RODIONOVSKAYA, E. I.

MD

Chemical method for determination of benzylpenicillin. S. I. Lur'e, and E. I. Rodionovskaya. *Trudy Vsesoyuz. Nauch. Issledovatel. Inst. Antibiotikov* 1953, No. 1, 20–2.—Dissolve 70–80 mg. of penicillin to be analyzed in 2 ml. cold H_2O. Add 2 ml. of a soln. of 3 ml. AmOAc satd. with 0.000 g. 1-ethylpiperidine (I) salt of benzylpenicillin (II) cooled to 0° and add 0.5 ml. of a 24% soln. of H_3PO_4 cooled to 0°. Shake well, centrifuge, remove the AmOAc layer, and dry by filtering through anhyd. Na_2SO_4. Add 1 ml. of a water-free filtrate of a soln. prepd. by mixing 1 ml. of a soln. of 2 ml. dry acetone satd. with 0.008 g. of I salt of II with 0.5 ml. of a soln. prepd. by dissolving 0.3 ml. of I in 1.2 ml. of dry AmOAc and satg. with 0.0048 g. of I salt of II. Leave at low temp. overnight, decant the liquid, and filter through a weighed filter. Dry the ppt. remaining in the centrifuge tube and the filter *in vacuo* at room temp. for 1–1½ hrs. and weigh.

V. Mihajlov

(1)

RODIONOVSKAYA, E.I.

TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; GORDINA, Z.V.; SERGEYEVA, L.N.

Producing a crystal erythromycin base. Med.prom. 11 no.7:14-19 Jl '57. (MLRA 10:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov
(ERYTHROMYCIN)

TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; BAYKINA, V.M.; KHOKHLOV, A.S.

Preliminary comparative data on the properties of antibiotics of the streptothricin group obtained from various types of actinomycetes [with summary in English]. Antibiotiki 3 no.6:36-41 N-D '58. (MIRA 12:2)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS, effects.
streptothricin group of antibiotics obtained from various strains of Actinomyces, comparison (Rus))

RODIONOVSKAYA, E. I.

30(1) SOV/30-59-1-50/57

AUTHORS: Afrikyan, E. K., Kuchayeva, A. G., Candidates of Biological Sciences

TITLE: Use of Antibiotics in Plant Cultivation (Primeneniye antibiotikov v rasteniyevodstve)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 1, pp 142-143 (USSR)

ABSTRACT:
A conference dealing with this subject took place in Yerevan
from 5 to 13 October, 1958; it had been called by the Institut
mikrobiologii Akademii nauk SSSR (Microbiological Institute
of the Academy of Sciences USSR), the Vsesoyuznyy institut
sel'skokhozyaystvennoy mikrobiologii VASKhNIL (All-Union
Institute for Agricultural Microbiology of the VASKhNIL) and
the Sektor mikrobiologii Akademii nauk Armyanskoy SSR (Department for Microbiology of the Academy of Sciences of the
Armyanskaya SSR).
K. Kh. Chkyinkryan spoke about microbe metabolites which
promote the development of higher plants.
K. M. Pidoplichko reported on investigations of several years'
duration carried out by Ukrainian mycologists on soil fungus
flora and its utilization in the fight against agricultural
plant diseases.
V. I. Bilay, S. F. Morkovxis dealt with the utilization of the
fungus Trichoderma in fighting the diseases of cotton bushes,
potatoes and some other agricultural breeds.
R. O. Mirzabekyan's report dealt with the excretions of
actinomycetes which produce active antibiotics against the
carriers of potato wart disease and diplodia in maize.
S. Orynberov, Y. M. Karunina spoke about the utilization of
the actinomycetes antagonists in fighting potato ring rot and
mucous bacteria in cabbage.
G. M. Kublanovskaya reported on the effect of preparations from
cultures of actinomycetes to prevent wilt of the cotton bush.
V. G. Tumanyan, E. K. Afrikyan, R. A. Bobikyan, Ye. T. Nikitina

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spoke about the successful utilization of several bacteria
against diseases of vegetable cultures and potato wilt.
Yu. M. Tessyakovskaya, O. G. Shirokov, A. D. Nalbandyan dealt
with the utilization of epiphyte microflora in fighting several
fungus diseases in plants.
D. M. Trakhtenberg, E. I. Rodionovskaya, L. P. Staryagina,
U. G. Ghevontyan mentioned results obtained in investigations
of phytobacteriomycene as well as its utilization in fighting
diseases occurring in cotton bushes and beans.
R. M. Galachiyan, Ye. P. Protsenko, A. G. Kuchayeva, R. A.
Tkalyalkina tried the effect of antibiotic preparations as
tomatoseed steeps against bacterial cankers in fighting diseases
of decorative plants.
Ye. Ya. Barbha, K. I. Bal'tyukova described the investigation
of plant antibiotics.
Z. V. Bekker, A. R. Silayev spoke about the production of the
preparations "griseoful'vin" and "trikhotetsin" and their effect on fungus carriers of diseases in cabbage, wheat and
water melons.
A. G. Kuchayeva reported on results achieved in the utilization
of antibiotics against unpaired silk moths.

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V. P. Izrail'skiy, N. D. Buyanova, M. D. Kulikovskaya dealt
with the formation of phytopathogen forms of bacteria resistant
to antibiotics.
K. A. Vinogradova, N. S. Agre described a method of rapid determination of the effect of antibiotics on plants. The
participants in the conference found the work carried out in
this field in the USSR insufficient. The organization of an
industrial production of antibiotics and microbe preparations
for the purpose of their large-scale practical introduction in
agriculture was pointed out as necessary. The necessity of an
intensification of joint investigation of the growth stimuli
and the development of plants of microbial origin was further
pointed out. The importance of coordination of work for purposes
of research and utilization of antibiotics in plant breeding
was emphasized as well as the holding of periodical conferences
dealing with this problem.

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TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; KLEYNER, G.I.; SHTAMER, V.Ya.

Study of some physicochemical properties of oleandomycin. Antibiotiki 10 no.11:982-989 N '65. (MIRA 19:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov, Moskva, i Rizhskiy zavod medpreparatov. Submitted January 16, 1965.

SEMENOVA, V.A.; SOLOV'YEVA, N.K.; RUYANOVSKAYA, I.S.; DMITRIYEVA, V.S.; TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; CHERENKOVA, L.V.; KHOKHLOV, A.S.; BYCHKOVA, M.M.; GINZBURG, G.N.

Antibiotic phytobacteriomycin, effective in controlling bacteriosis in plants. Trudy Vses. inst. sel'khoz. mikrobiol. 17:131-139 '60. (MIRA 15:3)

(Antibiotics) (Bacteria, Phytopathogenic)

TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.

Production and properties of certain derivatives of erythromycin. Antibiotiki 5 no.3:22-24 My-Je '60. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ERYTHROMYCIN)

TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; GORDINA, Z.V.; ROSTOVTSEVA, L.I.; KLEYNER, G.I.; NAGLE, A.M.

Studies on the properties and chemical purification of nystatin. Antibiotiki 5 no. 5:9-14 S-O '60. (MIRA 13:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov (for Trakhtenberg, Rodionovskaya, Gordina and Rostovtseva).
2. Rizhskiy zavod meditsinskikh preparatov (for Kleyner and Nagle).

(NYSTATIN)

TRAKHTENBERG, D.M.; RODIONOVSKAYA, E.I.; GORDINA, Z.V.; ROSTOVTSEVA, L.I.; KLEYNER, G.I.; NAGLE, A.M.; LAZDYNYA, V.Ya.

Isolation and chemical purification of nystatin. Part 1: Isolation of nystatin from moist mycelium. Med. prom. 14 no.8:18-23 Ag '60. (MIRA 13:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov i Rizhskiy zavod meditsinskikh preparatov.
(MYCOSTATIN)

BEKKER, Z.E., BEREZINA, Ye.K. VEYS, R.A., MILOVANOVA, S.N., OSTROUKHOV, A.A. RODIONOVSKAYA, E.I., TRAKHTENBERG, D.M., KHOKHLOV, A.S., CHAYKOVSKAYA, S.M.

Velutinin, an antibiotic from the mold fungus Aspergillus velutinus. [with summary in English]. Antibiotiki 3 no.4:104-105 Jl-Ag '58 (MIRA 11:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut antibiotikov.
(ANTIBIOTICS)

USSR / Soil Science. Physical and Chemical Properties of Soils. J-2

Abs Jour: Ref Zhur-Biol., No 8, 1958, 34331.

Author : Rodionovskiy, F. K.
Inst : Not given.
Title : Effect of Methods of Cultivation Upon Water Regimen of the Soil.

Orig Pub: Zemledeliye, 1957, No 8, 43 - 45.

