KARNOZHITSKIY V.

~~Karnojitzky, V.~~

2

V. Organic peroxides. V. Karnojitzky. *Chimie & industrie* 74, 662–8, 920–39(~~Nov.~~ ~~Dec.~~ 1955)—~~A review~~ with 57 references. CH
E. H.

KARNOZHITSKIY, V.N.

Heat transfer in turbine blades during actual operating conditions. Energ. i elektrotekh. prom. no.3:43-46 Jl-S '63. (MIRA 16:10)

1. Institut teploenergetiki AN UkrSSR.

FEDOROV, V.I.; KARNOZHITSKIY, V.N.

Thermal and stress condition in a boiler during sudden gas temperature changes. Energ. i elektrotekh. prom. no.4:59-60 O-D '64.
(MIRA 18:3)

FEDOROV, V.I., kand. tekhn. nauk; KARNOZHITSKIY, V.N., kand. tekhn. nauk; MIKRYUKOV, A.P., inzh.

Determination of inertial characteristics of reguline thermocouples. Energ. i elektrotekh. prom. no.3:31-33 Jl-S '65.
(MIRA 18:9)

ACCESSION NR: AT4039459 S/2526/64/000/026/0107/0113

AUTHOR: Karnozhy*ts'ky*y, V. M. (Karnozhitskiy, V. N.)

TITLE: Experimental investigation of temperature fields in turbine blades

SOURCE: AN UkrRSR. Insty*tut teploenergety*k*. Zbirny*k prats', no. 26, 1964. Teploobmin ta gidrody*namika (Heat exchange and hydrodynamics), 107-113

TOPIC TAGS: turbine, turbine blade, solid turbine blade, hollow turbine blade, blade temperature, turbine blade temperature, high pressure turbine, thermal stress

ABSTRACT: The article presents the results of an experimental study of the temperature fields in the nozzle blades of the first stage of a high pressure turbine under natural operating conditions. Temperature fields are given for solid and hollow turbine jet blades made of E1417 and 1Kh18NYaT steel, as well as graphs illustrating the variation of gas temperature and Reynold's number under non-stationary operating conditions. It is shown that temperature non-uniformity along the center-line of the blade profile may reach considerable values and that high temperature stresses may develop in the blades. Maximum temperature non-uniformity over the blade center-line and through the thickness of a solid blade 0.11 and 0.07 degrees/m respectively) occurs when the engine is started at the moment the maximum gas temperature is established in front of the nozzle unit of the turbine. Temperature non-uniformity along the profile center-line of a solid uncooled blade, with the

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ACCESSION NR: AT4039459

engine operating under stationary conditions, is on the order of 0.01-0.02 degrees/m. The irregularity in temperature distribution for the cross-sectional height of a hollow uncooled blade under engine starting conditions is generally considerably lower than in the case of a solid blade, with the result that temperature non-uniformity can be reduced, engine reliability improved and the operational qualities of the blade enhanced by substituting hollow turbine blades for solid. Orig. art. has: 6 figures and 1 formula.

ASSOCIATION: Insty*tut teploenergety*ky* AN UkrRSR (Institute of Thermal Energetics, AN UkrRSR)

SUBMITTED: 10Apr62 DATE ACQ: 12Jun64 ENCL: 00

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

Card 2/2

L 07799-67 EWT(d)/EWT(m)/EWP(w)/EWP(k) IJP(c) EM/JAJ/RM/JXT(CZ)
ACC NR: AT6033812 SOURCE CODE: UR/3052/66/000/006/0205/0212

AUTHOR: Karnozhitskiy, V. P. (Khar'kov); Ingul'tsov, V. L. (Khar'kov)

ORG: none

TITLE: Effect of thermal stresses on the stability of an asymmetrical-construction sandwich wing panel

SOURCE: Nauchnoye soveshchaniye po teplovym napryazheniyam v elementakh konstruktsiy. 6th, Kiev, 1966, Teplovyye napryazheniya v elementakh konstruktsiy (Thermal stresses in construction elements); doklady soveshchaniya, no. 6. Kiev, Naukova dumka, 1966, 205-212

TOPIC TAGS: thermal stress, sandwich panel, sandwich plate, wing skin, wing sandwich skin, panel buckling, sandwich plate buckling, plastic buckling, thermal buckling

ABSTRACT: A rectangular sandwich panel of a wing skin supported along the pairs of opposite sides by spars and ribs is subjected to compression forces in span direction uniformly distributed along the face layers, and to thermal stresses caused by the temperature difference between the outer (hotter) and inner face layers. The sandwich panel is of asymmetrical construction as related to the thickness and material of faces. The effect of thermal stresses on the stability of such a

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L 07799-67
ACC NR: AT6033812 0

panel is discussed, assuming that the panel is plane and has peculiar boundary conditions: it is supposed to be clamped along all its sides as related to the action of thermal stresses, and to be hinged when discussing its buckling. The thermal stresses in the face layers are discussed first, and equilibrium equations for them are established. The expressions for displacements and stresses in the core satisfying the general equations of the theory of elasticity are given. The condition of joint deformation of the sandwich as a whole is used in deriving an expression for determining the buckling load of the inner face layer. The effect of the magnitude of the layer-temperature differences and of their rigidity parameters on the buckling load is discussed, and an empirical formula for calculating the buckling stresses beyond the proportional limit is recommended. The results of calculation were verified by experimental investigation of buckling of honeycomb sandwich shells with widely varying geometrical parameters; the thermal stresses were produced by heating one face and cooling the other. The discrepancies between the analytically and experimentally determined buckling stresses did not exceed 10%, and only in single cases increased up to 20%. Orig. art. has: 1 figure and 13 formulas.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 005/ ATD PRESS: 5101

Card 2/2 LS

BEL'SKIY, Vladimir Leonidovich; VLASOV, Ivan Petrovich; ZAYTSEV, Valentin Nikolayevich; KAN, Saveliy Nakhimovich, dokt.tekhn.nauk, prof.; KARNOZHITSKIY, Vladimir Pavlovich; KOTS, Veniamin Markovich; LIPOVSKIY, David Yevseyevich; BONIN, A.R., doktor tekhn. nauk, retsenzent; SOKOLOV, A.I., inzh., red.; KUZ'MIN, G.M., tekhn. red.

[Design of aircraft] Konstruktsiia letatel'nykh apparatov. [By] V.L.Bel'skiy i dr. Moskva, Oborongiz, 1963. 708 p. (MIRA 16:8)

(Aircraft)

KARNOZHITSKY, V.P. (Khar'kov)

"On the assumptions regarding core material made in the analysis of stability of sandwich plates"

report presented at the 2nd All-union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.

KARMOZHITSKIY, V. P.

"Temperature Stresses and Deformations in a Covering With a Filler."
Sub 21 Mar 51, Red Banner Order of Lenin Military Aeronautical
Engineering Academy imeni Prof, N. Ye. Zhukovskiy

Dissertations presented for science and engineering degrees in
Moscow during 1951.

SO: Sum. No 480, 9 May 55

SOV/86-58-10-38/40

AUTHOR: Karnozhitskiy, V.P., Engr Lt Col, Docent, Candidate of Technical Sciences

TITLE: Fillers Used in Aircraft Construction (Konstruktsii s zapolnitelem v aviastroyenii)

PERIODICAL: Vestnik vozdushnogo flota, 1958, Nr 10, pp 92-95 (USSR)

ABSTRACT: The author, on the basis of foreign literature, describes the use of different fillers in the aircraft construction. Seven illustrations.

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AM4007943

BOOK EXPLOITATION

Bel'skiy, Vladimir Leonidovich; Vlasov, Ivan Petrovich; Zaytsev, Valentin Nikolayevich; Kan, Saveliy Nakhimovich (Doctor of Technical Sciences, Professor); Karnozhitskiy, Vladimir Pavlovich; Kots, Veniamin Markovich; Lipovskiy, David Yevseyevich

Aircraft design (Konstruktsiya letatel'nykh apparatov) Moscow, Oborongiz, 1963. 708 p. illus., biblio. Errata slip inserted. 6200 copies printed.

TOPIC TAGS: aircraft construction, aircraft strength, aircraft design, aircraft rigidity, aircraft hydraulics, aircraft pneumatics, aircraft servo , aircraft service life, aeroelasticity, aerodynamic heating

PURPOSE AND COVERAGE: The book is intended for aeronautical engineers concerned with aircaft design and manufacture. It may also be useful to students of technical schools of higher education. The principles of aircraft construction and strength are discussed. The principles of arrangement are examined, and design methods for strength and rigidity are given. External design loads are analyzed, and other

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problems in the construction of airplanes, rockets, and helicopters are examined. The pneumatic and hydraulic aircraft systems as well as hydraulic servos are described. Considerable attention is paid to the problems of aeroelasticity, service life, and aerodynamic heating. The factual and numerical data and the schematic diagrams of aircraft are taken from non-Soviet sources. The authors thank K. A. Ly*nshinsky for writing article 3 of Ch. 2 and N. M. Mitrofanov who participated in selection of material for some chapters. Special appreciation is expressed to A. M. Okulov for illustrating the book and to Doctors of Technical Sciences A. R. Bonin and Professor L. P. Ninokurov, and Candidates of Technical Sciences N. G. Savusya, L. A. Kolesnikov, A. A. Yarkho and V. P. Rusanov for their valuable suggestions during the review and revision of the manuscript.

TABLE OF CONTENTS [Abridged]:

Card 2/5

27801

S/508/60/028/000/016/022
D251/D305

24.4200 1327 2607 1109

AUTHOR: Karnozhitskiy, V.P. (Khar'kov)

TITLE: Stress in a long three-layered cylindrical shell with temperature varying according thickness

PERIODICAL: Akademiya nauk SSSR. Otdeleniye tekhnicheskikh nauk. Inzhenernyy sbornik, v. 28, 1960, 197 - 203

TEXT: A three-layer shell is considered (see Fig. 1), consisting of an inner and outer thin layer of sufficiently rigid material with a layer between of a "filler" of low rigidity. μ_i, E_i, α_i, δ_i t_i are taken to be the Poisson coefficients, modulus of elasticity, coefficient of linear expansion, thickness, and temperature respectively of the inner layer (i = 1) and the outer layer (i = 2). The corresponding symbols without indices refer to the filler. Working in axisymmetric polar coordinates, the equations

$$\sigma_r = \frac{c}{r^2} + 2c_4 - \frac{\alpha E s}{2(1-\mu)} - \frac{\alpha E s_1 r}{3(1-\mu)}, \qquad (9)$$

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... and axial directions,

Stress in a long three-layered ...

