"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

LASUNOV, N.A., otv. red.; MOROZOVA, M.I., red.; GUTOROVA, V.G., red.; ZHILYAYEVA, A.V., red.; KONDRA[illegible], A.M., red.; OKOROKOVA, A.A., red.; USHAKOVA, F.N., red.

[Regulations for the design, installation and safe operation of elevators. Compulsory for all ministries and services] Pravila ustroistva i bezopasnoi ekspluatatsii liftov. Obiazatel'nyi dlia vsekh ministerstv i vedomstv. Moskva, Nedra, 1965. 73 p. (MIRA 18:8)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.P.; KHERNBURG, M.M.; CHEREZOVA, L.A.

Enthalpy of titanium nitrides. Vest.LGU 20 no.22:169-171 '65.
(MIRA 18:12)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

PROMYSLOV, M.Sh.; MOROZOVA, M.S.

Relationship between the sulfhydryl group content and cerebroside metabolism in the brain of rabbits. Biul.eksp.biol.i med. 48 no.11:59-61 N '59. (MIRA 13:5)

1. Iz laboratorii biokhimii (zav. - prof. V.M. Rubel') Instituta normal'noy i patologicheskoy fiziologii (dir. - deystvitel'nyy chlen AMN SSSR V.N. Chernigovskiy) AMN SSSR, Moskva. Predstavlena deystvitel'nym chlenom AMN SSSR V.N. Chernigovskim.

(BRAIN metab.)
(SULFHYDRYL COMPOUNDS metab.)
(CEREBROSIDES metab.)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.S.; PROMYSLOV, M.Sh.

Problem of enzymatic splitting of cerebrosides of the brain. Biul. eksp. biol. i med. 50 no.12:44-47 D '60. (MIRA 14:1)

1. Iz Instituta normal'noy i patologicheskoy fiziologii (dir. - akademik V.N. Chernigovskiy) AMN SSSR, Moskva. Predstavlena chlenom AMN SSSR S.Ye. Severinym.
(CEREBROSIDES) (BRAIN)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.S.; SELEZNEVA, T.P.; GORDEYEVA, M.A.; TEMIN, L.I., otv. za vypusk; DEBERDEYEV, B.S., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Time and estimates norms for road work. Estimates are converted in accordance with the price scale introduced on 1-1 1961]Sbornik norm vremeni i rastsenok na dorozhnye raboty. Rastsenki pereschitany iskhodia iz masshtaba tsen, vvedennogo s 1/1 1961 g. Moskva, Avtotransizdat. Pt.2. [Construction and repair of highway bridges and conduits]Stroitel'stvo i remont avtodorozhnykh mostov i trub. 1962. 463 p. (MIRA 15:12)

1. Russia (1917- R.S.F.S.R.)Ministerstvo avtomobil'nogo transporta i shosseinykh dorog. TSentral'naya normativno-issledovatel'skaya stantsiya.
(Bridge construction) (Culverts)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 11072-65 EWT(m)/EPF(c)/EWA(d)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pl-4 RPL/
AFMDC/AFETR/ASD(a)-5/ESD(dp) RM/WW/JW/JD

ACCESSION NR: AT4047300 S/3115/64/000/021/0344/0358

AUTHOR: Burovoy, I. A.; Yemel'yanov, S. V.; Morozova, M. S.; Grigor'yeva, O. A. (6)

TITLE: The use of variable structure feedback systems in the control of thermochemical heterogeneous processes

SOURCE: Moscow. Gosudarstvennyy institut tsvetnykh metallov. Sbornik nauchnykh trudov, no. 21, 1964. Matematicheskiye modeli tekhnologicheskikh protsessov i razrabotka sistem avtomaticheskogo regulirovaniya s peremennoy strukturoy (Mathematical models of technological processes and development of variable structure feedback systems), 344-358

TOPIC TAGS: variable parameter control system, automatic regulation, heterogeneous process, thermochemical process

ABSTRACT: The most convenient and effective regimes for thermochemical heterogeneous processes cannot be controlled by linear methods because the variables which must be controlled are described by nonlinear differential equations with unstable singularities in the phase plane. The stability of these points depends largely on initial conditions, so that in order to accommodate realistic disturbances in the system, feedback controls with variable structure must be used. Using the method of multi-sheeted phase planes, developed by V. V. Petrov and

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L 11072-65
ACCESSION NR: AT4047300 2

G. M. Ulanov, the authors studied the phase plane topology as a function of the sign and magnitude of the static gain coefficient K_p of the control system. This is done by assuming a process with two singularities only, deriving the expressions for their phase plane coordinates for processes limited by constant velocity of the surface chemical reaction or concentration of the gaseous component, or by both, and investigating the behavior of these coordinates as K_p changes. It was discovered that if $K_p = K_{p\,crit.}$, both singularities change places and if $K_p \neq K_{p\,crit.}$ then K_p does not influence the coordinates very much. This leads to the conclusion that if the system structure (K_p) is varied during the transient process, the system can be organized in such a way that it will return to the origin from any given initial point and will have a very wide (sometimes unlimited) stable region. Orig. art. has: 13 equations and 8 figures.

ASSOCIATION: Gosudarstvennyy institut tsvetnykh metallov, Moscow (State Institute of Non-Ferrous Metals)

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

NO REF SOV: 003 OTHER: 002

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.S.

Effect of repeated administration of ACTH on the a[illegible] of 3β-ol-dehydrogenase and the synthesis of steroids [illegible] progesterone in the adrenal glands of rabbits. Probl. [illegible] gorm. 11 no.1:71-77 Ja-F '65. (MIRA [illegible])

1. Laboratoriya biokhimii gormonov i gormonal'noy regulyatsii protsessov obmena (zav. - prof. N.A. Yudayev) Instituta biologicheskoy i meditsinskoy khimii (dir. - prof. V.K. [illegible]) AMN SSSR, Moskva.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

YUDAYEV, N.A.; MOROZOVA, M.S.

Activity of 21- and 11 β-hydroxylases in the adrenal glands of rabbits following repeated administrations of [illegible] endok. i gorm. 11 no.1:81-87 Ja-F '65.

(MIRA 18:5

1. Institut biologicheskoy i meditsinskoy kliniki [illegible] V.N. Orekhovich AMN SSSR, Moskva.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M. V.

[illegible] The [illegible]

[illegible] Inst. Synthetic Liquid [illegible] Trud. Vsesoyuz. [illegible]

[illegible] acid components, with low [illegible] hydroxyl [illegible] weight of the ethane-benzene-soluble fraction [illegible] The molecular [illegible] bases, and [illegible] acid components. The [illegible] contains no [illegible] carbides are neutral, [illegible] up to [illegible] benzene-soluble [illegible]

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

AUTHOR: Morozova, M. V. 65/2/10 12

TITLE: Analysis of Bituminous Substances Occurring in Compositions of Tars. (Metodika analiza smolistykh veshchestv, vkhodyashchikh v sostav degtey).

PERIODICAL: Khimiya i Teknologiya Topliv i Masel, 1958, Nr.2. pp. 58 - 61. USSR.

ABSTRACT: A method for the determination of various groups in tar substances was developed. It is based on the gravimetric determination of various groups of substances which are insoluble in petroleum ether. Phenols and bases insoluble in petroleum ether were determined refractometrically. According to A. M. Kunin and A. N. Mel'nikova (Refs. 9 and 10) substances insoluble in petroleum ether can be divided into the following groups: a) high-molecular compounds of the carboid type, which are insoluble in organic solvents and partly soluble in alcohol-benzene mixtures; b) high-molecular compounds of the "carbene" type, which are insoluble in petroleum ether, alcohol, benzene but soluble in alcohol-benzene mixtures; c) high-molecular compounds of the asphaltene type - insoluble in petroleum ether and alcohol, but soluble in benzene and d) compounds insoluble in petroleum ether, but soluble in ethyl alcohol containing basic, acid and

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

65-2-10/12

Analysis of Bituminous Substances Occurring in Compositions of Tars.

neutral components having a high oxygen content. Experimental procedures are described in some detail, and comparative data of analytical results given in Tables 1 and 2. The relation between the refractive index of phenols and their concentration in alkaline solutions is shown in Fig.1. Fig.2 - the relation between the refractive index of sulphate and the pyridine content. The refractometric method for the determination of phenol in a petroleum ether-benzene solution gives slightly higher results than the gravimetric method even though the alkaline extract was washed with a petroleum ether-benzene solution, in order to free it from admixtures. However, the refractometric determination of phenols in synthetic mixtures gives more accurate results than the gravimetric method. There are 3 Tables, 2 Figures and 10 Russian References.

ASSOCIATION: VNII NP.

AVAILABLE: Library of Congress.

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MARTYNOV, V.M.; MOROZOVA, M.V.

Electrochemical method of evaluating the anticorrosive properties of greases. Khim.i tekh.topl.i masel 5 no.3:22-28 Mr '60. (MIRA 13:6)

(Corrosion and anticorrosives)
(Lubrication and lubricants)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

77933
SOV/65-60-3-6/19

AUTHORS: Martynov, V. M., Morozova, M. V.

