

SUYKOVSKAYA N.V.

51-4-1-11/26

AUTHORS: Shirokshina, Z. V. and Suykovskaya, N. V.

TITLE: Preparation of Translucent Films which are Transparent in the Infrared Spectral Region. (Polucheniye prosvetlyayushchikh plenok, prozrachnykh v infrakrasnoy oblasti spektra.)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol.IV, No.1, pp. 82-86. (USSR)

ABSTRACT: The authors used ethyl esters of orthosilicic, orthotitanic and orthogermanic acids, and chlorides of tin and antimony. Films were made by depositing a small amount of solution on a surface of a rotating glass or crystal plate. By hydrolysis of the solution and evaporation of the solvent uniform films of oxides of silicon, germanium, titanium, tin and antimony were obtained. To improve adhesion of the films to their bases they were heated to 120°C. These films were
Card 1/4 deposited on plates of fluorite, sodium chloride,

Preparation of Translucent Films which are
Infrared Spectral Region.

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Transparent in the

glass covered by films of titanium dioxide and antimony trioxide. Fig.1 shows that reflection of the infrared light ($3-12 \mu$ wavelengths) from the above glass covered with antimony trioxide is smaller than reflection from glass without this film. Minima of the reflection coefficient of coated glass, which may be as low as 3.8% (instead of 18-19% for plain glass), were found to occur in the $3.5-7.0 \mu$ spectral region for antimony trioxide films of $0.82-1.75 \mu$ thickness. The spectral curves of reflection obtained experimentally and by calculation for a glass with $n = 2.6$ covered by an antimony trioxide film 1.375μ thick, are compared in

Card 3/4 Fig.2 and are found to be in good agreement. Measure-

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Preparation of Translucent Films which are Transparent in the Infrared Spectral Region.

ments of transmission of sulphide glass covered by a film of antimony trioxide 1.375 μ thick (Fig.3) showed that in the spectral region 3-8.5 μ transparency may be increased by 20 - 25%. Deposition of titanium dioxide layers of 0.3 to 1.05 μ thickness also decreases considerably reflection of the infrared light at wavelengths when the film thickness equals $1/4 \lambda$. The reflection coefficient (Fig.4) may be then decreased from 18-19% to 3.8%. There are 4 figures, 1 table and 7 references, of which 5 are Russian and 2 American.

ASSOCIATION: State Institute of Optics Leonid S. I. Vavilov.
(Gos. opticheskii institut im. S.I. Vavilova.)

SUBMITTED: March 18, 1957.

AVAILABLE: Library of Congress.

Card 4/4 1. Films-Translucent-Infrared-Transparency spectra

L 15957-66 EWT(m)/EWP(j)/EWP(t)

JD/RM

ACC NR: AP6002808

SOURCE CODE: UR/0237/60/000/011/0044/0052⁴²

AUTHOR: Suykovskaya, N. V.

B

ORG: none

TITLE: ¹⁸Coatings which are transparent in the longwave spectral region (A survey of the literature)

SOURCE: Optiko-mekhanicheskaya promyshlennost', no. 11, 1960, 44-52

TOPIC TAGS: IR spectrum, glass coating, optic property

ABSTRACT: This is a survey based on 60 papers on thin films which are transparent in the infrared spectral region. Four comprehensive tables compare the properties (index of refraction, longwave transparency region, water solubility, thermal stability, possible optical thickness, and uses) of halides (fluoride), dielectrics (oxides), semiconductors (sulfides²⁷, selenides²⁷, tellurides⁷, silicon²⁷, germanium²⁷, tellurium⁷, and selenium), and organic polymer films.^{5, 23} The properties of the metallic coatings are also mentioned. The author also presents typical transmission curves, changes in the index of refraction, and absorption curves. Orig. art. has: 10 figures and 4 tables.

SUB CODE: 11, 20 / SUBM DATE: 09Aug60 / ORIG REF: 019 / OTH. REF: 041

bvk
Card 1/1

SVIRIDOVA, A.I.; SUYKOVSKAYA, N.V.

Properties of zirconium and thorium chlorides in ethyl alcohol
solutions. Zhur.prikl.khim. 35 no.2:280-285 F '62.

(MIRA 15:2)

(Zirconium chloride)

(Thorium chloride)

SUYSKAYA, Z. S.

"Treatment of Scrofulous Keratite with Tuberculin and Calcium Chloride," Vest. Oftalmol.,
28, No. 3, 1949. Mbr., Eye Clinic, Leningrad Hygiene & Sanitation Med. Inst., Min. Public
Health, RSFSR, -c1949-.

AUTHOR:

Suyskiy, P. A., (Moscow)

SOV/105-58-9-7/34

TITLE:

A Study of the Heating of Series A and AO 0,6 to 100 kW Squirrel Cage Induction Motors During Continuous Service
(Issledovaniye nagreva asinkhronnykh korotkozamknutykh dvigateley seriy A i AO moshchnost'yu 0,6 do 100 kvv pri prodolzhitel'nom rezhime raboty)

PERIODICAL:

Elektrichestvo, 1958, Nr 9, pp 35-38 (USSR)

ABSTRACT:

It is shown in this paper that for the series of induction motors the heating parameters may be obtained from equations derived on the basis of laws valid for the whole series, and of the test results obtained from a limited number of experimental motors. Furthermore, it is shown that the resulting average temperature elevations of induction motor windings in continuous service can be calculated by the method of equivalent heating losses. The formula obtained here can be used for designing induction motor series after the constants k_1 k_6 have been determined from the test data of the first experimental motors. There are 2 figures and 5 references, 5 of which

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A Study of the Heating of Series A and AO 0,6 to 100 kW SOV/105-58-9-7/34
Squirrel Cage Induction Motors During Continuous Service

are Soviet.

SUBMITTED: February 24, 1958

Card 2/2

8(5)

AUTHOR:

Suyskiy, P. A., Engineer

SOV/105-58-12-10/28

TITLE:

On the Investigation of the Heating of Squirrel-Cage Induction Motors Series A and AO of a Capacity Ranging From 0.6 to 100 kW at Intermittent Mode of Operation (Issledovaniye nagreva asinkhronnykh korotkozamknytykh dvigateley seriy A i AO moshchnost'yu ot 0.6 do 100 kvv pri povtorno-kratkovremennom rezhime raboty)

PERIODICAL:

Elektrichestvo, 1958, Nr 12, pp 44 - 48 (USSR)

ABSTRACT:

Here is demonstrated that the mean stabilized superripes of temperature of asynchronous motor windings can be calculated in accordance with the method of equivalent heating losses (Refs 3,5). This calculation refers to an intermittent mode of operation. The coefficients α , β and γ , which characterize the cooling during the operation in different sections of the cycle, can be determined for any motor of this series on the basis of the relations having been established here. The values for α and β may differ very strongly from those recommended in the directions for electric drive. The formulae obtained can be used to project series of asynchronous motors

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On the Investigation of the Heating of Squirrel-Cage Induction Motors Series A and AO of a Capacity Ranging From 0.6 to 100 kW at Intermittent Mode of Operation SOV/105-58-12-10/28

with an intermittent mode of operation and to design electric drives. Here enclosed two examples are given for a control calculation of the superrise of temperature in stator windings of two different motor types. There are 4 figures, 1 table and 6 Soviet references.

SUBMITTED: February 24, 1958

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SOV/110-59-2-3/21
Determination of the Permissible Number of Starts Per Hour for Squirrel Cage Induction Motors

permissible number of starts, but it is more convenient to use the total losses for this purpose. Eq (3) is then written for the conditions under which the temperature rise is equal under continuous and short term repeated conditions. The formulae to determine permissible number of starts per hour are then derived for three cases: repeated short term conditions with given duration of connection; repeated short term conditions with given operating times; and repeated short term conditions with given rest periods. When the formulae have been derived a formula for determining the permissible number of starts that is often quoted in handbooks is examined, and the reasons why it is inaccurate are considered. Values of coefficients that enter into the formulae for motors of series A and AO with outputs from 0.6 - 100 kW are tabulated. The method by which these figures were obtained is described. The recommended formulae were tested on a number of machines operating under different conditions and it was found that when the recommended number of starts per hour was made the temperature rise

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Determination of the Permissible Number of Starts Per Hour for Squirrel Cage Induction Motors

was somewhat greater than under normal operating conditions and the reasons for this are considered. It is concluded that the formulae are simple, convenient, and sufficiently accurate for practical use and that allowance can be made for different conditions of cooling of protected and enclosed motors. A calculation of the permissible number of starts on a motor under given conditions is given as an appendix.

Card 3/3 There are 4 figures, 1 table and 5 Soviet references.

SUBMITTED: June 25, 1958

8(5)

AUTHOR:

Suyskiy, P. A., Engineer, Moscow

SOV/105-59-3-15/27

TITLE:

On the Selection of Asynchronous Motors With Short-Circuited Rotors for Cyclic Operation (O vybore asinkhronnykh korotkozamknutykh dvigateley dlya tsiklicheskikh rezhimov raboty)

PERIODICAL:

Elektrichestvo, 1959, Nr 3, pp 67-72 (USSR)

ABSTRACT:

The results of investigations carried out by the author (parts of which were published in references 6, 7, 8) are given here. They show that it is useful and possible to include the following data in the catalogues for asynchronous motors with short-circuited rotors for cyclic operation: the factor β , which indicates cooling off during an interval; the permissible number of starts h_{AO} and of reversals h_{RO} per hour of idle running; and the loss factor k which is equal to the ratio between constant and variable losses. The derivation of computational relations is based on the assumption that the medium stabilized excess temperatures are equal in both nominal and required operation. Investigations of motors of the A and AO series showed (Refs 7, 8) that with series production...

