Raskin, Sh. Sh.

6

USSR.

535.375.5 : 539.132

3329. A spectroscopic method of investigating the association of molecules of some organic compounds in different phase states. SH. SH. RASKIN AND A. V. SIDKAREV. *Dokl. Akad. Nauk SSSR*, 86, No. 3, 509–12 (1952) *In Russian.*

See also preceding abstract. Tabulates data obtained for the Raman spectra of the benzoic, phenylacetic and hydrocinnamic acid, in crystal state and in a melt (at 2 temperatures). It has been found that a number of intramolecular lines observed in crystals are transformed at the melting-point into diffuse bands the maxima of whose intensity shift (usually toward longer wavelengths) as the temperature rises. These frequency shifts are explained by assuming the existence in crystals of complete molecular dimers that gradually dissociate in melts. Values calculated from Halford's paper [Abstr. 2981 (1946)] for two frequencies of the molecular deformation of benzoic acid show good agreement with experimental values.

F. LACHMAN

RASKIN, Sh. Sh.

(5)

Dielectric properties of polymorphous organic compounds. G. Gol'shtein and Sh. Sh. Raskin (A. A. Zhdanov State Univ., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 89, 817–19(1953)(Engl. translation issued in *U.S. Atomic Energy Comm.* NSF-tr-118, 1–3(1953)).—The temp. dependence of the dielec. const. ϵ' and dielec. loss ϵ'' of camphor, α-chlorocamphor (I), borneol, bornyl chloride, cyclohexanol, and also α-bromocamphor (II) (camphor and its derivs. were used in racemic form) were measured in the microwave region $\lambda = 3.2$ cm. All of these compds. except II displayed strong temp. dependence of ϵ' and ϵ'', owing to 2nd-order phase transitions. In comparison with the results at lower frequencies, the temp. range within which discontinuous changes in the dielec. properties occurs is considerably wider and is displaced towards higher temps. The ϵ'' values attain appreciable size, whereas at lower frequencies they are almost zero for some of the substances studied. The dielec. properties of II, which has no 2nd-order transition, do not differ from those of ordinary cryst. substances. The temp. dependence of mixts. of II and I showed displacement of the ϵ' and ϵ'' curves towards higher temps. with increasing concn. of II, but the value of the losses remained about const. The dipole moments μ_0 of these compds. were detd. at varying concns. up to the pure polar compds. The dipole moments of II, I, camphor, bornyl chloride, borneol, and cyclohexanol in dil. soln. in C_6H_6 or CCl_4 were 3.7, 3.6, 3.0, 2.0, 1.2, and 1.4 D., resp. The dipole moments of I, camphor, bornyl chloride, borneol, and cyclohexanol as the pure substances (from the Onsager equation) were 2.4, 2.2, 1.4, 1.2, and 1.3 D., resp. In soln., increases in concn. affect t_{max} (temp. at which max. dielec. losses start) very little for camphor and bornyl chloride, more strongly for borneol and cyclohexanol, and quite strongly for II. The relaxation time τ in the solid state for all of the substances except II differs little from the relaxation times in the case of solns. The rotational energies were estd. by analyzing the curves $\log \tau = f(1/T)$. Mols. of camphor and bornyl chloride have rotational energies close to those of liquids such as bromobenzene and butyl bromide. The rotational energy of mols. of I is considerably larger. The largest rotational energy was found in mols. of borneol and cyclohexanol; this tends to confirm the existence of H bonds above the range of polymorphous transition for these substances.

Aubrey P. Altshuller

6

RASKIN, SH, SH.

Translational vibrations of molecular crystalline lattices and the question of their appearance in Raman spectra. 62 Physics Inst.
Sh. Sh. Raskin and F. I. Skripov (Leningrad State Univ.).
Zhur. Eksp. i Teoret. Fiz. 26, 470–91(1954).—An exptl. study of the Raman spectra of cryst. *d*-tartaric and racemic acids, ethylenediamine, di-K and Na-K tartrates, cryst. and liquid resorcinol and thymol and a theoretical estimate of the frequencies of intermol. vibrations lead to the following conclusions: the translational frequencies are of the same order of magnitude and in some cases slightly higher than the rotational frequencies; the lines which correspond to translational vibrations are frequently observed in the Raman spectrum, in particular in crystals contg. H bonds.
B. Gor

(1)

RASKIN, SH. SH.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 32/50

Authors : Persiina, E. V., and Raskin, Sh. Sh.

Title : Combined diffusion spectra of sulfuric acid-phenol and sulfuric acid-paracresol systems

Periodical : Dok. AN SSSR 100/1, 123-125, Jan. 1, 1955

Abstract : The combined diffusion spectra of fresh and old samples of sulfuric acid / phenol and sulfuric acid/p-cresol were investigated at room temperature and at 60°. The frequencies of the combined diffusion spectra obtained are shown in one of the tables. It was assumed that some of these frequencie pertain to the oscillations of the complex, i.e. they characterize the reaction between the individual components of the compound. The intensity of the spectra of fresh samples was found not much different from the intensity of the spectra of other components, at 60° the spectrum weakened to such an extent as to make the frequency measurement very difficult. Seven references: 3 USA, 3 USSR and 1 German (1914-1953). Tables.

Institution: The A. A. Zhdanov State University, Leningrad

Presented by: Academician A. N. Terenin, July 20, 1954

RASKIN, SH. SH.

USSR/Chemistry - Physical chemistry

Card 1/1 Pub. 22 - 22/54

Authors : Raskin, Sh. Sh.

Title : Combined diffusion spectra of certain molecular compounds containing $Sb(C_2H_5)_3$.

Periodical : Dok. AN SSSR 100/3, 485-486, Jan 21, 1955

Abstract : The application of the combined light diffusion spectra method for the study of $SbCl_3$ systems is discussed. The preliminary results obtained by studying $2SbCl_3 \cdot C_6H_6$ and $2SbCl_3 \cdot C_6H_5OH$ systems are presented. The spectral frequencies of these systems are represented in bands the width of which varies between 15 and 40 cm^{-1}. It was established that the intramolecular frequencies do not depend upon the intermolecular reaction with exception of such frequencies as OH, NH, C = O and so forth. Six references: 5 USSR and 1 German (1912-1955). Table.

Institution : The A. A. Zhdanov State University, Leningrad

Presented by: Academician A. N. Terenin, September 13, 1954

RASKIN, Sh.Sh.

Raman spectra of complex-compounds of antimony trichloride with benzene and their derivatives. Opt.i spektr. 1 no.4:516-522 Ag '56. (MLRA 9:11)

1. Laboratoriya optiki poverkhnostnykh yavleniy Fizicheskogo instituta Leningradskogo gosudarstvennogo universiteta.
(Compounds, Complex--Spectra)
(Antimony chlorides)

RASKIN Sh. Sh.

51-4-26/26

AUTHORS: Malysheva, T. D. and Raskin, Sh. Sh.

TITLE: On the Raman Scattering Spectra of Solutions of $SnCl_4$ and $SbCl_3$ in Dichloroethane. (This translation corrects an error in the original title.)
(O spektrakh kombinatsionnogo rasseyaniya rastvorov dikhloretana v $SnCl_4$ i $SbCl_2$.)

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr.4, pp.405-406. (USSR)

ABSTRACT: One of the authors (Raskin) studied earlier the Raman scattering of complex compounds containing $SbCl_3$ and $SnCl_4$ (Ref.1), which are used as catalyzers. Definite changes of the spectral components were observed in substances containing unsaturated hydrocarbons. The present note deals with the effect of the catalyzers on saturated hydrocarbons. As an object of study 1,2-dichloroethane was used. This compound has rotational isomers and is sensitive to intermolecular interactions. A theory of such interactions (Ref.2) states that the

Card 1/3

On the Raman Scattering Spectra of Solutions of $SnCl_4$ and $SbCl_3$ in Dichloroethane.

ratio of intensities of lines in Raman spectra of different isomers, and consequently the number of molecules of different configurations, is determined primarily by the dipole interaction. First experiments using photographic photometry showed definite changes in the spectra of solutions. In pure dichloroethane $J_{753}/J_{653} = 1.2$ (J_{753} is the intensity of the 753 cm^{-1} line of the trans-isomer of dichloroethane, J_{653} is the intensity of the 653 cm^{-1} line of the other isomer) while in an equimolecular solution of $SbCl_3$ in dichloroethane the ratio J_{753}/J_{653} is 0.8-0.9, and in an equimolecular solution of $SnCl_4$ in dichloroethane $J_{753}/J_{653} = 3$. In spite of the presence of strong background and fluorescence the observed effect is undoubtedly greater than the experimental errors. Multiple records of the Raman spectra of pure dichloroethane and solutions of $SnCl_4$ in dichloroethane obtained by photoelectric means confirmed fully the earlier (photographic) results. The changes in the spectra

SOC/20-123-4-19/53

24(4)
AUTHOR: Raskin, Sh. Sh.

TITLE: On the Raman Spectra of the Light of Complex Compounds Which Contain $SbCl_3$ and $SnCl_4$ (O spektrakh kombinatsionnogo rasseyaniya sveta kompleksnykh soyedineniy, soderzhashchikh $SbCl_3$ i $SnCl_4$)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 4, pp 645-647 (USSR)

ABSTRACT: The present paper gives results obtained for the spectra of crystals of the complexes of naphthalene and diphenyl ether with $SbCl_3(2SbCl_3)\cdot(C_6H_5)_2O$ and $2SbCl_3\cdot C_{10}H_8$. The investigation of these compounds presented the well-known difficulties. A table contains the frequencies of the Raman spectra of the compounds under investigation. The spectra of the complexes show characteristic differences from the spectra of individual components: Firstly, a marked new distribution of intensity and a shift of frequencies can be observed. Secondly, new lines appear in the various spectral ranges, and several frequencies of the spectrum of components are split up. The authors devoted particular attention to the complexity of the spectrum in the range of the valence frequencies of

Card 1/3

On the Raman Spectra of the Light of Complex Compounds Which Contain $SbCl_3$ and $SnCl_4$

$SbCl_3$. Thus, in the spectrum of the complex $2SbCl_3 \cdot (C_6H_5)_2O$, there are 4 frequencies in this range, whereas in the spectrum of pure $SbCl_3$ in the crystalline state, only the two frequencies 313 and 349 cm^{-1} are observed. The occurrence of the new lines in the range of the valence frequencies of $SbCl_3$ is due not only to molecule deformation, nor is the complexity of the spectrum connected with the second component of the complexes, nor, obviously, with the existing traces of H_2O. These new frequencies are probably due to the new bonds between $SbCl_3$ and the molecules of the second complexes. The possibility of the existence of a similar effect in the crystals of other metal halide compounds is pointed out. The authors are at present carrying out further investigations of the spectra of $SnCl_4$ complexes and of other metal halides with various organic compounds. There are 2 tables and 7 references, 6 of which are Soviet.

