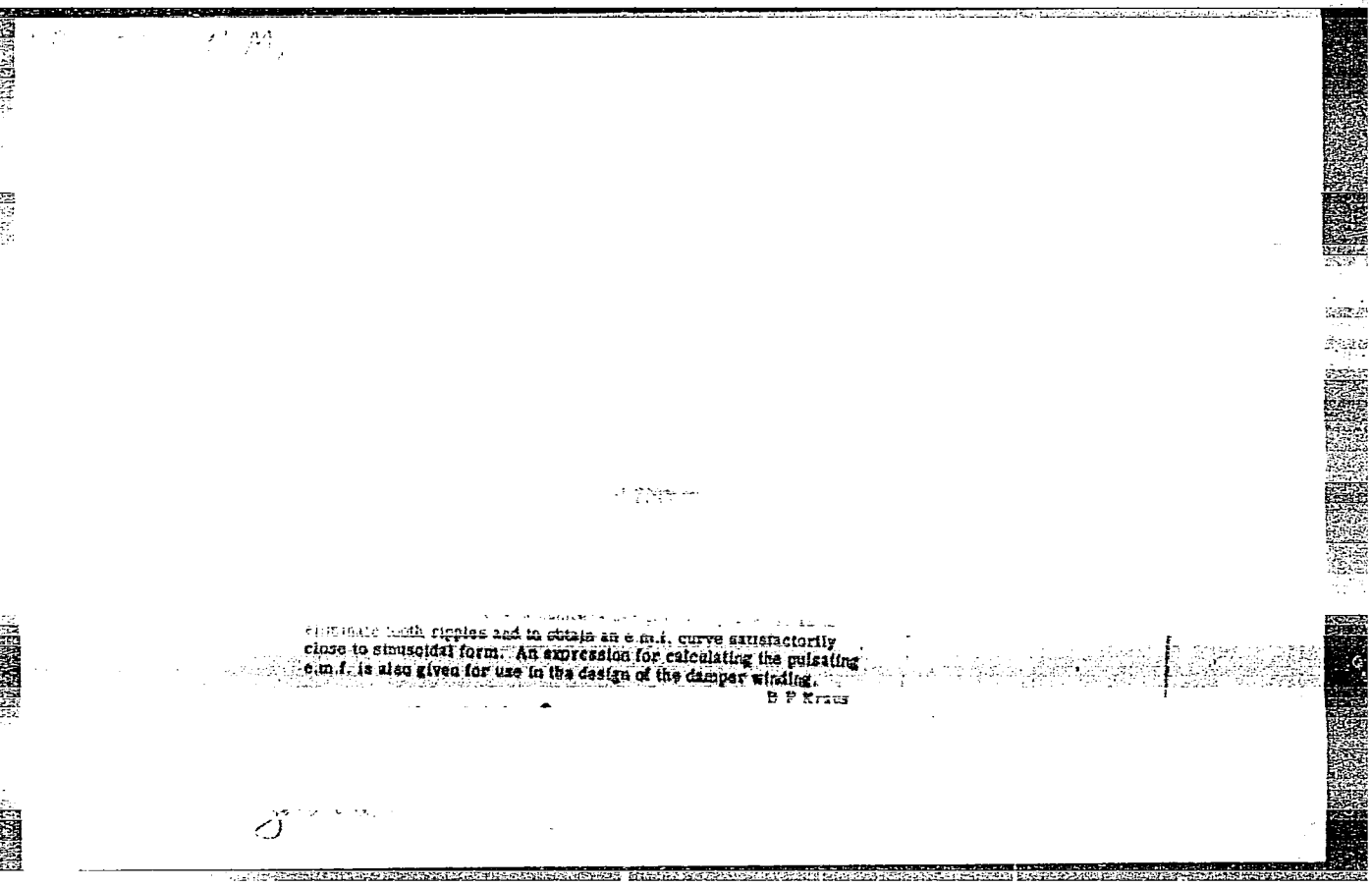
Powerful hydrogenerators. Elektrosila no.14:5-11 '56. (MIRA 12:12)

(Hydroelectric power stations)

IPATOV, P.M.; KHUTORETSKIY, G.M.

Ratings of hydrogenerators. Elektrosila no.14:24-27 '56.
(MIRA 12:12)

(Electric generators)



eliminate both ripples and to obtain an e.m.f. curve satisfactorily close to sinusoidal form. An expression for calculating the pulsating e.m.f. is also given for use in the design of the damper winding.

B P Kraus

AUTHOR: Ipatov, P.M., Candidate of Technical Sciences, and Sipaylov, G.A., Candidate of Technical Sciences.

110-6-4/24

TITLE: A simplified thermal ventilation calculation for hydro-generators. (Uproshchennyy teplovoy ventilyatsionnyy raschet gidrogeneratorov.)

PERIODICAL: "Vestnik Elektropromyshlennosti" (Journal of the Electrical Industry) 1957, Vol.28, No.6, pp. 6-10 (U.S.S.R.)

ABSTRACT: The Scientific Research Institute of the Ministry of Electro-technical Industry (NII MEP) has done a great deal of work on the experimental determination of the temperature, the flow and speed of air in various parts of the air ducts of existing hydro-generators. This material may be used to introduce certain corrections into the procedure of thermal calculations.

The present article proposed a procedure of thermal calculations based on the method of the equivalent thermal circuit and also a simplified procedure for determining the air flow. The article first considers at some length thermal calculations on the stator of a hydro-alternator. The information which is required for the purposes of the calculation is stated and the necessary equations are formulated. Heating of the rotor is considered much more briefly. The second part of the article is concerned with determin-

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A simplified thermal ventilation calculation for hydro-generators. (Cont.) 110-6-4/24

ation of the air flow. A formula is given for the head in the closed ventilating system. In order to compare the ventilating systems of different generators it is convenient to select a single characteristic section of the air duct, for instance, the section of the air gap, and to relate all the other sections to it. This is done in the article. Some of the factors that appear in the equations are difficult to determine analytically and simplified procedures for finding them are given. The procedure here described was used to make thermal calculations on a number of existing hydro-alternators. The theoretical and practical test results are compared in a table which shows that there is good agreement between the two.

Card 2/2 There are 3 figures and 4 references, 3 of which are Slavic.

ASSOCIATION: Elektrosila Works. (Zavod "Elektrosila")

SUBMITTED: December 24, 1956.

AVAILABLE:

IPATOV, P.M.

IPATOV, P.M., inzh.; KHUTORETSKIY, G.M., inzh.

Rated voltage of high capacity generators. Vest.elektroprom. 28 no.8:14-17 Ag '57. (MIRA 10:10)

1.Zavod "Elektrosila."

(Electric generators)

AUTHOR: Ipatov, P. M., Candidate of Technical Sciences

SOV/105-58-7-2/32

TITLE: Slot-Ripple Frequency Currents in the Damping Winding and the Additional Losses of an Alternator (Toki zubtsovoy chastoty v dempfernoy obmotke i dobavochnyye poteri sinkhronnogo generatora)

PERIODICAL: Elektrichestvo, 1958, Nr 7, pp. 7 - 11 (USSR)

ABSTRACT: The currents parallel to the transverse axis of the poles and the additional losses caused by these currents are investigated here. First an alternator with slanting slots is described. The currents and the losses produced by them by the pulsation of the magnetic flux at $t_2=t$ with a whole number of slots per pole and phase and with a damping winding with open slots are determined. The formulae for the total current in the rods of the damping cage, for the maximum current in the steel per 1 cm pole-length at x=0 and for the losses in the copper-rods (armor rods) at 75°C are determined. Then an alternator without slanting stator slots is investigated. In this case, a drop of potential occurs between the ends AB of the armor rods. The total current

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in the armor rods is determined according to formula (17). After the determination of the currents in the rods, the losses may be determined according to formula (14). The problem of the generation of currents in the steel between the armor rods of the adjacent poles in the case of a stator-slot-slanting per slot pitch is of great importance. These currents may reach considerable values and lead to a destruction of the poles. In order to avoid sparking, a sufficiently reliable contact between the rods and the steel of the poles must be guaranteed. There are 4 figures and 2 references, 1 of which is Soviet.