Abstract: On ordinary chernozom soil of the Rostovskaya Oblast under cultivations of peas, wheat and corn - the optimum condition of the humidity of soil was observed under dump plowing 30 cm deep and additional deepening by 15 cm. Field under non-dump plowing 45 to 50 cm deep, had a higher reserve of moisture in the bed of 1.5 m (by 30mm more) in comparison to the field under dump plow-

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RODIONOVSKIY, F. K.

Doc Agr Sci - (diss) "Effect of separate crops in field crop on the fertility of soils in the zone of insufficient moisture (western province) of the Rostovskaya Oblast." Voronezh, 1961. 41 pp; (Ministry of Agricultue RSFSR, Voronezh Agri Inst); 150 copies; price not given; (KL, 7-61 sup, 249)

RODIONOVSKIY, F. K.

Grasses

Structure-forming role in soils of perennial grass mixtures, and their components. Pochvovedenie, no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

MARKOV, Nikolay [illegible]; [illegible], [illegible], red.

[Lipetsk; a brief guide] Lipetsk; kratkii spravochnik. Lipetsk, Lipetskoe knizhnoe izd-vo, 1962. 62 p. (MIRA 18:9)

RODIONOVSKIY, M.

Liquid molasses yeast as a valuable protein feed. Mias. ind. SSSR 32 no.3:36 '61. (MIRA 14:7)

1. Gul'kevichskiy otkormochnyy sovkhoz.
(Krasnodar Territory--Yeast)

RODIONOVSKIY M.

Feeding cattle with beet pulps. Mias.ind.SSSR 31 no.1:38-39 '60. (MIRA 13:5)

1. Gul'kevicheskiy otkormochnyy sovkhoz.
(Caucasus--Cattle--Feeding and feeds)

GRUDEV, D.I., doktor sel'skokhoz. nauk; SADOVNIKOVA, N.V., starshiy nauchnyy sotrudnik; SMIRNITSKAYA, N.Ye.; KARAVAYEVA, S.G.; KOTOV, P.Ya.; RODIONOVSKIY, M.S.; KRYLOVA, N.N., kand. biol. nauk; KRASIL'NIKOVA, T.F., inzhener-khimik; SOLNTSEVA, G.L., aspirant; KUZNETSOVA, V.V., mladshiy nauchnyy sotrudnik; Prinimali uchastiye: BAZAROVA, K.I.; MALYGINA, M.I.; BUDINSKAYA, S.Z.; SINITSYNA, I.K.

Comparative evaluation of the fattening and slaughtering characteristics of Shorthorn and Kalmyk steers and physico-chemical indices of their meat. Trudy VNIIMP no.16:5-23 '64. (MIRA 18:11)

GRIDEV, D.I., doktor sel'skokhoz. nauk; KOTOV, P.Ya., nauchnyy sotrudnik; RODIONOVSKIY, M.S., nauchnyy sotrudnik; SYRKIN-SHKIOVSKIY, Ye.A., nauchnyy sotrudnik; UNANOV, G.S., nauchnyy sotrudnik

Use of the tissue preparation VNIIMP-3 in the fattening of swines. Trudy VNIIMP no.15:13-19 '63. (MIRA 17:5)

NOWIKOW, A.; RODIONOW, W.; NIEMYRJA, A.

The effectiveness of surgical therapy of pulmonary cancer.
Nowotwory 13 no.1:19-30 '63.

1. Z Naukowo-Badawczego Instytutu Onkologii im. P. Hercena
Dyrektor: prof. dr med. A. Nowikow.
(LUNG NEOPLASMS) (PNEUMONECTOMY)
(NEOPLASM STATISTICS) (NEOPLASM THERAPY)

RODIONOVIYEV, V. M.; BELOV, V. N.; KORE, S. A.

"On the Problem of Orientation of the Tert-Butyl Group During Introduction into the Aromatic Ring," J Gen Chem USSR 23, (11) 1802-1808 (1953).

Evaluation B-85325, 14 Jun 55

ROSTA, Janos, dr.; RODIS, Istvan, dr.

Our recent informations on the pathology of Down's syndrome.
Gyermekgyogyaszat 15 no.4:105-112 Ap'64

1. A Budapesti Orvostudomanyi Egyetem I.sz. Gyermekklinika (Igazgato: Dr. Gegesi Kiss, Pal, akademikus, egyetemi tanar) es az Universitats-Kinderklinik, Basel (Igazgato: Prof. Dr. A.Ikettinger) (Chromasoma labor, vezeto: Priv. Doz. G.Staleder) kozlemenye.

ACCESSION NR: AT4039441 S/2879/64/000/000/0837/0842

AUTHOR: Roditelev, K. A. (Moscow)

TITLE: Stability of reinforced cylindrical shells under axiosymmetrical loads

SOURCE: Vsesoyuznaya konferentsiya po teorii obolochek i plastin. 4th, Yerevan, 1962. Teoriya obolochek i plastin (Theory of plates and films); trudy* konferentsii, 1964, 837-842

TOPIC TAGS: shell, cylindrical shell, chemical milling, reinforced cylindrical shell, rib, stringer, shell stability, axiosymmetrical stress, compression

ABSTRACT: The author considers the problem of the stability of a cylindrical shell, reinforced by means of stringers and enclosed between transverse truss members, under the influence of axial compression or the joint effect of axial compression with internal or external pressure. The problem is solved in a linear formulation, by the energy method. It is assumed that the loss of stability by the skin and the stringers occurs simultaneously. In this manner, the stability of the reinforced cylindrical shell is reduced to an investigation of the stability of the skin, on which radial forces dependent on the rigidity of the stringers are acting along the contact line. For the assignment of the number of stringers the author uses the results of the investigations by Roditelev (K. A. Roditelev. Ustoychivost'

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gladkikh tsilindricheskikh obolochek pri osesimmetrichn*kh nagruzkakh. Trudy* Vsesoyuznoy konferentsii po teorii obolochek i plastin, L'vov, 1961); that is, the number of halfwaves in the circumferential direction is determined on the basis of given R, l and h. In order to increase the critical stress in the skin the stringers must be arranged at a distance less than the lengths of the halfwaves in the circumferential direction; i.e., the number of stringers must not be less than four times the number of halfwaves. The radial displacement is selected in the form:

$$w = f_0 + f_1 \sin\frac{\pi x}{l} \sin\frac{ny}{R} + f_2 \sin^2\frac{\pi x}{l}. \qquad (1)$$

Using this equation the following are determined: the strain energy of the center surface and bending, the work of external forces applied to the ends of the shell, the work of internal or external pressure, and also the work of radial forces from the stringers to the skin. The investigations made in the first part of the paper permit the determination of the least weight of a reinforced cylindrical shell. Formulas are given by means of which the dimensions of stringers of square cross section may be determined (such a stringer configuration is characteristic of shells manufactured by chemical milling). The problem

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ACCESSION NR: AT4039441

of the simulation of reinforced cylindrical shells is briefly discussed and it is shown that the indispensable condition in this connection is that the critical compression stresses and the stresses from internal or external pressure be equal in the natural shell and in its model. A comparison of theoretical and experimental data showed that the rated value of the critical load differs from the experimental by no more than 6%. Orig. art. has: 18 formulas and 1 figure.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 14May64 ENCL: 00

SUB CODE: AS NO REF SOV: 001 OTHER: 000

Card 3/3

S/879/62/000/000/053/088
D234/D308

AUTHOR: Roditelev, K. A. (Moscow)

TITLE: Stability of cylindrical shells subject to axially symmetric loads

SOURCE: Teoriya plastin i obolochek; trudy II Vsesoyuznoy konferentsii, L'vov, 15-21 sentyabrya 1961 g. Kiev, Izd-vo AN USSR, 1962, 322-327.

TEXT: The problem is considered in nonlinear formulation, for two types of shells: 1) shells which lose stability along one half-wave parallel to the generatrix, 2) those losing stability along more than one half-wave. The radial displacement takes the form:

$$w = f_0 + f_1 \sin \frac{\pi x}{l} \sin \frac{ny}{R} + f_2 \sin^2 \frac{\pi x}{l} \qquad (1)$$

in the first case and

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$$w = f_0 + f_1 \cos\frac{\pi x}{\lambda_x}\cos\frac{ny}{R} + f_2\left(\cos\frac{2\pi x}{\lambda_x} + \cos\frac{2ny}{R}\right) \qquad (2)$$

in the second. Dimensionless quantities are introduced: $\bar{\sigma} = \sigma R/Eh$, $p = pR^2/Eh^2$. Graphs and tables of various dependences between dimensionless parameters are given for short and long shells subject to axial compression with or without external or internal pressure. There are 5 figures and 2 tables.

RODITI, V.V.

Measurement of industrial radio interference. Elektrosviaz' 10 no.2:36-40 F '56. (MLRA 9:6)
(Radio--Interference)

RABINOVICH, M.B., inzhener; RODITI, V.V., inzhener.