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With Short-Circuited Rotors for Cyclic Operation

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no difficulties will be encountered in determining the β factor by the organizations designing these items. Investigations of motors of the same series also showed that for the purposes on hand and for general application the working time on each of the sectors of the transition part of the cycle can be calculated with sufficient exactitude according to formula (4). For determining the degree of efficiency, the formula (11) was obtained (Ref 3). Calculations according to this formula lead to satisfactory results if the concrete values of the k factor are used, the amount of which changes according to the calculation data for motors of the A and AO series in a more extended range (from 0.2 to 2) than is mentioned in publications (Ref 1). Therefore, the k values must be listed in the catalogues. The method for the determination of h_{AO} and h_{RO} by calculation and an example are given. For the calculation of total losses on the transition sectors the formulas (12) and (13) are written down and for the calculation of the permissible efficiency, formula (14).

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On the Selection of Asynchronous Motors
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The permissible number of circuit connections per hour under load (according to the known permissible number of starts and reversals per hour of idle running) can be calculated for orientation, according to formula (19).
There are 2 figures and 9 Soviet references.

SUBMITTED: October 6, 1958

Card 3/3

SUYSKIY, P.A., inzh.; BUDNIKOV, V.V., inzh.

Determining the permissible number of switchings (starts) per hour for squirrel-cage induction motors. Vest.elektrom. 30 no.2:9-13
F '59. (MIRA 12:3)

(Electric motors, Induction)

SUYSKIY, P.A., kand. tekhn. nauk

Calculation of the heating of asynchronous machines using
an equivalent heating loss technique. Vest. elektroprom.
34 no.7:30-35 JI '63. (MIRA 16:8)

SUYSKIY, P.A., kand. tekhn. nauk

Choice of asynchronous motors for periodic and short-term
operating modes. Elektrichestvo no.10:10-14 0 '64.

(MIRA 17:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektromekhaniki.

Suy L.R.

5(2), (3) PHASE I BOOK EXPLOITATION SOV/2554
 Akademiya nauk SSSR. Otdeleniye Khimicheskikh nauk. Komissiya po Khromatografii

Isledovaniya v oblasti ionobmennoy, raspredelitel'noy i osadochnoy khromatografii (Studies in the field of Ion Exchange, Distribution and Precipitation Chromatography) Moscow, Izd-vo AN SSSR, 1959. 150 p. Errata slip inserted. 3,500 copies printed.

Ed. of Publishing House: M.G. Yegorov; Tech. Ed.: I.M. Guseva; Editorial Board: K.V. Chmutov, Corresponding Member, USSR Academy of Sciences (Resp. Ed.); V.M. Shemyakin, Professor, K.M. Olishanov, Professor; K.M. Saldadze, Docent, and M.N. Lunitskiy, Professor.

PURPOSE: This book is intended for chemists and chemical engineers. COVERAGE: The book discusses studies in ion-exchange, distribution, and precipitation chromatography. Various problems of the theory of chromatography and its application are also considered. This or that collection of articles published by the Committee on Chromatography. The first collection was published in 1952 under the title: 'Isledovaniya v oblasti khromatografii' (Studies in the Field of Chromatography); the second was published in 1955 under the title 'Teoriya i praktika primeneniya ionobmennyykh materialov' (Theory and Practice of the Use of Ion-exchange Materials); and the third was published in 1957 under the title 'Isledovaniya v oblasti ionobmennoy khromatografii' (Studies in the Field of Ion-exchange Chromatography). No personalities are mentioned. References are given after most of the articles.

Davidov, A.F. and G.M. Lisovina. Study of the Sorption Value and the Exchange Energy of Cations on Mofatite With Relation to Temperature 21

Rachinskiy, Y.V. Theory of the Stationary Front of Dynamic Sorption 24

Saldadze, K.M., and Ye. N. Fedakova. Effect of the Ionite Structure on the Ion Exchange Process 39

Saldadze, K.M., and Ye. A. Shepina. Kinetics of Cation Exchange Processes on Carboxylic Cationites 48

Suy L.R., and P.M. Shevaykin. Purification of Salts With the Aid of an Ion-exchange Counterflow Installation 55

Fedorovskaya, O.P., K.M. Tunitskiy, and Ye. P. Chernaya. Study of the Kinetics of Complete Cation Exchange on Sulfonated Resins 63

Chernaya, Ye. P., A. B. Pashkov, S.H. Barabanov, and M.N. Tunitskiy. Change in the Specificity of Strongly Acidic Monofunctional Cationites in Relation to the Concentration of Sulfo Groups and Interchain Bonds in Cationites 70

Fedorovskaya, O.P., Ye. P. Chernaya, and M.M. Tunitskiy. Study of the Diffusion of Ions Through a Cationite Membrane 76

Shevaykin, V.M. Organic Reagents Used in Adsorption and Distribution Chromatography, Their Classification, and Trends of Investigation 80

Mitslovskiy, E.S., and P.M. Shevaykin. Some New Phenomena Which Accompany the Process of Electromigration of Organic Substances 90

Polyanskiy, M.G. Study of Thermal Desulfonation of Sulfophenolformaldehyde Resin KU-1 95

Kopylova, V.D., and K.M. Olishanova. Precipitation Chromatography 105

Kopylova, V.D., and K.M. Olishanova. Secondary Phenomena in Precipitation Chromatography 113

Olishanova, K.M., and M.M. Morozova. Determination of Calcium by the Precipitation Chromatography Method With the Indicator Murexide 124

Olishanova, K.M., and Z.A. Koloskova. Ion-exchange Paper Chromatography in Qualitative Analysis 128

Orlovskaya, N.V. Chromatographic Method of Qualitative Analysis for Fur Dyeuffs 134

Saldadze, K.M., K.M. Olishanova, and I.I. Ivanova. Sorption of Mineral Acids and of Their Salts on Cationites 138

Gorbacheva, M.A., and K.M. Saldadze. Adsorption of Complex Zinc Anions on Anionites With Different Basicity 143

SUYUMBAYEV, A.

For further improvement in the work of Kirghiz financial organs.
Fin. SSSR 19 no.6:23-27 Je '58. (MIRA 11:6)

1. Ministr finansov Kirgizskoy SSR,
(Kirghizistan--Finance)

SUYUMBAYEV, A.

Success of work depends upon personnel. Fin. SSSR 20 no.7:14-17
Jl '59. (MIRA 12:11)

1. Ministr finansov Kirgizskoy SSR.
(Kirghizistan--Finance)

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S/166/60/000/005/001/008
G111/0222

16.7300

AUTHOR: Suyunshkaliyev, N.Kh.

TITLE: Differential Equations of Elastical-Plastical Vibrations of a Big Plate

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1960, No.5, pp.11-18

TEXT: In contradistinction to the theory of thin plates, where $e_{zz} = \gamma_{zx} = \gamma_{zy} = 0$, the author starts from the assumption:

$$(1) \quad \begin{cases} e_{zz} = \frac{\partial w}{\partial z} = 0, & \gamma_{xz} = \frac{\partial u}{\partial z} + \frac{\partial w}{\partial x} = mf'(z) \mu_x(x, y, t), \\ \gamma_{yz} = \frac{\partial v}{\partial z} + \frac{\partial w}{\partial y} = mf'(z) \mu_y(x, y, t), \end{cases}$$

where $f'(z) = 1 - \frac{4z^2}{h^2}$, $m = \frac{5}{4}$, μ_x and μ_y are arbitrary functions.

By integrating (1) and assuming that the middle surface has no stretching then it holds

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$$(3) \quad \begin{cases} u = -z \frac{\partial w}{\partial x} + mf(z) \mu_x(x, y, t), & v = -z \frac{\partial w}{\partial y} + mf(z) \mu_y(x, y, t), \\ w = w(x, y, t) \end{cases}$$

and
(4)

$$\begin{cases} e_{xx} = \frac{\partial u}{\partial x} = -z \frac{\partial^2 w}{\partial x^2} + mf(z) \frac{\partial \mu_x}{\partial x} \\ e_{yy} = \frac{\partial v}{\partial y} = -z \frac{\partial^2 w}{\partial y^2} + mf(z) \frac{\partial \mu_y}{\partial y} \\ e_{xy} = \frac{\partial u}{\partial y} + \frac{\partial v}{\partial x} = -2z \frac{\partial^2 w}{\partial x \partial y} + mf(z) \left(\frac{\partial \mu_x}{\partial y} + \frac{\partial \mu_y}{\partial x} \right) \\ \gamma_{xy} = mf(z) \mu_x \\ \gamma_{yz} = mf(z) \mu_y \end{cases}$$

The differential equations of the elastica-plastica vibrations are obtained according to the principle of Hamilton

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Differential Equations of Elastical-Plastical Vibrations of a Big Plate

$$(5) \quad \delta E = \delta \int_{t_0}^{t_1} \int_{(V)} (T-U+A) dV dt = 0 ,$$

where E, T, U are full, kinetic and potential energies of the elementary volume of the plate, and A is the work of the external forces. After the calculation of the single summands of (5) the author obtains the following three differential equations for w, μ_x, μ_y :

