

L 61463-65

ACCESSION NR: AP5012432

agrees to within 0.95% with the experimental value of 420 000 kg/cm². And the average calculated and experimental strength limit σ , σ calc = 7740 kg/cm² and σ exp = 8400 kg/cm² differ from each other by 7.9%. Similar agreement between theory and experiment is obtained for alkali glass fibers and for nonalkali glass fibers glued together with an alcoholic solution of phenol resin. Orig. art. has: 2 tables, 3 graphs, and 32 equations.

ASSOCIATION: none

SUBMITTED: 16Nov64

ENCL: 00

SUB CODE: MT

NO REF SOV: 004

OTHER: 001

DK
Card 2/2

L 3793-66

ACCESSION NR:

AP5023210

EWT(d)/EWP(w)/EWT(m)/EWP(o)/EPF(c)/EWP(1)/EWP(j)/T

WW/EM/RI/WH

AUTHOR:

Lomakin, V. A. (Moscow); Yumasheva, M. A. (Moscow)

UR/0374/65/000/004/0028/0034
678:539.378

TITLE:

Correlation between stresses and deformations during the nonlinear deformation of orthotropic glass-plastics

11
65

SOURCE:

Mekhanika polimerov, no. 4, 1965, 28-34

TOPIC TAGS:

nonlinear elasticity, material deformation, glass fabric, sheet glass, plastic

ABSTRACT:

The applicability of the theory of nonlinear deformation of anisotropic solids to glass-plastics subjected to brief loadings is discussed in detail. The functions of the stress-strain correlations of this theory were determined experimentally for EDF-5-6 and PN-1, T-1 glass plastic sheets. The EDF-5-6 glass-plastic is based on one epoxy-phenolformaldehyde resin and PN-1, T-1 glass-plastic is based on PN-1 polyester resin reinforced with T-1 glass fabric. The simplification of these correlations for simple loadings is determined. It was found that the theory well describes the anisotropy of glass-plastics under nonlinear deformation. The

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ACCESSION NR: AP5023210

stress (σ) - strain (ϵ) curves for EDF-5-6 glass-plastic samples (2 mm in thickness) and PN-1, T-1 are shown in figs. 1 and 2 of the Enclosure. Orig. art. has: 4 figures, 19 formulas.

ASSOCIATION: none

SUBMITTED: 13Mar65

NO REF SOV: 003

ENCL: 01

OTHER: 000

SUB CODE: MT, GC

Card 2/3

L 3793-66
ACCESSION NR: AP5023210

ENCLOSURE: 01

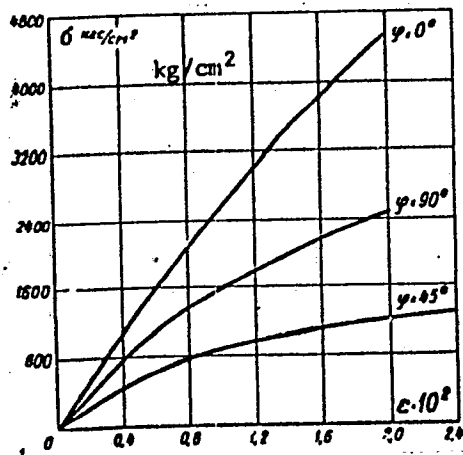


Fig. 1. *GC*
Card 3/3

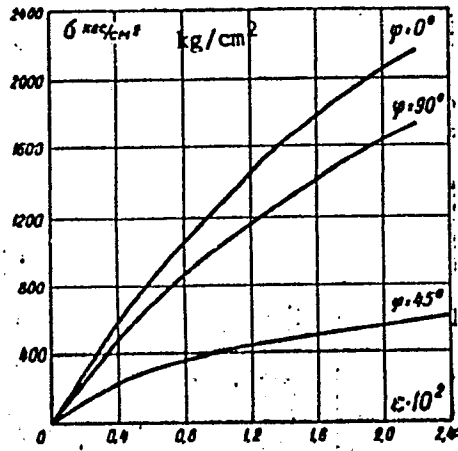


Fig. 2.

L 3793-66

ACCESSION NR: AP5023210

ENCLOSURE: 01

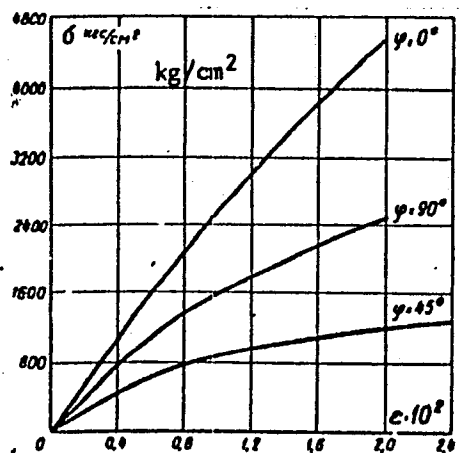


Fig. 1. 50
Card 3/3

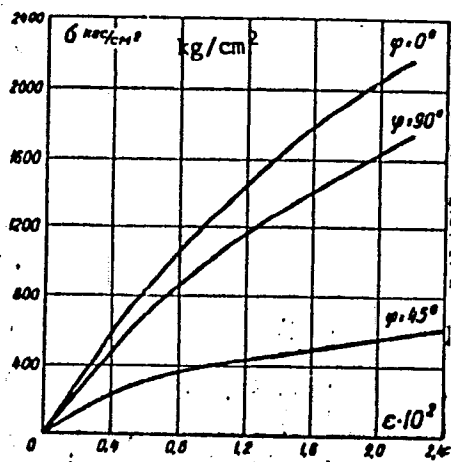


Fig. 2.

LOMAKIN, V.A.

Static problem in the theory of elastostatics for bodies loaded.
Vestn. Mosk. univ. Ser. 1, 1988, no. 4, 10-11, 165.
(MIRA 18:9)

1. Kafedra teorii i prikladnoy mekhaniki i fiziki.

LOMAKIN, V.A.

Elastoplastic deformations of bodies under the action of
random forces. Vest. Mosk. un. Ser. 1: Mat., mekh. 21 no.1:
77-84 Ja-F '66. (MIRA 19:1)

1. Kafedra teorii uprugosti Moskovskogo gosudarstvennogo
universiteta. Submitted February 17, 1965.

ACC NR: AP7002694

SOURCE CODE: UR/0424/66/000/006/0068/0075

AUTHOR: Lomakin, V. A. (Moscow)

ORG: none

TITLE: A plane problem of the theory of elasticity for bodies with rapidly oscillating elastic properties

SOURCE: Inzhenernyy zhurnal. Mekhanika tverdogo tela, no. 6, 1966, 68-75

TOPIC TAGS: elasticity theory, stress analysis

ABSTRACT: A special case of the plane problem of the theory of elasticity is considered when the parameters that determine the elastic properties of the nonhomogeneous isotropic medium are almost-periodic, rapidly oscillating functions of the coordinates. The boundary problem is rendered in the form

$$\nabla^2 P_0 = 0, \quad \tau_x^0 n_x + \tau_{xy}^0 n_y = g_x, \quad \tau_{xy}^0 n_x + \tau_y^0 n_y = g_y$$

where ∇ is the Laplacian, g_x and g_y are surface forces, and τ_x , τ_y , and τ_{xy} are stresses. Upon finding solutions for P_0 , τ_x^0 , τ_y^0 , τ_{xy}^0 , we develop a boundary problem for P_1 . Introducing certain notations and substitutions, and passing on to complex

