CHERNYSHEV M. A.

AL'BREKHT, Vladimir Georgiyevich, prof.; LIDERS, Georgiy Vladimirovich, dotsent; NIKIFOROV, Pavel Aleksandrovich, prof. [deceased]; CHLENOV, Mikhail Timofeyevich, kand.tekhn.nauk; CHERNYSHEV, Mikhail Andreyevich, kand.tekhn.nauk; FRISHMAN, M.A., prof., retsenzent; ANDREYCHENKO, A.V., inzh., retsenzent; BABKIN, A.R., inzh., retsenzent; BEZRUCHKO, V.S., inzh., retsenzent; ZHEREBIN, M.I., inzh., retsenzent; MEL'NIK, D.M., inzh., retsenzent; MURAV'YEV, I.V., inzh., retsenzent; NOVITSKIY, G.I., inzh., retsenzent; PASHININ, S.A., inzh., retsenzent; POTOTSKIY, G.I., inzh., retsenzent, red.; RAK, S.M., inzh., retsenzent; TYUTYUNNIK, F.R., inzh., retsenzent; ULYUYEV, D.I., inzh., retsenzent; SHEPELEV, V.N., inzh., retsenzent; BOBROVA, Ye.N., tekhn.red.

[Track work] Putevoe khoziaistvo. Pod red. M.A.Chernysheva. Moskva, Gos.transp.zhel-dor.izd-vo, 1959. 435 p. (MIRA 12:12)

1. Kafedra "Put' i putevoye khozyaystvo" Dnepropetrovskogo instituta inzhenerov zheleznodorozhnogo transporta (for Frishman).
(Railroads--Track)

CHERNYSHEV, M.A., doktor tekhn.nauk; FAMINSKIY, G.V., kand.tekhn.nauk

Using recuperation without energy receptors at traction substations. Elek. i tepl.tiaga 3 no.1:42 Ja '59.
(MIRA 12:2)

1. TSentral'nyy nauchno-issledovatel'skiy institut Ministerstva putey soobshcheniya.
(Electric railroads--Substations)

CHERNYSHEV, M.A., kand. tekhn. nauk.

Problems which demand quick solutions. Put' i put. khoz. no.2: 18-19 F '59. (MIRA 12:3)
(Railroads--Track)

CHERNYSHEV, M.A., doktor tekhn. nauk

Defective network voltage regulation. Elek. i tepl. tiaga 3 no.3:41-42 Mr '59. (MIRA 12:5)
(Voltage regulators)

CHERNYSHEV, M.A., doktor tekhn.nauk; SOKOLOV, S.D., kand.tekhn.nauk

Investigating inverter installations under working conditions.
Trudy TSNII MPS no.173:4-50 '59. (MIRA 13:4)
(Electric current converters)

CHERNYSHEV, M.A., kand.tekhn.nauk

Why is the R75 type rail necessary? Vest. TSNII MPS 19 no.3:8-11 '60. (MIRA 13:10)

1. Vsesoyuznyy zaochnyy institut inzhenerov zheleznodorozhnogo transporta.

(Railroads--Rails)

CHERNYSHEV, M.A., doktor tekhn.nauk

Effectiveness of the conversion of surplus recuperation. Vest. TSNII MPS 19 no.6:17-18 '60. (MIRA 13:9)
(Electric railroads)

ZOLOTARSKIY, A.F., kand.tekhn.nauk; CHERNYSHEV, M.A., kand.tekhn.nauk

Improving the interaction of track and rolling stock.
Zhel.dor.transp. 42 no.7:49-54 Jl '60.
(MIRA 13:7)

(Railroads--Rolling stock)
(Railroads--Track)

CHERNYSHEV, Mikhail Andreyevich, kand. tekhn. nauk; MIKHEYEV, A.P., prof., doktor tekhn. nauk, otv. red.; KOPTEVSKIY, D.Ya., red. izd-va; DOROKHINA, I.N., tekhn. red.; KASHINA, P.S., tekhn. red.

[Trends in the development of railroad track in foreign countries] Tendentsii razvitiia zheleznodorozhnogo puti za rubezhom. Moskva, Izd-vo Akad. nauk SSSR, 1961. 135 p. (MIRA 14:11)
(Railroads--Track)

CHERNYSHEV, M.A

PHASE I BOOK EXPLOITATION SOV/5754

Zasorin, Sergey Nikolayevich, Nikolay Arsen'yevich Karsh, Kalinik Georgiyevich Kuchma, Candidates of Technical Sciences, and Mikhail Aleksandrovich Chernyshev, Doctor of Technical Sciences

Ionnyye i elektronnyye preobrazovateli (Gas-Filled and Vacuum-Tube Rectifiers) Moscow, Transzheldorizdat, 1961. 306 p. 8,000 copies printed.

Ed. (Title page): M. A. Chernyshev; Tech. Ed.: Ye. N. Bobrova; Managing Ed. for Literature on Railroad Electrification and Power Engineering: V. K. Kalinin, Engineer.

PURPOSE: This book has been approved by the Main Administration of Schools of the Ministry of Railroads as a textbook for students specializing in railroad electrification in railroad transportation schools of higher education.

COVERAGE: The textbook presents the physical principles of mercury-arc rectifier operation, the theory and circuits of a-c

Card 1/8

rectification by uncontrolled electric rectifiers, and the theory of controlled rectifier operation. Designs of mercury-arc rectifiers for a-c electric power supply and electrically driven rolling stock of electrified railroads are described. Current inversion, vacuum-tube rectifiers, solid-cathode gas-filled rectifiers and semiconductor rectifiers are examined. Chs. III and VIII were written by S. N. Zasorin; Chs. II and VI, by N. A. Karsh; the Introduction and Chs. IV and VII, by K. G. Kuchma; and Chs. I and V, by M. A. Chernyshev. The authors thank P. N. Ramlau, head of the Radio Engineering Department of LIIZhT (Leningrad Institute of Railroad Transportation Engineers) for his advice. There are 34 references: 29 Soviet (including 1 translation), 3 English, and 2 German.

TABLE OF CONTENTS:

CHERNYSHEV, M.A., kand.tekhn.nauk

More accurate evaluation of track conditions. Put' i put. khoz. 5 no. 1 36-37 Ja '61. (MIRA 14:5)
(Railroads--Track)

CHERNYSHEV, M.A., prof.

The training of specialists has to be at the level of aimed tasks. Put' i put.khoz. 5 no.12:10 D '61. (MIRA 15:1)
(Railroads--Employees--Education and training)

CHERNYSHEV, M.A., doktor tekhn.nauk

Economic advantages of the use of regenerative braking. Vest. TSNII MPS 20 no.5:14-16 '61. (MIRA 14:8)
(Railroads—Brakes)

KLAUZ, Pavel Leonidovich, kand. tekhn. nauk, dots.; KRYUKOV, Georgiy Nikolayevich, kand. tekhn. nauk, dots.; CHERNYSHEV, M.A., prof., retsenzent; ALEKSEYEV, A.P., kand. tekhn. nauk, retsenzent; IVANOV, K.Ye., kand. tekhn. nauk, retsenzent; TIKHOMIROV, V.I., inzh., retsenzent; NEKLEPAYEVA, Z.A., inzh., red.; USENKO, L.A., tekhn. red.

[Organization and operation of mechanized construction and track maintenance work]Organizatsiia i proizvodstvo mekhanizirovannykh stroitel'nykh i putevykh rabot. Moskva, Transzheldorizdat, 1962. 267 p. (MIRA 15:12)
(Railroads--Maintenance and repair)
(Railroads--Construction)

CHERNYSHEV, M.A., doktor tekhn.nauk (Moskva)

New terminology on static converters. Elektrichestvo no.1:89-90 Ja '62. (MIRA 14:12)
(Electric current converters--Terminology)

CHERNYSHEV, M.A., gornyy inzh.; KUSAKIN, A.A., mekhanik

Improving individual components of the P-1 drill rig. Gor. zhur. no.5:72-73 My '62. (MIRA 16:1)

1. Rudnik Temir-Tau, Gornaya Shoriya.
(Boring machinery)

CHERNYSHEV, M.A., prof.