SOV/20-123-4-19/53

On the Raman Spectra of the Light of Complex Compounds Which Contain $SbCl_3$ and $SnCl_4$

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. A. A. Zhdanova (Leningrad State University imeni A. A. Zhdanov)

PRESENTED: July 21, 1958, by A. N. Terenin, Academician

SUBMITTED: July 2, 1958

Card 3/3

SOV/51-6-3-10/26

AUTHORS: Polyakova, I.D. and Raskin, Sh.Sh.

TITLE: On the Raman Scattering Spectra of Certain Halide Derivatives of Acetic Acid in Various Phase States (O spektrakh kombinatsionnogo rasseyaniya nekotorykh galoidoproizvodnykh uksusnoy kisloty v raznykh fazovykh sostoyaniyakh)

PERIODICAL: Optika i Spektroskopiya, 1959, Vol 6, Nr 3, pp 343-348, (USSR)

ABSTRACT: The paper reports Raman spectra of trichloracetic (CCl_3COOH), chloracetic ($CH_2ClCOOH$) and bromacetic ($CH_2BrCOOH$) acids in liquid and solid states. These spectra were obtained in connection with earlier work reported in Refs.1, 2. The results are given in Table 1 for the three acids in solid (crystal) and liquid forms; for the chloracetic acid the authors report Raman spectra of the three polymorphic modifications with melting points of 51, 56 and 61°C. Characteristic changes are observed in the region of intramolecular vibration frequencies on transition from solids to liquids. The sharp lines of crystals are broadened and spread into bands, and for some of them a

Card 1/2

On the Raman Scattering Spectra of Certain Halide Derivatives of Acetic Acid in Various Phase States

background (sometimes unsymmetrical) and satellites appear. Some of the lines disappear altogether, others are displaced and in certain regions the number of lines increases. All these changes are particularly clear in the Raman spectra of trichloracetic and bromacetic acids, and are somewhat less prominent in the Raman spectrum of chloracetic acid. These effects are due to changes in the association of molecules of the three compounds when they are melted; they are particularly clear in the changes of the number and intensity of C=O frequencies. There are 2 tables and 7 references, of which 3 are Soviet, 1 translation from English into Russian and 3 English.

SUBMITTED: April 7, 1958

Card 2/2

SOV/20-128-1-16/58

5(4), 24(7)

AUTHORS: Raskin, Sh. Sh., Sechkarev, A. V.

TITLE: The Origin of Certain Differences in the Raman Spectra of Acetamide and n-Phenylene Diamide in Various Phases

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 1, pp 67 - 70 (USSR)

ABSTRACT: This article presents the results obtained by the authors from an investigation of the Raman spectra of acetamide and phenyl diamine. Crystalline acetamine was investigated in two polymorphous variations (melting points 80.2 and 48°) and in the liquid phase. A comparison of their spectra discloses differences between some lines of intramolecular origin. The latter belong both to valence oscillations and other kinds of molecular oscillations. These differences are obviously due to the ability of acetamide molecules to associate by means of the hydrogen bond N H ... O. The authors give a short description of previous articles on this problem. The α and β-variations have completely different crystal structures. Variations are found within the range of valence frequencies and

Card 1/3

The Origin of Certain Differences in the Raman Spectra of Acetamide and n-Phenylene Diamide in Various Phases

507/2[illegible]-125-1-16/55

deformation frequencies of the C-N and C-N- groups and within the range of deformation frequencies of the N-H- groups It is possible that there are differences between the spectra of the two variations also in this frequency range of the hydrogen bond. A detailed interpretation, however, is complicated because of the blurred N-H- bands. The influence exercised by association upon the spectrum is also noticeable in n-phenyl diamine. A comparison of the intramolecular spectrum of n-phenyl diamine in both phases indicates that a much larger number of lines is visible in the crystal spectrum. The following results were obtained from a comparison with experimental data: All active frequencies are really visible in the crystal- and liquid spectrum. But the two frequencies 168 and 317 cm^{-1}, which are not contained in the liquid spectrum, are visible as weak lines in the crystal spectrum. This may be explained by the fact that the symmetry of molecules in the n-phenyl diamine crystal is considerably reduced by the effect of intramolecular interaction with a deviation from the symmetry D_{2h}. Yet the

Card 2/3 data available at present does not suffice for a complete ex-

planation of the nature of such interaction. The article is concluded with a short description of the spectra of small frequencies. The authors thank Academician A. N. Terenin for his interest in the present investigation. There are 1 table and 12 references, 6 of which are Soviet.

ASSOCIATION: Fizicheskiy institut Leningradskogo gosudarstvennogo universiteta im. A. A. Zhdanova (Physics Institute of Leningrad State University imeni A. A. Zhdanov)

PRESENTED: May 11, 1959, by A. A. Lebedev, Academician

SUBMITTED: February 26, 1959

L 33195-66 EWT(1)/EWT(m)/EWP(j) RM

ACC NR: AR6016198 SOURCE CODE: UR/0058/65/000/011/D029/D029

48

B

AUTHOR: Pershina, Ye. V.; Raskin, Sh. Sh.

TITLE: Concerning certain features of Raman spectra of adsorbed molecules

SOURCE: Ref. zh. Fizika, Abs. 11D224

REF SOURCE: Tr. Komis. po spektroskopii. AN SSSR. t. 3, vyp. 1, 1964, 255-264

TOPIC TAGS: Raman scattering, Raman spectrum, adsorption, molecular spectrum, silica gel, glass, phase transition

ABSTRACT: Raman spectra were obtained for several molecules adsorbed on microporous glass and silica gel. In most cases it was possible to obtain spectra for degrees of filling ranging from 0.2 - 0.5 layers to several layers. For several substances, for example for acetonitrile, dichloroethane, acetophenone, diphenyl, or antimony trichloride, there were observed regular variations in the spectra, which were most clearly manifest at small degrees of filling. At large degrees of filling (but long before capillary condensation) the spectra become in most cases identical with the spectra of the condensed phase. [Translation of abstract]

SUB CODE: 20,07/

Card 1/1 pla

SKRIPOV, Fedor Ivanovich; OSTROUMOV, G.A., prof., red.; RACHKO, Sh.Sh., st. nauchn. sotr., red.; [illegible], T.F., tekh., red.; BORODIN, P.M., red.

[A course of lectures on microwave spectroscopy] Kurs lektsii po radiospektroskopii. Leningrad, Izd-vo Leningr. univ., 1964. 211 p. (MIRA 18:2)

PERSHINA, Ye.V.; RASKIN, Sh.Sh.

Raman spectra of $AlCl_3$ and $AlBr_3$ in different phase states. (MIRA 16:3)
Opt. i spektr. 13 no.4:488-491 O '62.
(Aluminum chloride) (Aluminum bromide)
(Raman effect)

L 10284-63 EWP(j)/EPF(c)/EWT(m)/BDS--Pc-4/Pr-4--RM/WW/JW/MAY

ACCESSION NR: AP3002870 S/0020/63/150/005/1022/1025

AUTHOR: Pershina, Yc. V.; Raskin, Sh. Sh.

TITLE: Raman light spectra of certain compounds in the adsorption state

SOURCE: AN SSSR. Doklady, v. 150, no. 5, 1963, 1022-1025

TOPIC TAGS: raman spectra, acetonitrile, acetophenone, antimony trichloride, antimony tribromide

ABSTRACT: Raman light spectra of antimony trichloride and tribromide, acetonitrile, and acetophenone have been studied, with microporous glass and silica gel used as adsorbents. A double monochromator with photoelectric registration of spectra and a low-pressure spiral mercury lamp were used for recording the spectra. Raman spectra of antimony trichloride molecules on the adsorbents were recorded for film layers ranging in thickness from 0.2 monolayers to the state of capillary condensation. The spectra exhibit a broad band of 60 cm sup -1 width in the region of valence oscillations and of 130 cm sup -1 width in the region of deformation oscillations. Only the capillary-condensation sample exhibited linear spectra identical to those obtained from the antimony

Card 1/2

L 10284-63
ACCESSION NR: AP3002870

trichloride solid phase. Raman spectra of antimony trichloride molecules on the samples of microporous glass and silica gel were practically identical. Raman spectra of acetonitrile and acetophenone exhibited the valence frequencies shown in items 1 and 2 of the Enclosure. It was found that these spectra were identical to the spectra of adsorbed molecules when displacement of valence frequencies took place in the CN and CO groups. Antimony trichloride also exhibited spectra which were assumed to be the result of adsorbed molecules. It was observed that acetonitrile and acetophenone possess continuous fluorescence spectra which increase in magnitude toward the blue spectral region. The paper was presented by Academician A. N. Terenin on 14 January 1963. "The authors express to A. N. Terenin, on whose initiative the research was begun, their deep gratitude for his advice. The authors express their sincere thanks to O. S. Molchanova for the donation of samples of microporous glass and to A. M. Kaganova for the donation of samples of silica gel." Orig. art. has: 3 figures.

ASSOCIATION: Leningradskiy gosudarstvenny*y universitet im. A. A. Zhdanova (Leningrad State University)

SUBMITTED: 22Dec62 DATE ACQ: 15Jul63 ENCL: 01

SUB CODE: 00 NO REF SOV: 008 OTHER: 001

Card 2/3

RASKIN, Sh.Sh.

Raman spectra of $AgClO_4$ and of its complex with benzene. Dokl. AN SSSR 141 no.4:900-903 D '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy fizicheskiy institut Leningradskogo gosudarstvennogo universiteta. Predstavleno akademikom A.N. Tereninym.

(Silver perchlorate—Spectra)
(Benzene)

RASKIN, S.Ya.

Necessary book on practical application in teaching chemistry ("Problems in practical application in teaching chemistry" by P.A. Glorizov and others. Reviewed by S.IA. Raskin). Khim. v shkole 13 no.4:66-69 Jl-Ag '58. (MIRA 11:6)
(Chemistry--Study and teaching)
(Glorizov, P.A.)

RASKIN, S.Ya. (g.Kiyev)

Chemical methodology manual ("Methodology for teaching chemistry in secondary schools. D.M.Kiriushkin. Reviewed by S.IA.Raskin.) Khim. v shkole 9 no.4:61-66 Jl-Ag '54. (MLRA 7:8)
(Chemistry--Study and teaching) (Kiriushkin, D.M.)

RASKIN, S. YA.

Periodic Law-Study and Teaching

Method of teaching the subject: "Periodic law and D. I. Mendeleev's periodic system of elements. No. 4., Jl Ag '52. Khim v slkole

9. Monthly List of Russian Accessions, Library of Congress, December 1952 ~~1953~~, Uncl.

PASKIN, S. E.

"Granosan in the Treatment of (Grain) Seeds During Vernalization," Agrobiologiia, no. 6, 1949, pp. 140-141. 20 Ag822

So: SIRA - S1-90-53, 15 Dec 1953

RASKIN, S. YE.

DESHEVAYA, A. S. I. RASKIN, S. YE.

33276. Granozan Kak Protravitel' Semyan (Zernovykh) Pri Yarovizatsii. Agrobiologiya, 1949, No. 5, C. 140-41.

SO: Letopis' Zhurnal'nykh Statey Vol. 45, Moskva, 1949

RUSKOVA, A. A., [illegible]

Fungicides

Determining toxicity of treatments against hard smut of wheat on the developing spike. Sel. i sem., 19, No. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1952 1953, Uncl.

