

BOGUSLAVSKAYA, Ye. Yu.

GIL'MAN, E.B.; BOGUSLAVSKAYA, Ye.Yu.

Increasing equipment performance is a major task for textile workers.
Tekst.prom.8 no.2:33-35 F'48. (MLRA 8:11)
(Textile machinery)

BOGUSLAVSKAYA, Yu.

Man decodes the "language" of animals. Znan.sila 37 no.2:38-42
F '62. (MIRA 15:3)
(Animals, Habits and behavior of)

BOGUSLAVSKAYA, Z.M.

Peculiarities of orienting activity in the process of forming initial
notions in preschool children. Vop.psichol. 7 no.3:93-101 My-Je
'61. (MIRA 14:6)

1. Institut psichologii Akademii pedagogicheskikh nauk RSFSR, Moskva.
(Orientation)

LUKOSHKINA, L.A., kand. tekhn. nauk; MAKOTINSKIY, M.P., kand. arkh.;
MIKHAYLEVSKIY, P.A., inzh.; TSILLI, L.B., kand. arkh.;
SHPANOV, I.A., arkh.; Prinimali uchastiye: BOGUSLAVSKIY,
A.I., inzh.; GALAKTIONOV, A.A., kand. tekhn. nauk; LIVSHITS,
A.M., inzh.; ZHUKOV, K.V., kand. arkh., retsenzent; SOKOLOV,
P.N., prof., retsenzent; GURVICH, E.A., red. izd-va; TENKINA,
Ye.L., tekhn. red.

[Catalog of finishing materials and products] Katalog otdeloch-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.4.[As-
bestos cement] Asbestotsement. 1961. 36 p. (MIRA 15:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh
stroitel'nykh materialov. 2. Nauchno-issledovatel'skiy institut
slyudy, asbestotsementnykh izdeliy i proyektirovaniya stroitel'-
stva predpriyatii slyudinoy promyshlennosti (for Lukoshkina,
Mikhaylevskiy).

(Asbestos cement)

KOSHKIN, V.G., kand. tekhn.nauk; MAKOTINSKIY, M.P., kand. arkh.; MUNTS,
V.O., kand. arkh.; RUDINA, M.A., arkh.; SILUANOVA, G.V., arkh.;
SHDRYGINA, N.V., kand. khim. nauk; Primalni uchastiye:
BOGUSLAVSKIY, A.I., inzh.; ZARUBITSKIY, A.Ye., inzh.; LIVSHITS,
A.M., inzh.; MASHINA, N.N., inzh.; OTLIVANCHIK, A.N., kand.
tekhn. nauk; ROMANOVA, L.A., inzh.; CHERKINSKIY, Yu.S., inzh.;
ANDREYEV, V.S., retsenzent; IOFAN, B.M., retsenzent; KRIPPA,
A.I., arkh., retsenzent; GURVICH, E.A., red.izd-va; BRUSINA,
L.N., tekhn. red.

[Catalog of finishing materials and products] Katalog otdeloch-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.1.[Plastics;
polymer finishing materials] Plastmassy; polimernye otdelochnye
materialy. 1962. 119 p. (MIRA 16:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroi-
tel'nykh materialov. 2. Chleny-korrespondenty Akademii stroitel'-
stva i arkhitektury SSSR (for Andreyev, Iofan, Krippa).
(Plastics) (Building--Details)

BRIK, F.G., inzh.; YEFREMOVA, Ye.M.; LOPOVOK, L.I., kand. arkh.;
MAKOTINSKIY, M.P., kand. arkh.; MILOVZOROV, A.K., arkh.;
CHARNYY, S.S., kand. tekhn. nauk; Prinimali uchastiye:
BOGUSLAVSKIY, A.I., inzh.; LIVSHITS, A.M., inzh.; POPOV,
A.N., retsenzent; ROKHVARGER, Ye.L., kand. tekhn. nauk;
retsenzent; GURVICH, E.A., red.

[Catalog of finishing materials and elements] Katalog ot-
delochnykh materialov i izdelii. Moskva, Gosstroizdat.
Pt. 5. [Ceramics] Keramika. 1961. 54 p. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh
stroitel'nykh materialov. 2. Deystvitel'nyy chlen Akademii
stroitel'stva i arkhitektury SSSR (for Popov).
(Finishes and finishing)

ALEKSEYEV, V.N., arkh.; KONSTANTINOVA, M.A., arkh.; LOPOVOK, L.I.,
kand. arkh.; MAKOTINSKIY, M.P., kand. arkh.; Prinimali
uchastiye: BOGUSLAVSKIY, A.I., inzh.; LIVSHITS, A.M., inzh.;
MASHINA, N.N., inzh.; ANDREYEV, V.S., retsenzent; BOTVINKIN,
O.K., doktor khim, nauk, prof., retsenzent; POSOKHIN, M.V.,
retsenzent

[Catalog of finishing materials and products] Katalog otdeloch-
nykh materialov i izdelii. Moskva, Gosstroizdat. Pt.3. 1961.
60 p.

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut no-
vykh materialov. 2. Rukovoditel' Arkhitekturno-stroitel'nym
sektorom Vsesoyuznogo nauchno-issledovatel'skogo instituta
novykh stroitel'nykh materialov, Moskva (for Makotinskiy).
3. Rukovoditel' Sektorom tekhniko-ekonomiceskikh issledovaniy
Vsesoyuznogo nauchno-issledovatel'skogo instituta novykh
stroitel'nykh materialov, Moskva (for Boguslavskiy). 4. Chlen-
korrespondent Akademii stroitel'stva i arkhitektury SSSR (for
Andreyev, Posokhin).

KRESTOV, M.A., kand. arkh.; MAKOTINSKIY, M.P., kand. arkh.; TSILLI,
L.B., kand. arkh.; Prinimali uchastiye: BOGUSLAVSKIY, A.I.,
inzh.; DOBRYAKOVA, L.I., kand. tekhn. nauk; LIVSHITS, A.M.,
inzh.; MUNTS, V.O., kand. arkh.; L'VOV, G.N., inzh., retzen-
zent; POPOV, A.N., retsenzent; GURVICH, E.A., red.izd-va;
TEMKINA, Ye.L., tekhn. red.

[Catalog of finishing materials and elements] Katalog otde-
lochnykh materialov i izdelii. Moskva, Gosstroizdat.
Pt.6.[Concrete and mortars] Betony i rastvory. 1962. 46 p.
(MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh
stroitel'nykh materialov. 2. Deystvitel'nyy chlen Akademii
stroitel'stva i arkhitektury SSSR (for Popov).
(Finishes and finishing)

BOGUSLAVSKIY, A.I.