σ_z is the component of normal stress in the axial direction, u and v are the displacements in the radial and tangential directions. Hence

$$\sigma_z = (d_z - \alpha t)\, E + \mu(\sigma_r + \sigma_\theta) \qquad (13)$$

[Abstractor's note: E not defined]. The boundary conditions are

$$(\sigma_r)_{r=r_1} = p_1,\ (\sigma_r)_{r=r_2} = p_2. \qquad (15)$$

Equations are given similarly for the inner and outer layers. The author concludes by considering the two states $t_1 = 0$ and $t_1 = t_2 = t$ in detail. There are 2 figures and 1 Soviet-bloc reference.

Card 3/4

28818

10.6000 1327

S/147/61/000/003/007/017
E081/E135

AUTHOR: Karnozhitskiy, V.P.

TITLE: The influence of thermal stresses on the stability of 3-ply panels of a wing

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Aviatsionnaya tekhnika, 1961, No.3, pp. 69-77

TEXT: The paper is a continuation of previous work by the present author (Ref.1: Temperaturnykh napryazheniyakh i deformatsiyakh v obshivke s zapolnitelem (Thermal Stresses and Deformations in the Skin), KhVAIVU, 1952). A detailed theoretical analysis is presented of the effect of thermal stresses on the elastic stability of a three-layer wing panel compressed by a load uniformly distributed along the edges of the panel. The thermal stresses result from the difference in temperature of the upper and lower panel layers during high-speed flight. It is assumed that the hypothesis of rectilinear normals applies to the bearing layers. The general relations of elasticity theory are used for the filler, but it is assumed that all compressive stresses are borne by the bearing layers, and that

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the filler is free of stress up to the moment of buckling. The thermal stresses and strains in the filler are neglected in view of its small rigidity. Formulae are derived for calculating the following: 1) thermal and total stresses in the upper and lower layers; 2) stresses in the filler due to the load; 3) combined deformations in the layers and the filler. An expression for the critical load is also derived and an analysis of formulae obtained is presented. The equations for the strains in the upper and lower bearing layers are written in terms of the thermal expansion and elasticity constants, and the differential equations of bending for the two layers are also derived. The stress state in the layers is specified in terms of the Maxwell stress functions, and a biharmonic solution is found for the displacements. The condition of strain compatibility between the bearing layers and the filler is satisfied, and leads to a 6x6 determinant which when evaluated gives an equation for the critical stress.

There are 2 figures and 5 references: 4 Soviet and 1 English.

A.P. Boronovich is mentioned in the article.

28818

The influence of thermal stresses... S/147/61/000/003/007/017
E081/E135

The English language reference reads as follows:
Ref.4: H.L. Cox, I.N. Riddell. Sandwich Construction and Core Materials. Instability of Sandwich Struts and Beams. Aeron. Res. Couns. Rep. Mem. London, No.2125, 1945.

ASSOCIATION: Khar'kovskoye vyssheye aviatsionnoye inzhenernoye voyennoye uchilishche
(Khar'kov Aircraft Engineering Military School

SUBMITTED: October 18, 1960

Card 3/3

KARNOZHITSKIY, V.P.

Effect of thermal stresses on the stability of a sandwich wing panel. Izv.vys.ucheb.zav.; av.tekh. 4 no.3:69-77 '61.
(MIRA 14:8)

1. Khar'kovskoye vysshaye aviatsionnoye inzhenernoye voyennoye uchilishche.

(Airplanes--Wings)
(Thermal stresses)

KARNOZHITSKIY, V.P. (Khar'kov)

Stability of a freely supported sandwich plate subjected to bending in two directions. Inzh. zhur. 3 no.1:183-186 '63. (MIRA 16:10)

(Sandwich construction)

L 14642-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/EWP(k)/EWA(h)/ETC(m)-6 IJP(c)
ACC NR: AP6003187 WW/EM SOURCE CODE: UR/0147/65/000/004/0090/0096

AUTHOR: Karnozhitskiy, V. P.; Tydykov, P. G.

53
B

ORG: none

TITLE: Thermal stresses in a cylindrical shell with an annular-cross-section core

SOURCE: IVUZ. Aviatsionnaya tekhnika, no. 4, 1965, 90-96

TOPIC TAGS: thermal stress, cylindrical shell

ABSTRACT: Sometimes it is advantageous to use in aircraft design a sandwich-like construction consisting only of a skin with a core of annular cross section, e.g., a sandwich plate or shell without an inner face layer. During high-speed flights, thermal stresses will be generated due to the temperature variation over the thickness of the shell. These thermal stresses are determined in a long cylindrical shell with a tubular core, assuming that the temperature in the skin is constant, and varies linearly in radial direction in the core, but the variation is not too strong, so that the modulus of elasticity can be considered constant. The hypothesis of straight normals is applied to the skin, and the general stress-strain relationships of the theory of elasticity are used in the treatment of the core. Expressions are derived for determining the stresses, strains, and displacements in the core produced by the difference of temperatures on its inner and outer surfaces, and by the radial pressure exerted by the skin on the core. The skin is treated as a thin cylindrical shell

Card 1/2 UDC: 539.3+621.438

2

L 14642-66
ACC NR: AP6003187

acted upon by the radial pressure developed by the core, and expressions are also derived for stresses, strains, and displacements. The resulting distribution of thermal stresses in the shell is obtained by summation of two component states of stresses obtained from the above-mentioned expressions by introducing into them boundary conditions associated with temperatures at the inner and outer shell surfaces. A numerical example illustrating thermal-stress analysis in a shell of the discussed type is given. Orig. art. has: 1 figure and 28 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 03Dec64/ ORIG REF: 002/ ATD PRESS: 4198

Card 2/2 BC

L 45115-66 EWT(d) BC

ACC NR: AP6022411 (A) SOURCE CODE: UR/0317/66/000/002/0068/0073

AUTHOR: Karnozov, L. (Engineer, Colonel); Kolenskiy, L. (Engineer, Colonel)

ORG: none

TITLE: In the service of combat training

SOURCE: Tekhnika i vooruzheniye, no. 2, 1966, 68-73

TOPIC TAGS: gyrocompass, oscillograph, potentiometer, electronic oscillograph, electronic device, electronic equipment, electronic warfare training, training equipment, combat training, mechanical failure forecasting device, military conference, mechanical breakdown

ABSTRACT: A review is presented of the Seventh Conference of the Committee of Inventors and Production Experts of the North Caucasus Military District. The progress achieved in the last year in combat-training techniques through the use of mechanical equipment is reported, and the importance of developing new devices is

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L 45115-66

ACC NR: AP6022411

stressed. Worthy of special note, among the instruments demonstrated at the Conference, is a warning device of gyrocompass failure, which can be used for determining the condition of a potentiometer frame in the gyrocompass and to determine the time left before its complete breakdown. The device consists of a standard monitor UPK-2, of a low-frequency electronic oscillograph ENO-1, and of special grouped conductors. The condition of the potentiometer is estimated visually by the characteristic lines of a horizontal sweep projected on the oscillograph screen. During normal function of the gyrocompass the horizontal sweeps are not distorted. The distortions noted at separate points indicate the initial bulging of the potentiometer's frame while strong distortions indicate a defective potentiometer. Orig. art. has: 3 figures. [AM]

SUB CODE: 17,15/SUBM DATE: none/ ORIG REF: none/ SOV REF: none/ OTH REF: none/

Card 2/2 mjs

ACC NR: AP6024897 (A) SOURCE CODE: UR/0317/66/000/007/0017/0023

AUTHOR: Karnozov, L. (Engineer; Colonel)

ORG: None

TITLE: New electric circuit and power units for motor vehicles

SOURCE: Tekhnika i vooruzheniye, no. 7, 1966, 17-23

TOPIC TAGS: motor vehicle, vehicle component, vehicle engineering, electric equipment, electric generator, semiconductor rectifier / G-250 a-c generator, Moskvich-408 motor vehicle, MZMA motor vehicle, GAZ motor vehicle, UAZ motor vehicle, ZIL motor vehicle

ABSTRACT: The progress in using electric equipment for motor vehicles is reviewed and some new applications of Soviet and foreign origin are described. Due to sharp increases in voltage (up to 24 v) and in generator power capacity (up to 0.5 kw) it becomes more expedient to use a-c generators instead of d-c ones. In this connection, the advantages of a-c generators are discussed and comparative speed-load characteristics are presented. Usually a three-phase current is generated and then rectified by means of semiconductor rectifiers. The arrangement of a-c generating and rectifying circuits used for the "Moskvich-408" car is shown in a diagram. Two versions of rectifier circuits are also graphically illustrated. A Soviet a-c generator of a new G-250 type is smaller in size, lighter in weight and twice as powerful as a similar d-c generator. It is equipped with silicon rectifiers assuring a full charge of storage batteries and satisfying other needs even at low engine speeds. It is expected that various motor vehicles of GAZ, UAZ, ZIL and MZMA makes will be equipped with new a-c generators. It is mentioned, however, that the use of alternating current is of interest only for larger power capacities. Small

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L 46181-66

ACC NR: AP6024897

vehicles are equipped with 6-volt d-c generators. Some advantages of using combined systems of dynastarter type for small vehicles are mentioned. With reference to research and experiments conducted in various foreign countries, the author examines the possibilities of electric propulsion by means of electric motors fed from special electrochemical generators. The advantages of electric motor propulsion and the principles of electrochemical heat generation are discussed. An electrochemical element consisting of a negative hydrogen electrode and a positive oxygen electrode is illustrated and its operations are explained by means of flow diagrams. The author also discusses the advantages of using transistor devices for ignition circuit. The contact-transistor and contactless-transistor systems are described by means of comparative curves and a circuit diagram. In connection with the ignition system, a British "spark pump" device is considered to be a promising invention for the future. In conclusion, it is mentioned that the ATE-2 Plant started a series production of a contact-transistor ignition system (shown in a diagram). Its operating characteristic is 15% higher than that of the Ford system and 30 - 40% higher than that produced by Delco - Remi (USA) and of "Khansin Transformer" (Japan). Orig. art. has: 10 diagrams.

SUB CODE: 09, 13/ SUBM DATE: None

Card 2/2 mjs

KARNAUKOV, L.

Radioelectronics in agriculture. Tekh. i vooruzh. s.kh. '64.

L 38038-66 EWT(m)/T DJ/WE

ACC NR: AP6015412 (A) SOURCE CODE: UR/0367/65/000/009/0009/0013

AUTHOR: Komarov, N. (Engineer, Colonel); Karnozov, I. (Engineer, Lieutenant colonel)

ORG: None

TITLE: Initiative of armored tank company to honor the 50th anniversary of Great October

SOURCE: Tekhnika i vooruzheniye, no. 9, 1965, 9-13

TOPIC TAGS: armed force organization, ordnance, armored vehicle, military tank, training

ABSTRACT: The authors praise the initiative of an armored tank company commanded by Captain A. Shipkov. The company makes part of the Guard tank regiment attached to the Soviet armed forces in East Germany. The company appealed to other Soviet military units in Germany to initiate competition for the first place in combat and operational readiness including maintenance of equipment and savings in material. The heroic past of the regiment (October Revolution, Civil War and Second World War) is glorified and pledges for further achievements and improvements are cited. The pledges cover: better training, flexible interchange

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6.9600

S/142/62/005/003/004/009
E140/E435

AUTHORS: Geranin, V.A., Zarenin, Yu.G., Karnsvskiy, M.I.