Eliminating radio interferences created by telegraph installations.
Vest.sviazi 15 no.12:8-10 D '55. (MLRA 9:3)
(Radio--Interference) (Telegraph lines)

RODITI, V.V.; GARTSENSHTEYN, M.S.

Receiving antennas and industrial radio noise. Radiotekhnika 11 no.9:21-27 S '56. (MLRA 9:10)
(Radio--Antennas)

1. MENDELEVICH, Ya. A.; RODITI, V. V.

2. USSR (600)

4. Radio - Interference

7. Elimination of radio interferences caused by automobile traffic. Avt. trakt. prom. No. 12, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

RODITI, V.V. and RABINOVICH, M.B.

SUPPRESSION OF RADIO INTERFERENCE CREATED
BY TELEGRAPH COMMINUCATIONS EQUIPMENT.

Vestnik Svyazi, No 12, Moscow, 1955, pp 8-10

Translation M-1249, 27 Sep 56.

RODITI V.V.

USSR / Radio Physics. Reception of Radio Waves. I-7

Abs Jour : Ref Zhur - Fizika, No 3, 1957, No 7342

Author : Roditi, V.V., Gartsenshtoyn, M.S.
Title : Receiving Antennas and Industrial Radio Interference

Orig Pub : Radiotekhnika, 1956, 11, No 9, 21-27

Abstract : Analysis of the problem of the effective heights of indoor antennas and the noise transfer coefficient as fundamental parameters, affecting the quality of the reception of radio broadcasts in municipal conditions in the presence of industrial noise. Data are given on the measurements of these quantities in certain cities of the USSR and on the analysis of the results using the method of mathematical statistics.

Card : 1/1

AUTHORS: ~~Roditi, V.V.,~~ 108-13-6-6/11
Gartsenshteyn, M.S.

TITLE: The Effect Attained When Using the Standards in Force in the USSR for Industrial Radio Disturbances for the Purpose of Improving Radio and Television Reception (Effektivnost' primeneniya deystvuyushchikh v SSSR norm industrial'nykh radiopomekh dlya uluchsheniya priyëma radioveshchaniya i televideniya)

PERIODICAL: Radiotekhnika, 1958, Vol. 13, Nr 6, pp. 59-67 (USSR)

ABSTRACT: By taking into account the statistical character of industrial radio disturbances and other factors influencing the degree of the effect exercised by disturbances or noises in radio reception, a method of determining the probability of the disturbing effect exercised by disturbances of the source is given in accordance with the standards in force (Ref 1). Statistical investigations (Refs 2,3,4) showed that, expressed in decibels, the distribution of the amounts of disturbance voltages at the terminals of the source, of the disturbance-transmission factors, and of the efficacious heights of the reception antennae obey the normal standards with sufficient accuracy. First, the formula (5) for the standardized deviation is derived. Next, the disturbance

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Trans. mdr: VNORiE

probability is calculated 1.) of electric household apparatus, 2.) of high-frequency generators in industry, 3.) of electric communications, and 4.) of automobiles. - Re. 1.) The ratio between signal and disturbance N_1 = 40 db is considered to be the condition for good reception. This quantity was also recommended by the MKKR and SMKPR and was recommended also in this case for most calculations. For the reception of black- and-white television it is advisable in view of the standards in force in the USSR to assume the value of 47 db. - Re. 2.) The measuring results obtained by the State Radio Inspectorate at the Ministry of Post and Telecommunications were evaluated by the statistical method. The investigation of the character of the distribution of the voltage level of residual disturbance in the network at a distance of 50 m from the generators showed that distribution obeys the normal laws. A control carried out in accordance with the agreement-criterion set up by Kolmogorov-Smirnov confirmed the fact that a deviation from this law is not of essential importance. - Re. 3.) It may also be assumed (particularly in the case of trolley buses) that a weakening of the level of the disturbance field with the distance from the standardized point (10 m from the line) to the point of

wireless reception can be expressed by the following empirical formula:

$$U = U_{10} \left(\frac{1}{10} \right)^{-1,5}$$

where U and U_{10} denote the disturbance field levels expressed in decibels at a distance of 1 and 10 m respectively from the line. Up to a distance of 90 m the error will not exceed 2 db. - Re. 4.) The residual disturbances caused by automobile traffic exercise no disturbing effect on radio reception within the ranges of long-, medium-, and short waves, but they are very noticeable in the range of ultrashort waves and in some cases they also disturb reception in television. In conclusion efficacy is evaluated by the application of 1954 standards for some groups of industrial radio disturbances. By means of the calculation method described here and applying the average statistical parameters, efficacy can be evaluated by the application of standards in force for industrial radio disturbances according to individual groups of disturbance sources. The standards for residual

The Effect Attained When Using the Standards in Force in the USSR for Industrial Radio Disturbances for the Purpose of Improving Radio- and Television Reception

108-13-6-6/11

disturbances of electric communication systems and automobile traffic must be increased. The present work was compiled according to the results of investigations carried out by the authors at the Scientific Research Institute of the Ministry for Postal and Telecommunications. There are 4 figures, 6 tables, and 4 references, 3 of which are Soviet.

SUBMITTED: September 1, 1957

1. Radio interference---Statistical analysis 2. Radio reception ---USSR 3. Television reception---USSR

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84377

S/106/60/000/006/010/013
A169/A026

6.4100(2204, 1024, 1144)

AUTHOR: Roditi, V.V.

TITLE: The Parameters of an Open-Air Communication Line at High Frequencies

PERIODICAL: Elektrosvyaz', 1960, No. 6, pp. 54 - 57

TEXT: The author describes the results of an experimental investigation of the parameters of a two-wire open-air communication line in the frequency range of 150 kc to 10 Mc. The measurements of the attenuation constant (per km) were carried out by the author in connection with an investigation of the radio noise propagation along wire lines, which was conducted by the NII of the Ministry of Communications. One of the experimental communication lines of TsNIIS of the Ministry of Communications was used for this purpose. The constructional data of this 206 m long line are described. The 4 mm copper wires (spaced 20 cm apart) were tied to the insulators by caprone strings to reduce the lumped capacitance to the ground and between wires. This measure reduced simultaneously the effect of periodic line discontinuities to a considerable extent. The measurements were performed under no-load and short-circuit conditions at frequency

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S/106/60/000/006/010/013
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The Parameters of an Open-Air Communication Line at High Frequencies

intervals of 50 kc. The input impedance was measured with the aid of a Marconi high-frequency bridge. The attenuation constant (per km) was calculated from the results of measurements of the impedance moduli (shown graphically in Fig. 1) and the phase angle of the input impedance. The results of these calculations were compiled in a graph (Fig. 2). To estimate the correctness of the measurements, an additional theoretical calculation was performed. The attenuation constant of the experimental line was calculated for a frequency of 1 Mc by a conventional method using the primary line parameters. The insulator conductance value was taken from measurement data of TsNIIS for ТФ-2 (TF-2) insulators. At a frequency of 1 Mc, the attenuation constant was 0.0482 nepers/km according to theoretical calculations, and 0.0463 nepers/km according to the experimental investigation. The phase shift (per km) in dependence on the frequency was determined from the line input impedance measurements under no-load and short-circuit conditions. The values obtained were compiled in Table 1. Simultaneously, the phase shift was determined by theoretical calculations. The deviation of results obtained by measurements from those by theoretical calculations does not exceed 1.6% on the average. In conclusion, the author points out that the open-air

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S/106/60/000/006/010/013
A169/A026

The Parameters of an Open-Air Communication Line at High Frequencies

communication line of the aforementioned type (using caprone strings for tying wires to insulators) has small phase shift values (per km) and a relatively small attenuation constant, rising evenly with increasing frequencies. Consequently, the line can be successfully used for establishing communication channels in the frequency range of 150 kc to 10 Mc. The author expresses his gratitude to A.D. Anapasenko and A.A. Naletov, scientific workers of TsNIIS, for their valuable advice concerning the performance of this work. There are 2 figures, and 1 table.

SUBMITTED: December 19, 1959

Card 3/3

RODITI, V.V.

Interference rejection of radiobroadcast receivers at the power supply end. Elektrosviaz' 19 no.5:36-39 My '65.
(MIRA 18:6)

SHKLOVER, G.G., inzh.; RODIVILIN, M.D., inzh.; TITIVKIN, A.V., inzh.

Vacuum condensation of steam in spiral heat exchangers manufactured by the Kaluga Turbine Factory. Energomashinostroenie 9 no.8: 4-7 Ag '63. (MIRA 16:8)

(Heat exchangers)

4191
S/191/62/000/011/006/019
B101/B186

15.8570

AUTHORS: Akutin, M. S., Korshak, V. V., Rodivilova, L. A., Vinogradova, S. V., Budnitskiy, Yu. M., Valetskiy, P. M., Lebedeva, A. S.