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Differential Equations of Elastical-Plastical Vibrations of a Big Plate

$$\begin{aligned}
 & 2 \frac{\partial^2}{\partial x^2} \left[I_0 \left(\frac{\partial^2 w}{\partial x^2} - \frac{1}{2} \frac{\partial^2 w}{\partial y^2} \right) - I_1 \frac{\partial \mu_x}{\partial x} \right] + \frac{\partial}{\partial x} \left(I_1 \frac{\partial \mu_y}{\partial y} \right) + \\
 & + 6 \frac{\partial^2}{\partial x \partial y} \left[I_0 \frac{\partial^2 w}{\partial x \partial y} + \frac{I_1}{2} \left(\frac{\partial \mu_x}{\partial y} - \frac{\partial \mu_y}{\partial x} \right) \right] + \\
 & + 2 \frac{\partial^2}{\partial y^2} \left[I_0 \left(\frac{\partial^2 w}{\partial y^2} - \frac{1}{2} \frac{\partial^2 w}{\partial x^2} \right) - I_1 \frac{\partial \mu_y}{\partial y} \right] + \frac{\partial}{\partial y} \left(I_1 \frac{\partial \mu_x}{\partial x} \right) + I_0 \nabla^4 w - \\
 & - J_1 \left[\frac{\partial}{\partial x} \nabla^2 \mu_x + \frac{\partial}{\partial y} \nabla^2 \mu_y \right] - \frac{\partial}{\partial t} \left[m_0 \nabla^2 w - m_1 \frac{\partial}{\partial t} \left(\frac{\partial \mu_x}{\partial x} + \frac{\partial \mu_y}{\partial y} \right) + m_3 \frac{\partial w}{\partial t} \right] - \\
 & - q(x, y, t) = 0, \tag{17}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{\partial}{\partial x} \left[I_1 \left(2 \frac{\partial^2 w}{\partial x^2} - \frac{\partial^2 w}{\partial y^2} \right) - I_2 \left(2 \frac{\partial \mu_x}{\partial x} - \frac{\partial \mu_y}{\partial y} \right) \right] + 3 \frac{\partial}{\partial y} \left[I_1 \frac{\partial^2 w}{\partial x \partial y} - \right. \\
 & \left. - \frac{I_2}{2} \left(\frac{\partial \mu_x}{\partial y} + \frac{\partial \mu_y}{\partial x} \right) \right] + \frac{3}{2} I_3 \mu_x + J_1 \left(2 \frac{\partial^2 w}{\partial x^2} - \frac{\partial^2 w}{\partial y^2} \right) - J_2 \frac{\partial}{\partial x} \left(\frac{\partial \mu_x}{\partial x} + \frac{\partial \mu_y}{\partial y} \right) - \\
 & - \frac{\partial}{\partial t} \left(m_1 \frac{\partial w}{\partial x} - m_2 \frac{\partial \mu_x}{\partial t} \right) = 0, \tag{18}
 \end{aligned}$$

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Differential Equations of Elastical-Plastical Vibrations of a Big Plate

$$\begin{aligned}
& \frac{\partial}{\partial y} \left[I_1 \left(2 \frac{\partial^2 w}{\partial y^2} - \frac{\partial^2 w}{\partial x^2} \right) - I_2 \left(2 \frac{\partial \mu_y}{\partial y} - \frac{\partial \mu_x}{\partial x} \right) \right] + \\
& + 3 \frac{\partial}{\partial x} \left[I_1 \frac{\partial^2 w}{\partial x \partial y} - \frac{I_2}{2} \left(\frac{\partial \mu_y}{\partial x} + \frac{\partial \mu_x}{\partial y} \right) \right] + \frac{3}{2} I_3 \mu_y + J_1 \left(2 \frac{\partial^2 w}{\partial y^2} - \frac{\partial^2 w}{\partial x^2} \right) - \\
& - J_2 \frac{\partial}{\partial y} \left(\frac{\partial \mu_y}{\partial y} + \frac{\partial \mu_x}{\partial x} \right) - \frac{\partial}{\partial t} \left(m_1 \frac{\partial w}{\partial y} - m_2 \frac{\partial \mu_y}{\partial t} \right) = 0. \quad (19)
\end{aligned}$$

where m_i are given by

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Differential Equations of Elastical-Plastical Vibrations of a Big Plate

$$\begin{aligned}
 m_0 &= \int_{-h/2}^{h/2} \rho z^2 dz = \frac{1}{12} \rho h^3 \\
 m_1 &= \int_{-h/2}^{h/2} \rho z m f(z) dz = m \rho \int_{-h/2}^{h/2} z \left(z - \frac{4z^3}{3h^2} \right) dz = \frac{1}{9} \rho h^3 \\
 m_2 &= \int_{-h/2}^{h/2} \rho [m f(z)]^2 dz = m^2 \rho \int_{-h/2}^{h/2} \left(z - \frac{4z^3}{3h^2} \right)^2 dz = \frac{25}{192} \rho h^3 \\
 m_3 &= \int_{-h/2}^{h/2} \rho dz = \rho h
 \end{aligned}
 \tag{a}$$

the J_i are given by

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Differential Equations of Elastical-Plastical Vibrations of a Big Plate

$$\left. \begin{aligned}
 J_0 &= \int_{-h/2}^{h/2} Kz^2 dz = \frac{1}{12} Kh^3 \\
 J_1 &= \int_{-h/2}^{h/2} Kzmf(z) dz = \frac{1}{9} Kh^3 \\
 J_2 &= \int_{-h/2}^{h/2} K [mf(z)]^2 dz = \frac{25}{192} Kh^3
 \end{aligned} \right\}$$

(b)

and the I_i are given by

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G111/C222

Differential Equations of Elastical-Plastical Vibrations of a Big Plate of the deformations, K is the coefficient of the universal compression. The boundary conditions are not given. There are 3 Soviet references.

ASSOCIATION: Institut mekhaniki AN UzSSR (Mechanical Institute of the Academy of Sciences Uzbekskaya SSR)

SUBMITTED: March 28, 1960

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ACCESSION NR: AP4042631

the stress function by which the components of force are expressed, and w is the normal transfer (deflection) point of the medium layer. The operators ∇^2 and ∇_k^2 have the form:

$$\begin{aligned} \nabla^2 &= \frac{1}{AB} \left[\frac{\partial}{\partial \alpha} \left(\frac{B}{A} \frac{\partial}{\partial \alpha} \right) + \frac{\partial}{\partial \beta} \left(\frac{A}{B} \frac{\partial}{\partial \beta} \right) \right] \\ \nabla_k^2 &= \frac{1}{AB} \left[\frac{\partial}{\partial \alpha} \left(\frac{B}{A} k_2 \frac{\partial}{\partial \alpha} \right) + \frac{\partial}{\partial \beta} \left(\frac{A}{B} k_1 \frac{\partial}{\partial \beta} \right) \right] \end{aligned} \quad (2)$$

where $A = A(\alpha, \beta)$, $B = B(\alpha, \beta)$ are the coefficients of the first quadratic form of the medium surface; and α, β are the curvilinear coordinates coinciding with the lines of the main slopes $k_2 = k_2(\alpha, \beta)$, $k_1 = k_1(\alpha, \beta)$. The introduction of a complex potential

$$V = w + ipF, \quad p = \frac{\sqrt{12(1-\nu^2)}}{Eh^3} \quad (3)$$

of the system (1) leads to a complex equation:

$$\nabla^2 \nabla^2 V - \frac{12\sqrt{12(1-\nu^2)}}{h} \nabla_k^2 V = \frac{1}{D} Z, \quad (4)$$

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The general solution of equation (6) can be represented thus:

$$V = V_1 + V_2$$

(8)

where V_1 satisfies the Laplace equation

$$\Delta V_1 = 0,$$

(9)

and V_2 satisfies

$$\Delta V_2 - 4l\sqrt{12(1-\nu^2)} \frac{r_0^2}{R^2} V_2 = 0$$

(10)

In the case of complex arguments, equation (9) has the form:

$$\frac{\partial^2 V_1}{\partial z \partial \bar{z}} = 0,$$

(11)

The author concludes by explaining that the problem of the deflection of a sloping, spherical shell weakened by an opening leads to some marginal problems in the theory of functions of complex variables. Depending on the definition of the four unknown functions $\Phi_j(z)$ and $\Psi_j(z)$ ($j = 1, 2$), one can define boundary conditions

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124187-65 EWA(b)/EWP(k)/EWT(d)/EWT(m)/EWA(d)/EWP(w)/EWP(v) Pf-4/Peb EM
ACCESSION NR: A25003.15 5/0167/64/000/006/0014/0028

AUTHOR: Suyunshkaliyev, N. Kh.

TITLE: On flat shell calculations

SOURCE: AN UzSSR. Izvestiya. Seriya tekhnicheskikh nauk, no. 6, 1964, 14-28

KEYWORDS: spherical shell, cylindrical shell, stress analysis, Fourier series, complex variables, finite series, stress level

ABSTRACT: The stress and deflection characteristics of cylindrical and spherical flat shells were studied analytically under the following two assumptions:
 $ds^2 = da^2 + d\beta^2$, $k_1 = \text{const}$, $k_2 = \text{const}$. The various shell coordinates are defined in Fig. 1 on the Enclosure. Here k_1 and k_2 are the principal curvatures of the shell. The two governing differential equations are given by

$$\left. \begin{aligned} \nabla^2 \nabla^2 w - \frac{1}{R} \nabla^2 \varphi &= \frac{Z}{D} \\ \nabla^2 \nabla^2 \varphi - Eh \nabla^2 w &= 0 \end{aligned} \right\}$$

Card 1/4

L 24137-65

ACCESSION NR: AP5003319

where D is $D = \frac{Eh^3}{12(1-\nu^2)}$ and w and φ are the deflection and stress functions respectively. The general solution is carried out by introducing the complex function

$$\left. \begin{aligned} u(\alpha, \beta) &= w(\alpha, \beta) + i \frac{\sqrt{12(1-\nu^2)}}{Eh^3} \varphi(\alpha, \beta) \\ w &= \operatorname{Re} u, \quad \varphi = \frac{Eh^3}{\sqrt{12(1-\nu^2)}} \operatorname{Im} u \end{aligned} \right\}$$

where $u(\alpha, \beta)$ is given as a double-infinite sine series. For a spherical shell, $k_1 = k_2 = 1/R$ solutions are given corresponding to six different end conditions which include freely supported ends, equal but oppositely acting moments represented as Fourier series, antisymmetric moments, and one free- and three fixed-end conditions. A similar analysis is made for cylindrical shells, $k_1 = 0, k_2 = 1/R$ with boundary conditions corresponding to freely-supported ends, two fixed ends and two carrying equal loads, three freely supported and one fixed end. The results are found to agree with existing solutions in the literature. Orig. art. has: 91 equations.