1. RASKIN, S.YE., RISAKOVA, A.A.

2. USSR (600)

4i Root rot

7. New developments in the control of black and white rot in carrot seed plants. Sel. i sem. 19 no. 12, 1952

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

RASKIN, S.E.

71* (The TMTD Preparation for Treating the Seed Roots of the Carrot.) Preparat TMTD dlia protravlivaniia semen-

nykh korneplodov morkovi. A. A. Rusakova and S. E. Raskin. *Zemledelie*, v. 2, no. 8, Aug. 1954, p. 39-43.
Use of tetramethyl thiuram disulfide (TMTD) for anti-rot treatment of seeds and roots. Tables, photographs.

PHASE I BOOK EXPLOITATION SOV/4147
SOV/2-S-100

Leningrad. Glavnaya geofizicheskaya observatoriya

Issledovaniye radiatsionnykh protsessov (Investigation of Radiation Processes). Leningrad, Gidrometeoizdat, 1960. 197 p. (Series: Its: Trudy, vyp. 100) Errata slip inserted. 1,000 copies printed.

Additional Sponsoring Agency: USSR. Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (Title page): K.S. Shifrin, Doctor of Physics and Mathematics, and V.L. Gayevskiy, Candidate of Geography; Ed. (Inside book): L.P. Zhdanova; Tech. Ed.: M.I. Braynina.

PURPOSE: The publication is intended for meteorologists and students of hydrometeorology at higher technical schools.

COVERAGE: This issue of the Transactions of the Main Geophysical Observatory imeni A.I. Voyeykov contains 27 articles on investigations of the radiation processes

Card 1/6

occurring in the atmosphere and on the active surface. Individual articles on the following topics are included: light dispersion in a two-layered atmosphere, comparative analysis of sighting conditions under a cloudy and a cloudless sky, investigation of long-wave radiation of the atmosphere, electronic temperature controller, aircraft instruments for measuring the spectral optical characteristics of the atmosphere and the underlying surface, and the dependence of long-wave atmospheric radiation upon the meteorological elements. References accompany each article.

TABLE OF CONTENTS:

3,5150

S/169/62/000/005/051/093
D228/D307

AUTHORS: Shifrin, K. S. and Raskin, V. F.

TITLE: The theory of the atmospheric indicatrix of scattering

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 28, abstract 5B192 (V sb. Aktinometriya i atmosfern. optika, L., Gidrometeoizdat, 1961, 178-186)

TEXT: Proceeding from an approximate method of examining the scattering and the absorption of light by particles, whose properties are not too different from those of the surrounding medium (soft particles), the authors construct a quantitative theory for the optical properties of atmospheric haze. A formula of the scattering indicatrix is introduced for the Rokar distribution, and the error, allowed by Rokar when deducing his well-known atmospheric indicatrix formula, is rectified. A formula is derived for the polydispersed coefficient of scattering of atmospheric haze with the same distribution. The optics of atmospheric haze with the Young distribution is calculated; an approximate formula is derived for the

Card 1/2

S/169/62/000/005/051/093
D228/D307

The theory of the ...

scattering indicatrix in the case of the Young distribution, and it is shown that the formula can be utilized with a precision of 10% for scattering angles greater than 5°. A more complex formula, accurate for the scattering angle ß = 0, is introduced. A scale is calculated for the special function, required in the computation of the indicatrix. A formula is derived for the coefficient of scattering of atmospheric haze with the Young distribution. [Abstracter's note: Complete translation.]

V
B

Card 2/2

32279

S/169/61/000/011/038/065
D228/D304

3,5150

AUTHORS: Shifrin, K.S., and Raskin, V.F.

TITLE: Atmospheric indicatrix corresponding to the generalized Junge distribution

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 11, 1961, 27, abstract 11B195 (Tr. Gl. Geofiz. observ., no. 109, 1961, 155 - 160)

TEXT: The optical characteristics (the indicatrix of scattering and the coefficient of scattering) of polydispersed aerosol systems with a Junge type distribution were obtained by theoretical means. It is possible to state on the grounds of experimental data that the microstructure in the troposphere's middle and upper layers may be described by the formula:

$$f(a) = A/a^n \qquad a \geqslant a_{min}$$

$$f(a) = 0 \qquad 0 < a < a_{min}.$$

This kind of distribution is termed the generalized Junge distribu-

Card 1/2

Atmospheric indicatrix corresponding ... S/169/61/000/011/038/065 D228/D304

tion by the authors. Formulas for the indicatrix of scattering and the coefficient of scattering of polydispersed aerosol systems consisting of particles of the environment ("soft particles") are introduced in the work with n equal to 5 and 6. Indicatrices corresponding to n = 5 and n = 6 are tabulated on the basis of the derived formulas. [Abstractor's note: Complete translation].

Card 2/2

SHIFRIN, K.S.; RASKIN, V.F.

Mean indicatrix in case of gamma-distribution. Trudy GGO no.109: 161-167 '61. (MIRA 14:5)

(Meteorological optics)

SHIFRIN, K.S.; RASKIN, V.F.

Spectral transmittance and the inverse problem of the theory of scattering. Opt. i spektr. 11 no.2:268-271 Ag '61.
(Light--Scattering)
(Meteorological optics)

SHIFRIN, K.S.; RASKIN, V.F.

Sensitivity of the polydispersion indicatrix to the shape of the distribution curve. Dokl. AN SSSR 137 no. 1:64-67 Mr-Ap '61. (MIRA 14:4)

1. Glavnaya geofizicheskaya observatoriya im. A.I. Voyeykova. Predstavleno akademikom A.A. Lebedevym.
(Colloids--Optical properties) (Aerosols--Optical properties) (Light--Scattering)

ACCESSION.NR: AT4033568 S/2922/63/009/000/0253/0260

AUTHOR: Shifrin, K. S.; Raskin, V. F.

TITLE: The theory of the optical method for the investigation of atmospheric aerosols

SOURCE: Vsesoyuznoye nauchnoye meteorologicheskoye soveshchaniye. 1st, Leningrad, 1961. Pribory* i metody* nablyudeniy (Instruments and methods of observation); trudy* soveshchaniya, v. 9. Leningrad, Gidrometeoizdat, 1963, 253-260

TOPIC TAGS: meteorology, aerosol, atmospheric aerosol, meteorological instrument

ABSTRACT: At the present time there are no sufficiently complete and reliable data concerning the aerosol component of the atmosphere because most existing instruments for measurement of aerosol particles have serious shortcomings; instruments based on the optical method are free of these inadequacies. The optical method makes it possible to make measurements without virtually any disturbance of the aerosol system. The method employs various optical characteristics: angular characteristics of the scattered light -- the indices of scattering, data on spectral transparency of the aerosol volume and polarization characteristics. This article discusses the possibility of determining microstructure from data on these indices and the scattering coefficient (spectral transparency). The direct and inverse

Card 1/2

ACCESSION NR: AT4033568

problems in the theory of scattering are discussed in detail; certain of these have been summarized from earlier papers of the author (Trudy GGO, No. 109, 1961 (two papers); Trudy 2-go soveshchaniya po aktinometrii i atmosfernoy optike, Gidrometeoizdat, Leningrad, 1960). Particular attention is given to the possibility of using data on spectral transparency for solution of the inverse problem. It is shown that by having an experimentally determined spectral transparency curve and using formulas cited in this paper it is possible to obtain a particle-size aerosol distribution curve; the very existence of these formulas is evidence of an unambiguous relationship between the microstructure of an aerosol and spectral transparency. Orig. art. has: 17 formulas and 2 figures.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

SUBMITTED: 00 DATE ACQ: 16Apr64 ENCL: 00

SUB CODE: ES NO REF SOV: 005 OTHER: 000

Card 2/2

ACC NR: AM6032613 (A,N) Monograph UR/

Strunge, Boris Nikolayevich; Revva, Leonid Dorofeyevich; Raskin, Veniamin Geselevich; Epshteyn, Abram Semenovich

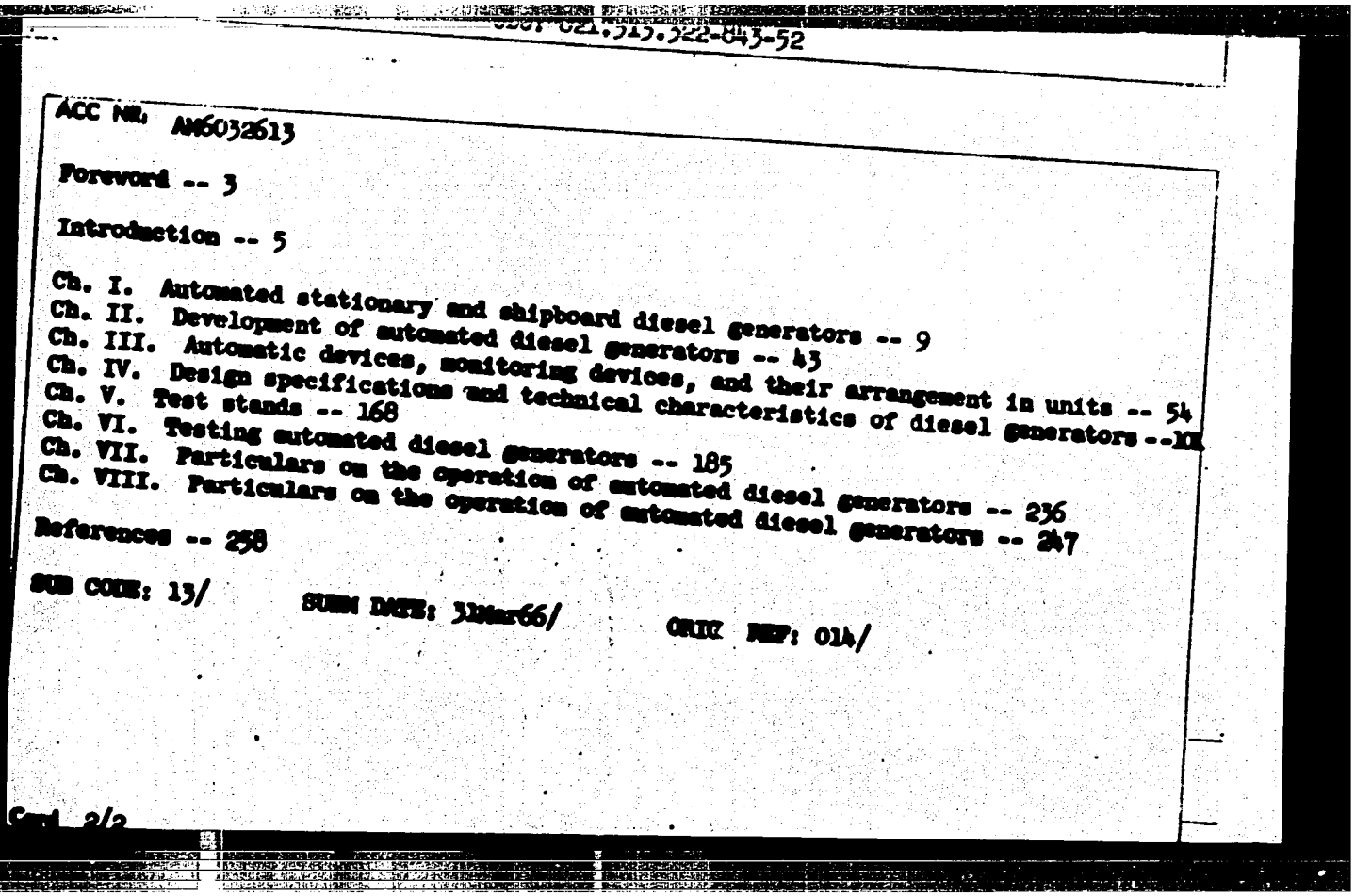
D100 automated high-power diesel generators (Avtomatizirovannyye dizel'-generatory bol'shoy moshchnosti tipa D100) Moscow. Izd-vo "Mashinostroyeniye", 1966. 259 p. illus., biblio. 1800 copies printed.