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ACC NR: AP7002694

variables, we obtain a partial solution of the boundary problem in the form

$$\nabla^2 \Phi_k = 0, \quad L_1[\Phi_k] = P_k^{(1)}(x, y, \omega) e^{i\omega(\alpha_k x + \beta_k y)}$$

$$P_k^{(1)}(x, y, \omega) = \beta_k (\beta_k n_x - \alpha_k n_y) f_k + \frac{1}{\omega} i \left[\beta_k \left(\frac{\partial f_k}{\partial x} n_y - \frac{\partial f_k}{\partial y} n_x \right) - \right. \\ \left. - (\beta_k n_x - \alpha_k n_y) \frac{\partial f_k}{\partial y} \right] + \frac{1}{\omega^2} \left[\frac{\partial}{\partial y} \left(\frac{\partial f_k}{\partial x} n_y - \frac{\partial f_k}{\partial y} n_x \right) - \left(\frac{\partial f_k}{\partial x} \frac{\partial n_y}{\partial y} - \frac{\partial f_k}{\partial y} \frac{\partial n_x}{\partial x} \right) \right]$$

$$P_k^{(2)}(x, y, \omega) = \alpha_k (\alpha_k n_y - \beta_k n_x) f_k + \frac{1}{\omega} i \left[\alpha_k \left(\frac{\partial f_k}{\partial y} n_x - \frac{\partial f_k}{\partial x} n_y \right) - \right. \\ \left. - (\alpha_k n_y - \beta_k n_x) \frac{\partial f_k}{\partial x} \right] + \frac{1}{\omega^2} \left[\frac{\partial}{\partial x} \left(\frac{\partial f_k}{\partial y} n_x - \frac{\partial f_k}{\partial x} n_y \right) - \left(\frac{\partial f_k}{\partial y} \frac{\partial n_x}{\partial x} - \frac{\partial f_k}{\partial x} \frac{\partial n_y}{\partial y} \right) \right]$$

Solutions of several modifications of the above boundary problem lead to the following conclusions: 1) In a broad sense, the stress fields are everywhere statistically homogeneous, with the exception of a narrow boundary layer, where they are nonhomogeneous. 2) The width of the boundary layer, with certain imposed restrictions, is of the order of a linear dimension of the nonhomogeneities at the largest scale. 3) The

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ACC NR: AP7002694

dispersion of stresses τ_y , τ_{xy} and the stress moments of second order containing τ_y , τ_{xy} at the boundary of the body is zero; the stresses vary, however, in the boundary layer. At the boundary, they approach values different from zero, in the inner range of the body they appear to be constant, and in a nonlimited medium they coincide with their eigenvalues. In a specific case, when τ_x^0 , τ_y^0 , τ_{xy}^0 are functions of the coordinates x, y , the solution has the form

$$v_k^{(0)} = -f_k^{(0)}(x, b) [1 + \omega(\alpha_k + i\beta_k)(y-b)] e^{-\omega\alpha_k(y-b)}$$

Orig. art. has: 35 formulas, 2 figures.

SUB CODE: 20, ~~12~~ 12/

SUBM DATE: 21Mar65/

ORIG REF: 006

Card 3/3

LOMAKIN, Vasilii Andreyevich, inzh.; MASKOV, Iemiriy Aleksandrovich,
inzh.; KLEINIG, E.A., inzh., nauchn. sot.[deceased]

[Technology and organization of construction work] Tekhno-
logiia i organizatsiia stroitel'nogo proizvodstva. Moskva,
Stroizdat, 1964. 366 p. (MIRA 18:1)

RAZUMNYI, V.T.; LOMAKIN, V.A.

Pulsed power supply to a great number of magnetic logical elements. Avtom.i prib. no.3:24-27 J1-S '62. (MIRA 16:2)

1. Lisichanskiy filial Instituta avtomatiki Luganskogo soveta narodnogo khozyaystva.
(Electronic computers)

DIKIY, B.F. [Dykyl, B.F.]; LOMAKIN, V.F.

Conductophotometric transducer for wine flow control. Kharch.prom. no.
4:63 O-D '63. (MIRA 17:1)

LOZHEV, V.F.; BUTENKO, B.M.

Long distance transmission of information on production indices by
means of light signals. Khar. prom. no.2:19-20 Ap-Je '65. (MIRA 13:15)

DIKIY, G.F.; BUTENKO, B.M.; IVASHKEVICH, Yu.K.; IVASHCHENKO,
B.P.; LOMAKIN, V.F.

[Automation of production processes in the wine and
brandy making factory in Tiraspol] Avtomatizatsia pro-
izvodstvennykh protsessov na Tiraspol'skom vinno-
kon'iachnom zavode. Moskva, TSentr. in-t nauchno-
tekh. informatsii pishchevoi promyshl., 1964. 32 p.
(MLA 17:11)

AID P - 5070

Subject : USSR/Engineering-Welding

Card 1/1 Pub. 107-a - 10/11

Authors : Lomakin, V. I. and N. I. Fishkova

Title : The SL-60A electric riveter

Periodical : Svar. proizvod., 6, 31-32, Je 1956

Abstract : The authors describe the SL-60A electric riveter designed for welding sheet metal and structural steel of 2 to 5 mm thick. The riveter's technical characteristics and its design, the complete installation and its performance are presented. Three drawings, 1 photo and 1 table.

Institution : None

Submitted : No date

L 45581-66 ENF(e)/ENI(m)/ENF(w)/I/ENI(t)/ENI/K) UR(C) J/IN

ACC NR: AP6031223

(N)

SOURCE CODE: UR/0133/66/009/009/0834/0836

AUTHOR: Teumin, I. I.; Lupakov, I. S.; Lomakin, V. I.

46
45
8

ORG: none

TITLE: Ultrasonic treatment of boron-bearing steels during solidification

SOURCE: Stal', no. 9, 1966, 834-836

TOPIC TAGS: ultrasonic ^{vibration} ~~steel-treatment~~, boron containing stainless steel, steel properties/Kh18N10R3 steel, Kh18N6G9R3 steel

ABSTRACT: Ingots of Kh18N10P3 and Kh18N6G9R3 high-boron stainless heat-resistant steels were treated with ultrasonic vibrations during their solidification. The weight of ingots was 15 kg, which is a usual production-scale size for ingots of these steels. It was found that ultrasonic treatment significantly reduced the grain size of the boron phase and improved the uniformity of its distribution throughout the ingot, thereby improving the mechanical and technological properties of steels. For instance, at 350C specimens of ultrasonically treated Kh18N10R3 steel had a tensile strength of 26.8 kg/mm², an elongation of 0.6% and a reduction of area of 1.4%. The same properties for untreated steel were 10.3 kg/mm², 0.0%, and 0.0% respectively. The mechanical properties of Kh18N6G9R3 steel were found to be similar. The forgeability of ultrasonically treated steels also was greatly improved.

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UDC: 669.18-412:621.746.393-534.8

L 45581-66

ACC NR: AP6011223

a billet 30 x 60 x 80 mm was forged into a sheet bar 14 mm thick without difficulties. /
Orig. art. has: 5 figures. [TD]

SUB CODE: 11, 13, 20/ SUBM DATE: none/ ORIG REF: 003/ ATD PRESS: 5082

Card 2/2 LC

FILONENKO, S.N.; LOMAKIN, V.K.

Dimensional wear of cutting tools in diamond boring of steel. Stan.1
instr. 35 no.9:29-30 S '64. (MIRA 17:10)

YEROFEYEV, A.A.; PRAVDA, Ye.I.; LOMAKIN, V.K.

Automation of the cooking of preserves. Trudy MNIIPP 2:109-113 '62.
(MIRA 16:4)

(Moldavia—Canning and preserving)

(Automation)

BROMBERG, B.M.; DASHEVSKIY, T.B.; LAMDON, E.A.; LOMAKIN, V.K.;
MIKHEYEV, Yu.Ye., inzh., retsenzent; KUNIK, P.A., inzh.,
red.

[Diamond boring machines; their design and adjustment]
Almazno-rastochnye stanki; konstruktsii i naladki. Mo-
skva, Mashinostroenie, 1965. 243 p. (MIRA 18:8)

FILONENKO, S.N.; LOMAKIN, V.K.

Dimensional wear of cutting tools in fine boring. Stan. 1
instr. 34 no.6:33-34 Je '63. (MIRA 16:7)

(Drilling and boring)

PRAVDA, Ye.I.; LOMAKIN, V.K.

Automatic evaporation plant for the cooking of fruit preserves.
Kons. i ov. prom. 17 no.8:3-5 Ag '63. (MIRA 17:1)

1. Moldavskiy nauchno-issledovatel'skiy institut pishchevoy
promyshlennosti.

LOMAKIN, V.K.; FRAVDA, Ye.I., kand.ekonom.nauk

Improved automatic control circuit for cooking fruit preserves
in vacuum apparatus. Trudy MNIIPP 3:92-98 '63.

(MIRA 18:1)

1 35288-65 EWT(1)/EWA(h) Feb
ACCESSION NR: AP5008159

S/0286/65/000/005/0037/0038

AUTHOR: Nasibov, A. S.; Lomakin, V. L.; Bagramov, V. G.