Main trends in the development of the building materials
industry during 1964 and 1965. Stroi. mat. 10 no.2:1-6 F '64.
(MIRA 17:6)

1. Gosplan SSSR.

SHNEYDER, V.Ye., kand. ekon. nauk, dots.; TUROVSKIY, I.G., prof.;
ZAK, M.A., kand. ekon. nauk; BOGUSLAVSKIY, A.I., inzh.-
ekon.; SANKISKIY, D.I., kand. ekon. nauk, dots.;
ASTANSKIY, L.Yu., kand. tekhn. nauk; GUSEV, S.G., inzh.-
ekon.; GORSKOV, V.A., inzh.-ekon. [deceased]; IL'IN, S.I.,
inzh.-ekon.; BALDIN, S.A., inzh.-ekon.; NAUMOVA, L.N., kand.
ekon. nauk

[Economics, organization and planning for the building
materials industry] Ekonomika, organizatsiia i planirovanie
promyshlennosti stroitel'nykh materialov. Moskva, Stroi-
izdat, 1965. 425 p, (MIRA 18:10)

BOGUSLAVSKI, A.; ATANASOVA, Lj.; LAZAREVSKA, R.

Content of ascorbic acid in fruits and vegetables intended for direct consumption in the area of Skoplje and suburbs in the period from 1952 to 1953 and at the beginning of 1954. Higijena, Beogr. 7 no.1-4:391-395 1955.

1. Centralni higijenski zavod, Skoplje.
(VITAMIN C
content in fruits & vegetables (Ser))
(FRUITS
vitamin C content (Ser))
(VEGETABLES
same)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A., inzh.; DVORTSYN, R., inzh. (Kiyev).

Preparation and packaging of shoe polish are mechanized.
Prom.koop. 13 no.10:20 0 '59. (MIRA 13:2)
(Kiev--Shoe polish)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, A.

"Ways of Increasing the Quality of Asphalt-Concrete Coverings" (Chemistry: Petroleum Products) Zhil.-Komm. Kh-vo, No. 4, 1953, 25,26

Abs.

W-31146, 1 Feb 55

BOGUSLAVSKIY, A. D.

PA 195T57

USSR/Metals - Cast Iron, Castings

May 51

"Centrifugal Casting of Cast-Iron Gears," A. D. Boguslavskiy, V. Ye. Gurkov, V. D. Dudkin, Engineers, P. F. Zhidkov

"Litey Proizvod" No 5, pp 9, 10

Describes 2-sided cantilever-type centrifugal casting machine and procedure for casting blanks of cast-iron gears. Advantages of centrifugal casting are discussed and improvement in metal structure, from viewpoint of graphite distribution and basic perlitic structure, is illustrated by micrographs.

195T57

Boguslavskiy, A. I.

USSR/ Miscellaneous - Building tiles

Card 1/1 Pub. 104 - 9/14

Authors : Boguslavskiy, A. I.: and Katsenelinboogen, A. I.

Title : Reserves for increasing the output of the work at tile factories

Periodical : Stek. i ker. 11/3, 23-25, Mar 1954

Abstract : Building tiles, especially floor tiles, are classed as a critical item, and methods are proposed for increasing production without increasing plant equipment or the number of workers. Some plants successfully shortened the time of firing by using liquid fuel. Among the changes suggested are automatization, improvements in the system of moving materials and reduction in the number of auxiliary operations.

Institution:

Submitted:

BOGUSLAVSKIY, A. I.

GORSKOV, Vladimir Alekseyevich; ZAGORCHIK, Matvey Mikhaylovich; BOGUSLAVSKIY, A.I., retsentrant; PLEMYANNIKOV, M.N., redaktor; MEDVEDEV, L.Ya., tekhnicheskiy redaktor

[Economics, organization and planning in enterprises of the glass industry] Ekonomika, organizatsiya i planirovanie predpriatii stekol'noi promyshlennosti. Moskva, Gos. nauchno-tekhn. izd-vo Ministerstva legkoi promyshl. SSSR, 1956. 414 p. (MLRA 10:1)
(Glass manufacture)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, A.M., kandidat tekhnicheskikh nauk.

Frost-resistance requirements of aggregates and concrete (for discussion).
Stroi.prom. 31 no.10:35-36 O '53. (MIRA 6:11)
(Frost) (Concrete, Frost resistant)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY A.M.

BOGUSLAVSKIY A.M., kand.tekhn.nauk.

Calculating concrete mixes by means of their flexural strength.
Avt.dor. 20 no.7:18-20 Jl '57. (MIRA 10:10)
(Concrete)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.M., kand.tekhn.nauk.

Cold-laid granite asphalt concrete pavement. Avt.dor. 21 no.3:8
Mr '58. (MIRA 11:3)
(Pavements, Asphalt)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A. M., kand.tekhn.nauk

Necessary strength for asphalt concrete. Avt.dor. 22 no.8:
16-17 Ag '59. (MIRA 12:11)
(Asphalt concrete)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.M.; OSETROV, V.F.

Effect of gravel size on the strength of concrete pavement.
Avt. dor. 22 no.9:8-10 S '59. (MIRA 12:12)
(Roads, Concrete) (Gravel)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.M.

Deformation capacity of asphalt concrete subject to loading and
cooling. Avt.dor. 26 no.4:26-27 Ap '63. (MIRA 16:4)
(Asphalt concrete—Testing)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.M., kand.tekhn.nauk

Making road pavement of soil cement. Avt. dor. 27 no.2:18 F
'64. (MIRA 17:3)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, A.N., inzhener.

Approximate calculations of the arms of stability of a hull shell.
Sudostroenie 22 no.6:1-4 Je '56. (MIRA 9: 9)
(Hulls (Naval architecture)) (Stability of ships)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.N., inzh.

Datum-rib deformation according to given changes in the position
of the abscissa. Trudy TSNIIRF no.40:75-78 '59.
(MIRA 13:6)

(Ship models—Testing) (Hulls (Naval architecture))

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, A.N., inzh.

Estimate of basic parameters for a stability diagram. Trudy
LIVT no.14:49-54 '61. (MIRA 14:11)
(Stability of ships)

BOGUSLAVSKIY, A.N., inzh.

Calculating curves for elements of theoretical drawings in
the initial stages of design. Trudy LIVT no.5:12-18 '60.
(MIRA 15:2)
(Hulls (Naval architecture))

S/124/63/000/002/007/052
D234/D308

AUTHOR: Boguslavskiy, A.N.