ASSOCIATION: Zavod "Elektrosila" im. Kirova ("Elektrosila"-Works imeni Kirov)

SUBMITTED: January 21, 1958

SOV/110-58-8-20/26

AUTHOR: Ipatov, ~~P.N.~~ (Candidate of Technical Science)

TITLE: Currents in the Damper-winding Bars of a Synchronous Machine with Asynchronous Fields (Toki v sterzhnyakh dempfernoy obmotki sinkhronnoy mashiny pri asinkhronnykh polyakh)

PERIODICAL: Vestnik Elektropromyshlennosti,1958,Nr 8,pp 68-70 (USSR)

ABSTRACT: The damper-windings in salient-pole synchronous machines that may be used for asynchronous starting or for retardation are made short-circuited, but there are bars only in the pole-pieces. As there are no bars in the spaces between the poles, the current distribution in the damper-winding bars is not uniform during asynchronous operation. The bars near the edge of the pole-piece are most heavily loaded. In a published method of calculating the current distribution in this case it is assumed that the outer bars take up all the uncompensated part of the sinusoidally distributed linear load of the stator, which is rotating relative to the rotor. The actual current distribution is more favourable than this because of leakage of the damper-winding. This article describes a simplified

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Currents in the Damper-winding Bars of a Synchronous Machine with Asynchronous Fields

approximate method of calculating the current distribution in the bars during asynchronous running or asymmetric loading. The method supposes that the space between the poles of the machine also contains damper-bars, so that the current distribution in the bars, including the imaginary bars, may be considered as sinusoidal in the longitudinal and cosinusoidal in the transverse axis. It further supposes that an e.m.f. is applied to the imaginary bars which sets up in them currents equal in magnitude and opposite in phase to the initial currents; these additional currents would circulate through the real bars mounted on half of the pole-piece. The superposition of the two hypothetical current distributions corresponds to the real distribution. A mathematical analysis of the case is given on this basis and equations are derived for the additional current in each bar and the normal current. Theoretical and experimental

Cureents in the Damper-winding Bars of a Synchronous Machine with Asynchronous Fields

current distributions are compared in Fig 3 and agreement is seen to be good. Overloading of the outer bars is greater if the leakage is small and if the arc occupied by damper-bars is small. A numerical worked example of the calculations is given.

There are 3 figures and 1 German reference.

SUBMITTED: July 16, 1957

1. Electric motors--Circuits 2. Electric motors--Design 3. Mathematics--Applications

Card 3/3

SOV/110-58-11-5/28

AUTHORS: Ipatov, P.M. (Cand.Tech.Sci.) and Dombrovskiy, V.V. (Engineer)

TITLE: Current During Internal Short-circuits in Wave Windings of Synchronous Machines (Toki pri vnutrennikh korotkikh zamykaniyakh v volnovykh obmotkakh sinkhronnykh mashin).

PERIODICAL: Vestnik Elektropromyshlennosti, Nr.11, 1958, pp.20-26, (USSR)

ABSTRACT: When short-circuits occur in the wave windings of a synchronous machine operating in parallel with a large power system, the currents in the two parts of the winding are in opposite directions. Therefore, two bars of the same phase in a single slot may carry currents in opposite directions, as shown in Fig.1, and the resultant mechanical forces due to these currents may cause damage. The currents in question are calculated with the simplifying assumptions that the winding has no parallel branches, and that the machine is connected to an infinitely large system. For further simplification,

Card 1/4 reactances due to higher harmonics in the field curve, and

Current During Internal Short-circuits in Wave Windings of Synchronous Machines.

also the ohmic resistance of the winding, are neglected. A symmetrical internal short-circuit, illustrated in Fig.2, is first considered because although it is hardly likely to occur it must be investigated in order to analyse other forms of internal damage. A schematic diagram of the winding with internal short circuit is drawn in Fig.3. Calculations are then made of the inductances of the two parts of the winding; expressions for the self-inductance are given in equations 4 and 5 and for the mutual inductance in equation 6. Equations are then obtained for the current in the different parts of the winding. The case of asymmetric short-circuits is then considered, with reference to Fig.5. In examining single- and two-phase short-circuits, which are the most common forms, it is assumed that during the short-circuit a symmetrical system of reactances is formed in the windings. This is always true of single-phase short-circuits, but for two-phase short-circuits the same number of turns should be shorted in both phases. If these assumptions are made,

Current During Internal Short-circuits in Wave Windings of Synchronous Machines.

the theory of symmetrical components can be used to calculate the currents and voltages. Equivalent circuits for various types of symmetrical internal short-circuit are depicted in Fig.6. Expressions are then derived for the symmetrical components of current in the different cases. It is concluded that single-phase internal short-circuit currents are never greater than the currents during three-phase short-circuits. Curves are plotted in Fig.7 for the initial values of current in the two parts of the winding for various positions of short-circuit in hydro-alternators with known reactance values. These are averaged curves calculated from the formula given, and can be used to calculate the currents and stresses between winding bars during internal short-circuits. A table gives values of short-circuit currents calculated by the method given in this article and values calculated by the previous methods for a hydro-alternator of known inductances. It may be seen from the curve

Current During Internal Short-circuits in Wave Windings of Synchronous Machines.

and the table that the results can explain certain types of failures that occur in these machines. There are 7 figures, 1 table and 7 references, of which 3 are Soviet and 4 English.

SUBMITTED: October 2, 1957.

1. Generators--Operation 2. Electric circuits--Failure
3. Electric currents--Performance

IPATOV, P.M.

110-1-1/19

AUTHOR: Rozovskiy, Yu.A., Candidate of Technical Sciences, Salita, P.Z., Engineer, and Ipatov, P.M. Candidate of Technical Sciences.

TITLE: On the Constants of Hydro-alternators for Use with Long-distance Transmission Lines with Synchronous Compensators (O parametrakh gidrogeneratorov dlya dal'nikh elektro-peredach s podpornymi sinkhronnymi kompensatorami)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Vol.29, No.1, pp. 1 - 4 (USSR).

ABSTRACT: When hydro-electric stations feed relatively short transmission lines, stability is enhanced by reducing the reactance of the generators and increasing their inertia. However, when the lines are so long that stability cannot be achieved without special arrangements (such as the use of series capacitors or synchronous compensators), the above measures may be less effective. Since 1955, the NIIPT, together with the staff of the Elektrosila Works and the Electrical Machines Faculty of the Leningrad Polytechnical institute (Leningradskiy politekhnicheskiy institut), have been investigating the stability of long-distance transmission lines and the rational selection of characteristics for hydro-alternators and synchronous condensers. This article

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On the Constants of Hydro-alternators for use with Long-distance Transmission Lines with Synchronous Compensators

gives a brief outline of the main results of work relating to the Stalingrad Hydro-electric Station-Moscow transmission line. The stability of this line was investigated using the electro-dynamic model, the circuit and main characteristics of which are given in an article by Rokotyan in Elektricheskiye Stantsii, 1956, No.8.

First, the influence on the steady-state stability of the installed output and location of the synchronous condensers was determined. If the improved values of hydro-alternator characteristics were used and if synchronous condensers with a total capacity of 280 MVA were installed in the first sub-station, an adequate steady-state stability limit is achieved even without series capacitors. This arrangement was accordingly made the basis of further work. Stability limits with various values of generator reactance are tabulated and it will be seen that the generator reactance has relatively little influence. Increase in the reactance of one section of the transmission system can largely be compensated by appropriate adjustment of the regulators.

 To increase the permissible time for disconnecting a fault,

On the Constants of Hydro-alternators for Use with Long-distance Transmission Lines with Synchronous Compensators

the inertia constant of the Stalingrad generators was selected as 16 sec. As it was not proposed to brake the generators, this solution was correct. However, electrical and mechanical braking is now proposed to improve the stability of the power station and extra inertia becomes necessary. Work done in the Institute by Candidate of Technical Sciences Ye.A. Marchenko showed that with suitable electrical braking of the generators, dynamic stability can be ensured with an inertia constant of the order of 10 sec.