TITLE: High-voltage nanosecond pulse oscillator. Class 21, No. 168754

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 37-38

TOPIC TAGS: high voltage pulse oscillator, pulse shaper, discharge thyatron, nanosecond pulse

ABSTRACT: This Author Certificate introduces a high-voltage nanosecond pulse generator consisting of a pulse shaper, a discharge pulse thyatron, a coaxial transmission line, and a correction circuit (see Fig. 1 of Enclosure). For increased pulse height and preliminary correction of the pulse top, the two-stage shaper, shunted by a capacitor, is connected in parallel to the discharge thyatron. To increase the steepness of the leading edge of the pulse and to straighten its top, the correction circuit contains two nonlinear inductors connected in series. A resistor is connected in parallel to the first inductor, a capacitor is connected between the common junction of the inductors, and two resistors are connected in series between the output terminal of the second inductor and a grounded bus bar. The output lead of the generator is in turn connected to the midpoint between the resistors. Orig. art. has: 1 figure. [JR]

Card 1/3

5500-05 EWT(1)/EWA(n) Feb

ACCESSION NR: AP5016385

UR/0120/65/000/003/0120/0122
621.373.43

AUTHOR: Nasibov, A. S.; Lomakin, V. L.

TITLE: Rectangular-pulse generator 25

SOURCE: Pribery i tekhnika eksperimenta, no. 3, 1965, 120-122

TOPIC TAGS: pulse generator, HV pulse generator, thyatron

ABSTRACT: A high-voltage thyatron pulse generator is described which works on the principle of partial capacitance discharge and requires no auxiliary power supply for the pulse turn-off portion of the circuit. The circuit works in the following manner: the previously charged capacitor is discharged through a fired thyatron, generating the leading edge of the 2-kv pulse. After a preset delay, another thyatron is triggered, generating the trailing edge of the pulse and at the same time (through transformer action) making the cathode of the first thyatron positive with respect to the anode. This bias inversion causes the grid to regain direct control of the tube and indirect control of the pulse parameters. The characteristics of the pulse generator are as follows: pulse height,

Card 1/2

21
20
B

L 59980-95

ACCESSION NR: AP5016385

2 kv; pulse repetition frequency, set at 50 cps; pulse duration, continuously variable, from 20 usec to 1000 usec. The rise time does not exceed 6 usec.
Orig. art. has: 2 figures. [BD]

ASSOCIATION: Fiziko-tekhnicheskij institut GKAE SSSR, Sukhumi (Physicotechnical Institute, GKAE SSSR)

SUBMITTED: 28Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 091

ATD PRESS: 40.33

Card 2/2

L 55985-65 EWT(1)/EWA(h) Pob
ACCESSION NR: AP5016386

UR/0120/65/000/003/0123/0126
621.373

13
12
B

AUTHOR: Nasibov, A. S.; Lomakin, V. L.

TITLE: Narrow HV pulse generator 25

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1965, 123-126

TOPIC TAGS: HV pulse generator, pulse transformer, coaxial cable, thyatron

ABSTRACT: The pulse generator described is capable of generating 50-kv pulses of 100-nsec duration. Its construction circumvents the problems encountered in high-voltage operation of thyatron circuits, such as extended ionization time and distributed inductance. The generator is made up of a thyatron circuit generating a 15-kv wavefront that is passed into a split transmission line whose midpoint consists of a transformer and a load. The incident and the reflected wavefronts generate a very narrow pulse at the secondary winding of the transformer. The load mismatch does not affect the pulse flatness since the pulse transformer saturates at approximately 50 kv. The windings of the transformer are constructed of sections of RK-106 coaxial cable to assure small distributed inductance and high voltage immunity. The pulse repetition rate is variable in increments of 100 cps from 100 to 1000 cps. Orig. art. has: 6 figures. [BD]

Card 1/2

L 5985-65

ACCESSION NR: AP5016386

ASSOCIATION: Fiziko-tehnicheskiy institut GKAE SSSR, Sukhumi (Physicotechnical
Institute, GKAE SSSR)

SUBMITTED: 21Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 005

OTHER: 000

ATD PRESS: 4033

Card 2/2

L 8100-66 EWT(1)/EWA(h)

ACC NR: AP5027025

SOURCE CODE: UR/0120/65/000/005/0133/0136

AUTHORS: Nasibov, A. S.; Lomakin, V. L.; Bagramov, V. G.

14
39
B

ORG: none

TITLE: High-voltage short-duration pulse generator ²⁵

SOURCE: Pribory i tekhnika eksperimenta,¹⁰ no. 5, 1965, 133-136

TOPIC TAGS: pulse generator, thyatron, pulse shaper.

ABSTRACT: A high-voltage short-duration pulse generator is described. The generator consists of four fundamental units: a shaper unit, a commutating thyatron, a transformer line, and correcting (or adjusting) elements. The shaper unit consists of a two-step cable system to reduce the thyatron voltage. The transformer unit has a coefficient calculated from an equivalent circuit to be

$$k = 2nR_n / (n\rho_0 + R_n)$$

Card 1/2

UDC: 621.373

2

L 8100-66

ACC NR: AP5027025

5

where n is the number of cables, and ρ_0 is the wave impedance. The correcting unit consists of several inductive, capacitive, and resistive coils which remove the thyatron distortions. The generator has the following characteristics: 300-kv pulse height, 100-amp current per pulse, a pulse duration of 250 nanosec, a front duration of 20 nanosec, and a 12.5-cycle frequency. The authors express their gratitude to M. M. Agrest for helping in the equivalent transformer circuit analysis and computation on the Ural-1, to A. B. Shavrov for constructing the work, and to Z. P. Rusakov, R. V. Shvetsov, and E. V. Vasil'yev for taking part in adjusting and mounting the generator. Orig. art. has: 4 formulas and 3 figures.

SUB CODE: 09/

SUBM DATE: 23Sep64/

ORIG REF: 004/

OTH REF: 001 [04]

ATD PRESS: 4146

Card 2/2 *ju*

LOMAKIN, V.H.

New applications of kinematics to the design of model 5330, 5353
and 5355 M gear-cutting machines. Stan. i instr. 27 no.12 D '56.
(Gear-cutting machines) (MLRA 10:2)

SOV/28-58-6-20/34

AUTHORS: Geller, Yu.A., Professor, Doctor of Technical Sciences, Malinkina, Ye.I., Candidate of Technical Sciences, Lomakin, V.N.

TITLE: Supplementing the State Standard GOST 5950-51 With the Method for Controlling Steel by Its Annealing Property (Dopolnit' GOST 5950-51 metodikoy kontrolya stali na prokalivayemost')

PERIODICAL: Standartizatsiya, 1958, Nr 6, pp 65-69 (USSR)

ABSTRACT: The annealing property of instrumental steel is defined as the property to obtain a martensite structure and high hardness after tempering. The annealing capacity is determined by the methods of butt tempering as specified by GOST 5657-51. If the samples are kept up to 30-35 sec/mm in the salt tank, the annealing property increases (Figure 1). A longer period does not increase the annealing property beyond the value reached at 35 sec/mm. Changes in this

Card 1/3

SOV/28-58-6-20/34

Supplementing the State Standard GOST 5950-51 With the Method
for Controlling Steel by Its Annealing Property

property among the different smeltings are not due to the chemical composition, because only slight changes are correlated with a 2-3 times higher annealing property (Tables 1 and 2, Figure 2). Metallurgical factors, like smelting, rolling, are the causes of the changes. The comparison of the curves of distribution of hardness over the length of the sample is the basis for the nomograms showing the distribution of the annealing property of alloyed instrumental steels (Figures 4 and 5). These nomograms may be applied to steel to types KhVG, 9KhS, Kh, and similar types. During grinding, the layer of annealed steel in an instrument may be reduced. In the samples, the obtained values may be reduced therefore by 2 mm. The results of these calculations are shown in Table 6.

Card 2/3

SOV/28-58-6-20/34

Supplementing the State Standard GOST 5950-51 With the Method
for Controlling Steel by Its Annealing Property

There are 6 tables and 6 graphs.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy instrumen-
tal'nyy institut (All-Union Scientific Research
Instrument Institute)

Card 3/3

LOMAKIN, V.N.; MALIKOV, G.

Determining the hardenability of alloy steel by diagrams of isothermal transformation in austenite. Metalloved. i term.obr.met. no.9:57-64 (MIRA 18:10) S '65.

1. Vsesoyuznyy nauchno-issledovatel'skiy instrumental'nyy institut.

27
 PHASE I BOOK EXPLOITATION: SOV/5457

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Sektzaya metallovedeniya i termicheskoy obrabotki metallov.

