ZELENEV, Yu.V.; LYALINA, N.M.

Application of Ferry's method for the processing of experimental data on the dynamic properties of rubberlike network polymers. Vysokom.soed. 5 no.11:1717-1724 N '63. (MIRA 17:1)

1. Moskovskiy gosudarstvennyy pedagogicheskiy institut imeni Lenina.

LEZHNEV, N.N.; YAMPOL'SKIY, B.Ya.; LYALINA, N.M.; VOLODINA, V.V.

Studying the influence of the carbon black structures on the effect of rubber reinforcement in model systems. Kauch. i rez. 24 no.2:16-19 F '65. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti i Moskovskiy gosudarstvennyy universitet.

L 27621-65 EWT(m)/EPF(c)/EWP(t)/T/EWP(j)/EWP(b) Pc-4/Pr-4 IJP(c) JD/RM
ACCESSION NR: AP5005392 S/0138/65/000/002/0016/0019

AUTHOR: Lezhnev, N. N.; Yampol'skiy, B. Ya.; Lyalina, N. M.; Volodina, V. V.

TITLE: Simulation of the effect of carbon-black structures on the reinforcement of rubber

SOURCE: Kauchuk i rezina, no. 2, 1965, 16-19

TOPIC TAGS: rubber strengthening, carbon black structure, simulating system, carbon black dispersion, strengthening mechanism

ABSTRACT: A study has been made of structure formation of carbon-black dispersions in xylene and in raw rubber solutions — systems which simulate filled rubbers. The experiments were conducted with unmodified and modified common carbon blacks. The structure formation processes were determined from measurements of electrical conductivity and ultimate shearing stress. It was shown that carbon-black dispersions form quasi-equilibrium coagulation systems with thixotropic properties. The addition of small amounts of rubber to carbon-black dispersions sharply increased the strength of the structures. The strengthening of the systems was attributed not only to adsorption of the polymers onto the black, but also to the formation of macromolecular structures which are oriented along the carbon-black chains to

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L 27621-65

ACCESSION NR: AP5005392

2

form a supramolecular network. Chemical or physical modification of the carbon-black surface changed the surface energy and sharply affected the structure of the dispersions and their mechanical properties. Orig. art. has: 5 figures and 1 table.

[BO]

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of the Rubber Industry); Moskovskiy Gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 007 OTHER: 002 ATD PRESS: 3190

Card 2/2

L 35147-65 EPF(c)/EPR/EWP(j)/EWT(m) Pc-4/Pr-4/Ps-4 RM/WW

ACCESSION NR: AP5006858 S/0020/65/160/004/0861/0863

AUTHOR: Lezhnev, N. N.; Yampol'skiy, B. Ya.; Lyalina, N. M.; Dreving, V. P.; Kogotkova, L. I.

TITLE: Investigation of the structural properties of carbon black-reinforced rubbers

SOURCE: AN SSSR. Doklady, v. 160, no. 4, 1965, 861-863

TOPIC TAGS: rubber reinforcement, carbon black, vulcanized rubber, unvulcanized rubber, graphitization, stress relaxation rate, activation energy, nuclear magnetic resonance, molecular interaction, polymer

ABSTRACT: The present work was carried out because of lack of clarity on the mechanism of the reinforcing effect of active rubber fillers. Vulcanized and unvulcanized rubber-carbon black systems were investigated. The rubbers used were: butadiene-styrene, natural, stereoregular polybutadiene, and the carbon blacks used were active furnace carbon black (I) as well as the same carbon black but partially graphitized for 24 hr at 2600° C (II). The investigated properties of the rubber-carbon black mixtures were: shear stress, viscosity, activation energy

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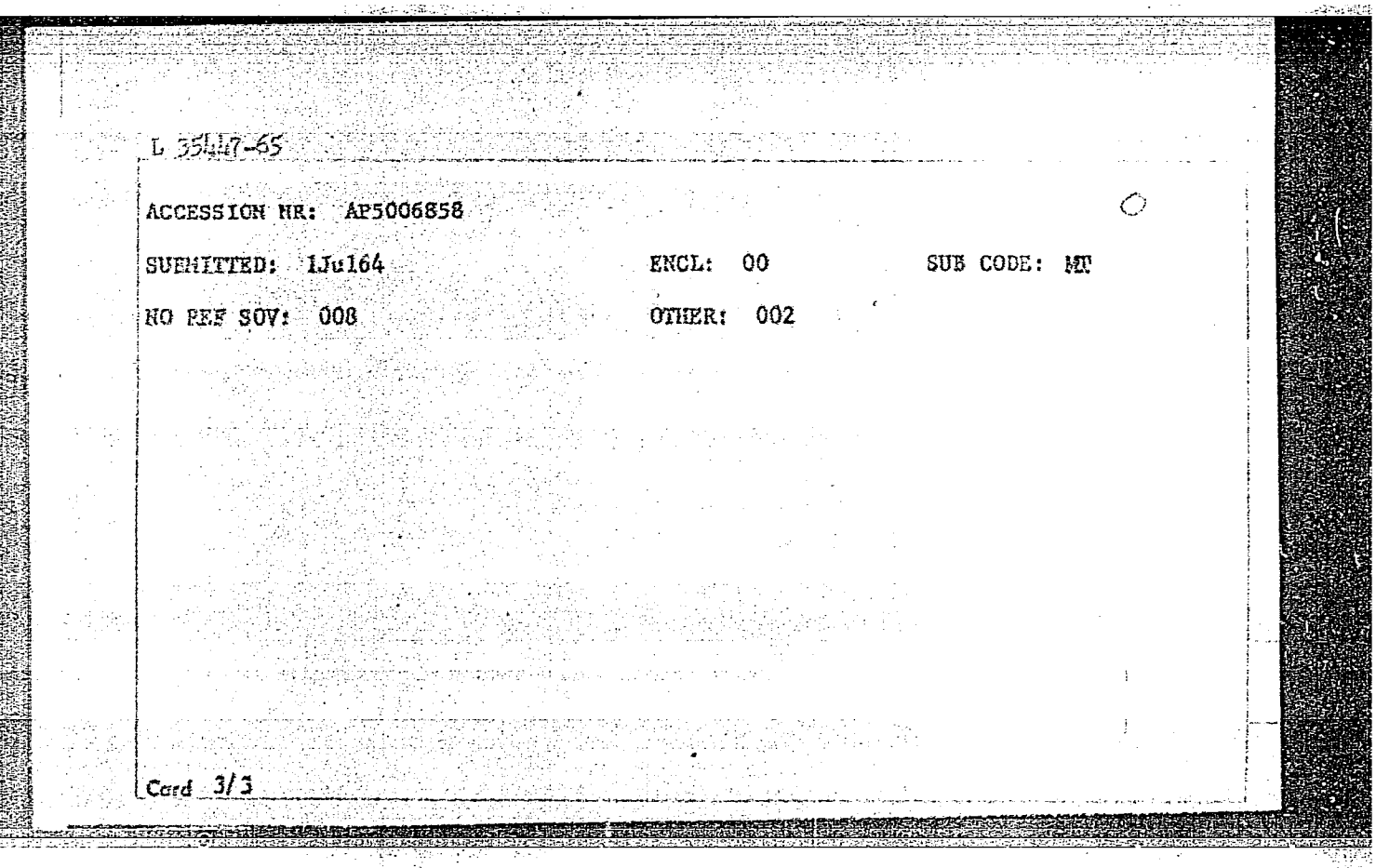
L 35147-65