Potentials for an increase of the train speed over switches.
Put' i put.khoz. no.7:18-20 '62. (MIRA 15:7)
(Railroads--Train speed)

PODPALYY, Anatoliy Fedorovich; CHERNYSHEV, M.A., prof., retsenzent; VICHEREVIN, A.Ye., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Technological reorganization of track operation, maintenance and repair] Tekhnicheskaia rekonstruktsiia putevogo khoziaistva. Moskva, Transzheldorizdat, 1963. 74 p. (MIRA 16:5)
(Railroads—Track)

CHERNYSHEV, M. A., prof.

Need for comprehensive solving of problems concerning the increase of traffic speed over switches. Put' i put. khoz. 7 no.3:27-28 '63. (MIRA 16:4)

(Railroads—Switches)

CHERNYSHEV, M.A., prof.

Way to determine the minimum gauge width. Put' i put. khoz. 7 no.6:37-38 '63. (MIRA 16:7)

(Railroads—Track)

CHERNYSHEV, M.A., prof.

Re-establish the original dimensions of the ballast roadbed.
Zhel. dor. transp. 45 no.4:45-46 Ap '63.
(MIRA 16:4)

(Ballast(Railroads))

CHERNYSHEV, M.A., prof.; BASILOV, V.V., inzh., retsenzent; ZAKHAROV, A.A., inzh., retsenzent; PAL'CHUN, P.S., inzh., retsenzent; SERGEYEVA, A.I., inzh., red.; USENKO, L.A., tekhn.red.

[Arrangement, maintenance and repair of tracks] Ustroistvo, soderzhanie i remont puti. 2. perer. izd. Moskva, Transzheldorizdat, 1963. 466 p. (MIRA 17:2)

MELENT'YEV, L.P., kand.tekhn.nauk; TSUKANOV, P.P., kand.tekhn.nauk; CHERNYSHEV, M.A., prof.

Means of increasing the efficiency of the operation of track facilities. Zhel.dor.transp. 46 no.11:54-58 N '64. (MIRA 18:1)

ZOLOTARSKIY, Aleksey Fedorovich; VERSHINSKIY, Sergey Vasil'yevich; YERSHKOV, Oleg Petrovich; IVASHCHENKO, Georgiy Ivanovich; SHESTYAKOV, Vladimir Nikolayevich; CHERNYSHEV, Mikhail Andreyevich, prof.; PERSHIN, S.P., red.

[Railroad tracks and rolling stock for high speed traffic conditions] Zheleznodorozhnyi put' i podvizhnoi sostav dlia vysokikh skorostei dvizheniia. Moskva, Transport, 1964. 271 p. (MIRA 18:10)

CHERNYSHEV, M.A., prof.

Prospects of the development of track facilities. Put' i put.khoz. 9 no.4:2-5 '65. (MIRA 18:5)

CHERNYSHEV, M.A., prof.

Labor productivity is the principal, the most important factor.
Put' i put.khoz. 9 no.8:1-4 '65. (MIRA 18:8)

CHERNYSHEV, M.A., prof.

Potentials for the increase of labor productivity in the current maintenance. Put' i put. khoz. 8 no.1:6-9 '64.
(MIRA 17:2)

CHERNYSHEV, M.K.

CHERNYSHEV, M.K.

Using vibrators to clean dump cars. Mekh.trud.rab.11 no.9:13 S '57 (MIRA 10:11)

(Railroads--Freight cars) (Coal handling)

CHERNYSHEV, M.K.

AUTHORS: Chernyshev, M.K. and Smolyankin, M.I. 68-12-5/25

TITLE: Methods of Increasing the Productivity of Hammer Crushers (Puti povysheniya proizvoditel'nosti molotkovykh drobilok)

PERIODICAL: Koks i Khimiya, 1957, No.12, pp. 16 - 17 (USSR)

ABSTRACT: On the Bagleysk Coke Oven Works, the initial throughput of a hammer mill used for the preparation of coal blend was 170 t/h, separate pre-crushing of gas coals to 93-94% to 3-0 mm and their incorporation into the blend before final crushing increasing the throughput of the blend before final crushing increasing the throughput of the mill to 350 t/h. Further modifications of the mill, namely, the removal of the basket (from the non-working side of the mill) and bottom pockets (Figs. 1 and 2) as well as replacement of the normal 70 hammers by 130 hammers of a lighter type (Fig 3), increased the throughput of the mill to 400 t/h and decreased power consumption by 0.8 kWh/t of dry blend. There are 3 figures.

ASSOCIATION: Bagley Coke-chemical Plant (Bagleyskiy koksokhimicheskiy zavod)

AVAILABLE: Library of Congress

Card 1/1

SOV/68-58-10-17/25

AUTHORS: Chernyshev, M.K. and Smolyankin, M.I.

TITLE: Semi-automatic Tipping of Wagons (Poluavtomaticheskoye oprokidyvaniye vagonov)

PERIODICAL: Koks i Khimiya, 1958, Nr 10, pp 55 - 56 (USSR)

ABSTRACT: The labour force of a coal tippler on the above works was reduced from 20 men to 13 men by the introduction of semi-automation. The system applied is briefly described. There is 1 figure.

ASSOCIATION: Bagleyskiy koksokhimicheskiy zavod (Bagleyskiy Coking Works)

Card 1/1

CHERNYSHEV, M.K.

Automatic control of the operation of reversing larry cars for overhead coal bins. Koks i khim. no.12:17-19 '60. (MIRA 13:12)

1. Bagleyskiy koksokhimicheskiy zavod.
(Dneprodzherzhinsk--Coke industry--Equipment and supplies)

L 38232-66 EWT(1)

ACC NR: AP6010292 SOURCE CODE: UR/0103/66/000/003/0164/0177

AUTHOR: Kogan, B. Ya. (Doctor of technical sciences; Moscow); Chernyshev, M. K. (Moscow)

ORG: none

TITLE: Delay simulation by operational amplifiers 15

SOURCE: Avtomatika i telemekhanika, no. 3, 1966, 164-177

TOPIC TAGS: delay circuit, electronic amplifier

ABSTRACT: Three methods for the simulation of variable delay are examined: (1) approximating the initial transfer function by a transfer function of the appropriate differential equation with variable coefficients; (2) distributing the initial transfer function into a convergent series resulting in transfer functions without variable poles; (3) reducing the problem with variable time lag to a problem with constant shift (or translation) by another independent variable. Method (1) substantially limits the permissible variation speed of the delay. Method (2) does not restrict the variation speed of the delay, but does involve an amplitude error, in addition to a phase error. Method (3) is applicable only to a restricted number of problems; it does not limit the variation speed of the delay to the extent that method (1) does. Thus, in a system consisting of four operational amplifiers and one multiplier,

UDC: 621.374.5-501.72 : 621.375.3

Card 1/2

L 38232-66

ACC NR: AP6010292

$\tau'(t)_{max} \leq 0.7$ sec/sec, when $[\omega\tau(t)]_{max} \leq 7.5$ sec, and the phase error is 2.0%. The application of this method combining linear operations in one operational amplifier and time-pulse multiplier involves an error that does not depend on the value of the input signal. Orig. art. has: 9 figures, 35 formulas.