The cost and size of generators having extra reactance and inertia was calculated. The effect of the direct-axis transient reactance on the cost is most marked. An approximate formula is given for the relationship between this value and the weight and cost of the generator. The relationship between the machine constant and the transient reactance for a generator of 123.5 MVA, 13.8 kV and 68.2 r.p.m. is given in Fig.2. The relationship between the linear load and the transient reactance for a pole-pitch of 51 cm is given in Fig.3. For a hydro-alternator of the type in question, the normal inertia for the given reactance is of the order of 8 or 9 sec; for an

On the Constants of Hydro-alternators for Use with Long-distance Transmission Lines with Synchronous Compensators

inertia constant of 15 - 16 sec., the rotor has to be made heavier. The inertia may be reduced by using high-tensile steel for the rotor or by other measures. If the Stalingrad generators are designed for normal inertia, they will weigh about 17% less than the current design. Manufacture and erection will be simpler and cheaper.
Hydro-alternators with specially low reactance and high inertia are accordingly not advised for the Stalingrad-Moscow type of installation, because adequate steady-state and transient stability can be achieved by appropriate excitation control of the synchronous condensers, combined with braking of the alternators. The power-factor of the alternators can be raised to 0.95. There are 3 figures and 5 Russian references.

ASSOCIATION: NIIPT – Nauchno-issledovatel'skiy institut peredayannogo toka.

SUBMITTED: January 18, 1957

AVAILABLE: Library of Congress

Card 4/4

SOV/110-59-2-6/21

AUTHOR: Ipatov, P.M. Candidate of Technical Sciences

TITLE: Additional Stator Iron Losses due to Pulsations of a Magnetic Flux Caused by the Damper Winding (Dobavochnyye poteri v aktivnoy stali statora ot pul'satsiy magnitnogo potoka, vyzvannykh dempfernoy obmotkoy)

PERIODICAL: Vestnik Elektropromyshlennosti,1959,Nr 2,pp 19-21(USSR)

ABSTRACT: In synchronous machines the presence of a damper winding in the rotor can cause appreciable pulsations of the magnetic flux. It is shown that these pulsations can cause additional stray losses in the main stator steel. The usual formula for determining stator steel losses makes no allowance for this factor. Formula (8) is then derived for the additional stray losses that result from this cause. In an appendix the additional stray losses are calculated for a 500 kVA motor and are found to be 1 kW. It is concluded that the stray losses can be

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Additional Stator Iron Losses due to Pulsations of a Magnetic Flux Caused by the Damper Winding

important in medium and small motors but that at high speeds machines with a large number of slots per pole and phase show small additional stray losses.

Card 2/2 There are 2 Soviet references.

SUBMITTED: February 6, 1958

IPATOV, P.M., kand.tekhn.nauk

Assymetry of duplex single reentrant lap armature windings of d.c. machines. Vest.elektroprom. 31 no.3:54-57 Mr '60. (MIRA 13:6)
(Electric machinery--Direct current)

IPATOV, P.M., kand.tekhn.nauk

Equalizing connections of a two-way loop winding of the armature of a d.c. machine. Vest. elektroprom. 32 no.7:25-28 Jl '61. (MIRA 14:10)

(Electric machinery--Direct current)

IPATOV, Pavel Mikhaylovich, kand.tekhn.nauk

Resistance of the circuit of a double and triple-throw armature winding for equalizing currents. Izv.vys.ucheb.zav.; elektromekh. 5 no.1:28-36 '62. (MIRA 15:2)

1. Ispolnyayushchiy obyazannosti dotsenta kafedry elektricheskikh mashin Severo-Zapadnogo zaochnogo politekhnicheskogo instituta.
(Electric machinery--Windings)

IPATOV, P.M., kand.tekhn.nauk; KAZOVSKIY, Ye.Ya., doktor tekhn.nauk; KULIKOV, N.V., inzh.; LYUTER, R.A., doktor tekhn.nauk

Research conducted at the Leningrad branch of the All-Union Scientific Research Institute of Electromechanics and the S.M. Kirov "Elektrosila" factory. Vest.elektrprom. 33 no.4:3-8 Ap '62. (MIRA 15:4)

(Electric machinery)

IPATOV, P.M., kand.tekhn.nauk; DOMBROVSKIY, V.V., inzh.; TSIRLIN, Yu.L., inzh.

Short-circuited turns in the loop windings of an asynchronous machine. Vest. elektroprom. 33 no.7:36-43 Jl '62. (MIRA 15:11)
(Electric machinery--Windings)

DUKSHTAU, A.A.; IPATOV, P.M.

Synchronous machine with pole commutation. Elektrosila no.22: 12-18 '63. (MIRA 17:1)

DOMBROVSKIY, V.V., inzh.; IPATOV, P.M., kand.tekhn.nauk; KAPLAN, M.Ya., inzh.; PINSKIY, G.B., inzh.

Large hydrogenerators. Elek. sta. 34 no.1:37-43 Ja '63. (MIRA 16:2)

(Hydroelectric power stations)
(Turbogenerators)

DOMBROVSKIJ, V.V. [Dobrovskiy, V.V.]; IPATOV, P.M.; KAPLAN, M.J.; PINSKIJ, G.B. [Pinskiy, G.B.]

Large hydroaltenators in the Soviet Union. El tech obzor 52 no.2:58-63 F '63.

1. Elektrosila, Leningrad.

IPATOV, Pavel Michailovic [Ipatov, Pavel Mikhailovich] inz.

Research activities of the Leningrad branch of the All-Union Scientific Research Institute of Electromechanics and of the enterprise Elektrosila imeni S.M. Kirova on the large rotating machines. El tech obzor 52 no.3:120-122 Mr '63.

1. Elektrosila Leningrad.

IPATOV, Pavel Mikhaylovich; DANILEVICH, Ya.B., otv. red.

[Multiplex armature windings of d.c. electric machines] Mnogokhodovye obmotki iakorei elektricheskikh mashin postoiannogo toka. Moskva, Nauka, 1965. 60 p. (MIRA 18:4)

DOMBROVSKIY, Vyacheslav Vyacheslavovich; YEREMEYEV, Aleksandr Sergeyevich; IVANOV, Nikolay Pavlovich; IPATOV, Pavel Mikhaylovich; KAPLAN, Moiseye Yakovlevich; PINSKIY, Grigoriy Borisovich; ZHERVE, G.K., nauchn. red.; ZARITSKIY, Ya.V., red.

[Design of hydrogenerators] Proektirovanie gidrogeneratorov. [By] V.V.Dombrovskii i dr. Moskva, Energiia. Pt.1. 1965. 257 p. (MIRA 18:3)

IPATOV, P.M., kand. tekhn. nauk

Performance of a d.c. machine with a multiplex armature winding under load. Elektrotekhnika 35 no.10:54-57 O '64.
(MIRA 17:11)

L 27760-66 EWT(l)/ETC(f)/EWG(m)/EWA(h) IJP/AT/GD

ACC NR: AT6000052 SOURCE CODE: UR/0000/65/000/000/0067/0074

AUTHOR: Ipatov, P. M. 35

ORG: Institute of Electromechanics of AN SSSR (Institut elektromekhaniki) Bh1

TITLE: The effect produced by solid poles on the emf wave shape of a synchronous generator 25

SOURCE: AN SSSR. Institut elektromekhaniki. Elektricheskiye mashiny; issledovaniya, voprosy teorii i rascheta (Electrical machinery; research, problems in theory and design), Leningrad, Izd-vo Nauka, 1965, 67-74

TOPIC TAGS: electric power engineering, electric generator, electromotive force

ABSTRACT: The possible use of solid poles or solid pole shoes in alternators is discussed from the standpoint of the slot harmonics effect. In certain cases, the usual methods available for the reduction of these harmonics could not be applied efficiently to the design of machines. For instance, use of a fractional number of stator slots render intricate the design of the water-cooling system. In this connection, it was mentioned that the alternator designed for the Krasnoyarsk Hydro-Power Plant will have three slots per pole per phase. In case of heavy saturations and large coil pitches, the skewed slots call for a high preci-

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ACC NR: AT6000052

sion in designing and fitting the damper windings. It seems, therefore, that the use of solid poles or solid pole shoes without damper windings can become a radical method for suppressing the slot harmonics in water-wheel-type alternators. As to the additional losses in solid shoes, they are in many cases, not greater than in the laminated poles. These losses can be reduced by 50 to 70% in solid shoes with a corrugated surface. The expensive machinery and finishing of solid pole surfaces can partly be avoided by using clean surfaced castings. The author states that the trend developed by the "Uralelektroapparat" plant toward the use of solid poles appears to be a right decision. In order to investigate the effect of solid poles upon the emf wave shape, the author presented a brief analysis of the currents induced in solid poles by the pulsating magnetic flux. The damper factor was also determined. The formulas for induced wave lengths and amplitudes were given for machines having integer number of stator slots per pole per phase. By using standard vector and equivalent circuit diagrams the damper factor for the transversal axis was formulated. The flux penetration depth was also expressed by a formula. For a better illustration, an example of calculation for a DC-85-10-4 synchronous machine of 745 kva was presented. The calculations were made for the laminated poles with damper windings as well as for the solid poles without damper windings but with a short-

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ACC NR: AT6000052

circuit ring. The detailed data on the DC-85-10-4 alternator were given. The emf harmonics data for the solid pole design were tabulated. The test results showed a practical absence of slot harmonics. In conclusion, it was stated that by using solid poles, the amplitudes of slot harmonics could be reduced dozens of times. The design could also be simplified due to the possibility of using integer numbers of slots per pole per phase. It was proven too that the induced harmonic wave lengths could be assumed equal to a double pole pitch. Orig. art. has: 6 formulas and 2 figures.