ACCESSION NR: AP5006858

of viscous flow, stress relaxation rate, tensile strength, nuclear magnetic resonance, plastic strength. In addition, thermograms were recorded, using the Kurnakov pyrometer. It was found that the tensile strength of the vulcanized batches and the plastic strength of the unvulcanized batches are much higher when carbon black I is used, as compared with carbon black II. The stress relaxation rate, which is the highest for an unfilled system, decreases to some extent in the presence of carbon black I and to a still greater extent in the presence of carbon black II. In general, a comparison of the reinforcing effect of carbon blacks I and II on different rubbers shows that, the weaker the forces of molecular interaction in a polymer (qualitatively characterized by the activation energy of viscous flow) are, the easier is the formation of "reinforced" structure and the greater is the difference in the mechanical properties of filled and unfilled systems. This equally applies to comparisons of crystallizing and noncrystallizing polymers, independently of the well-known effect of crystallizability of polymers on the strength properties of rubbers. Orig. art. has 1 figure, 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti (Scientific Research Institute of Tire Industry); Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University)

Card 2/3



L 35447-65

ACCESSION NR: AP5006858

SUBMITTED: 13Ju164 ENCL: 00 SUB CODE: MT

NO REF SOV: 008 OTHER: 002

Card 3/3

L 00676-67 EWT(m)/EWP(j) IJP(c) JWD/RM

ACC NR: AP6017860 (A) SOURCE CODE: UR/0069/66/028/003/0420/0423

AUTHOR: Lezhnev, N. N.; Lyalina, N. M.; Zelenev, Yu. V.; Bartenev, G. M.

ORG: Scientific Research Institute of the Tire Industry, Moscow (Nauchno-issledovatel'skiy institut shinnoy promyshlennosti)

TITLE: Influence of the nature of carbon black surface on the relaxation properties of extended rubbers

SOURCE: Kolloidnyy zhurnal, v. 28, no. 3, 1965, 420-423

TOPIC TAGS: butadiene styrene rubber, carbon black, filler, stress relaxation, polymer structure

ABSTRACT: The influence of the surface character of carbon black fillers on the formation of the reinforced structure of rubber and hence on the molecular mobility and relaxation properties of the rubber was studied. Rubbers based on stereoregular polybutadiene rubber Yuropren-cis-1,4 (SKD) and butadiene-styrene rubber Yuropren-1500 (BSK) extended with various types of carbon black were employed. Stress relaxation curves of the rubber were recorded on a relaxometer at 20 and 70°C. It was found that the more active the carbon black from the standpoint of its reinforcing effect, the more level is the shape of the relaxation time spectrum, i.e., the greater the role of long relaxation times of the extended systems, owing to a limited mobility of the macromolecules of the reinforced polymer structures. The increase in the number of re-

UDC: 541.183.1

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L 00676-67
ACC NR: AP6017860

laxing elements with short relaxation times of the extended systems indicates the presence of carbon black - polymer bonds, comparable in strength to intermolecular bonds, since the carbon black surface has an assortment of adsorption centers with various energies (more or less weaker than the energy of intermolecular interaction). The reinforced structure of the polymer is created in the presence of strong adsorption centers. The data obtained confirm the concepts advanced in the literature, according to which the reinforced filler - polymer coagulation structures are mosaic in character. Indeed, the most active from the standpoint of reinforcing effect is carbon black characterized by the presence of a small number of highly active adsorption centers on a background of relatively low activity. It is concluded that in an extended rubber the polymer is present in the form of two structures, one unchanged and the other reinforced, and that there is no distinct boundary between them. Orig. art. has: 2 figures, 1 table, and 3 formulas.

SUB CODE: 11/ SUBM DATE: 03Jan65/ ORIG REF: 012/ OTH REF: 003

Card 2/2 vlr

L. LYALINA, N. A.

DOLGOPOLOVA, A.V.; LYALINA, N.A.

Chronic tonsillitis in preschool children [with summary in English]. Pediatriia 36 no.3:11-16 Mr '58. (MIRA 11:3)

1. Iz kafedry detskikh infektsiy (zav.-prof. D.D.Lebedev) II Moskovskogo meditsinskogo instituta i poliklinicheskogo otdeleniya 1-y Moskovskoy klinicheskoy detskoy bol'nitsy (glavnyy vrach-zasluzhennyy vrach respubliki Ye.V.Prokhorovich)
(TONSILS--DISEASES)

AGROSKIN, S. I., kand. med. nauk; LYALINA, N. A.

Influenzal laryngotracheitis in children. Vest. otorin. no.1: 67-72 '62. (MIRA 15:7)

1. Iz Otorinolaringologicheskogo otdeleniya detskoy gorodskoy klinicheskoy bol'nitsy No. 1, Moskva.

(INFLUENZA) (LARYNX--DISEASES) (TRACHEA--DISEASES)

KHAYKIN, M.N.; LYALINOV, A.N., inzh.

Manufacture of precast prestressed trusses with a span of 30 m. Bet. i zhel.-bet. 8 no.6:254-256 Je '62. (MIRA 15:7)

1. Nachal'nik tekhnologo-konstruktorskogo otdela Proyektnogo instituta No.1 Ministerstva stroitel'stva RSFSR (for Khaykin).
(Trusses)
(Prestressed concrete)

LYALITSKAYA, S.

26029 Lyalitskaya, S. Nasekomyye-- Vrediteli I Druz'ya Sada. (V Pomoshch' Yunym Naturalistam). Nach. Shkola, 1948, No.7, S. 33-41.

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LYALITSKAYA, S. D.

Forests and Forestry

Buzuluk pine forest. Nauka i zhizn' 19 No. 9, 1952.

Monthly List of Russian Accessions, Library of Congress, December 1952. Unclassified.

LYALITSKAYA, S. D. May 53

USSR/Geology - Caves

"The Kungur Glacial Cave," S. D. Lyalitskaya

Priroda, No 5, pp 82-87

Presents description and historical sketch of the famous Kungur cave (first described in the 1700s) and surrounding areas, near the Kungur Station and Perm' Railroad. This cave is one of the largest in the world. In this era of large hydroelectric projects and dams there is renewed interest in the study of karst and other speleological phenomena.

263T87

LYALITSKAYA, S.

Kasli cast iron. Vokrug sveta no.5:46-47 My '54. (MLRA 7:6)
(Kasli--Ironwork) (Ironwork--Kasli)

LYALITSKAYA, Sof'ya Dmitriyevna; SOBOLEVA, N.N., professor, redaktor; PORTNOV, A.S., redaktor; BARSUKOVA, Yu.V., tekhnicheskiy redaktor.

[Molotov stone carvers] Molotovskie kamnerezy. Pod red. N.N.Soboleva. Moskva, Vses.kooperativnoe izd-vo, 1955. 55 p. (MLRA 9:5)
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(Crimea--Juniper)

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(Ukraine—Natural history)

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Reserves in the Crimean Mountains. Priroda 50 no.12:62-66 D '61. (MIRA 14:12)
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LYAL'KIN, I. A.