Metallovedeniye i termicheskaya obrabotka metallov; trudy Sektsii metallovedeniya i termicheskoy obrabotki metallov (Physical Metallurgy and Heat Treatment of Metals; Transactions of the Section of Physical Metallurgy and Heat Treatment of Metals) no. 2, Moscow, Mashgiz, 1960. 242 p. 6,000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Tsentral'noye pravleniye.

Editorial Board: G. I. Fogodin-Alekseyev, Yu. A. Geller, A. G. Rakhnitskiy, and G. K. Shreyber; Ed. of Publishing House: I. I. Lashchenko; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Metalworking and Machine-Tool Making: V. I. Mitin.

PURPOSE: This collection of articles is intended for metallurgists, mechanical engineers, and scientific research workers.

COVERAGE: The collection contains articles describing results of research conducted by members of VPO (Scientific Technical Society) of the machine-building industry in the field of physical metallurgy, and in the heat treatment of steel, cast iron, and nonferrous metals and alloys. No personalities are mentioned. Most of articles are accompanied by Soviet and non-Soviet references and contain conclusions drawn from investigations.

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AVAILABLE: Library of Congress (TW672.M34)	

S/123/61/000/012/011/042
A004/A101

AUTHORS: Geller, Yu. A.; Malinkina, Ye. I.; Lomakin, V. N.

TITLE: Hardenability of alloyed tool steels

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 12, 1961, 80-81, abstract 12B575 (V sb. "Metallovedeniye i term. obrabotka metallov". [Tr. Sektsii metalloved. i term. obrabotki metallov. Tsentr. pravl. Nauchno-tekhn. o-va mashinostroit. prom-sti, no. 2]. Moscow, 1960, 197-219)

TEXT: The authors studied the hardenability of industrial melts of the steel grades 9XC (9KhS) (18 melts), XБГ (KhVG) (16 melts) and X (Kh) (5 melts). It is expedient to determine and check the hardenability of these steel grades by the face end hardening method according to ГОСТ (GOST) 5657-51. The authors established a dependence between the distribution of hardness over the length of the face end specimen and over the cross section of cylindrical specimens of alloyed hyper-eutectoid steels. The data of face end hardening according to the suggested nomogram being available it is possible to determine the hardenability of cylindrical specimens up to 100 mm in diameter. In order to obtain more homo-



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Hardenability of alloyed tool steels

S/123/61/000/012/011/042
A004/A101



geneous and higher properties of cutting tools and dies of large profile it is necessary to rate the mentioned alloyed hyper-eutectoid steels according to their hardenability by the face end hardening method taking into account the nomogram of the critical diameter and the distribution of hardness over the cross section. There are 17 figures and 10 references.

N. Il'ina

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/003/144/191
A052/A101

AUTHORS: Malinkina, Ye. I., Geller, Yu. A., Lomakin, V. N.

TITLE: The hardenability of alloyed steel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 74, abstract 3I480
(V sb. "Metodika i praktika metallogr. issled instrum. stali".
Moscow, Mashgiz, 1961, 94-108)

TEXT: For the determination of hardenability of alloyed tool steel by the face hardening method, GOST 5657-51 provides for the design of the installation, shape and dimensions of the sample (25 mm in diameter). The measurement of hardness was done every 1.5 - 2 mm of the length of the sample starting from the cooled face. For steels with a 5 mm hardened layer, $R_c = 60$ was checked by additional measurements done every millimeter in checkered arrangement of imprints. To plot the nomograms for recomputing the data of the face hardening method for the hardenability of cylindrical samples cooled in oil or hot media, the methods described in GOST 5657-51 were used. The nomograms were plotted on the basis of experimental data obtained on steel $\Gamma X C$ (GKhS), $X B \Gamma$ (KhVG) and X (Kh) samples separately for cooling in oil and in molten salt-peter. The fitness of

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AG52/AIG1

The hardenability of alloyed steel

nomograms was checked on a number of grades of alloyed tool steels of different smelts. The discrepancy between the experimental and calculation data was insignificant. It is possible to use the nomograms for calculating hardenability of cylindrical samples of 50 mm and over in diameter. The nomograms make possible the solution of a number of practical problems by the data of the face hardening method. The use of the nomograms is illustrated by examples. The hardenability bands obtained by the face hardening method on 16 smelts of KhVG steel and 5 smelts of Kh steel are plotted. The broadest band has KhVG steel which accounts for its worse machinability.

M. Rabinovich

[Abstracter's note: Complete translation]

Card 2/2

MALINEINA, Ye.I.; LOMAKIN, V.N.; PANDURCHINA, M.N.; BADAIEVA, A.D.

Effect of a carbide lattice on the properties of hypereutectoid steel. Standartizatsiya 27 no.12:29-31 D '63. (MIRA 12:4)

LOMAKIN, V.P., inzhener

Review of "High-power walking excavators." N.P. Vorontsov-
Vel'iaminov, M.I. Kraitsberg. Reviewed by V.P. Lomakin. Mekh.
trud.rab.9 no.8:47 Ag'55. (MIRA 8:10)
(Excavating machinery) (Vorontsov-Vel'iaminov, N.P.)
(Kraitsberg, M.I.)

DOMBROVSKIY, N.G. professor, doktor tekhnicheskikh nauk, laureat
Stalinskoy premii; GREKOV, A.R., inzhener; KRAYTSBERG, M.I.,
inzhener; LOMAKIN, V.P., inzhener; YARTSEV, G.P., inzhener.

Excavator with an electromagnetic sliding coupling. Mekh.
stroi. 12 no.4:16-21 Ap '55. (MLRA 8:6)
(Couplings) (Excavating machinery)

KRAYTSBERG, M.I., kand. tekhn. nauk; LOMAKIN, V.P., inzh.; KAMINSKAYA, D.A.,
inzh.

Improving the electric drive of single-bucket excavators. Stroi. i
dor. mashinostr. 2 no.11:3-6 N '57. (MIRA 11:1)
(Excavating machinery--Electric driving)

PHASE I PCOA EVALUATION SCV/589

Kauchan-tobchakchaya'ya kon'ferentsiya po razvitiyu proizvoditel'stva sil'nykh i leknykh ekonomicheskoy administratsionnoy rayona, 1978.

Voprosy mashinostroyeniya: trudy konferentsii... (Symposium of Machine Building Transactions of the Scientific Technical Conference on the Development of Productive Forces of the Muravskaya Economic Administrative Region) no. 3. Kiev, Izd-vo AN UkrSSR, 1960. 122 p. 1,400 copies printed.

Sponsoring Agency: Akademiya nauk Ukrainskoy SSR. Svet po izdaniyu proizveditel'stva sil'nykh i leknykh.

Editorial Board: Resp. Ed.: A.A. Vasilenko, Academician of the Academy of Sciences UkrSSR; A.A. Gorobov, Corresponding Member, Academy of Sciences UkrSSR; I.P. Prudskiy, Doctor of Technical Sciences; S.M. Kutanchik, A.I. Adamenko, Candidate of Technical Sciences; G.M. Davydov, Candidate of Economic Sciences; Ed. of Publishing House: S.D. Lepkiy, Tech. Ed.: R.A. Buriy.

PURPOSE: This collection of articles is intended for scientific personnel, engineers, technicians, soviet workers, and planning organizations. COVERAGE: The articles deal with problems in technology and techniques in the manufacture of engines, hybrid turbines, diesel locomotives, tractors, combines, electrical machinery, etc. Considerable attention is given to the following: the development of various types of equipment used for automation in the coal industry; equipment development for the production and use of rectifiers; the development of new electrical apparatus for measuring and controlling heat-engineering parameters; and the introduction of advanced methods into founding and die forging. No personal titles are mentioned. References accompany some of the articles. There are 20 references. 16 Soviet, 2 German, 1 French, and 1 English.