TITLE: Calculation of stability diagrams in the initial stages of design

PERIODICAL: Referativnyy zhurnal, Mekhanika, no. 2, 1963, 54,
abstract 2B317 (Tr. Leningr. in-ta vodn. stransp.
no. 28, 1962, 48-59)

TEXT: The author proposes approximate expressions for calculating the diagrams of static stability, based on a parabolic approximation for the metacentric radius as a function of the heeling angle. The method of approximation is different in two ranges: from the heeling angle $\theta = 0$ to the angle of the deck entering the water or the angle of appearance of the bilge θ_x , then from θ_x to $\theta = 90^\circ$. Corresponding expressions for the arm of static stability l_c and that of dynamic stability l_d are obtained by integration. Trigonometric functions of θ occurring in these expressions are tabulated in the paper. Initial data for the application of the method

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S/124/63/000/002/007/052
D234/D308

Calculation of stability ...

are: initial metacentric height, the angle of the deck entering the water θ_m , initial metacentric radius $r(0)$, metacentric radii $r(\theta_m)$ and $r(90^\circ)$ and the ordinate of the center of magnitude for $\theta = 90^\circ$. Two approximate methods are given for determining $r(\theta_m)$. For ships with the ratio of watertight volumes above and below water level $V_g/V = 1.5 - 2.2$, $B/T \leq 3.5$ and $H/T = 1.5 - 2.0$, a simplified method of calculating the diagram of dynamic stability is proposed. Limits of applicability of the proposed methods of construction of the diagram are established. In comparison with other approximate methods of calculating the stability diagram (e.g. those of V.L. Pozdunin, V.G. Vlasov, N.A. Zabotkin, M.I. Ol'pinskiy) which approximate the curve of the center of magnitude or directly the diagrams of static or dynamic stability, the method proposed is more accurate since it approximates the curve of metacentric radii for which the diagrams of static stability are integral. This improvement is especially substantial for ships with large B/H . However, the method proposed in the paper is more difficult than those mentioned above.

[Abstracter's note: Complete translation]

Card 2/2

BOGUSLAVSKIY, A.N., inzh.

Design of a theoretical drawing preserving the given characteristics
of stability. Trudy LIVT no.50:34-45 '63.

(MIRA 17:11)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.N., inzh.

Preliminary calculation of the stability diagram of a ship
in waves. Trudy LIVT no.62:41-51 '64. (MIRA 18:11)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, Aleksandr Ruvimovich; ANDREYEV, Lev Sergeyevich; SHAPOSHNIKOV, Sergey Stanheyevich; SOBEDOV, O.O., gornyy inzhener, retsenzent; TIKHONOV, N.V., kandidat tekhnicheskikh nauk, retsenzent; KALMYKOV, S.G., redaktor; YEZDOKOVA, M.L., redaktor; ATTOPOVICH, M.K., tekhnicheskiy redaktor.

[Operator of a scraper winch; textbook for instructing workers in production technology] Mashinist skrepernoi lebedki; i uchebnos posobie dlja proizvodstvenno-tekhnicheskogo obuchenija rabochikh. Moskva, Gos.nauchno-tekhkn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955. 196
(Winches)

(MLRA 8:11)

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, A.R.; ANDREEV, L.S.

"Scraper haulage in nonferrous metal mines". N.V. Tikhonov. Reviewed
by A.R. Boguslavskii, L.S. Andreev. Gor. zhur. no.1:64 Ja '55.
(Scrapers) (Tikhonov, N.V.) (MLRA 8:?)

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

BOGUSLAVSKIY, Aleksandr Ruvimovich; ANDREYEV, Lev Sergeyevich;
SHAPOSHNIKOV, Sergey Stakheyevich; AVSEYENOK, A.P., otv.red.;
SINYAGINA, Z.A., red.izd-va; SABITOV, A., tekhn.red.

[Scraper operator] Mashinist skrepernoi ustanovki. Moskva,
Gos.nauchno-tekhn.izd-vo lit-ry po gornomu delu, 1959. 201 p.
(MIRA 13:2)

(Scrapers)

BOGUSLAVSKIY, A.S.

Hopper for delivery of concrete mix and mortar. Rats. i izobr. predl.
v stroi. no.95:20-21 '54. (MLRA 8:7)

1. Trest no.42 Ministerstva stroitel'stva. (Concrete)
(Hoisting machinery)

BOGUSLAVSKIY, A.Sh.

Interuniversity scientific conference on the reorganization of plant design and planning based on mathematical methods and the newest computing techniques. Khim. prom. no. 2:144 F '61. (MIRA 14:4)
(Chemical plants—Congresses)

(BOGUSLAVSKIY, A.Ya.; MELIK-DAVT'YAN, R.S.

Case of intravital x-ray diagnosis of cancer of the horizontal
portion of the lower segment of the duodenum. Vest.rent.1 rad.
35 no.1:60-61 Ja-F '60. (MIRA 13:6)
(DUODENUM neopl.)

BOGUSLAVSKIY, B.L., Professor

"A.D. Yudin. Metal-Cutting Machine Tools" Stanki i Instrument, 12, no. 3, 1941

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, B.L., Professor

"The Question of Assembling Machine Tools" Stanki i Instrument, 12, no. 5, 1941

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"

"APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, B.L.

"Classification of the Principal Variants of an Automatic Lathe Drive"
Stanki i Instrument, 16, nos. 10-11, 1945

APPROVED FOR RELEASE: 06/09/2000

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"APPROVED FOR RELEASE: 06/09/2000

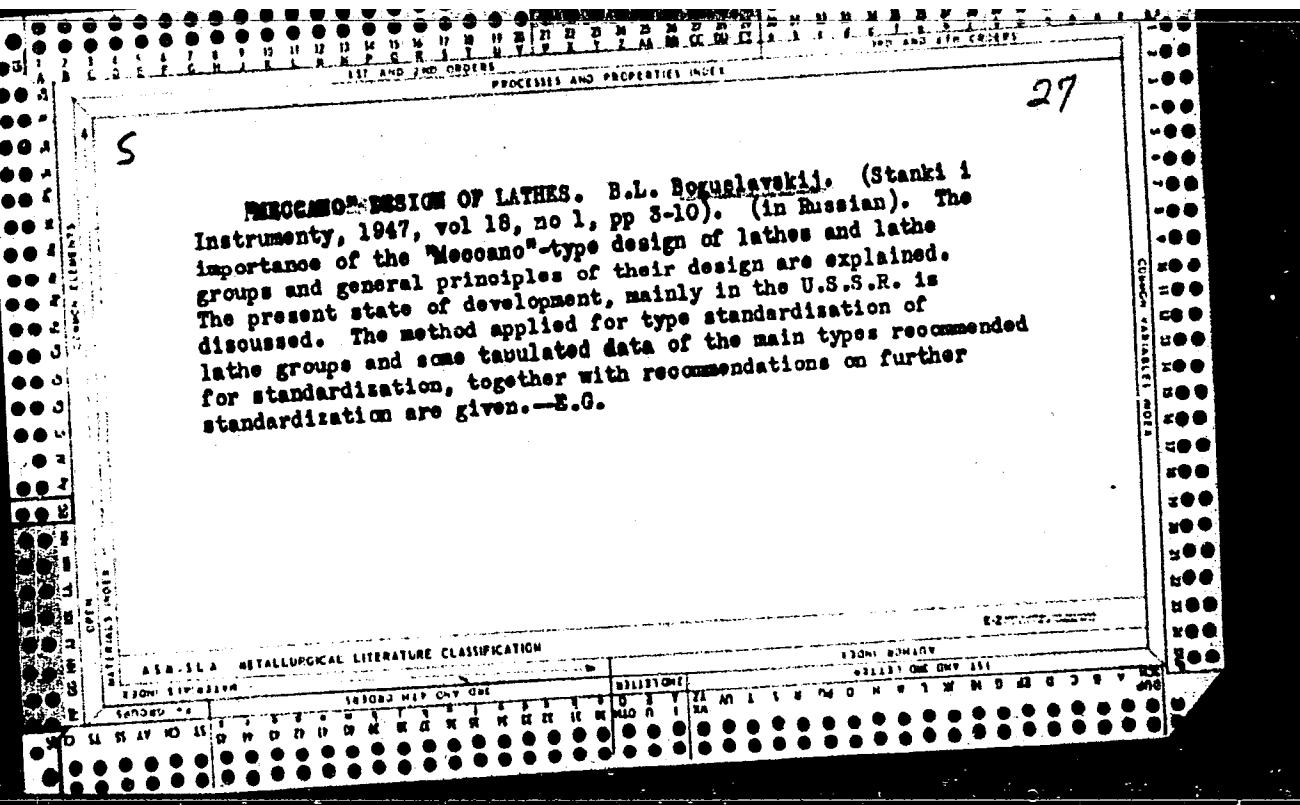
CIA-RDP86-00513R000206010013-8

BOGUSLAVSKIY, B.L.