SUB CODE: EM / SUBM DATE: None / ORIG REF: 004 / OTH REF: 000

Card 3/3

IPATOV, P.M., kand.tekhn.nauk; DUKSHTAU, A.A., inzh.

Action of harmonic magnetomotive forces of a stator winding with a fractional number of pole and phase grooves. Elektrotekhnika 36 no.1:8-11 Ja '65. (MIRA 18:3)

130 - 6 - 25/27

AUTHOR: Ipatov, P.P.

TITLE: Coil Remover at a Wire Mill in East Germany. (S"yemshchik buntov na provolochnom stane GDR.)

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, p.47 (USSR).

ABSTRACT: Wire coil handling by a special machine in East Germany is described and the machine is illustrated. Three such machines are said to be used for a mill with a productivity of 100 000 tons per annum.

There are 2 figures.

ASSOCIATION: Department of the Chief Mechanic, Ministry of Ferrous Metallurgy of the USSR. (Otdel Glavnogo Mekhanika MChM SSSR)

Card 1/1

NIKOLAYEVSKIY, Ye.Ya., inzh.; EYDEL'NANT, L.B., inzh.; DAVYDOV, A.M., inzh.; SIMACHEV, L.V., red.; BATENCHUK, A.N., inzh., red.; IPATOV, P.P., inzh., red.; KRYLOV, V.A., inzh., red.; PELESHUK, M.I., inzh., red.; PITERSKOV, N.I., red.; SHUBOV, L.B., red.

[Instructions for industrial safety measures in the assembly of technological equipment and piping] Instruktivnye ukazaniia po tekhnike bezopasnosti pri montazhe tekhnologicheskogo oborudovaniia i truboprovodov. Izd.2., perer. i dop. Moskva, TSentr. biuro tekhn.informatsii, 1959. 160 p. (MIRA 13:6)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Glavmetallurgmontazh. 2. Glavnyy inzhener Glavmetallurgmontazha Ministerstva stroitel'stva RSFSR (for Simachev).
(Industrial safety)

RAYKO, V.V., nauchnyy sotrudnik; NIKBERG, I.M., nauchnyy sotrudnik; KHODAK, A.N., nauchnyy sotrudnik; NEVEDUSHCHIY, A.I., nauchnyy sotrudnik; VOLKOV, Ya.R., nauchnyy sotrudnik; PEYCHEV, G.P., otv. red.; IPATOV, P.P., red.; SHULYATSKIY, D.M., red.; BURKSER, L.D., red.; BALASKVICH, Yu.Yu., red.; SVETCHENKO, V.N., red.; KRYLOVSKIY, A.P., red.; SINYAVSKAYA, Ye.K., red.izd-va; ANDREYEV, S.P., tekhn.red.

[Regulations for operating the mechanical equipment of rolling mills] Pravila tekhnicheskoi ekspluatatsii mekhanicheskogo oborudovaniia prokatnykh tsekhov. Khar'kov, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 247 p. (MIRA 12:9)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy insitut organizatsii proizvodstva i truda chernoy metallurgii. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut organizatsii proizvodstva i truda chernoy metallurgii (VNIIOChERMET) (for Rayko, Nikberg, Khodak, Nevedushchiy, Volkov). 3. Otdel glavnogo mekhanika byvshego Ministerstva chernoy metallurgii SSSR (for Ipatov, Shulyatskiy). 4. Zavod imeni Dzerzhinskogo (for Burkser, Balasevich). 5. Zavod imeni Kirova (for Svetchenko). 6. Zavod imeni Voroshilova (for Krylovskiy).
(Rolling mills--Equipment and supplies)

GINZBURG-SHIK, Lev Davidovich; IPATOV, P.P., inzh., retsenzent; POLOZHINTSEV, V.R., inzh., red.; TSOPIN, K.G., inzh., red. izd-va; STROGANOV, L.P., inzh., red.izd-va; MODEL', B.I., tekhn.red.

[Installation of boiler systems; brief reference book] Montazh kotloagregatov; kratkoe spravochnoe posobie. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 231 p. (MIRA 13:11)

(Boilers)

MIKHEYEV, Il'ya Il'ich; IPATOV, P.P., inzh., nauchnyy red.; SHIROKOVA, G.M., red. izd-va; OSENKO, L.M., tekhn. red.

[Assembly of centralized systems of lubrication and hydraulic and pneumatic drives] Montazh tsentralizovannykh sistem smazki, gidravliki i pnevmatiki. Moskva, Gos. izd-vo lit-ry po stroit., arkhit., i stroit. materialam, 1961. 240 p. (MIRA 14:11)
(Lubrication and lubricants) (Oil-hydraulic machinery)
(Pneumatic machinery)

LEVIN, M.L.; IPATOV, P.P., nauchnyy red.; ZVORYKINA, L.N., red. izd-va; OSENKO, L.M., tekhn. red.

[Assembly of industrial equipment in enterprises of the metallurgical industry; ore dressing, sintering, and blast-furnace plants] Montazh tekhnologicheskogo oborudovaniia predpriiatii metallurgicheskoi promyshlennosti; obogatitel'nye i aglomeratsionnye fabriki, domennye tsekhi. Moskva, Gosstroiizdat, 1962. 335 p. (MIRA 15:6)
(Iron and steel plants—Equipment and supplies)

IPATOV, P. P.

Ipatov, P. P. "Analysis of the stud activity of the Gil'deyts stallion and further selection work with his descendants," Trudy Stavrop. s.-kh. in-ta, Issue 3, 1948, p. 267-86

So: U-3566 15 March, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

PA 31/49T64

IPATOV, P. P., Docent

USSR/Medicine - Veterinary Medicine Jun 48
Medicine - Education, Medical

"Improving the Standard of Students at Veterinary Higher Educational Institutions," Docent P. P. Ipatov, Deputy Chief, Main Adm of Zoovet "Vuz," Min of Higher Educ, 3¼ PP

"Veterinariya" No 6

Cites examples of ignorance of "vetvuz" (veterinary higher educational institutions) graduates. Suggests altering training scheme to give veterinary students more practical experience.

31/49T64

IPATOV, P. P.

20930 Ipatov, P. P. Voprosy podlotovki kadrov i nauchno-issledova tel' skaya rabota po molochnomu delu v zooveterinarnykh . Sbornik dokladov Pervoy Vsesoyuz. Konf-tsii po moloch. delu. M., 1949, s. 6-15

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

IPATOV, P. P.

IPATOV, P. P.: "An objective method of evaluating the working ability of race horses in racetrack tests." Min Higher Education USSR. Moscow Veterinary Academy. Moscow, 1956. (Dissertation for the Degree of Doctor in Agricultural Sciences)

Source: Knizhnaya letopis' No. 28 1956 Moscow

Q

USSR/Farm Animals. Horses.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92567.

Author : Ipatov, P.P.
Inst : The All-Union Agricultural Correspondence Course Institute.

Title : Gas Metabolism in Trotters During Tests.

Orig Pub: Tr. Vses. s.-kh. in-ta zaochn. obrazovaniya, 1957, vyp. 1, 103-134.

Abstract: It was established during the investigation of pulmonary gaseous metabolism in trotting horses that the pulse rate (PR) and respiration rate (R) are lower in horses with a speed of 2 min. 25 sec. and slower. Immediately after a race at a distance of 1600 meters the PR reached 91 and 114 respectively while R attained

Card : 1/3

Q

USSR/Farm Animals. Horses.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92567.