SUB CODE: 09/ SUBM DATE: 01Nov65/ ORIG REF: 008/ OTH REF: 009

Card 2/2

L 38739-66 EWT(d)/T IJP(c)

ACC NR: AP6025415 SOURCE CODE: UR/0103/66/000/007/0148/0163

AUTHOR: Chernyshev, M. K. (Moscow)

ORG: none

TITLE: Synthesis of one class of transcendental transfer functions with the aid of computing elements of analog computers

SOURCE: Avtomatika i telemekhanika, no. 7, 1966, 148-163

TOPIC TAGS: computer technique, transcendental transfer function, transfer function approximation, analog computer

ABSTRACT: It is stressed that the transfer function of the form

$$W(p) = e^{A(p)/B(p)} \qquad (1)$$

where $A(p)/B(p)$ is a rational fraction with the degree of the numerator not exceeding the degree of the denonominator and with a finite number of poles located on the left half-plane with the exception of the first-order pole at the zero point at which the residue of (1) is negative, obtained from the partial differential equation describing the process with distributed parameters, cannot be directly applied to the analysis of automatic control systems by ordinary methods using analog computers. The problem of approximating function (1) with the aid of continued fractions by some simpler rational expressions enabling the simplification of the calculations of the

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L 38739-66

ACC NR: AP6025415 O

control process in systems with distributed parameters is analyzed. Approximate expressions for the transfer functions of the form $e^{-K/p}$ and of form (1) in the cases when the zeros of the function A(p)/B(p) are conjugate complex numbers and when they are not are analyzed. Computing circuits insuring the simple and convenient synthesis of these expressions on analog computers are presented. It is shown that the approximate transient processes obtained by means of derived approximate transfer functions differ from the exact transient processes by a magnitude whose absolute value does not exceed the error in approximating the transfer functions. Orig. art. has: 7 figures and 38 formulas. [LK]

SUB CODE: 12,09/SUBM DATE: 20Dec65/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 5047

Card 2/2

MAMON, F.D.; CHERNYSHEV, M.K.; PEDAN, A.A.

Ways of increasing the productivity of hammer-mill crushers. Koks i khim. no.1:61-64 '61. (MIRA 14:1)

1. Bagleyskiy koksokhimicheskiy zavod.
(Coal preparation) (Crushing machinery)

CHERNYSHEV, M.K.

Servicing of two lines by a single crew in the crushing and proportioning sections of coal preparation shops. Koks i khim. no.1:64-65 '64. (MIRA 17:2)

1. Bagleyskiy koksokhimicheskiy zavod.

S/050/60/000/06/12/021
B007/B007

AUTHOR: Chernyshev, M. P.

TITLE: Measurement of the Direction and Velocity of Sea Currents From the Shore

PERIODICAL: Meteorologiya i gidrologiya, 1960, No. 6, pp. 35-37

TEXT: It is first pointed out that the method of investigating direction and velocity according to the inclination or deflection of ranging rods, in spite of being very old, has hitherto not been generalized. On a larger scale, ranging rods were used in the Kerch Strait in 1937 - 1938 by the "Volgo-Don" expedition for the purpose of investigating the water exchange between the Black Sea and the Sea of Azov. A comparison of these observations with those made with the help of devices showed that in only 15.3% of the cases no agreement was found. The calculation of ranging rods is explained and some advice for their construction is given. In consideration of the characteristic features of sea currents along the shore line, the gidrometeorologicheskaya observatoriya Chernogo i

Card 1/2

Measurement of the Direction and Velocity of Sea Currents From the Shore

S/050/60/000/06/12/021
B007/B007

Azovskogo morey (Hydrometeorological Observatory of the Black Sea and the Sea of Azov) constructed and tested a ranging rod in 1956, which is shown in Fig. 1. The ranging rod, which is described, is said to be an electromagnetic current meter, and serves for the observation of sea currents from the shore. By means of this apparatus the same accuracy is attained as by means of a wind vane. The ranging rod is attached to a float, which is securely fixed at a distance of from 300 - 600 m from the shore. There are 2 figures.

Card 2/2

L 17853-66 EWA(h)/EWT(1)
ACC NR: AP6004557 SOURCE CODE: UR/0103/66/000/001/0139/0145

AUTHOR: Grinya, Ya. I. (Moscow); Chernyshev, M. K. (Moscow)

35
B

ORG: None

TITLE: A rational choice of circuits for the reproduction of variable delays using operational amplifiers

25

SOURCE: Avtomatika i telemekhanika, no. 1, 1966, 139-145

TOPIC TAGS: delay circuit, computer simulation

ABSTRACT: The studies of numerous physical processes are related to variable delay determination. When such processes are investigated by digital computer methods, the simulation of variable delays is usually introduced by standard analog computer units. In view of analytical and design difficulties encountered during the simulation, the authors survey the principles useful for the design of variable delay blocks incorporating operational amplifiers, analyze certain existing circuits for variable delay, and search for those which are distinguished by design simplicity and high engineering characteristics. An advanced circuit for variable delay generation (shown in Fig. 1) is proposed. Orig. art. has: 16 formulas and 7 figures.

Card 1/2 UDC: 621.372.061:621.375.147.3

2

L 17853-66
ACC NR: AP6004557

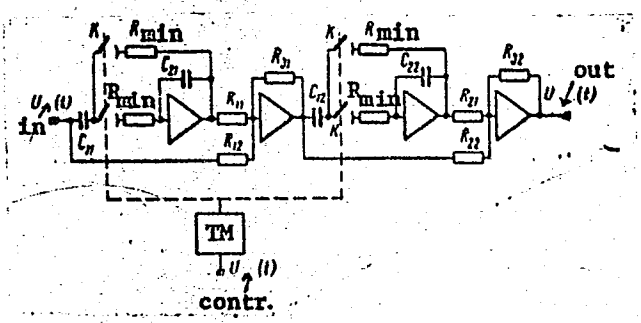

Fig. 1. Simple variable delay circuit

TM - time modulator.

SUB CODE: 09 / SUBM DATE: 26Mar65 / ORIG REF: 003 / OTH REF: 004

Card 2/2 nst

CHERNYSHEV, M.P.; ROZHKOV, L.P.; SHUL'GINA, Ye.F.; IGNATOVICH, A.F.; LABUNSKAYA, L.S.; FOMINA, T.V.; CHERNYAKOVA, A.P.; SHPAKOVA, L.N.; TARASOVA, M.K.; ANFILATOVA, A.I.; SLAVIN, L.B.; BARYSHEVSKAYA, G.I.; DERIGLAZOVA, N.V.; MATUSHEVSKIY, G.V.; AL'TMAN, E.N.; KROPACHEV, L.N.; CHEREDILOV, B.F.; POTAPOV, A.T.; DUDCHIK, M.K.; REGENTOVSKIY, V.S.; YERMAKOVA, L.F.; SEMENOVA, Ye.A.; KULIKOVSKIY, I.I.; KIRYUKHIN, V.G.; AKSENOV, A.A., red.; NEDOSHIVINA, T.G., red.; SERGEYEV, A.N., tekhn. red.; BRAYNINA, M.I., tekhn. red.

[Hydrometeorological handbook of the Sea of Azov] Gidrometeorologicheskii spravochnik Azovskogo moria. Pod red. A.A.Aksenova. Leningrad, Gidrometeoizdat, 1962. 855 p. (MIRA 16:7)

1. Gidrometeorologicheskaya observatoriya Chernogo i Azovskogo morey.

(Azov, Sea of—Hydrometeorology)

CHERNYSHEV, M.V.

Creeping Skimmia. Priroda 50 no.7:117 Jl '61. (MIRA 14:6)

1. Sakhalinskiy todel Geograficheskogo obshchestva SSSR, YUzhno-Sakhalinsk.

(Skimmia)

CHERNYSHEV, M.V. (Yuzhno-Sakhalinsk)

Sakhalin currants. Priroda 54 no.8:128 Ag '65.
(MIRA 18:8)

CHERNYSHEV, N.

Materials on work norms prepared in 1959. Biul.nauch.inform.: trud i zar.plata 3 no.5:38-44 '60. (MIRA 13:8)
(Production standards)

CHERNYSHEV, N.A.; NIKOLAYEVSKIY, G.F.; MOLOSKIN, A.F.

Using an electrolyte in dyeing for the class of insoluble azo dyes. Obm.tekh.opyt. [MLP] no.10:15-17 '56. (MIRA 11:11)
(Azo dyes) (Electrolites)

GOTOVTSEVA, L.A.; ZERNOVA, K.N.; POPKINA, S.N.; CHERNYSHEV, N.A.; SHIKHER, M.G.