TITLE: Redistribution of signal probabilities in systems for the transmission and processing of information

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiotekhnika, v.5, no.3, 1962, 339-346

TEXT: The problem frequently arises of transforming the probability distribution of a signal in transmission or in information processing, for example in employing the Monte Carlo method. The authors attempt to solve the problem of specifying the transmission characteristics of a converter, given the input and output probability distributions, for which they know no published solution. A.I.Kitov and N.A.Krinitskiy (Elektronnyye tsifrovyye mashiny i programmirovaniye (Electronic digital computers and programming), Fizmatgiz, 1959) have attempted to solve the special case where the input distribution is uniform but their work is inaccurate. The present work uses the mathematical apparatus developed in probability theory for the related problem of the functional transformation of continuous

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random quantities, reducing to the determination of the probability distribution of a given random function if the distribution of the argument is known. The solution of the problem is given by a differential equation. Illustrations are furnished by the transformation of "truncated normal" distribution to uniform and the reverse transformation. While the method is not directly applicable to discrete distributions, a method due to A.A.Kharkevich (Ocherki obshchey teorii svyazi.(Outline of a general theory of communications), GITTL, 1955).is recommended. There are 5 figures.

ASSOCIATION: Kafedra akustiki i zvukotekhniki, Kiyevskiy ordena Lenina politekhnicheskiy institut (Acoustics and Sound Engineering Department, Kiyev Order of Lenin Polytechnical Institute)

SUBMITTED: November 10, 1960

KARNUS, I.M., inzhener.

Intrafactory planning and accounting of the total production in establishing wage standards. Vest.mash.36 no.12:80-82 D '56.
(Factory management) (Production standards) (MLRA 10:2)
(Wages)

KARNUS, I.M., inzh. ekonomist.

Training technicians for the electric industry. Vest.elektroprom. 28 no.8:78-79 Ag '57. (MIRA 10:10)

1.Khar'kovskiy elektromekhanicheskiy zavod.
(Kharkov--Technical education)

25(3) SOV/117-59-6-28/33

AUTHOR: Karnus, I.M., Engineer

TITLE: Indices for Planning and Calculating Gross Output

PERIODICAL: Mashinostroitel', 1959, Nr 6, p 43 (USSR)

ABSTRACT: The author refers to an article by Engineer O.Ya. Danil'chenko ("Mashinostroitel', Nr 12, 1957), subject as above, in which the current system of calculation and accounting was discussed and criticized. The system used by th Khar'kovskiy traktornyy zavod (Khar'kov Tractor Plant) was described, in which the "work-rate wage" is employed for appraising the gross plant output. The same system has been used since January 1956 by the Khar'kovskiy elektromekhaniches-kiy zavod imeni Stalina (Khar'kov Electro-Mechanical Plant imeni Stalin). The author discusses the drawbacks and advantages of this system. There is one Soviet reference.

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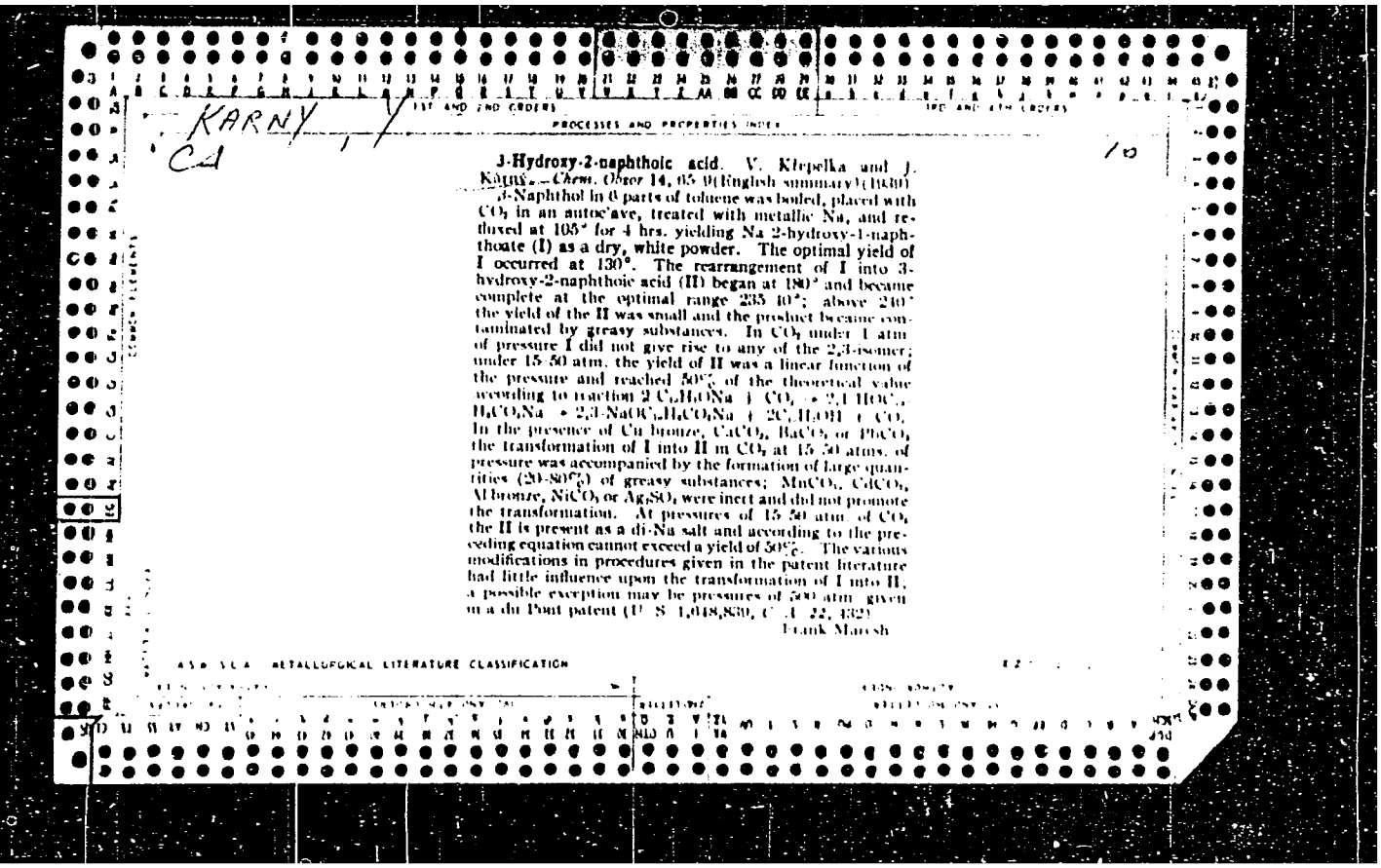

KARNY
C4

PROCESSES AND PROPERTIES INDEX

3-Hydroxy-2-naphthoic acid. V. Křepelka and J. Kárný.—*Chem. Obzor* 14, 65-9 (English summary) (1939). β-Naphthol in 6 parts of toluene was boiled, placed with CO_2 in an autoclave, treated with metallic Na, and refluxed at 105° for 4 hrs. yielding Na 2-hydroxy-1-naphthoate (I) as a dry, white powder. The optimal yield of I occurred at 130°. The rearrangement of I into 3-hydroxy-2-naphthoic acid (II) began at 180° and became complete at the optimal range 235-40°; above 240° the yield of the II was small and the product became contaminated by greasy substances. In CO_2 under 1 atm. of pressure I did not give rise to any of the 2,3-isomer; under 15-50 atm. the yield of II was a linear function of the pressure and reached 50% of the theoretical value according to reaction $2\,C_{10}H_7ONa + CO_2 + 2\,HOC_6H_4CO_2Na \rightarrow 2,3\text{-}NaOC_{10}H_6CO_2Na + 2C_{10}H_7OH + CO_2$. In the presence of Cu bronze, $CaCO_3$, $BaCO_3$ or $PbCO_3$ the transformation of I into II in CO_2 at 15-50 atms. of pressure was accompanied by the formation of large quantities (20-80%) of greasy substances; $MnCO_3$, $CdCO_3$, Al bronze, $NiCO_3$ or Ag_2SO_4 were inert and did not promote the transformation. At pressures of 15-50 atm. of CO_2 the II is present as a di-Na salt and according to the preceding equation cannot exceed a yield of 50%. The various modifications in procedures given in the patent literature had little influence upon the transformation of I into II, a possible exception may be pressures of 500 atm. given in a du Pont patent (U. S. 1,048,830, C. A. 22, 432).

Frank Marsh

ASTM METALLURGICAL LITERATURE CLASSIFICATION

ZAMYATNIN, I. S., inzh.; KARNYSHEV, A. D., inzh.; KOLYSHKIN, O. M., kand. tekhn. nauk

Study of coal mining with a USB-1 high-speed plow in Voikov Mine No. 1-2 in the Donets Basin. Mekh. i avtom. v gornoi prom. no.2: 69-95 '62. (MIRA 16:1)

(Donets Basin—Coal mining machinery)

VASIL'YEV, Petr Vasil'yevich; IVANOV, Konstantin Ivanovich; KARNYSHEV, Anatoliy Dmitriyevich; KUZNETSOV, S.I., kand. tekhn. nauk, retsenzent; KAZAKOV, B.Ye., inzh., otv. red.; OKHRIMENKO, V.A., red.izd-va; LOMILINA, L.N., tekhn. red.

[Controlling roofs in flat seams] Upravlenie krovlei na pologikh plastakh. Moskva, Gosgortekhizdat, 1962. 249 p. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut (for Kuznetsov).

(Mine timbering) (Coal mines and mining)

AKUTIN, G.K. [Akutin, H.K.]; GAYEVENKO, Yu.O. [Haievenko, IU.O.]; DYACHENKO, M.Ya.; ZHAROV, M.T.; IVANOV, S.K.; KARNYUSHIN, L.B.; KLODNITSKIY, I.I. [Klodnyts'kyi, I.I.]; KOBUS, Yu.Y. [Kobus, IU.I.]; KOZLYU, V.Y. [Kozliuk, V.I.]; KORYTNIKOV, V.P.; KOROBKO, M.I.; KOSTOGRIZOV, V.S. [Kostohryzov, V.S.]; LADIYEV, R.Ya. [Ladiiev, R.IA.]; MARTYNYUK, G.F. [Martyniuk, H.F.]; MEL'NIK, P.M.; kand.tekhn.nauk; NAVOL'NEV, S.Ya. [Navol'niev, S.IA.]; SIN'KOV, V.M.; SPINU, G.O. [Spynu, H.O.]; SHCHYKHET, L.A.; SHUMILOV, K.A.; KORSAK, Yu.Ye. [Korsak, IU.IE.], red.; LAGUTIN, I.A. [Lahutin, I.A.], tekhn.red.