Glaschev, K.M. [Doctor of Technical Sciences at Ebar'ko. Polytechnical Institute]. The Present State of and Outlook for the Development of Engine Building 44

Koval', I.A. [Chief Designer at the GZED (Gosudarstvennoye Spetsial'noye Konstruktorskiye Byuro Dvigateley - State Special Engine-Design Bureau) in the "Serp i Molot" Plant]. Work Done by the "Serp i Molot" Plant in Muravov and by its GZED in the Design of New Tractor and Combine Engines 61

Kashuba, P.P. [Chief Designer at the Ebar'kovskiy traktorny zavod (Ebar'kov Tractor Plant)]. The All-Purpose T-7; Caterpillar Tractor 62

Garf, M.F., and O.Yu. Kravchenko [Candidates of Technical Sciences at the Institut liternogo proizvodstva AN UkrSSR (Institute of Founding AS UkrSSR)]. Investigating the Dynamic Strength of Certain Components in the Tractor and Transportation Industries 75

Postnikov, I.M. [Doctor of Technical Sciences at the Institut elektrotokhniki AN UkrSSR (Electrotechnical Institute AS UkrSSR)]. Basic Prospects for Research in the Field of Design of New Types of Electric Machinery 87

Perel'muter, M.K. [Candidate of Technical Sciences at the Ebar'kov Branch of "Yashivskoelektroproyekt"]. Prospects for the Development of Electric Drives 92

Problems of Machine Building (Cont.) SCV/589

Zil'berman, P.Z. [Candidate of Technical Sciences at the Ebar'kov Branch of "Yashivskoelektroproyekt"]. The Use of Computers for Planning Production Processes 94

Serechenko, V.Ye. [Chief Equipment Designer at the Ebar'kovskiy elektromekhanicheskiy zavod (Ebar'kov Electromechanical Plant)]. Trends in the Development of Electrical-Machinery Manufacture at the Muravskiy Electrotechnical Plant 99

Zanchuk, G.V. [Candidate of Technical Sciences at Zaved "Yashivskoelektroproyekt" (The Ebar'kov Plant)]. Equipment for Automation in Coal Mining 110

Grom'yan, Ya.P. [Designer at the Ebar'kov Branch of "Yashivskoelektroproyekt"]. The Use of Mechanical Rectifiers in Electrolytic Processes 115

Levskiy, V.P. [Designer at the Ebar'kov Electromechanical Plant]. The Basic Tasks of Technical Rectifiers 127

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E194/E455

16.9500

AUTHORS: . Vasil'yev, V.G., Candidate of Technical Sciences, Dotsent
and Lomakin, V.P., Aspirant

TITLE: Structural Diagrams and Electronic Analogues of Systems
Containing Cross-Field Amplidynes, 9

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika,
1960, Nr 4, pp 3-10 (USSR)

ABSTRACT: The analogue representation of amplidynes usually
consists of two series inertia links with no allowance
for internal feed-back. This can lead to serious errors
because internal feed-back may have a decisive influence
on transient processes. An article by Ye.L.Ettinger and
Yu.R.Reyngol'd (Ref 4) gave a very satisfactory
structural diagram to serve as a basis for analogues of
amplidynes with internal feed-back. In somewhat amended
form, the transmission functions given in that article
for resistively and inductively loaded amplidynes are
of the forms of Eq (1) and (2) respectively. The form
of Eq (3) applies to an amplidyne-generator system
where the amplidyne is the generator exciter. The
physical meaning of Eq (1) is discussed; the amplidyne

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Cross-Field Amplidyne

is represented as two inertia links with appropriate feed-backs. The input magnitude of the first link is the voltage on the control winding together with an additional resistance; the output magnitude of the second link is the direct-axis emf. The representation of brush displacement, iron loss and other features is explained. The structural diagram of an amplidyne with resistive load constructed according to Eq (1) is shown in Fig 2; the corresponding diagram for an amplidyne-generator system corresponding to Eq (3) is shown in Fig 3. In both cases, the output magnitude is the direct-axis emf but in practical cases the total amplidyne armature emf is often of interest. It can be determined from Eq (5) which may be represented by a link with transmission function (6) connected as shown in the diagram of Fig 3. The final amended structural diagram of a non-linear amplidyne-generator system is shown in Fig 4. The structural diagram discussed above may be used to formulate analogues of amplidyne with

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**Structural Diagrams and Electronic Analogues of Systems Containing
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resistive or inductive load and of an amplidyne-generator system. For example, Fig 5 shows the diagram of such an analogue. The accuracy of reproduction of transients on the model was verified by comparing oscillograms obtained on the actual amplidyne and on the analogues. To this end, oscillograms were made of the amplidyne transients for the no-load and resistive load conditions. One of the amplidyne windings provided feed-back according to the amplidyne voltage as shown in the diagram of Fig 6. The corresponding structural diagram is shown in Fig 7 which was used to construct the analogue circuit shown in Fig 8. The open position of the switch P1 in Fig 7 and 8 corresponds to the no-load condition of the amplidyne and the closed position of the switch to operation on load. As will be seen from the oscillograms given in Fig 9, there is very close agreement between the transients in the actual amplidyne and in the analogue. In some drives capacitance or inductance may be connected in series with

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Structural Diagrams and Electronic Analogues of Systems Containing
Cross-Field Amplidynes

the amplidyne control windings instead of resistance.
In th's case, the analogue should be based on the
procedure described in a previous article by the same
authors with appropriate modifications to the circuits
given here. There are 9 figures and 7 Soviet references.

4

ASSOCIATION: Khar'kovskiy politekhnicheskii institut
(Khar'kov Polytechnical Institute)

SUBMITTED: November 27, 1959

Card 4/4

KRAYTSBERG, M.I., kand.tekhn;nauk; KAMINSKAYA, D.A., inzh.; LOMAKIN, V.P.,
inzh.

Low-inertia electric drive for excavators. Elektrichestvo no.4:
26-30 Ap '60. (MIRA 14:4)

1. Moskovskiy inzhenerno-stroitel'nyy institut (for Kraytsberg).
(Excavating machinery—Electric driving)

VASIL'YEV, V.G., kand.tekhn.nauk, dots.; KONDRATENKO, A.I., inzh.;
LOMAKIN, V.P., inzh.; TARASOVA, N.Ya., inzh.

Use of an electronic model in the study of the electric
drive of the EVG-15 excavator. Elektrichestvo no.6:39-41
Je '60. (MIRA 13:7)

1. Khar'kovskiy politekhnicheskij institut im.Lenina.
(Electric driving)
(Excavating machinery—Electric driving)

KRAYTSBERG, M.I., dotsem, kand.tekhn.nauk; KAMINSKAYA, D.A., inzh.;
LOMAKIN, V.P., inzh.

Control systems for drives of medium-sized excavators.
Elektrichestvo no.7:30-35 J1 '60. (MIRA 13:8)

1. Moskovskiy inzhenerno-stroitel'nyy institut (for Kraytsberg).
2. Khar'kovskiy elektromekhanicheskiy zavod (for Kaminskaya, Lomakin).

(Excavating machinery--Electric driving)

VASIL'YEV, V.G., kand.tekhn.nauk; LOMAKIN, V.P., inzh.

Electron model of the electromechanical systems for digging mechanisms on powerful excavators. Izv. vys. ucheb. zav. gor. zhur. no.8:107-116 '60. (MIRA 13:9)

1. Khar'kovskiy politekhnicheskiy institut im. V.I. Lenina. Rekomendovana kafedroy elektricheskikh apparatov.
(Excavating machinery--Electromechanical analogies)
(Electronic analog computers)

VASIL'YEV, V.G., kand.tekhn.nauk; LOMAKIN, V.P., inzh.; KALASHNIKOV,
V.I., inzh.

Electron model of electromechanical lifting and thrust mechanisms
on excavating machines with simultaneous operation on the
part of these mechanisms. Izv. vys. ucheb. zav.; gor. zhur.
no.9:109-116 '60. (MIRA 13:9)

1. Khar'kovskiy politekhnicheskii institut im. V.I. Lenina.
(Excavating machinery—Electromechanical analogies)
(Electronic analog computers)

VASIL'YEV, Viktor Georgiyevich, dotsent, kand.tekhn.nauk; LOMAKIN,
Viktor Pavlovich, aspirant

Electronic simulation of circuits containing multi-wound
magnetic systems. Izv.vys.ucheb.zav.; elektro-mekh. 3
no.1:8-15 '60. (MIRA 13:5)

1. Zaveduyushchiy kafedroy elektricheskikh apparatov Khar'-
kovskogo politekhnicheskogo instituta (for Vasil'yev).
2. Kafedra elektricheskikh apparatov Khar'kovskogo politekhnicheskogo instituta.
(Electromechanical analogies)
(Electromagnets)

VASIL'YEV, Viktor Georgiyevich, kand.tekhn.nauk, dotsent; LOMAKIN, Viktor Pavlovich, aspirant.