"Classification of the Principal Variants of an Automatic Lathe Drive"
(Conclusion) Stanki i Instrument, 16, no. 12, 1945

APPROVED FOR RELEASE: 06/09/2000

CIA-RDP86-00513R000206010013-8"



BOGUSLAVSKIY, B. L.

BOGUSLAVSKIY, B. L. -- "Automatic and Semiautomatic Lathes (Book: 'Automatic and Semiautomatic Lathes (Single Spindle)', Mashgiz, 1948, and 'Multispindle Automatic and Semiautomatic Lathes', Mashgiz, 1950)." Sub 28 May 52, Moscow Machine-Tool and Tool Inst imeni I.V. Stalin

SO: Vechernaya Moskva January-December 1952

BOGUSLAVSKIY, B.L.

Mnogospindel'nye tokarnye avtomaty i poluavtomaty. Moskva, Mashgiz, 1950.
574 p.

Automatic and semiautomatic multispindle lathes.

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

SEMELEV, A. I.; KAZAK, M. I., inzhener, redaktor; BOGUSLAVSKIY, B. L.,
professor, retsenzent; POPOVA, S.M., tekhnicheskiy redaktor.

[Vertical multispindle semi-automatic lathes; a turner's manual]
Vertikal'nye mnogospindel'nye tokarnye poluavtomaty; posobie dlja
rabochikh. Moskva, Gos. nauchno-tekn. izd-vo mashinostroit. lit-ry,
1951. 194 p.
(Lathes)

MAROCHKIN, A.I.; KASHIRIN, A.I.; BOGUSLAVSKIY, B.L. [editors].

[Automatic control in industry] Avtomatizatsiya tekhnologicheskikh protsessov.
[Nauchnye redaktory: A.I. Marochkin, A.I. Kashirin, B.L. Boguslavskii] Moskva,
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1951 314 p. (MLR 6:8)

1. Vsesoyuznoye nauchnoye inzhenerno-tehnicheskoye obshchestvo mashinostroyeniya.
Moskovskoye otdeleniye. (Automatic control)

VLADZYEVSKIY, A.P., dotsent, laureat Stalinskoy premii, kandidat tekhnicheskikh nauk; SOKOLOVSKIY, A.P., professor, doktor tekhnicheskikh nauk, retsensent; BOQUSLAVSKIY, B.I., professor, doktor tekhnicheskikh nauk, redaktor; DLUGOKANSKAYA, Ye.A., tekhnicheskiy redaktor

[Problems in the operation and planning of automatic lines of machines] Nekotorye voprosy ekspluatatsii i proektirovaniia avtomaticheskikh stanochnykh linii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1953. 162 p. (MIRA 9:12)
(Automatic control) (Machine tools)

1. BOGUSLAVSKIY, B. L.
2. USSR (600)
4. Lathes
7. Analysis of construction and operation indexes of current automatic and semiautomatic multi-spindle lathes. Stan i instr No. 1 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

BOGUSLAVSKIY, B.L.

"Analysis of Design and Operating Characteristics of Multiple-Spindle Automatic and Semiautomatic Lathes," Stanki i Instrument, no. 2, pp 3-6, Feb 1953

States operational results at tractor plants of multiple-spindle automatic lathes, model 1225-6 (mfd by plant im S. Ordzhonikidze), indicate reliable operation under two- and three-shift schedules. Also states automatic lathe model 1290 mfd by plant im Gor'kiy. Plant locations not given.

258T48

BOGUSLAVSKIY, B.L.

ARISTOV, N.P.; AIZENSHTADT, L.A.; BOGUSLAVSKIY, B.L.; PROKOPOVICH, A.Ye,
redaktor; POPOVA, S.M., tekhnicheskiy redaktor

[Achievements of Soviet machine tool construction] Dostizhenia
sovetskogo stankostroeniia. Moskva, Gos. nauchn.-tekhn. izd-vo
mashinostroit. i sudostroit. lit-ry, 1954. 174 p. (MIRA 7:9)
(Machine tool industry)

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A.B., inzhener, nauchnyy redaktor; SUSLOV, P.V., inzhener, redaktor;
RAKOV, S.I., tekhnicheskiy redaktor~~

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(Lathes)

(MLRA 7:10)

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ACHERKAN, N.S., zasluzhennyy deyatel' nauki i tekhniki, red.; BOGUSLAVSKIY,
B.L., prof. red.; GLIZMANENKO, D.L., kand.tekhn.nauk, red.;
KABINOVICH, B.V., kand.tekhn.nauk, red.; SASOV, V.V., kand.tekhn.
nauk, red.; STANKOVICH, V.G., inzh., red.; STOROZHEV, M.V., kand.
tekhn.nauk, red.; GOKUNA, V.B., red.; SOKOLOVA, T.P., tekhn.red.

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~~ANAN'IN, Sergey Grigor'yevich, professor; ACHERKAN, Naum Samoilovich,
professor, doktor tekhnicheskikh nauk; BOGDANOVSKIY, Boris L'vovich,
professor; IERMAKOV, Vladimir Viktorovich, dotsent; IGUMENOV,
Nikolay Vasil'yevich, dotsent; KUDRYASHOV, Aleksandr Alekseyevich,
dotsent; PUSH, Valentin Ervinovich, dotsent; FEDOTENOK, Aleksey
Antonovich, dotsent; KHRYKOV, Aleksandr Nikolayevich, dotsent;
ROSTOVTSIEV, I.A., inshener, retsenzenter; SOKOLOVA, T.F., tekhnicheskiy redakte~~

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B.L., prof., retsenzent; GUTNER, N.G., inzh., red.; CHIAS, M.A.,
red., izd-va; SOKOLOVA, L.V., tekhn. red.

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239 p.

(MIRA 11:10)

(Lathes)

Vladziyevskiy, Aleksandr Pavlovich, prof., doktor tekhn.nauk; BOGUSLAVSKIY,
B.L., prof., retsenzent; Dymshits, Ye.S., inzh., red.; RZHAVINSKIY,
V.V., inzh., red; izd-va; El'kind, V.D., tekhn.red.