[Automation in industry] Avtomatizatsiia v promyslovosti. Kyiv, Derzh.vyd-vo tekhn.lit-ry URSR, 1960. 288 p. (MIRA 14:12)

(Automation) (Industrial management)

KARNYUSHIN, L. V.

PA 3/49T38

USSR/Electronics
Circuits, Electronic
Regulators, Electronic

May 48

"Vacuum Tube Automatic Machine Regulator With Broad Range of Regulation," L. V. Karnyushin, Docent P. K. Kulikovskiy, Candidates Tech Sci, Sci Res Lab for the Electrification of Industries of the "Sevzapelektromontazh" Trust, 2 pp

"Elektrichestvo" No 5

Gives results of research to determine best construction for automatic regulator for electric machinery, having maximum reliability, rapid action and stability of regulation, to base the control circuit

3/49T38

USSR/Electronics (Contd)

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on the regulating object, and to increase accuracy of dynamic regulation.

3/49T38

05-6-17/26

AUTHOR KARNYUSHIN, L.V., Cand. of Technical Sciences

TITLE On Rational Laws for the Motion of a Motor Drive Intended for Intermittent Operation.
(O ratsional'nykh zakonakh dvizheniya elektroprivoda pri povtorno-kratkovremennom rezhime raboty - Russian)

PERIODICAL Elektrichestvo, 1957, Nr 6, pp 64 - 71 (U.S.S.R.)

ABSTRACT There are two kinds of extreme laws of motion for an electro drive intended intermittent operation with complete heat utilization of the motor: 1.-Such laws of motion as reduce the nominal power of the motor necessary for securing the gear-drive capacity to a minimum. 2.- A law of motion which reduces the nominal motor-moment, required for the given gear-drive power, to a minimum The realization of the laws makes it possible to obtain the maximum power of the motor permitted by heating. The parameters of the first mentioned law do not depend on the characteristic magnitudes of the dynamic stress, and those of the second do not depend on stress. Efficacy is shown to be dependent on the ratio between the static and the dynamic load component. The author shows how to realize the most advantageous tachograms in the case of a change of the way of displacement. The optimum tachograms of motion of an electro drive are compared with one another; for this purpose the author base upon two principles: The principle of the same power and the principle of the maintainance of the same nominal motor-moment. It is shown to be useful to carry out

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On Rational Laws for the Motion of a Motor Drive Intended for Intermittent Operation.

an automatic modification of the control scheme as a function of the required way in dependence on the velocity and acceleration optimum for every displacement, in the case of a change of the way of displacement of a working machine (e.g. a dredger).
(5 illustrations, 3 tables and 7 Slavic references)

ASSOCIATION L'vov Polytechnical Institute
PRESENTED BY
SUBMITTED 17.12.1956
AVAILABLE Library of Congress
Card 2/2

GLUZMAN, I.S.; KARNYUSHIN, L.V., dotsent.

System of pneumatic transportation of steel specimens in metallurgical plants. Zav. lab. 23 no.4:502-503 '57. (MLRA 10:6)

1. Master Bereznyakovskogo montazhnogo upravleniya tresta "Uralelektromontash" (for Gluzman). 2. Zaveduyushchiy kafedroy elektrifikatsii promyshlennykh predpiyatiy L'vovskogo politekhnicheskogo instituta (for Karnyushin).
(Pneumatic-tube transportation)

SANDLER, Abram Solomonovich; CHILIKIN, M.G., prof., red.; ZUSMAN, V.G., kand.tekhn.nauk, dotsent, retsenzent; KARNYUSHIN, L.V., kand. tekhn.nauk, dotsent, retsenzent; ZIMIN, Ye.N., kand.tekhn.nauk, red.; BORUNOV, N.I., tekhn.red.

[Electrical equipment for industrial machinery: electrical equipment for metal-cutting machines] Elektrooborudovanie proizvodstvennykh mekhanizmov; elektrooborudovanie metallorezhushchikh stankov. Pod obshchei red. M.G. Chilikina. Moskva, Gos.energ. izd-vo, 1958. 238 p. (MIRA 12:1)
(Machine tools) (Electric apparatus and appliances)

SOV/102-58-3-6/10

AUTHORS: Kardashov, A.O. and Karnyushyn, L.V. (Karnyushin, L.V.)

TITLE: Constructing Frequency Characteristics from Experimental Transient Response Curves (Do pytannya pro pobudovy chastotnykh kharakterystyk za eksperymental'nymy kryvymy perekhidnykh protsesiv).

PERIODICAL: Avtomatika (Kyiv), 1958, Nr.3, pp.74-83 (USSR)

ABSTRACT: In para.1 the curves are approximated by sections of semi-infinite smooth curves delayed relative to one another (as shown in Fig.1, and represented mathematically in Eq.(3)). Eqs.(6) and (7) then have the same general form as is obtained when piecewise-linear approximation is used. Eqs.(8)-(10) deal with the forms used for the approximating curves; Eqs.(11)-(12) relate to the use of Eq.(8) for this purpose. In para.2 the essentials of Solodovnikov's method (see Ref.11) are utilized (tables of the h_x functions, given by Solodovnikov (Ref.11) are required). The last section of the paper deals with an example, for a system with the differential equation of Eq.(18); the response to a step input is assumed to be that of Eq.(19). The

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Constructing Frequency Characteristics from Experimental Transient Response Curves.

first method is found to give a good result if the approximating functions remain bounded as t approaches infinity (e.g. are exponentials); it is very simple and convenient. Both methods give good results. There are 4 figures and 11 references, of which 8 are Soviet, 2 English and 1 Swiss.

ASSOCIATION: L'vivs'kyy politekhnichnyy instytut (L'vov Polytechnic Institute).

SUBMITTED: August 25, 1957.

AUTHORS: Kardashov, A. A., Karnyushin, L. V (L'vov) 103 19-4-6/12

TITLE: Determination of the System Parameters by Using Experimental (Given)Frequency Characteristics (Opredeleniye parametrov sistemy po eksperimental'nym (zadannym)chastotnym kharakteristikam)

PERIODICAL: Avtomatika i Telemekhanika, 1958, Vol. 19, Nr 4, pp. 334-345 (USSR)

ABSTRACT: Here the experiment is made to create a universal and sufficiently exact method for the determination of the values of factors of the transfer functions or of single parameters of linear models of real elements and of the parameters of automatic control systems by means of approximation of the experimental amplitude-phase-characteristics. By interpolation the orientation values for the factors of the analytical formula for the amplitude-phase-characteristics are found and after this according to the method of the least squares the corrections to the found factors are computed. The suggested method is applicable in case of arbitrary structure of the numerator- and denominator polynomials of the transfer function and gives sufficiently accurate results in the computation with a slide rule. The process of computation is explained at

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examples. The method shown here is more universal and exact than the other ways used for this purpose. The advantage of the interpolation method, which is given here, is represented by the fact, that, compared with reference 5, here a solution for a much larger class of approximating transfer functions is obtained, but without essentially complicating the computations. A much greater amount of computation becomes necessary only then, if according to the accuracy conditions for the approximation of the function the corrections to the factors, which are sought, must be computed.
There are 6 figures, 2 tables, and 9 references, all of which are Soviet.

SUBMITTED: August 9, 1957

AVAILABLE: Library of Congress

1. Mathematics--Theory 2. Functions 3. Polynomials

KARNYUSHIN, L.V.

BARDACHEVSKIY, V.T.; VELICHKO, Yu.T.; VLASENKO, N.V.; GUBENKO, T.P.; DRYAKHLOV, A.I.; KARANDEYEV, K.B.; KARNYUSHIN, L.V.; MAKSIMOVICH, N.G.; SOKOL'NITSKIY, G.Z.

M.G. Liukov. Izv. vys. ucheb. zav.; energ. no.5:127 My '58. (MIRA 11:8)

(Liukov, Mikhail Grigor'evich, 1915-1958)

KARNYUSHIN, L.V.

PHASE I BOOK EXPLOITATION SOV/4526

Soveshchaniye po teorii invariantnosti i yeye primeneniyu v avtomaticheskikh ustroystvakh. Kiyev, 1958

Teoriya invariantnosti i yeye primeneniye v avtomaticheskikh ustroystvakh; trudy soveshchaniya (Theory of Invariance and Its Applications to Automatic Devices; Transactions of the Conference Oct. 16-20, 1958) Moscow, 1959. 381 p. No. of copies printed not given.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Otdeleniye tekhnicheskikh nauk.

Resp. Ed.: V.S. Kulebakin, Academician; Editorial Commission: V.A. Bodner, Doctor of Technical Sciences, A.G. Ivakhnenko, Doctor of Technical Sciences, A.Yu. Ishlinskiy, Academician, Academy of Sciences UkrSSR, N.A. Kachanova, Candidate of Technical Sciences, P.I. Kuznetsov, Doctor of Physics and Mathematics, A.I. Kukhtenko, Doctor of Technical Sciences, B.N. Petrov, Corresponding Member, Academy of Sciences USSR, Ye.P. Popov, Doctor of Technical Sciences, G.M. Ulanov, Doctor of Technical Sciences, K.K. Khrenov, Academician, Academy of Sciences UkrSSR, P.I. Chinayev, Candidate of Technical Sciences, and N.M. Chumakov, Candidate of Technical Sciences; Tech. Ed.: G.V. Kruglov.

PURPOSE: This collection of papers is intended for engineers and other specialists working in various fields of automation.

COVERAGE: The collection includes reports and papers presented at the Conference on the Theory of Invariance and Its Applications to Automatic Devices, which was called by the Otdeleniye tekhnicheskikh nauk (Department of Technical Sciences) and the Institut elektrotekhniki (Institute of Electrical Engineering) of the Academy of Sciences of the Ukraine and convened in Kiyev October 16 - 20, 1958. The papers presented are concerned with high-quality automatic control systems designed on the basis of compensating for the effects of disturbances or maintaining the invariance of the quality to be regulated with respect to the disturbances acting on the system. The reports treat the physical and mathematical foundations of invariance in automatic control systems; they also consider methods for designing and calculating invariant systems and problems connected with specific cases of practical applications of compensation in various automatic systems. On the basis of these reports it was established by the Conference that, by utilization of the conditions of compensation and the principle of invariance, it is possible to produce automatic systems and various arrangements which are more perfect from the viewpoint of quality of the regulation and control process, stability, simplicity of construction, and reliability of operation. The following members of the Kiyev Seminar on Automatic Control are mentioned as organizers of the conference: A.I. Kukhtenko, A.G. Ivakhnenko, Yu.G. Kornilov, O.M. Kryzhanovskiy, N.M. Chumakov, N.A. Kachanova, and P.I. Chinayev. References accompany each article.