55 and 77. The inhalation intake was 6.6 and 6.0 liters, after 1 hour it was 4.6 and 3.2 liters, after 2 hours 4.5 and 3.8 liters respectively. The O_2 requirement for the fastest trotters was 0.211 liters greater at rest than for the merely fast trotters, and immediately after the race, one hour and two hours after racing, the greatest O_2 need was found in horses having the least speed. The O_2 utilization factor was higher in the fast horses both at rest and after running than in the slower ones, although the CO_2 accumulation factor was less in the former than in the latter. The oxygen restoration process lasts for two hours after the race in the slower trotters. The process is completed sooner in faster trotters. The oxygen supply to tissues occurs at the expense of

Card : 2/3

46

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92567.

systolic rate, while in faster horses through systolic force and the quantity of blood flow per minute. -- A.D. Musin.

USSR/Farm Animals. Horses.

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92566.

Author : Ipatov, P.P.
Inst : The All-Union Agricultural Correspondence Course Institute.
Title : The Blood Pressure in Trotters During Tests.

Orig Pub: Tr. Vses. s.-kh. in-ta zaochn. obrazovaniya, 1957, vyp. 1, 135-149.

Abstract: The blood pressure (BP) was investigated in 113 trotters. The BP in Orel trotters who were faster than 2 min. 20 sec. was 109 mm before running, 135 mm immediately after running, and 104 two hours after running. The BP in Russian trotters faster than 2 min. 20 sec. was correspondingly 97, 132.5 and 100.5. When the

Card : 1/2

USSR/Farm Animals. Horses. Q

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92566,

cardiovascular system was at peak functioning capacity, the average BP scarcely varied before and after racing. The most characteristic BP cuve may be regarded as the one where the curve comes to rest in the shortest possible time and its drop before coming to rest at the bottom does not exceed 10%. Blood pressure norms are given for trotters undergoing training at the track.

Card : 2/2

USSR/Farm Animals - Horses.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30907

Author : Ipatov P.P.
Inst :
Title : Changes of the Blood Composition in Trotter Horses During Tests.
(Izmeneniya v sostave krovi u rysistykh loshadey pri ispytaniyakh).

Orig Pub : Tr. Mosk. vet. akad., 1957, 19, No 1, 112-131.

Abstract : During the summer season of the running tests on 10 Orel Trotters and 10 Russian Trotters, the following blood indexes were studied: Hb, erythrocyte and leukocyte count, reserve alkalinity, and leukocytal formula. It was demonstrated that identical muscular exertion (test run of 1,600 m.) appears to be much more straining (causing sharp variations in the blood indexes) for the Orel Trotter than for the Russian Trotter.

Card 1/2

USSR/Farm Animals - Horses.

Abs Jour : Ref Zhur - Biol., No 7, 1958, 30907

The difference in the blood picture between the lively and quiet Trotters within the breed groups was also studied. The quiet Trotters are distinguished by a lower index of reserve alkalinity, by a rapid spending of it, and by a slower process of its restoration.

Card 2/2

KRYLOV, V.A.; IPATOV, P.P., retsenzent; FINKEL', A.F., retsenzent; GURVITS, A.I., inzh., nauchn. red.

[Assembling the equipment of steel smelting plants] Montazh oborudovaniia staleplavil'nykh tsekhov. Moskva, Stroiizdat, 1964. 289 p. (MIRA 17:6)

IPATOV, Petr Platonovich, inzh.; FINKEL', Abram Froymovich, inzh.; ZALENSKIY, V.S., inzh., nauchn. red.; PEREVALYUK, M.V., red.; SHEVCHENKO, T.N., tekhn. red.

[Rigging operations and hoisting and conveying machinery used in assembling] Takelazhnye raboty i montazhnye podʺemno-transportnye mekhanizmy. Moskva, Stroiizdat, 1964. 246 p. (MIRA 17:2)

IPATOV, S.I.

IPATOV, S.I., inzhener.

Portable electric appratus for vulcanizing conveyer belts. Elek.sta. 28 no.7:84-85 Jl '57. (MLRA 10:9)
(Conveying machinery)

IPATOV, S.S.

[Coordinate boring machines in precision instrument making] Koordinatno-rastochnye stanki v tochnom priborostroenii. Moskva, Oborongiz, 1954. 196 p. (MLRA 7:11D)

IPATOV, S.S.; YERMILOV, Ye.F., red.; TIKHONOV, V.I., red.; GLADKIKH, N.N., tekhn. red.

[Jig boring machines used in the precision manufacture of instruments] Koordinatno-rastochnye stanki v tochnom priborostroenii. Pod red. E.F.Ermilova. Moskva, Oborongiz, 1954. 195 p. (MIRA 16:9)
(Drilling and boring machinery)
(Instrument manufacture)

IPATOV, V.; NOVIK, G.; RUSANOV, B.; STEPANOV, Yu.; LANSKOY, V.; IVANOV, A.

Sports news. Kryl. rod. 15 no.7:27 Jl '64. (MIRA 18:1)

SOV/120-58-2-22/37

AUTHORS: Ipatov, V. A., Pakhomov, L. P.

TITLE: A Photoelectric Instrument for the Determination of the Concentration of Mercury Vapour in Air (Fotoelektricheskiy pribor dlya opredeleniya kontsentratsii parov rtuti v vozdukhe)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, pp 91-94 (USSR)

ABSTRACT: A description is given of a portable instrument which can be used to determine quickly and conveniently the concentration of mercury vapour in air. The instrument is based on the absorption by a vapour of ultraviolet radiation having a wavelength of 2537 Å. The intensity of the radiation is measured by a photomultiplier. The output of the photomultiplier is fed to an electric circuit which uses only diode and triode transistors. The circuit used is shown in detail in Fig.3. The scale of the instrument is linear and full scale deflection corresponds to 120 μg/m³. A complete analysis of mercury vapour concentration in a given room can be carried out in 30-40 sec.

Card 1/2

SOV/120-58-2-22/37

A Photoelectric Instrument for the Determination of the Concentration of Mercury Vapour in Air.

There are 4 figures, no tables and 3 references, of which 2 are English and 1 is Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut AN SSSR (Physico-Technical Institute of the Academy of Sciences of the USSR)

SUBMITTED: May 13, 1957.

Card 2/2 1. Air--Analysis 2. Mercury vapor--Determination
3. Photoelectric equipment--Applications

L 44002-66 EWT(l)/EWP(m) WW

ACC NR: AP6018720 SOURCE CODE: UR/0057/66/036/006/0981/0987

AUTHOR: Ipatov, V.A.; Kalmykov, S.G. 99 B

ORG: Physicotechnical Institute im. A.F.Ioffe, AN SSSR, Leningrad (Fiziko-tekhnicheskiy institut AN SSSR)

TITLE: Application of uhf diagnostic techniques to the investigation of the structure of shock waves

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 6,1966, 981-987

TOPIC TAGS: plasma diagnostics, uhf, microwave, plasma shock wave, shock wave structure, electron density, argon, SHOCK WAVE FRONT, SHOCK WAVE VELOCITY

ABSTRACT: The authors have employed a microwave interferometer to measure the electron density distribution in a shock front. The shock waves were produced in a 4 cm diameter quartz tube containing argon at approximately 0.01 mm Hg by discharging a 50 kV 12 microfarad capacitor through a two-turn conical winding at one end of the tube. Electrode erosion was avoided only by employing high grade steel for the winding and carefully preparing its surface. The apparatus was baked out and was purified by repeated discharges, after each of which it was pumped down to 10^{-6} mm Hg. An up to 14 kOe transverse magnetic field, uniform within 3% over the 10 cm long working region, was provided by discharging a 5 kV 1.05 microfarad capacitor through two rectangular windings. The velocity of the shock front was derived from the cutoff