TITLE: New data on processing and properties of polyarylates

PERIODICAL: Plasticheskiye massy, no. 11, 1962, 20-26

TEXT: This paper deals with experiments for determining the optimum processing conditions of polyarylates from isophthalic acid and diane (ID), terephthalic acid and diane (TD), and the mixed polymer ITD (ratio isoto terephthalic acid 1:1). Preliminary experiments showed that the interfacial polycondensation in more concentrated solutions than hitherto usual gave polymers with low molecular weight: thus 13.5% by weight of diane in NaOH solution + 15-20% by weight of isophthalic dichloride in methylene chloride yielded a polymer with MW ~18,000. A better result was obtained for ITD in the presence of 1% triethyl benzyl ammonium chloride as catalyst: the reduced viscosity in tricresol was 0.58. Injection-molded products were made from ID, TD, and ITD, and tested. Results:

Card 1/3

New data on processing and ...

(1) At 280-360°C, ID and TD can be processed only in inert gas atmosphere since thermal destruction occurs if air is present. ITD can still be processed at these temperatures in the presence of air. (2) The strength of products depends on the molecular weight (or on the reduced viscosity). Adequate tensile strength (~ 400 kg/cm^2) is attained above η_{red} = 1.0. Products with a tensile strength of 850-900 kg/cm^2 were obtained from ITD with η_{red} = 1.9-2.0. (4) The tensile strength drops from 820 kg/cm^2 at 280°C to 480 kg/cm^2 at 340°C. (5) The effect of the molding time becomes manifest the tensile strength dropping from 850 kg/cm^2 after 10 min to 300 kg/cm^2 after 30 min molding time. (6) A change in molding pressure has no effect on the tensile strength. (7) Increasing the temperature of the mold from 80 to 160°C increases the tensile strength from 650 to 820 kg/cm^2, but a further increase (to 200°C) reduces the tensile strength. (8) A study of the chemical stability of injection-molded specimens and films showed: good stability to mineral and organic acids, oxidants, and dilute alkalis; poor stability to concentrated alkalis, particularly ammonia; swelling in some solvents, injection-molded specimens being more stable than films. The chemical stability of polyarylates resembles that of polycarbonates, and is inferior to that of polyethylene terephthalate

Card 2/3

New data on processing and ... S/191/62/000/011/006/019
B101/B186

only as regards the swelling in some organic solvents. There are 8 figures and 6 tables.

Card 3/3

85113

S/191/60/000/007/006/015
B004/B056

15807

AUTHORS: Rayburd, S. M., Rodivilova, L. A., Vlasova, K. N., Shabadash, A. N., Igonin, A. A.

TITLE: Investigation of the Hardening Process of Methylol Polyamide Resins

PERIODICAL: Plasticheskiye massy, 1960, No. 7, pp. 20 - 22

TEXT: In Ref. 2, the authors supposed that the hardening of methylol polyamides takes place by the formation of ether cross links (CH_2-O-CH_2) or methylene cross links (N-NH_2-N). The present paper gives a report on the spectral-analytical investigation of the hardening process. The following substances were used: polyamide resin of the type 54/10 (molecular weight 25,000) obtained by polycondensation of caprolactam with АГ-соль (AG-) salt, further МПП-20 (MPL-20) and АМП (AMP) methylol polyamides of the type ПФЭ-2/10 (PFE-2/10), obtained by treatment of polyamide resin 54/10 with paraform in ethanol or benzyl alcohol. Structure, content of methylol and methoxyl groups, and solubility are given in a table.

Card 1/2

85143

Investigation of the Hardening Process of Methylol Polyamide Resins

S/191/60/000/007/006/015
B004/B056

Figs. 1,2 show the infrared spectra within the range 2800 - 3300 cm^{-1} and 1000 - 1300 cm^{-1} before and after hardening (30 hours heating to 150°C) of the resins, which were recorded by means of a UKC-11 (IKS-11) recording spectrometer. The absorption bands are discussed. After 30 hours of hardening, the IR-spectra of the various resins were rather similar to one another. The bands of the methylol- and ether groups (1000 - 1100 cm^{-1}) vanished during heating; no bands characteristic of the CH_2-O-CH_2 groups occurred. Therefore, cross linking took place by the formation of methylene bonds. The authors mention a paper by D. N. Shigorin. There are 2 figures, 1 table, and 6 references: 5 Soviet and 1 US.

Card 2/2

RODIVILOVA, L. A., CAND TECH SCI, "SYNTHESIS AND ~~INVESTIGATION~~ study OF POLYAMIDES WITH INCREASED ADHESIVE PROPERTIES." MOSCOW, 1960. (MIN OF HIGHER ED USSR, MOSCOW ORDER OF LENIN CHEMICO-TECHNOL INST IM D. I. MENDELEYEV). (KL, 3-61, 219).

15.1124

66565
SOV/81-59-15-55458

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 15, p 495 - 496 (USSR)

AUTHORS: Vlasova, K.N., Rodivilova, L.A.

TITLE: The Methylolpolyamide Glue PFE-2/10

PERIODICAL: Vestn. tekhn. i ekon. inform. Mezhotrasl. labor. tekhn.-ekon. issled. i nauchno-tekhn. inform. N.-i. fiz.-khim. in-ta im. L.Ya. Karpova, 1958, Nr 5 (10), pp 21 - 24

ABSTRACT: The methylolpolyamide glue of type PFE-2/10 (I) (25-30% alcohol-water solution of polyamide resin treated by formaldehyde) with a glue viscosity of 20 - 60 poise retains the positive properties of polyamide resins, has a good adhesion to many materials and is used for gluing at 20°C and increased temperatures. It can be used in the aviation, machine building, leather-footwear, printing, food and other industries. It can be used for strengthening artificial leather and low-quality natural leather as well as low-quality types of paper. On the base of methylolpolyamide resin and fillers (glass and caprone fabric), laminated plastics are obtained by the method of vacuum molding. It is recommended for the production of polishing material used in the production of ball bearings.

Card 1/2

4

66565

SOV/81-59-15-55458

[illegible] thylolpolyamide Glue PFE-3/10

It has been noted that L in combination with polyethylene gives a material which has high elastic properties at low temperatures, and in combination with phenolformaldehyde resins the methylolpolyamidephenolformaldehyde glue PFE-3 is obtained which can be used for the gluing of steel combinations.

Z. Ivanova

Card 2/2

RODIVILOVA, L.A.

32358
S/191/62/000/001/002/006
B145/B110

158112

AUTHORS: Korshak, V. V., Akutin, M. S., Vinogradova, S. V., Rodivilova, L. A., Valetskiy, P. M., Lebedeva, A. S., Salazkin, S. N.

TITLE: Polyarylates - new thermostable polymers

PERIODICAL: Plasticheskiye massy, no. 1, 1962, 9-13

TEXT: A survey of the properties of polyarylates is given. They are best synthetized from bifunctional phenols and dicarboxylic acid chlorides. Some of the synthetized polyarylates and their softening temperatures are given in Table 1. The great number of rings in the polymer ensure high resistance to most organic solvents as well as to gasolines and oils. At room temperature, the polyarylate ИД (ID) is stable against H_2O_2, dilute and concentrated caustic soda solutions, acetic acid, formic acid, nitric acid, and sulfuric acid. The effect of dilute and concentrated ammonia solutions considerably reduces the molecular weight of ID. Polyarylates on the basis of phenolphthalein are readily soluble in a number of solvents, which facilitates the production of foils. At the NIIPM it was

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32358
S/191/62/000/001/002/006
B145/B110

Polyarylates - new thermostable ...

established that the polyarylates TA(TD) and ID withstand high temperatures. Decomposition increases with rising temperature, at first slowly and then sharply at about 400°C. The oxidation of ID sets in at 250°C and proceeds slowly. Measurement of breakdown voltage, temperature dependence of tan δ, dielectric constant, and volume resistivity for some polyarylates prove that they are better dielectrics than polyethylene terephthalate, polycarbonate, etc. Polyarylates have good mechanical properties at various temperatures. Working processes are being elaborated at present. Specimens of mixed polyarylates were obtained by pressure casting, the tensile strength of which reached 850 kp/cm^2. Specimens sprayed on metal showed an adhesion to metal of 75 to 150 kp/cm^2. Work is also in progress on polyarylates with double bonds and free functional groups. They might be used as a basic material for the production of varnishes, glues, glass-reinforced plastics, and foam plastics. There are 5 figures, 6 tables, and 5 Soviet references.

Table 1. Softening temperature of polyarylates of different structures. Legend: (1) polyarylate; (2) structure of the chain link; (3) softening temperature in °C; (4) TD; (5) ID; (6) TG; (7) IG; (8) TR; (9) IR; (10) TF; (11) IF; (12)-(14) ITD; (15) IDR; (16) TDR; (17) IFD; (18) IAD; * the

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3

32358
S/191/62/000/001/002/006
B145/B110

Polyarylates - new thermostable ...

molecular ratio of the initial dicarboxylic acid chlorides related to 1 mole of diol is given in parentheses; * * the molecular ratio of the initial diols related to 1 mole of dicarboxylic acid chloride is given in parentheses.