TOPIC TAGS: diesel engine, marine engineering, generator, electric generator, electric generator unit, automation, automation equipment/D100 diesel generator

PURPOSE AND COVERAGE: This book is intended for technical and engineering workers engaged in the planning and operation of stationary and shipboard automated diesel generators. The book discusses the principles and methods of automating the control, servicing, emergency-warning signalling, and the protection of high powered, type D100 stationary and shipboard diesel generators. Technical characteristics are presented, and domestic systems of automation, remote control, emergency-warning signalling, and the protection of diesel generators are described. The peculiarities of automation systems, their electrical diagrams, and the design of separate elements of the devices for monitoring these systems are examined. Recommendations are given for the installation, check-out, and operation of automated diesel generators. There are 14 references, all Soviet.

TABLE OF CONTENTS (Abridged)

Card 1/2



USSR 621.313.322-043-52

ACC NR: AM6032613

SUB CODE: 13/ SUBM DATE: 31Mar66/ ORIG REF: 014/

Card 2/2

RASKIN, V.I.; SEMENOV, G.I.

Determining causes for the breaking of counterbalance bolts of IAMZ engine crankshafts. Avt. prom. 29 no.11:14-15 N '63. (MIRA 16:12)

1. Yaroslavskiy motornyy zavod.

RASKIN, V.L. (Sverdlovsk)

EKG-5 excavator for open-pit mines. Gor. zhur. no. 1:48-53 Ja '61. (MIRA 14:1)

1. Nachal'nik konstruktorskogo byuro po ekskavatorostroyeniyu Uralmashzavoda.
(Strip mining) (Excavating machinery)

RASKIN, V.L., inzhener.

The EKG-8 excavator. Vest.mash.35 no.11:26-29 N '55.
(Excavating machinery) (MLRA 9:2)

RASKIN, V.M., inzh.; KRIVENKO, V.Ye., inzh.

Modernization of the A-547r hose-type semiautomatic machine for use in the welding of sanitary pipe billets. Svar. proizv. no.8:32-33 Ag '65. (MIRA 18:8)

1. Trest "Ukrmontazhorgstroy".

ZHEREBIN, B.N.; MISHIN, P.P.; KUDOYAROV, M.S.; SUKHENKO, S.I.; RASKIN, V.Z.; OSTROUKHOV, M.Ya.; RAKOV, V.V.

Experimental blast furnace smelting using coke from large-capacity coke ovens. Koks i khim. no.2:23-29 '64. (MIRA 17:4)

1. Kuznetskiy metallurgicheskiy kombinat (for Raskin).
2. Chelyabinskiy institut stali (for Ostroukhov). 3. Kuznetskiy filial Vostochnogo uglekhimicheskogo instituta (for Rakov).

VARSHAVSKIY, T.P., kand.tekhn.nauk; BEZDVERNYY, G.N.; RAKOV, V.V.; RASKIN, V.Z.; NIKITIN, Yu.K.

Coal charge for the production of other than blast-furnace coke. Koks i khim. no.11:18-20 '62. (MIRA 15:12)

1. Vostochnyy uglekhimicheskiy institut (for Varshavskiy, Bezdvernyy). 2. Kuznetskiy metallurgicheskiy kombinat (for Rakov, Raskin). 3. Kuznetskiy filial Vostochnogo uglekhimicheskogo instituta (for Nikitin).
(Coke)

KUPERMAN, P.I.; NIKITIN, Yu.K.; RAKOV, V.V.; RASKIN, V.Z.; KUZNETSOVA, A.I.

Characteristics of large dimenison coke ovens in connection with the coking of charges of Kuznetsk Basin coals. Koks i khim. no.12:22-27 '62. (MIRA 16:1)

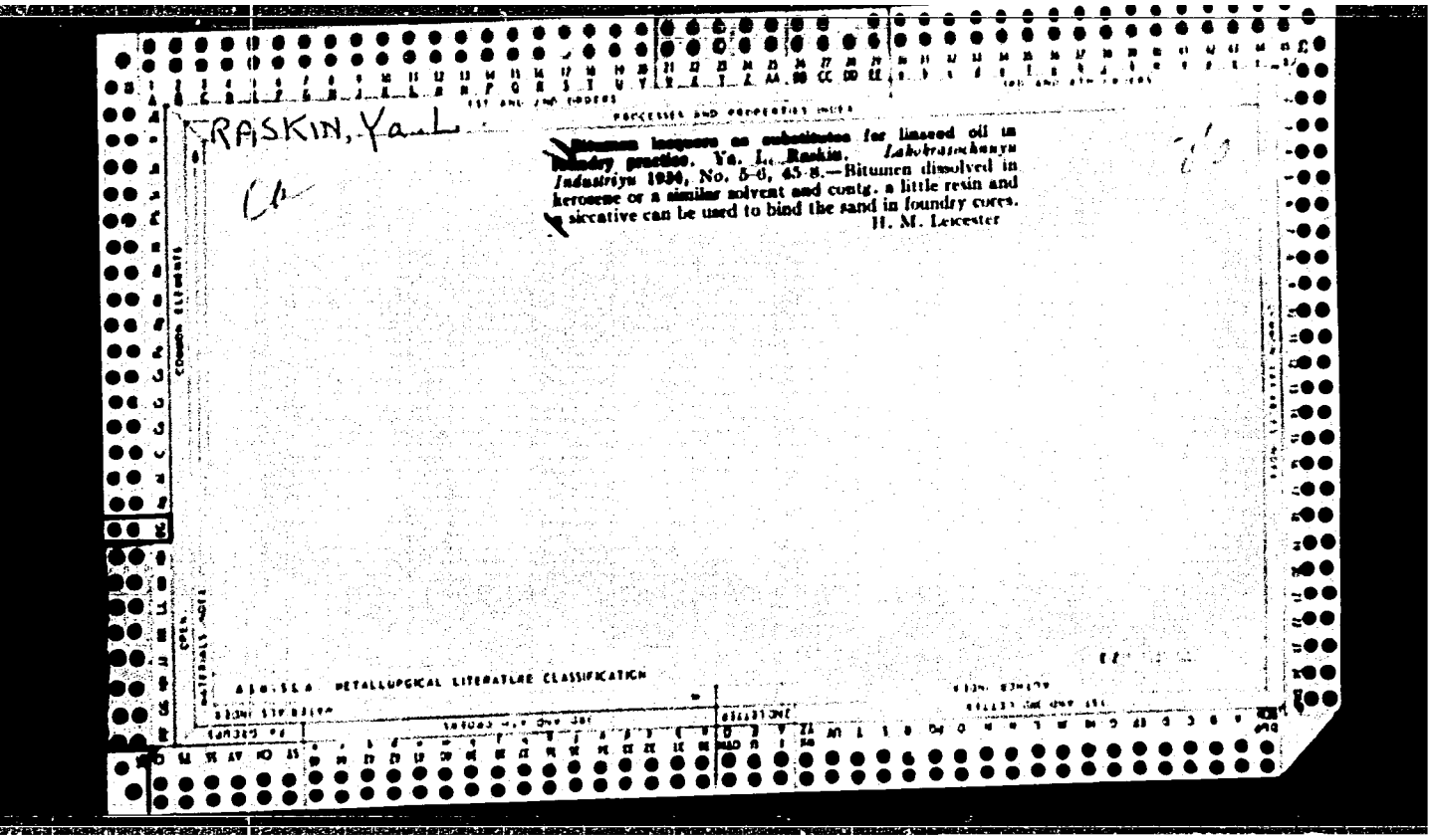
1. Vostochnyy uglekhimicheskiy institut (for Kuperman, Nikitin).
2. Kuznetskiy metallurgicheskiy kombinat (for Rakov, Raskin, Kuznetsova).

(Coke ovens)

PASKIN, Ya., Engr-Col

PASKIN, Ya.-
Listed as author of article, "The Repair and Washing of Vehicles in a Fixed Park," published in Tankist, No 12, 1953.
(Sovetskaya Armiya, 29 Dec 53)

SO: SUM 152, 25 June 1954



FRASKIN, Ya. L.

Ch

Bitumen lacquers as substitutes for linseed oil in foundry practice. Ya. L. Raskin. *Lakokrasochnaya Industriya* 1934, No. 5-6, 45-8.—Bitumen dissolved in kerosene or a similar solvent and contg. a little resin and a siccative can be used to bind the sand in foundry cores.
H. M. Leicester

669.5:5.6 METALLURGICAL LITERATURE CLASSIFICATION

RASKIN, YA. L.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
Organic Chemistry

6

(4) Chem

Synthesis and properties of 1-alkoxyethyl esters of unsaturated carboxylic acids (acylals). M. F. Shostakovskii, N. A. Gershtein, Ya. L. Raskin, and L. B. Ostroumova. *Bull. Acad. Sci. U.S.S.R., Div. Chem. Sci.* 1952, 453-8 (Engl. translation).—See *C.A.* 47, 4850a. H. L. H.

RASKIN, YA. I.

Chem Abs V 48
1-25-54
Organic Chemistry

7
5 Chem

α-Butoxyethyl methacrylate. M. F. Shostakovskii, N. A. Gershtein, Ya. I. Raskin, and L. E. Ostroumova. Akad. Nauk S.S.S.R., Inst. Org. Khim., Sintez Org. Soedinenii, Sbornik 2, 22-4(1952); cf. C.A. 43, 3785e.—Heating 25 g. BuOCH:CH_2 and 21.5 g. freshly distd. CH_2:CMeCO$_2$H in sealed tube 5-5.5 hrs. on a steam bath gave on distn. in N atm. 90% MeCH(OBu)O$_2$CCMe:CH_2, b_{12} 99°, b_{11} 84°, b_{10} 89°, d_{20} 0.9286, n_D^{20} 1.[illegible]. Similarly were prepd.: 84.5% MeCH(OEt)O$_2$CCMe:CH_2, b_{17} 65°, b_{13} 73°, d_{20} 0.9478, n_D^{20} 1.4209; 78.5% MeCH(OCH$_2$Ph)O$_2$CCMe:CH_2, b_{14} 83.7-4.0°, d_{20} 1.0367, n_D^{20} 1.5008; 77.8% MeCH(OC$_6$H$_{11}$)O$_2$CCMe:CH_2, b_{12} 112-12.5°, d_{20} 0.9776, n_D^{20} 1.4[illegible]; the necessary vinyl cyclohexyl ether, b_{12} [illegible], d_{20} 0.888, n_D^{20} 1.4547.