Card 1/3 UDC: 533.9.07

times of two parallel microwave beams 4 cm apart that crossed the shock tube at right angles to its axis. The 8 mm wavelength microwave interferometer was located midway between the two microwave beams employed to measure the shock wave velocity. The transmitting and receiving antennas were identical; each consisted of a horn and a 7 cm diameter hyperbolic double convex paraffin lens that focused the beam onto the axis of the shock tube. The local lengths of the two surfaces of each lens were 4 and 12.5 cm, respectively. The electron density was calculated from the phase shift of the transmitted beam. The resolving power of the interferometer in the axial direction was determined by moving a 3 cm diameter metal cylinder through the shock tube and observing the change with the position of the cylinder of the intensity of the transmitted beam; the resolution was found to be approximately 1 cm. In deriving the electron density from the interferometer data it was assumed that the electron density was constant in a coordinate system moving with the shock front and could be represented by a trapezoidal distribution function. The velocity of the shock front was about 10^7 cm/sec at 0.045 mm Hg; the velocity increased slightly with increasing voltage on the capacitor and decreased somewhat with increasing strength of the transverse magnetic field. The velocity was nearly 10^8 cm/sec at 0.064 mm Hg, but the reproducibility was poor. The width of the shock front, defined as the distance in which the maximum electron density increased from 10^{12} to 1.7×10^{13} cm^{-3}, increased rapidly with increasing velocity of the shock wave, and under some conditions it was as great as 20 cm. The observed velocity dependence of the shock front width is in conflict with the findings of H.Petschek and S.Byron (Ann. Phys., 1, 270, 1957) and H.Blackman and B.Niblett (The

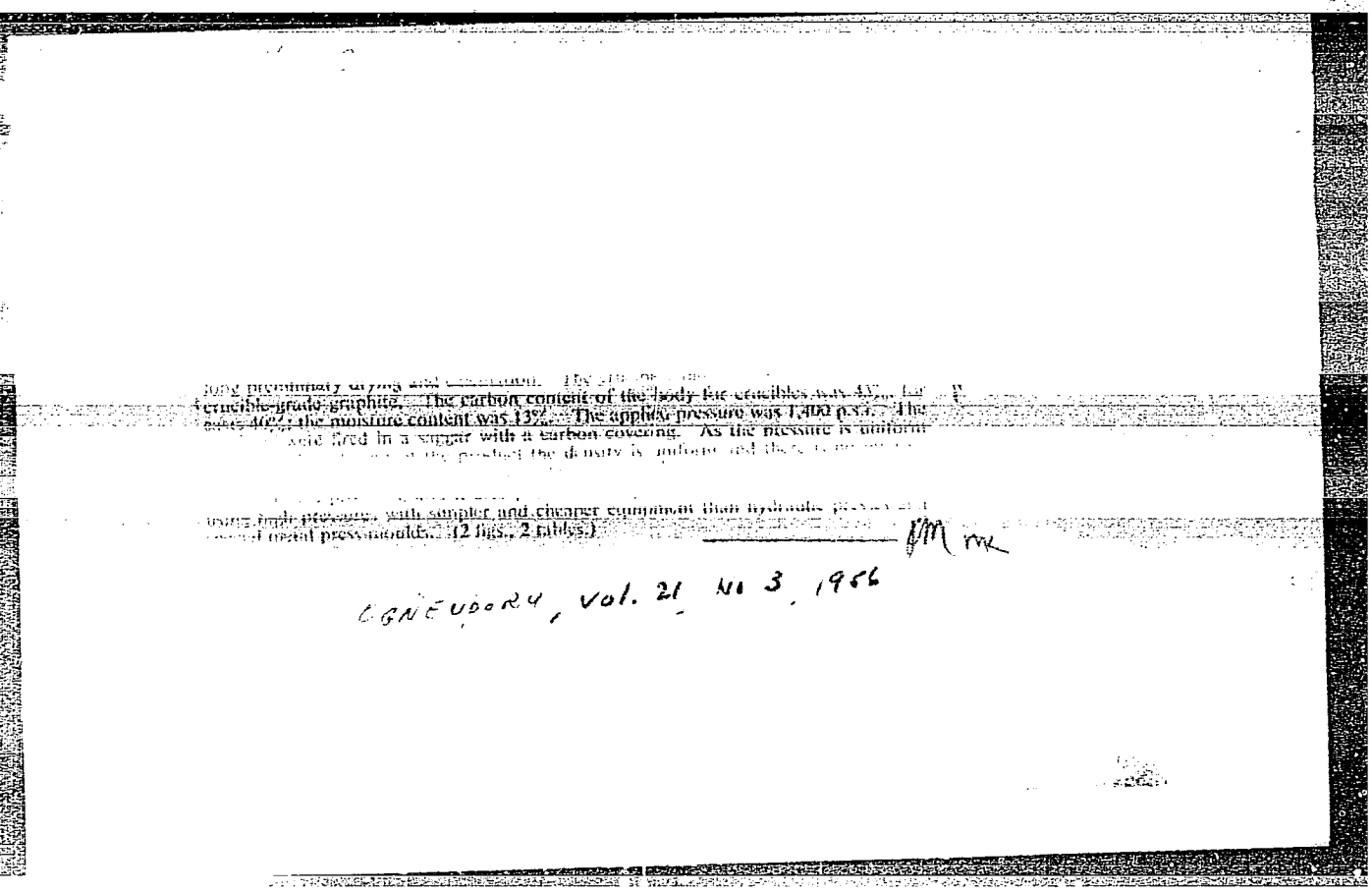
L 41002-66

ACC NR: AP6018720

Plasma in a Magnetic Field, a Symposium on Magnetohydrodynamics, Stanford University Press, 1958), but it is pointed out that the Mach numbers, which in the present work ranged from 140 to 800, were different in the other experiments. The width of the shock front decreased somewhat with increasing transverse magnetic field strength, but the width was definitely not limited by the electron Larmor radius. It is concluded that further experiments are desirable to eliminate the necessity for the arbitrary assumption of a trapezoidal electron density distribution, and that the microwave interferometer is a useful tool for measuring rapidly changing electron densities with a spatial resolution in the neighborhood of 1 cm. Orig. art. has: 2 formulas and 7 figures.

SUB CODE: 20 SUBM DATE: 02Jul65 ORIG. REF: 008 OTH REF: 005

Card 3/3



...some preliminary drying and ... The ... for ... crucible-grade graphite. The carbon content of the body for crucibles was 4%, for ... the moisture content was 13%. The applied pressure was 1,400 p.s.i. The ... was fired in a sagger with a carbon covering. As the pressure is uniform ... the product the density is uniform and there is ...

... with simpler and cheaper equipment than hydraulic ... metal press-moulds. (2 figs., 2 tables.)

CERAMURGIA, Vol. 21 No 3, 1956

L 6396-66

ACC NR: AP5020927 SOURCE CODE: UR/0142/65/008/003/0355/0357

AUTHOR: Zyubenko, V. D.; Ipatov, V. I.

61
23

ORG: none

TITLE: A shock excitation oscillator circuit

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 3, 1965, 355-357

TOPIC TAGS: semiconductor diode, periodic pulse, shock wave, electron tube

ABSTRACT: Two alternative semiconductor diode circuits are presented that form pulses of a sinusoidal wave by shock excitation. One has a positive, the other a negative initial half period. The diode generator is more advantageous at higher frequencies than the transistor and electron tube pulse forming circuits in that it has a much higher back breakdown voltage than the former and lower impedance than the latter. An experimental diode pulse forming circuit produced pulses of a sinusoidal voltage with a frequency of 10 Mc. Fig. 1 shows the schematic diagrams of the two alternatives, and fig. 2 shows the respective control and output voltages for both alternatives. Orig. art. has: 2 figures.

Card 1/2

0902 0121

L 6396-66
ACC NR: AP5020927

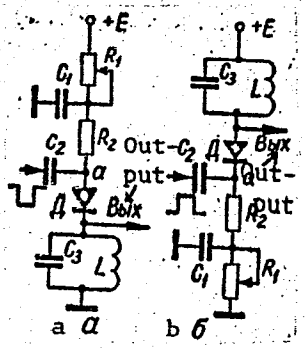


Fig. 1. Circuit of shock excitation oscillator; a - for generation of voltage with negative first half period; b - for generation of voltage with positive first half period.

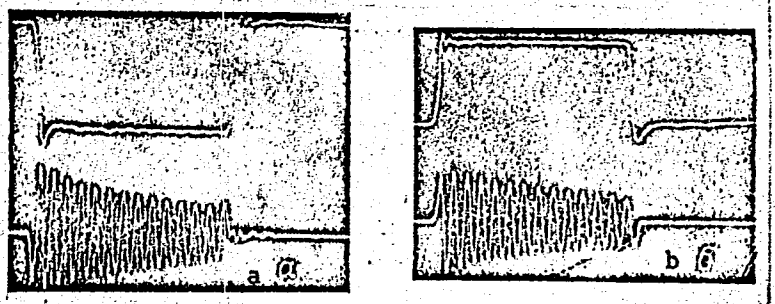


Fig. 2. Oscillograms of control and output voltages for circuits shown in Fig. 1, a and b.

