

Investigation Within the Field of Compounds With a Three -Membered Oxide Ring

XXI. The Reaction of the α -Tetra- and β -Tetraethylene-
Glycidic Acids With Hexyl- and Benzylamines

α -glycidic acid was less reactive. The result was the same with hexylamine, even at 150°C. Apparently this result is the consequence of steric hindrances. The attempt to obtain from the amides of oxalic acids benzoyl derivatives was only successful with the binding product of cyclohexylamine and the potassium salt of β -tetraethylene-propionic acid, where the corresponding N-benzene derivatives were obtained according to Schotten-Baumann. In order to determine the structure of the binding products the with concentrated sulfuric acid. In heating the amide of oxalyl hexylamino- β -tetraethylene-propionic acid with sulfuric acid at 150 - 160°C a turbulent formation of carbon monoxide began which points already at the structure of the obtained product. It was possible to isolate α -cyclohexylamino- β -tetraethylene-acetic acid aldehyde as a 2,4-dinitrophenylhydrazone from the reaction mixture. From this could be concluded that the opening of the oxide ring in the mentioned amide of glycidic acid took place from behalf of the β -carbon atom. Unfortunately this proof of structure which furnished good yields of

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Investigation Within the Field of Compounds With a Three-
-Membered Oxide Ring.

XXI. The Reaction of the Amido- β -Tetra- and β -Pentamethylene-
-Glycidic Acids With Hexyl- and Benzylamines

decomposition products for the binding products of aromatic
amines, can not be used for those of aliphatic character
because of its small yields. The reaction product of the amide
of β -tetramethylene-glycidic acid with benzylamine as free
acid was also treated with sulfuric acid, the formation of
 CO_2 already beginning at 110° . This points to the fact that
one α -oxy- β -aminic acid is present. The nature of the second
splitter could not be cleared. (See structure formulae of
the synthetic products at the end of the theoretical
treatise). Thus the amide of the β -tetramethylene-glycidic
acid has a greater reactivity than that of β -pentamethylene-
glycidic acid. The opening of the oxide ring of the amides
of glycidic acid takes place from the α -carbon
atom. There are 2 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet
(Leningrad State University)

Card 3/4

AUTHORS: Martynov, V. F., Sukhinin, N. F. 001/79-00-1-10, 0

TITLE: Investigations on Compounds Containing Oxygen in a Six-Membered Ring (Issledovaniye v oblasti soyedineniy, sofer-zhashchikh trekhchlennoye okisnoye kol'tso) XXII, The Acros-position Reactions of the Esters of Glycidic Acid with α - and β -Naphthylamines (XXII. Vzaimodeystviye efirov glitsidnykh kislot s α - i β -naftilaminami)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2075-2081 (USSR)

ABSTRACT: In previous investigations (Refs 1-3) V. F. Martynov found that esters of β -monoalkyl and β -dialkylglycidic acids react with aromatic amines of the aniline series by opening their oxygen ring on the side of the β -carbon atom. The purpose of the work reported here was to investigate the effect of steric hindrances in the reaction mechanism on the point at which the oxygen ring opens. Esters of the following glycidic acids (epihydrinic acids) were studied: β -propyl; β , β -dimethyl-; β -methyl-; β -ethyl-; β , β -tetramethyl-; and β , β -pentamethyl glycidic acids. All of these acids have different substituted groups in the β -position. The aromatic

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SOV/79-28-8-16/66

Investigations on Compounds Containing Oxygen in a Three-Membered Ring.
XXII. The Decomposition Reactions of the Esters of Glycidic Acid With
 α - and β -Naphthylamines

amines were chosen because they are very different from one another in terms of the volume occupied at the amino group and because there are good possibilities for the highly reactive amines to form bonds with the other substances present. The most suitable amines for this purpose were the α - and β -naphthylamines. These amines were reacted with the series of esters of glycidic acid, and it was found that the α -form was less reactive. It was found that in reacting with the ester of β,β -dimethyl glycidic acid the β -naphthylamine opened its oxygen ring on the side of the β -carbon atom. The product of this reaction could be converted to the corresponding alcohol using sulfuric acid. A mixture of two isomers resulted from the decomposition reaction of α -naphthylamine with the ethyl esters of β,β -dimethyl and β,β -tetramethyl glycidic acids. In this case the oxygen ring opened from the side of both the α - and the β -carbon. There are 2 references, which are Soviet.

2nd /3

D. G. Kostikov, A. F. Kuznetsov, E. A. Kuznetsov

SOV/79-28-9-17/66

TITLE: Investigations on Compounds Containing Oxygen in a Three-Membered Ring (Issledovaniye v oblasti obozheniy, soedyneniy i reaktsiy trekhchlennoye okisnoye kol'tso) XIII. The Decomposition Reactions of the Ethyl Esters of β -Methyl- β -Butyl- and β -Methyl- β -Phenyl Glycidic Acids With Aniline (XIII. Razlomeystviye etilovykh efirov β -metil- β -butil- i β -metil- β -fenilglitsilnykh kislot s anilinom)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol. 28, Nr 8, pp. 2082-2085 (USSR)

ABSTRACT: In the previous publication (Ref 1) the author described the decomposition reaction of aromatic amines with the ethyl esters of glycidic acids which have different substituted groups at the β -carbon atom. In this paper the author describes the newly synthesized β -methyl- β -butyl glycidic acid (42% yield). The addition of aniline to the above esters should be a difficult reaction to carry out because of the steric hindrances at the β -position. Heating for 16 hours at 160-170° failed to produce substitution at the oxygen ring, but the reaction did go when the mixture was heated in a steel cylinder at