Bleaching of fabrics made from a mixture of cotton and viscose spun rayon. Nauch.issl.trudy IvNITI 25:145-153 '61. (MIRA 15:10)
(Textile fabrics) (Bleaching)

CHERNYSHEV, N.A., inzhener-zemleustroitel'

Current land recording maps. Zemledelie 24 no.1:74-76 Ja '62.
(MIRA 15:2)
(Agriculture--Maps)

AL'SHITS, I.Ya., kandidat tekhnicheskikh nauk; BABKIN, S.I., kandidat tekhnicheskikh nauk; BALAKSHIN, B.S., doktor tekhnicheskikh nauk, professor; BEYSEL'MAN, R.D., inzhener; BELYAYEV, V.H., kandidat tekhnicheskikh nauk; BEREZINA, N.I., inzhener; BIRGER, I.A., doktor tekhnicheskikh nauk; BOGUSLAVSKIY, Yu.M., kandidat tekhnicheskikh nauk; BOROVICH, L.S., kandidat tekhnicheskikh nauk; GONIKBERG, Yu.M., inzhener; GORDON, V.O., professor; GORODETSKIY, I. Ye., doktor tekhnicheskikh nauk, professor; GROMAN, M.B., inzhener; DIKER, Ya.I., kandidat tekhnicheskikh nauk; DOSCHATOV, V.V., inzhener; IVANOV, A.G., kandidat tekhnicheskikh nauk; KINASOSHVILI, R.S., doktor tekhnicheskikh nauk, professor; KRUTIKOV, I.P., kandidat tekhnicheskikh nauk; LEVENSON, Ye.M., inzhzner; MAZYRIN, I.V. inzhener; MARTYNOV, A.D., kandidat tekhnicheskikh nauk; NIBERG, N.Ya., kandidat tekhnicheskikh nauk; NIKOLAYEV, G.A., doktor tekhnicheskikh nauk, professor; PETRUSEVICH, A.I., doktor tekhnicheskikh nauk; POZDNYAKOV, S.N., dotsent; PONOMAREV, S.D., doktor tekhnicheskikh nauk, professor; PRONIN, B.A. kandidat tekhnicheskikh nauk; REKSHETOV, D.N., doktor tekhnicheskikh nauk, professor; SATEL', E.A., doktor tekhnicheskikh nauk, professor; SIMAKOV, F.F., kandidat tekhnicheskikh nauk; SLOBODKIN, M.S., inzhener; SPITSYN, N.A., doktor tekhnicheskikh nauk, professor; STOLBIN, G.B., kandidat tekhnicheskikh nauk; TAYTS, B.A., doktor tekhnicheskikh nauk; CHERNYSHEV, M.A., kandidat tekhnicheskikh nauk; SHNEYDEROVICH, R.M., kandidat tekhni-

(Continued on next card)

AL'SHITS, I.Ya., kandidat tekhnicheskikh nauk (and others)..... Card 2.

cheskikh nauk, EYDINOV, V.Ya., kandidat tekhnicheskikh nauk; ERLIKH, L.B., kandidat tekhnicheskikh nauk; ACHERKAN, N.S., doktor tekhnicheskikh nauk, professor, redaktor; MARKUS, M.Ye., inzhener, redaktor; KARGANOV, V.G., inzhener, redaktor; SOKOLOVA, T.F., tekhnicheskiy redaktor.

[Mechanical engineer's manual; in 6 volumes] Spravochnik mashinostroitelia; v shesti tomakh. Izd.2-e, ispr. i dop. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit. lit-ry, Vol.4, 1955. 851 p. (Mechanical engineering) (MLRA 8:12)

CHERNYSHEV, N.A.

123-1-660

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957, Nr 1, p.101 (USSR)

AUTHOR: Chernyshev, N.A.

TITLE: Increasing Cutting Speeds (Povysheniye rezhimov rezaniya)

PERIODICAL: In sbornik: Proizvoditel'nost' truda na Stalingr. trakt. z-de. Stalingrad, Knigoizdat, 1955, pp. 131-150.

ABSTRACT: The author describes the experience of the Stalingrad tractor plant in introducing machining parts on a lathe with an increased feed. He discusses the design of cutters with a large nose radius instead of a trimming cutting edge, and the design of mounted chip breakers. Cutting of chip-breaking grooves on the cutters by electric-erosional method is described. Attention is

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drawn to the problem of fineness of finished surface depending on the nose radius of the cutter and the selected speed. Examples are given on the reduction of the machining time resulting from the increased speed of feed by the general-purpose lathes, by multi-cutter and turret lathes. A composite table of geometrical parameters of cutters for work at an accelerated speed as applied in machining steel, iron and bronze parts is provided; the effectiveness of this method in comparison with the previously used is underlined.

K.G.I.

CHERNYSHEVA

KOGAN-VOL'MAN, Georgiy Izrailevich, kand.tekhn.nauk; ~~CHERNYSHEV, N.A.,~~ kand.tekhn.nauk, retsenzent; ZAVARTSEV, A.M., inzh., retsenzent; SAPOZHKOV, N.M., inzh., red.; STUPIN, A.K., red.izdatel'stva; MODEL', B.I., tekhn.red.

[Flexible wire shafts] Gibkie provolochnye valy. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 246 p. (MIRA 11:1)
(Shafts and shafting)

CHERNYSHEV, N.A., dots., kand.tekhn.nauk

Nonlinear theory of elastic deformations of coil springs. Rasch. na prochn. no.3:19-39 '58. (MIRA 12:2)
(Springs (Mechanism))

AUTHOR: Chernyshev, N.A., Engineer. SOV/96-58-6-7/24

TITLE: The flow of oil through an annular gap between a cylindrical nozzle and a disc. (Istecheniye masla cherez kol'tsevuyu shchel' mezhdu tsilindricheskim soplom i diskom)

PERIODICAL: Teploenergetika, 1958, ... No.6. pp. 40 - 43. (USSR)

ABSTRACT: Turbine governor-systems use oil as hydraulic fluid. The first amplifying links in the systems usually include throttling devices, often consisting of a cylindrical nozzle and a flat disc, which is displaced by the governor or by a servomotor. There is little published data about the operation of such devices. This article gives the results of an experimental study of the flow of turbine oil grade L through the annular gap between a cylindrical nozzle and a flat disc, as illustrated in fig.1. The disc, which is placed near the end of the nozzle, may rotate in practice. The discharge edges of the nozzles were assorted. Some were square, some were partly or fully rounded internally, and some were chamfered externally to a sharp edge. All were short nozzles of 12 - 20 mm diameter, their length being only 4 - 5 times the internal diameter. The same disc of 40 mm diameter was used throughout. The tests were made at oil pressures of 1 to 3.5 atm and temperatures of 30° and 50°C. Rotation of the disc at speeds up to 3000 r.p.m. did not affect the rate of oil flow, mainly because peripheral speeds were still quite low, not

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exceeding 6.3 m/sec. When oil flows from a square-edged nozzle, critical effects are observed. If the gap is small, the flow fully fills the space between the end of the nozzle and the disc; as the gap increases, the flow suddenly breaks away from the edge of the nozzle, as indicated in fig.1. The breakaway is accompanied by a sudden change in the rate of flow; other things being equal, the pressure in the system rises and the flow becomes less. The nozzle and disc are likened to a diffusor and the concept of an equivalent plane diffusor is introduced. A formula is then given for the angle of expansion of the plane diffusor which is equivalent to the annular gap between nozzle and disc. A second formula determines the angle at which the flow breaks away from the edge in the plane diffusor. An experimental study was made of the conditions under which the flow breaks away and returns again to the edge as the gap is reduced. The results are plotted in fig.2. There is an unstable region in which either condition may occur, depending on the circumstances. Also, fig.3. shows that with a given ratio of internal to external nozzle diameter, and constant oil pressure and temperature, breakaway takes place at the same relative gap. As the flow rate increases or the viscosity falls, the gap at which breakaway occurs is reduced: this was confirmed experimentally with a 16 mm diameter nozzle at various pressures. A formula is given for the rate of flow when the oil has broken away