SUB CODE: EE, EC/ SUBM DATE: 21May64/ ORIG REF: 000/ OTH REF: 000
UDC: 621.373

Card 2/2

AMIROV, Rasim Zakareyevich; IPATOV, V.P., red.

[Electrocardiotopography] Elektrokardiotopografiia.
Moskva, Meditsina, 1965. 142 p. (MIRA 18:7)

IPATOV, V.P.; LOSEV, O.L.

Malaria in Iraq; survey of the literature published during 1950-1959. Med.paraz.i paraz.bol. 30 no.1:99-102 Ja '61. (MIRA 14:3)

1. Iz otdela epidemiologii Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. instituta - prof. P.G. Sergiyev, zav. otdelom - dots. M.G. Rashina).
(IRAQ—MALARIA)

IPATOV, V.P.; LOSEV, O.L.; SAKOVICH, O.Yu.

Study of the insecticide sensitivity of Anopheles maculipennis Sacharovi Favre and Anopheles hyrcanus pseudopictus Grassi mosquitoes in the Masally and Astrakhan-Bazar Districts of the Azerbaijan S.S.R. in 1960. Med.paraz.i paraz.bol. no.1:83-87 '62. (MIRA 15:5)

1. Iz otdela epidemiologii (i. o. zav. N.N. Dukhanina) i otdela entomologii (zav. - prof. V.N. Beklemishev) Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo (dir. - prof. P.G. Sergiyev) Ministerstva zdravookhraneniya SSSR.
(AZERBAIJAN--MOSQUITOES) (INSECTICIDES)

DOROFEYEVA, Zoya Zakharovna; IPATOV, V.P., red.; PARAKHINA, N.L., tekhn. red.

[Principles of vectorcardiography] Printsipy vektorkardiografii. Moskva, Medgiz, 1963. 211 p. (MIRA 17:2)

IPATOV, V.P.; SAKOVICH, O.Yu.

Study of the insecticide sensitivity of malarial mosquitos in the Massaly and Astrakhan-Bazar districts of the Azerbaijan S.S.R. in 1961; results of the second year of observation. Med. paraz. i paraz. bol. 32 no.3:271-274 My-Je'63 (MIRA 17:3)

1. Iz otdelov epidemiologii (zav. - prof. N.N. Dukhanina) i entomologii (zav. - prof. V.N. Beklemishev [deceased] Instituta meditsinskoy parazitologii i tropicheskoy meditsiny imeni Ye.I. Martsinovskogo Ministerstva zdravookhraneniya SSSR (dir. -prof. P.G. Sergiyev).

YURENEV, Pavel Nikolayevich; IPATOV, V.P., red.

[Rheumatic carditis] Revmaticheskii kardit. Moskva, Meditsina, 1964. 238 p. (MIRA 17:6)

TAREYEV, Ye.M., prof., red.; SHUBLADZE, A.K., prof., red.;
IPATOV, V.P., red.

[Epidemic hepatitis; Botkin's disease] Epidemicheskii gepatit; bolezn' Botkina. Moskva, Meditsina, 1964. 198 p.
(MIRA 17:8)

1. Deystvitel'nyy chlen AMN SSSR (for Tareyev).

GUKASYAN, Aram Grigor'yevich; [illegible], V.I., red.

[Intestinal diseases] Bolezni kishechnika. Moskva, Meditsina, 1964. 474 p. (MIRA 17:11)

YEGOROV, Mikhail Nikolayevich, prof.; LEVITSKIY, Leonid Markovich, doktor med. nauk; IPATOV, V.P., red.

[Obesity] Ozhirenie. Izd.2., perer. i dop. Moskva, Meditsina, 1964. 305 p. (MIRA 18:1)

S.

IPATOV, V.; ZELINSKIY, K. (Reviewers)

"In the heart of living nature." IU.Dolgushin. Reviewed by V. Ipatov, K.Zelinskii. Bot.zhur.39 no.1:119-121 Ja-F '54. (MLRA 7:3)

(Origin of species) (Dolgushin, IUrii)

SHISHKIN,B.K., professor; ROMANKOVA,A.G., kandidat biologicheskikh nauk, starshiy nauchnyysotrudnik; MANKOV,G.S., doktor biologicheskikh nauk, dotsent; DANILEVSKIY,A.S., kandidat biologicheskikh nauk, dotsent; SHTEYNBERG,D.M., doktor biologicheskikh nauk; LOMAGIN,A.G aspirant; SELL'-HERMAN,I.Y., mladshiy nauchnyy sotrudnik; ZHINKIN, L.N., doktor biologicheskikh nauk, professor; IPATOV,V.S., student V kursa; KOKLOV,V.Ye., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; KARTASHEV,A.I., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; NITSENKO,A.A., starshiy nauchnyy sotrudnik; VASILEVSKAYA,V.K., doktor biologicheskikh nauk, dotsent; RYUMIN,A.V., kandidat biologicheskikh nauk; NAUMOV.D.V., kandidat biologicheskikh nauk, mladshiy nauchnyy sotrudnik; KHOZATSKIY,L.I. kandidat biologicheskikh nauk, dotsent; GOROHOFS,A.M., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik; GODLEVSKIY,V.S. assistent; GERBIL'SKIY,N.L., doktor biologicheskikh nauk, professor; ALEKSANDROV,A.D., professor; KOLOSVAZHNYY,V.I.; TURBIN,N.V.; ZAVADSKIY,K.M.

[Theory of species and the formation of species]. Vest.Len.un. 9 no.10:43-92 O '54. (MLRA 8:7)

1. Chlen-korrespondent Akademii nauk SSSR (for Shishkin, Aleksandrov)

(Condtinued on next card)

SHISHKIN.B.K., professor; ROMANKOVA,A.G., kandidat biologicheskikh nauk, starshiy nauchnyy sotrudnik, and others.

[Theory of species and the formation of species]. Vest.Len.un. 9 no.10:43-92 O '54. (MLRA 8:7)

2. Leningradskiy gosudarstvennyy universitet (for Shishkin, Romankova, Markov, Ipatov, Kozlov, Kartashev, Godlevskiy, Gerbil'skiy, Aleksandrov) 3. Zoologicheskiy institut Akademii nauk SSSR (for Shteynberg, Naumov) 4. Kafedra entomologii Leningradskogo gosudarstvennogo universiteta (for Danilevskiy). 5. Kafedra darvinizma Leningradskogo gosudarstvennogo universitete (for Lomagin, Gorobets). 6. Kafedra geobotaniki Leningradskogo gosudarstvennogo universiteta (for Nitsenko). 7. Kafedra botaniki Leningradskogo gosudarstvennogo universiteta (for Vasilevskaya). 8. Kafedra zoologii pozvonochnykh Leningradskogo gosudarstbennogo universiteta (for Khozatskiy). 9. Leningradskoye otdeleniye Vsesoyuznogo instituta udobreniy, agropochvovedeniya i agrotekhniki (for Sell'-Bekman) 10. Institut eksperimental'noy meditsiny Akademii meditsinskikh nauk SSSR (for Zhinkin)

(Origin of species)

IPATOV, V. S., Cand Biol Sci -- (diss) "Aspen forests of the Leningrad Economic Rayon." Leningrad, 1960. 13 pp; (Academy of Sciences USSR, Botannical Inst im V. L. Komarov); 200 copies; price not given; (KL, 24-60, 130)

IPATOV, V.S.

Birch forests in the eastern districts of Leningrad Province.
Uch. zap. LGU no.290:156-170 '60. (MIRA 13:9)
(Leningrad Province--Birch)

IPATOV, V.S.

Types of aspen forests in the northwestern part of the R.S.F.S.R.
Vest. LGU 15 no.3:23-40 '60. (MIRA 13:1)
(Russia, Northwestern--Aspen)

IPATOV, V.S.