X

Card 3/5

RODIVILOVA, L.A.; BATALOVA, L.G.; VLASOVA, K.N.; KANAVETS, I.F.

Effect of the length and nature of a side alcohol radical on the structural and mechanical properties of methylolpolyamides. Plast. massy no.6:14-19 '60. (MIRA 13:11)
(Polyamides) (Alcohols)

RODIVILOVA, L. A. and AKUTIN, M. S. (USSR)

O geterogennom metode polikondensatsii
On the heterogeneous method of the polycondensation
IUPAC S I:228-36

report presented at the Intl. Symposium on Macromolecular Chemistry, Moscow, 14-18 June 60.

ACCESSION NR: AP4039942 S/0191/64/000/006/0013/0016

AUTHOR: Rodivilova, L. A.; Akutin, M. S.; Morozova, S. A.; Pshenitsina, V. P.

TITLE: Thermal aging of film materials based on type D-4 polyarylates

SOURCE: Plasticheskiye massy*, no. 6, 1964, 13-16

TOPIC TAGS: polyarylate, D 4 polyarylate, thermal stability, diphenylolpropane terephthalic acid condensate, diphenylolpropane isophthalic acid condensate, isophthalic terephthalic acid ratio, film strength, dielectric property, IR spectra, ester bond, methyl bond rupture

ABSTRACT: The thermal stability of type D-4 polyarylate films (condensation products of diphenylolpropane and a mixture of terephthalic and isophthalic acids) was examined. No change in film strength or dielectric properties was observed on prolonged heating at 70-100C. At 150 and 200C there was no change in strength during the initial period, the strength then increased 14-16% and then gradually decreased. The thermal stability is dependent on the isophthalic:terephthalic acid ratio in the polyarylate, a decrease in the terephthalic acid increased the thermal stability. It was established by IR spectroscopy that the D-4 polyarylate

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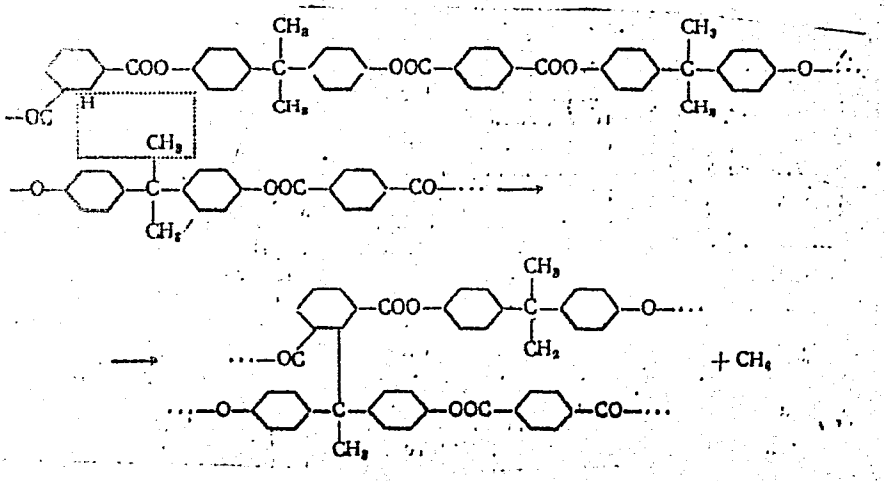
ACCESSION NR: AP4039942

does not undergo structural changes at 150C; at 200C the structural changes are primarily associated with the rupture of the $-CH_3$ group from the quaternary carbon atom in diphenylolpropane to form methane, thus:



Card 2/3

ACCESSION NR: AP4039942

The ester bonds are stable under these conditions. Orig. art. has: 6 figures, 3 tables and 1 equation.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00

SUB CODE: MT, OC NO REF SOV: 003 OTHER: 000

Card 3/3

83414

S/191/60/000/006/006/015
B004/B054

5.3832

AUTHORS: Rodivilova, L. A., Batalova, L. G., Vlasova, K. N., Kanavets, I. F.

TITLE: Influence of Length and Type of the Alcohol Side Radical on the Structural and Mechanical Properties of Methylol Polyamides

PERIODICAL: Plasticheskiye massy, 1960, No. 6, pp. 14 - 19

TEXT: The authors refer to previous papers (Refs. 1,2,5) in which they studied polycondensation by measuring the structural and mechanical characteristics of commercial methylol polyamides. The structure of these compounds was as follows: ...-$HN(CH_2)_n NCO(CH_2)_m CONH(CH_2)_n NCO-...$.
CH_2OH $CH_2OC_2H_5$

The present paper deals with the influence of alcohols, in the medium of which the polycondensation takes place, and whose radicals are introduced as a side chain into the polymer. Further, the authors studied the hardening process under the action of high temperatures, and the change in

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83414

Influence of Length and Type of the Alcohol Side Radical on the Structural and Mechanical Properties of Methylol Polyamides

S/191/60/000/006/006/015
B004/B054

mechanical properties by different hardening agents. Fig. 1 indicates the experimental data (deformation as a function of stress) for polyamide films of the type 54/10, and methylol polyamide films of the type ПФЭ-2/10 (PFE-2/10). Both substances contain a crystalline phase. Hardening changes the properties of PFE-2/10 and increases its tensile strength (Fig. 2). The strength of methylol polyamides, in which the ethyl group of the side chain was substituted by CH_3, C_3H_7, $CH_2C_6H_5$, C_4H_9, or $CH_2CH{=}CH_2$, decreased with increasing chain length of the radical, even more so in the case of substitution by allyl- or benzyl radicals (Fig. 3). After hardening by heating to 125-130°C in the presence of acid catalysts (oxalic acid, maleic acid, etc.), however, the films of differently substituted methylol polyamides showed only slight differences in their mechanical properties (Fig. 5). While in unhardened films the modulus of elasticity and the strength decreased if long alcohol molecules were introduced, these characteristics increased after hardening (Fig. 4). Fig. 6 shows the influence of temperature on МПС-1 (MPS-1) polyester film, Fig. 7 the influence on

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Influence of Length and Type of the Alcohol Side Radical on the Structural and Mechanical Properties of Methylol Polyamides

S/191/60/000/006/006/015
B004/B054

PFE-2/10 film. Fig. 8 represents the logarithm of the elasticity modulus as a function of 1/T. The identical course of the straight line in MPS-1 and PFE-2/10 suggests the same nature of the intermolecular bond. Fig. 9 shows the influence of different hardening agents (benzoyl peroxide, styrene). The introduction of methyl side radicals weakens the hydrogen bond between the macromolecules of the polyamide. The introduction of radicals larger than CH_3 loosens the structure even more. The properties of the polymer can be modified not only by different side radicals but also by the type of hardening agent and other high-molecular compounds. At temperatures above 80°C, the thermal activation energy is 1.14 kcal/mole, which suggests the dispersive character of the bonding forces in the resin. The authors mention papers by P. P. Kobeko (Ref. 6) and V. A. Kargin, G. A. Slonimskiy, A. I. Kitaygorodskiy (Ref. 7). There are 9 figures and 7 Soviet references.

Card 3/3

AKUTIN, M. S.; KORSHAK, V. V.; RODIVILOVA, L. A.; VINOGRADOVA, S. V.; BUDNITSKIY, Yu. M.; VALETSKIY, P. M.; LEBEDEVA, A. S.; Prinimali uchastiye: BONDAREVA, Ye. A., laborant; RESHETNIKOVA, L. M., laborant; KOVALEVA, T. G., laborant

New data on the processing and properties of polyarylates. Plast. massy no.11:20-26 '62. (MIRA 16:1)

(Esters) (Condensation products(Chemistry))

L 19003-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RM/WW

ACCESSION NR: AP5000750 S/0191/64/000/012/0026/0029

AUTHOR: Akutin, M.S.; Rodivilova, L.A.; Zimin, Ye. F.

TITLE: The structural-mechanical properties of polyarylate films of the D-4 type and their possible orientation

SOURCE: Plasticheskiye massy*, no. 12, 1964, 26-29

TOPIC TAGS: polyarylate film, polymer film orientation, polymer film structure, polymer film strength, condensation polymer, polymer recrystallization

ABSTRACT: The orientation of type D-4 films, i.e. condensation polymers of diphenylolpropane and 25:75 to 75:25 mixtures of terephthalic and isophthalic acid, was shown to be hindered by the rigidity and/or the tendency to recrystallization of the polymer at both low and high drawing speeds over the studied temperature range of 20-200C. The films were deposited from tetrachloroethane-phenol solution and drawn at 9 or 231 mm/min. Although the lower speed facilitated the process, the films could be extended to double their initial length only at 200C. Plots of stress vs. elongation were of the type obtained with crystalline polymers. At temperatures above 75C and depending on composition, fusing of crystalline structures was followed by the emergence of more stable structures, and finally, by

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L 19009-65
ACCESSION NR: AP5000750

homogeneous extension at higher stress. Higher speeds favored recrystallization in limited loci, while slow drawing favored distribution of the process over a wider area. A polymer of 50:50 terephthalic-isophthalic acid had a tensile strength of 100 kg/cm^2 at 220C. The elasticity modulus was shown to increase with a decreasing concentration of isophthalic acid residues. The strength of films drawn to an elongation of 100% or more was no greater than 300 kg/cm^2, i.e. considerably less than the strength of non-oriented films. Orig. art. has: 6 figures.