6

SOV/143-59-5-7/19

28(1)

AUTHORS: Karnyushin, L.V., Candidate of Technical Sciences, Docent, and Kuz'myak, B.D., Engineer

TITLE: The L'vov Polytechnic Institute Laboratory of Automated Electric Drives

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Energetika, 1959, Nr 5, pp 56-68 (USSR)

ABSTRACT: From 1924 to 1929 the first electrical drive laboratory in the USSR was organized by Professor S.S. Rinkevich at the Leningradskiy elektrotekhnicheskiy institut imeni V.I. Ul'yanova (Lenin) (Leningrad Electrical Engineering Institute imeni V.I. Ul'yanov (Lenin)). Thereafter, electric drive laboratories were organized at the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering), at the Leningradskiy politekhnicheskiy institut (Leningrad Polytechnical Institute), at the Kharkovskiy elektrotekhnicheskiy institut (Khar'kov Electrical Engineering Institute), and at large institutes and technological colleges of the USSR. Presently, only in polytechnic power engi-

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The L'vov Polytechnic Institute Laboratory of Automated Electric Drives

neering and electric engineering colleges of the USSR, there are more than 25 laboratories of automated electric drives, not counting similar laboratories in agricultural, mining, and other higher educational institutions. However, only a few of them correspond by equipment and organization to the development level of modern industrial automated electrical drives. In this paper the authors describe the experience of creating a new laboratory of automated electric drives at the L'vovskiy politekhnicheskiy institut (L'vov Polytechnic Institute) which was activated in 1957, instead of a temporary laboratory built in 1948. The laboratory at the L'vov Polytechnic Institute was built according to a project developed by Candidate of Technical Sciences, Docent, L.V. Karnyushin. The temporary laboratory was created under the guidance of Doctor of Technical Sciences, Professor V.N. Kiyanits. After explaining principles of efficient laboratory organization, the authors present a detailed

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description of the laboratory. The laboratory is housed in an L-shaped building. The main wing is 22.5 x 13.5 x 4.7 m and has a glass roof. The other wing is 17.2 x 8.4 m and is used for conducting laboratory work on industrial electronics and electrical control equipment. One section of the last mentioned building section serves as a workshop. The total floor space of the laboratory is 300 m^2. About 60 different types of laboratory work may be conducted at 20 work places. Between 12 and 16 different types of laboratory work may be conducted simultaneously. The authors further describe the power equipment and the power mains, equipment of work places and the organization of laboratory work, including work safety. They present in Figure 3 a circuit diagram of the power distribution system in the laboratory. Figures 6, 8 and 9 are photographs of student's work places. At the laboratory, the students work in groups for which 6 to 8 work places are assigned. The time allocated

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for the performance of one laboratory task is on the average 3 hours. The laboratory is equipped with lathes, drilling and milling machines as well as other small machine tools, transport equipment, trolleys and cranes. There are 5 photographs, 1 diagram and 3 circuit diagram. This article was presented by the Kafedra elektrifikatsiy prompredpriyatiy (The Chair of Electrification of Industrial Installations).

ASSOCIATION: L'vovskiy politekhnicheskiy institut (L'vov Polytechnic Institute)

SUBMITTED: December 16, 1958

26.2195
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S/102/60/000/003/002/006
C 111/ C 333

AUTHORS: Karnyushyn, L. V., Palyukh, A. S.

TITLE: Determination of the Parameters of Linear Members and Systems of Automatic Control by the Method of Approximating Experimental Temporal Characteristics

PERIODICAL: Avtomatika, 1960, No. 3, pp. 7-16

TEXT: From the known structure of a system it is assumed to follow that it is described by the differential equation

(1) $a_n x^{(n)} + a_{n-1} x^{(n-1)} + \ldots + a_1 x' + a_0 x =$

$= b_m f^{(m)} + b_{m-1} f^{(m-1)} + \ldots + b_1 f' + f,$

where f is the input parameter, x the output parameter and a_i, b_i are unknown coefficients. For determining these coefficients from the experimentally determined transition function the authors propose the following simple method: 1.) a_0 is directly determined from

(7) $a_0 = \frac{f(\infty)}{x(\infty)}$

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Determination of the Parameters of Linear Members and Systems of Automatic Control by the Method of Approximating Experimental Temporal Characteristics

2.) By introducing the new variable

(2) $y(t) = x(t) - x(\infty)$

(1) is transformed into a homogeneous equation

(4) $a_n y^{(n)} + a_{n-1} y^{(n-1)} + \cdots + a_1 y' + a_0 y = 0,$

where the corresponding initial conditions are given by

(5) $y(0) = -x(\infty), \quad y'(0) = x'(0) = \lim_{p \to \infty} pW(p),$

$y''(0) = x''(0) = \lim_{p \to \infty} p\left[pW(p) - x'(0)\right]$, etc.,

where $p = \frac{d}{dt}$ and

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(6) $$W(p) = \frac{b_m p^m + b_{m-1} p^{m-1} + \cdots + b_1 p + 1}{a_n p^n + a_{n-1} p^{n-1} + \cdots + a_1 p + a_o} .$$

3.) By numerical differentiation the values $y_k^{(r)} = x_k^{(r)}$ are determined from the experimentally determined transition function and the system

(8) $$a_n x_1^{(n)} + a_{n-1} x_1^{(n-1)} + \cdots + a_1 x_1' = z_1,$$
$$a_n x_2^{(n)} + a_{n-1} x_2^{(n-1)} + \cdots + a_1 x_2' = z_2,$$
$$\cdots\cdots\cdots\cdots\cdots\cdots\cdots$$
$$a_n x_n^{(n)} + a_{n-1} x_n^{(n-1)} + \cdots + a_1 x_n' = z_n$$

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is formed, where $z_k = a_0 y_k$. 4.) (8) is solved and the a_i are determined; the b_i then are determined from (5).

The authors give series expansions of differential operators according to (Ref. 10). Two examples are considered. S. N. Bernshteyn is mentioned in the paper.

There are 11 references: 8 Soviet, 2 American and 1 German.

ASSOCIATION: L'vivs'kyy politekhnichnyy instytut (L'vov Polytechnical Institute)

SUBMITTED: July 20, 1957

Card 4/4

13,2000

S/105/60/000/011/005/008
B012/B058

AUTHORS: Kardashov, A. A., Engineer, and Karnyushin, L. V., Docent, Candidate of Technical Sciences

TITLE: Determining the Parameters of Linearized Simulators of Control Systems According to Experimental Frequency Characteristics

PERIODICAL: Elektrichestvo, 1960, No. 11, pp. 51 - 55

TEXT: In the papers (Refs. 1-4), methods were explained for determining the numerical values of coefficients of linearized differential equations for elements of automatic control systems. These methods are based on the approximation of the experimental frequency response by an analytical formula already known previously. This formula should be drawn up under consideration of all internal connections and all physical processes within the element, which is practically impossible. Strictly speaking, the required parameters should therefore not be designated as "physical" ones, but as equivalent parameters of the simplified simulator of a real element. The selection of circuit and

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Determining the Parameters of Linearized Simulators of Control Systems According to Experimental Frequency Characteristics

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parameters of correction elements expediently takes place on an electronic simulator. Approximated (simplified) differential equations of the main elements of the system may be used when building up the simulator. Since the initial experimental characteristics may be distorted owing to nonlinearity, measuring errors etc., the methods based on a simple interpolation (Refs. 2,3) are often not sufficiently accurate for the approximation of the frequency response characteristic. In the paper (Ref. 4), a better method was therefore elaborated by the authors. It is based on using the method of the least mean square errors. The calculations for this method are, however, very lengthy. In the present paper, a simple method is given for solving the problem in question. It is true that this method was elaborated for a more narrow (compared with the above mentioned method), but still sufficiently wide class of elements of electromechanic automatic control systems. The amplitude-phase characteristics, smoothed out with the aid of statistical processes (Ref. 7), served as initial data for the determination of the required parameters of individual elements or the total control system. The differential equation (1) of a linear simulator of the investigated

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element (and the system respectively) is written down. In most cases, the setup of this equation may be determined already in advance, on the basis of the mode of action of the element. The analytical formula (3) of the amplitude-phase characteristic $W(j\omega)$ corresponds to this equation (1). Two constant coefficients $a_s(s=1, 2, \ldots, n)$ and k are contained in formula (1). The problem consists in finding such values for these coefficients, so that formula (3) may conform best with the experimental characteristic. k is the amplification coefficient and may be determined from the initial part of the characteristic $k=W(j\omega)\big|_{\omega=0}$.

A transition to the reciprocal amplitude-phase characteristic $W'(j\omega)$ is made for the determination of a_s, and system (11) for a_s is finally obtained. This system consists of two groups of equations, each of them containing n/2 unknowns. The method given here is simple and accurate. It can be used for checking the admissibility of a simplification of equations for elements or systems, for the determination of parameters and equations of electric drive systems from given dynamic characteristics and for the synthesis of electric current circuits. There are

Determining the Parameters of Linearized Simulators of Control Systems According to Experimental Frequency Characteristics

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6 figures, 2 tables, and 7 Soviet references.

SUBMITTED: March 28, 1960

Card 4/4

ZABRAMNYY, A.A., inzh.; KARNYUSHIN, L.V., kand.tekhn.nauk, dotsent

Study of the occurance of instability in the characteristics of the electric drives of large drag-line excavators. Izv. vys. ucheb. zav.; energ. 5 no.6:51-59 Je '62. (MIRA 15:6)

1. L'vovskiy politekhnicheskiy institut. Predstavlena kafedroy elektrifikatsii promyshlennykh predpriyatiy.
(Excavating machinery--Electric driving)

KARDASHOV, A.A., inzh.; KARNYUSHIN, L.V., kand.tekhn.nauk

Second-order delay component equivalent for a complex dynamic system. Elektrichestvo no.7:70-73 Jl '63. (MIRA 16:9)

1. Ukrainskiy zaochnyy politekhnicheskiy institut.
(Automatic control)

KARPYUSHIN, L.V., kand.tekhn.nauk, dotsent; KURT-UMEROV, V.G., inzh.