Structural schematics and electronic models of systems containing transverse field amplifiers. Izv. vys. ucheb. zav.; elektromekh. 3 no.4:3-10 '60. (MIRA 13:9)

1. Zaveduyushchiy kafedroy elektricheskikh apparatov Khar'kovskogo politekhnicheskogo instituta (for Vasil'yev). 2. Kafedra elektricheskikh apparatov Khar'kovskogo politekhnicheskogo instituta (for Lomakin).
(Rotating amplifiers) (Electromechanical analogies)

9.7280
9.2570

S/144/60/000/007/003/007
E194/E455

AUTHORS: Vasil'yev, V.G., Candidate of Technical Sciences and
Lomakin, V.P.

TITLE: A Structural Diagram and Electronic Model of a Cross-Field Amplidyne Connected to a Branched Load

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Elektromekhanika, 1960, No.7, pp.42-46

TEXT: In order to investigate dynamic systems with analogue computers, it is necessary to draw up structural diagrams of individual links of the systems investigated; it is accordingly of interest to formulate the structural diagram of an amplidyne. This was done for the case of an amplidyne with a single resistive or inductive load in an article in Izvestiya vysshikh uchebnykh zavedeniy Elektromekhanika, 1960, No.4. In many cases, however, the amplidyne load circuit is branched and then the dynamic processes in the amplidyne are very different from those occurring in the case of a single load. A typical example of a branched load is that illustrated in Fig.1, in which an amplidyne is used to excite a generator field winding which is shunted by a resistance. Circuits of this kind are used in many cases.

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A Structural Diagram and Electronic Model of a Cross-Field
Amplidyne Connected to a Branched Load

drives, for example in excavators. The present article shows how to formulate a structural diagram of the amplidyne for this case, which is typical of amplidynes with branched loads. Fig.2 shows the structural diagram of an amplidyne supplying a generator field winding, already derived in the earlier article. All that is now required is to make the modifications necessary to allow for the shunt resistor. Eq.(1), (2) and (3) are then written down for the amplidyne load circuit and solutions are obtained in the form of the transmission functions (4) and (5). These may be used to modify the structural diagram of Fig.2, giving that of Fig.3 for the case of an amplidyne generator supplying a branched load. Usually the amplidyne armature resistance is much smaller than the generator field or shunt resistances that form the load. In such cases, Eq.(6) and (7) can be considerably simplified to the forms of Eq.(10) and (11) respectively, and further equations (12), (13) and (14) may be derived. The structural diagram of Fig.3 may then be simplified to that of Fig.4 which forms the basis of the electronic model,

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A Structural Diagram and Electronic Model of a Cross-Field
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a diagram of which is shown in Fig.5. This model makes allowance for the nonlinearity of the no-load curve of the amplidyne and generator in the same way as was done in the earlier article. There are 5 figures and 3 Soviet references.

ASSOCIATIONS: Khar'kovskiy politekhnicheskiy institut
(Khar'kov Polytechnical Institute)

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SUBMITTED: January 22, 1960

Card 3/3

KRAYTSBERG, M.I., dotsent; KAMINSKAYA, D.A., inzh.; LOMAKIN, V.P., inzh.

Dynamic quality of simplified electric-drive system for powerful
overburden stripping excavators. Izv. vys. ucheb.zav.; gor. zhur.
no.11:163-170 '60. (EEAI 13:12)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni inzhenerno-
stroitel'nyy institut imeni V.V.Kuybysheva. Rekomendovana
kafedroy elektrotehniki Moskovskogo inzhenerno-stroitel'nogo
instituta.

(Excavating machinery--Electric driving)

S/105/61/000/008/002/004
E140/E163

9.3230

AUTHORS: Vasil'yev, V.G., and Lomakin, V.P. (Khar'kov)
TITLE: The design and calculation of electronic models of electrical networks

PERIODICAL: Elektrichestvo, 1961, No.8, pp. 41-45

TEXT: Generally in the modelling of electrical networks on analogue computers the point of departure is a system of differential equations describing the network. The number of operational amplifiers and integrators depends directly on the manner in which the equations have been set up, and therefore some discussion has been directed towards the most economical manner of doing this. The present note concerns a method for passing directly from the electrical network to the electronic analogue. Only networks with either single voltage or single current sources are handled by the method. The author first derives the equations indicating the validity of the method, gives certain rules for carrying it out, and states, without proof, that the method gives the smallest number of amplifiers and integrators for a given network. The method may be described as follows.
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E140/E163

The design and calculation of

1) The method of dual networks may be used to model planar electrical networks with lumped constants R, L, C, with a single source of voltage (current). 2) The circuit is modelled by inserting its dual in the feedback network of the operational amplifier. This circuit model will be termed the first dual transformation. The dual is constructed in the well-known manner. The voltage applied at the amplifier input is ku , where k is the scale factor in constructing the dual network. 3) Branches of the feedback network containing inductance are substituted by two series-connected amplifiers, one to invert the polarity and the second containing in its feedback network the dual of the substituted branch. The network model thus constructed is termed the second dual transformation. 4) The process of point 3 is carried out until no inductances remain in the circuit. 5) The values of the parameters in the model can be determined from Table 1. 6) The voltage across elements which have been transformed in the model in an odd number of steps will be modelled by currents flowing through the corresponding element, and vice versa. For those elements which have been transformed an even number of times, voltages will be modelled by voltages and currents by

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The design and calculation of

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currents. 7) For simplicity, networks driven by a single source of current are first transformed into voltage driven circuits, by introducing them without the dual transformation into the feedback network of the first stage of the modelling process (Table 2). The successive steps for a typical network are shown in Fig.3. There are 4 figures, 2 tables and 2 references: 1 Soviet and the following English language reference:

Ref.1: Joseph Otterman. "On the loop- and node-analysis approaches to the simulation of electrical networks." IRE Trans. Electronic Comput., 1958, V. Ec-7, No.3.

SUBMITTED: April 19, 1961

Card 3/7

KAMINSKAYA, D.A., inzh. (Khar'kov); VASIL'YEV, V.G., kand.tekhn.nauk
(Khar'kov); LOMAKIN, V.P., inzh. (Khar'kov)

Study of capacitative stabilization in a motor-generator system
with amplidyne control. Elektrichestvo no.9:78-82 S '61.

(Electric current converters) (Rotating amplifiers) (MIRA 14:9)

LOMAKIN, VIKTOR PAVLOVICH, aspirant

Calculation of the operating conditions of bucket excavators.
Izv. vys. ucheb. zav.; elektromekh. 4 no.6:91-102 '61.
(MIRA 14:7)

1. Kafedra elektricheskikh apparatov Khar'kovskogo
politekhnicheskogo instituta.
(Excavating machinery)

SHENDEROV, A.I., inzh.; LOMAKIN, V.P., inzh.; KAMINSKAYA, D.A., inzh.;
KALASHNIKOV, Yu.T., inzh.

Increasing the productivity of high-powered steam shovels by
automation of the digging process. Stroi. i dor. mash. 6
no.2:4-7 F '61. (MIRA 14:5)
(Power shovels)

KRAYTSBERG, M.I., kand. tekhn. nauk; TOIMACH, I.M., inzh.; LOMAKIN,
V.P., inzh.; KAMINSKAYA, D.A., inzh.

Use of synchronous motors on excavators. Vest. elektroprom.
32 no.7:29-31 J1 '61. (MIRA 14:10)

(Electric motors, Synchronous)
(Excavating machinery)

KRAYTSBERG, M.I., kand.tekhn.nauk; KAMINSKAYA, D.A., inzh.; LOMAIN, V.P.,
inzh.; SOKOLOVSKIY, V.M., inzh.

Effect of temperature on the basic parameters of the drive of an
excavator with electric controls. Stroi. i dor. mash. 7 no.3:
21-24 Mr '62. (MIRA 15:4)

(Excavating machinery)

LOMAKIN, V.P., kand.tekhn.nauk

Calculation of the dynamic loads during stopping in the digging mechanisms of single-bucket excavators. Izv. vys. ucheb. zav.; gor. zhur. 5 no.10:146-150 '62. (MIRA 15:11)

1. Khar'kovskiy politekhnicheskiy institut imeni V.I.Lenina.
Rekomendovana kafedroy matematicheskikh i schetnoreshayushchikh priborov i ustroystv.