ASSOCIATION: None

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

NO REF SOV: 018 OTHER: 000

Card 2/2

SOV/4982

International symposium on macromolecular chemistry, Moscow, 1960.

Mezhdunarodnyy simpozium po makromolekulyarnoy khimii SSSR, Moskva, 14-18 iyunya 1960 g.; doklady i avtoreferaty. Sektsiya I. (International Symposium on Macromolecular Chemistry Held in Moscow, June 14-18, 1960; Papers and Summaries. Section I.) [Moscow, Izd-vo AN SSSR, 1960] 346 p. 5,500 copies printed.

Sponsoring Agency: The International Union of Pure and Applied Chemistry, Commission on Macromolecular Chemistry

Tech. Ed.: T. V. Polyakova.

PURPOSE: This collection of articles is intended for chemists and researchers interested in macromolecular chemistry.

COVERAGE: This is Section I of a multivolume work containing scientific papers on macromolecular chemistry in Moscow. The material includes data on the synthesis and properties of polymers, and on the processes of polymerization,

copolymerization, polycondensation, and polyrecombination. Each text is presented in full or summarized in French, English, and Russian. There are 47 papers, 28 of which were presented by Soviet, Rumanian, Hungarian, and Czechoslovakian scientists. No personalities are mentioned. References accompany individual articles.

AVAILABLE: Library of Congress

Card 9/9

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9-29-61

27

Card 6/9

49

S/191/60/000/002/003/012
B027/B058

AUTHORS: Akutin, M. S., Rodivilova, L. A.

TITLE: The Method of Heterogeneous Polycondensation

PERIODICAL: Plasticheskiye massy, 1960, No. 2, pp. 14-17

TEXT: The authors studied the possibility of obtaining polyamides on the interface, with and without mixing of the heterogeneous system. L. A. Sakharova, S. A. Gershkokhen, and L. P. Nekrasova participated in the experimental work. Their results confirmed those obtained by V. V. Korshak and correspond to the reaction mechanism proposed by him, at which a reaction component present in abundance does not inhibit the reaction of the end groups with other initial substances, so that the polymer chain continues to develop. If the polymer is formed on the interface as a film which prevents further development of the polymer chain, the interface must be continuously set free. This is done either by mixing the heterogeneous system or by continuous polymer extraction at the interface, the latter process having been performed by means of the mechanical installation by M. P. Shapenko, which also permits to vary the extraction rate

Card 1/2

from 0.5 to 12 m/min. Individual factors influencing the yield and molecular weight of the polymers were also studied, e.g., the addition of certain salts (Ref. 8) to the aqueous phase and of surface-active substances during mixing; an increase of the polymer yield up to 75-90% was thus obtained. It was also found that a certain feed rate of the reagents must correspond to a certain extraction rate. Polycondensation on the interface took place at 22°C ± 2°; an increase above 20 to 25°C is not suitable since the diffusion of the reagents increases. Polymers with different physical and chemical properties are manufactured by the above method, according to the initial components, i.e. diamine and diacid anhydride. Phthalamides and polyamides without hydrogen bonds are of interest, as well as the production of copolymers with given properties; furthermore, polymers may be obtained on the basis of products such as ethylene diamine, which at present is not used for the production of high-molecular polyamides according to the homogeneous method. There are 4 figures, 5 tables, and 8 references: 2 Soviet, 2 British, and 4 US.

88318

S/191/60/000/002/005/012
B027/B058

15.8112

AUTHORS: Vlasova, K. N., Rodivilova, L. A.

TITLE: Methylol Polyamide Glues

PERIODICAL: Plasticheskiye massy, 1960, No. 2, pp. 19-23

TEXT: The authors studied various types of methylol polyamide glues which are produced on the basis of methylol polyamide resins and widely used for industrial purposes. In contrast to ordinary polyamides, methylol polyamide polymers and glues are hardenable. The hardeners are usually added to the glues before use, in an amount of from 1 to 2.5% and up to 10% related to the weight of solid resin. The thermal resistivity of glues hardened in this way is thus increased so that they withstand a temperature of 150°C for longer periods, are insoluble in alcohol and alcohol - water mixtures and resistant against boiling water. The introduction of side groups into the polymer greatly improves the properties of the common polyamide resins. Various materials may be glued with methylol polyamides, such as ferrous and nonferrous metals, silicate and organic glass, leather, fabrics, ceramics, concrete, wood, and certain plastics. The most widely

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Methylol Polyamide Glues

S/191/60/000/002/005/012
B027/B058

used glue of the type ПФЭ 2/10 (PFE 2/10), which was studied in greatest detail, is a 25 to 30% alcoholic aqueous solution of methylol polyamide with a viscosity of from 30 to 40 poises. The glue is easy to be used, nontoxic, and stable even at low temperatures; the coatings are heat resistant for up to 200 hrs at temperatures of from 130 to 150°C. This highly elastic product with great adhesive power is of special importance for the leather and shoe industry; by saturation with the glue and/or doubling, the durability of low-quality leather is increased by 100 to 150% or 30 to 90%. The respective experiments were made in cooperation with the ЦНЭЛКОЖ (TsNELKOZh). The gluing of the upper parts of shoes instead of stitching them is also new. The glue of the type ПФЭ 2/10 (PFE 2/10) saves work in the polygraphic trade, since books are not stitched together, but glued with it. With this glue, a world atlas in an edition of 30,000 copies was produced without seams by the Minskaya kartograficheskaya fabrika (Minsk Cartographic Factory). The glue МПФ-1 (MPF-1) has a specially high adhesive power compared with metals. The glue МПЭ-21 (MPE-21), developed by the НИИПМ (NIIPM) jointly with the НИИРП (NIIRP) serves for rubber gluing on the basis of organofluorine, nitrile- and styrene rubber. The glue types МПЛ-20 (MPL-20), МПС-1 (MPS-1)

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Methylol Polyamide Glues

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S/191/60/000/002/005/012
B027/B058

ПФМ-12 (PFM-12), and ПЭМ-2 (PEM-2) are mentioned. The glue of the type АМП (AMP), which is soluble in acetone, has the highest elasticity of all glues on the basis of methylol polyamide polymers. Its use as plasticizer for the manufacture of water-resistant grinding materials yielded very satisfactory results. Further work is conducted concerning the production of new glue types by modification of polyamides by means of other high-molecular compounds and/or polycondensation with certain monomers. The polyamide epoxy glue is also studied and glues with higher heat resistance on the basis of methylol polyamide resins are being produced. There are 9 tables and 11 Soviet references.

Card 3/3

S/191/60/000/011/014/016
B013/B054

AUTHORS: Yermolina, A. V., Rodivilova, L. A., Vlasova, K. N., Igonin, L. A.

TITLE: X-Ray Investigation of the Degree of Order of Methyl Polyamide Resins

PERIODICAL: Plasticheskiye massy, 1960, No. 11, pp. 58-59

TEXT: The authors studied the change of the degree of order of methyl polyamide materials depending on the concentration of methylol groups and of the side radical, as well as during the process of setting. They used products of joint condensation of ε-caprolactam and AG salts which, on treatment with paraformaldehyde in various alkaline media, form chains of the type $HN(CH_2)_n—\underset{\displaystyle CH_2OH}{\overset{|}{N}}—CO(CH_2)_mCO—\ldots—\ldots—\underset{\displaystyle CH_2OR}{\overset{|}{N}}—$. The X-ray structural analysis was made on a УРС-50-И (URS-50-I) apparatus. The intensity distribution curve for the initial polyamide (Fig. 1) is distinguished by three distinct maxima. One of them shows a strong, the two others a weak

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X-Ray Investigation of the Degree of Order of Methyl Polyamide Resins

S/191/60/000/011/014/016
B013/B054

intensity. On introduction of methylol groups, the X-ray pattern of the polyamide resin changes considerably. On introduction of methylol and methoxyl side groups, the order of the polymeric system changes (Fig. 2). By an increase in the number of methylol groups introduced into the polymeric chain from 2.23 to 8.1%, the degree of order changes with maintenance of the mean intermolecular distances of 4.37 A. On an enlargement of the alkyl radical introduced, from the methoxy-ethyl to the methoxy-butyl radical, the intermolecular distances change from 4.37 A to 4.41 A. Further enlargement of the alkyl radical effects no great change of diffraction patterns (Fig. 3). By introduction of aromatic (methoxy benzyl) and cyclic (methoxy furyl) radicals, the degree of order of the corresponding methylol polyamides decreases considerably (Fig. 3, curves 6 and 7). Irrespective of the nature and size of side radicals, the intermolecular distances are shortened from 4.41 A to 4.2 A due to hardening. This suggests that in all cases methylene cross bonds are formed between the polyamide chains. There are 4 figures and 4 Soviet references.