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(Machinery industry) (Automatic control)

25(2)

PHASE I BOOK EXPLOITATION

SOV/1303

Boguslavskiy, Boris L'vovich

Tokarnyye avtomaty; osnovy rascheta, proyektirovaniya i ekspluatatsii
(Automatic Lathes; Design and Operation Principles) Moscow, Mashgiz, 1958,
594 p. 10,000 copies printed.

Reviewer: Rostovtsev, I.A., Engineer, Laureate of the Stalin Prize; Ed.:
Okhlyand, A.B., Engineer; Ed. of Publishing House: Rzhavinskiy, V.V.,
Engineer; Tech. Ed.: Uvarova, A.F.; Managing Ed. of Literature on Metal
Working and Tool Making (Mashgiz): Beyzel'man, R.D., Engineer.

PURPOSE: The book is intended for machine tool designers and may be useful to
students of vuzes and departments of machine tool engineering.

COVERAGE: The book discusses the fundamentals of design, construction and opera-
tion of highly automated lathes and automated mass production lines and gives
brief descriptions of models currently used in industry. This monograph repre-
sents a development of the author's works on single-spindle and multiple-
spindle automatic lathes published by Mashgiz (State Scientific and Technical
Publishing House of Literature on Machine Building) in 1948 and 1950.

Card 1/11

Automatic Lathes (Cont.)

SOV/1303

The names of K.V. Votinov, N.G. Bruyevich, N.A. Kalashnikov, B.S. Balakshin, I.P. Inochkin, V.I. Dikushin, G.I. Zuzanov, A.I. Erpsher, A.I. Sokolov, G.I. Domokukov, N.S. Sevryukov, M.A. Novozhilov, and L.N. Koshkin are mentioned as having contributed to this field. There are 116 references, of which 106 are Soviet, 6 German, and 4 English.

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BOGUSLAVSKIY, B.L., prof., retsentent; LIVSHITS, Sh.Ya.,
inzh., red.; IVANOVA, N.A., red.izd-va; ZL'KIND, V.D.,
tekhn.red.

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pribory dlja dinamicheskoi balansirovki. Moskva, Gos.
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(MIRA 12:8)

(Balancing of machinery)

SHMELEV, A.I.; BOGUSLAVSKIY, B.L., prof., retsenzent; IZAKOV, N.R.,
dotsent, kand.tekhn.nauk, red.; SOKOLOVA, T.F., tekhn.red.

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Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 238 p.
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(Lathes)

GOLOVANOV, Aleksey Dmitriyevich; BOGUSLAVSKIY, B.L., prof., retaenzent;
BALANDIN, A.P., red.izd-vs; GORDEYEVA, L.P., tekhn.red.

[Automatic turret lathes in lot production] Tokerno-revol'vernnye
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izd-vo mashinostroit.lit-ry, 1960. 105 p.

(MIRA 14:2)

(Lathes)

S/122/60/000/012/012/018
A161/A130

AUTHOR: Boguslavskiy, B. L. Professor

TITLE: Automated general-purpose lathe lines

PERIODICAL: Vestnik mashinostroyeniya, no. 12, 1960, 44 - 52

TEXT: A review of automatic lathes and lathe lines produced now in the USSR is made, and the design features of automatic lathe lines are discussed. It is stated that most of the lathes of general-purpose type, being produced and designed automatic and semiautomatic, are suitable for all-over automation provided that automatic loading devices will be standardized. The experience of ENIMS and the machine tool plants as well as foreign practice are mentioned as proved. The use of two Acme-Gridley eight-spindle automatics in a transfer line at the Ford Co. Works is mentioned as an example ("Machinery", L., 1960, 9/III, v. 96, no. 2469, 553). By now ENIMS has tested various transfer lines for machining simple shafts, spline shafts and gears that will be produced at different plants. The Stankostroitelnyy zavod imeni S. Ordzhonikidze (Machine Tool Plant imeni S. Ordzhonikidze) has started output of automatic transfer lines turning shafts. The lines consist of centering milling machines and hydraulic copying lathes. The

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S/12/60/000/012/012/018

A161/A130

Automated general-purpose lathe lines

SKB-6 of Moscow city avtmarkhot took part in development of transfer lines at machine tool plants, and lines for machining and assembling antifriction bearings have been produced. Same design office (SKB) has completed designs of lines that will produce valves. Lines for automobile and tractor engine cylinder linings are under development. Different combinations of machines in the lines or groups are discussed and illustrated. The majority of single-spindle lathes has placed the tool slide so that through-transfer of work is not possible and conveyors have to be used at the front, or beside, or overhead. The first automated MP107 (MR107) line for stepped shafts produced by the Plant im. Orizhonikidze consists of two copying "1712" lathes, with a rocking reloader and a chain type magazin at the first lathe. The lathes are facing each other so that the shaft need not be turned over. Stepped shafts 48 mm in diameter and 258 mm long are machined in a 114 sec cycle, reloading taking 12 sec. One copying lathe modification is fitted with a device automatically turning over the blanks, and both shaft sides are machined automatically in two cutting passes. MP12 (MR12) line five general-purpose semi-automatics are working stepped shafts. The first machine mills and centers the blank ends, the second and third ("1722" copying lathes) perform rough turning, the fourth and fifth (also "1722") finish both ends. The line has a chain loader and intermediate magazins accomodating eight blanks. This feature permits stop-

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S/122/60/000/012/012/018

A161/A130

Automated general-purpose lathe lines

ping one or several machines for resetting without stopping the whole line. The line is resettable for 25 to 90 mm shaft diameter and 350 to 800 mm length. It works in 1.8 min cycles on 65 mm diameter and 610 mm length shafts. The Plant im. Ordzhonikidze has lately switched over to lathes permitting through conveyer. ENIMS has devised lines for turning electric motor armature shafts. They include standardized multi-tool automatics with hydraulic drive, and a step-by-step rod conveyer with spring-loaded snap pawls, placed outside the work zone. The conveyer has a hydraulic drive, and special reloaders are placing and removing blanks. The first such lines are machining armatures 48 mm in diameter and 523 mm length in 67 sec cycle. New lines under development will have 50-sec cycle. ENIMS has completed several resettable lines for machining gears. They are also using general-purpose lathes. One line produced for the "Krasnyy proletariy" Plant is designed for producing 10 gears different in type and size at a rate of 120,000 pieces annually, with 1.5 min work cycle. Lines are also produced for double-rim gears 80 - 440 mm in diameter. The SKB-6 has designed lines for bearing races and automobile engine valves. Two standard automated lines have to be used for producing all existing 17 "type-sizes" of intake and exhaust valves for the tractor and automobile industry. The average work cycle will be 10 sec. "Multi-flow" L49C3 (L49S3) automatic for turning the work chamber of valve disc will have an

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Card 3/4

S/122/60/000/012/012/018
A161/A130

Automated general-purpose lathe lines

mular blanks motion and be used in a line, or separately. It is expected that L4983 will be later used for a variety of parts. The output of lines will range from 80 - 200 thousand to 1,500 thousand parts annually. Pilot machines include some with program control. Soon production will start at many plants. There are 9 figures and 1 non-Soviet-title reference. The reference to the English-language publication reads as follows: "Machinery", L., 1960, 9/III, v. 96, no. 2469, 553.