Prigotovleniye Gidroliznogo Cyr'ya iz Drevesiny (Production of Hydrolized Raw Material From Wood) Moskva, Goslesbumizdat, 1952.
112 P. Illus., Diagrs., Tables.
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SO: N/5
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LYAL'KIN, Ivan Antonovich; BARANOV,N.A., redaktor; SIDEL'NIKOVA,L.A., redaktor; KOLESNIKOVA,A.P., tekhnicheskiy redaktor

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KOSTYANOY, Mikhail Grigor'yevich; BABINETS, A.Ye., doktor geol.-mineral.nauk, otv.red.; LYAL'KO, V.I., red.izd-va; BEREZOVSKAYA, D.N., tekhn.red.

[Characteristics of clay rocks in the regions of the Kanev dislocations from the viewpoint of engineering geology] Inzhenerno-geologicheskie osobennosti glinistykh porod raiona Kanevskikh dislokatsii. Kiev, Izd-vo Akad. nauk USSR, 1963. 173 p. (Akademiia nauk URSR. Kiev. Instytut geologichnykh nauk. [Trudy]. Seriia gidrogeologii i inzhenernoi geologii, no.10). (MIRA 16:10)

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[Formation and prediction of the resources of underground waters in arid regions; experimental studies in the southern Ukraine] Formirovanie i prognoz resursov podzemnykh vod zasushlivykh raionov; eksperimental'nye issledovaniia na primere iuga Ukrainy. Kiev, Naukova dumka, 1965. 186 p. (MIRA 18:9)

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1. Glavnyy inzh. Tallinskoy avtokolonny 3051G.

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LYAL'OVICH, S.S.; MARKOVA, L.P.

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(Kharkov--Turbomachines)

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[Kharkov plastics] Khar'kovskie plastmassy. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1959. 52 p.
(MIRA 14:4)

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ZMAGA, P.I., inzh., red.; VOROB'YEV, S.A., kand.tekhn.nauk, red.; KUZUBOV, V.I., inzh., red.; LEONOV, A.Ye., dotsent, red.; MALYSH, Yu.I., inzh., red.; PUSTOVALOV, V.I., inzh., red.; SAVCHENKOV, V.A., kand. tekhn.nauk, red.; KHMARA, S.M., kand.tekhn.nauk, red.; DONSKOY, Ya.Ye., red.; LYALYUK, I.P., red.; SHEVCHENKO, M.G., tekhn.red.

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LYALYUK, I.P.

PHASE I ROCK EXPLOITATION SOV/5452

Donskoy, Ya. Ye., G.I. Karkash, and I.P. Lyalyuk, eds.

Mekhanizatsiya i avtomatizatsiya; sbornik statey ob opyte vnedreniya mekhanizatsii i avtomatizatsii na Khar'kovskikh mashinostroitel'nykh zavodakh (Mechanization and Automation; Collection of Articles on the Introduction of Mechanization and Automation in Khar'kov Machinery-Manufacturing Plants) [Khar'kov] Khar'kovskoye knizhnoye izd-vo, 1960. 373 p. 3,900 copies printed.

Editorial Board: S.A. Vorob'yev, Candidate of Technical Sciences; Chairman of the Editorial Board: P.I. Zenin, Engineer; A.A. Kutlov, Engineer; V.I. Kunikov, Engineer; A. Ye. Leonov, Docent; A.T. Tuplyak, Candidate of Technical Sciences, and S.M. Khnare, Candidate of Technical Sciences; Eds.: Ya. Ye. Donskoy, G.I. Karkash, and I.P. Lyalyuk; Tech. Ed.: M.I. Limanova.

PURPOSE: This collection of articles is intended for technical and scientific personnel, outstanding workers, and shock workers of communist labor.

COVERAGE: The multifaceted experience of Khar'kov enterprises in the mechanization, automation, and improvement of manufacturing processes is generalized. The development of new machines, instruments, and production methods is considered and attention is given to newly established enterprises, and to the introduction of telemechanics in the Khar'kov gas-system management. By including concrete examples and facts, the authors of the various articles attempt to demonstrate the achievements of the Khar'kov industrial complex in fulfilling the resolutions of the June (1959) and July (1960) Plenums of the Central Committee of the Communist Party of the Soviet Union. No personalities are mentioned. There are no references.

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Mangubi, V.A., and V.G. Kovalenko [Engineers]. What is Accomplished at the "Elektrotyazhmash" Plant 174

Korkhov, P.K. [Chief Engineer of the KhMZ]. Automatic [Production] Lines for Stamping Stator and Rotor Sheets 181

Zil'ber, A.G. [Chief Process Engineer of the "Svet shakhtera" Plant]. For Mechanization in Coal Mining 197

Card 4/8

MIROSHNIKOV, Petr Semenovich, kand. ekon. nauk; MAL'TSEV, G.F., inzh., spets. red.; LYALYUK, I.P., red.; LIMANOVA, M.I., tekhn. red.

[redacted]

[Utilization of internal production potentials; based on the practice of the Kharkov Electric Equipment Plant] Ispol'zovanie vnutriproizvodstvennykh rezervov; na opyte Khar'kovskogo elektromekhanicheskogo zavoda. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1963. 84 p. (MIRA 16:9)
(Kharkov--Electric equipment industry--Technological innovations)

PODLOZHENOV, Pavel Mikhaylovich; LYALYUK, I.P., red.

[Mechanization, automation and production quality] Mekhanizatsiia, avtomatizatsiia i kachestvo produktsii. Khar'kov, Khar'kovskoe knizhnoe izd-vo, 1962. 69 p. (MIRA 17:12)

1. Glavnyy inzhener Khar'kovskogo podshipnikovogo zavoda (for Podlozhenov).

SPOL'NIK, I.I.; LYALYUK, M.A.

Analyzing natural gas combustion products by the chromatographic method. Trudy IUzhgiprotsementa no.5:86-101 '63.

(MIRA 17:12)

SHABEL'NIK, B.P. [Shabel'nyk, B.P.], inzh.; LYALYUK, P., red.; SHEVCHENKO, M.G.[Shevchenko, M.H.], tekhn. red.

[Mounted reaper which works without an operator] Lafetna zhatka pratsiue bez mashynista. Khar'kiv, Khar'kivs'ke oblasne vyd-vo, 1958. 7 p. (MIRA 14:12)

1. Khar'kovskoye oblastnoe upravleniye sel'skogo khozyaystva (for Shabel'nik).

(Grain--Harvesting)

VOLOSHIN, A.I.; BOGOYAVLENSKIY, K.A.; AKHTYRCHENKO, A.M.; TURIK, I.A.; ZHIDKO, A.S.; LYALYUK, V.S.; GABAY, L.I.; ONOPRIYENKO, V.P.; STARSHINOV, B.N.; BABIY, A.A.; SAVELOV, N.I.; Prinimali uchastiye: TORYANIK, E.I.; VASIL'YEV, Yu.S.; SHEMEL', T.I.; SENYUTA, V.I.; BONDARENKO, I.P.; AMSTISLAVSKIY, D.M.; ANDRIANOV, Ye.G.; SERGEYEV, G.N.; ZAMAKHOVSKIY, M.A.; LYUKIMSON, M.O.; IVONIN, V.K.; TSIMBAL, G.I.; SEN'KO, G.Ye.; KONAREVA, N.V.; SOLODKIY, Yu.L.; LUKASHOV, G.G.; TARASOV, D.A.; GORBANEV, Ya.S.; SUPRUN, I.Ye.; TIKHOMIROV, Ye.I.; KONONENKO, P.A.; PROKOPOV, V.N.; GULYGA, D.V.; PLISKANOVSKIY, S.T.; PONOMAREVA, K.Ye.