Card 2/2

AKUTIN, M.S.; RODIVILOVA, L.A.; Prinimali uchastiye: SAKHAROVA, L.A.; GERSHKOKHEN, S.A.; NEKRASOVA, L.P.

Heterogeneous polycondensation method. Plast.massy no.2: 14-17 '60. (MIRA 13:6)
(Polymides)

VLASOVA, K.N.; RODIVILOVA, L.A.

Methylol polyamide adhesives. Plast.massy no.2:19-23 '60.
(MIRA 13:6)

(Adhesives) (Polyamides) (Formaldehyde)

5(1,3) SOV/153-58-4-16/22

AUTHORS: Rodivilova, L. A., Vlasova, K. N., Petrov, G. S.

TITLE: Methylol Polyamide Resins (Metilolpoliamidnyye smoly)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1958, Nr 4, pp 98 - 105 (USSR)

ABSTRACT: Polyamide resins are only little used as glues because of their insufficient adhesion to various materials. As the authors believe that the introduction of polar groups into the chain of the polymer macromolecule would improve the adhesion, they followed the way of treating high-molecular polyamides with paraformaldehyde to produce the resins mentioned in the title. This idea is not new (Ref 1). The authors chose an other way than the patent owners (Ref 1). They used alcohol-soluble mixed polyamide resins of the binary and ternary system. They succeeded in producing a thermoreactive polyamide with good adhesion properties, which makes possible its use as a glue. The produced polyamide is also suited for the production of films. Its physico-

Card 1/3

mechanical properties are given in the tables 2 and 3. Optimum production conditions of methylol polyamide were determined; formaldehyde and alcohol concentration, duration of the condensation, and nature of the catalyst (formic acid). It was proved that besides the formation of polar methylol groups ($-CH_2OH$) also methoxy-ethyl groups ($-CH_2OC_2H_5$) are formed. The ratio between those groups depends on the amount of the reacting component as well as on the nature of the catalyst. In the methylol polyamide glue PFE -2/10 there are 4.5-5% methylol groups and 3.5-4% methoxy-ethyl groups. Recalculated with respect to the percentage of the substituted amide groups this amounts to 42.5-49.7%. It may be assumed that hardening takes place due to the formation of methylene and methylene-ether bridges. The reaction velocity of the hardening of methylol polyamides in dependence on the temperature and on the catalysts was investigated. The properties of the hardened methylol polyamide resins are essentially different from those not hardened. The former have a

Methylol Polyamide Resins

heat resistance of more than 150° and are resistant to boiling water and alcohols. The glue in question, PFE -2/10, is industrially produced and is used in polygraphic, food and other industries. There are 7 figures, 4 tables, and 3 references, 1 of which is Soviet.

ASSOCIATION: Nauchno-issledovatel'skiy institut plastmass (Scientific Research Institute of Plastics)

SUBMITTED: October 23, 1957

FARNIYEVA, O.V.; TKACHENKO, A.I.; RODIVILOVA, L.A.; BAYBAKOV, K.P.; VLASOVA, K.N.

Use of polyamide glues for assembling parts of shoe uppers. (MIRA 13:1)
Kozh.-obuv. prom. no.8:17-20 Ag '59.
(Shoe manufacture)

RODIVILOVA L.A.

PETROV,G.S., doktor tekhnicheskikh nauk, professor; VLASOVA,K.N., kandidat tekhnicheskikh nauk; RODIVILOVA,L.A.; SHEYDINA,T.Z., inzhener; ZAVEL'GEL'SKIY,L.M., inzhener

New shoe adhesive based on polyamide resins. Leg.prom.15 no.8: 31-33 Ag '55. (MLRA 8:10)

1. Mladshiy nauchnyy sotrudnik Nauchno-issledovatel'skogo instituta plasticheskikh mass. (for Rodivilova)
(Shoe industry) (Resins, Synthetic)

RAYBURD, S.M.; RODIVILOVA, L.A.; VLASOVA, K.N.; SHABADASH, A.N.; IGONIN, A.A.

Study of the solidification of methylol polyamide resins. Plast. mass no.7:20-22 '60. (MIRA 13:10)
(Resins, Synthetic) (Polyamides)

YERMOLINA, A.V.; RODIVILOVA, L.A.; VLASOVA, K.N.; IGONIN, L.A.
X-ray study of the extent of molecular ordering in methylolpolyamide resins. Plast.massy no.11:58-59 '60. (MIRA 13:12)
(Resins, Synthetic) (Polyamides)

RODIVILOVA, L. A., PUTSKOV, G. B., and VIASOVA, K. M.

"Synthesis of methylolpolyamide resins," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Polymer Research Inst.

B-3,084,395

L 35472-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM
ACCESSION NR: AP4046894 S/0191/64/000/010/0009/0013

AUTHOR: Rodivilova, L. A.; Akutin, M. S.; Budnitskiy, Yu. M.; Prosvirkina, V. F.; Kaminskaya, I. P.

TITLE: The effect of fractional composition on the mechanical properties and processability of polyarylate D-3 and D-4

SOURCE: Plasticheskiye massy, no. 10, 1964, 9-13

TOPIC TAGS: polyarylate, polycondensation, polymer mechanical property, polymer processability, turbidimetry, fractional precipitation, molecular weight distribution, polymer film

ABSTRACT: The relationship between the mechanical properties of polyarylates and their molecular weight distribution was investigated on polyarylates D-3 and D-4. The polymers were synthesized by interphase polycondensation at a 0.1 M concentration of reagent and a reduced viscosity of 1.63 for D-3 and 1.12 for D-4. The polydispersity of the polyarylate was determined by fractional precipitation, using tetrachloroethane and acetone as a solvent-precipitant system. Turbidimetric titration was used for the analysis. The date of fractional precipitation are

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tabulated and plotted. The differential curves show that the molecular weight distribution of polyarylates D-3 and D-4 fall in a rather narrow range and close to one another. The slightly higher polydispersity for polarylate D-3 is due to the different conditions of synthesis, particularly the concentrations of the solutions of initial components. A concentration of 0.1 D-3 is the most useful. The physico-mechanical properties of the polymer films and molded products (bending and impact strength, Brinell hardness, Vicat heat stability) were then investigated. Tabulated and plotted data show that the maximum tensile strength of homogeneous fractions increases with increasing reduced viscosity up to a value of 1.4, remaining almost unchanged above this value. With increasing molecular weight, the relative elongation of the films also increases. For high-molecular polyarylates, the chain flexibility increases because there is forced elastic deformation in the polymer films and the role of elastic deformation decreases, leading to a decrease in the elasticity modulus from 8500 to 7000 kg/cm^2. The mechanical properties of polyarylate depend not only on the overall molecular weight, but also on the molecular weight distribution of the polymer. A decrease in the concentration of low-molecular fractions improves the mechanical properties. Since polyarylate D-4 has a lower polydispersity than D-3, its mechanical properties meet the requirements for making films. For molded samples, the

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variation in mechanical properties with varying molding temperature, shape and molding time was also studied. The data, compared with those obtained for a polymer with a reduced viscosity of 1.97, show that the change in reduced viscosity does not affect the processing conditions for D-4. Orig. art. has: 6 tables and 9 figures.

ASSOCIATION: None

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

NO REF SOV: 004 OTHER: 003

Card 3/3

L 43754-66 EWT(m)/EWP(j)/T IJP(c) WW/RM

ACC NR: AP6030845 (A, N) SOURCE CODE: UR/0191/66/000/009/0013/0016

31
33
B

AUTHOR: Israilov, D.; Rodivilova, L. A.; Akutin, M. S.

ORG: none

TITLE: Synthesis and investigation of phosphorus-containing polyaryl esters

SOURCE: Plasticheskiye massy, no. 9, 1966, 13-16

TOPIC TAGS: polyaryl ester, phosphorus containing polyaryl ester, thermal oxidative stability, fire resistant resin, ESTER, POLYARYL RESIN, INTERFACIAL POLY CONDENSATION

ABSTRACT: It is noted that such desirable properties of polyaryl esters as high softening points are also the cause of processing difficulties due to thermal-oxidative degradation. Because the presence of phosphorus in the polymer backbone was expected to improve thermal-oxidative stability, phosphorus-containing polyaryl esters were prepared. The method used was interfacial polycondensation of methyl-, vinyl-, β-chloroethyl-, or phenyl-phosphonic dichloride and bisphenol A. The reaction kinetics was studied and the optimum preparative conditions were determined. The polymers had a high molecular weight, a higher softening point (220—250C) than is usual for phosphorus-containing polyesters, high thermal-oxidative stability, good solubility, and were nonburning. Thermal and thermal-oxidative stability rose with increasing amount of phosphorus in the backbone as well as on going from a methyl to a phenyl substituent at the phosphorus atom. The unsaturated polyaryl esters from vinylphosphonic

Card 1/2 UDC: 678.85

L 43754-66

ACC NR: AP6030845

dichloride and (β-chloroethyl)phosphonic dichloride (after dehydrochlorination of the β-chloroethyl side group) were shown to lend themselves to cross-linking and copolymerization with unsaturated monomers in the presence of initiators and accelerators. [SM]
Orig. art. has: 3 tables and 4 figures.