Card 4/4

BOGUSLAVSKIY, Boris L'vovich; GLINKIN, N.M., nauchnyy red.; GORDEYEV,
P.A., red.; KOZLOVSKAYA, M.D., tekhn. red.; PERSON, M.N.,
tekhn. red.

[Semiautomatic and automatic lathes and automatic lines] To-
karnye poluavtomaty, avtomaty i avtomatizirovannye linii.
Izd.3., perer. i dop. Moskva, Vses.uchebno-pedagog. izd-vo
Proftekhizdat, 1961. 599 p. (MIRA 15:4)
(Lathes) (Automation)

S/121/62/000/007/005/006
D040/D113

AUTHOR: Boguslavskiy, B.L.

TITLE: Selecting the dimensional series of machine tools

PERIODICAL: Stanki i instrument, no. 7, 1962, 35-37

TEXT: Problems of selecting the most economical dimensional series of machine tools for nationwide standardization are discussed in general terms of statistical mathematics with reference to the comparative statistical method used in the USSR and the relevant work done lately by ENIMS. Calculation formulas and the sequence of calculating and determining separate factors is recommended. The considerations and conclusions apply to machines in general and not to machine tools alone.

Card 1/1

BOGUSLAVSKIY, B.L.; DEM'YANOVICH, A.N., inzh., retsenzent;
VLADIMIROV, V.M., inzh., red.

[Automatic machines and overall automation] Avtomaty i
kompleksnai avtomatizatsiiia. Moskva, Mashinostroenie,
1964. 534 p. (MIRA 17:11)

BOGUSLAVSKIY, B.V.

Specialization and centralization of manufacturing fastening
parts at the plants of the Moscow Province Economic Council.
Standartizatsiia 24 no.5:32-34 '60. (MIRA 14:3)
(Moscow Province--Fastenings)

AUTHORS: Tsaylingol'd, V. L; Farberov, M. I; Epshteyn, V. G; Lazaryants, E. G. and Boguslavskiy, D. A. SOV/138-58.9.1/11

TITLE: Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-4-Vinylpyridine in Ordinary Rubbers (Preliminary Communication) (Nizkotemperaturnyye sopolimery butadiyena-1,3 s 2-metil-5-vinilpiridinom v kachestve kauchukov obshchego naznacheniya)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 9, pp 1 - 4 (USSR)

ABSTRACT: Latexes based on these copolymers show better properties when used in the production of tyre cords (Ref.1) During investigations of these copolymers, and of some of their properties, the copolymers contained varying amounts of monomers; the polymerisation temperatures were 50° and 5°C. Low temperature polymerisation conditions were based on the oxidation-reduction system suggested by Dolgoplosk (Ref.4). The substance for use during polymerisation at 50°C was based on the composition given for rubber SKS-30. A 70% conversion of the monomers was attained after 10 - 12 hours. The unreacted monomers were distilled off after termination of the polymerisation and 2.5% of an aqueous dispersion of "Neczon "D" introduced into the latex. The latex coagulated, and the rubber was dried to 105°C. The composition

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Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-4-Vinyl-pyridine in Ordinary Rubbers

of two mixtures is given. These mixtures were vulcanised at 145°C and tested according to GOST 8074-51 (Ref.5). The physic-mechanical properties of rubbers obtained by hot and cold polymerisation are given in Tables 1 and 2. The characteristics of these copolymers and of styrene copolymers SKS-30 and SKS-30A were compared. The properties of both types of copolymers depend on the content of 2-methyl-5-vinylpyridine (Fig.1). Fig.2: the wear resistance of cold and hot copolymers when containing 10 - 15% 2-methyl-5-vinylpyridine. Data on the loss of plasticity during boiling in H₂O(at 100°C for 30 minutes) is given in Table 3. Copolymers of butadiene with 2-methyl-5-vinylpyridine show a 1.5 - 2-fold better wear resistance than butadiene-styrene rubber vulcanisates. There are 2 Figures, 3 Tables and

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SOV/138-58-9-1/11

Low-Temperature Copolymers of 1,3-Butadiene with 2-Methyl-5-Vinyl-pyridine in Ordinary Rubbers

5 References: 3 English and 2 Soviet.

ASSOCIATION: Yaroslavskiy tekhnologicheskiy institut i Yaroslavskiy shinnyy zavod (Yaroslavl' Technical Institute and the Yaroslavl' Tyre Factory)

Card 3/3

207/72-10-2/16
 AUTHORS: Nosylinovich, V. I.; Kurbakov, M. I.; Sopitov, V. G.
 Udmurt, Dav., Pejner, A. B.; Borodina, V. D.; Bragrov,
 G. A.; Savin, V. F.; Antimirov, T. N.

Title:

Preparation of Latexes Obtained by the Copolymerization of Butadiene, and 2-methyl-5-vinylpyridine, and 2-methyl-5-vinylpyridine, increases the bond strength between the rubber and the cord by 50 to 100% (Ref. 2).

The copolymerization of butadiene and 2-methyl-5-vinylpyridine was investigated and the obtained latexes were evaluated as impregnating agents. The two compounds were copolymerized at 40°C and 20°C. In both tests salts of stearic fatty acid were used as emulsifiers and calcium was added as stabilizer.

Potassium peroxalate was used as polymerisation initiator.

Card 1/4

PERIODICAL: Luchuk i rezin, 1959, Nr 3, pp 6 - 9 (USSR)

ABSTRACT: The addition of copolymers of butadiene and 2-methyl-5-vinylpyridine and also of tripolymers consisting of butadiene, and 2-methyl-5-vinylpyridine, increases the bond strength between the rubber and the cord by 50 to 100% (Ref. 2).

The copolymerization of butadiene and 2-methyl-5-vinylpyridine was investigated and the obtained latexes were evaluated as impregnating agents. The two compounds were copolymerized at 40°C and 20°C. In both tests salts of stearic fatty acid were used as emulsifiers and calcium was added as stabilizer.

Potassium peroxalate was used as polymerisation initiator.

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process was carried out at 50°C (isopropylbenzene hydroperoxide was used when the copolymerization proceeded at 20°C). Furthermore, 0.001% methyl-*p*-aminobiphenyl was added as a polymeric acidic inhibitor. Results in Table 1 indicate that the addition of the inhibitor does not affect the rate of copolymerization. The reaction was allowed to proceed (at batch process a temperature) until a 75 to 80% conversion was reached after 8 to 12 hours (Table 1). The unreacted monomers were separated from the latex by vacuum distillation and 2-methyl-5-vinylpyridine was added to the copolymer. The effect of the addition of Diprirod (diisopropyl zincphosphide) on the hardness of the latex was tested (Figure 2). Both types of the latexes had good mechanical properties. The latex was further used for impregnating viscose and polyamide cords.