Effect of the length of coking on coke quality and the performance of blast furnaces. Koks i khim. no.12:26-32 '61. (MIRA 15:2)

1. Ukrainskiy uglekhimicheskiy institut (for Voloshin, Bogoyavlenskiy, Akhtyrchenko, Turik, Zhidko, Lyalyuk, Toryanik, Vasil'yev, Shemel'). 2. Zhdanovskiy koksokhimicheskiy zavod (for Gabay, Senyuta, Bondarenko, Amstislavskiy, Andrianov, Sergeyev, Zamakhovskiy, Lyukimson, Ivonin, TSimbal). 3. Ural'skiy nauchno-issledovatel'skiy institut chernykh metallov (for Onopriyenko, Starshinov, Babiy, Sen'ko, Konareva, Solodkiy). 4. Zavod "Azovstal'" (for Savelov, Lukashov, Tarasov, Gorbanev, Suprun, Tikhomirov, Kononenko, Prokopov, Gulyga, Pliskanovskiy, Ponomareva).

(Coke)
(Blast furnaces)

5(3), 15(8)

AUTHORS: Sorokin, M. F., Lyalyushko, K. A. SOV/156-59-2-36/48

TITLE: The Synthesis of Resins of Aryldiglycid-ethers and Arylamines (Sintez smol iz arildiglitsidnykh efirov i arilaminov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Khimiya i khimicheskaya tekhnologiya, 1959, Nr 2, pp 358-362 (USSR)

ABSTRACT: The paper under review reports for the first time on the synthesis of resins from diglycid ethers of the resorcine or of the p,p'-dioxydiphenylpropane with aniline or N,N'-disubstituted 4,4'-diaminodiphenylmethane. By reducing the functionality of the diamine by substituting one each hydrogen atom in each amino group, it became possible to produce resins soluble in acetone, acetates and a 1 : 1 - mixture of butanol with xylene. The molar proportions, reaction-temperatures, and physical data of resins produced from aniline are shown in Table 1 . Table 2 shows the same data for resins of N,N'-disubstituted 4,4'-diaminodiphenylmethane. By adding ethylene diamine, hexamethylene diamine, or phthal-acid-anhydride as a hardening agent to the resin solution, resin lacquer films were produced. At room temperature, only dull, inferior lacquers were obtained; hardening tests were there-

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The Synthesis of Resins of Aryldiglycid-ethers and Arylamines SOV/156-59-2-36/48

fore carried out at 100°. Hexamethylendiamine as a hardening agent produced at this temperature lacquer films with excellent physical and chemical properties (Table 3). There are 3 tables and 7 references, 3 of which are Soviet.

PRESENTED BY: Kafedra tekhnologii lakov i krasok Moskovskogo khimiko-tekhnologicheskogo instituta im. D. I. Mendeleyeva (Chair for the Technology of Lacquers and Dyes Moscow Institute of Chemical Technology imeni D. I. Mendeleyev)

SUBMITTED: November 10, 1958

Card 2/2

SOROKIN, M.F.; LYALYUSHKO, K.A.

Glyptal-epoxide resins modified with vegetable oils. Trudy MKHTI no.29:83-87 '59. (MIRA 13:11)

(Epoxy resins)

SOROKIN, M.F.; LYALYUSHKO, K.A.; DUDAKOVA, R.A.

Synthetic resins from aryl glycidyl ethers. Report No.1: Synthesis of resins from aryl diglycidyl ethers and substituted aromatic diamines. Lakokras.mat.i ikh prim. no.5:1-7 '60. (MIRA 13:11)
(Epoxy resins)

5.3610

69674

S/153/60/003/01/030/058
B011/B005

AUTHORS: Sorokin, M. F., Lyalyushko, K. A.

TITLE: Investigation of the Reactions of Aryl-glycide Ethers With Aromatic Amines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1960, Vol 3, Nr 1, pp 115-118 (USSR)

TEXT: The authors studied the reaction between the phenyl-glycide ethers of phenol, of exo(dimethylphenyl-)-p-cresol, of p-tert-butyl phenol, and of o-cresol, with the following aromatic amines: aniline, o- and p-toluidine, o- and p-anisidine, and o- and m-phenylenediamine. They found that this reaction proceeds sufficiently fast and at low temperatures in the case of aromatic amines with a dissociation constant $> 7.5 \cdot 10^{-11}$ (Table 2). With amines having a lower dissociation constant, the reaction is practically impossible under the same conditions. If the reacting substances are in a stoichiometric relation, the reaction is bimolecular and is expressed by an equation of 2nd order. The activation energy and the temperature coefficient of the reaction depend on the nature of the amine. Table 2 shows that the reaction rate is influenced by the substituent in the aromatic ring and by its position with respect to the amino group. Thus, aniline has a higher dissociation constant than o-anisidine but its reaction rate

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constant is lower. The character of the solvent is decisive for the reaction rate: in acetone, toluene, and dioxane, the reaction does not take place even at high concentrations of the reacting substances. Alcohols (methyl-, ethyl-, and butyl alcohol) accelerate the reaction. The values of the velocity constant change on transition from one amine to another. Table 1 shows these constants, the reaction order, the temperature coefficient, and the activation energy. Table 3 shows the interaction of the glycide ethers with aniline. Table 4 contains the 16 prepared reaction products together with data on the substances used, and the characteristics. There are 4 tables and 1 Soviet reference.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva; Kafedra tekhnologii lakov i krasok (Moscow Institute of Chemical Technology imeni D. I. Mendeleyev; Chair of Technology of Dyes and Varnishes)

SUBMITTED: May 15, 1959

S/081/61/000/018/025/027
B101/B147

15.7140 1407

AUTHORS: Sorokin, M. F., Lyalyushko, K. A., Dudakova, R. A.

TITLE: Synthetic resins from aryl glycide ethers. Communication I. Synthesis of resins from aryl diglycide ethers and substituted aromatic diamines

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 18, 1961, 541, abstract 18P174 (Lakokrasochn. materialy i ikh primeneniye, no. 5, 1960, 1 - 7)

TEXT: New epoxy amine varnish resins (ER) were synthesized on the basis of N,N'-dialkyl diamines (N,N',diethyl, N,N'-dipropyl, N,N'-dibutyl-4,4'-diamino-3,3'-dimethyl-diphenyl methane, and N,N'-diethyl-4,4'-diamino diphenyl methane) and the diglycide ethers of resorcinol and 2,2'-(p-hydroxy phenyl)-propane. ER are soluble in acetone, acetates, ethyl cellosolve, as well as in 1 : 1 mixtures of xylene and butanol, and acetone and toluene. They may be stored for one year without any change, and if they are hardened with hexamethylene diamine at 18 - 23 or 80°C, they form hard, elastic, and shockproof films with high resistance to

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B101/B147

Synthetic resins from...

water and alkalis. The best properties were obtained at a ratio: diglycide ether : amine = 2 : 1 or 1.5 : 1. The reaction of N-alkyl amines with aryl glycide ethers was studied and found to be bimolecular. Its rate depends on the molecular weight of the substituting alkyl and on the introduction of a methyl group into the ring. Glycide ethers of p-tert-butyl phenol and exo-(dimethyl phenyl)-p-cresol display equal reactivity. [Abstracter's note: Complete translation.]