G. M. Kosolapoff

[illegible] 5-28-54

Perchloro-Vinyl Resins and Various Copolymers of Vinylchloride as Film-Forming Materials

[Ref 4]. During dissolution a change of the form of the polymeric macromolecule takes place [Ref 5]. Plasticizers are dibutylphthalate, tricresylphosphate, etc. Monomeric plasticizers increase the permeability to moisture in the films [Ref 7]. Stabilizers, like dibutyl--tin-dilaurate, are used as light filters for ultraviolet rays and acceptors for HCl which prevent the decomposition of the polymer. Epoxidized oils are as efficient as metal-organic compounds (Table 4). The adhesion of the resins to the painted surface being low, research is going on to use other monomers and grafted copolymers of vinylchloride as film-forming materials. Copolymers of vinylchloride with vinylbutyl ether and methylacrylate with a molecular weight of 30,000 produce coatings of high elasticity and adhesion and good atmospheric and water resistance [Ref 18]. The copolymer of vinylchloride with vinylidenechloride is highly soluble in varnish solvents [Ref 19]. It is elastic, adhesive and frost-resistant. It protects equipment against concentrated mineral acids and alkali for 3 - 5 months [Ref 20]. A system of primers, intermediate enamels and covering enamels has been developed for the protection of lower parts of ships against corrosion. [Ref 27]. Grafted copolymers formed by the polymerization of a mixture of monomers of butylmethacrylate and methacrylic acid in a latex

Card 2/3

"Perchloro-Vinyl Resins and Various Copolymers of Vinylchloride as Film-Forming Materials

of polyvinylchloride are resistant to light, atmospheric conditions, gasoline, oil, water, and are not inflammable. The resins are often used as suspensions in liquids which are no solvents for them. For this purpose diisobutylketone is used as a dispersing agent. There are 30 references, 15 of which are Soviet, 8 English, 4 German, 2 American and 1 Canadian.

Card 3/3

RASKIN, Ya.L.; URANOV, S.A.; TATARINOVA, T.L.

Benzene-resistant paints and coatings. Lakokras.mat.i ikh.prim. no.3:13-19 '60. (MIRA 14:4)

(Protective coatings)

BASKIN, Ya.L.; LIVSHITS, R.M.; BERLIN, A.A.

Preparation of graft copolymers based on nitrocellulose and study of their film-forming capacity. Report No.1. Lakokras.mat. i ikh prim. no.4: 6-10 '60. (MIRA 13:10)
(Polymers) (Nitrocellulose) (Protective coatings)

RASKIN, Ya.L.; LIVSHITS, R.M.

Methods for the modification of cellulose esters. Lakokras.mat.i ikh prim. no.5:33-37 '60. (MIRA 13:11)
(Cellulose esters)

BELYAYEVA, K.P.; RASKIN, Ya.L.; BERLIN, A.A.

Polyester acrylates as film-forming materials. Report No. 1: Polyester acrylates as film-forming materials in lacquers for wood finishing. Lakokras. mat. i ikh prim. no. 6:5-11 '60. (MIRA 13:12)

(Acrylic acid) (Lacquers and lacquering)

RASKIN, Ya.L.; ERMAN, V.Yu.; BELYAYEVA, K.P.; BERLIN, A.A.

Use of polyester acrylates as film-forming agents. Report No. 2: Film-forming capacities of polyester acrylates. Lakokras.mat i ikh prim. no.2:21-26 '61. (MIRA 14:4)
(Acrylic acid) (Films (Chemistry))

PLYPLINA, A.I.; RASKIN, Ya., L.; ROGOVIN, Z.A.

Photochemical degradation of nitrocellulose films. Report No.2: Effect of oil-containing components on the photochemical degradation of cellulose nitrates in paint coatings. Lakokras. mat. i ikh prim. no.3:8-11 '61. (MIRA 14:6)
(Nitrocellulose)
(Protective coatings)

PLYPLINA, A.I.; RASKIN, Ya.L.; ROGOVIN, Z.A.

Investigation of the processes of photochemical destruction of nitrocellulose coatings. Report No. 3: Effect of stabilizers on the resistance of nitrocellulose in lacquer-paint coatings to photochemical destruction. Lakokras. mat. i ikh. prim. no.4:2-5 '61. (MIRA 16:7)

(Protective coatings) (Nitrocellulose)

S/081/62/000/022/080/088
B101/B186

AUTHORS: Raskin, Ya. L., Sverdlin, M. S., Kronman, A. G., Yanovskiy, D. M.

TITLE: Paint and varnish coatings based on the copolymer obtained by the suspension method from vinyl chloride and vinyl acetate

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 22, 1962, 552, abstract 22P464 (Lakokrasochn. materialy i ikh primeneniye, no. 2, 1962, 10 - 12)

TEXT: Data are given for the composition and properties of copolymers (CP) synthetized by the suspension method from vinyl chloride and vinyl acetate, and for coatings made on this basis. In addition, recipes are given for primers and enamels based on this CP both in combination with other resins (epoxy, modified alkyd resin) and without them. Test results prove the high resistance to atmospheric effects, the good physico-mechanical properties, the resistance to water and light and the good appearance of coatings based on CP containing 16 - 17 % of vinyl acetate. [Abstracter's note: Complete translation.]

Card 1/1

MIKHAYLOV, V.V.; NAZARKIN, A.T. [deceased]; RASKIN, Ya.L.; SVERDLIN, M.S.; YEFREMOVA, V.K.; Prinimala uchastiye: BEREZINA, G.P.

Granulated organic pigments for the paint industry. Lakokras. mat.i ikh prim. no.3:32-35 '62. (MIRA 15:7)
(Pigments)

KOZHEVNIKOV, Sergey Nikolayevich; YESIPENKO, Yakov Ivanovich; RASKIN, Yakov Mikhaylovich; KOZHEVNIKOV, S.N., doktor tekhnicheskikh nauk, professor, redaktor; SHAUMYAN, G.A., laureat Stalinskoy premii, doktor tekhnicheskikh nauk, professor, retsenzent; BURAKOVA, O.N., redaktor; GLADKIKH, N.N., tekhnicheskiy redaktor.

[Elements of machinery] Elementy mekhanizmov. Izd. 2-oe, ispr. i dop. Pod red. S.N.Kozhevnikova. Moskva, Gos.izd-vo.obor.promyshl.,1956. 1078 p. (MLRA 9:6)

(Machinery)

RASKIN, Ya.M., kand.tekhn.nauk, dotsent

Coefficient of the recovery of speed in case of a collision of real solids. Izv.vys.ucheb.zav.; mashinostr. no.2:31-42 '61. (MIRA 14:3)

1. Dnepropetrovskiy metallurgicheskiy institut.
(Impact)

SOV/137-58-12-24501

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 12, p 77 (USSR)

AUTHOR: Raskin, Ya. M.

TITLE: The Kinetics and Working Loads of Automatic Nut-upsetting Machines (Kinetika i rabochiye nagruzki gaykovysadochnykh avtomatov)

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Chern. metallurgiya, 1958, Nr 5, pp 103-114

ABSTRACT: In an effort to discover the reasons for the frequent breakdowns of automatic nut-upsetting machines (M) which prevent attainment of planned output rates, to determine the working loads occurring in upsetting, and to estimate approximate formulas for analysis, a special investigation of the A412 M was run. Examination is made of the kinematics of the M, of the planned cyclic programming ("cyclogram") of the various operating mechanisms, and of the actual cyclogram recorded on an oscillograph by means of rheochord elements. It is established that the transporter-mechanism cam shapes require corrections and that the size of the clearances in meshing links of the plunger and transporter mechanisms require reduction to an absolute minimum. Experimental determination is made of the force required

Card 1/2

The Kinetics and Working Loads of Automatic Nut-upsetting Machines (cont.)

for upsetting, for punching holes, and for ejection. This is done by dynamometer and round wire strain-gage elements. An evaluation is made of stresses calculated by Gubkin's formula, the values of the coefficients employed being those of Nistratov, Navrotskiy, Misozhnikov and Grinberg, and the results are compared with experimental data. It is noted that Nistratov's values for the Z and n factors and the formula for σ_s^1 due to Navrotskiy are in best agreement with the experimental results. It is desirable to introduce a thermal coefficient in determining the force required to upset a hex nut. Reliable estimates of Z, n, and σ_s^1 require determination of the ultimate stresses of deformation under laboratory or shop conditions during manufacture of nuts of all shapes and sizes.

M. Ts.

Card 2/2

L 40787-65 EWT(d)/EWT(m)/EWA(d)/EWP(v)/EWP(t)/EWP(k)/EWP(h)/EWP(b)/
EWP(1)/EWA(c) Pf-4 JD/HW
ACCESSION NR: AP4047433 S/0182/64/000/010/0035/0040

27
26
B

AUTHOR: Raskin, Ya. M.; Zdanevich, V. A.

TITLE: Kinematic and force distribution pattern of a pipe section extrusion crank press

SOURCE: Kuznechno-shtampovochnoye proizvodstvo, no. 10, 1964, 35-40

TOPIC TAGS: crank press, force distribution pattern, kinematics, hydraulic safety lock, back brace, pipe section extrusion, crank press

ABSTRACT: The authors found considerable overloading in the cast iron back brace during their investigation of a 1500 t crank press. A new adjustable motor (see fig. 1) was designed and approved by GPI TPEP (State Design and Planning Institute of Technical and Industrial Electric Substations) and by KhEMZ (Khar'kov Electromechanical Plant). However, the authors point out that the shortcomings of a hydraulic safety lock remain to be eliminated and they are discussed in a special paper. The cast iron back brace should be replaced by a steel back brace. The substantial difference in stress application will be overcome by providing a

Card 1/2

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ACCESSION NR: AP4047433

uniform force distribution pattern in the span pieces of all four columns. The authors warn against pressing with a cold die. They recommend the use of a "2P176-8K" motor having a 2x1320 kw capacity; furthermore, coupling and flywheel are to be removed from the drive (see fig. 1a) Orig. art. has: 7 figures and 1 table

ASSOCIATION: None

SUBMITTED: 00 ENCL: 01 SUB CODE: MM

NR REF SOV: 003 OTHER: 000

Card 2/3

KOZHEVNIKOV, Sergey Nikolayevich; YESIPENKO, Yakov Ivanovich; RASKIN, Yakov Mikhaylovich

[Mechanisms] Mekhanizmy. Izd.3., dop. i perer. Moskva, Mashinostroenie, 1965. 1058 p. (MIRA 18:4)

1. Chlen-korrespondent AN Ukr.SSR (for Kozhevnikov).

ACC NR: AM5017937 Monograph UR/

Kozhevnikov, Sergey Nikolayevich (Corresponding Member, Academy of Sciences of the Ukrainian S.S.R.); YEsipenko, YAkov Ivanovich; Raskin, YAkov Mikhaylovich

Mechanisms (Mekhanizmy) 3d ed., rev. and enl. Moscow, Izd-vo "Mashinostroyeniye", 65. 1058 p. illus., biblio. Errata slip inserted. 16,000 copies printed.