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In conjunction with rubbers based on natural, butadiene (SBR) and with butadiene-styrene (SBS-10M) rubbers, the quantity of 2-methyl-5-vinylpyridine contained in the latex affects the bond strength between the viscose cord and the rubbers (Figure 3). Optimum strength of the bond is achieved when 2-methyl-5-vinylpyridine is added to the copolymer. The effect of the addition of 2-methyl-5-vinylpyridine on the physical and mechanical properties of the adhesive when 10% by weight of 2-methyl-5-vinylpyridine are added (Table 2). The effect of various quantities of resorcinol-formaldehyde resins on the strength of bonds between the cord and the rubber was investigated (Figure 2). Changes in the plasticity of the polymer, the effect on the physical and mechanical properties of the adhesive film and the bonding between the cord and the rubber. Results of relevant experiments are shown in Figure 6. The physical and mechanical properties of the adhesive are improved and the strength of bonding is increased when lowering the polymerisation temperature (Table 3).

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Table 4 gives the data on the strength of bonding of the viscose cord with various tyre rubbers. The strength of bonding was particularly satisfactory when natural rubber was used and when the latexes were polymerised at 50°C.

The re are 7 figures, 4 tables and 10 references of which 8 are English and 2 Soviet.

DECLARATION: Nosylinovich and Institut monomerov dlya SKI, nauchno-issledovatel'skii institut shchumy proyshchishchenniye vseyumnykh nauchno-issledovatel'skikh laboratoriysk, sredstv zashchety, nauchno-issledovatel'skii shchumy zavod (Research Institute for Monomers for the use in Synthetic Rubber; Research Institute for Synthetic Rubber; Impunav Tyre Research Institute for Synthetic Rubber; Impunav Tyre Factory)

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BOGUSLAVSKIY, D.B.; TIKHOMIROV, B.P.; BAKHAREV, A.I.

Using radiation from radioisotopes to determine the homogeneity of
rubber mixtures. Kauch. i rez. 16 no.12:24-27 D '57. (MIRA 11:3)

1. Yaroslavskiy shinnyy zavod.
(Rubber) (Radioisotopes--Industrial applications)

Boguslavskiy, D.B.

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82844

S/081/60/000/008/001/001
A006/A001

15.9.200

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 8, p. 544, # 33151

AUTHORS: Tsaylingol'd, V.L., Farberov, M.I., Epshteyn, V.G., Lazaryants,
E.G., Boguslavskiy, D.B., Bugrova, G.A., Uzina, R.V.

TITLE: Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

PERIODICAL: Yaroslavsk. prom-st' (Sovnarkhoz Yaroslavsk, ekon. adm. r-na),
1958, No. 5, pp. 22-25

TEXT: Copolymers of butadiene and 2-methyl-5-vinyl pyridine (VPK) were obtained at 50 and 5°C polymerization temperature and studied. Resistance to wear and heat generation of VPK-vulcanized rubbers exceeds considerably that of vulcanized products from butadiene-styrene rubbers (SKS). Rubbers containing 10-15% 2-methyl-5-vinyl-pyridine have high quality characteristics. Impregnation of cords with VPK latexes ensures high adhesion strength of viscose and caprone cords with natural, SKB and SKS rubbers. Compared to standard SKS impregnation, VPK impregnation increases the adhesion strength of rubber and

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Vinyl-Pyridine Rubbers and Latexes and Outlooks on Their Use

cord by a factor of 1.5-2 under static conditions and much more under dynamic conditions. VPK, polymerized at 5°C exceeds the quality of analogous polymers obtained at 50°C.

O.T.

Translator's note: This is the full translation of the original Russian abstract.

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SOV/81-59-19-69874

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 19, p 479 (USSR)

AUTHORS: Boguslavskiy, D.B., Galybin, G., Epshteyn, V.G.

TITLE: On the Problem of Producing Divinyl-Styrene Oil Rubbers

PERIODICAL: Yaroslavsk. prom-st' (Sovnarkhoz Yaroslavsk. ekon. adm. r-na), 1958,
Nr 5, pp 25 - 29

ABSTRACT: The rubber mixtures made of SKS-ZOAM (non-regulated oil-filled polymer) have an increased shrinkage and an unsatisfactory adhesiveness due to sweating out of the oil; their vulcanized rubbers have inferior physical-chemical properties compared to the rubbers of SKS-ZOA, have a higher wear-resistance, but show a lower heat-formation. The filling with oils of rigid rubbers, like SKS-ZOAM needing thermo-mastication, lacks any technical foundation, because the thermo-masticated rubbers of the polymers of this type are enriched by a considerable quantity of low-molecular and high-molecular fractions negatively affecting the technological and technical properties of the rubbers. It is recommended to use

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On the Problem of Producing Divinyl-Styrene Oil Rubbers

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rubbers on the base of regulated oil-filled polymers with an increased average molecular weight which need no thermo-mastication.

O. Timofeyeva

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Boguslavskiy, D.B.

821.8
SOV/81-59-6-21672

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 6, p 560 (USSR)

15.9210

AUTHORS: Boguslavskiy, D.B., Golitsyna, A.A., Borodushkina, Kh.N.

TITLE: The Application of Carboxyl-Containing Latexes to the Impregnation
of Tire Cord

PERIODICAL: Yaroslavsk. prom-st' (Sovnarkhoz Yaroslavsk. ekon. adm. r-na), 1958,
Nr 5, pp 29 - 34

ABSTRACT: The effect of COOH-groups in a polymer on the stability of the bond
between impregnated cord and rubber was studied on divinyl-styrene
and divinyl latexes with $\leq 10\%$ methacrylic acid. Carboxyl-con-
taining latexes (CL) without polar additions impart to the cord an
increased adhesion property compared to that impregnated by mass-
produced SKS-30 latex. The application of impregnating compositions
based on CL in combination with resorcin-formaldehyde resin ensures,
under the conditions of static and dynamic deformations, an essential
increase in the bond stability of viscous and polyamide cord with
rubbers made of natural and synthetic rubber. The bond stability
increases to a content of 1-2% COOH-groups in the polymer. The bond
stability of the impregnated cord increases with the content in the

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Sov/81-59-6-21672

The Application of Carboxyl-Containing Latexes to the Impregnation of Tire Cord

dispersion of resorcin-formaldehyde resin of up to 9-12%. A film of adhesive made of CL has increased mechanical properties, which ensures a more uniform distribution of tensions between the carcass rubber and the cord during deformations. For CL on the base of SKS the stability of the bond between cord and rubber increases with a decrease in the content of styrene groups, attaining the highest values in the pure divinyl polymer. The stability of the bond between the cord impregnated by CL and rubber increases with an increase in the drying temperature. Under industrial conditions the cord was impregnated by a mixture of the following composition (in weight parts), latex 100, resorcin 6.27, formalin 5, NaOH 0.73, water 911, pH 9.5. Impregnation conditions: velocity 6-12 m/min, temperature in the 3rd section of the chamber 125°C. Stand tests of experimental tire casings confirm the laboratory data on the preferability of CL for impregnating viscose cord, especially for carcass rubbers made of natural rubber and SKS-30AM. In the case of a temperature increase, the bond stability drops less than in the case of usual impregnation. The mileage of the experimental tire casings increases by 16-22%.