Card 2/2

SOROKIN, M.F.; LYALYUSHKO, K.A.; KHINCHINA, E.L.

Synthetic resins derived from aryl glycidic esters. Report No.3: Synthesis of resins derived from aryl diglycidic esters and incomplete glycerides of tung-oil fatty acids. Lakokras. mat. i ikh. prim. no.4:6-11 '61. (MIRA 16:7)

(Resins, Synthetic) (Tung oil)

39770
Z/011/62/019/007/002/005
E112/E453

15.8120

AUTHORS: Sorokin, M.F., Lyalyushko, K.A.

TITLE: Synthetic resins from arylglycidyl ethers. Fourth communication. Synthesis of hard epoxies from aniline and epoxy-resin E-40

PERIODICAL: Chemie a chemická technologie. Přehled technické a hospodářské literatury, v.19, no.7, 1962, 322, abstract Ch 62-4393. (Lakokrasoch materialy, v.2, no.2, 1962, 7-10)

TEXT: New resin coating materials were synthesized from commercial, low-molecular-weight resin E-40 and aniline. The resins, hardened with hexamethylene diamine, produced surface coatings with outstanding physicomechanical properties. They are therefore recommended as raw materials for surface coating compositions. Polymerized at relatively low temperatures, the resins are almost colourless. Technologically, the manufacture of the resins is simple and does not require special equipment. The most desirable compositions are obtained if the

Card 1/2

Synthetic resins from ...

Z/011/62/019/007/002/005
E112/E453

epoxy-resins are reacted with aniline in the proportion 2:1 and 4:1. Surface coatings based on the above aniline-epoxyresins show good resistance to alkalies and acids.
4 diagrams, 2 tables, 3 literature references.

[Abstracter's note: Complete translation.]

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S/081/62/000/022/082/088
B101/B186

AUTHORS: Sorokin, M. F., Lyalyushko, K. A.

TITLE: Synthetic resins from aryl glycidic esters. Communication 4. Synthesis of solid epoxy resins from ЭД-40 (E-40) resin and aniline

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 554, abstract 22P476 (Lakokrasochnyye materialy i ikh primeneniye, no. 2, 1961, 7 - 10)
(1962 ?)

TEXT: The synthesis of novel epoxy varnish resins (ER) by condensing commercial E-40 resin with aniline is described. The effects of the ratio of the initial components and of the reaction temperature on the ER properties were studied. It is shown that using E-40 without toluene results in optimum physicomechanical properties and optimum resistance of the films to the action of 5 % NaOH and 5 % H_2SO_4 (no change within 40 days) in the case of an ER having an equivalent ratio of E-40 : aniline = 2 : 1 at 100°C, wherefrom the resulting ER has a m.p. of 81 - 86°C and 10.5 % glycide

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groups, and that at 150°C, if E-40 with 6 % of toluene is used, the resulting ER has a m.p. of 93 - 96°C and 8.2 % glycide groups. The films were prepared from 30 % solutions of the ER in ethylcellosolv with hexamethylene diamine as hardener, by drying at 80°C. Communication 3 see RZhKhim, 1962, 4P308. [Abstracter's note: Complete translation.]

Card 2/2

KONOVALOV, Petr Gordeyevich; ZHEBROVSKIY, Vatslav Vatslavovich: SHNEYDEROVA, Vera Vladimirovna; SOROKIN, M.F., retsenzent; LYALYUSHKO, K.A., retsenzent; YAKUBOVICH, S.V., retsenzent; ROGOVIN, Z.A., retsenzent; SOKOLOVA, N.A., red.

[Laboratory work on the chemistry of film-forming substances and on the technology of coatings and paints] Laboratornyi praktikum po khimii plenkoobrazuiushchikh i po tekhnologii lakov i krasok. IAroslavl', Rosvuzizdat, 1963. 202 p. (MIRA 17:5)

SOROKIN, M.F.; YANGARSKAYA, E.Ya.; LYALYUSHKO, K.A.

Epoxy lacquers without solvents. Report No.1. Lakokras.mat. i ikh.prim. no.2:1-6 '63. (MIRA 16:4)
(Lacquers and lacquering)

S/191/63/000/003/002/033
B101/B186

AUTHORS: Sorokin, M. F., Lyalyushko, K. A., Dudakova, R. A., Vasil'yev, V. S., Shuvalova, A. N.

TITLE: Copolymers of unsaturated glycidol esters. Copolymerization of glycidyl methacrylate with methyl methacrylate in solvents

PERIODICAL: Plasticheskiye massy, no. 3, 1963, 3 - 7

TEXT: The copolymerization of glycidyl methacrylate (GMA) with methyl methacrylate (MMA) was conducted in a solution of toluene, dioxane, or cyclohexanone under an atmosphere of nitrogen with 0.1 mole% benzoyl peroxide as initiator, the purpose of this study being to produce polymers containing epoxy groups. GMA was synthesized from epichlorohydrine and sodium methacrylate. Optimum reaction was reached at 90°C and 30% concentration of components. At higher concentrations, the reaction went too fast and the mass became too viscous, making it very difficult to take samples. Lower concentration decelerated the reaction considerably. Copolymerization did not occur at 60°C and 30% concentration. At 50% it was too slow but could be accelerated by increasing the benzoyl peroxide addition to 1%. The re-

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Copolymers of unsaturated ...

action was slowest in toluene yielding 77-89%; in dioxane and cyclohexanone it was equally slow yielding 83 - 96%. Reduced viscosity in dioxane was 3.55 - 3.79, in toluene 2.48 - 2.64. The ratio GMA : MMA was varied between 1 : 4 and 4 : 1. The resulting copolymers were white, solid substances soluble in acetone, acetates, dioxane, dichloro ethane, and cyclohexanone. The polydispersion of the copolymers was determined by turbidimetric titration. Pure polyglycidyl methacrylate had the lowest polydispersion, whereas pure polymethyl methacrylate had the highest. The values for the copolymers ranged in between, depending on the molar ratio of components and on the amount of initiator added. Fractionate precipitation showed all fractions to contain equal amounts of glycide groups: approximately 23% at a ratio GMA : MMA = 1 : 1, ~18% at 1 : 2, ~11% at 1 : 4, ~29% at 2 : 1, and ~33% at 4 : 1. The copolymers were somewhat enriched with GMA and their fractional composition differed from that of a mechanical mixture of components. The copolymerization constants were determined by M. Fineman's and S. D. Ross' method (J. Polymer Sci., 5, 259 (1950)): $r_{GMA} = 0.94$; $r_{MMA} = 0.75$.

There are 6 figures and 3 tables.