The flow of oil through an annular gap between a cylindrical nozzle and a disc. SOV/96-58-6-7/24

from the edge of the nozzle: this formula is in good agreement with experiment for normal gaps, but gives high values when the gap is large. However, it is generally valid for small and large nozzles. The sudden change in rate of flow on breakaway is a disadvantage in practice, and attempts were made to reduce it by changing the shape of the nozzle edge. Partial rounding of the edge does not overcome the effect. It disappears when the edge is fully rounded, but there is a gradual change in the shape of the oil flow, so that the flow factor depends on the viscosity and velocity in an inconvenient way and the rate of flow is much higher at small gaps. The most satisfactory shape was an external chamfer to a charp edge and it is shown that the usual flow formula are then valid over a useful range of gaps. If a sharp-edged nozzle is used operation must always be in a single region of flow. Partial rounding is not recommended because it only causes the breakaway effect to occur at higher speeds. For the nozzle characteristics to be independent of oil temperature and pressure, either a sharp-edged nozzle should be used, or one with a square edge in the zone of stable breakaway of flow from the nozzle edge. There are 5 figures, 2 literature references (1 Soviet and 1 German)

ASSOCIATION: Moscow Power Institute. (Moskovskiy Energeticheskiy Institut)
Card 3/3 1. Fluid flow--Analysis 2. Turbines--Performance 3. Hydraulic systems --Test methods 4. Hydraulic nozzles--Applications

AUTHOR: Chernyshev, N.A. (Engineer) SOV/96-58-10-8/25

TITLE: The influence of rotation on the operation of control system slide valves. (O vliyanii vrashcheniya na rabotu zolotnikov sistem regulirovaniya)

PERIODICAL: Teploenergetika, 1958, No.10. pp. 30-34 (USSR)

ABSTRACT: The main defect of piston and slide valve devices in control systems is insensitivity caused by friction between the cylinder and pistons. These frictional forces arise because of lateral stresses that result from eccentric external forces acting on the slide valve. The slide valve takes up a sloping position, as sketched in Fig.1. This fact has been indirectly confirmed by measurements of the oil flow through the gap between the casing and the differential piston shown in Fig.2. The operation of rotating slide valves is then considered. Rotation of the piston sets up an oil film much as in the hydrodynamic lubrication of a bearing. A reliable liquid film is produced if the surface speed is more than 4 m/sec. Rotation influences the rate of oil flow through the gap between the piston and cylinder. Theoretical and practical investigations have been made on the flow of viscous liquid in the gap between two cylinders in different positions and with one of them rotating. However, the material that has been published cannot be directly applied to rotating slide valves of control systems because the position of the slide valve depends on the rotation. In the Moscow Power Institute (MEI)

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tests were made to determine the rate of flow of oil through the gap between the casing and the rotating slide valve of the floating type. The tests were made on an installation with the rotating differential piston shown in Fig.2. An approximate formula is derived for laminar flow of oil through the gap between the stationary slide valve and the casing, the elements being parallel but eccentric. Another formula is given for the case when they are concentric; it is confirmed by experimental results. In practice, the slide valve is usually slightly sloping so that the flow of oil through the gap is intermediate between the extreme values given by the formula for the eccentric and concentric positions. When the slide valve is rotating the flow of oil follows a helical pattern, but the rate of flow is unaffected thereby and depends only on the position of the slide valve relative to the casing. This has been confirmed experimentally and the formulae already derived can be used to determine the flow in this case. An expression is then derived for the relationship between the relative eccentricity and the speed of rotation of the slide valve. The relationship depends on the ratio of slide valve length to diameter; a graph of the function when this ratio is 0.5 is given in Fig.3. The oil flow through the gap is plotted as function of speed of rotation and pressure in Fig.4. which also displays test results that are in

The influence of rotation on the operation of control system slide valves. SOV/96-58-10-8/25

good agreement with the theoretical curve. Flow was laminar in the tests, as it usually is in service. It is shown that for a given rate of leakage the clearance between the slide valve and cylinder can be greater when the slide valve rotates than when it does not. There are 4 figures and 8 Soviet references.

ASSOCIATION: Moscow Power Institute (Moskovskiy Energeticheskiy Institut)

Card 3/3

AUTHOR: Chernyshev, N.A. (Engineer) SOV/96-58-12-12/18

TITLE: The influence of oil viscosity on the process of control (Vliyaniye vyazkosti masla na protsess regulirovaniya)

PERIODICAL: Teploenergetika, 1958, No.12, pp. 66-71 (USSR)

ABSTRACT: Hydraulic systems are commonly used in the control systems of steam- and gas-turbines. The viscosity of the oil and its rate of flow affects these systems and may impair their reliability and stability. In some cases, mechanical arrangements can easily be made to counteract changes in oil viscosity. However, this is not always possible in complicated control systems and some measure of compensation for this effect is then necessary. Published work on this subject is mentioned. The hydraulic resistances of control systems are then divided into two categories; the working resistances of throttle sections, and the inactive resistances of clearances and the like. A formula is given for pressure losses due to various types of resistance. It is seen that changes in oil viscosity alter the flow and pressure drop in the hydraulic lines. It is assumed that the characteristics of the control system do not depend on the oil viscosity if a small change in viscosity causes no change in the pressure drop in the system.

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The influence of oil viscosity on the process of control. SOV/96-58-12-12/18

Two typical cases of combinations of resistance in control systems, series and mixed, are then considered. It is not often that a control system contains a large number of resistances in series, but the case is examined for the sake of completeness and for subsequent use. From the mathematical analysis it is concluded that the nature of the resistance of a group of different types of resistances connected in series depends on the operating conditions of the system even when the oil flow is of a constant nature in each resistance. Therefore, the pressure drop on any one of the resistances can be independent of oil viscosity only for a single set of operating conditions. The case of mixed combination of resistances is then considered. This case is typical of most turbine control systems. Many systems that appear to be series in principle are, in fact, mixed because of the presence of inactive resistances. Different classes of mixed systems are discussed. The analysis given is used to evaluate the influence of inactive resistances on the performance of the system. Flow is usually laminar in the inactive resistances, which appear as approximate constants, whereas the active resistances often have a square-law relationship between flow and pressure drop. There is, therefore, a difference in principle between the active and inactive resistances. It is deduced that

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The influence of oil viscosity on the process of control. SOV/96-58-12-12/18

so long as inactive resistances are present the performance of the system must depend on the viscosity of the oil. It is shown that in some types of control system the inactive resistances can be compensated for by appropriate selection of variable and constant resistances. This is confirmed by tests made on a rotating differential servo-motor. The conditions of this test are given. The way in which oil viscosity could be compensated for by changing the nozzle characteristics of the turbine used in the servo-motor will be seen from the graph in Fig.1. The influence of resistance in the signal line on the process of control is then considered. The influence of line resistance on the operation of a differential servo-motor when the oil viscosity changes is shown graphically in Fig.3. In this system the pressure drop in the line was high, but by providing a line of larger diameter the system was made to operate normally. There are 3 figures and 3 Soviet references.

ASSOCIATION: Moscow Power Institute (Moskovskiy Energeticheskiy Institut)

Card 3/3

CHERNYSHEV, N. A.: Master Tech Sci (diss) -- "Investigation of the operation of hydraulic transformers for turbine regulation". Moscow, 1959. 19 pp (Min Higher Educ USSR, Moscow Order of Lenin Power Engineering Inst), 150 copies (KL, No 7, 1959, 126)

TARABASOV, Nikolay Danilovich, doktor tekhn. nauk, prof.; CHERNYSHEV, N.A., kand. tekhn. nauk, retsenzent; ARBUZOV, V.N., kand. tekhn. nauk, red.; SAVEL'YEV, Ye.Ya., red. izd-va; EL'KIND, V.D., tekhn. red.

[Calculating wringing fits in the manufacture of machinery] Raschety napriazhennykh posadok v mashinostroenii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 266 p. (MIRA 14:6)
(Strains and stresses) (Machinery—Design and construction)

SMEL'NITSKIY, S.G., kand.tekhn.nauk; CHERNYSHEV, N.A., kand.tekhn.nauk
KHRIPUNOV, V.P., inzh.