(Excavating machinery)

LOMAKIN, Viktor Pavlovich, aspirant

Structural schematic and electronic model of a transverse-field
amplidyne. Izv.vys.ucheb.zav.; elektromekh. 5 no.10:1097-1107
'62. (MIRA 15:11)

1. Khar'kovskiy politekhnicheskii institut.
(Rotating amplifiers)

VASIL'YEV, V.G., kand.tekhn.nauk, dotsent; LOMAKIN, V.P., kand.tekhn.nauk;
TIMANOVSKAYA, L.Ye., inzh.

Simulation of a magnetization curve using an electronic model.
Elektrichestvo no.12:15-16 D '62. (MIRA 15:12)

1. Khar'kovskiy politekhnicheskij institut imeni Lenina.
(Electric machinery—Electromechanical analogies)
(Electric networks)

LOMAKIN, V.P., kand.tekhn.nauk

Steady-state characteristics of a system for automating the operation of single-bucket excavators. Elektrichestvo no.3:48-51 Mr '63.

(MIRA 1614)

1. Khar'kovskiy avtodorozhnyy institut.
(Excavating machinery) (Automatic control)

~~L 18605-65~~ AFWL/ASH(a)-5/ESD(t)
ACCESSION NR: AP4047833

S/0144/64/000/009/1060/1065

AUTHOR: Kaminskaya, D. A. (Docent) B
Lomakin, V. P. (Candidate of technical sciences, Head of automation department);
Timanovskaya, L. Ye. (Candidate of technical sciences, Assistant in computing
instruments and devices department)

TITLE: Electronic simulation of magnetic amplifiers

SOURCE: IVUZ. Elektromekhanika, no. 9, 1964, 1060-1065

TOPIC TAGS: electronic simulation, magnetic amplifier

ABSTRACT: Methods of electronic simulation of single- and 3-phase magnetic amplifiers having internal positive feedback and operating under high alternating magnetization conditions are considered. The conventional assumptions (leakage fluxes are negligible, phases are symmetrical, etc) are made. As the duration of the supply-voltage half-cycle is much greater than the transient time of the

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L 18605-65

ACCESSION NR: AP4047833

amplifier, average output quantities are used for a simplified description of the transient process. Structural diagrams and electronic-simulator diagrams of single- and 3-phase amplifiers are presented, as well as oscillograms of the transients in an "Elektrotyazhmash" (diesel electric-locomotive control) magnetic amplifier and its simulator. Orig. art. has: 6 figures and 21 formulas.

ASSOCIATION: none

SUBMITTED: 21Jan64

ENCL: 00

SUB CODE: EC

NO REF SOV: 003

OTHER: 002

Card 2/2

LOMAKIN, Viktor Pavlovich, kand. tekhn. nauk; KAMINSKAYA, Dora Abramovna,
ispolnyayushchaya obyazannosti dotsenta

Study of the effect of flexible internal feedback in amplifiers
on the stability of electric drives. Izv. vys. uch. zav.;
elektromekh. 7 no. 12: 1437-1444 '64. (MIRA 18:2)

1. Zaveduyushchiy kafedroy avtomatiki Khar'kovskogo avtodorozhnogo
instituta (for Lomakin). 2. Kafedra avtomatiki Khar'kovskogo
avtodorozhnogo instituta (for Kaminskaya).

KAMINSKAYA, Dora Abramovna; LOMAKIN, Viktor Pavlovich, kand. tekhn. nauk;
TIMANOVSKAYA, Lidiya Yefimovna, kand. tekhn. nauk, assistentka

Electronic modeling of magnetic amplifiers. Izv. vys. ucheb. zav.;
elektromekh. 7 no.9:1060-1065 '64 (MIRA 18:1)

1. Ispolnyayushchiy obyazannosti dotsenta kafedry avtomatiki
Khar'kovskogo avtodorozhnogo instituta (for Kaminskaya). 2. Za-
veduyushchiy kafedroy avtomatiki Khar'kovskogo avtodorozhnogo
instituta (for Lomakin). 3. Kafedra matematicheskikh schetno-
reshayushchikh priborov ' ustroystv Khar'kovskogo politekni-
cheskogo instituta (for Timanovskaya).

LOMAKIN, V.P.

Remote control regulation of air temperature in reinforced concrete tanks. Nhar. prom. no. 1:4-45 (MIRA 1964)
Ja-Mr '65.

LCMAKH, V.P., kand. tekhn. nauk; KAMINSKAYA, D.A., kand. tekhn. nauk;
BOGDANOV, N.I., inzh.

Analysis of the energy balance during stopping of the bucket
raising drive of powerful excavators. Izv. vys. ucheb. zav.;
gor zhur. 8 no.2:122-127 '65. (MIRA 18:5)

1. Khar'kovskiy avtomobil'no-dorozhnyy institut.

LOMAKIN, V.P., kand. tekhn. nauk; KAMINSKAYA, D.A., kand. tekhn. nauk;
MAKAROV, A.V., inzh.

Study of the dynamics of the electric drive of the steering
of the FSh-8/60 excavator. Stroil. i dor. mash. 10 no.6:
7-9 Je '65. (MIRA 18:8)

LOMAKIN, V.P., kand. tekhn. nauk; KAMINSKAYA, D.A., kand. tekhn. nauk;
MAKAROV, A.V., inzh.; LYUBCHENKO, L.P., inzh.

Analytic investigation of dynamic characteristics of the
drive of excavator turn gear. Izv. vys. ucheb. zav.; mashinostr.
no.9:113-118 '65. (MIRA 18:11)

L 07052-67 EWF(d)/EWF(1) IJP(c)

ACC NR: AP6028534

SOURCE CODE: UR/0280/66/000/003/0032/0037

AUTHOR: Lomakin, V. P. (Khar'kov); Kaminskaya, D. A. (Khar'kov); Polyakov, V. A. (Khar'kov) ⁴³

ORG: none

TITLE: Solution of nonlinear convex problems of ¹⁶ mathematical programming on electronic simulators

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 3, 1966, 32-37

TOPIC TAGS: nonlinear programming, computer simulation, electronic computer, electric analog

ABSTRACT: A method is examined for solving nonlinear convex problems of mathematical programming on general-purpose electronic simulators. The problem being solved is a substitution system on the basis of which it is possible to construct an electrical circuit-analog of the problem. The model of the circuit is set up and solved on the electronic simulator. The model is constructed and calculated by the dual circuit method which eliminates the need

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ACC NR: AP6028534

for setting up the circuitry and equations of the electrical circuit-analog. The nonlinear dependences are reproduced by appropriate functional converters. The solution of nonlinear problems of mathematical programming of the transportation type is examined as an example. Orig. art. has: 13 formulas and 6 figures.

SUB CODE: 09/ SUBM DATE: 10Dec64/ ORIG REF: 006

Card 2/2 vmb

LOMAKIN, V.P. (Krivoy Rog 26, ul. Shkaryatova, d. 10, kv.21)

Traumatism at the Southern Ore Dressing Combine in Krivoy Rog.
Ortop., travm. i protez. 26 no.31-67-71 N 167. (MIR 18:12)

1. Iz kafedry ortopedii i travmatologii (zav.- prof. L.A. Smirnova)
i kafedry organizatsii zdravookhraneniya (zav.- dotsent G.F.
Yemel'yanova) Dnepropetrovskogo meditsinskogo instituta i 11-y
gorodskoy bol'nitsy Krivogo Rogu (glavnyy vrach - V.G. Podlyashenko).

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24
Classification and Unification with respect to Wear of Con-
nections of Machine Parts ... Occur-

Wear of Railway Wheels ... Mechanism of the
(324 204) ... T. V. Linn and V. D. Dvornik

Wear of Machine Parts ... Wear and Lubrication

LOMAKIN, V.S.

Investigating the wear of hubs and piston rings in mud pumps. Tren.
i izn.mash. no.11:47-80 '56. (MIRA 9:9)
(Pumping machinery) (Mechanical wear)

122-2-22/33

LOMAKIN, V.S.

AUTHORS: Lomakin, V.S., Candidate of Technical Sciences, and
Savchenko, V.I., Engineer.

TITLE: Wear-resistant Enamel Coatings for Machine Components
(Iznosostoykiye emalevyye pokrytiya detaley mashin)

PERIODICAL: Vestnik Mashinostroyeniya, 1958, No.2, pp. 64-66 (USSR).