Card 2/4

L 24137-65
ACCESSION NR: AF5003319

by Institute AN UZSSR, Institute of

SUBMITTED: 10/19/64

ENCL: 01

SUB CODE: A2

NO REF SOV: 004

OTHER: 000

Card 3/4

L 24137-65
ACCESSION NR: AP50G3319

ENCLOSURE: 01

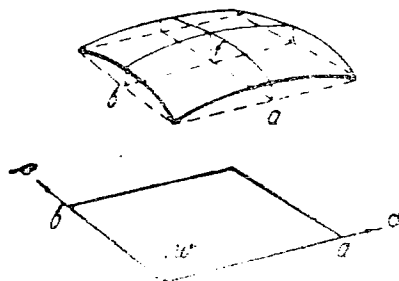


Fig. 1.

Card 4/4

SUYUNSHKALIYEV, N.Kh.

Calculation of sloping envelopes. Izv. AN UzSSR. Ser. tekhn. nauk
no.8:14-28 '64. (MIRA 18:3)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN UzSSR.

SUYUNSHKALIYEV, N. Kh.

Allowing for shifting in the problem involving a bent plate.
Izv. AN Uz. SSR. Ser. tekhn. nauk 8 no.5:12-15 '64.

(MIRA 18:2)

1. Institut mekhaniki AN UzSSR i Vychislitel'nyy tsentr AN UzSSR.

ACCESSION NR: AP5-17255

UR/0167/64/000/005/0012/0015

AUTHOR: Sayunskaliyev, N. Kh.

TITLE: Calculating displacement in the plate-bending problem

SOURCE: AN U-SSR. Izvestiya, no. 5, 1964, 12-15

TOPIC TAGS: thin plate, metal stress, aerospace structure, flat plate, metal bending

ABSTRACT: In this brief mathematical paper the author examines on the basis of R. V. Timoshenko's theory of plates and shells the cylindrical bending of a thin plate with a hole of radius a , by moments M , the circumference of the opening being free from external stresses. His analysis differs from the standard approach in that k , the ratio of the

Card 1/2

L 53725-05
ACCESSION NR: AP5017255

2

ASSOCIATION: Institut mekhaniki AN UzSSR (Institute of Mechanics AN UzSSR);
Vychislitel'nyy tsentr AN UzSSR (Computing Center AN UzSSR)

DISPATCH: 0000 ENCL: 0 SUB CODE: AS,ME
NR REF SOV: 003 OTHER: 000 JPRS

2/2
Card

SUYUNSHKALIYEV, N.Kh.

Calculation of a spherical shell. Izv. AN Uz. SSR. Ser. tekhn. nauk
9 no.2:44-53 '65. (MIRA 18:8)

1. Institut mekhaniki i Vychislitel'nyy tsentr AN UzSSR.

SUM, C.

"Lichens of Brundis, Slovenia." p. 175
(Irace. Vol. 23, No. 107-100, 1951, Erno.)

SO: Monthly List of East European Accessions, Vol. 3, No. 3, Library of Congress, March 1954, Uncl.

SUZA, J.

"Algae of the Slanec-Presov Mountains in Slovakia." (p.61). BIOLOGICKY SBORNIK.
(Slovenska akademia vied a umeni) Bratislava. Vol. 7, No. 1/2, 1952.

SO: East European Accessions List, Vol 3, No 8, Aug 1954.

SUZAK, A.

Payment of workers according to results. p. 637. TEKSTIL. Vol. 4
No. 6, June 1955. Beograd.

SCURCE: East European Accessions List (E.E.A.L), Library of Congress,
Vol. 4, No. 12, December 1955.

SUZAK, A.

Use of modern measuring instruments for work norms. p. 31

TEKSTIL, Zagreb, Vol 5, No. 1, Jan 1956

SO: EEAL, Vol 5, No. 7, July 1956

SUZAK, A.

Survey of various systems of performance evaluation with a description of their historical development. p. 345. TEKSTIL. (Društvo inženjera i tehnicara tekstilaca Hrvatske) Zagreb. Vol. 5, no. 5, May 1956.

So. East European Accessions List Vol. 5, No. 9 September, 1956

SUREK, A

Modern methods of labor research and rationalization of industry by using
technical aids and instruments. p. 601.

(TEKSTIL. Vol. 6, No. 6, June 1957, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions (EMAL) Lc. Vol. 6, No. 10, October 1957. Uncl.

SUZAK, A.

The study of work and its organization. p. 535.

(TFKSTIL. Vol. 6, No. 6, June 1957, Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions (EPAL) Lc. Vol. 6, No. 10, October 1957. Uncl.

SUZAK, A.

Basic principle for the setting of norms in cotton manufacture. p. 271.

TEKSTIL. (Društvo inženjera i tehničara tekstilaca Hrvatske) Zagreb, Yugoslavia.
Vol. 8, no. 4, Apr. 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

SUZAK, A.

Some problems of labor productivity at the Duga Resa Cotton Mill. p. 798.

TEKSTIL. (Društvo inženjera i tehničara tekstilaca Hrvatske) Zagreb,
Yugoslavia, Vol. 8, no. 10, Oct. 1959.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, no. 1,
Jan. 1960.

Uncl.

SUZANOV, B.V.

Using excess-pressure blast-furnace gas in gas turbines. Metallurg no.9:
1-3 S '56. (MLRA 9:10)

1. Glavenergo Ministerstva chernoy metallurgii SSSR.
(Blast furnaces) (Gas turbines)

SANDOMIRSKIY, Georgiy Borisovich; STANKEYEV, Boris Mikhaylovich; BEKERMEN, Roman Yefimovich; SUZANOVICH, Dmitriy Frantsevich; KANDALOV, I.I., professor, redaktor; OBREZKOV, S.S., redaktor; SZVORTSOV, I.M., tekhnicheskiy redaktor.

[Handbook of construction equipment for use in hydroelectric power plant construction] Spravochnik stroitel'nogo oborudovaniia dlia gidroenergeticheskogo stroitel'stva. Moskva, Gos. energ. izd-vo, 1954. 287 p. (MIRA 8:2)
(Hydraulic engineering) (Building machinery)

SEMENCHENKO, D.I., kand. tekhn. nauk, dots.; UKHACHEV, V.A.;
MALKIN, A.Ya., doktor tekhn. na k, prof., red.; SUZANOVICH,
M.I., nauchn. red.

[Instruments for automating production in use abroad] In-
strument dlia avtomatizirovannogo proizvodstva zarubezh-
nykh firm. Moskva, 1963. 85 p. (Novye mashiny, oborudo-
vanie i sredstva avtomatizatsii. Serii: U-77)

(MIRA 17:5)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy in-
formatsii po avtomatizatsii i mashinostroyeniyu.

SUZANOVICH, Yu. D.

28-58-1-10/34

AUTHOR: Suzanovich, Yu.D., Candidate of Technical Sciences

TITLE: The Terminology and Classification of Deep-Boring Drills Must Be Made More Precise (Utochnit' terminologiyu i klassifikatsiyu sverl dlya sverleniya glubokikh otverstiy)

PERIODICAL: Standartizatsiya, 1958, # 1, pp 31-33 (USSR)

ABSTRACT: The author points out the need for a standard terminology of deep-boring drills, especially for "single-sided" and "two-sided" ones. The article includes the drawings of 4 gun drills, standardized by "Normal NV 667-52", 3 of which are "single-sided" and 1 "two-sided".
In the author's opinion, deep drills ought to be classified as shown in the diagram (Figure 5).
There are 4 drawings, 1 diagram and 3 Soviet references.

AVAILABLE: Library of Congress

Card 1/1

L 13552-63

EWI(j)/EPF(c)/EWI(m)/BDS ASD Fe-4/Pr-4 RM/WW

ACCESSION NR: AP3000699

8/0190/63/005/005/0712/0718

AUTHOR: Petrov, K. A.; Nifant'yev, E. Ye.; Ly*senko, T. N.; Suzanskiy, A. I. 64

TITLE: Phosphorus-containing polymers. 6. Synthesis of polyphosphites and polyphosphinites on the basis of glucose

SOURCE: Vy*sokomolekulyarny*ye soyedineniya, v. 5, no. 5, 1963, 712-718

TOPIC TAGS: polyphosphites, polyphosphinites, methylglucoside, phosphorylation, polymers, monosaccharides, polythiophosphates

ABSTRACT: The objective of the present investigation was an attempt to synthesize polymers, using methylglucoside from the hydrolysis of wood pulp and di- and triamides of trivalent phosphorous acids as the issuing materials. However, the alcoholysis by methylglucoside of tetraethylidiamides of methylphosphinic and ethylphosphorous acid and of hexaethyltriamide of phosphorous acid, when conducted at 100 to 130C, yielded bicyclic phosphinites with a molecular weight of only 210 to 220. Subsequent heating at 160 to 200C caused a molecular weight increase, with optimal molecular weights reaching 321.000 and 528.000, where the ratios of the reacting ingredients are close to equinormal. Since the formation of intermolecular bonds generally proceeds at a lesser rate when compared with the building of intracyclic phosphinite groups, it is necessary to conduct the polymerization in two steps, the

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L 13552-63

ACCESSION NR: AP3000699

second one intended to promote the conversion of the initially formed cyclic esters into branched polyphosphites and polyphosphinites. The obtained polymers could be converted to polyphosphates, polythiophosphates, and polyphosphonates by treatment with NO at 30 to 40C, with S at 130C, and with Arbuzov's alkylation reagent, respectively. Orig. art. has: 2 formulas, 3 figures, and 2 tables. 0