Control system with a relay-type accelerator for condensing turbines at the Moscow Power Institute. Teploenergetika 8 no.4:19-25 Ap '61. (MIRA 14:8)

1. Moskovskiy energeticheskiy institut.
(Turbines)

NEDUMOV, Nikolay Vasil'yevich; TIKHOMIROV, Ye.N., prof., retsenzent; CHERNYSHEV, N.A., dots., retsenzent; SIMAKINA, I.L., red.; BARANOVSKAYA, K.P., tekhn. red.

[Design of statically determined frames] Raschet staticheski opredelimykh ram. Moskva, Aviatsionnyi in-t im. Sergo Ordzhonikidze, 1962. 112 p. (MIRA 16:4)
(Structural frames)

PETROV, Fedor Grigor'yevich; CHERNYSHEV, Nikolay Aleksandrovich; SMAGORINSKIY, B.S., red.

[From the bolt to a tractor] Ot bolta do traktora. Volgograd, Nizhne-Volzhskoe knizhnoe izd-vo, 1964. 139 p.
(MIRA 18:2)

SMEL'NITSKIY, S.G.; CHERNYSHEV, N.A.; KHRIPUNOV, V.P.

Control system for a back-pressure turbine. Trudy MEI no.47: 201-208 '63. (MIRA 17:1)

CHERNYSHEV, N.F.

Open pit mining in Tula "ore management". Gor.zhur. no.2:62-63 F'55.
(Tula Province--Strip mining) (MLRA 8:7)

CHERNYSHEV, N.G.

Khimiya raketnykh topliv (Chemistry of rocket fuels),
Gosenergoizdat, Moscow and Leningrad, 1948, 352 pp.
This book contains an analysis of the properties and a critical evaluation of a large number of rocket fuels actual and potential.

Biblio

TSIOLKOVSKIY, K.E.; CHERNYSHEV, N.G., doktor tekhnicheskikh nauk.

[The problem of interplanetary communications in the works of K.E.TSiolkovskii and other national scientists] Problema mezhplanetnykh soobshchenii v rabotakh K.E.TSiolkovskogo i drugikh otechestvennykh uchenykh. Moskva, Izd-vo Znanie, 1953. 31 p. (MLRA 6:7)
(Interplanetary voyages) (TSiolkovskii, K.E., 1857-1935)

Biblio

CHERNYSHEV, N.I.

Standard metal subtrack supports for the BKKM, SBK-1 and T-128 cranes. Rats. i izobr.predl. v strei. no.119:20-22 '55. (MLRA 9:7)
(Cranes, derricks, etc.)

CHERNYSHEV, N.I.

CHERNYSHEV, N.I. (Perm').

Using logging diagrams for correlating upper Permian cross sections.
Geol. nefti 2 no.2:52-54 F '58. (MIRA 11:2)
(Ural Mountain region--Geology, Stratigraphic)
(Prospecting--Geophysical methods)

CHERNYSHEV, N.I.

Structure of upper Permian sediments in the southwestern part of Perm Province. Izv. vys. ucheb. zav.; geol. i razv. 1 no.4:47-51 Ap '58. (MIRA 11:12)

1.Permskiy gosudarstvennyy universitet imeni A.A. Zhdanova, Kafedra poiskov i razvedki mestorozhdeniy poleznykh iskopayemykh.
(Perm Province--Geology, Stratigraphic)

CHERNYSHEV, N.I.

Method for mapping structural traps in upper Permian sediments. Izv.vys.ucheb.zav.; neft' i gaz 1 no.10:15-18 '58. (MIRA 12:4)

1. Permskiy gosudarstvennyy universitet.
(Russian Platform--Geology--Maps)

CHERNYSHEV, N.I.

Paleontological characteristics of upper Permian formations in the Kama Valley portion of Perm Province. Nauch.dokl.vys.shkoly; geol.-geog.nauki no.1:51-54 '59. (MIRA 12:6)

1. Permskiy universitet, geologicheskiy fakul'tet, kafedra poiskov i razvedok mestorozhdeniy poleznykh iskopayemykh.
(Perm Province--Paleontology)

CHERNYSHEV, N.I.

Upper Permian sediments in the southwestern part of Perm Province. Izv.vys.ucheb.zav.; neft' i gaz 2 no.9:25-30 '59. (MIRA 13:2)

1. Permskiy gosuniversitet im. A.M.Gor'kogo.
(Permian Province--Geology, Stratigraphic)

CHERNYSHEV, N.I.

Upper Permian concretions in the Kama Valley. Sov.geol. 2 no.10:138-139 O '59. (MIRA 13:4)

1. Permskiy gosudarstvennyy universitet.
(Kama Valley--Concretions)

CHERNYSHEV, N.I.

Tectonic jointing of the upper Permian in the Perm-Sarapulka section of the Kama Valley. Izv. vyss. ucheb. zav.; geol. i razv. 2 no.12:78-83 '59. (MIRA 14:6)

1. Permskiy gosudarstvennyy universitet.
(Kama Valley--Geology, Structural)

18(6) SOV/127-59-4-26/27

AUTHOR: Chernyshev,N.I., Senior Lecturer

TITLE: Copper From Ural Region Sandstones Must be Extracted. (Med' iz peschanikov Priural'ya dolzhna byt' izvlechena.)

PERIODICAL: Gornyy zhurnal, 1959, Nr 4, p 80 (USSR)

ABSTRACT: The author proposes to reexploit copper-bearing sandstones of the Ural region, which were exploited long ago. The method of underground lixiviation is proposed. Bore holes should be drilled in the sandstones and a heated ammonium solution pumped into these holes. The solution could be used again after the extraction of copper. Moreover dumps of copper ore still containing 0,3-0,4% of copper could be used as fertilizers in agriculture.

ASSOCIATION: Permskiy universitet. (The Perm' University).

Card 1/1

CHERNYSHEV, N.I.