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L 54610-65 EWG(j)/EWT(m)/EPF(c)/EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) Pc-4/
Pr-4/Peb/Pu-4 GG/RM
ACCESSION NR: AP5011238 UR/0303/65/000/002/0001/0005

AUTHOR: Sorokin, M. F.; Lyalyushko, K. A.; T'ang, Tsung-lan

TITLE: Effect of gamma radiation on certain epoxy resins

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 2, 1965, 1-5

TOPIC TAGS: epoxy resin, gamma radiation, radiation resistance, coating

ABSTRACT: A study has been made of 1) the effect of γ-radiation on the properties of certain epoxy resins, and 2) the effect of certain hardeners on the radiation resistance of the epoxy coatings. The resins used were based on epichlorhydrin and 2,2-bis(4-hydroxyphenyl)-propane or -butane, or 1,1-bis(4-hydroxyphenyl)cyclohexane. The resins were irradiated from a Co^{60} source in glass test tubes and changes in solubility in organic solvents, melting or dropping point, glycidyl group content, molecular weight, intrinsic viscosity, polydispersity and weight loss at 250C were determined. The data are presented in graphic and tabular form. It was found that at doses up

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L 54610-65
ACCESSION NR: AP5011238

3

to 100 Mrad, these properties remain virtually unchanged. When the dose is raised to 775 Mrad, the glycidyl group content drops linearly and the molecular weight and intrinsic viscosity rise logarithmically with increasing dose. The mechanical properties and gas permeability of coatings of the same resins were tested in the presence of such hardness as m-phenylenediamine, 4,4'-diaminodiphenylmethane, hexamethylenediamine, and a polyamide resin. The data, given in tabular form, indicate that the films show good radiation resistance and are suitable as radiation-resistant coatings. Orig. art. has: 7 figures, 6 tables and 2 formulas. [SM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: OC,NP

NO REF SOV: 003 OTHER: 007 ATD PRESS: 3239

Card 2/2

L 65218-65 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5022506 UR/0303/65/000/004/0004/0007
666.21.633

AUTHOR: Sorokin, M. F.; Lyalyushko, K. A.; Belokrinitskaya, N. Ye.

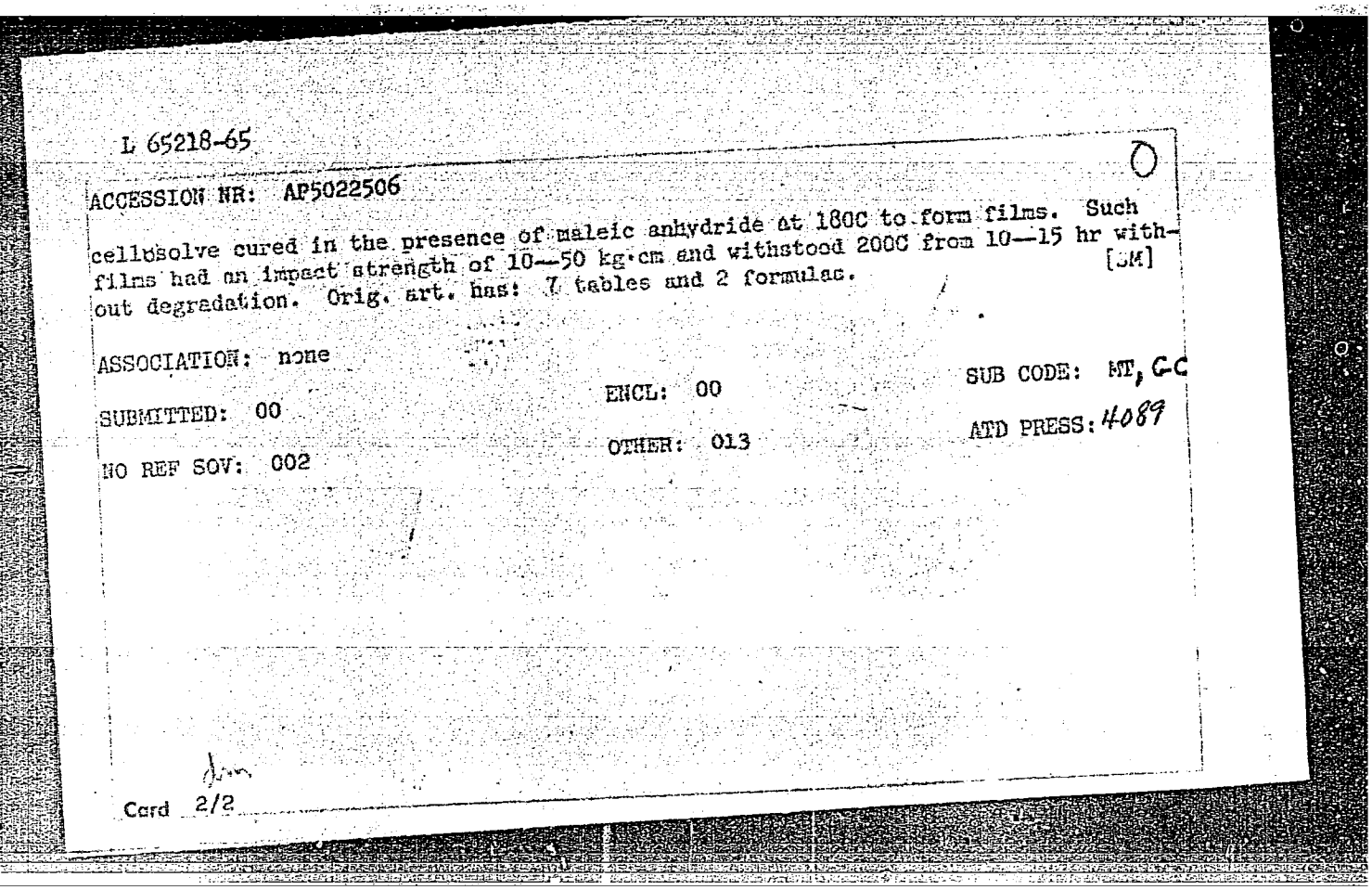
TITLE: Epoxy resins based on dicyclopentadiene and polyhydric alcohols

SOURCE: Lakokrasochnyye materialy i ikh primeneniye, no. 4, 1965, 4-7

TOPIC TAGS: epoxide, protective coating, varnish, polymerization

ABSTRACT: Alicyclic diepoxides have been prepared which are suitable for making varnish films having good mechanical properties. It is noted that alicyclic epoxides are of interest because the raw materials for them are readily available, and because films from them show improved light and thermal stability and better electrical insulation properties. First, bis(dicyclopentadienyl) ethers of ethylene glycol, diethylene glycol, and glycerol were synthesised in the presence of H_2SO_4 in 70—80% yields. From the ethers the diepoxides were obtained by epoxidation with peracetic acid in 70—80% yields. Both the ethers and the diepoxides were suitable for preparing varnish films with good mechanical properties. The ethers polymerized via the dicyclopentadienyl double bond in the presence of driers to form varnish films with an impact strength of 50 kg·cm. The diepoxides in the form of 60% solutions in

Card 1/2



L 65218-65

ACCESSION NR: AP5022506

cellosolve cured in the presence of maleic anhydride at 180C to form films. Such films had an impact strength of 10—50 kg·cm and withstood 200C from 10—15 hr without degradation. Orig. art. has: 7 tables and 2 formulas. [JM]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 002 OTHER: 013 ATD PRESS: 4089

Card 2/2

SOROKIN, Mikhail Fedorovich; LYALYUSHKO, Kapitolina Alekseyevna; YUKHNOVSKIY, G.L., prof., doktor khim. nauk, retsenzent; ARKHIPOV, M.I., doktor tekhn. nauk, prof., retsenzent; ALAVERDOV, Ya.G., red.