ASSOCIATION: none

SUBMITTED: 01Nov61

DATE ACQ: 17Jun63

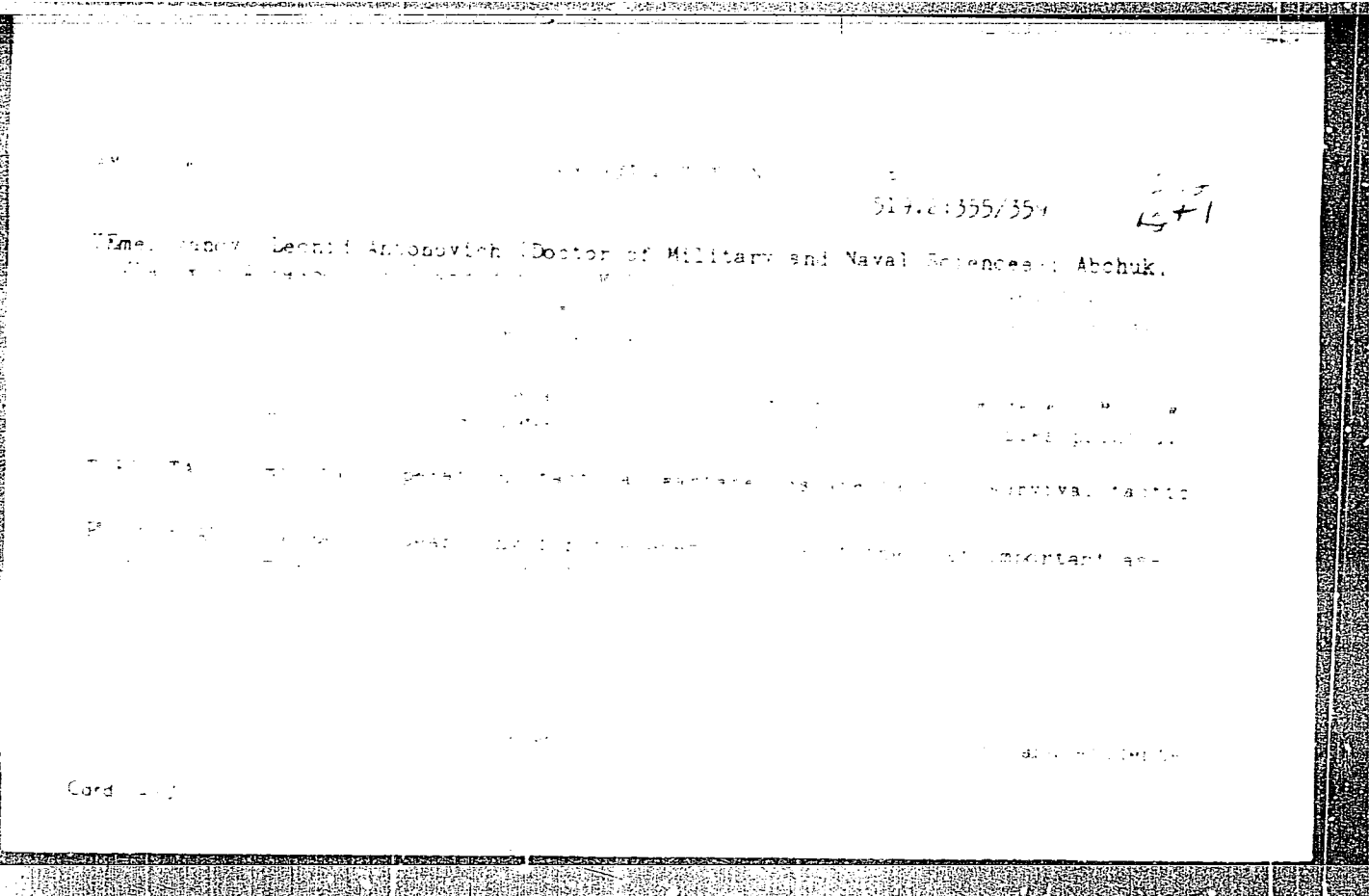
ENCL: 00

SUB CODE: CH

NO REF SOV: 003

OTHER: 004

Card 2/2



12

of military institutions. It can also be used by specialists in civil aviation, in the field of search for the wreckage of aircraft, and in connection with the search for a stationary object.

TABLE OF CONTENTS (abridged):

1. FOREWORD — 1

Ch. I. General principles of the theory of search — 11

1.1. The search for a target in a given area — 11

1.2. Laws of target detection deduced by means of observation — 71

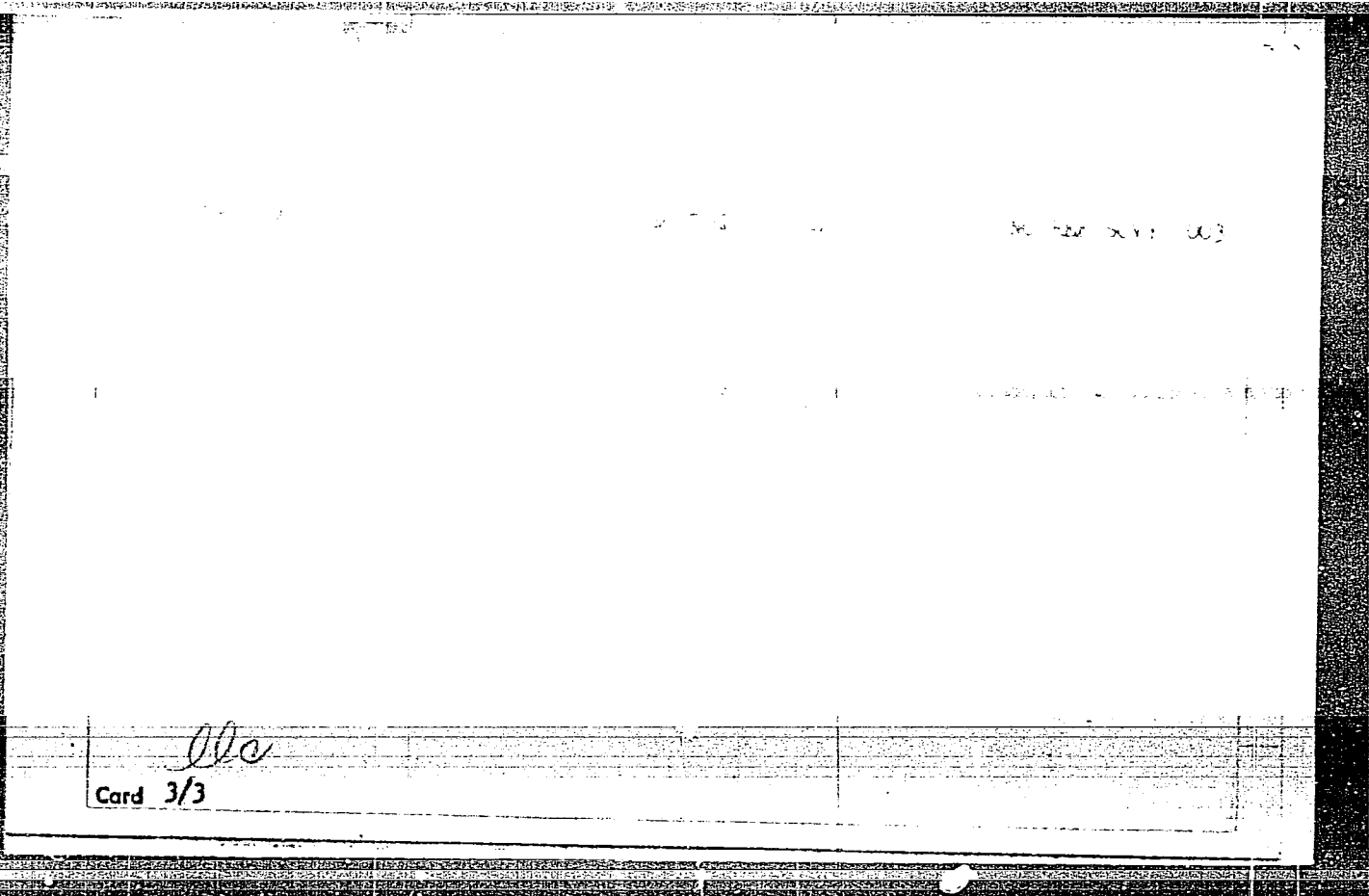
1.3. Selecting the most favorable plan of operations for the search of objects

1.4. The search for a target in a given area with a variable movement

1.5. The search for a target in a given area with a variable movement

2. APPENDIX

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SUZDALEV, I.F.; MAKAROV, Ye.F.; GARZANOV, I. Ya.; KORYTKO, L.A.

Oxidation of finely dispersed tin studied by means of Mössbauer effect. Kin. i kat. 6 no. 6:1108-1111 N-D '65 (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR. Submitted March 9, 1965.

KORYTKO, I.A.; SUEDALIEV, I.P.; TRUKHTANOV, V.A.

Electrodynamic unit for tests using the Mössbauer effect.
Zav. lab. 21 no. 12:1519-1522 '65 (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR.

L 15674-66 EWT(m)/T/EWP(t) IJP(c) JD

ACC NR: AP6000195

SOURCE CODE: UR/0056/65/049/005/1424/1430

AUTHOR: Suzdalev, I. P.; Gol'danskiy, V. I.; Makarov, Ye. F.; Plachinda, A. S.;
Korytko, L. A. 76
68
BORG: Institute of Chemical Physics, Academy of Sciences, SSSR (Institut khimicheskoy fiziki Akademii nauk SSSR)TITLE: Investigation of the dynamics of motion of tin atoms on a silica gel surface by means of the Mossbauer effect. 27

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 5, 1965, 1424-1430

TOPIC TAGS: temperature dependence, electric field, Mossbauer effect, tin, chemical valence, silica gel, atom, adsorption, ion exchange, calcium cryostat, temperature measurement, gamma spectrometer, chemisorptionABSTRACT: The authors studied the dynamics of motion of tin atoms adsorbed on a silica gel surface with specific area 300 m²/g and particle diameter ~100 A. A monomolecular layer of tin was produced on the surface by successive ion exchange of the hydrogen atoms contained in the hydroxyl on the surface, first with Ca²⁺, and then with Sn²⁺. A special cryostat was constructed for the temperature measurement which could maintain any temperature between 90 and 300K accurate to 0.1°. All measurements were made with the nuclear gamma-ray resonance spectrometer described by the authors earlier (Zavodskaya laboratoriya, no. 12, 1965). The experimental results indicate that the tin atoms exist on the surface in two states, tetravalent and divalent. The temperature dependence of the intensity of the Mossbauer effect shows

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L 15674-66

ACC NR: AP6000195

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that the former is attached to the surface by physical adsorption, and the latter is held by chemisorption. With increasing temperature, the doublet components on the spectrum (which consist of a singlet and a doublet) become asymmetrical, and the electric field gradient at the Sn^{119} nucleus increases over the value for crystalline SnO . Estimates are presented for the absolute values of the rms displacements of the molecule $\text{SnO}_2 \cdot n\text{H}_2\text{O}$ on the surface, and of the tin atoms within the molecules. The energy of the zero-point vibrations of the tin atoms and molecules, the energy at which the binding between the molecule and adsorption center on the surface vanishes, the absolute value of the rms displacement of the tin atom within the SnO molecule normally and parallel to the surface, and the temperature dependence of these quantities are also estimated. Authors thank I. Ye. Neymark, V. M. Chertov, and I. Ya. Garzanov for interest in the work and for help with the experiments, and Yu. M. Kagan for a discussion of the results. Orig. art. has: 4 figures and 4 formulas.