Principles of the control of the reliability of the elements of automatic control systems during their operation. Elektrichestvo no.11:81-84 N '64. (MIRA 18:2)

1. Ukrainskiy zaochnyy politekhnicheskiy institut.

KARO, V.I.

Simple method for slowing down the coagulation of bone marrow punctates. Lab.delo 3 no.4:56 Jl-Ag '57. (MLRA 10:8)
(MARROW) (SODIUM CITRATE)

KAROCHAROVA, V. N.

"Characteristics of Histological Processes in the Conjunctiva of the Eye Due to the Action of Strong Irritants." Sub 13 Nov 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55

KLER, O.V.; KAROCHAROVA, V.N. (Sverdlovsk)

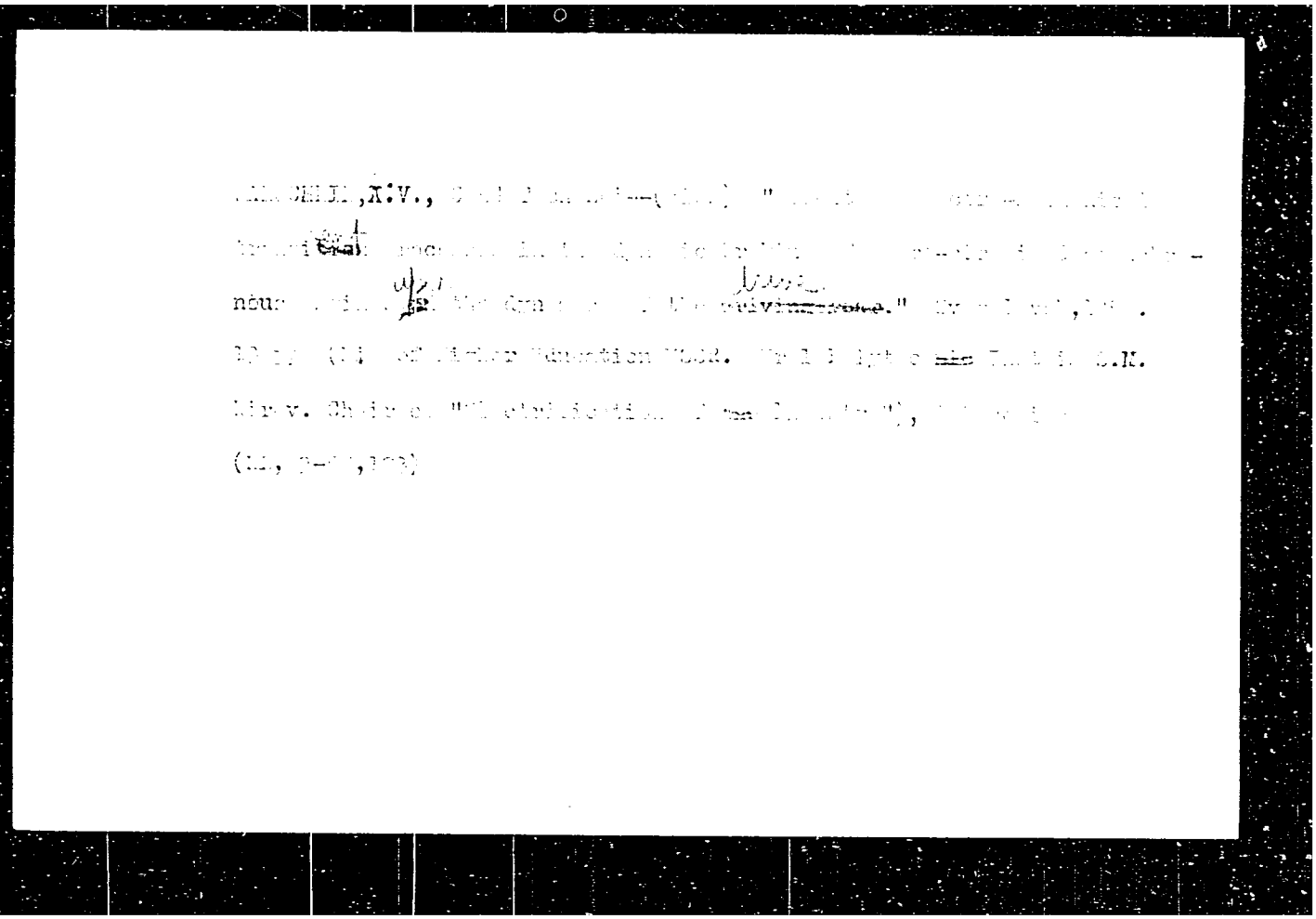
Changes in the lungs following the administration of brucite dust. Gig.truda i prof.zab. 6 no.6:51-54 Je '62.
(MIRA 15:12)

1. Meditsinskiy institut, Sverdlovsk.
(BRUCITE—TOXICOLOGY) (LUNGS—DUST DISEASES)

KAROCHENKO, A.

Lipetsk, an important academic base of a metallurgical plant. Prof.-tekh. obr. 22 no.3:9 Mr '65. (MIRA 18:7)

1. Direktor professional'no-tekhnicheskogo uchilishcha na proizvodstvennoy baze Novolipetskogo metallurgicheskogo zavoda.



SHUBENKO, V.A.; KAROCHKIN, A.V.

Effect of transient commutation processes on the behavior of dynamic drag in induction motors with a short-circuit rotor. Izv. vys. uchab. zav.; elektromekh. 1 no.4:27-34 '58. (MIRA 11:8)
(Electric motors, Induction)

14(1) SOV/67-59-5-11/30

AUTHORS: Shubenko, V. A., Candidate of Technical Sciences, Karochkin, A. V., Engineer

TITLE: On the Protection of Engines Driven by Compressed Gas Against Acceleration

PERIODICAL: Kislorod, 1959, Nr 5, pp 38-40 (USSR)

ABSTRACT: The work of engines driven by compressed gas is in most cases transformed into electric energy by means of an asynchronous generator which is connected in parallel with the alternating-current system of the department. It is used in starting as the motor which accelerates the engine driven by compressed gas until the working speed is reached. The mechanical characteristics of the asynchronous generator are given in figure 1. The braking couple of the generator during operation is at all times equal to the torque of the engine driven by compressed gas. In the case of turbo-engines driven by compressed gas working at a very high speed, a gear reduction is used with the generator. When the generator is not energized there follows, therefore, a dangerous increase in the speed of the engine driven by compressed air. In the case of turbo-engines driven by compressed gas

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of plants type KT-3600 the speed increases by 900 revolutions per minute. A method preventing this acceleration is urgently needed. The answer to the problem is an automatic device. Additional braking devices acting upon the flywheel axis of the engine driven by compressed gas are extensively used, or the gas intake of the engine driven by compressed gas is shut off. Figure 2 shows the scheme of a device of the latter kind. Its disadvantage lies in the fact that the stop valve freezes easily. A new method is based on the use of a condenser for the braking of the asynchronous generator (V. P. Andreyev, Yu. T. Sabinin, Footnote 1). The braking couple of the condenser is in this case balanced by the torque of the engine driven by compressed gas. The new device was tested by means of laboratory models as well as industrially in the Nizhne-Tagil'skiy metallurgicheskiy Kombinat (Nizhniy Tagil' Metallurgical Kombinat). Figure 5 demonstrates the braking power of the condenser. There are 5 figures and 1 Soviet reference.

KAROCHKIN, A.V., SHUBENKO, V.A.

Transient electromagnetic processes at dynamic braking of asynchronous short-circuited motors. Trudy Ural. politekh. inst. no.79:118-133 '59. (MIRA 13:7)
(Electric motors, Induction)

KAROCHKIN, A.V., inzh.; SHUBENKO, V.A., dotsent, kand.tekhn.nauk;
GLUSHKOV, L.A., inzh.

High-speed automatic control of dynamic braking of asynchronous three-phase servomotors. Trudy Ural.politekh.inst., no.101:111-115 '60. (MIRA 14:3)

(Electric controllers)

KAROCHKIN, A.V.

Frequency and speed of fading of stray circuits in dynamic braking of asynchronous motors. Izv. vys. ucheb. zav.; elektro ekh. 3 no.11: 65-71 '60. (MIRA 14:2)

(Electric motors, Induction)

SHUBENKO, V.A.; KAROCHKIN, A.V.

Selecting the method of automatic switching-in of loads for expanders after the asynchronous generators driven by them ar disconnected. Prom.energ. 17 no.1:16-19 Ja '62. (MIRA 14:12)

(Electric generators)
(Gas and oil engines)

SHUBENKO, V.A.; ZENKIN, N.I.; KAROCHKIN, A.V.

Problem concerning the effect of electromagnetic transients on the principles of the design of automatic control networks for short-circuited asynchronous motors. Trudy Ural. politekh. inst. no.106:28-42 '60. (MIRA 15:5)
(Electric motors, Induction)