TOPIC TAGS: mechanical engineering, automatic machine, automatic control, durability

PURPOSE AND COVERAGE: This book contains descriptions of 2,030 mechanisms and their elements applied to present machines of different branches of industry. It also describes elements and apparatus of automatic devices. For most of the material the classification of mechanisms is principally functional. For many mechanisms the design formulas are given in finished form to facilitate planning. This book is useful as a manual for technical engineers in factories, technological and planning institutes as well as for students in design of mechanisms and machines.

TABLE OF CONTENTS (abridged):

Card 1/2 UDC:621.01

RASKIN, Ya.M., kand.tekhn.nauk, dotsent

Kinematics of and work leads on automatic nut-upsetting machines. Izv. vys. ucheb. zav.; chern.met. no.5:103-114 My '58. (MIRA 11:7)

1.Dnepropetrovskiy metallurgicheskiy institut.
(Forging machinery)

KOZHEVNIKOV, S.N.; KOKLENKO, A.K.; KOS'KO, I.K.; MARTYNENKO, V.V.; RASKIN, Ya.M.; TSEKHNOVICH, L.I.

Instruments for the testing of machinery. Trudy Sem.teor.mash. 13 no.51: 86-111 '53. (MLRA 7:1)
(Engineering instruments) (Machinery--Testing)

LARIONOV, A.N.; KARATYGIN, A.M.; PETROV, I.I.; MOROZOV, D.P.; BARSUKOV, S.G.; RASKIN, Ye.A.; KHALIZEV, G.I.; MASLENNIKOV, L.V.

Candidate of engineering, Docent K.V. Urnov. Elektrichestvo no.2: 95 F '58. (MIRA 11:2)

(Urnov, Konstantin Vasil'evich, 1907-)

RASKIN, YE. I.

5560. Raskin, Ye. I. Trubozakatnyy starok dlya proizvodstva krovatey. M., KOIZ, 1954. 8 s. s ill. 21 sm. (Tsent. sovet promyshl. kooperatsii SSSR. Tekhn. upr. Obmen proizvod.-tekhn. opytom. Inform. listok. 64). 2000 ekz. Besp.----Avt. ukazan v kontse teksta.----(54-15081zh) 672.94.05

So: Knizhnaya Letopis', Vol. 1. 1955

TANSKIY, V.V.; KOYENMAN, G.P.; VOZNENKO, G.V. ; GORDONOVA, S.M.;KUGUSHEV, I.N.; GENIN, M.Ya; VISHNEVSKIY, A.V., red.; AVINOVITSKIY, I.Ya., inzh. nauchn. red.; GORCHAKOV, A.V., otv. red.; RASKIN, Yu.A., red.

[Plastics in construction] Plastmassy v stroitel'stve; tematicheskii sbornik. Moskva, TSentr.biuro tekhn.informatsii tekhn. upravleniia, 1960. 156 p. (MIRA 14:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Vishnevskiy). 2. TSentral'noye byuro tekhnicheskoy informatsii (for Raskin).

(Plastics) (Building materials)

RASKIN, Yu.N., inzh.

Method of determining stresses in decks and transverse bulkheads under the effect of ice loads. Sudostroenie 28 no.7:19-22 Jl '62. (MIRA 15:8)

(Hull (Naval architecture))
(Ships—Cold weather operation)

ACC NR: AR6035384 (N) SOURCE CODE: UR/0398/66/000/009/A022/A022

AUTHOR: Raskin, Yu. N.

TITLE: Experimental determination of the external forces acting on the hydrofoils of the motorship "Meteor"

SOURCE: Ref. zh. Vodnyy transport, Abs. 9A137

REF. SOURCE: Tr. Leningr. in-ta vodn. transp., vyp. 81, 1965, 86-93

TOPIC TAGS: ship, hydrofoil, stress analysis, stress distribution

ABSTRACT: In October and November 1963, running tests were made in the Finnish Bay, of the strength of the hydrofoils of the motorship "Meteor" under rough sea conditions. The ship was equipped with apparatus for the measurement of overloads and stresses in the ship's hull, and also with a wave measuring device. Accelerometers were mounted in three sections along the ship, to determine the wave and shock components of the accelerations. The stresses due to the overall bending were measured in five points of the midsection. The tests of the "Meteor" were made under six rough-sea conditions at wave altitudes 0.5 -- 1.6 m. It is concluded that the recommended rated load for the hydrofoil is a static load equal to double the load acting on the hydrofoil when the ship travels in still water. Attention is called to the long-term fatigue strength of the hydrofoils, which can determine their strength when materials with in-

UDC: 629.12.620.178.7

Card 1/2

RASKIN, Yu.N., inzh.

Calculating the effect of a longitudinal force on deck beams. Trudy LIVT no.62:12-14 '64. (MIRA 18:11)

ACC NR: AP7002657 (A,N) SOURCE CODE: UR/0191/67/000/001/0022/0025

AUTHOR: Koroleva, T. V.; Krasovskaya, T. A.; Sobolevskiy, M. V.; Gornets, L. V.; Raskin, Yu. Ye.

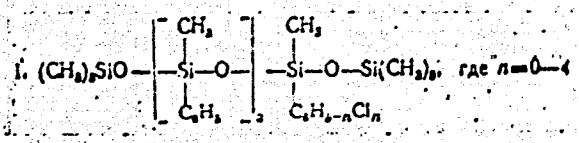
ORG: none

TITLE: Lubricating properties of polymethyl(chlorophenyl)siloxanes

SOURCE: Plasticheskiye massy, no. 1, 1967, 22-25

TOPIC TAGS: lubricant, silicone lubricant, polymethylchlorophenylsiloxane

ABSTRACT: The effect has been studied of the chlorine content in the phenyl radical and of the chlorophenyl group content of polymethyl(chlorophenyl)siloxanes on their lubricating properties. Polymers I, II, or III prepared by hydrolytic condensation and subsequent rearrangement in the presence of sulfuric acid were used:



Card 1/3 UDC: 678.84.06:621.892.28

ACC NR: AP7002657

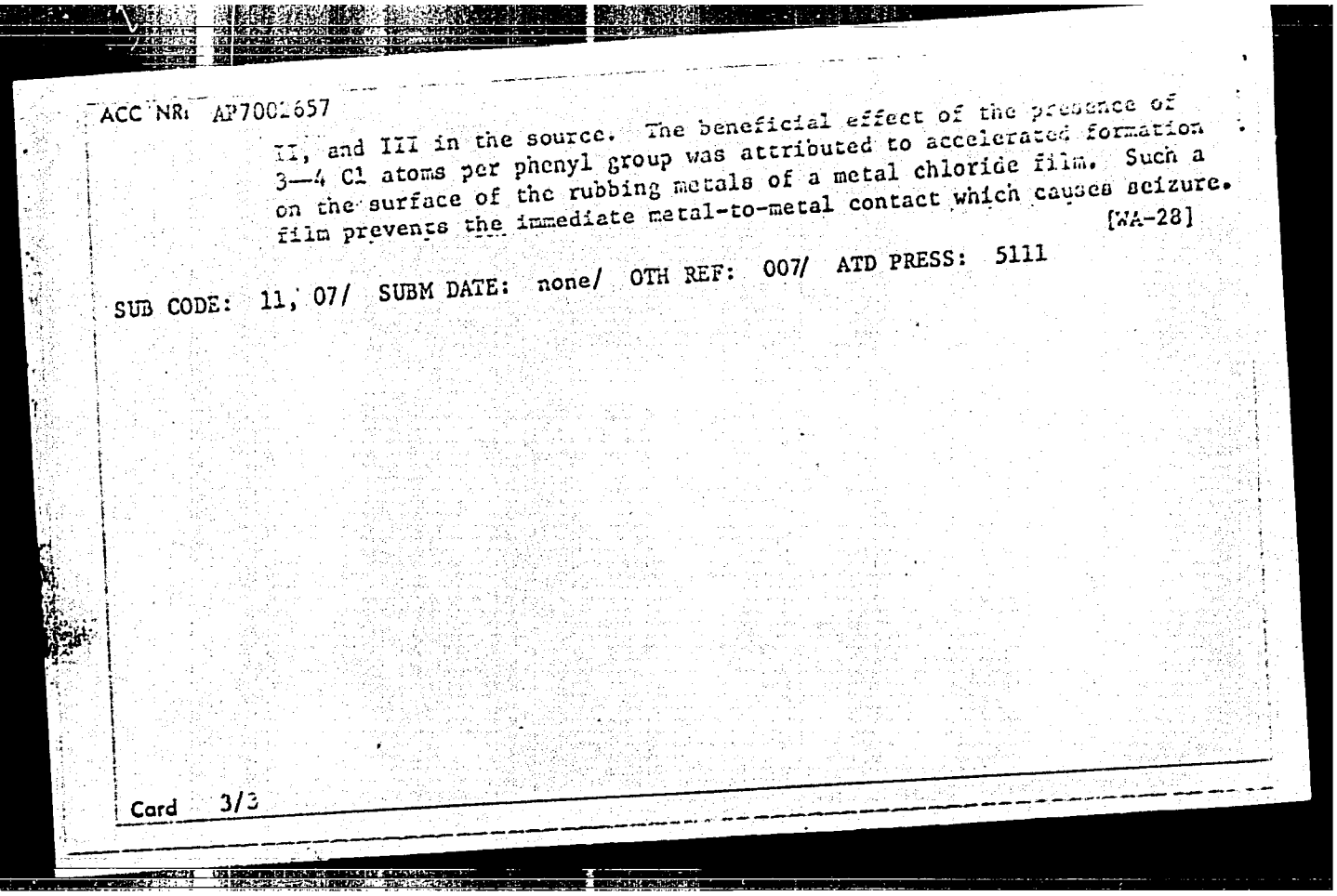
II. $(CH_3)_3SiO-\left[-Si(CH_3)(C_6H_5)-O-\right]_{6-m}-\left[-Si(CH_3)(C_6H_4Cl)-O-\right]_m-Si(CH_3)_3$

III. $(CH_3)_3SiO-\left[-Si(CH_3)(C_6H_5)-O-\right]_{6-m}-\left[-Si(CH_3)(C_6H_3Cl_2)-O-\right]_m-Si(CH_3)_3$

when $m = 0-4$.