TITLE: Electrochemical Evaluation of the Protective Properties of Consistent Lubricants

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, Nr 3, pp 22-28 (USSR)

ABSTRACT: The authors studied the ability of different lubricating oils to protect a metal from corrosion by means of a microgalvanic couple. Since the corrosion current is strictly proportional to the diffusion rate of oxygen to the metal surface through the lubricant layer, on this basis it was possible to determine the rate of corrosion and protective properties of lubricants. The ability of different lubricating oils to protect metal from corrosion is shown in Fig. 2. The existence of the induction period of the corrosion of metal under the lubricant layer was proven experimentally. The results are

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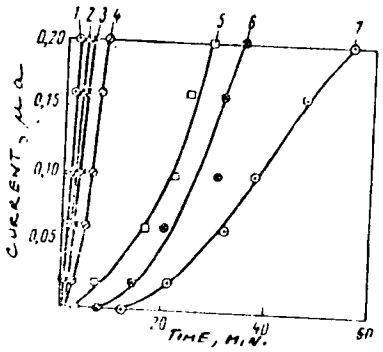
"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Electrochemical Evaluation of the Protective Properties of Consistent Lubricants

77933
SOV/65-60-3-6/19

Fig. 2. Corrosion kinetics under the lubricant layer. (1) MVP oil; (2) tsiatim-202; (3) silicone oil; (4) tsiatim-201; (5) tsiatim-221; (6) technical vaseline; (7) gun oil.



Card 2/5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Electrochemical Evaluation of the Protective Properties of Consistent Lubricants

77933
SOV/65-60-3-6/19

shown in Table 3. It was established that the corrosion products of metal diffuse through the lubricant layer, especially if it is less than 0.5-mm thick. There are 3 tables; 3 figures; and 11 references, 10 Soviet, 1 German.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Key to Table 3 on Card 5/5

77933 SOV/65-60-3-6/19

Table 3. Induction period of corrosion under the lubricant layer.

(1)

(2)	(3)	(4) (5)	(4) (6)
(7)	1,04	1,4	1,33
(8)	1,66	2,6	0,83
(9)	0,137	12,0	10,22
(10)	0,19	7,5	7,3

Card 4/5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Electrochemical Evaluation of the Protective Properties of Consistent Lubricants

SOV/65-[illegible]

Key to Table 3. (1) Temperature 20°. Thickness of the lubricant layer, 0.[illegible] mm. A solution of NaCl was applied on top of the lubricant layer; (2) Lubricant; [illegible] Penetration ability of water vapors, 10[illegible]; [illegible] Induction period, minutes; (5) Experimental; [illegible] Calculated; (7) Tsiatim-201; (8) Tsiatim-[illegible]; [illegible] oil; (10) Technical vaseline

Card 5/5

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MARTYNOV, V.M.; MOROZOVA, M.V.

Determining the chemical stability of lubricants from the rate of oxygen absorption. Neftepr. i neftekhim. no.6:1[illegible]-23 '[illegible]. (MIRA 1[illegible]:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 43117-65 EWT(m)/EPF(c)/T Pr-4 DJ

ACCESSION NR: AP5005736 S/0318/65/000/001/0026/0028

AUTHOR: Martynov, V. M.; Morozova, M. V.; Kuchinskaya, N. D.

23
22
B

TITLE: Condensation of thickened lubricants during water vapor absorption

SOURCE: Neftepererabotka i neftekhimiya, no. 1, 1965, 26-28

TOPIC TAGS: grease, thickened grease, thickened lubricant, water vapor absorption, viscosity, shear strength, alcohol vapor absorption, lubricating grease/ TsIATIM-221 grease

ABSTRACT: Changes in shear strength and viscosity of thickened grease with increase in water or ethyl alcohol vapor absorption have been investigated. The experiments were carried out with standard, humidified, and dehumidified TsIATIM-221 grease. The results show that 1) the viscosity and shear strength of the grease change with the absorption of water or ethyl alcohol vapors, 2) the effective viscosity increases at 20C and attains a maximum value at a vapor absorption of 0.5 millimoles per gram of grease, 3) the highest relative increase in viscosity (2 - 2.5 times) is effected at low shear rates, 4) at a constant amount of absorbed vapors the relative increase in viscosity drops with increase in the shear rate,

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 43117-65
ACCESSION NR: AP5005736

and 5) at vapor absorptions up to 0.5 millimoles per gram of grease the increase in shear strength is tenfold and linear. The experimental results are given in Tables 1 and 2 in the Enclosure. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: VNII NP

SUBMITTED: 00 ENCL: 02 SUB CODE: FP

NO REF SOV: 003 OTHER: 002

Card 2/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 58857-65 EPF(c)/EWT(m)/EWP(i)/EWP(b)/T/EWA(d)/EWP(t) Pr-4 JD/WB/
DJ

ACCESSION NR: AP5017981 UR/0065/65/000/007/0055/0059
620.197.6

32
31
B

AUTHOR: Martynov, V. H.; Morozova, M. V.

TITLE: Assessment of duration of the grease-coating protection of goods against atmospheric corrosion

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 7, 1965, 55-59

TOPIC TAGS: grease-coating, corrosion, anticorrosive protection

ABSTRACT: An attempt was made to assess the duration of the grease coating protection of industrial metal goods and machinery against atmospheric corrosion on the basis of the laboratory corrosion test. The approach assumes that diffusion of atmospheric oxygen through the protective grease coating conforms to Fick's diffusion law. The laboratory tests involved 201-Tsiatim grease coatings (0.2 mm in thickness) on 25-steel. Metal corrosion (m_1) was measured at 35° and 50° ± 1°C in grams of metal found in 1 cm^2 of grease coating. The test duration varied from 1 to 15 days. An empirical equation is proposed

$$m = m_1 e^{-E/R\left(\frac{1}{T} - \frac{1}{T_1}\right)} \sqrt{\frac{t}{t_1}}.$$

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 58857-65

ACCESSION NR: AP5017981

for determining the actual extent of atmospheric corrosion; where: m and m_1 are quantities of corroded metal in time t and t_1 respectively, T is absolute temperature, T_1 is absolute temperature used in the laboratory test when determining m_1, E is energy of activation of diffusion, and R is the universal gas constant. There is an excellent agreement between actual metal corrosion and the extent of corrosion predicted by the equation. Orig. art. has: 2 tables and 11 formulas.

ASSOCIATION: VNII NP

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

NO REF SOV: 008 OTHER: 006

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA M. Ye.

MOROZOVA, M. Ye.: "The biology of early phases of development of the broad tapeworm under the conditions pertaining in the Karelo-Finnish SSR." Leningrad, 1955. Leningrad Order of Lenin State U imeni A. A. Zhdanov. Inst of Biology, Karelo-Finnish Affilidate, Acad Sci USSR. (Dissertations for the Degree of Candidate of Sciences.)

So: Knizhnaya letopis' No. 49, 3 December 1955. Moscow.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.Ye.

Frost resistance of the eggs of Diphyllobothrium latum.
Trudy Kar.-Fin. fil. AN SSSR no.4:74-81 '56. (MLRA 10:2)

(Tapeworms) (Cold--Physiological effect)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, M.Yu

Allergic intracutaneous test in Q fever patients and convalescents; preliminary report. Zhur.mikrobiol. epid. i immun. no.6:28-31 Je '55. (MLRA 8:9)

1. Studentka II Moskovskogo meditsinskogo instituta imeni Stalina Iz otdela rikketsiozov (zav.-prof. P.F. Zdrodovskiy) Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR (dir.-prof. G. V. Vygodchikov)

(Q FEVER, immunology,
allergic skin reactions in convalescents)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

NOVSKIY, I.S.; MOROZOVA, N.A.

Rapid sinking of skip shafts in the "Novo-Butovka" mine. Ugol' 34 no.8:22-24 Ag '59. (MIRA 12:12)

1.Glavnyye konstruktory proyektov TSentral'nogo nauchno-issledovatel'skogo instituta Podzemshakhtostroy.
(Donets Basin--Shaft sinking)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.A.

The KS-2u universal rock-loading machine for shafts. Biul.tekh.-ekon. inform. no.5:19-22 '61. (MIRA 14:6)
(Mining machinery)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

69-20-3-23/24

AUTHORS: Dogadkin, B.A.; Gul', V.Ye.; Morozova, N.A.

TITLE: The Effect of Electric Charges Formed During Repeated Deformations on the Fatigue Resistance of Vulcanizates (O vliyanii elektricheskikh zaryadov, voznikayushchikh v protsesse mnogokratnykh deformatsiy, na soprotivleniye utomleniyu vulkanizatov)

PERIODICAL: Kolloidnyy zhurnal, 1958, vol XX, Nr 3, pp 397-398 (USSR)

ABSTRACT: Electroelastic and friction-elastic effects cause electrical charges on deformed polymer products. The influence of these charges on the fatigue resistance of the vulcanizates has been studied in the article. Samples containing from 0-22 weight parts of carbon black did not conduct the electrical current of 127 v. A sample with 30 weight parts of carbon black broke after 215,000 test cycles, if the charges remained on it. If the charges were led off, the sample showed no change which could have been detected visually after 315,000 test cycles. The relative figures for 40 weight parts of carbon black are 23,000 cycles and 48,000 cycles; for 75 weight parts 6,000 and 20,000. The removal of the electrical charges, formed

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

60-3-1-21/24

The Effect of Electric Charges Formed During Repeated Deformations of the Fatigue Resistance of Vulcanizates

during deformation of the polymer products, increases the fatigue resistance two times.