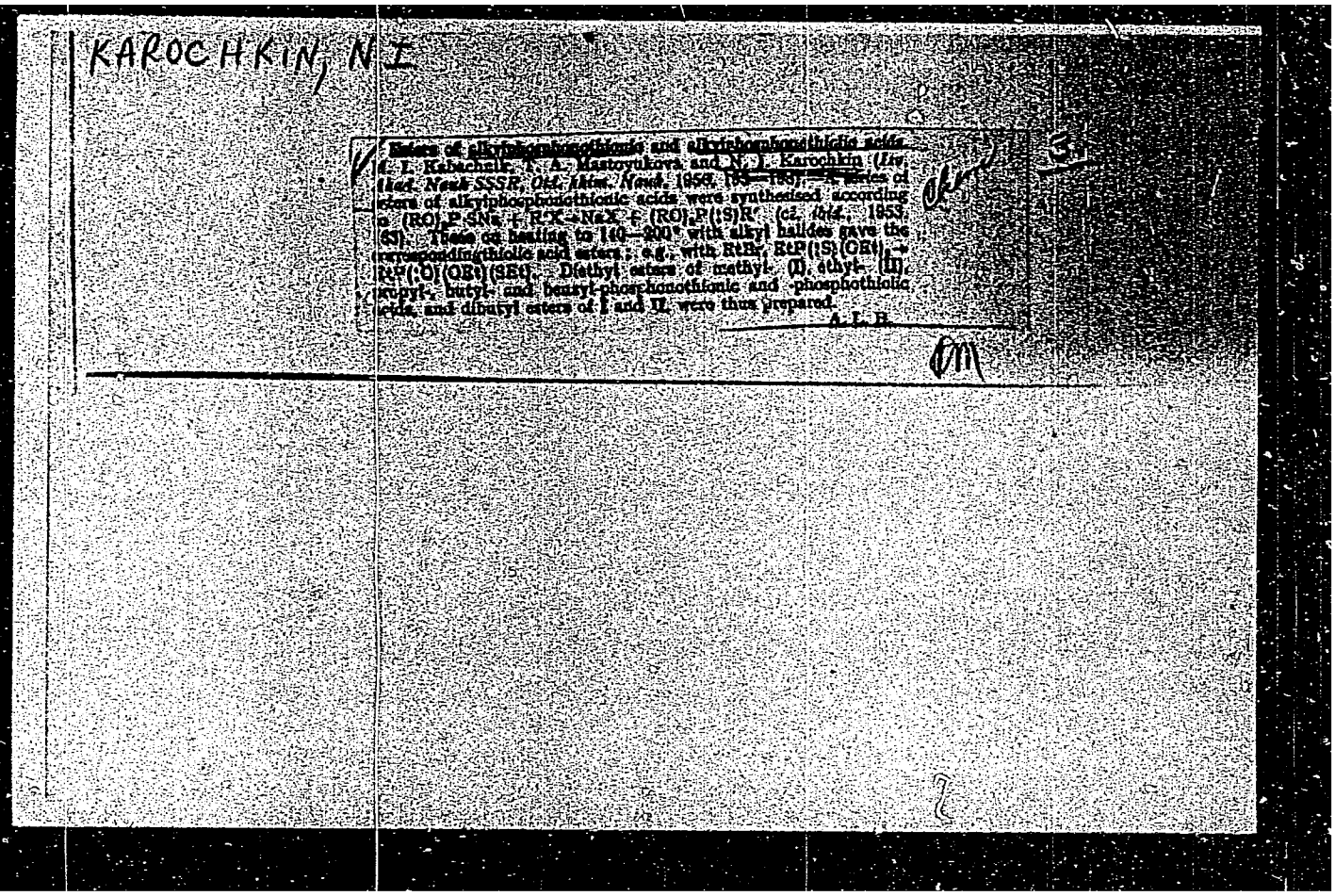
KAROCHKIN, Aleksandr Vasil'yevich, kand.tekhn.nauk, dotsent; ZELENOV, Anatoliy Borisovich, kand.tekhn.nauk, dotsent; SAMCHELEYEV, Yuriy Pavlovich, inzh.

Universal device for processing the oscillograms of reversing rolling mills. Izv. vys. ucheb. zav.; elektromekh. 6 no.5: 611-618 '63. (MIRA 16:9)

1. Kafedra elektrifikatsii i avtomatizatsii promyshlennykh predpriyatiy i ustanovok Kommunarskogo gornometallurgicheskogo instituta (for Karochkin, Samcheleyev). 2. Zaveduyushchiy kafedroy elektrifikatsii i avtomatizatsii promyshlennykh predpriyatiy i ustanovok Kommunarskogo gornometallurgicheskogo instituta (for Zelenov).
(Rolling mills--Electric driving) (Electric measurements)

ZELENOV, Anatoliy Borisovich; KAROCHKIN, Aleksandr Vasil'yevich; SAMCHELEYEV, Yuriy Pavlovich; SHKOL'NIKOV, Viktor Ivanovich; DOLBNYA, V.T., kand.tekhn.nauk dots., otv.red. ALYAB'YEV, N.Z., red.

[Automated electric drive and servo systems] Avtomatizirovannyi elektroprivod i sledivshchie sistemy. Khar'kov, Izd-vo Khar'kovskogo univ., 1965. 362 p. (MIRA 18:12)



KAROCHKIN, N.I.

Esters of alkylphosphonothionic and alkylphosphonothiolic acids. I. L. Kabachnik, T. A. Mastoyukova, and N. I. Karochkin (*Izv. Akad. Nauk SSSR, Otd. Khim. Nauk*, 1959, 183—189). A series of esters of alkylthiophosphonothionic acids were synthesised according to $(RO)_2P(:S)Na + R'X \rightarrow NaX + (RO)_2P(:S)R'$ (cf. *ibid.*, 1953, 43). These on heating to 140—200° with alkyl halides gave the corresponding thiolic acid esters; e.g., with RtBr, $RtP(:S)(OEt)_2 \rightarrow RtP(:O)(OEt)(SEt)$. Diethyl esters of methyl- (I), ethyl- (II), propyl-, butyl- and benzyl-phosphonothionic and -phosphothiolic acids, and dibutyl esters of I and II, were thus prepared.

A. L. B.

KAROCHKIN, P. P.

PA 161T64

USSR/Engineering - Foundries Mar 50
Bunkers, Loam

"Automatic Charging of Loam Bunkers in Foundries," P. P. Karochkin, M. T. Kovalenko, 2 pp

"Prom Energet" No 3

Describes system invented by authors. Works well at Automobile Plant imeni Stalin. Advantages: (1) Cuts bunker workers by 80%.
(2) Rules out filling bunker at wrong time.
(3) Prevents loam sticking in bunkers.
(4) Doubles main belt life, and increases life of rubber scrapers by 400-500%.

FDD

161T64

KAROCHKIN, P. P. (Engr)

"Experience in Manufacturing and Utilizing Plug Busbars Conductors," a paper read at the Conference on New Designs for Busbar Conductors, Elektrichestvo, No.4, pp. 88,89, 1950

Translation W-23653, 23 Aug 52

LIFSHITS, B.S.; TOMASHPOL'SKIY, I.A.; KAROCHKINA, A.A.; PROTSEROV, S.A.; VASIL'YEVA, A.N.

Intrafactory price lists for tools and equipment. Avt.prom. 29 no.3:1-2 Mr '63. (MIRA 16:3)

1. Moskovskiy avtozavod imeni Likhacheva.
(Industrial equipment)

KAROCHKINA, S. K., and BOSKAKOV, A. P.

"The Study of Heat Transfer Between Particles of a Fine Heat Agent in a Filling."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

KAROCHKINA, S.K., inzh.; BASKAKOV, A.P., dotsent, kand.tekhn.nauk; SYRO-MYATNIKOV, N.I., prof., doktor tekhn.nauk

Study of thermal decomposition of Kushmurun coal during high-speed heating. Trudy Ural. politekh. inst. no.108:13-22 '61.
(MIRA 16:9)

KAROCHKINA, S.K., inzh.; SYROMYATNIKOV, N.I., prof., doktor tekhn.nauk

Study of the thermal decomposition of Kushmurun coal. Izv. vys. ucheb. zav.; energ. 3 no. 12:61-68 D '60. (MIRA 14:4)

1. Ural'skiy politekhnicheskiy institut imeni S.M. Kirova. Predstavlena kafedroy promteploenergetiki.
(Electric power plants) (Coal gasification)

KAROCHKINA, S. K.

Cand Tech Sci - (diss) "Study of processes of thermal decomposition of kushmurunskiy coal with the purpose of finding the optimal conditions for its utilization in power-gas-chemical installations." Tomsk, 1961. 15 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Tomsk Order of Labor Red Banner Polytechnic Inst imeni S. M. Kirov); 150 copies; price not given; (KL, 7-61 sup, 237)

KAROCHKINA, S.K., inzh.; SYROMYATNIKOV, N.I., doktor tekhn.nauk, prof.

Problems concerning the study of heat exchange between particles in a filling-in process. Izv. vys. ucheb. zav.; energ. 5 no.2:67-72 F '62. (MIRA 15:3)

1. Ural'skiy politekhnicheskiy institut imeni S.M.Kirova. Predstavlena kafedroy promteploenergetiki.

(Heat—Transmission)

KAROGODIN, V. M.

1(1) PHASE I BOOK EXPLOITATION SOV/3491
SOV/11-M-109

Moscow. Aviatsionnyy institut imeni Sergo Ordzhonikidze

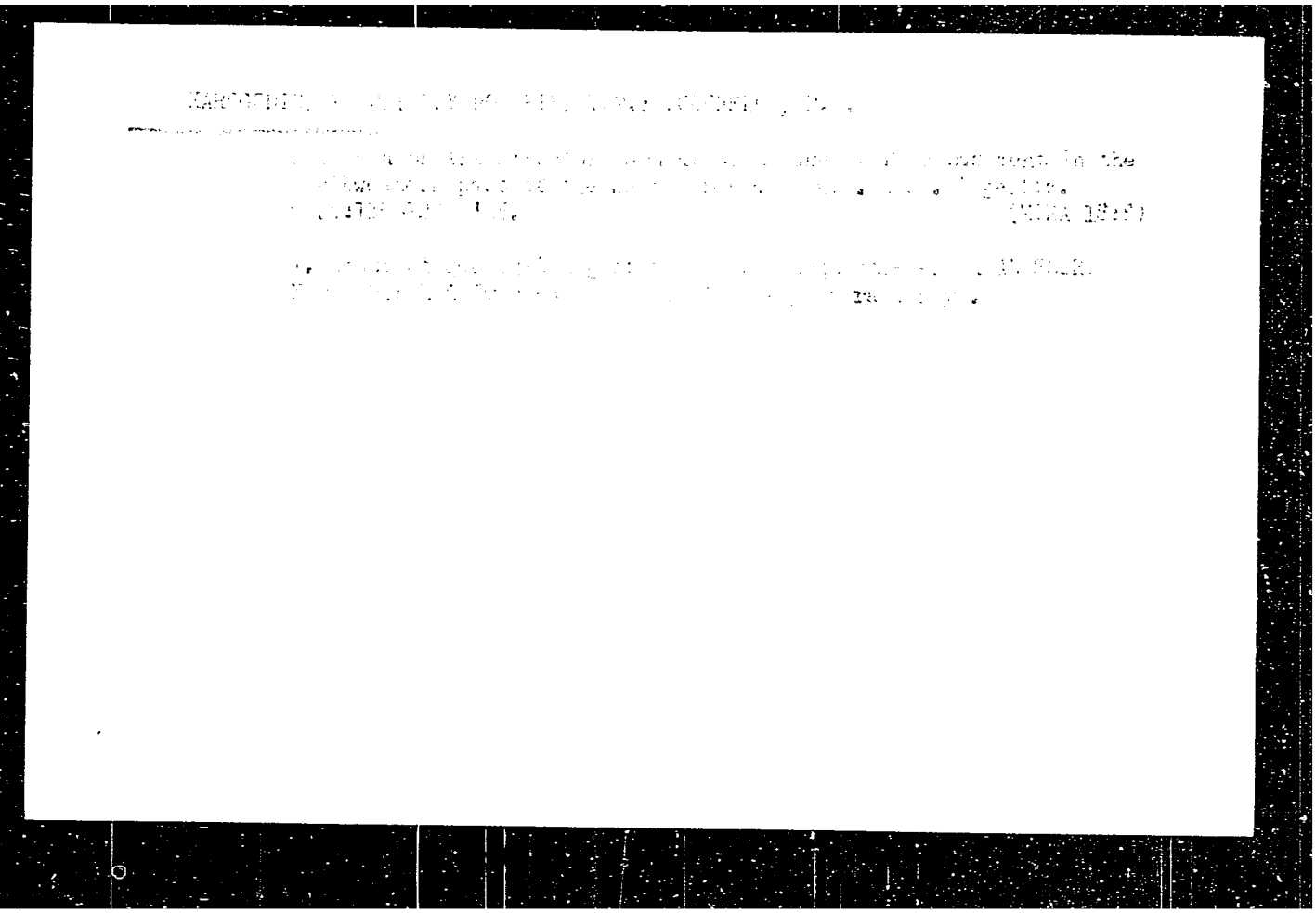
Aviatsionnoye priborostroyeniye i avtomatika; sbornik statey (Instrument Making and Automatic Systems in Aviation; Collection of Articles) Moscow, Oborongiz, 1959. 147 p. (Series: Its Trudy, vyp. 109) Errata slip inserted. 5,200 copies printed.