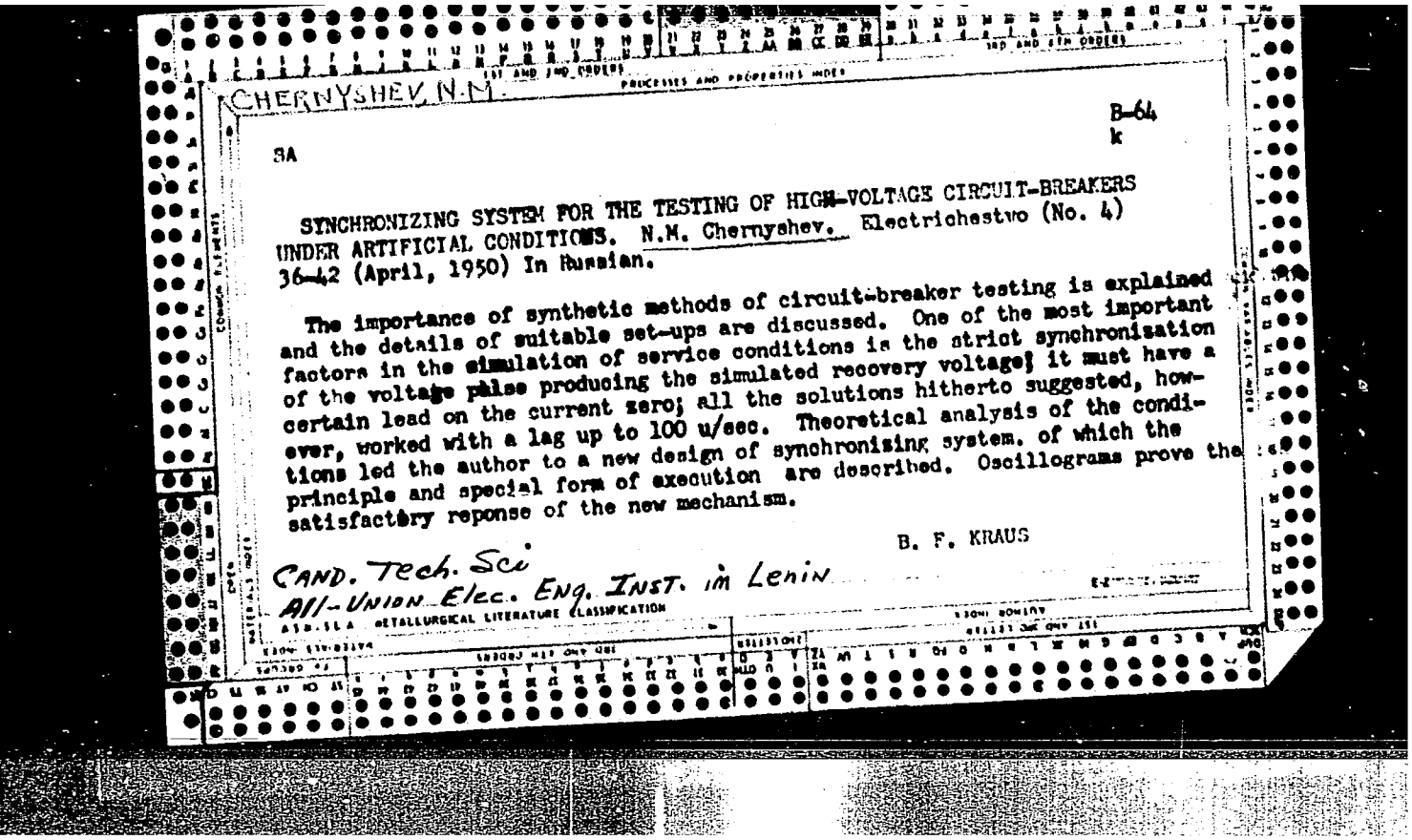
Oblique bedding of upper-Permian rocks in the Kama Valley protion of Perm Province. Biul.MOIP.Otd.geol. 35 no.4:105-109 Jl-Ag '60. (MIRA 14:4)

(Kama Valley--Geology, Stratigraphic)

CHERNYSHEV, N.I.; SHUMILOV, Yu.V.

Upper Permian sediments in the northern part of the Kama Valley and their correlation using diagrams of electric logging. Izv. vys. ucheb. zav.; geol. i razv. 7 no.5:34-43 My '64.
(MIRA 18:3)

1. Permskiy gosudarstvennyy universitet im. A.M. Gor'kogo.



CHERNYSHEV, N.M.

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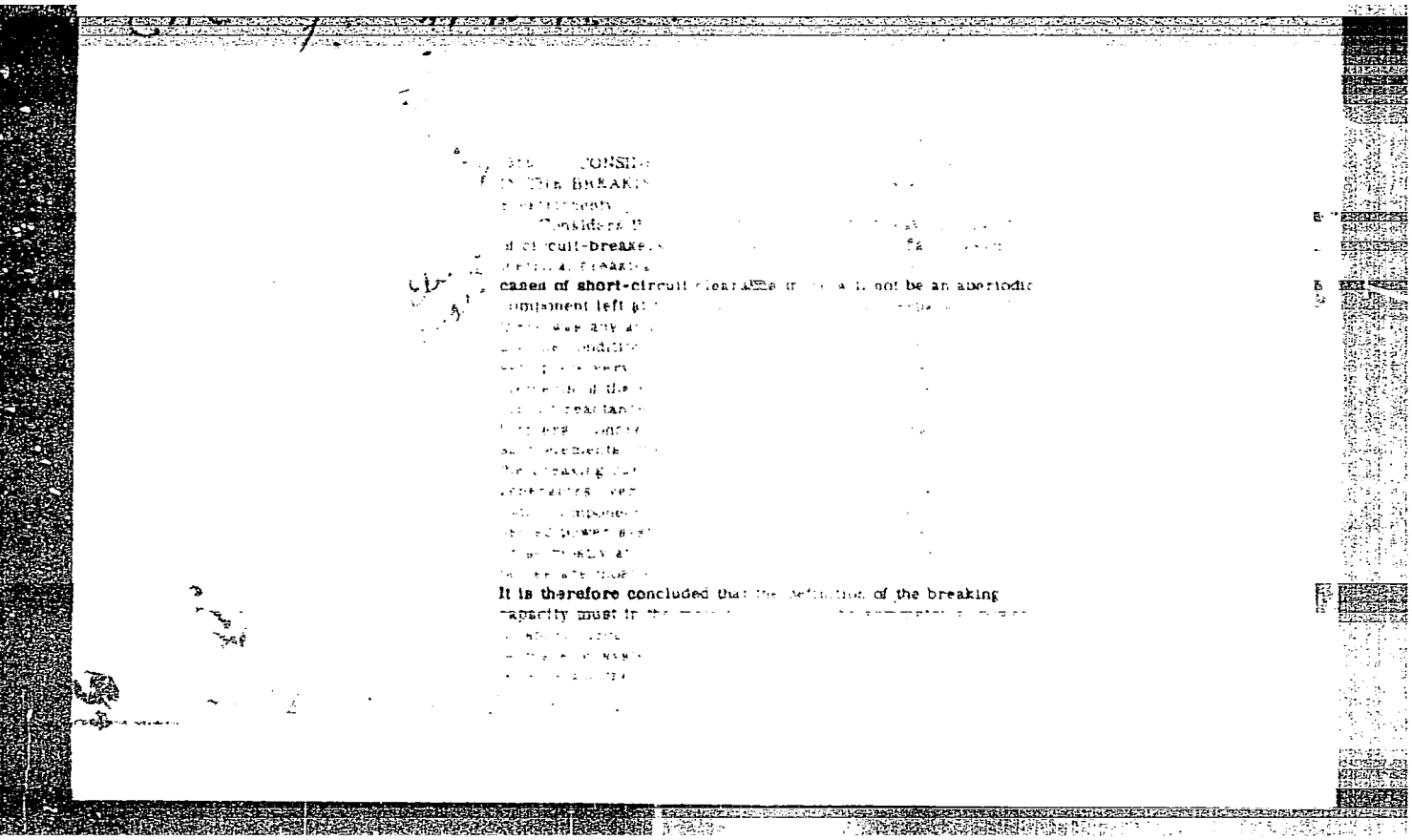
3A

SYNCHRONIZING SYSTEM FOR THE TESTING OF HIGH-VOLTAGE CIRCUIT-BREAKERS UNDER ARTIFICIAL CONDITIONS. N.M. Chernyshev. Electrichestvo (No. 4) 36-42 (April, 1950) In Russian.

The importance of synthetic methods of circuit-breaker testing is explained and the details of suitable set-ups are discussed. One of the most important factors in the simulation of service conditions is the strict synchronisation of the voltage pulse producing the simulated recovery voltage; it must have a certain lead on the current zero; all the solutions hitherto suggested, however, worked with a lag up to 100 u/sec. Theoretical analysis of the conditions led the author to a new design of synchronising system, of which the principle and special form of execution are described. Oscillograms prove the satisfactory reponse of the new mechanism.

B. F. KRAUS

CAND. Tech. Sci
All-Union Elec. Eng. Inst. im Lenin



cases of short-circuit

It is therefore concluded that

CHERNYSHEV, N. M.

Artificial Circuits for Testing Breaking Capacity of Circuit-Breakers

paper submitted for presentation at the Intl. Conf. on Lagge Electric Systems (CIGRE) 17th Biennial Session, Paris, France, 4-14 June 1958.

Electra, No. 30, Nov 57, periodical news letter issued by the CIGRE, Paris France.