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

SUBMITTED: March 28, 1958

Card 2/2 **1. Vulcanizates—Fatigue 2. Polymers—Deformation 3. Vulcanizates —Conductivity**

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

67647

SOV/96-60-1-16/22

24.5300

AUTHORS: Tsederberg, N. V., Doctor of Technical Sciences and Morozova, N. A., Engineer

TITLE: The Thermal Conductivity of Carbon Dioxide at Pressures from 1 to 200 kg/cm² and Temperatures up to 1200°C

PERIODICAL: Teploenergetika, 1960, Nr 1, pp 75-79 (USSR)

ABSTRACT: There is increasing interest in the thermal conductivity of carbon dioxide. Relevant tables have already been published, particularly by Vargaftik, but further reliable experimental results have since become available and there was a need for values at higher temperatures than he quoted. The present article uses published data on the thermal conductivity of carbon dioxide to formulate tables ranging up to 1200°C. Use was made of the results of numerous authors, and all their experimental values for thermal conductivity of carbon dioxide are plotted in Fig 1, which also gives the mean curve. The values obtained by various authors are discussed. The mean curve was used to determine the values of thermal conductivity of carbon dioxide for temperatures from - 75 to + 1200°C which is given in Table 1. The range

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

67647
SOV/96-60-1-16/22

The Thermal Conductivity of Carbon Dioxide at Pressures from 1 to 200 kg/cm^2 and Temperatures up to 1200°C

from 800 to 1200°C was covered by extrapolation. A list is given of the data used to plot the thermal conductivity as a function of pressure and temperature. Fig 2 gives a graph in logarithmic coordinates: the difference between the thermal conductivity at any given temperature and that at atmospheric pressure and temperature is plotted as a function of the specific gravity of carbon dioxide at the test temperature and pressure. A mean curve was plotted on this graph and equation (2) corresponds thereto. Again the results obtained by various authors are critically reviewed. Eq (2) was used to calculate values of the thermal conductivity at the extreme ends of the curves, at the critical point and on isobars from 30 to 200 kg/cm^2 up to the temperature of 1000°C. Fig 3 gives a graph of the relationship between the thermal conductivity of carbon dioxide and temperature from 0 to 1000°C on isobars from 1 to 200 kg/cm^2. The graph indicates that the thermal conductivity alters considerably with the pressure near the critical

Card 2/3

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67647

SOV/96-60-1-16/22

The Thermal Conductivity of Carbon Dioxide at Pressures from 1 to 200 kg/cm^2 and Temperatures up to 1200°C

point. Graphs of the relationship between the thermal conductivity and pressure along the isotherms close to the critical temperature at temperatures of 32, 35 and 40°C are plotted in Fig 4. Table 2 gives values of the thermal conductivity of carbon dioxide on the 32°C isotherm, Table 3 on the 35°C isotherm and Table 4 on the 40°C isotherm. It is concluded that the data are in error by not more than 2%, and are thus more accurate than Vargaftik's earlier tables. There are 4 figures, 4 tables and 22 references, 10 of which are Soviet, 8 English and 4 German.

ASSOCIATION: Moskovskiy energeticheskiy institut (The Moscow Power Institute)

Card 3/3

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

69205

24.5200

S/096/60/000/06/018/025
E194/E284

AUTHORS: Tsederberg, N. V., Doctor of Technical Sciences, Popov, V. N., Candidate of Technical Sciences, and Morozova, N. A., Engineer

TITLE: An Experimental Investigation of the Thermal Conductivity of Argon

PERIODICAL: Teploenergetika, 1960, Nr 6, pp 82-87 (USSR)

ABSTRACT: Previous experimental work on the thermal conductivity of argon is reviewed. Published values for the thermal conductivity of argon in the temperature range from -200 to +600°C at atmospheric pressure from a number of authors are plotted in Fig 1. Available experimental data for the thermal conductivity of argon in the temperature range from 300 to 1100°C at atmospheric pressure is plotted in Fig 2. It will be seen from -200 to +200°C there is good agreement between the results of all authors but there is increasing divergence at temperatures above 200°C. The thermal conductivity of monoatomic gases at atmospheric pressure may be calculated by expression (1) and the curve for argon for temperatures of 0 to 600°C constructed by means of this equation is plotted in Fig 1 and in general

Card 1/4

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69205

S/096/60/000/06/018/025
E194/E284

An Experimental Investigation of the Thermal Conductivity of Argon

agreement is good. Values for the thermal conductivity is argon at atmospheric pressure over the temperature range of -200 to +600°C corresponding to the curve given in Fig 1 are presented in Table 1. Higher temperatures are not considered in the present article because of the great differences between the published results of various authors. The thermal conductivity of argon under pressure was studied by the hot wire method using two glass measuring tubes. The instrumentation and experimental procedure are described and the method of working out the results was the same as that used in determination of the thermal conductivity of helium described in an article by the same authors in Teploenergetika, 1958, Nr 10. The principal characteristics of the two measuring tubes used in the tests are given in Table 2. In checking the apparatus measurements were first made of the thermal conductivity of air and good agreement was obtained with published results as will be seen from the graph plotted in Fig 3. Graphs

Card 2/4

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S/096/60/000/06/018/025
E194/E284

An Experimental Investigation of the Thermal Conductivity of Argon.

of the thermal conductivity of argon as function of temperature on isobars ranging from 1 to 500 kg/cm^2 are plotted in Fig 4, in the majority of cases the scatter of experimental points did not exceed 2.5%. Values of thermal conductivity obtained by other authors are also plotted in Fig 4 and it will be seen that the present authors are in good agreement with some other published work. On the basis of available experimental data calculations were made of the specific gravity of argon over the temperature range from -90 to 1000°C and pressures from 100 to 500 kg/cm^2 and the results are given in Table 3. Table 4 gives values of the specific gravity of argon on the upper and lower boundary curves. Fig 5 gives the results of experimental data on thermal conductivity of argon under pressure obtained by various authors when plotted in terms of Eq (3), which is the empirical form of Eq (2) and it is concluded that this

Card 3/4

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S/096/60/000/06/012/025
E194/E284

An Experimental Investigation of the Thermal Conductivity of Argon

equation accurately describes the thermal conductivity of argon under pressure. Table 5 gives values of the thermal conductivity of argon at high pressures calculated by means of Eq (3) and recommended for practical use. There are 5 figures, 5 tables and 22 references, 8 of which are Soviet, 11 English and 3 German.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)

Card 4/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.A.

11.3100

S/096/60/000/010/012/022
E194/E135

AUTHORS: Tsederberg, N.V., Popov, V.N., and Morozova, N.A.

TITLE: Investigation of the Thermo-physical Properties of Helium in the Pressure Range 1 to 200 kg/cm^2 and the Temperature Range 0 to 600 °C.

PERIODICAL: Teploenergetika, 1960, No 10, p 95

TEXT: The experimental equipment is described. Equations are given relating the thermal conductivity and viscosity of helium with temperature and pressure, and tables of thermal-physical properties are given. The tabulated data of thermal conductivity and viscosity are determined on the basis of the authors' own experimental work and also published work.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

Card 1/1

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

TSEDERBERG, nikolay Valerianovich; POPOV, Valentin Nikolayevich; MOROZOVA, Nadezhda Anisimovna; RASSKAZOV, D.S., red.; VORONIN, K.P., tekhn. red.

[Thermal and physical properties of helium] Teplofizicheskie svoistva geliia. Moskva, Gos. energ. izd-vo, 1961. 118 p. (MIRA 14:8)
(Helium)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

[illegible], V.N.; TSEDERBERG, N.V., MOROZOVA, N.A.

Experimental investigation of the heat conductivity of four petroleum products samples. Izv.vys.ucheb.zav., neft'i gaz no.4:71-74 '64. (MIRA 1[illegible])

1. Moskovskiy ene geticheskiy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

POPOV, V.N.; TSEDERBERG, N.V.; MOROZOVA, N.A.

Experimental investigation of the thermophysical properties of petroleum products. Izv. vys. uchebn. zav.; neft' i gaz 8 no.1: 79-81 '65.

1. Moskovskiy energeticheskiy institut.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

KUPRYAKHINA, K.Z.; ZIMTSEV, P.P.; IVASHCHENKO, A.T.; KOVALENKO, M.F.; Prinimali uchastiye: MOROZOVA, N.A.; ANTIPOVA, G.G.; LEVINA, N.A.

Use of ion-exchange resins for the decontamination of waste waters. Koks i khim. no.7:46-47 '65. (MIRA 18:8)

1. Ukrainskiy nauchno-issledovatel'skiy uglekhimicheskiy institut (for Kupryakhina). 2. Rutchenkovskiy koksokhimicheskiy zavod (for Zimtsev, Ivashchenko, Kovalenko).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

ACC NR: AP6027579 SOURCE CODE: UR/0152/66/000/003/0080/0086

AUTHOR: Popov, V. N.; Tsederberg, N. V.; Morozova, M. A.

ORG: Moscow Institute of Energetics (Moskovskiy energeticheskiy institut)

TITLE: Experimental determination of heat capacity of liquid petroleum products

SOURCE: IVUZ. Neft' i gaz, no. 3, 1966, 80 and p. 86

TOPIC TAGS: HEAT CAPACITY, petroleum product, petroleum fuel, diesel fuel, lubricating oil / DS diesel fuel, TS-1 petroleum fuel, M-3 lubricating oil, AK-1 lubricating oil

ABSTRACT: The authors present the results of heat capacity tests performed on DS diesel fuel (density 0.857 g/cu cm), TS-1 fuel (0.786 g/ cu cm), M-3 lubricating oil (0.874 g/cu cm) and AK-1 lubricating oil (0.923 g/cu cm). A calorimeter with an adiabatic enclosure was used for tests at atmospheric pressure while for higher pressures an isometric enclosure was applied. The calorimeters were checked for the known capacities of toluene and water, as shown in two graphs. The results of tests at different temperatures are presented in two tables of which the first covers the tests performed at a pressure of 1 kg/sq cm and the second at 3 kg/sq cm. Orig. art. has: 2 graphs, 2 tables.