Sponsoring Agency: USSR. Ministerstvo vysshego obrazovaniya.

Ed.: B. A. Ryabov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: N. A. Gortsuyeva; Tech. Ed.: L. A. Garnukhina; Managing Ed: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for scientific and technical personnel in the field of instrument making and automation, and for students of technical schools of higher education.

COVERAGE: The book is a collection of 10 articles describing certain aspects of aircraft automatic control and regulation and aviation instrument making. The articles consist of parts of the authors' dissertations or describe results of scientific research work of the Department of Aircraft Instruments and Automatic Systems of the Moscow Aviation Institute. References are given at the end of some articles.



KAROKAS, I. I. (Engineer, Vilnyus Department of the VNIIESSO), LUSHKEVICH, V. A. (Engineer, Main Welding Laboratory of the Latvian Sovnarkhoz)

"The design of power sources for welding."

Report presented at the 3rd Baltic Conference on Welding, convened by the Sovnarkhozes of the Lithuanian SSR, Latvian SSR, and Estonian SSR, 8-9 April 1964, Vilnyus.

[Avtomaticheskaya SVARKA, No. 7, 1964 p. 95]

[illegible], I. I.

"[illegible] of Nematodes of the Order Ascaridata Skrjab., 1915," Dok. AN, [illegible], No. 4, Lab. Nor., Helminthology Lab., Dept. Mol. Sci., Acad. Sci., -1[illegible]-.

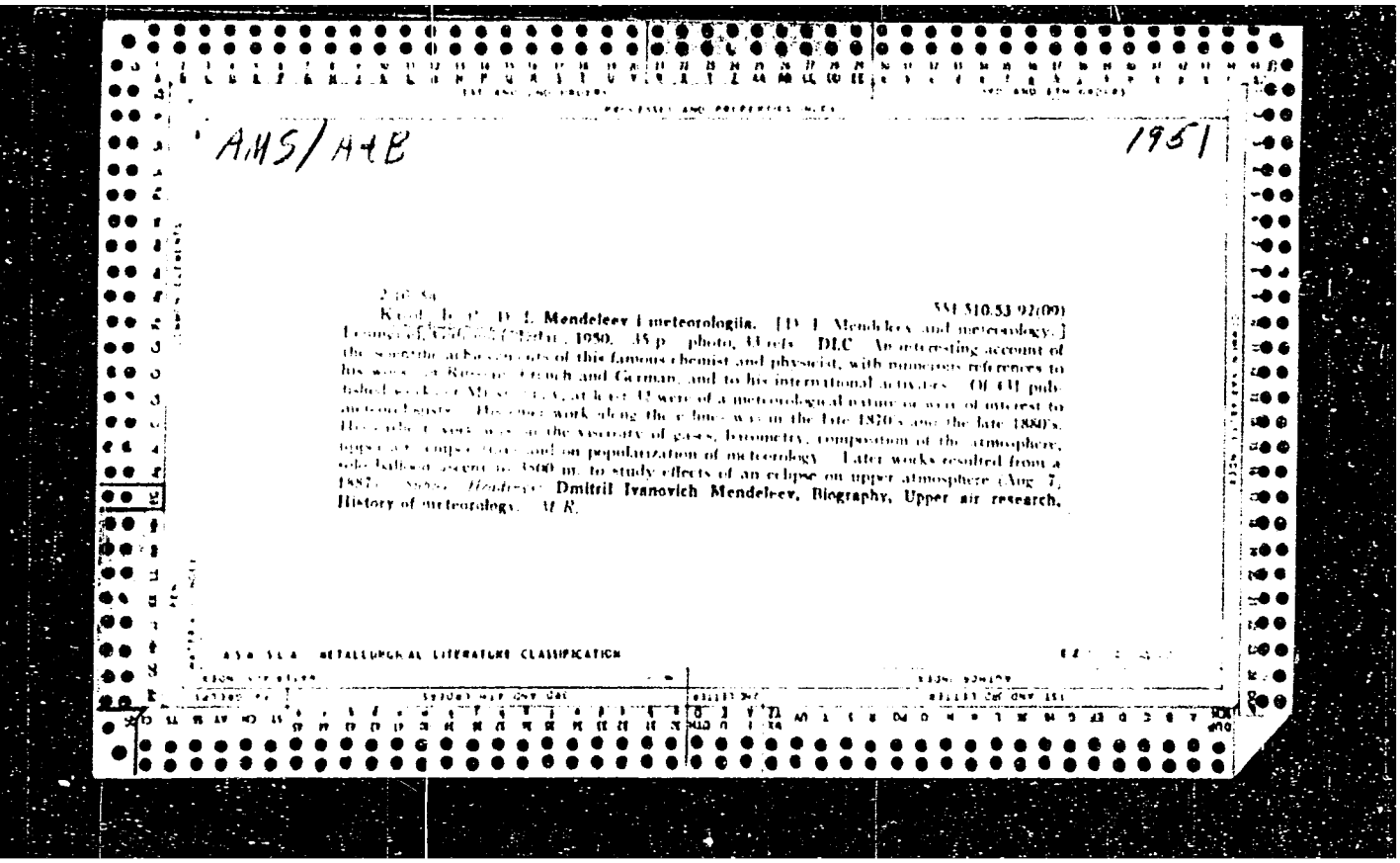
KAROKHIN, V. I.

Karokhin, V. I. "A new representative of nematodes of the genus Contracaecum", Trudy Gel'mintol. laboratorii (Akad. nauk SSSR), Vol. II, 1949, p. 91-93.

SO: U-4630,16 Sept. 53, (Letopis 'Zhurnal 'nykh Statey, No. 23, 1949).

KAROL', B.P.

[Snow cover] Snezhnyy pokrov. Leningrad, Gidrometeorologicheskoe izd-vo, 1949. 72 p. (MIRA 12:11)
(Snow)



AMS/A+B

1951

551.510.53.92(09)

Kropotkin, P. P. **D. I. Mendeleev i meteorologiia.** [D. I. Mendeleev and meteorology.] Leningrad, Gidrometeoizdat, 1950. 35 p. photo, 43 refs. DLC. An interesting account of the scientific achievements of this famous chemist and physicist, with numerous references to his works in Russian, French and German, and to his international activities. Of 43 published works by Mendeleev, at least 12 were of a meteorological nature or were of interest to meteorologists. His major work along this line was in the late 1870's and the late 1880's. His early work was on the viscosity of gases, barometry, composition of the atmosphere, upper air research and on popularization of meteorology. Later works resulted from a balloon ascension to 3500 m. to study effects of an eclipse on upper atmosphere (Aug. 7, 1887). — *Author.* Headings: **Dmitrii Ivanovich Mendeleev, Biography, Upper air research, History of meteorology.** *W.R.*

ASTIA METALLURGICAL LITERATURE CLASSIFICATION

ZAMORSKIY, Aleksandr Dmitriyevich; KAROL', B.P., otvetstvennyy redaktor; YASNOGORODSKAYA, M.M., redaktor; BRAYNINA, M.I., tekhnicheskiy redaktor.

[Atmospheric phenomena] Atmosfernye iavleniia. Leningrad, Gidrometeorologicheskoe izd-vo, 1954. 92 p. (MLRA 7:11)
(Meteorology)

GLEBOV, Petr Aleksandrovich; KAROL', B.P., redaktor; VLASOVA, Yu. V. redaktor; SOLOVEYCHIK, A.A., tekhnicheskiy redaktor

[Science of the weather] Nauka o pogode. Leningrad, Gidrometeorologicheskoe izd-vo, 1955. 110 p. (MLRA 8:9)
(Meteorology)

KAROL', B.P.

Effect of various safeguards on readings of self-recording meteorological instruments in field conditions. Vest.Len.un.10 no.1:109-118 Ja '55. (MLRA 8:4)
(Meteorological instruments)

KAROL', B. P.

Call Nr: QC 861.D8

AUTHORS: Dubinskiy, G. P., Gural'nik, I. I., Mamikonova, S. V.

TITLE: Meteorology (Meteorologiya)

PUB. DATA: Gidrometeorologicheskoye Izdatel'stvo, Moscow, 1956, 398 pp., 7500 copies

ORIG. AGENCY: Glavnoye upravleniye gidrometeorologicheskoy sluzhby

EDITORS: Responsible Editor: Karol', B. P.; Ed.: Vlasova, Yu. V.; Techn. Ed.: Soloveychik, A. A.

PURPOSE: Approved by the Hydrometeorological Service at the Soviet of Ministers of the USSR as a textbook for hydrometeorological technical schools. The book can also be used by a wide circle of specialists engaged in meteorology and allied fields.

COVERAGE: This is a popularly written and well-balanced book with a minimum of mathematics designed for the Soviet "tekhnikum" program. The short historic review that precedes the exposition of the whole range of atmospheric-air-vapor-precipitation fields of meteorology

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Call Nr: QC 861.D8

Meteorology (Cont.)

is very much in keeping with modern understanding of earth phenomena and recent advancements. The basic conclusions drawn from numerous publications by Soviet authors are accompanied by information on the organization of hydrometeorological and agro-meteorological services under the Main Administration of the Hydrometeorological Service of the USSR (Glavnoye upravleniye gidrometeorologicheskoy sluzhby - GUGMS), which is responsible to the Council of Ministers of the U.S.S.R. in Moscow and directs all the work in this field in all Soviet Republics and oblasts. The following organizations form the core of Soviet meteorological institutions: 1. Main Geophysical Observatory im. A. I. Voyeykov, Leningrad; 2. State Hydrological Institute, Leningrad; 3. Central Forecasting Institute; 4. Central Aerological Observatory; 5.Scientific Research Institute of Construction of Hydro-Meteorological Instruments; 6. Scientific Research Institute for Aero-Climatology, Moscow; 7 - 10. High altitude observatories (3), of which the highest is on Mt. El'brus

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