8(2) SOV/105-59-3-11/27

AUTHORS: Chernyshev, N. M., Candidate of Technical Sciences, Arzyayev, A. M., Engineer

TITLE: A Device for Automatic Control of Interrupting Capacity Laboratory Tests (Pribor dlya avtomaticheskogo upravleniya opytami v laboratorii razryvnykh moshchnostey)

PERIODICAL: Elektrichestvo, 1959, Nr 3, pp 54 - 55 (USSR)

ABSTRACT: When contactors are tested to their interrupting capacity several operations must be carried out in a certain rigorously determined sequence of time (Refs 1,2). The intervals between the individual operations must be timed with an accuracy of at least 0.01 sec, the deviations not exceeding a few 0.001 sec. As the apparatus which have hitherto been used for this purpose do not operate with satisfactory accuracy, a new circuit (Ref 3) for the automatic control of experiments has been developed. The device developed by the authors is described. A special feature of this device is the independence of the absolute time error of the output pulses of the interval. This is achieved by using a computer for the time measurement. The accuracy only depends upon the phase constancy of

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the output pulses. The combination of a computer with a phase selection device provided a means for achieving the required accuracy. The operational principle of the device is elucidated by a circuit diagram. The input of the frequency division block is driven by the control voltage which is synchronous with the EMF of the supply of the checking circuit. At the output a series of voltages is delivered, the frequencies of which vary as the ratios $1:1/2:1/4:\ldots(1/2)^n$. They are positive unipolar pulses. The final elements of the device are zero indicators, each of which is across switches and diodes connected to the voltage buses with different frequencies. When the circuit is in its rest state, the zero indicators are blocked. The circuit operates as follows: The tripping command for the device is given by the transmission of the de-blocking pulse to all zero indicators. With the help of a special circuit the de-blocking pulse is transmitted at that moment, where the phases of the voltages at the output of the frequency division block are distributed as is shown in figure 2 at t=0. Under this condition each zero indicator is tripped by the de-blocking

pulse (t=0) after a delay, which depends upon the switch combination across which the zero indicator is connected. Several examples of connecting combinations are given. The essential advantage of this circuit is the possibility of feeding a great number of output circuits (zero indicators) from one frequency division block. The pulse transformation block and the frequency divider are described. The device incorporates 22 output blocks and hence 22 output pulses can be obtained from different circuits. The output block includes an element which manipulates currents up to several amperes with sufficient time accuracy. It is a TG1-1/0.8 thyratron. Apart from the blocks with a step-by step regulation others have been developed, which permit a continuous regulation of the interval. These devices contain phase selection units and a trigger. The apparatus designed by A. M. Alimov developed in the experimental works of the VEI is described. The first two models were subjected to test runs which showed that this device is fully capable of solving the given problem. There are 7 figures and 3

A Device for Automatic Control of Interrupting Capacity Laboratory Tests SOV/105-59-3-11/27

Soviet references.

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina (All-Union Institute of Electrical Engineering imeni Lenin)

SUBMITTED: October 16, 1958

Card 4/4

8 (2)

AUTHOR: Chernyshev, N. M., Candidate of Technical Sciences

SOV/105-59-6-10/28

TITLE: Equivalent Networks for Testing Circuit Breakers in Clearing Unloaded Lines (Ekvivalentnyye skhemy dlya ispytaniya vyklyuchateley v rezhime otklyucheniya nenagruzhennykh liniy)

PERIODICAL: Elektrichestvo, 1959, Nr 6, pp 40-47 (USSR)

ABSTRACT: This investigation has been limited to single-phase circuits. The requirements placed upon the testing device are presented first. Circuits for the testing of circuit breakers, which break unloaded lines without re-ignition are investigated next. In figure 1 the circuit diagram of a special synthetic circuit is given, in which the broken current and the recovery voltage were obtained from different sources. In 1954, it has been used in the testing of an air circuit breaker, which had to break large capacitive currents. A similar circuit has been used in the USA (Ref 2). Its mode of operation is explained. Circuits for the testing of circuit breakers which operate with re-ignition are investigated next. The breaking process of unloaded lines is calculated. By this, it is possible to determine the harmonic components of current and voltage at

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an unloaded line when the arc in the breaker re-ignites. The formulas obtained show that the amplitude of the components decreases with increasing frequency. Hence it may be assumed that the process is reproduced with a certain accuracy in the equivalent circuit and that it is possible to determine the frequency limits, wherein the chain network must correspond to a long transmission line. Finally the possiblities of application of the different equivalent circuits are demonstrated. Z. A. Abramova did the calculations necessary for the synthesis of the diagrams, she also collaborated in the experiments. If a choice is to be made between such testing circuits a point should be made of distinguishing between circuits, which give re-ignition, and which give no re-ignition. If the breakdown voltage in the rising branch of the recovery voltage is less than nominal line voltage, it can be ignored. If circuit breakers are tested, which break an unloaded line without re-ignition, a Π or Γ shaped circuit element will do for an equivalent circuit, and if the line is short, even a lumped capacitance will. If circuit breakers are tested, which extinguish the arc of the overload current

within a few current zeros, the process of overloading the line must not be reproduced. If circuit breakers are tested, which give a fast extinction of the arc, the resulting wave process in the line must be reproduced with sufficient accuracy in the equivalent circuit. The practical construction of a universal equivalent circuit is very costly and involves constructional difficulties. The design for three-phase testing is particularly difficult. There are 10 figures and 1 reference.

ASSOCIATION: Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina (All-Union Institute of Electrical Engineering imeni Lenin)

SUBMITTED: February 27, 1959

CHERNYSHEV, N.M., kand.tekhn.nauk; LYASHENKO, V.D., inzh.

Synchronizing device with a synthetic circuit for testing the interrupting capacity of circuit breakers. Elektrichestvo no.2: 53-57 F '60. (MIRA 13:5)

1. Vsesoyuznyy elektrotekhnicheskiy institut imeni Lenina.
(Electric circuit breakers--Testing)

CHERNYSHEV, N.M., kand.tekhn.nauk; ABRAMOVA, Z.A., inzh.

Synthetic circuit for testing cutouts with long burning arcs.
Elektrichestvo no.7:41-46 Jl '60. (MIRA 13:8)

1. Vsesoyuznyy elektrotekhnicheskiy institut im. Lenina.
(Electric cutouts--Testing)

L 24534-66 EWT(m)/EWP(j)/T/ETC(m)-6 IJP(c) DS/JD/WW/JG/RM

ACC NR: AP6011016 (A) SOURCE CODE: UR/0080/66/039/003/0642/0646

AUTHOR: Kotlyar, I. B.; Shvarev, Ye. P.; Chernysheva, N. M.

ORG: none

TITLE: Some properties of aqueous solutions of sodium salts of styrene-maleic anhydride copolymer

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 3, 1966, 642-646

TOPIC TAGS: styrene, maleic anhydride, emulsion, copolymer, polymerization

ABSTRACT: The stability of concentrated emulsions stabilized with protective colloids is attributed at the present time to the formation of a stable film of stabilizer on the interface. The present article examines those properties of styromal, a styrene-maleic anhydride copolymer (whose sodium salt is a stabilizer employed in suspension polymerization) which can determine the stability of the protective film at the interface. Such properties are the molecular weight and the degree of neutralization of the copolymer in solution. The styromals studied had different molecular weights. Their viscosity, surface tension, pH, foaming, and stabilizing

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properties in the polymerization of vinyl chloride were investigated. The properties of aqueous solutions of styromal were found to depend strongly on its molecular weight and on the degree of its neutralization. These factors played a substantial part in the use of salts of styromal as the emulsion stabilizer during the polymerization of vinyl chloride. The best results were obtained with a high molecular sample which had been 25% neutralized. The data obtained from the suspension polymerization show that the stabilizing properties of styromal depend considerably on its cross-linking tendencies. Orig. art. has: 4 figures and 1 table.

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NIKUL'CHENKO, V.G.; PAN, F.Ya.; CHERNYSHEV, N.M.

Basic characteristics of the tectonics of the western part of the Eastern Sayan Mountains. Mat. po geol. i pol.iskop.Kras.kraia no.3: 141-146 '62. (MIRA 17:2)

CHERNYSHEV, N.M., kand. tekhn. nauk

Performance of high-voltage switches in switching pumping currents in desynchronized systems. Elektrotekhnika 34 no.10:25-30 O '63. (MIRA 16:11)