SUB CODE: 07,20/ SUBM DATE: 08Jan65/ ORIG REF: 011/ OTH REF: 005

Card 2/2

MYS

KISELEV, P.N., starshiy elektromekhanik; KROT, G.R., elektromekhanik;
VAZHNIK, G.S., elektromekhanik; SUZDALEV, N.V., elektromekhanik

Automatic frequency signaling system on hump yards. Avtom.,
telem.i sviaz' 5 no.7:26-28 JI '61. (MIRA 14:10)

1. Gomel'skaya distantiya signalizatsii i svyazi Belorusskoy
dorogi.

(Railroads--Hump yards) (Railroads--Signaling)

SUZDALEV, I. P.

S/050/61/043/002/015/053
B102/B104

2

AUTHORS: Bryukhanov, V. A., Gol'danskiy, V. I., Delyagin, N. M.,
Korytko, L. A., Makarov, Ye. F., Suzdalev, I. P., Shipinell, M. S.

TITLE: Peculiarities of Mossbauer spectra of organo-tin compounds
and the role of the nearest chemical bonds in the Mossbauer
effect

C

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43,
no. 2(8), 1962, 448-452

↓

TEXT: In continuation of their studies on the Mossbauer effect in
organo-tin compounds (ZhETF, 42, 637, 1962), the authors determined
a Mossbauer effect in the resonance absorption of 23.8-keV gamma-quanta by
Sn¹¹⁹ nuclei. Many examples, e.g. Sn(C₆H₅)₄, SnCl₄ on the one hand, and
Sn(C₆H₅)_iCl_{4-i} (i=1,2,3) on the other, show that in compounds with four
identical substituted groups the Mossbauer lines appear as the usual
singlet; whereas with different substituted groups (R_iSnX_{4-i}) a distinct
doublet occurs. The two lines differ in width and intensity, depending
Card 1/2

Peculiarities of Mossbauer spectra...

S/055/02/003/002/013/053
B102/3:04

2

on the ratio of R to X. In amorphous media, e.g. in stanniferous glass, the Mossbauer effect was observed for the first time. The glass composition was the following: SnO_2 -9.1%; SiO_2 -61.3%; B_2O_3 -13.5%; Al_2O_3 -3.2%; Na_2O -7.9%. The spectra of crystalline $\text{Sn}(\text{C}_5\text{H}_5)_4$ and its solid solution in polymethylmethacrylate and of crystalline $\text{Sn}(\text{C}_2\text{H}_5)_2\text{Cl}_2$ and of its 20 % solution in dichloroethane are identical. Some of the data obtained indicate that the decisive factor determining the shape of the Mossbauer spectra (isomer shift and quadrupole splitting) are the molecular bonds closest to the tin nucleus. There are 5 figures and 1 table.

↓

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: April 12, 1962

Card 2/2

ACC NR: AP7004569

SOURCE CODE: UR/0056/65/049/005/1424/1430

AUTHOR: Suzdalev, I. P.; Gol'danskiy, V. I. Makarov, Ye. F.; Plachinda, A. S.; Korytko, I. A.ORG: Institute of Chemical Physics, AN SSSR (Institut khimicheskoy fiziki AN SSSR)TITLE: Investigation of the dynamics of the motion of tin atoms at the surface of silica gel by means of the Mossbauer effectSOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki v. 49, no. 5, 1965, 1424-1430TOPIC TAGS: Mossbauer effect, silica gel, sorption, tin, chemisorption

ABSTRACT: The authors used the nuclear gamma resonance (Mössbauer effect) method to investigate the dynamics of the motion of tin atoms sorbed on the surface of silica gel. A special cryostat was constructed for temperature measurements. All measurements were made on a nuclear gamma resonance spectrometer with source in the form of $\text{Sn}^{119}\text{O}_2$. Analysis of the experimental results indicated that the tin atoms at the surface exist in two states -- the tetravalent and the bivalent. Investigation of the temperature dependence of the Mössbauer-effect probability indicated that the tetravalent tin is fixed on the surface through physical sorption; and the bivalent tin, through chemisorption. Considerable asymmetry of the doublet components was found in the spectrum of

Card 1/2

0926 1408

SUZDALEV, I. P.

S/020/62/147/001/018/022
B101/B144

AUTHORS: Gol'danskiy, V. I., Corresponding Member AS USSR, Gorodinskiy, G. M., Karyagin, S. V., Korytko, L. A., Krishanskiy, L. M., Makarov, Ye. P., Suzdalev, I. P., Khrapov, V. V.

TITLE: Investigation into the Mössbauer effect in tin compounds

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 147, no. 1, 1962, 127 - 130

TEXT: The Mössbauer effect in the symmetrical compounds SnCl_4 , SnBr_4 , SnI_4 , $\text{Sn}(\text{C}_6\text{H}_5)_4$ and SnO_2 and in the asymmetrical compounds Ph_3SnHal ($\text{Ph} = \text{C}_6\text{H}_5$, $\text{Hal} = \text{F}, \text{Cl}, \text{Br}, \text{I}$) was studied using an apparatus in which the absorber moved uniformly with respect to the source and an apparatus with sinusoidal movement. β -Sn or SnO_2 were used as sources of the 23.8-keV gamma-quanta ($\text{Sn}^{119\text{m}}$). With the symmetrical compounds the chemical shift δ of the absorber lines with respect to β -Sn, expressed in mm/sec ($1\text{mm/sec} = 7.9 \cdot 10^{-8} \text{ eV}$), was a linear function of the electronegativity of the atoms bound to Sn. The equation $\delta = 1.6 \cdot 10^{-29} \left[\left| \psi_s(0) \right|_{\text{absorb}}^2 - \left| \psi_s(0) \right|_{\text{emit}}^2 \right] \Delta R / \text{Rev}$
Card 1/5

Investigation into the...

S/020/62/147/001/018/022
B101/B144

given by A. J. F. Boyle, D. S. P. Bunbury, C. Edwards (Proc. Phys. Soc., 79, 416(1962)) and the data on the ionicity of the Sn-Hal bonds, obtained by the method of A. L. Schawlow (J. Chem. Phys., 22, 1211 (1954)) and those of M.M. Yakshin et al. (ZhNKh, 6, 2425(1961)) on refraction and dielectric constant give $\delta_{ion} = -(5.6 \pm 0.5) \text{ mm/sec} = -(4.4 \pm 0.4) \cdot 10^{-7} \text{ ev}$, $\Delta R/\bar{R}(\text{Sn}^{119}) = +(1.9 \pm 0.2) \cdot 10^{-4}$ for a completely ionized bond. These data enable $|\psi_{5s}(0)|^2$ to be determined directly from δ . In the asymmetrical compounds, asymmetrical doublets were observed (Fig. 2) similar to those found by Boyle et al. in SnF_4 . The asymmetry was found also in dissolved compounds and cannot be explained by a random orientation of the crystals in the direction of the gamma quanta or by ferromagnetic or paramagnetic impurities. From the equation

$$\frac{c_{13 \text{ total}}}{c_{11 \text{ total}}} = \frac{\int_{-1}^{+1} [2\sqrt{5}P_2(\cos\theta) + P_0(\cos\theta)] / (\cos\theta) d\cos\theta}{\int_{-1}^{+1} [2\sqrt{3}P_2(\cos\theta) - P_0(\cos\theta)] / (\cos\theta) d\cos\theta} \quad (3)$$

where the subscript total = total, $P_L(\cos\theta)$ is the normalised Legendre Card 2/5

Investigation into the...

S/020/62/147/001/018/022
B101/B144

polynomial, $f(\cos\theta) = \sum_k a_k P_k(\cos\theta)$ is the factor determining the intensity of the Mössbauer line, a_k the decay coefficient, it follows that if $\sigma_{13, \text{tot}}/\sigma_{11, \text{tot}} = (2\sqrt{5}a_0 + a_2)/(2\sqrt{5}a_0 - a_2) \neq 1$ (with $a_2 \neq 0$) and $-2\sqrt{5} < a_2/a_0 < 2\sqrt{5}$, each of the peaks of the Mössbauer doublet may become higher than the other one according to the ratio a_0/a_2 . This ratio can be determined experimentally. Assuming a quadrupole splitting of the Mössbauer line in SnF_4 and Ph_3SnHal , $q = 6.9 \cdot 10^{18} x \text{ v/cm}^2$ is obtained where $q = \partial^2 v / \partial z^2$ is the gradient of the electric field in the region of the Sn nucleus, and x is the degree of ionization of the bond. For Ph_3SnHal $x \approx 0.55$ with Hal = I; $x \approx 0.7$ with Hal = Br; Cl and $x \approx 1$ with Hal = F. Another possible interpretation of the asymmetrical splitting might be the different hybridization of the sp^3d^2 bonds. In order to explain this problem it is suggested that the effective charges of the halogen and tin atoms be determined directly. When an equimolecular mixture of SnPh_4 and SnI_4 was irradiated with 1.6-Mev electrons the Mössbauer spectrum was

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B101/B144

Investigation into the...

observed to be greatly changed through the spectra of various disproportionation products $\text{Ph}_1\text{SnI}_{4-1}$ being superimposed. Hence it is concluded that the Mossbauer effect can be used not only to study the chemical structure but also to solve problems of chemical kinetics and radiation chemistry. There are 2 figures.