SUB CODE: 21 / SUBM DATE: 10Feb65

Card 1/1 UDC: 665.5.:536.22.001.5

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 10672-65 EWT(1)/EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(v)/EPR/T/EWA(1)
Pe-5/Pr-4/Pg-4/Pt-10/Pu-4 ASD(d) WW/WE

ACCESSION NR: AP4042485 S/0152/64/000/006/0055/0057

AUTHOR: Popov, V. N.; Tsederberg, N. V.; Morozova, N. A.

TITLE: An experimental study of the thermal conductivity of seven types of petroleum products

SOURCE: IVUZ. Neft'i gaz, no. 6, 1964, 55-57

TOPIC TAGS: petroleum fraction, thermal conductivity, desalted petroleum, benzine, kerosene, diesel oil, fuel oil, masut

ABSTRACT: Data on the chemical composition, thermal conductivity and other physical properties are tabulated for desalted petroleum, NK-140 benzine, TS-1 kerosene, atmospheric diesel oil (B. P. 202C), vacuum diesel oil (B. P. 213C), a broad fraction of the vacuum column (B. P. 280C) and masut (B. P. 225C), all obtained from the same source. As shown in Fig. 1 of the Enclosure, the thermal conductivity decreased linearly with increasing temperature (17.1-300C) and was highest for masut. Orig. art. has: 1 figure and 8 tables.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power Institute)

SUBMITTED: 27Jan64 ENCL: 01 SUB CODE: FP

NO REF SOV: 002 OTHER: 001

Card 1/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Silk weaving, Moskva, Gos. nauchno-tekhn. izd-vo legkoi promyshl., 1952. 325 p. (54-18402)

TS1669.A45)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N. D., Cand Med Sci -- (diss) "Electrophorus Investigations of Serum Albumins in Various Forms of Rheumatism and in Rheumatic Polyarthritis." Kazan', 1957. 16 pp. (Kazan State Med Inst, Chair of Faculty Therapy), 200 copies. (KL, 7-58, 113).

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

AGAPOVA, N.P., kandidat tekhnicheskikh nauk; MOROZOVA, N.D., kandidat tekhnicheskikh nauk.

They are suppressing a valuable study. Tekst.prom.17 no.2:33-34 F '57. (MLRA 10:2)

(Looms)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.D., kand.tekhn.nauk

Use and reprocessing of synthetic fibers in silk manufacture. Tekst.prom. 21 no.11:9-13 N '61. (MIRA 14:11)

1. Zamestitel' direktora TSentral'nogo nauchno-issledovatel'skogo instituta shelkovoy promyshlennosti (TSNIIShelka) po nauchnoy rabote.

(Textile fabrics) (Textile fibers, Synthetic)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

AGAPOVA, Nadezhda Platonovna, kand. tekhn. nauk; MOROZOVA, Nadezhda Dmitriyevna, kand.tekhn. nauk; LYTKINA, Sof'ya Grigor'yevna. Prinimala uchastiye MURALEVICH, M.V.; POTAPOVA, L.V., kand. tekhn. nauk; MONINA, P.V., kand. tekhn. nauk; DMITRIYEV, I.I., retsenzent; MEN'SHENINA, V.A., red.

[Equipment and technology of silk weaving manufacture] Oborudovanie i tekhnologiia shelkotkatskogo proizvodstva. Moskva, Legkaia industriia, 1964. 527 p. (MIRA 18:1)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.D.; NEFEDOVA, N.G.

Clinical importance of determining the titer of antistreptococcal antideoxyribonucleases in various forms of rheumatic fever. Nauch. trudy Kaz. gos. med. inst. 14:491-492 '64. (MIRA 18:9)

1. Kafedra fakul'tetskoy terapii (zav. - prof. Z.I.Valkin) i tsentral'naya nauchno-issledovatel'skaya laboratoriya (zav. - S.V.Senkevich) Kazanskogo meditsinskogo instituta.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

BLAGOVESHCHENSKAYA, N.M.; ZARUBINA, L.V.; MOROZOVA, M.F.

Clinical aspects of leptospirosis in man. Sov.med. 21 no.3:33-37 Mr '57. (MLRA 10:7)

1. Iz Rostovskogo-na-Donu instituta epidemiologii, mikrobiologii i gigiyeny (dir. Ye.S.Soboleva)
(LEPTOSPIROSIS
clinical aspects)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

1. BOZHOVICH, L. I., MOROZOVA, N. G., SLAVINA, L. S.

2. USSR (600)

4. Motivation (Psychology)

7. Psychological analysis of the role of grades as motivation for scholastic activity of pupils.
Izv. Ak.ped.nauk. No.36, 1951

9. Monthly List of Russian Accessions, Library of Congress, _____1953, Unclassified.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

LURIYA, A.R.; MOROZOVA, N.G.

Scientific session on problems of defectology. Vop.psikhol. 2 no.2:110-118 Mr-Ap '56. (MLRA 9:8)
(Children, Abnormal and defective)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

Dec 48

USSR/Geological Prospecting
Petroleum Deposits

"The Problem Concerning the Paragenesis of Titanium Organic Carbon, and Several Other Elements," L. V. Khmelevskaya, N. G. Morozova, K. I. Taganov, S. M. Katchenkov, L. A. Voytsekhovich, All-Union Petroleum Sci Res Geol Prospecting Inst, 3 pp

PA 35/49T46

"Dok Ak Nauk SSSR" Vol LXIII, No 6

Spectrographic and statistical analysis of 87 sandstones taken from Maykopskiy, Chokrakskiy, Karaganskiy, and Sarmatskiy deposits in the layer of oil-bearing deposits of Groznenskiy Rayon, Terskiy Oblast. Found that presence of organic carbon,

[redacted]

35/49T46

USSR/Geological Prospecting (Contd) Dec 48

vanadium, manganese, titanium, nickel, barium and strontium in various lithologic groups -- sand-silt. stone, clay, and carbon -- was not connected exclusively with any of them. Submitted by Acad D. S. Belyankin, 27 Oct 48.

35/49T46

[redacted]

MOROZOVA, N. G.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

SARYCHEVA, I.K.; MOROZOVA, N.G.; ABRAMOVICH, V.A.; BREYTBURT, S.A.; SARGIYENKO, L.F.; PREOBRAZHENSKIY, N.A.

Synthesis of farnesol and farnesal. Zhur. ob.khim. 25 no.10: 2001-2006 S '55. (MIRA 9:2)

1.Moskovskiy institut tonkoy khimicheskoy tekhnologii.
(Farnesol) (Farnesal)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

PHASE I BOOK EXPLOITATION 785

Baranov, V.I.; Morozova, N.G.; Serdyukova, A.S., Chalov, P.I.; and Shashkin, V.L., Compilers

Spravochnik po radiometrii dlya geofizikov i geologov (Handbook on Radiometry for Geophysicists and Geologists) Moscow, Gosgeoltekhizdat, 1957. 198 p. 15,000 copies printed.

Ed.: Baranov, V.I.; Ed. of Publishing House: Koloskova,M.I.; Tech. Ed.: Gurova, O.A.

PURPOSE: The manual is intended for exploration geophysicists and geologists and it may be useful to students interested in the subject of radioactivity prospecting.

COVERAGE: The manual covers the field of radioactivity detection and the equipment and apparatus used in this type of prospecting and it describes a number of methods for field work. The manual deals only with the natural radioactivity of geochemical elements as they occur in the earth. Artificial radioactivity is not taken into account.

Card 1/9

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

The book surveys the radioactive elements and gives their essential characteristics. Terminology and units are defined and theories of radioactivity explained. Material on apparatus and applied prospecting is limited to about 50 pages. Of particular interest is Chapter VI, dealing with the problem of determining the geological age of any given formation by radioactive methods. There are 95 tables, 21 figures, 122 Soviet references and 54 English, 4 German, and 1 French reference.

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Ch. I. Radioactive Transmutation
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a) Soddy-Fajans displacement law 5
b) Periodic table (Mendeleyev's periodic system) 6
c) Series disintegration of radioactive elements 8
d) Tables of radioactive elements 10
e) Mean energies of radioactive emissions given off during one moment of decay 24
f) Naturally occurring radioactive elements outside of series 26

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

AUTHORS: Morozova, N.G. and Startsev, G.P. 51-3-16/24

TITLE: On the spectrum of ionized uranium. (O spektre ionizovannogo urana).

PERIODICAL: "Optika i Spektroskopiya" (Optics and Spectroscopy), 1957, Vol.2, No.3, pp.382-384 (U.S.S.R.)

ABSTRACT: The sources were a high-voltage condensed spark and a low-voltage pulse generator (10^{-3} - 10^{-5} sec produced by a discharge of 1000-2000 μF capacitors charged to 250-300 V). Brickettes consisting of 1-10% of U_3O_8 and copper powder were used. Both quartz and glass spectrographs were used. Spectrum of pure copper was recorded alongside the uranium spectrum in order to exclude the copper lines in the interpretation. A table gives wavelengths (with 0.02-0.03 Å error) and intensities (estimated by eye) of 69 uranium lines between 2472 and 3468 Å. From the behaviour of the lines with variation of impedance of the source circuits and the behaviour of the copper lines and from a discussion of the energy-level scheme of ionized uranium it is concluded that the recorded lines belong to U^{+++} and more highly ionized uranium. There are 2 figures (one plate with record of lines); 2 tables and 10 references, 4 of which are Slavic.