[Practical laboratory work on synthetic polymers for lacquers] Praktikum po sinteticheskim polimeram dlia lakov. Moskva, Vysshaia shkola, 1965. 271 p. (MIRA 18:7)

1. Zaveduyushchiy kafedroy Khar'kovskogo Politekhnicheskogo instituta im. V.I.Lenina (for Yukhnovskiy).

LYALYUTSKAYA, Ye., nauchnyy sotrudnik; GAYNANOVA, S., aspirantka;
PUSVASHKITE, O. [Pusvaskyte, O.], aspirantka

Garden pests feeding on leaves. Zashch. rast. ot vred. i bol.
10 no.12:26-27 '65. (MIRA 19:1)

1. Odesskaya sel'skokhozyaystvennaya opytnaya stantsiya (for Lyalyutskaya). 2. Saratovskiy sel'skokhozyaystvennyy institut (for Gaynanova). 3. Litovskaya sel'skokhozyaystvennaya akademiya (for Pusvashkite).

BAYEV, Stepan Mikhaylovich; BRUSKIN, Mikhail Il'ich; PUSTOVOY, Pavel Vanifat'yevich; LYAM, L.M., red.; TIKHONOVA, Ye.A., tekhn. red.

[Merchant marine at the time of the 22d party congress] Morskoi transport k XXII s"ezdu partii. n.p. Izd-vo "Morskoi transport," 1961. 30 p. (MIRA 15:5)

(Merchant marine)

KUROCHKIN, Sergey Nikolayevich; LYAM, L.M., red.; LAVRENOVA, N.B., tekhn. red.

[Use of underwater concreting in harbor hydraulic engineering] Primenenie podvodnogo betonirovaniia v portovom gidrotekhnicheskom stroitel'stve. Moskva, Izd-vo "Morskoi transport," 1961. 48 p. (MIRA 14:8)

(Concrete construction) (Hydraulic engineering) (Harbors)

KOVAL'CHUK, Viktor Semenovich; KAUFMAN, A.L., inzh., red.; LYAM, L.M., red.; TIKHONOVA, Ye.A., tekhn. red.

[Principles of radio engineering; a brief abstract of lectures] Osnovy radiotekhniki; kratkii konspekt lektsii. Moskva, Izd-vo "Morskoi transport," 1961. 147 p. (MIRA 14:11)
(Radio)

SHAIN, Nikolay Mefod'yebich; LYAM, L.M., red.; LAVRENOVA, N.B., tekhn. red.

[The motorship "Zhan Zhores."]Teplokhod "Zhan Zhores." Moskva, Izd-vo "Morskoi transport," 1962. 197 p. (MIRA 15:11)

(Freighters)

MUZALEVSKIY, Oleg Geogriyevich, kand.tekhn.nauk; SMIRNOV, Yuriy Vladimirovich, inzh.. Prinimal uchastiye: LYAMBAKH, R.V., inzh.. TSEYTLIN, B.S., inzh., nauchnyy red.; DEMINA, G.A., red.; RAKOV, S.I., tekhn.red.

[Automatic control of rolling mills] Avtomatizatsiia prokatnykh stanov. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1958. 87 p. (MIRA 12:4)
(Rolling mills) (Automatic control)

SOV/119-58-10-2/19

AUTHORS: Zarezankov, G. Kh., Engineer, Lyambakh, R. V., Engineer

TITLE: Apparatus for Visually Controlling the Operation of a Follower (Pribor dlya vizual'nogo kontrolya raboty sledyashchikh sistem)

PERIODICAL: Priborostroyeniye, 1958, Nr 10, pp 5-7 (USSR)

ABSTRACT: The Central Laboratory for Automation of the Trust "Energochermet" devised an apparatus by means of which the operation of the follower can be controlled even across long distances.
This apparatus consists of a picture tube of the type ELT, a rectifier unit with the valve 2Ts2s for feeding ELT, an RC circuit for synchronizing the horizontal deflection, a balanced phase-sensitive amplifier and diode limitor; both incorporate double triodes of the type 6N9.
The unbalance voltage of the follower is driven to the input of the apparatus.
The position of the follower is represented on the picture tube in the form of a closed curve, with the horizontal lines representing the position the follower should have (desired position), whereas the curve peaks give the actual position

Card 1/2

Apparatus for Visually Controlling the Operation of a Follower

of the follower with respect to the pre-set level (actual position).
If, for instance, only a straight line is shown on the picture tube it means that the executive organ of the follower has exactly the pre-set position. A direct error reading can be compiled for the other shapes of curves, and the corresponding commands to the executive organ of the follower can be prepared.
This apparatus was first used to control the follower carrying out the automatic pre-set control of the pressure mechanisms of the Blooming Mr 2 at the Magnitogorsk Metallurgical Kombinat. This apparatus proved to operate excellently. There are 3 figures and 1 table.

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9(2) SOV/107-59-2-6/55

AUTHORS: Lyambakh, R. V. and Zarezankov, G., Engineers

TITLE: The Instruments Are in Control (Pribory upravlyayut)

PERIODICAL: Radio, 1959, Nr 2, pp 8-9 and p 11 (USSR)

ABSTRACT: The article deals with the future introduction of electronic devices and computers in the ferrous metal industry. Recently the Tsentral'naya laboratoriya avtomatiki (Central Laboratory of Automation) developed and introduced a series of electronic devices in one of the biggest metallurgic combines, which operates an automatical rolling mill using photoelectric relay switches, electronic computers, perforators etc. The schedule of the bar rolling process is recorded on a disc-type perforation card in the form of apertures. The quantity of the radial aperture rows is equal to the maximum number of times the bar is passed during the rolling process. The rolling process being completed, radioelectronic devices measure automatically the thickness and width of the sheet bars and

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the diameter and gage of the wire. For measuring the thickness of sheet bars radioactive or roentgen micrometers are used. The measuring principle is based on the adsorption of radioactive and roentgen radiations by the thickness of the material to be measured. The measuring devices are automatic and noncontact, electronic correctors eliminate errors. The use of noncontact measuring devices ensures a continuous, i.e. uninterrupted rolling process. There are 2 diagrams and 2 figures.

LYAMBAKH, R. V.

"Automatic Devices for Contactless Measurement of the Geometrical Dimensions of Rolled Products in the Process of Hot and Cold Rolling."

report presented at the Symposium on Variable Speed Electric Drives in Steel Mills, Prague, Czechoslovakia, 5-15 Sep 1960.

ARKHANGEL'SKIY, V.I.; LYAMBAKH, R.V.; SLEZHANOVSKIY, O.V.