ASSOCIATION: Institut khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics of the Academy of Sciences USSR)

SUBMITTED: July 21, 1962

Card 4/5

SUZDALEV, I.P.; GOL'DANSKIY, V.I.; MAKAROV, Ye.F.; PLACHINDA, A.S.;
KORYTKO, L.A.

Use of the Mössbauer effect in studying the dynamics of motion
of tin atoms on a silica gel surface. Zhur.eksp. i teor.fiz.
49 no.5:1424-1430 N '65. (MIRA 19:1)

1. Institut khimicheskoy fiziki AN SSSR.

08180-67 EWT(m)/EWP(t)/ETI IJP(c) JD
ACC NRI AP6024870 SOURCE CODE: UR/0056/66/051/001/0118/0120
AUTHOR: Suzdalev, I. P.; Gen, M. Ya.; Gol'danskiy, V. I.; Makarov, Ye. F.
ORG: Institute of Chemical Physics, Academy of Sciences SSSR (Institute Khimicheskoy fiziki Akademii nauk SSSR)
TITLE: Nuclear gamma resonance in highly dispersed tin
SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 51, no. 1, 1966, 118-120
POPIC TAGS: tin, nuclear resonance, aerosol, Mossbauer effect, Mossbauer spectrum, temperature dependence
ABSTRACT: The Mossbauer effect was investigated in highly dispersed tin particles having diameters of 250, 370, 600, and 1550 Å. The dispersed tin was produced by evaporating liquid drops in a helium or argon atmosphere and condensing the vapor into aerosol particles. The particle size was regulated by the rate of flow and also depended on the gas. The mean particle size was determined with an electron microscope. The spectrum for the highly dispersed tin consisted of a single line characteristic of ordinary polycrystalline β -Sn with a chemical shift of 2.6 mm/sec (relative to SnO₂). The probability of the Mossbauer effect f' was measured as a function of the temperature (T) and particle diameter (d) from the area under the spectral absorption curve. The results show that f' diminishes with decreasing particle diameter, starting with $d = 600$ Å. The temperature dependence is steeper. The variation with particle sizes is connected with the influence of the surface. The Debye temperature is determined

Card 1/2

SUZDALEV, P.

85-58-6-20/43

AUTHOR: Suzdalev, P., Candidate in Art Studies

TITLE: Soviet Artists' Image of Aviation (Aviatsiya v izobrazhenii sovetskikh khudozhnikov); A Noble Subject (Blagorodnaya tema)

PERIODICAL: Kryl'ya rodiny, 1958, Nr 6, p 15 (USSR)

ABSTRACT: The author reports on the treatment of aviation in Soviet Art and the increased interest in the portrayal of outstanding pilots in sculpture and painting. There are 8 photographs on the four-page insert following page 16.

1. Civil aviation--USSR 2. Art--USSR

Card 1/1

6(4)

06256
SOV/107-59-6-20/50

AUTHORS: Suzdalev, V. (UC2KAB), Kaplan, M., Dannikov, V., Radio Operators

TITLE: The Main Thing is Constant Training

PERIODICAL: Radio, 1959, Nr 6, p 15 (USSR)

ABSTRACT: The authors describe their activities at the group radio station UC2KAB which has been operating at the Gomelskaya oblast' Radio Club of DOSAAF since 1948. They explain briefly the preparations made for competitions and the training given to operators. The principal tubes in the equipment were replaced by new ones. The operators observe the passage of signals in the different ranges. These observations are used for setting up call schedules. Further, the authors briefly describe the equipment of their station. The transmitter was built in 1954 and works on 3.5, 7, 14, 21 and 28 Mc. It contains, among others, tubes 6S5, 6P6, G-801, GK-71. A ground plane

Card 1/2

L 52011-65 EWT(1) Pg-4 IDP(c)

ACCESSION NR: AP5012058

UR/0057/65/035/005/0914/0028

AUTHOR: Mikh. A.F. Lukdaley, V.A. Fedoseyev, Ye.P.

30

TITLE: Nonlinear investigation of spatial focusing in magnetic focusing prisms

21

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 5, 1965, 914-926

KEYWORDS: electron optics, magnetic prism, magnetic field, magnetic separation

ABSTRACT: This paper gives a detailed discussion of the electron optics of a magnetic prism consisting of a sector (bounded by circular arcs passing through the origin of the coordinate system) in a uniform magnetic field, the strength of which, in the region of the prism, is directed along the z-axis. The conditions for the focusing of a parallel beam of electrons are investigated. The conditions for the focusing of a point and

Keywords are also: conditions for magnetic focusing and imaging of point and

Card 1/2

L 52011-65

ACCESSION NR: AP5012058

line sources, and the equations are put into a form suitable for design computations

ASSOCIATION: None

SUBMITTED: 20J 1164

ENCL: 0

SUB CODE: NP, EM

NR R&F SOV: 002

OTHER: 000

llc
Card 2/2

Suzdaleva, V.V.

EXCERPTA MEDICA Sec.4 Vol.11/4 Med.Microb. etc. April 58

1072. LABILITY OF THE BLOOD PROTEIN SYSTEM DURING ANAPHYLACTIC SHOCK (Russian text) - Suzdaleva V. V. and Kulyabko O. M. Centr. Inst. of Haematol. and Blood Transfusion, Moscow - PROBL. GEMATOL. PEREL. KROVI 1956, 1/3 (46-47) Tables 1

The condition of proteins in the blood and tissues in the various phases of anaphylactic shock was investigated. The experiments were performed on 14 adult dogs. Stabilization of the protein system of the blood serum after injection of antigen into the sensitized animal is characteristic of the development of the state of shock. Comparison of the shift in protein in anaphylactic heterogenic shock shows that during anaphylactic shock the changes in the protein system are more marked. This is due to the greater severity of the course of the anaphylactic shock, to the presence of haemolysis during heterogenic shock which can, to a small extent, mask the changes of the protein system, and to the greater participation of proteins in the causation of anaphylactic shock as compared with heterogenic shock. Naturally, the reaction following injection of heterogenic protein to sensitized animals differs from that occurring in non-sensitized animals.

Krymskii - Moscow (S)

SUZDALEVA, Y V

Centrifuged... as to contain 0% protein. This was tested for viscosity, gelatinization time, and resistance to denaturation by alk. The sets of expts were performed on 40 dogs. The injec-

likewise brought about a state of shock in the dogs. Such shocks were of a lesser intensity than the shocks caused by the injection of whole blood. The reactions to the injection of heterogenous erythrocytes were in

SUZDALEVA, V.V.; KULYABKO, O.M.

Determination of the lability of blood protein systems in anaphylactic shock. Probl.gemat. i perel. krovi 1 no.3:46-47 My-Je '56. (MIRA 10:1)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (dir. - chlen-korrespondent AMN SSSR prof. A.A.Bogdasarov) Ministerstva zdravookhraneniya SSSR.

(ALLERGY, exper.

anaphylactic shock, blood protein systems in, determ. of lability)

(BLOOD PROTEIN, in various dis.

exper. anaphylactic shock, lability determ. of blood protein systems)

GARFUNKEL', M.L.; SUZDALEVA, V.V.; NEMENOVA, N.M.; ZARETSKIY, I.I.; GUREVICH,
I.B. (Moskva)

Blood transfusion during modified reactivity of the organism caused
by action of the spinal cord [with summary in English]. Arkh.pat.
19 no.9:67-73 '57. (MIRA 10:12)

1. Iz patofiziologicheskoy laboratorii (zav. - prof. N.A.Fedorov) i
laboratorii fizicheskoy i kolloidnoy khimii (zav. - prof. P.S.
Vasil'yev) Tsentral'nogo instituta gematologii i perelivaniya krovi
(dir. - chlen-korrespondent AMN SSSR prof. A.A.Bagdasarov) Minister-
stva zdravookhraneniya SSSR.

(BLOOD TRANSFUSION, experimental,
in spinal shock (Rus))

(SPINAL CORD, physiology,

eff. of section on reactivity to blood transfusion in
animals (Rus))

MALAKHOVA, G.M.; SUZDMELEVA, V.V.; ROZANOVA, N.S.

Study of specific anaphylactogenic and hemodynamic properties of heteroproteins subjected to denaturation. Probl. gemat. i perel. krovi no.3:30-33 '65. (MIRA 18:10)

1. Laboratoriya fiziko-khimii krovi i kroveznameniteley (nauchnyy rukovoditel' - prof. P.S.Vasil'yev) Tsentral'nogo ordena Lenina instituta gematologii i perelivaniya krovi (direktor - dotsent A.Ye.Kiselev) Ministerstva zdravcokhraneniya SSSR, Moskva.

ACC NR: AP7006956

SOURCE CODE: UR/0217/67/012/001/0124/0126

AUTHOR: Zore, V. A.; Kimel'fel'd, O. D.; Suzdaleva, V. V.; Kobyzeva, L. P.; Genkina, Ye. S.

ORG: Medical Institute im. I. M. Sechenov, Minzdrava SSSR, Moscow (Meditsinskiy institut Minzdrava SSSR)

TITLE: Complex dielectric permittivity of human blood serum under normal conditions and during some diseases in the 100—500 MHz range

SOURCE: Biofizika, v. 12, no. 1, 1967, 124-126

TOPIC TAGS: microwave, ~~biological effect~~, dielectric ^{property} ~~permittivity~~, blood, human physiology

ABSTRACT: The dielectric permittivity of normal and pathological blood was measured using a bridge, the arms of which were sections of coaxial cables. The measurement error at 200 MHz was 1.5% and ϵ_0 was 3.0%. Table 1 shows some results of a series of tests conducted on blood sera of various donors.