Card 1/1

SUBMITTED: August 29, 1956.
AVAILABLE:

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N. G.

493. **Spectrographic determination of uranium in ores and refining products.** N. G. Morozova. *Zhur. Anal. Khim.*, 1957, 12 (2), 186-192.—With content of U > 0.1%, the sample is mixed with nine times its wt. of copper powder, to increase the conductivity, and with ammonium molybdate, giving Mo [illegible] standard, and compressed under 10,000 kg per [illegible]. The briquette is [illegible] [illegible] the sample mixed with the internal standard is pressed into a hollow in a copper disc which forms the lower electrode. The lines U II 4090.14 and Mo 4090-025 A are read. G. S. Smith

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.G.; STARTSEV, G.P.

Spectrum of ionized uranium. Fiz.sbor. no.4:18-21 '58. (MIRA 12:5)

1. Gosudarstvennyy ordena Lenina opticheskiy institut imeni S.I.Vavilova.

(Uranium—Spectra)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

SOV/48-22-6-13/28

AUTHORS: Morozova, N. G., Startsev, G. P.

TITLE: The Isotopic Displacement of Lines in the Spectrum of Ionized Uranium (Izotopicheskoye smeshcheniye liniy v spektre ionizovannogo urana)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya fizicheskaya, 1958, Vol. 22, Nr 6, pp. 686-691 (USSR)

ABSTRACT: The isotopic effect in the uranium spectrum was discovered and investigated (in non-Soviet countries) on the lines UI and UII (Refs 1-4). The most accurate and detailed description was, however, given by A. P. Striganov and L. A. Korostyleva, namely with respect to the determination of the dependence of the displacements on electron configurations and determination of the displacement in the terms. The rules governing the isotopic displacements in the uranium spectrum were experimentally determined on this occasion. As a result of the investigation of displacements in classified lines between the isotopes U^{238} and U^{235} also the rules governing isotopic displacement in the uranium spectrum were determined. All lines, of which the lower terms relate to the configurations with passing-through s^2- and s-electrons are

Card 1/1

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characterized by the greatest (and negative) displacements. The lines, the lower terms of which belong to the higher electron configurations with non-penetrating f- and d-electrons are characterized by less considerable and only positive displacements. A table compares the results obtained by Striganov (Ref 5) and McNally (Ref 3) respectively. An earlier paper (Ref 6) dealt with a spectrum of ionized uranium (U^{+}). It was proved in the course of this paper as a result of further investigation that in this case three-times ionized uranium (U^{+++}) was concerned. The investigation of the isotopic displacement of the lines in the ionized uranium spectrum was carried out in this case with the aid of a concave diffraction net (600 mm^{-1}, 5,2 m diameter) and by means of the device developed by Pashen-Runge. A low-voltage pulsed discharge with a minimum of inductivity, in which the VQ -236 tube was used served as source. A table shows the results obtained by measuring about 200 different λ-values (between 2394,124 and 4377,026 Å). There are 2 figures, 2 tables, and 6 references, 2 of which are Soviet.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

The Isotopic Displacement of Lines in the Spectrum of Ionized Uranium SOV/48-22-6-13/28

1. Uranium isotopes (Radioactive)--Spectra 2. Ionized uranium--Spectra

Card 3/3

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

SOV/7-59-6-7/17

3(5), 5(4)

AUTHORS: Baranov, V. I., Morozova, N. G., Kunasheva, K. G., Babicheva, Ye. V., Karasev, ~~B. V.~~

TITLE: On the Radiometric Method of Prospecting for Natural Gas and Petroleum Deposits

PERIODICAL: Geokhimiya, 1959, Nr 6, pp 530 - 537 (USSR)

ABSTRACT: In the course of the research work of the Institut nefti AN SSSR (Institute of Petroleum of the AS USSR) under the direction of Professor F. A. Alekseyev negative gamma anomalies were found to exist in petroleum- and natural gas deposits of the USSR (Refs 5 - 9). The Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy) instructed a group of scientists under the direction of N. G. Morozova to find the reasons for this phenomenon; the scientists assisted in the prospecting work of the Laboratory of F. A. Alekseyev. The Laboratory placed the gamma pictures taken from airplane and motorcar at the disposal of the scientists. B. V. Karasev, Ye. V. Babicheva, and A. M. Dorina made the chemical analysis of the samples collected, and K. G. Kunasheva and A. P. Novitskaya the radiochemical determinations. The deposits of Kizyl-Kum and Gekcha

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

On the Radiometric Method of Prospecting for Natural Gas and Petroleum Deposits SOV/7-59-6-7/17

in western Turkmeniya were investigated. The portion of gamma-radiative elements was determined with respect to total gamma radiation (Table 1) and graphically represented in figures 1 - 4. Beside, the radioactivity of gases was investigated in the Korobki and Archeda deposits (Table 2). It was found that the gamma-anomalies are in perfect accordance with the distribution of the gamma-radiative elements U, Ra, Th, and K in the upper layer of soil (25 cm deep). Radium was not found to play a special part as assumed by some authors. The portion of gamma-radiation of the emanation contained in gases is only a minimum (2 % approximately) of the radiation of the elements mentioned before. The change of gamma-activity is, therefore, due to lithological or structure-morphological characteristics of the petroleum-containing regions. Papers by L. N. Bogoyavlenskiy and V. L. Shashkin are mentioned. There are 4 figures, 2 tables, and 12 references, 7 of which are Soviet.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V. I. Vernadskogo AN SSSR, Moskva (Institute of Geochemistry and Analytical Chemistry imeni V. I. Vernadskiy of the AS USSR, Moscow)

SUBMITTED: April 2, 1959

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

S/048/62/026/007/022/030
B125/B104

AUTHORS: Morozova, N. G., and Startsev, G. P.

TITLE: The lines of the iron arc spectrum for determining the arc temperature by the emission method

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 7, 1962, 929-933

TEXT: The temperature of the d-c arcs with 110 and 220 v and of a-c arcs was determined from 17 lines of the visible iron spectrum. The a-c arc was fed by an СП-42 (SP-42) generator with electronic control. The electrodes consisted of pointed armco iron and copper rods. The spectra were taken by means of an ИСП-28 (ISP-28) and a КСА-1 (KSA-1) spectrograph and an instrument with plane diffraction grating. The lines used should have various upper-level energies and lie within a comparatively wide range of wavelengths; they should be free from interferences, not superposed by neighboring lines; their intensities should not differ notably, and their self-absorption should be low. The temperature of the d-c arc between iron electrodes determined in such a way rises from

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S/048/62/026/007/022/030
B125/B104

The lines of the iron arc spectrum ...

(4350 ± 100)°K at 1 a to (4850 ± 100)°K at 5 a. The different measuring apparatus gave the same results under identical conditions. The temperature decreases comparatively slowly from the center of the arc (5000°K) to its edge. It is ~4000°K at a distance of 1 mm from the center of the arc. This radial temperature distribution was determined by turning the image of a 2-a arc burning between an iron electrode and a copper electrode by 90° and by projecting this image to the slit of a spectrograph. There are 3 figures and 4 tables.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

MOROZOVA, N.G.; STARTSEV, G.P.

Absolute oscillator forces of lines of arc spectra of atoms of the iron group. Opt. i spektr. 17 no.3:327-332 S '64. (MIRA 17:10)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 24939-65 EWT(1)/EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EPR/EEC(t)/EEC(b)-2/EWP(b)
Pq-4/Pr-4/Ps-4 WH/WW

ACCESSION NR: AP5004209 S/0077/65/010/001/0022/0027

AUTHORS: Morozova, N. G.; Startsev, G. P.

TITLE: Investigation of the spectral properties of photographic materials in the vacuum ultraviolet region of the spectrum

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii, v. 10, no. 1, 1965, 22-27

TOPIC TAGS: photographic emulsion, photographic film, photographic sensitivity, photographic image theory, ultraviolet photography, spectrosensitometry

ABSTRACT: The purpose of the investigation was to develop equipment and a procedure for spectrosensitometric tests of photographic emulsions, and to use the procedure to investigate the properties of certain types of emulsions intended for the registration of short-wave ultraviolet radiation. Calibration was by means of a photoelectric method using a screen of sodium salicylate, whose fluorescence quantum yield is constant over a wide wavelength range. An SP-99 vacuum spectrograph was used to investigate the photographic sensitivity of the material. The light source was a high-voltage discharge in a hydrogen stream, and the light due to

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

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ACCESSION NR: AP5004209

fluorescence was transmitted from the output slit of the spectrograph to the photomultiplier by means of a glass-fiber lightguide 8 mm in diameter. The characteristic curves of the photographic materials in the vacuum ultraviolet region were determined by varying the intensity in three ways: by broadening the spectrograph slit, by attenuating the beam with screens of varying meshes, and by using different groups of spectral lines in the hydrogen spectrum. The first two gave almost identical results and are suitable only for the continuous spectrum, at wavelengths 1700--2500 Å. Seven groups of lines in the molecular spectrum of hydrogen, spaced approximately 100—150 Å apart, were used in the region from 1000 to 1640 Å. The results show that the characteristic curve is practically linear for all wavelengths, and with slight exception the contrast of the NIKFI emulsions is practically constant. The characteristic curves, contrast curves, and spectral sensitivity curves for several NIKFI emulsions are shown in Fig. 1 of the Enclosure. "The investigated photographic materials were developed at NIKFI and were supplied by V. M. Uvarova, to whom the authors are grateful." Orig. art. has: 7 figures and 3 tables. [02]