"Comparative estimation of the participation of species in the structure of a meadow community" by V.M.Poniatovskaia, N.V. Syrokomskaia. Reviewed by V.S.Ipatov. Bot. zhur. 46 no.9: 1346-1348 S '61. (MIRA 14:9)

1. Leningradskiy gosudarstvennyy universitet.
(Pasture research) (Poniatovskaia, V.M.) (Syrokomskaia, N.V.)

IPATOV, V.S.

Some considerations on the conception of the "forest type".
Vest. LGU 17 no.9:131-134 '62. (MIRA 15:5)
(Forest ecology)

IPATOV, V. S.

Aspen and aspen forests as a source of vegetable raw material. Trudy PBI no.19:88-97 '62. (MIRA 16:1)

1. Laboratoriya geobotaniki Petergofskogo biologicheskogo instituta.

(Aspen)

IPATOV, V.S.

Comparison of some methods for determining the role of a species in the structure of the herbaceous cover of an oak forest. Bot. zhur. 47 no.3:360-368 Mr '62. (MIRA 15:3)

1. Leningradskiy gosudarstvennyy universitet.
(Forest ecology) (Grasses)

IPATOV, V.S.

Correlation between the projective cover and the weight of herbaceous plants. Bot. zhur. 47 no.7:991-992 Jl '62. (MIRA 15:9)

1. Leningradskiy gosudarstvennyy universitet.
(Botanical research)

IPATOV, V.S.; MIRKIN, B.M.

"Floodland meadows of the Yenisey" by L.I.Nomokonov. Reviewed by V.S.Ipatov, B.M.Mirkin. Bot. zhur. 47 no.9:1388-1390 S '62. (MIRA 16:5)

1. Leningradskiy gosudarstvennyy universitet.
(Yenisey Valley--Pastures and meadows)
(Nomokonov, L.I.)

MIRKIN, B.M.; IPATOV, V.S.

Geobotany at the Second Interuniversity Conference "Contribution of Universities to Agriculture". Bot. zhur. 48 no.7:1088-1090 Jl '63. (MIRA 16:9)

1. Leningradskiy gosudarstvennyy universitet.
(Phytogeography) (Botany, Economic)

IPATOV, V.S.

Tables for evaluating forest stands. Vest. LGU 19 no.3:170-174 '64. (MIRA 17:3)

IPATOV, V.S.

Evaluation of the data obtained by projective surveying.
Bot. zhur. 49 no.3:382-386 Mr '64. (MIRA 17:3)

1. Leningradskiy gosudarstvennyy universitet.

IPATOV, V.S.

Use of ecological tables in evaluating forest types. Vest.
LGU 19 no.21:150-152 '64 (MIRA 18:1)

DROZDOV, Aleksandr Aleksandrovich; IPATOV, Vladimir Vasil'yevich; MIGAY, L.S., vedushchiy red.; POLOSINA, A.S., tekhn. red.

[The SS-24P standard seismic station] Seriinaia seismicheskaia stantsiia SS-24P. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 89 p. (MIRA 14:10)
(Seismic prospecting)

20442
S/115/61/000/003/006/013
B124/B204

26.2190

AUTHORS: Ipatov, V. V. and Magin, I. Ya.

TITLE: A miniature resistance thermometer for checking the service of bearings

PERIODICAL: Izmeritel'naya tekhnika, no. 3, 1961, 19-20

TEXT: The service of the bearings in turbo-generators is usually controlled with the temperature of the oil emerging from the bearing, but this is not enough to avert the danger of breakdowns early enough. A more promising method of checking load and support bearings is direct measurement of the temperature of the bearing metal layer in the bearing. The controls showed that the temperature of the race depends on the type of design, amount of load, quantity, and temperature of the cooling oil, and that it usually varies between 70 and 90°C, whereas on critical conditions it may reach 110-140°. Thus, the apparatus for checking the service of bearings must be able to measure temperatures of up to 150°C. However, the usual resistance thermometers which are suited for this range, are too big and therefore cannot be attached to the casing of the

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support bearings. For this reason, a miniature thermometer with a diameter of 3.2 mm and a 12 mm long active part was developed at the laboratory of a turbine engine factory. This resistance thermometer (Fig.1) is a copper wire (0.05 mm in diameter) which is bifilarly wound upon the thermometer and covered with a layer of bakelite paper of the type ПЭЛ ГОСТ 2773-51 (PEL GOST 2773-51). The resistance of the thermometer at 0°C is 53 ohms, its graduation the same as that of the copper thermometers 2a. Stability and measuring error of the thermometers cited meets the requirements of ГОСТ 6651-59 (GOST 6651-59) for third-class thermometers. Inertia of these resistance thermometers is low. The mounting of miniature resistance thermometers to the casings of the support bearing of a ВПТ-25-4 (VPT-25-4) type turbine and in the casings of the load bearings is shown in Fig.2. The resistance thermometers are placed in especially drilled openings (diameter of 3.4 mm) and fixed with БФ-2 (BF-2) adhesive. The terminals of the resistance thermometers are, over a plug, connected to a switch and a measuring instrument. As measuring instrument, the electron bridge ЭМВ-11 (EMV-11) or ЭМДС-26 (EMDS-26) was used. There are 2 figures.

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Fig. 1

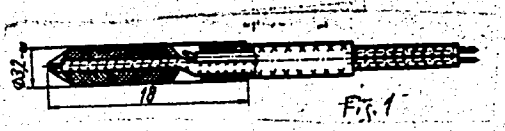

Fig. 1

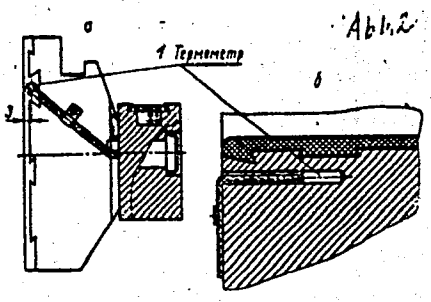

Abb. 2

Fig. 2

Legend to Fig.2:
1) Thermometer.

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AUTHORS: Ipatov, Yu.S., Leykum, V.I., Oleynik, B.N., Patovskaya, Z.K.

TITLE: Instruments for measuring thermal conductivity

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta. no.63(123). Moscow, 1962. Issledovaniya v oblasti teplovykh i temperaturnykh izmereniy. 143-150

TEXT: In 1960 a need was pointed out for instruments to measure thermal conductivity quickly, though not necessarily with great accuracy. For this purpose the here described instrument A-21 is suitable. The cylindrical specimen is in contact with an insulated heater. The measurements are carried out with a constant current passing through the heater. Under such conditions the thermal flux passing through specimens is a function of their thermal conductivity, providing they have the same length. In the base of the instrument is a transformer which supplies the heater. Microammeter M-95 measures the output from the thermocouples in the contact plates at the top and bottom of the test

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piece. The influence on the readings of the pressure on the specimen, the air temperature around the specimen and the cooling temperature were studied, using test pieces 15 mm diameter and 20 mm long made of fused quartz or of fluoroplast-4 (teflon). These specimens are longer than the optimum length of 5 to 10 mm and so the maximum stabilisation time could readily be determined, with quartz it was up to 125 minutes. Similar results were obtained with fluoroplast-4. The specimen diameter is not critical but it will probably be convenient to use a value of 10 to 15 mm. The mean standard error was ± 1% and the overall error of measuring the coefficient of thermal conductivity of a specimen 10 to 15 mm diameter and 5 to 10 mm long is about ± 2% for a large number of tests or about ± 3% for two or three measurements. These values apply for thermal conductivities in the range 0 to 1 W/(metre degree) but for materials of greater thermal conductivity the errors will be greater and indeed the A-21 instrument is not recommended for them. A somewhat improved version, type A-22, is of very similar performance. In order to extend the range of thermal conductivity that can be measured,

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instrument type A-24 has been developed. It measures the heat flow through a given specimen which is in thermal contact with a standard specimen. In this instrument there is no need to maintain the heater output constant. By appropriate calibration of the microammeter scale, measurements can be made in the same way as with instrument A-22. However, the range of thermal conductivity coefficients that can be measured may be extended to semiconducting materials by using a standard specimen of convenient dimensions and thermal conductivity. By measurements of quartz and fluoroplast-4 specimens of 15 mm diameter and 10 mm long, it was found that the repeatability was about ± 1%. The overall error in the measurements is about ± 3% and the instrument can measure thermal conductivities up to 2W/(metre degree). There are 7 figures.

ASSOCIATION: VNIIM

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