Card 1/14

UDC: none

ACC NR: AP7006956

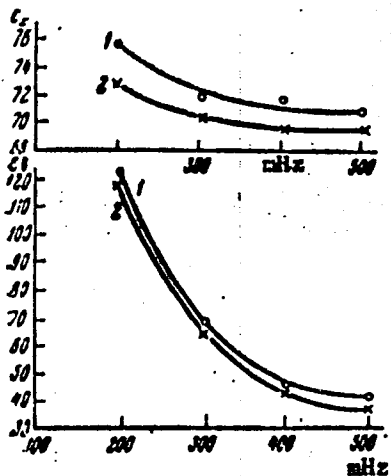


Fig. 1. Frequency dependence of the dielectric qualities (ϵ_x and ϵ_δ) of normal blood serum before (1) and after (2) controlled heating to 63°C for 15 min (2.5% protein; 23°C).

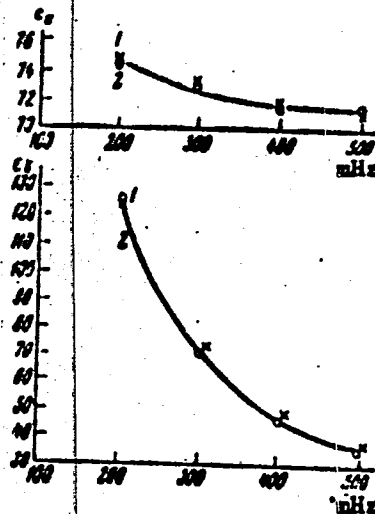


Fig. 2. Frequency dependence of the dielectric qualities of blood from a patient with myeloleukosis before (1) and after (2) heating to 63°C for 15 min (2.5% protein; 23°C).

Card 3/4

1 451 2-15 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EEC(b)-2 P1-4 LJP(c) JD/GG

ACCESSION NR: AP5006922

S/0181/65/007/003/0943/0946

34
33
3

AUTHOR: Adirovich, E. I.; Dubrovskiy, L. A.; Suzdalkina, L. B.

TITLE: Relaxation phenomena in diode structure: using cadmium sulfide films

SOURCE: Fizika tverdogo tela, v. 7, no. 3, 1965, 943-946

TOPIC TAGS: cadmium sulfide, thin film, diode structure, dark current, photo-
electric property, voltage current characteristic

ABSTRACT: This research was undertaken because of lack of sufficient data on the dark conductivity of CdS, especially in a direction perpendicular to the surface of the film, especially in high-resistance films which have become important in connection with the development of theory of space-charge-limited currents in dielectrics. With the idea that an investigation of the relaxation phenomena can yield the required information and is also of independent interest, the experiments were carried out with specially prepared film-type diodes obtained by evaporating CdS powder in vacuum of 5×10^{-5} mm Hg at a substrate temperature $\sim 400^\circ\text{C}$. The contacts were made by evaporation in vacuum using Au, In, Al, and Ag. An assembly of three diodes with common lower electrode, prepared from one film, was used, as

Card 1/1

L 45184-65

ACCESSION NR: AP5006922

shown in Fig. 1a of the Enclosure. The voltage-current characteristics obtained for this structure one second after application of the voltage are shown in Fig. 1b. Each point was plotted after prolonged recovery of the sample and resumption of the initial condition. The current was measured with a galvanometer with 100 μ A/division and a reaction time shorter than 1 sec. Au-CdS-In and Au-CdS-In structures with a single film, exhibited radically different behavior both with respect to the relaxation time and with respect to the presence of a barrier layer. Au-CdS-In does not relax, and no barrier layer is produced at the In contact. This can be explained from the point of view of the development of the reaction products at the Au-CdS-In junction, and charge exchange processes. The results are given in the Enclosure.

ASSOCIATION: Fiziko-tehnicheskiy institut AN UzSSR, Tashkent (Physiotechnical Institute AN UzSSR)

IDENTIFIED: 260464

ENCL: 01

SUB CODE: SS, EC

REF PER SOV: 006

OTHER: 004

Card 2/3

ADIROVICH, E.I.; DUBROVSKIY, L.A.; SUZDALKINA, L.B.

Relaxation effects in diode structures on cadmium sulfide films.
Fiz. tver. tela 7 no.3:943-946 Mr '65.

(MIRA 18:4)

1. Fiziko-tehnicheskiy institut AN UzSSR, Tashkent.

MATVEYEV, K.I.; OSIPOV, A.M.; ODYAKOV, V.F.; SUZDAL'NITSKAYA, Yu.V.;
BUKHTOYAROV, I.A.; YEMEL'YANOVA, O.A.

Catalytic oxidation of ethylene in the presence of aqueous
solutions of palladium salts. Kin.i kat. 3 no.5:661-673 S-0
'62. (MIRA 16:1)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR.
(Ethylene) (Oxidation) (Palladium salts)

ZYUKO, A.G.; SUZDAL'NITSKIY, I.D.

Interference rejection of signal composition systems with
diversity reception. Izv. vys. ucheb.; radiotekh. 5 no.1:128-131
Ja-F '62. (MIRA 15:5)

1. Rekomendovano kafedroy radiopriyemnykh ustroystv
Novosibirskogo elektrotekhnicheskogo instituta svyazi.
(Radio--Receivers and reception)

TSATSKIS, V.I., kand.tekhn.nauk, dotsent; SUZDAL'NITSKIY, I.D., inzh.

Losses of stability from the plane of rod formations with linearly
non-moving, elastically fixed units. Trudy NII ZHT no.24:27-29
'61. (MIRA 16:5)

(Elastic rods and wires)

SUZDAL'SKAYA, I. P.

35/49T62

FA 35/49T62

USSR/Medicine - Muscles, Contractions Dec 48
Medicine - Sodium, Hydroxide

"Contractions of the Laterally Striated Muscles, Obtained by the Action of NaOH," I. P. Suzdal'skaya, Fiziol Inst, Leningrad State U, 3 pp

"Dok Ak Nauk SSSR" Vol LXIII, No 6

Studied connection between emergence of contracture and onset of narcosis of the transverse-striated frog muscles under the action of successive increments in NaOH concentrations. Found, as with other agents, the correspondence of threshold concentrations which cause rapid development of narcosis and

35/49T62

USSR/Medicine - Muscles, Contractions (Contd) Dec 48

muscle contractions. Submitted by Acad K. M. Bykov, 14 Oct 48.

SUZDAL'SKAYA, I.P.

NASONOV, D.N.; SUZDAL'SKAYA, I.P.

Persistent excitation, injury and narcosis of striated muscles.
Nauch.biul.Len.un. no.24:32-34 '49. (MLRA 10:3)

1. Laboratoriya fiziologii kletki Fiziologicheskogo instituta.
(MUSCLE)

SUZDAI'SKAYA, I. P.

Muscle

Mechanics of the physiological action of salts on striated muscles.
Vest. Len. un. 7 no. 7, 1952

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

USHAKOV, B.P.; AVERBAKH, M.S.; SUZDAL'SKAYA, I.P.; TROSHINA, V.P.; CHEREPANOVA, T.N.

Parabiotic nature of physiological electrotonus. Fiziol. zh. SSSR 39
no.2:218-225 Mar-Apr 1953. (GLML 24:3)

1. Laboratory of Histophysiology of the Institute of Physiology imeni A. A. Ukhtomskiy, Leningrad State University imeni A. A. Zhdanov.

animals. The action of combined salts, such as NaOH-NaCl, NaOH-HCl, NaOH-KCl, CaCl₂-KCl, and CaCl₂-NaCl was studied on frog sciatic nerve. The use of strong threshold concns. of 2 agents leaves the time of narcotization approx. equal to that found for the more toxic agent alone. Increased effect of action is generally found on combination of weak subthreshold concns. of the agents, while retardation of action is found only in combination of subthreshold concns. of one reagent with high concns. of the other agent.

~~SECRET~~ SUZDAL'SKAYA I.P.
NASONOV, D.N.; SUZDAL'SKAYA, I.P.

Relationship between the excitability and rhythmic activity of
nerve tissue. Uch.zap.Len.un. no.164:286-295 '54. (MLRA 10:3)
(NERVES)

USSR/Biology - Physiology

FD-2255

Card 1/1 Pub 17-6/20

Author : Suzdal'skaya, I. P.

Title : Reaction of digestive glands of mice to hydrostatic pressure

Periodical : Byul. eksp. biol. i med. 3, 22-26, Mar 1955

Abstract : Investigated variations in the degree of sorption of acidic and basic dyes by the pancreas, parotid, and submaxillary glands of white mice under the action of hydrostatic pressures ranging from 200 to 2,000 atom. Tables; graphs. Seventeen references, all USSR and all since 1940.

Institution: Leningrad State University imeni A. A. Zhdanov

Submitted : May 21, 1954 by D. N. Nasonov, Member of the Academy of Medical Sciences USSR

NASONOV, D.N.; SUZDAL'SKAYA, I.P.

Effect of temperature on the excitability of peripheral nerves in cold-blooded and warm-blooded animals (reptiles, birds). Biofizika 1 no.4:305-312 '56. (MIRA 9:9)

1. Leningradskiy gosudarstvennyy universitet.
(TEMPERATURE--PHYSIOLOGICAL EFFECT)
(NERVOUS SYSTEM)

MASONOV, D.N.; SUZDAL'SKAYA, I.P.

Effect of temperature on irritability of the nerve in frog. *Fiziol.*
zhur. 42 no.4:415-425 Ap '56. (MLRA 9:7)

1. Leningradskiy universitet imeni A.A.Zhdanova

(NERVES, physiology,

eff. of temperature on irritability in frog (Rus))

(TEMPERATURE, effects,

on nerve irritability in frog (Rus))