The lubricating properties were determined on a four-ball apparatus under nitrogen from the diameter of the wear pit on the lower ball, the friction coefficient at various loads, and the character and magnitude of the friction force. The test temperature was 200C (at this temperature the viscosity of I, II, and III was virtually the same). It was found that for all three polymers, optimum lubricating properties are produced by the introduction of four chlorine atoms per polymer molecule, i.e., at a 16—17% chlorine content. At this chlorine content, the poorest lubricating properties are obtained when all four Cl atoms are concentrated in single phenyl group; such a concentration also considerably impairs thermal-oxidative stability. Polymers containing 1 or 2 Cl atoms per phenyl group have virtually the same lubricating properties. Properties, test conditions, and test results are given for I,

Card 2/3



ACC NR: AP7001657

II, and III in the source. The beneficial effect of the presence of 3—4 Cl atoms per phenyl group was attributed to accelerated formation on the surface of the rubbing metals of a metal chloride film. Such a film prevents the immediate metal-to-metal contact which causes seizure. [WA-28]

SUB CODE: 11, 07/ SUBM DATE: none/ OTH REF: 007/ ATD PRESS: 5111

Card 3/3

L 1549-66 EWT(d)/EWT(m)/EWP(w)/EPF(c)/EWA(d)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(z)/EWP(b)/EWP(l) MJW/BW/JD/DJ/GS

ACCESSION NR: AT5020436 UR/0000/65/000/000/0107/0113

AUTHORS: Raskin, Yu. Ye.; Gornets, L. V.; Nosov, Yu. A.

TITLE: Evaluation of lubricating properties of working fluids for aircraft hydraulic systems

SOURCE: AN SSSR. Nauchnyy sovet po treniyu i smazkam. Teoriya smazochnogo deystviya i novyye materialy (Theory of lubricating action and new materials). Moscow, Izd-vo Nauka, 1965, 107-113

TOPIC TAGS: lubricant, lubricant property, hydraulic fluid

ABSTRACT: The lubricating properties of 11 hydraulic fluids (No. 7; 7-30s; 7-40S-3; DS-18-1; AMG-10; AMG-10IT; AMG-10AIT; AMG-10SV; AMG-10S-2, and No. 2) were investigated on a four-ball friction machine (19 mm steel balls, HRC=60-62, 500 rpm of top ball) and on two axial-piston hydraulic pumps (at 210-220 kg/cm^2 and 2900-4000 rpm). The results are shown in Fig. 1 on the Enclosure. It was found that lubricants which have the same or better properties at 150C in the friction machine than AMG-10 at 100C worked well in the pumps, while the others were unsatisfactory. To determine the effects of load, sliding speed, materials of the friction junction, and gas used above the fluids in the accumulator,

Card 1/4

L 1549-66

ACCESSION NR: AT5020436

additional experiments were performed with AMG-10 and 7-50S-3. At a constant sliding speed of 23 cm/sec (AMG-10 at 100C, 7-50S-3 at 175C) and loads of 10, 20, 30 and 40 kg, for steel on steel (ShKh-9 steel balls, 60-62 HRC) and steel on bronze friction junctions (ShKh-9 steel on BRAZh-9/4 bronze), it was found that after 30 minutes the best performance was with steel on steel and AMG-10 lubricant in air (diameter of wear spot 0.45 mm at 10 kg, 0.6 mm at 40 kg, at 100C). In an N_2 atmosphere the wear was maximum with 7-50S-3 lubricant at 175C (1.28 mm at 40 kg as compared with 0.84 mm in air). For steel on bronze the wear increased smoothly with load for both lubricants with maximum wear for 7-50S-3 lubricant in N_2 (3.2 mm at 40 kg). Wear as a function of speed (AMG-10 at 100C, 7-50S-3 at 175C) was investigated at a constant load of 10 kg (time of experiment was adjusted to give same total number of ball revolutions). It was found that for AMG-10 (steel on steel) in air the wear remained almost constant with speed ($\approx$0.5 mm for 23-92 cm/sec) while for AMG-10 and 7-50S-3 (steel on steel) in N_2 the wear increased with speed (from 0.35 and 0.48 mm at 23 cm to 0.56 and 0.95 mm at 92 cm/sec respectively). For steel on bronze, wear remained almost constant for AMG-10 (in air and N_2) and 7-50S-3 (in air) and decreased for 7-50S-3 in N_2 (from 2.0 mm at 23 cm/sec). Orig. art. has: 5 figures and 5 tables.

Card 2/4

L 1549-66

ACCESSION NR: AT5020436

ASSOCIATION: [redacted]

SUBMITTED: 22May65 ENCL: 01 SUB CODE: PP

NO REF SOV: 000 OTHER: 000

Card 3/4

L 1549-66

ACCESSION NR: AT5020436

ENCLOSURE: 01

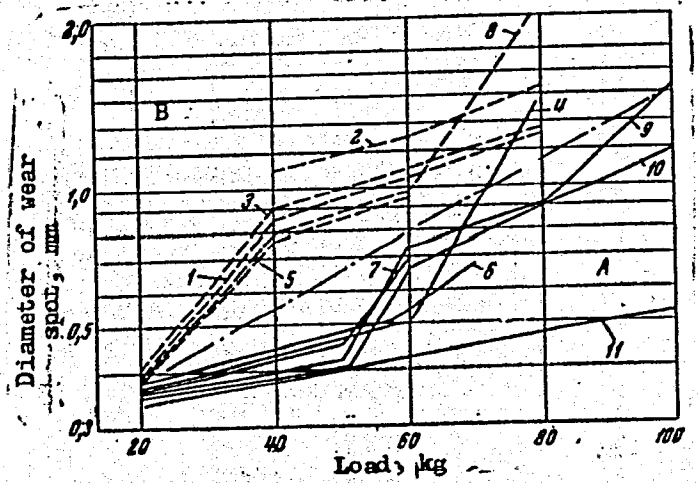


Fig. 1. Wear spot diameter vs axial load: 1- fluid 7 at 20C; 2- at 200C; 3- 7-30S at 150C; 4- organic ester at 150; 5- 7-40S-3 at 150; 6- 7-50S-3 at 150; 7- 50S-3 at 175C; 8- DS-18-1 at 200; 9- AMG-10 at 100; 10- general curve of 5 fluids AMG-10SV, AMG-10S-2, AMG-10S-3, AMG-10AIT and AMG-10IT at 150C; 11- fluid 2 at 125C; A- zone of satisfactory pump operation; B- unsatisfactory operation

Card 4/4

ACC NR: AP7006909 (A, N) SOURCE CODE: UR/0191/67/000/002/0041/0043

AUTHOR: Koroleva, T.V.; Raskin, Yu.Ye.; Krasovskaya, T.A.; Sobolevskiy, M.V.; Gornets, L.V.

ORG: none

TITLE: Lubricating properties of polymethyl (chlorophenyl) siloxanes

SOURCE: Plasticheskiye massy, no. 2, 1967, 41-43

TOPIC TAGS: lubricant, silicone lubricant, lubricity, siloxane ~~polymethylchlorophenylsiloxane~~

ABSTRACT:
A study was made of the effect on the lubricity of polymethyl(chlorophenyl)-siloxanes of 1) the methyl/phenyl group ratio in the middle and at the end of the backbone, and 2) the chlorophenyl group distribution along the backbone. The lubricity was tested in a four-ball apparatus; the criteria used were the diameter of the wear spot on the lower balls, the friction coefficient at various loads, and the character and magnitude of the friction force. The effect of the methyl/phenyl group ratio was studied for the following polydisperse mixtures:

Card 1/4 UDC: 678.84.01:621.891.22

ACC NR: AP7006909

Polysiloxanes I

$(CH_3)_3Si[OSiCH_2C_6H_5]_4OSi(CH_3)_3$ (1)

$(CH_3)_3Si[OSi(CH_3)_2]_3[OSiCH_2C_6H_5]OSi(CH_3)_3$ (2)

$(CH_3)_3Si[OSiCH_2C_6H_5]_3[OSiCH_2C_6H_4Cl]OSi(CH_3)_3$ (3)

$(CH_3)_3Si[OSi(CH_3)_2]_3[OSiCH_2C_6H_4Cl]OSi(CH_3)_3$ (4)

$(CH_3)_3Si[OSiCH_2C_6H_5]_3[OSiCH_2C_6H_3Cl_2]OSi(CH_3)_3$ (5)

$(CH_3)_3Si[OSi(CH_3)_2]_2[OSiCH_2C_6H_3Cl_2]OSi(CH_3)_3$ (6)

Polysiloxanes II

$(CH_3)_3Si[OSi(CH_3)_2]_2[OSiCH_2C_6H_4Cl]_2OSi(CH_3)_3$ (1)

$(CH_3)_3C_6H_5Si[OSi(CH_3)_2]_2[OSiCH_2C_6H_4Cl]_2OSiC_6H_5(CH_3)_2$ (2)

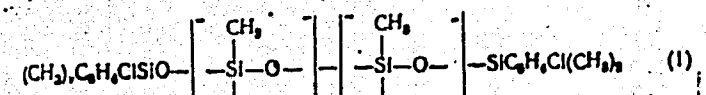
$CH_3(C_6H_5)_2Si[OSi(CH_3)_2]_2[OSiCH_2C_6H_4Cl]_2OSi(C_6H_5)_2CH_3$ (3)

It was found for polysiloxanes I, that at a constant number of trimethylsiloxane end groups per molecule, an increase in the methyl/phenyl ratio improves lubricity. For polysiloxanes II, it was found that the replacement of methyl end groups by phenyl end groups has an adverse effect on

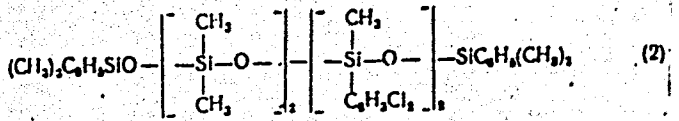
Card 2/4

ACC NR: AP7006909

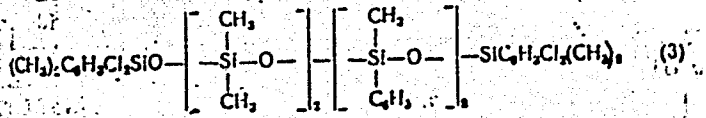
lubricity. It was concluded that an increase in the number of phenyl groups in the middle and at the end of the chain has an adverse effect on the lubricity of polymethyl(chlorophenyl)siloxanes. Therefore, a determination of the effect of the distribution of chlorophenyl radicals along the backbone on lubricity required a comparison of oligomers having not only the same chlorine content but also the same number of methyl and phenyl radicals. The effect of the chlorophenyl radical distribution on lubricity was studied for polysiloxanes III:



(1)



(2)



(3)