ASSOCIATION: Gosudarstvennyy opticheskiy institut im. S. I. Vavilova (State Optical Institute)

Card 2/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 34939-65
ACCESSION NR: AP5004209

SUBMITTED: 16Mar64 ENCL: 01 SUB CODE: ES, OP

NO REF SOV: 001 OTHER: 005 ATD PRESS: 3211

Card 3/4

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 34939-65

ACCESSION NR: AP5004209

ENCLOSURE: 01

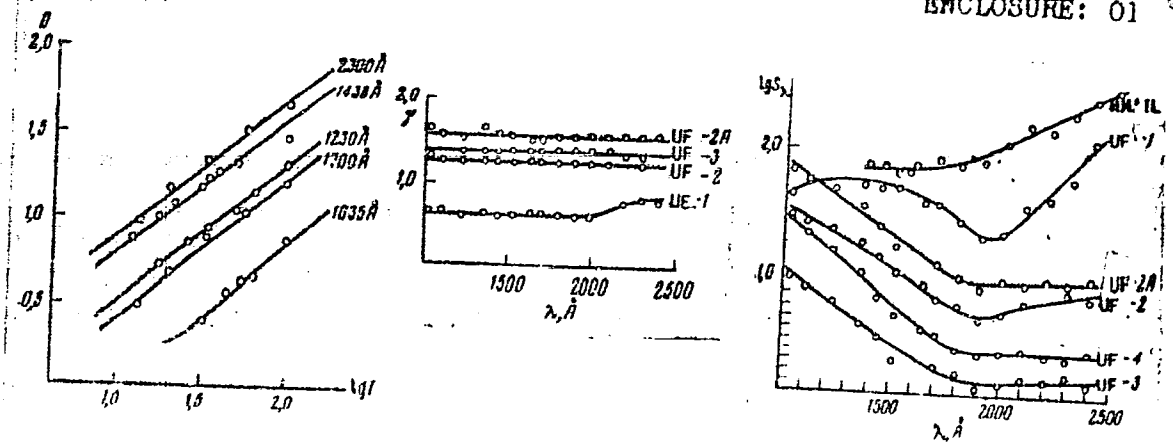

Fig. 1. Characteristic curves (left), contrast curves (center), and spectral sensitivity curves for some NIKFI emulsions.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 52326-65 EWT(m)/EWP(b)/EWP(t) IJP(c) JD

ACCESSION NR: AP5012625 UR/0051/65/018/005/0899/0902

AUTHOR: Morozova, N. G.; Startsev, G. P.

12
B

TITLE: Measurement of the relative values of oscillator strengths in the spectrum of the iron ion

SOURCE: Optika i spektroskopiya, v. 18, no. 5, 1965, 899-902

TOPIC TAGS: iron ion, oscillator strength, relative intensity, intermediate coupling approximation, LS coupling, diffraction pattern

ABSTRACT: In view of the lack of experimental data on the $3d^6(a^5D)4s-3d^6(a^5D)4p$ transition for iron, the authors measured the oscillator strength of the lines of the following intense multiplets in the spectrum of the iron ion

$a^6D - z^6D^0$ (№1), $a^6D - z^6F^0$ (№2),
$a^6D - z^6P^0$ (№3), $a^4D - z^4F^0$ (№62),
$a^4D - z^4D^0$ (№63), $a^4D - z^4P^0$ (№64),

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L 52326-65

ACCESSION NR: AP5012625

which lie in the ultraviolet region of the spectrum between 2300 and 2800 Å. The spectra were photographed with a diffraction spectrograph in first and second order, with dispersion 4 and 2 Å/mm, respectively. The spectrum was excited with a d-c arc operating in such a way that self-absorption did not distort the intensities of the spectral lines. A table is presented of the logarithms of the relative values of the oscillator strengths obtained in the measurements and calculated in the intermediate-coupling and in the LS coupling approximations. Some suspected errors in the table of C. H. Corliss and W. R. Bozman (Experimental Transition Probabilities for Spectral Lines of Seventy Elements, N. B. S., 1962) are indicated. Orig. art. has: 1 figure and 1 table. [02]

ASSOCIATION: none

SUBMITTED: 19May64 ENCL: 00 SUB CODE: OP

NO REF SOV: 003 OTHER: 002 ATD PRESS: 4009

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

BARANOV, V.I.; IDNOZOVA, N.G.

Short-living radon disintegration products in atmospheric precipitation. Meteor. issl. no.9:182-202 '65.

(MIRA 19:1)

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

ACC NR: AT7004522 SOURCE CODE: UR/2563/66/000/268/0071/0075

AUTHOR: Zamotorin, M.I. (Docent, Candidate of technical sciences); Morozova, N.G.

ORG: none

TITLE: Effect of mischmetal on the properties of magnesium-zinc alloys

SOURCE: Leningrad. Politekhnicheskiy institut. Trudy, no. 268, 1966. Metallovendeniye (Metal sciences), 71-75

TOPIC TAGS: magnesium ~~zinc~~ alloy, ~~mischmetal containing alloy~~, ~~alloy strength~~, ~~alloy~~ ductility, ~~alloy hardness~~ property zinc alloy, metal

ABSTRACT: Ingots of magnesium alloys containing 1—7% Zn, 1—3% mischmetal (which consisted of 96—97% rare-earth metals (REM) including 60% Ce, 1.4—1.7% Fe and 0.13—0.14% Si) were extruded into 11 mm rods at 300—200°C and aged at 175°C for 48 hr. The rods were tested for mechanical properties at 20 and 250°C. Additions of up to 1% mischmetal had almost no effect on the alloy tensile strength and ductility. However, the alloys had a sufficiently high room-temperature tensile strength (27.0—24.0 kg/mm^2), yield strength (16.0—21.0 kg/mm^2), and elongation (20.5—17.5%). Increasing the mischmetal content to 3%

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

ACC NR: AT7004522

lowered the tensile and yield strengths to 25—21 and 18.5—15.5 kg/mm², respectively, and the elongation to 13.0—11.0%. At 250°C, alloys with 1.0 and 3.0% mischmetal had relatively high tensile and yield strengths of about 11.0—14.0 and 9.5—12.5 kg/mm², respectively, at a respective elongation of 43 and 33.5%. The alloy containing 2% Zn and 3% mischmetal had the best combination of mechanical properties: a tensile strength of 22 and 14.5 kg/mm², a yield strength of 12.0 kg/mm², and an elongation of 12 and 34% at 20 and 250°C, respectively. An alloy of the same composition had satisfactory heat and oxidation resistance and an HB hardness of 30 and 8.6 kg/mm² in 100-hr tests at 20 and 250°C, respectively. Orig. art. has: 1 figure and 3 tables. [MS]

SUB CODE: 11/ SUBM DATE: none/ ATD PRESS: 5116

Card 2/2

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 14053-65 ASD(f)-2/ASD(m)-3/BSD/RAEM(c)/ESD(gs)

ACCESSION NR: AP4044841 S/0051/64/017/003/0327/0332

AUTHOR: Morozova, N. G.; Startsev, G. F.

TITLE: Absolute oscillator strengths of arc-spectrum lines of atoms of the iron group

SOURCE: Optika i spektroskopiya, v. 17, no. 3, 1964, 327-332

TOPIC TAGS: ac arc, spectrum line, oscillator strength, iron, titanium, vanadium, chromium, cobalt, nickel

ABSTRACT: The purpose of this investigation was to ascertain whether measurements of relative oscillator strengths by means of a method based on emission in an a-c arc really satisfy the conditions that must be satisfied if they are to yield the absolute values of the oscillator strengths, namely, that the relative content of the elements be the same in the solid and in the vapor phase of the plasma. The method was used to obtain absolute values for 22 lines of titanium, vanadium, chromium, iron, cobalt, and nickel by comparison with known absolute f-values for the manganese lines, which are known from other sources. The procedure employed was developed earlier

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 14053-65

ACCESSION NR: AP4044841

by one of the authors (N. G. Morozova, ZhOKh, v. 12, 185, 1957) for spectral analysis purposes, in which the composition of the samples did not affect the relative intensity of the spectral lines. The preparation of the samples and the test procedures are described in detail. The measured results are in good agreement with data obtained by the absorption and anomalous dispersion method. Some discrepancies with results of others are briefly interpreted. Orig. art. has: 2 figures, 3 formulas, and 3 tables.