ABSTRACT: Tests are reported concerned with the wear-resistance of enamel coatings on machine components, carried out at the enamel plant "imeni Artema" in Voroshilovgrad. Specimens consisted of plates of 92 x 40 x 5 mm mounted in the slots of a rotating mandrel as spokes in a wheel. The rotating specimens were submerged in a bath filled with abrasive. The mandrel was attached to the tool spindle of a honing machine which performed rotational and reciprocating motions. The degree of wear was judged by loss of weight. Dry and wet quartz sand and coal dust were used as abrasives. The tests have shown that ordinary vitreous enamel is poor in dry sand but protects medium carbon steel in wet sand and in coal dust. Special enamels can improve the wear-resistance in acid atmospheres. Tests of enamelled pump impellers, axial fans for mines and coal chutes have shown the usefulness of vitreous enamels for increasing the service life of these units under coal mine conditions. There are 4 figures and 1 table.

Card1/2

PHASE I BOOK EXPLOITATION SOV/5053
 Vsesoyuznaya konferentsiya po temy i inozh v mashinakh. 3d, 1958.

Iznos i imosostoykost'. Antifraktsionnyye materialy (Wear and Tear Resistance. Antifriction Materials) Moscow, Izd-vo AN SSSR, 1960. 273 P. Errata slip inserted. 3,500 copies printed. (Series: Its: Trudy, V. 1)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed.: M. M. Khrushchov, Professor; Eds. of Publishing House: M. Ya. Kabanov, and S. L. Orpik; Tech. Ed.: I. V. Polyakova.

FOURPICK: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya, AN SSSR (Institute of Science of Machines, Academy of Science SSSR) contains papers presented at the III Vsesoyuznaya Konferentsiya po temy i inozh v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-15, 1958. Problems discussed were in 5 main areas: 1) Hydrodynamic Theory of Lubrication and Friction Bearings (Chairman: Is. M. Gut yar, Doctor of Technical Sciences, and A. D. Yachkov, Doctor of Technical Sciences); 2) Lubrication and Lubricant Materials (Chairman: G. V. Vinogradov, Doctor of Chemical Sciences); 3) Dry and Boundary Friction (Chairman: N. V. Perygin, Corresponding Member of the Academy of Science SSSR, and I. V. Krugel'skiy, Doctor of Technical Sciences); 4) Wear and Tear Resistance (Chairman: M. M. Khrushchov, Doctor of Technical Sciences); and 5) Friction and Antifriction Materials (Chairman: I. V. Krugel'skiy, Doctor of Technical Science, and M. M. Khrushchov, Doctor of Technical Science). Chairman of the general assembly (on the first and last day of the conference) was Academician A. A. Blagorayov. L. Yu. Frumanskiy, candidate of technical Sciences, was scientific secretary. The connections of the conference were published in 3 volumes of which the present volume is the first. This volume contains articles concerning the wear and tear resistance of antifriction materials. Among the topics covered are: modern developments in the theory and experimental science of wear resistance of materials, specific data on the wear resistance of various combinations of materials, methods for increasing the wear resistance of certain materials, the effects of friction on the structure of materials, the mechanism of the wear on the surface of materials, types of lubricating materials on sliding, abrasive wear of a wide variety of materials and components under many different conditions, modern developments in antifriction materials, and the effects of finish machining on wear resistance. Many personalities are mentioned in the text. References accompany most of the articles.

Lomakin, V. S. Wear Resistance of Enamel Coatings (Vestn. Mashinostr., No. 2, 1958, under the title "Resistance of Enamel Coatings of Machine Parts")	371
Barthain, E. L., and V. M. Vinogradov. Increasing the Wear Resistance of Drill Bits (Vestn. Mashinostr., No. 7, 1959)	371
Katvevskiy, R. M. Laboratory Investigation of the Abrasive Wear of Steels in the Case of Alternating Rotary Motion (Vestn. Mashinostr., No. 7, 1959)	371
Chestnov, A. I. Laboratory Investigation of Contact Friction of Rolling Surfaces (Izvestiya i inozh v mashinakh, sb. XV. Izd. AN SSSR)	371
Rubbe, I. A. Causes of Damage to Crankshaft Bearings of Heavily Loaded Diesels (Vestn. Mashinostr., No. 7, 1959)	371

CARD 12/13

LEMAKIN, V.S.

PHASE I BOOK EXPLOITATION

SOV/3948

Akademiya nauk SSSR. Institut mashinovedeniya

Treniye i iznos v mashinakh; sbornik XIV (Friction and Wear in Machinery; Collection of Articles, no. 14) Moscow, Izd-vo AN SSSR, 1960. 333 p. Errata slip inserted. 3,000 copies printed.

Resp. Ed.: M. M. Khrushchov, Doctor of Technical Sciences, Professor; Ed. of Publishing House: V. A. Girayeva; Tech. Ed.: G. A. Astaf'yeva; Editorial Board: Ye. M. Gut'yar, Doctor of Technical Sciences, Professor; A. K. D'yachkov, Doctor of Technical Sciences, Professor; I. V. Kragel'skiy, Doctor of Technical Sciences, Professor; A. D. Kuritsyna, Candidate of Technical Sciences; L. Yu. Pruzhanskiy, Candidate of Technical Sciences; and M. M. Khrushchov, Doctor of Technical Sciences, Professor.

PURPOSE: The book is intended for scientific research workers and designers in the machine industry.

COVERAGE: The recent works of Soviet scientists on the subject of friction and wear in machinery are presented. Problems discussed include abrasive wear, the real
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Friction and Wear in Machinery (Cont.)

SOV/3948

area of contact surface, wear resistance and antifriction properties of some bronze and brass materials, the effect of hot jets of gases on surface layers of steel, and seizure and movements of journals in bearings. Brief biographical sketches and bibliographies of the works of Ye. M. Shvetsova, V. F. Lorents, and L. V. Yelin are presented. Bibliographies on friction, wear, and lubrication for 1956 and 1957 compiled by Ye. O. Vil'dt are also presented. References accompany several of the articles.

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AUTHORS: Lomakin, V.S., and Savchenko, V.I. (Deceased)

TITLE: Investigating wear qualities of enamel coatings suitable for machine components

SOURCE: Akademiya nauk SSSR. Institut mashinovedeniya. Treniya i iznos v mashinakh, v. 14, 1960, 63 - 92

TEXT: In this study laboratory and factory tests designed to investigate the effect on wear and tear of enamel coatings applied to some machine components, are described in detail. The results are recorded in form of tables and graphs and are analyzed. For laboratory tests a special installation was built, as shown in Fig. 1 (1 - set of 6 specimens, 2 - holder, 3 - bath, 4 - cover, 5 - collar, 6 - thermometer or thermocouple, 7 - heat resisting material, 8 - honing machine spindle). Specimens of steel 30, covered with enamel no. 401, and dry and wet abrasives (quartz sand, and also anthracite and gas coal) were used. The following tests were made to determine the effect on wear: Working time with dry and wet abrasives, type and grain size and moisture contents of abrasives, acid solutions (sul-
Card 1/2

Investigating wear qualities of ...

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phuric acid). The industrial tests included testing of various enamels used for general technical purposes (acid and heat-resisting enamels excluded) and also wear tests of a number of enamelled machine parts used mostly in the coal industry (pump wheels, shaft fans, conveyor plates). Conclusions: Wear of enamel coatings increases with increasing grain size of abrasives, and the increase of the acid concentration in the abrasive medium. Wear qualities of enamel covered parts are much superior to plain steel and chromium plated items. Enamel coating is an effective method of improving wear qualities of machine parts, increasing working life of parts and assemblies and because of its relatively low cost, it is economically expedient. As a result of further works on this subject, the field of enamel coating applications in the machine design can be considerably extended. There are 7 figures, 14 tables and 2 Soviet-bloc references.

Card 2/3

LOMAKIN, V.S., kand.tekhn.nauk; SAVCHENKO, V.I., [deceased] kand.tekhn.nauk

Enameled mining machine elements. Ugol' 36 no.1:45-48 Ja '61.
(MIRA 14:1)

(Coal mining machinery)
(Enamel and enameling)

LOMAKIN, V.S., Arch.

Examples of metal saving. Sver.proizv. no.5:35 My '66.

(MIRA 18.6)

LOPARI, A. M.

The gathering and utilization of shed wool Moskva, Gos. izd-vo sel'khoz. lit-ry.
1953. 30 p. (54-22218)

SF202.L6

1. Cattle - Russia. 2. Hair.