Card 3/4

ACC NR: AP7006909

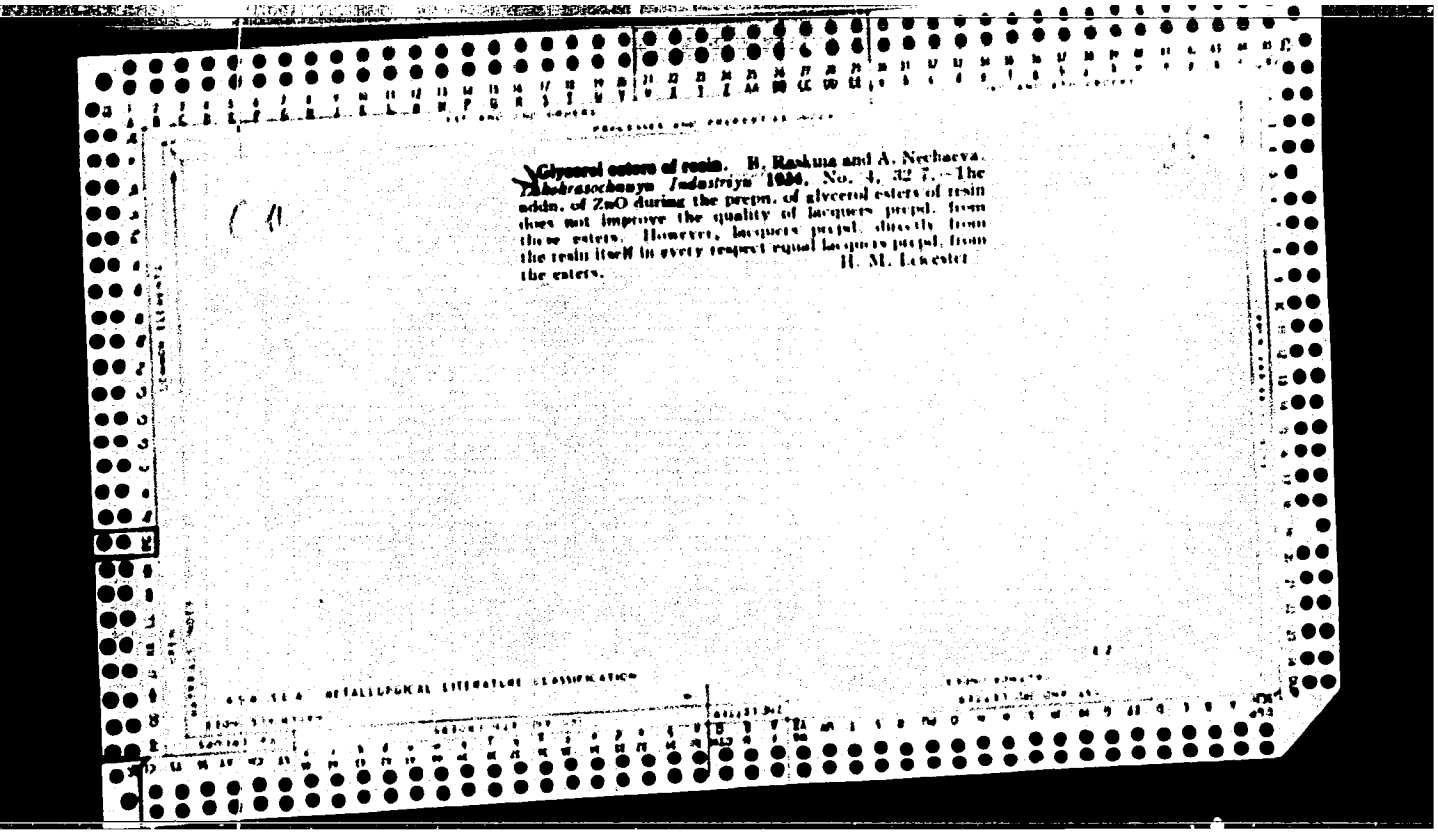
Comparison of III-1 with II-2 showed that the transfer of a chlorophenyl radical from the middle to the end of the chain substantially decreases the wear spot but does not change the friction coefficient. Comparison of III-2 and III-3 showed that the position of dichlorophenyl radicals has virtually no effect on lubricity. Evidently, for such a chain length (6 units) the presence of two dichlorophenyl radicals ensures virtually the same lubricity regardless of their position. Orig. art. has: 5 figures. [SM]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 006/
ATD PRESS: 5116

Card 4/4

RASKIN, Z.Ya., inzh.; KUURPERK, K.O., inzh.

New design of a blowoff device for convective heating surfaces.
Energomashinostroenie 4 no.11:39-40 N '58. (MIRA 11:11)
(Boilers--Equipment and supplies)



Glycerol esters of resin. B. Rashua and A. Nechaeva. *Lakokrasochnaya Industriya* 1934, No. 4, 32 7.—The addn. of ZnO during the prepn. of glycerol esters of resin does not improve the quality of lacquers prepd. from these esters. However, lacquers prepd. directly from the resin itself in every respect equal lacquers prepd. from the esters. H. M. Leicester

20362

9.4300 (1143, 1150)
24 7700 1143, 1043, 1136

S/020/61/136/005/024/032
B101/B206

AUTHORS: Voytenko, R. M. and Raskina, E. M.

TITLE: Some properties of polymer semiconductors

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1137-1138

TEXT: The electrical conductivity of polymer semiconductors obtained lately on the basis of polyacrylonitrile and polyvinylchloride is an exponential function of temperature: $\sigma \sim \exp(-\Delta E/2RT)$ (1). For these materials, the activation energy ΔE varies between 1.7 and 0.18 ev, according to the treatment of the initial polymer (Refs. 1,2). If $\sigma = enu$ (n = concentration of carriers; u = carrier mobility) is assumed, as is customary, the temperature dependence of electrical conductivity can be explained either a) by exponential increase of the number of carriers (when using the bond model, ΔE is the width of the forbidden band), or b) by exponential increase of the carrier mobility: $u \sim \exp(-\Delta E/RT)$. An answer to this problem can be given by studying the temperature dependence of the differential thermo-emf. If conductivity increases owing to increasing carrier concentration, this must be accompanied by a decrease of

Card 1/4

Some properties of polymer semiconductors

the thermo-emf. In this case, the following is valid according to the band theory: $\alpha = (k/e)(A - \Delta E/2RT)$ (2), A being almost independent of temperature. If, however, the carrier concentration does not depend on temperature, the thermo-emf is bound to increase logarithmically with temperature (Ref. 3). Fig. 1 shows the conductivity of polyacrylonitrile specimens as a function of temperature; Fig. 2 shows the thermo-emf of the same specimens as a function of temperature, and also the temperature dependence of the thermo-emf calculated from Eq. (2) for $\Delta E = 0.18$ (dash) and $\Delta E = 0.51$ (dot-dash). For specimens 3,4,5, the integral thermo-emf was determined as a function of the temperature gradient by charging a capacitor. Fig. 2 shows the differential thermo-emf obtained by differentiating the experimental function. As shown in the figures, the thermo-emf depends only slightly or not at all on temperature. It can be concluded therefrom that in the materials studied, the temperature dependence of conductivity is mainly caused by an exponential increase of the carrier mobility with temperature. [Abstracter's note: This is a full translation of the original]. There are 2 figures and 3 Soviet-bloc references.

20362

S/020/61/136/005/024/032
B101/B206

Some properties of polymer semiconductors

ASSOCIATION: Institut neftekhimicheskogo sinteza Akademii nauk SSSR (Institute of Petrochemical Synthesis, Academy of Sciences USSR)

PRESENTED: September 12, 1960, by V. A. Kargin, Academician

SUBMITTED: August 4, 1960

Legend to Fig. 1. a) specimen no. 1 $\Delta E = 0.18$ ev; б) specimen no. 2, $\Delta E = 0.26$ ev; в) specimen no. 3, $\Delta E = 0.32$ ev; г) specimen no. 4, $\Delta E = 0.39$ ev; д) specimen no. 5, $\Delta E = 0.51$ ev.

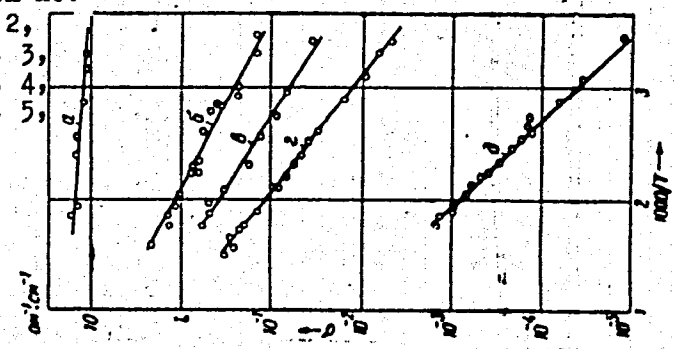


Рис. 1

Card 3/4

20362

S/020/61/136/005/024/032
B101/B206

Some properties of polymer semiconductors

Legend to Fig. 2. a) specimen

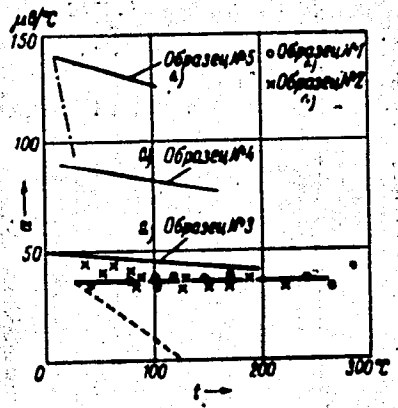


Рис. 2

Card 4/4

SOV/79-29-9-12/76

5(3)

AUTHORS: Nazarov, I. N., Prostakov, N. S., Raskina, E. M., Mikheyeva, N. N., Stolyarova, L. G.

TITLE: Synthetic Anti-spasmolitic Substances. Synthesis of 1-Phenyl-1-cyclohexyl-3-(2',5'-dimethyl piperidyl-1')-propanol-1

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 2861-2864 (USSR)

ABSTRACT: 2,5-dimethyl-4-piperidone (II) (Refs 1, 2) obtained from ammonia and propenyl-isopropenyl ketone (I) according to I. N. Nazarov, was made use of for the synthesis of compounds structurally related to the efficient anti-spasmolitic Arthan. (I) is an intermediate in the synthesis of anesthetics Promedol Isopromedol and α-Promedol (Ref 3). Compound (II) was transformed to (VII) according to Kizhner by reducing hydrazone (III) of piperidone (II) as well as by cleaving the piperidine compound (VI) with water; the latter compound is formed by compound (V) and lithium. Chloroderivative (V) was obtained from the reaction of piperidol (IV) with thionyl chloride. Condensation of piperidine (VII) with acetophenone and formaldehyde according to Mannich caused the separation of ketone (VIII) which was further transformed into compound (IX) by

Card 1/2

SOV/79-29-9-12/76

Synthetic Anti-spasmolitic Substances. Synthesis of 1-Phenyl-1-cyclohexyl-3-(2',5'-dimethyl piperidyl-1')-propanol-1

the reaction with magnesium chloro cyclohexyl. According to preliminary pharmacological data by M. D. Mashkovskiy (VNIKhFI), the chlorohydrate of this tertiary amino alcohol exhibits a marked anti-spasmolitic activity and is but little inferior to Arthan (Reaction Scheme). To investigate the structure dependence of this activity of tertiary amino alcohols containing the 2,5-dimethyl-1-piperidyl group as amine radical, the authors synthesized propanols (X), (XI), (XII), (XIII). The synthesis of these amino alcohols was made with the already earlier described ethyl esters (Ref 4) of β-(2,5-dimethyl piperidyl-1)-propionic and α-(2,5-dimethyl piperidyl-1)-propionic acid as well as with 1-acetonyl-2,5-dimethyl piperidine and the corresponding organomagnesium compounds. There are 4 Soviet references.

ASSOCIATION: Moskovskiy institut tonkoy khimicheskoy tekhnologii (Moscow Institute of Fine Chemical Technology)

SUBMITTED: July 10, 1958

Card 2/2