ASSOCIATION: none

SUBMITTED: 29Jul63 ENCL: 04

SUB CODE: OP NO REF SOV: 010 OTHER: 012

Card 2/6

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 14053-65
ACCESSION NR: AP4044841

ENCLOSURE: 01

Comparison of Cr, Fe, and Mn f-values

Элемент	№ мультиплета	Переход	J—J	Длина волны, Å	Энергия верхнего уровня, эв	Настоящая работа	Аномальная дисперсия, [*]
Mn	2	$a^6S-z^6P^0$	$5/2-7/2$	4030.75	3.09	0.056 *	0.056
Cr	1	$a^7S-z^7P^0$	3—4	4254.35	2.90	0.080	0.10
	1		3—2	4289.72	2.88	0.042	0.055
Fe	5	$a^5D-z^5F^0$	4—5	3719.93	3.32	0.045	—

(continued to Enclosure 02)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 14053-65

ACCESSION NR: AP4044841

ENCLOSURE: 02

(continuation from Enclosure 01)

атомный пучок	поглощение	фотометр. [10]	испускание		
				[1]	[7]
0.060 [18]	—	—	0.062 [9]	0.045	0.055
0.046 [18]	0.084 [17]	—	0.052 [10]	—	0.077
0.025	0.047	—	—	0.042	0.037
0.043 [18]	0.030 [9]	0.035	—	0.023	0.058
0.032 [9]				0.035	

*Measured by anomalous dispersion method and used to reduce our data to absolute scale

Column headings, 1 to r: 1 - Element; 2 - multiplet number; 4 - wavelength, Å; 5 - upper level energy, ev; 6 - present work; 7 - anomalous dispersion; 8 - atom beam; 9 - absorption; 10 - fluometer; 11-13 - emission

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APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

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ACCESSION NR: AP4044841

ENCLOSURE: 03

Элемент	№ мультиплета	Переход	J—J	Длина волны, Å	Энергия верхнего уровня, эв	Абсолютные значения сил осцилляторов в поглощении: настоящая работа	Аллен [1]	Корлисс и Бозман [2]
Tl	17	$a^3F-x^3F^0$	2—2	3729.81	3.31	0.032	—	0.13
	17	—	4—4	3752.86	3.34	0.037	—	0.14
	56	$a^1D-y^1F^0$	2—3	3904.78	4.06	0.110	—	0.76
	13	$a^3F-y^3D^0$	2—1	3948.67	3.13	0.023	—	0.16
	13	—	3—2	3956.34	3.14	0.016	—	0.12
	13	—	4—3	3958.21	3.17	0.026	—	0.11
	12	$a^3F-y^3F^0$	2—2	3981.76	3.10	0.029	—	0.16
	12	—	3—3	3989.76	3.11	0.029	—	0.14
	12	—	4—4	3998.63	3.13	0.031	—	0.17
	38	$a^5F-y^5G^0$	5—6	4981.73	3.32	0.19 *	—	0.33

Absolute values of oscillator strengths in absorption

Column headings, 1 to r: 1 - element, 2 - multiplet number, 4 - wavelength, Angstroms, 5 - upper level energy, ev 6-8 - Absolute values of oscillatorstrengths in absorption

(continued to Enclosure 04)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

L 14053-65

ACCESSION NR: AP4044841

(continuation from Enclosure 03)

ENCLOSURE: 04

V	7	$a^4F-y^4F^0$	$^9/_2-^9/_2$	3902.25	3.23	0.037	—	0.055
	27	$a^6D-y^6D^0$	$^9/_2-^9/_2$	4111.78	3.30	0.14	—	0.28
	27	—	$^7/_2-^7/_2$	4115.18	3.28	0.077	—	0.16
	22	$a^6D-y^6F^0$	$^9/_2-^{11}/_2$	4379.24	3.12	0.20	—	0.30
Co	22	$b^4F-y^4G^0$	$^9/_2-^{11}/_2$	3453.51	4.00	0.60	0.32	0.46
	18	$b^4F-z^4D^0$	$^9/_2-^7/_2$	3873.12	3.62	0.044	0.023	0.050
	18	—	$^7/_2-^5/_2$	3873.95	3.70	0.036	0.021	0.037
	34	$a^2F-y^2G^0$	$^5/_2-^7/_2$	3894.07	4.21	0.39	0.24	0.40
	34	$a^2F-y^4G^0$	$^7/_2-^9/_2$	3995.31	4.01	0.16	0.093	0.17
Ni	19	$a^3D-z^3F^0$	3—4	3414.76	3.64	0.30	0.066	0.14
	20	$a^3D-z^3D^0$	1—1	3423.71	3.62	0.20	0.051	0.10
	19	$a^3D-z^3F^0$	2—3	3433.56	3.62	0.081	0.024	0.044
	20	$a^3D-z^3D^0$	2—2	3446.26	3.59	0.20	0.052	0.14
	17	$a^3D-z^3F^0$	3—4	3461.65	3.59	0.16	0.038	0.081
	18	$a^3D-z^3P^0$	2—1	3492.95	3.64	0.28	0.059	0.14
	32	$a^1D-z^3F^0$	2—3	3858.30	3.62	0.048	0.022	0.048

*Determined from relative oscillator strengths of titanium lines obtained elsewhere

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[illegible], [illegible] I.:

[illegible], [illegible] I.: "[illegible] detect [illegible]
[illegible]." [illegible]
[illegible]
(D[illegible]

[illegible]: [illegible] let [illegible]

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

USSR / Pharmacology, Toxicology. Chemotherapeutic Preparations. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42471.

Author : Morozova, N. I.
Inst : AS USSR.
Title : Penicillin Excretion During the Neonatal Period.

Orig Pub: V. kn.: Materialy po evoluts. fiziol. T. 2. M-L, AH SSSR, 1957, 181-185.

Abstract: The experiments were carried out on pups. A solution of penicillin (I) containing 25-160 units in 1 ml, was administered perorally (sic) in the jugular vein at a rate of 0.5-1 ml/1 minute. It was established that excretion of I in newborn pups takes place by filtration in the glomerular system. Excretion of I approaches adult values at the beginning of the third month after birth.

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

USSR / Pharmacology, Toxicology. Chemotherapeutic Preparations. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42471.

Abstract: Active excretion of I in adult animals cause rapid fall of I blood levels. As a result of the absence of such excretion in pups during the early postanal period of life, their I blood decreases much slower. -- T. P. Veselova

Card 2/2

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3"

"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

AUTHORS: Morozova, N.K. and Morozov, V.P. SOV/51-5-5-7/23

TITLE: On the Application of the Spectroscopic Mass Method to Determination of the Vibrational Frequencies of Isotopic Molecules (O primenenii metoda spektroskopicheskikh mass pri opredelenii kolebatel'nykh chastot izotopicheskikh molekul)

PERIODICAL: Optika i Spektroskopiya, 1958, Vol 5, Nr 5, pp 535-541 (USSR)

ABSTRACT: The method of spectroscopic masses (Ref 2), used for approximate calculation of anharmonicity of vibrations of multi-atomic molecules containing hydrogen or deuterium, is very simple and convenient (Refs 3-10) but it gives very rough results especially in calculation of deformational frequencies. In the present paper the spectroscopic mass method is applied to determination of frequencies of XY_2 and XY_3 molecules, where Y = H or D. The method of Tatevskiy (Ref 11) and the method of partial frequencies (Ref 12) give the following relationship for these molecules: $\omega_i'/\omega_i = \rho_i (M, m, m_1, \gamma)$, where ω_i and ω_i' are the zero frequencies (the terms zero frequencies and fundamental frequencies are used in the sense of Ref 1) of molecules XH_n and XD_n respectively, M is the mass of the central atom, m and m_1 are the hydrogen and deuterium masses and γ is the valence angle. If the

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mass m = 1.0081 is replaced by the spectroscopic hydrogen mass $\bar{m}$ = 1.088 and if the mass m_1 = 2.0147 is replaced by the spectroscopic deuterium mass $\bar{m}_1$ = 2.126, then the above relationship may be written as $\nu_i'/\nu_i = \bar{\beta}_i(M, \bar{m}, \bar{m}_1, \gamma)$. The above approximate equation makes it possible to determine the fundamental frequencies ν_i' of deutero-derivatives if the fundamental frequencies ν_i of the original molecules are known. The above two relationships are more complicated if molecular symmetry changes on deuteration. The authors discuss first triatomic hydrides and deuterides of XY_2 type, where Y = H or D. Table 1 lists the fundamental frequencies of nine such molecules: H_2O, D_2O, H_2S, D_2S, H_2Se, D_2Se, HDO, HDS, HDSe. Lines I in Table 1 give the results of calculations using spectroscopic masses H = 1.088 and D = 2.126. Lines II give the values calculated using non-spectroscopic masses. New spectroscopic masses H = 1.00975 and D = 2.1410 were used to calculate the values in lines III. Lines IV represent values taken from V.P. Morozov's earlier work (Ref 20). The authors deal also with pyramidal hydrides and deuterides of XY_3 type where Y = H or D. The fundamental and the zero frequencies of eight such molecules (NH_3, ND_3, PH_3, PD_3, AsH_3, AsD_3, SbH_3, SbD_3) are given in Tables 2 and 3

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respectively. Lines I and II in Table 2 represent results of calculations using spectroscopic masses H = 1.068 and D = 2.0147 (line I) and H = 1.0975 and D = 2.1410 (line II). Unnumbered lines in Tables 1 and 2 represent values taken from Refs 13-21, 23-28, listed in the last column of these tables. In Table 3 the third, fourth and sixth columns list three variants of values calculated by the present authors, while the eighth column gives the results obtained by the other authors. The fifth, seventh and ninth columns give the differences between the results of the fourth, sixth and eighth columns and those of column 3. From the results obtained the authors deduce improved values of certain fundamental frequencies of the D_2S, HDS, ND_3 and PD_3 molecules. The authors thank I.N. Godnev for valuable discussions. There are 3 tables and 29 references, 13 of which are American, 12 Soviet, 1 Indian, 1 English, 1 French and 1 translation.

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Card 3/3

1. Molecules--Vibration 2. Mass spectrum analysis 3. Mathematics

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S/139/60/000/01/036/041
E032/E314

AUTHORS: Khlebnikova V.N., Morozova N.K. and Morozov V.P.