I. Pil'menshteyn

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SOV/138-58-7-10/19

AUTHORS: Blokh, G.A., Kormil'tseva, Z.P., Boguslavskiy, D.B.,
Bakharev, V.I., and Tikhomirov, B.P.

TITLE: Study of Diffusion Processes Occuring in Tyres During
Vulcanisation (Part I) (Issledovaniye diffuzionnykh
protsessov pri vulkanizatsii avtopokryshek) (Socbshchen-
iye I)

PERIODICAL: Kauchuk i rezina, 1958, Nr 7, pp 33 - 36 (USSR)

ABSTRACT: In this investigation, radioactive sulphur, S³⁵, was introduced into the tread, breaker and carcass rubber mixes and the diffusion of the isotope from each of these parts of the tyre into adjacent parts of the tyre was studied.

The appropriate rubber mixes containing the isotope sulphur were rolled into thin laminae 0.4 to 0.8 mm thickness and discs 16 mm diameter were cut from these laminae. The discs were placed under a (Geiger) counter and their radioactivity was determined before vulcanisation. Measurements were taken from both sides of the discs. The discs were then stacked into piles to form representative sections of a tyre. 30 discs represented the tread and 8 to 10 discs the breaker and the carcass.

Card1/4 The discs were dusted with talc to assist separation of

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Study of Diffusion Processes Occuring in Tyres During Vulcanisation

the laminae after vulcanisation. Piles of discs from mixes containing S³⁵ were assembled with piles of discs from mixes containing normal sulphur in the appropriate sequences so that diffusion could be assessed for the different cases of: 1) tread to breaker to carcass; 2) breaker to tread, breaker to carcass and 3) carcass to breaker to tread. The stacked piles were vulcanised at 145°C for half to two hours. The individual discs were then stripped from the vulcanised samples and the activity of each disc measured by the counter. Diffusion of the isotopic sulphur from discs to disc could then be assessed, as also diffusion from one part of the representative tyre section to another.

Table I shows the extent of the diffusion from the tread (where the active sulphur was originally located) into breaker and carcass. The S³⁵ diffused from the tread into the breaker to a depth of 3 to 3.5 mm. The breaker rubber taking up more than 40% of the activity of the tread rubber to a depth of 0.9 mm and over 60% to a depth

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0.65 mm. The diffusion did not extend to the carcass rubber where the activity remained at background level. Table 2 shows results from a test where the active material was located in the breaker rubber and diffused both to the tread and to the carcass parts of the sample to a depth of 3 to 4 mm. Table 3 shows the results of a similar test with the S³⁵ diffusing from carcass into the breaker rubber but not extending through to the tread. Similar experiments were made by assembling layers of tread, breaker and carcass rubber but in this case all containing S³⁵. After vulcanisation at 145 °C for 2 hours, the sample was stripped and the activity of the laminae at the interfaces between the different mixes was determined and compared with the activity at the same locations before vulcanisation. The results, given in Table 4, indicate concentration of the vulcanising groups at these interfaces, through differences in chemical rate and kinetic flow during vulcanisation. Such concentrations of polysulphide groups will undergo decomposition and re-grouping while the tyre is in use because of the temperature differences that are caused by deformation. Knowledge of the extent of these

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Study of Diffusion Processes Occurring in Tyres During Vulcanisation

concentrations is important since it will enable the ageing and fatigue characteristics of the tyre to be assessed. The diagram has been constructed from the data in tables 1, 2 and 3 and relates the activity level to the position of measurement in the stack. The shaded areas indicate concentration of activity at the interfaces between different parts of the tyre.

Attempts to study diffusion of calcium hydroxide, using Ca^{45} , in similar experiments were unsuccessful, evidently because of the insolubility of this material in rubber. There are 4 tables and 5 Soviet references.

1. Tires--Test methods 2. Sulfur--Diffusion 3. Sulfur isotopes (Radioactive)--Applications 4. Vulcanization

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BOGUSLAVSKIY, D.; KUTSENOV, B.; UZINA, R.; DOSTYAN, M.

Synthesis and use of carbonyl-containing latices for the
impregnation of tire cords. Report No.1. Kauch. i rez. 18
no.1:6-13 Ja '59. (MIRA 12:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo
kauchuka imeni S.V. Lebedeva Nauchno-issledovatel'skiy institut
shinnoy promyshlennosti Yaroslavskiy shinnyy zavod.
(Tire fabrics) (Carboxyl group)

S/138/59/000/07/09/009

AUTHORS: Boguslavskiy, D. B., Tikhomirov, B.P., Blokh, G. A.TITLE: A Study of the Diffusion Processes in the Vulcanization of Automobile
Tire Casings. Communication 2.

PERIODICAL: Kauchuk i Rezina, 1959, No. 7, pp. 47-50

TEXT: The authors briefly summarize the results of work carried out previously on the diffusion processes in rubbers and vulcanizates, referring to Ref. 1-9. The present article deals with the data obtained on the kinetics of sulfur and accelerator (captax) diffusion from the reinforcement rubber into the adhesive film which, in turn, is based in its composition on carboxyl-containing and 2-methyl-5-vinylpyridine copolymers. It is pointed out that at the present time the significance of impregnating tire cord with latex copolymers, having active functional groups in the molecular chains, is continuously increasing, as the latter affects the properties of vulcanizates depending on the content of sulfur and accelerators. Thus, the diffusion redistribution of the concentration of the vulcanizing agents can have a great effect on the mechanical properties of the adhesives. The experimental procedure undertaken is outlined, and it is established as a result that the rate of diffusion depends on the density of

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S/138/59/000/07/09/009

A Study of the Diffusion Processes in the Vulcanization of Automobile Tire Casings. Communication 2.

the vulcanizing lattice of the adhesive, on the type and content of the functional groups in the molecular chain of the copolymers and the dosages of the resorcin-formaldehyde resin. The various natures of the resorcin-formaldehyde resin's interaction with the carboxyl-containing and methylvinylpyridine copolymers, is pointed out. In discussing the obtained experimental data, it is also pointed out that the presence of the impregnating compositions of the carboxyl-containing and methylvinylpyridine latexes, in the adhesive, has a double effect: on the one hand, they increase the interaction of the molecules of the impregnated film and the reinforcement rubber, and, on the other hand, they have a significant effect on the elasticity of the molecular chains, reducing their diffusibility. It is noted that the degree of intermolecular action increases much more rapidly with the introduction of methacrylic acid into the chain. The authors state, however, that the obtained experimental data do not enable one to clearly identify the nature of the bonds occurring between the resorcin-formaldehyde resin and the molecules of the investigated polymers. There are 4 tables, 1 diagram, 3 graphs, 13 references: 12 Soviet, 1 English.

ASSOCIATION: Yaroslavskiy shinnyy zavod (Yaroslavl' Tire Plant) ✓

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