SUB CODE: 07, 11/ SUBM DATE: none/ ORIG REF: 014/ OTH REF: 002/ ATD PRESS: 5074

Card 2/2

L 00834-67 EWT(m)/EWP(j)/T RM
ACC NR: AP6027775 (A) SOURCE CODE: UR/0190/66/008/008/1414/1417

29 B

AUTHOR: Israilov, D.; Rodivilova, L. A.

ORG: Scientific Research Institute of Plastics (Nauchno-issledovatel'skiy institut plasticheskikh mass)

TITLE: Polycondensation of some dichlorides of phosphorus-containing acids with 2, 2-di-(4-oxyphenyl) propane

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 8, 1966, 1414-1417

TOPIC TAGS: polycondensation, propane

ABSTRACT: The polycondensation of dichlorides of vinylphosphinic and phenylphosphoric acids with 2, 2-di-(4-oxyphenyl) propane was kinetically analyzed and the reaction rates, activation energies, and temperature coefficients were determined. It was determined that the above-mentioned reactions are of the second order. The kinetic activity of dichlorides with respect to 2, 2-di-(4-oxyphenyl)

Card 1/2 UDC: 541.64+678.86

L 00834-67

ACC NR: AP6027775 O

propane can be arranged in the following order: dichloride of methylphosphinic acid > dichloride of vinylphosphinic acid > dichloride of phenylphosphoric acid. Orig. art. has: 4 figures and 1 table. [Based on authors' abstract] [NT]

SUB CODE: 07/ SUBM DATE: 06Jul65/ ORIG REF: 004

hs

Card 2/2

L 36759-00 EWT(m)/EWP(j) RM

ACC NR: AP6009933 (A) SOURCE CODE: UR/0413/66/000/004/0162/0162

25
B

INVENTOR: Rodivilova, L. A.; Akutin, M. S.; Gershkokhen, S. L.

15

ORG: None

TITLE: Preparation of macromolecular aliphatic polyamides. Class 39, No. 144987

SOURCE: Izobreteniya promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 162

TOPIC TAGS: macromolecular polyamide, polyamide, aliphatic polyamide

ABSTRACT: An author certificate has been issued describing a method of preparing macromolecular-aliphatic polyamides by polycondensation at the interphase with diacid chlorides of carboxylic acids and diamines. Synthesis is conducted in solutions with an increased concentration of reagents.

SUB CODE: 11/ SUBM DATE: 23May61

Card 1/1 BLG

AKUTIN, M.S.; RODIVILOVA, L.A.; ZININ, Ye.F.

Study of the structural and mechanical properties of plasticized polyarylate D 4 type films and possibilities of their orientation. Plast. massy no.3:32-36 '65. (MIRA 18:6)

L 59381-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5017837 UR/0286/65/000/011/0076/0077
678.673.002.2

AUTHOR: Akutin, M. S.; Rodivilova, L. A.; Zhilina, R. D.; Israilov, D.

TITLE: Preparative method for heat- and flame-resistant mixed polyaryl esters. Class 39, No. 171556

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 11, 1965, 76-77

TOPIC TAGS: polyaryl ester, heat resistant plastic, flame resistant plastic

ABSTRACT: An Author Certificate has been issued for a preparative method for heat- and flame-resistant polyaryl esters, involving interfacial polycondensation of bisphenol with aromatic dicarbonyl dichlorides and vinylphosphonic dichloride. [SM]

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut plasticheskikh mass (State Scientific Research Institute of Plastics)

SUBMITTED: 150ct63 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4047

Card 1/1

RODIVILOVA, I.A.; AKUTIN, M.S.; MOROZOVA, S.A.; PSHENITSINA, V.P.

Thermal aging of film materials based on type D-4 polyarylates.
Plast.massy no.6:13-16 '64. (MIRA 18:4)

AKUTIN, M.S.; RODIVILOVA, L.A.; ZININ, Ye.F.

Structural and mechanical properties and orientation possibilities of D4-type polyarylate films. Plast. massy no.12:26-29 '64.
(MIRA 18:3)

[illegible]OVA, I.A.; AKUTIN, M.S.; [illegible], Yu.M.; FROSVIRKINA, V.F.; KAMINSKAYA, L.P.

Effect of fractional composition on the mechanical properties and processing conditions of polyacrylate "D-3" and D-4" Plast. massy no.10:9-13 '64. (MIRA 17:10)

L 41646-65 EPF(c)/EPR/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4/Pt-7 RM/WW

ACCESSION NR: AP5006559 S/0191/65/000/003/0032/0036

36
35
B

AUTHOR: Akutin, M. S.; Rodivilova, L. A.; Zinin, Ye. F.

TITLE: Structural and mechanical properties of plasticized D-4 polyarylate films and possibilities for orientation of these films

SOURCE: Plasticheskiye massy, no. 3, 1965, 32-36

TOPIC TAGS: polymer film, polymer deformation, plasticizer

ABSTRACT: Previous research has shown that D-4 type films are not strengthened during stretching due to disruption of their orientation. Orientation of polyarylates is not only of practical, but also of theoretical interest. Improvement of the properties of high temperature polymers by plasticizing is very important. In this investigation D-4 polyarylate was selected. It was found that no supermolecular structure is formed during pressing of certain types of polyarylates. However, the rather regular structure of polyarylate chains is a basis for assuming that supermolecular structures may occur in polyarylates when plasticizers are introduced. This was verified experimentally. When various plasticizers are introduced, supermolecular structures of macroscopic dimensions are produced. In certain

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L 41646-65

ACCESSION NR: AP5006559

cases spherolytes up to 2 cm in diameter were produced. Stretching of D-4 was investigated as a function of the concentration of various plasticizers and temperature. An increase in the concentration of plasticizers improves the elastic properties, but as a rule the physical and mechanical properties are impaired at high temperature. "The authors express their gratitude to L. I. Burinova for furnishing plasticizer samples." Orig. art. has: 9 figures.

ASSOCIATION: none

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

NO REF SOV: 007 OTHER: 000

CC

Card 2/2

BORKOVSKIY, M.A.; VOSTOKOV, A.I.; ZHVIRKO, I.S.; LEPESHKIN,I.P.; MEL'NIK, M.K.; MITROFANOV, V.P.; RODKEVICH, A.V.; SILIN, P.I.[deceased]; YAKUBOVSKIY, V.V.; YEREMENKO, B.A., retsenzent; MAR'YANCHIK, V.L., retsenzent; MAKSIMOV, A.I., retsenzent; PRITYKINA, L.A., red.

[Handbook for the sugar manufacturer] Spravochnik sakharnika. Moskva, Pishchevaia promyshlennost'. Pt.2. 1965. 778 p. (MIRA 18:9)

ROZHKOVICH, A. V.

Electric Driving

Electric drive of a centrifurge. Sakh. prom. 26, No.2, 1952

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

RODKEVICH, A.V.

Power coefficient of electric installations of sugar factories. Sakh. prom. 27 no.4:12-15 Ap '53. (MLRA 6:6)

1. Gosudarstvennyy institut po proyektirovaniyu novogo stroitel'stva i rekonstruktsii predpriyatiy sakharnoy promyshlennosti. (Electric machinery)

RODKEVICH, D.V.

OMEL'CHENKO, A.N., kandidat tekhnicheskikh nauk, redaktor; AVERSHIN, S.G., doktor tekhnicheskikh nauk, professor, redaktor; KAZAKOVSKIY, D.A., doktor tekhnicheskikh nauk, professor, redaktor; KUZNETSOV, G.N., kandidat tekhnicheskikh nauk, redaktor; NIKIFOROV, B.I., doktor tekhnicheskikh nauk, professor, redaktor; RODKEVICH, D.V., kandidat tekhnicheskikh nauk, redaktor; TIMOFEYEV, B.I., gornyy inzhener, redaktor; SLAVOROSOV, A.Kh., redaktor; SHPAK, Ye.G., tekhnicheskiy redaktor

[Studies in surveying] Issledovaniia po voprosam marksheiderskogo dela. Moskva, Ugletekhizdat. No. 27. 1953. 394 p. [Microfilm]. (MLRA 8:7)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy institut.
(Mine surveying)