TITLE: Determination of the Errors Involved in the Calculation of Thermodynamic Functions on the Harmonic Oscillator Approximation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika. 1960, Nr 1, pp 217 - 221 (USSR)

ABSTRACT: A simple method is reported for the rapid determination of the errors involved in the calculation of the thermodynamic functions of the harmonic oscillator. The discussion is based on Eqs (1)-(3), which give vibrational components of the specific heat, the reduced internal energy and the reduced free energy.
In these equations, $y_i = hc\nu_i/kT$ and ν_i is in cm^{-1}.
Since the analysis is analogous for all the functions the specific heat is taken as an example. It follows from Eq (1) that the magnitude of the specific heat is determined by two kinds of quantities. 1) the physical constants h, k, c, R and 2) the independent variable ν/T. The values of the physical constants

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E032/E314

Determination of the Errors Involved in the Calculation of Thermodynamic Functions on the Harmonic Oscillator Approximation

are available in the literature and are periodically reviewed. Table 1 gives a summary of two successive determinations of the above four constants The second column gives the 1951 values and the third the 1958 value (Refs 2,3) The last column gives the differences The latter differences are all greater than the errors indicated by Du Mond and Cohen (Ref 2, Col 2 Table 1). The present authors argue that it is these differences which must be used to determine the error in this specific heat as given by Eq (1). Thus, the error in the specific heat due to the error in Planck s constant is given by Eq (4), from which it is clear that the error is a function of ν/T. Using the notation given by Eq (5), the authors seek the conditions for which the function f(y) is an extremum. The derivative of f(y) vanishes when Eq (6) is satisfied On expanding the exponentials in Eq (6) into series the latter equation may be rewritten in the form given by Eq (7). All the coefficients in Eq (7) are positive except for the first which is negative.

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Determination of the Errors Involved in the Calculation of Thermodynamic Functions on the Harmonic Oscillator Approximation

Thus the equation has met more than one positive root. The positive root can be found by successive approximations and it is found that the root is in fact 3.49. The analysis leads to results which are summarised in Table 2, in which all the values in the columns marked "maximum" should be multiplied by 10^{-4} and all the numbers in the columns marked "minimum" should be multiplied by 10^{-8} (the first row refers to the specific heat the second to the internal energy and the third to the free energy: Eqs (1)-(3)). This table shows that the error in the thermodynamic functions due to errors in the physical constants is negligible. Next an estimate is made of the effect of the spectroscopic error $\Delta\nu$ on the above functions. The corresponding error in the specific heat is given by Eq (8). Using the notation of Eq (9), the error in the specific heat can be written in the form given by Eq (10). The errors in the two

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Determination of the Errors Involved in the Calculation of Thermodynamic Functions on the Harmonic Oscillator Approximation

other functions can be written in the form given by Eq (11) - Eq (14). Figures 1 2 and 3 give plots of Z, H and Θ as functions of ν/T. These graphs may be used to calculate the errors in the thermodynamic functions due to $\Delta\nu$. The error in the entropy is then given by Eq (15) In Figures 1 2 and 3 ν is in cm^{-1} and T in degrees. I.N Godnev is thanked for valuable discussion.
There are 3 figures. 2 tables and 4 references of which 3 are Soviet and 1 is English. 1 of the Soviet references is translated from English.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskiy institut (Dnepropetrovsk Chemico-technological Institute)

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MOROZOVA, N.K.

82441

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S/149/60/000/004/004/009

AUTHORS: Pogorelyy, A.D., Morozova, N.K.

TITLE: The Behavior of Germanium Disulfide at High Temperatures

PERIODICAL: Izvestiya vysshikh uchebnykh zaveden', Tsvetnaya metallurgiya, 1960, No. 4, pp. 112-121

TEXT: Experimental investigations were performed to obtain precise data on characteristics of volatility of GeS_2 at high temperatures and on its dissociation. A method is described of preparing crystalline GeS_2, stable in air with a melting point of 825°C ± 3°. The tension of saturated GeS_2 vapor was determined by the aspiration method: Inert gas is passed over the evaporating substance at a rate ensuring the full saturation of the gas by the vapors of the condensed phase. The gas saturated with vapors, is exhausted through a condensation pipe in whose cold section the vapors are fully condensed; the inert gas is accumulated in a volumemeter. When the exact volume of the accumulated gas, the weight of the condensate and the molecular weight of its vapors are known, the saturated vapor tension of the investigated substance can be determined. A device for the saturation of gas with vapor and the process of determining the vapor tension are described in detail. Vapor tension of GeS_2 in argon was calculated according to

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S/149/60/000/004/004/009

The Behavior of Germanium Disulfide at High Temperatures

the law of partial pressure

$$p = P_o \frac{n}{n + N}$$

where P_o is the pressure in the reaction container, n is the number of GeS_2 moles and N is the number of argon moles. The temperature dependence of the tension of saturated GeS_2 vapor (p') is calculated for 500-800°C. Data obtained, compared to those of (Ref. 1) and (Ref. 2) show different results, since N.P. Diyev and V.N. Davydov (Ref. 1) had used the Knudsen method and H. Kenworthy, M.G. Starliper, and A. Ollar (Ref. 2) employed the Langmuire (Lengmyur) formula. Studies on the process of GeS_2 sublimation in argon atmosphere showed that besides the physical evaporation process there was a dissociation into volatile lower sulfide and elemental sulfur, according to the scheme $2GeS_{2\,cr.} = 2GeS_{gas} + S_2$. To determine the constant of GeS_2 dissociation (K_{GeS_2}), a method recommended in Reference 3 was used. The dissociation constant of the compound is found from experimental data on the total concentration of the metal in the gaseous phase determined from the tension of the saturated vapor. To find K_{GeS_2} a series of tests were performed determining the tension of GeS_2 vapor in an atmosphere of 90% Ar and 10% H_2 for temperature of 500-700°C. The results of the tests are given in tables. The experimental data were used to calculate (p'_{GeS}), the equilibrium

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S/149/60/000/004/004/009

The Behavior of Germanium Disulfide at High Temperature

pressure of GeS in argon atmosphere equilibrium with solid GeS_2. This value may be used to calculate the magnitude of

$$K_{GeS_2} = \frac{1}{2} (p'_{GeS})^3.$$

The magnitude of changes in the isobar potential for the reaction $2GeS_{gas} + S_2 = 2GeS_{2cr}$ can be calculated by the following formula: $\Delta G^o_T = -162.0 + 0.1377\ T$ kcal. There are 1 diagram, 2 graphs, 3 tables and 3 references: 2 Soviet and 1 English.

ASSOCIATION: Severokavkazskiy gornometallurgicheskiy institut (North-Caucasian Institute of Mining and Metallurgy) Kafedra obshchey metallurgii (Department of General Metallurgy)

SUBMITTED: November 2, 1959

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L 12790-63 BDS/EWP(q)/EWT(m) AFFTC/ASD JD

ACCESSION NR: AP3000784 S/0070/63/008/003/0461/0462

AUTHOR: Shalimova, K. V.; Morozova, N. K.; Soldatov, V. S.

TITLE: The crystalline structure of zinc-sulfide films

SOURCE: Kristallografiya, v. 8, no. 3, 1963, 461-462

TOPIC TAGS: crystal growth, crystal structure, ZnS, x-ray diffraction, A, HS

ABSTRACT: The authors made detailed studies of the crystal structure of ZnS films in relation to temperature and material of the substrate and also in relation to the atmosphere, structure of initial powder and fusing temperature of this powder. They prepared films from both cubical and hexagonal forms of powder on glass and quartz substrates at temperatures from 20 to 800C. The experiments showed that temperature of the evaporator and structure of the initial material have no effect on the crystal structure of the films. This structure depends chiefly on temperature of the substrate at the moment the film forms on it. It also depends on the atmosphere in which the film is deposited and on the material of the substrate. At lower temperatures (200-300C) the structure is generally that of zinc blende if the substrate is glass, but it is hexagonal if the substrate is quartz; and this film forms at somewhat lower temperature in a vacuum (220C) than in HS (300C). Mixtures of both structures are deposited at higher temperatures,

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ACCESSION NR: AP3000784

but the cubic phase is dominant on quartz substrates at a temperature of 700C, whereas films formed in the 400-470C range on glass substrates exhibit hexagonal structure exclusively. The cubic phase appears suddenly and abundantly, however, on cooling below 400C or heating above 470C. Orig. art. has: 4 figures. [Abstracter's note: 4 figures referred to in text but no graphics accompany article.]

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering)

SUBMITTED: 27Dec62 DATE ACQ: 21Jun63 ENCL: 00

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MOROZOV, V.P.; RYBAKOVA, G.I. [Rybakova, H.I.]; NAUGOL'NIKOV, B.I. [Nauhol'nikov, B.I.]; KHLEBNIKOVA, V.N.; [Khliebnikova, V.M.]; MOROZOVA, N.K. [Morozova, N.K.]; KOVAL'CHUK, D.S.

Some problems in the theory of vibrational spectra. Ukr.fiz.zhur. 6 no.6:728-730 N-D '61. (MIRA 16:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Molecular spectra)

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"APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310004-3

SOKOLOV, A.D.; MOROZOVA, N.K.

Effect of testing conditions on the impact strength of phenoplasts. (MIRA 14:10)
Zav.lab. 27 no.10:1305-1307 '61.

1. Zavod "Karbolit".
(Phenol condensation products)

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