Automatic control of reversing blooming mills. Stal' 21 no.6:528-534 Je '61. (MIRA 14:5)
(Rolling mills)
(Automatic control)

BOGACHEV, Aleksandr Mikhaylovich; LYAMBAKH, Romul'd Vital'yevich; GRUZIN, V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Equipment for the automatic control of the dimensions of rolled products]Pribory avtomaticheskogo kontrolia razmerov prokata. Moskva, Gosenergoizdat, 1962. 111 p. (Biblioteka po avtomatike, no.57) (MIRA 15:9)
(Rolling(Metalwork)) (Automatic control)

S/118/62/000/003/003/005
D221/D302

AUTHORS: Lyambakh, R.V., Radchenko, E.S., and Shishkinskiy, V.I., Engineers

TITLE: The automatic tension control of strip between the stand and the coiler

PERIODICAL: Makhanizatsiya i avtomatizatsiya proizvodstva, no. 3, 1962, 9 - 12

TEXT: The Tsentral'naya laboratoriya avtomatiki (Central Laboratory of Automation) has designed an arrangement of dynamic compensation for tension regulators. The primary winding of the transformer is parallel-connected to the armature of the winder tachogenerator through a resistance. The secondary winding is connected to the input of the amplifier, whose output feeds the coil of the dynamic compensation of the amplidyne. The compensating circuit includes the memory section of a rheostat. The latter varies the magnitude of the dynamic compensation in relation to the diameter of the coil. The change in the value of the dynamic compensation at a hi-

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The automatic tension control of ...

gher speed is ensured by the selector rheostat in the excitation circuit of the winder tachogenerator. The coincidence loop is formed by the d.c. balance amplifier, built on semiconductor triodes, and operating as a class B amplifier. The acceleration of the mill produces a voltage of opposite polarity in the two secondary coils of the transformer, which causes a cut-off of two triodes and the conduction by the other two (or vice versa). The current in the amplifier load determines the change of setting of the regulator. The linearity of the starting part of the amplifier characteristic is improved by feeding to its input a bias voltage derived from a potential divider and the ohmic resistance of the transformer secondary. There is a 20 % deviation between the calculated and experimental curve of the amplifier. The temperature compensation was computed on the basis of experiments. An oscillogram reveals that the voltage of the tachogenerator during the acceleration period is nonlinear. The changes of current in the compensation coil confirm the expediency of the arrangement. On the reverse run the winder operated as a generator. The system was applied in a cold rolling mill where the coiler had a 800 HP motor. It permitted the reduc-

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The automatic tension control of ... D221/D302

tion of both acceleration and deceleration time for strip thicknesses between 10 and 0.3 mm. There are 5 figures.

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S/118/62/000/012/001/002
D201/D308

AUTHORS: Dobronravov, D.N., Kleshko, O.B., and Lyambakh, R.V., Engineers

TITLE: Automatic control of strip thickness

PERIODICAL: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 12, 1962, 3-8

TEXT: A description is given of the design and analysis of automatic control of the continuous hot rolling process of a thin strip, as carried out at the rolling mill '2500' of the Magnitogorskiy metallurgicheskiy kombinat (Magnitogorsk Metallurgical Combine). The mill has 4 coarse and 6 finishing cages, with 700 and 1400 mm diameter of working and supporting rolls respectively. The thickness of rolled strips is 1.5 to 10 mm, its width is 1000 to 2350 mm. The output velocity of the strip is 12 m/sec. The method of automatic control was developed at the Tsentral'naya laboratoriya avtomatiki (TsLA) (Central Laboratory of Automation). The basic elements of the control system are the controllers of the roller gaps, placed

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at the 6th, 7th, 8th and 9th cages, which keep the gaps constant during the rolling process. The Simms-Golovin equation makes it possible to find the gap indirectly from measurements of the pressure of the roller clamp screw, and the deformation of the cage. The strip tension is measured by a loop-tension pickup. The position of the clamp screw is measured by the special position pickup ДР-5138 (DR-5138), in the form of a rheochord, with a remotely controlled wiper. It is envisaged that tension gauges developed by VNIIMETMASh and TsLA and magneto-anisotropic pressure pickups, developed at TsNIICHM, be used for the measurements of metal pressure against the rollers. An X-ray intensity meter ИТГ-5236 (ITG-5236) measures the strip thickness continuously. The gap control device has several electronic circuits, the most important of which are the electronic measuring amplifier, pressure storage circuit, adder and gap controller amplifier. A model under test proved to be reliable. The economy in metal could be 4.5 million roubles per year. There are 8 figures.

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LYAMBAKH, R.V.; ZAREZANKOV, G.Kh.; INDENBAUM, A.G.; AGARONOV, D .A.

Automatic measurement of strip elongation in temper mill rolling.
Stal' 24 no.12:1104-1106 D '64. (MIRA 18:2)

1. TSentral'naya laboratoriya avtomatiki.

LOMAKIN, Nikolay Dmitriyevich; LYAMBAKH, Romual'd Vital'yevich; GUTNIKOV, Eduard Yul'yevich

[Complete automation of blooming mills] Kompleksnaia avtomatizatsiia obzhimnykh stankov. Moskva, Metallurgiia, 1965. 302 p. (MIRA 18:4)

L 38913-66 EWT(d)/EWT(m)/EWP(v)/EWP(t)/ETI/EWP(k)/EWP(b)/ETC(1) IJP(c)
ACC NR: AP6017639 JD/HW (N) SOURCE CODE: UR/0133/66/000/001/0050/0055 52 B

AUTHOR: Dobronravov, D. N.; Lyambakh, R. V.; Stupnikov, E. G.; Shishkinskiy, V. I.; Burdin, V. M.; Muzalevskiy, O. G.; Yevdokimov, A. S.; Yegorov, Ye. P.; Leont'yev, S. A.; Shesterkin, A. G.; Khusid, S. Ye.

ORG: Central Automation Laboratory (Tsentral'naya laboratoriya avtomatiki); TsNIIChM; Magnitogorsk Metallurgurical Combine (Magnitogorskiy metallurgicheskiy kombinat)

TITLE: Experimental operation of an automatic system for controlling strip thickness on the 2500 continuous sheet mill 14 1

SOURCE: Stal', no. 1, 1966, 50-55

TOPIC TAGS: hot rolling, automatic control equipment, steel

ABSTRACT: An automatic control system was developed for regulating the thickness of steel strip, consisting of regulators of the gaps between the work rolls, and of a system stabilizing the tension of the strip between the stands. The automatic control system yielded satisfactory performance data on the 2500 continuous hot-rolling mill, and for the majority of the strip profiles studied, decreased the longitudinal variation in thickness and maintained a more accurate nominal strip thickness than had been possible before. In the presence of the automatic control system, the strips are rolled with deviations of no more than ±0.05 mm (with the exception of

UDC: 621.771.23:65.011.56

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ACC NR: AP6017639

short rear portions of the strip, where the positive deviation reaches 0.1-0.15 mm). Without the automatic control system, the length of the strip ends thickened by 0.3-0.2 mm reaches 50-100 m. The decrease in the length of thickened portions of the strip and a more accurate control of nominal strip thickness result in a 1.5% average increase in strip length. Orig. art. has: 6 figures and 2 tables.

SUB CODE: 11,13/ SUBM DATE: none/ ORIG REF: 002/ OTH REF: 001

CHISTOKLETOV, Petr Dmitriyevich; LYAMBEK, V.A., red.; TRUKHANOVA, A.N., red.

[Collection of accounting problems on collective farms; a comprehensive problem] Sbornik zadach po bukhgalterskomu uchetu v kolkhozakh; skvoznaia zadacha. Moskva, Statistika, 1964. 134 p. (MIRA 18:1)

CHISTOKLETOV, Petr Dmitriyevich; LYAMBEK, V.A., red.; TRUKHANOVA, A.N., red.

[Collection of problems in accounting on collective farms] Sbornik zadach po bukhgalterskomu uchetu v kolkhozakh. Moskva, Statistika, 1964. 223 p. (MIRA 18:7)

LYAMETS, F.

The main objective must be practical assistance to enterprises.
NTO 2 no.3:49-50 Mr '60. (MIRA 13:6)

1. Predsedatel' soveta pervichnoy organizatsii Nauchno-tekhnicheskogo obshchestva parovoznogo depo Otrozhka Yugo-Vostochnoy zheleznoy dorogi (for Lyamets).
(Otrozhka--Railroad research)