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Investigations on Compounds Containing Oxygen in a Three- SOV/79-28-8-17/66
Membered Ring. XXIII. The Decomposition Reactions of the Ethyl Esters of
2-Methyl- β -Butyl- and β -Methyl- β -Phenyl Glycidic Acids with Aniline

175-180° for 36 hours. The characteristic constants of the
end product were determined. It was expected that in ac-
cordance with the earlier results (Ref 1) an ethyl ester of
the α -oxy- β -aniline- β -methyl- β -butyl propionic acid (Formula I)
would result. However, analysis showed that it was possible
to convert the product of the above reaction to the correspond-
ing indole by reacting it with concentrated sulfuric acid.
In this way it was conclusively demonstrated that in the
above reaction the oxygen ring opens on the side of the
 β -carbon atom. In investigating the structure of the indole
prepared above the 2-methyl- β -butyl indole(II) was synthesized.
There are 2 references, which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet i Rizhskiy peda-
gogicheskiy institut (Leningrad State University and the
Riga Pedagogical Institute)

RECEIVED: July 10, 1957

0001/3

SOV/79-28-3-17/60

Investigations on Compounds Containing Oxygen in a Three-Membered Ring.
4. III. The Decomposition Reactions of the Ethyl Esters of β -Methyl- α -Butyl
and β -Methyl- β -Phenyl Glycidic Acids With Aniline

Page 3/3

AUTHORS: Martynov V. F., Snorekunov A. V. SOV/79-28-12-19/43

TITLE: Investigation in the Field of Compounds With a Three-Membered Oxide Ring (Issledovaniye v oblasti soyedineniy, sodershashchikh trekhchlennoye okisnoye kol'tso) XXIV. Synthesis of β, β' -Disubstituted Nitriles of Glycidic Acids (XXIV. Sintez β, β' -dizameshchennykh nitrilov glitsidnykh kislot)

PERIODICAL: Zhurnal obshchey khimii, 1958, Vol 28, Nr 12, pp 3248-3253 (USSR)

ABSTRACT: In an earlier report (Ref 1) the authors had described the reaction of the nitrile of monochloroacetic acid with some ketones and had obtained the β, β' -disubstituted nitriles of glycidic acids unknown before. To obtain further syntheses of this class the authors introduced further ketones into this reaction which are of aliphatic, aliphatic-aromatic, and aromatic character, namely, diethyl-diisobutyl, dibenzyl, diphenyl, di-p-tolyl, and di-p-dimethylamino-phenyl ketone. Diisobutyl ketone had the smallest yield of all these ketones introduced into the reaction; the aromatic ketones, the di-p-tolyl ketones, however, offered the highest yields (81 and 80%).
Methyl's Methyl ketone does not react with the nitrile

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Investigation of the Reaction of Compounds With a
Three-Membered Oxirane Ring. XXIV. Synthesis of
 β, β' -Disubstituted Nitriles of Glycidic Acids

SOVIET JOURNAL OF CHEMISTRY

of hydroxy acids to a corresponding nitrile of
glycidic acids, which can be explained by the highly nucleophilic
character of the dimethylamine group (Scheme 1). The
five glycidic nitriles synthesized and characterized are given
in scheme 2, among which the nitrile of diphenyl glycidic
acid has already been described in publications. The
nitriles with aromatic groups are very stable, the others,
however, decompose with time. The nitriles with aliphatic
groups containing radicals are hardly to be obtained in
appreciable amounts. The infrared dispersion spectrum taken of
 β, β' -diphenyl glycidic nitrile has proved this fact. The
infrared spectrum (Fig. 1) taken prove the results earlier
obtained. The acid hydrolysis of the β -pentamethylene glycidic
nitrile was investigated; the corresponding aldehyde was
obtained, which indicates that the hydrolysis begins with the
saponification of the nitrile group. There are 2 figures and
1 table in the text, which are Soviet.

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Investigation in the Field of Compounds With a
Three-Membered Oxide Ring. XXIV. Synthesis of
 β, β' -Disubstituted Nitriles of Glycidic Acids

SCV/79-28-12-19/41

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State
University)

SUBMITTED: December 21, 1957

Card 3/3

MARTYNOV, V.F.; TITOV, M.I.

Use of ethyl monofluoroacetate in Darsen's reaction. Zhur. ob. Khim.
30 no.12:4107-4108 D '60. (MIRA 13:12)

1. Leningradskiy gosudarstvennyy universitet.
(Acetic acid)

MARTYNOV, V.F.; CHZHOU I-MIN [Cho I-Ming]

Compounds containing a three-member oxide ring. Part 25: Reaction of
methyl α -methylglycidate with aromatic amines. Zhur.ob.khim. 30
no.10:3174-3178 0 '61. (MIRA 14:4)

1. Leningradskiy gosudarstvennyy universitet i Universitet Nankay,
8.Tyan'tszin', Kitayskaya Narodnaya Respublika.
(Amines) (Glycidic acid)

MARTYNOV, V.F.; BELOV, I.B.

Compounds containing a three-membered oxide ring. Part 27: Reactions of ethyl esters of some β -disubstituted glycidic acids with hydrazone hydrate. Zhur.ob.khim. 31 no.5:1509-1510 My '61.
(MIRA 14:5)

1. Leningradskiy gosudarstvennyy universitet.
(Glycidic acid) (Hydrazine)

MARTYNOV, V.F.; OL'MAN, G.; VINDLER, T.; LEYBNITS, Ye.

Compounds containing a three-membered oxide ring. Part 26:
Reaction between aniline and the ethyl ester of β -phenylglycidic
acid. Zhur.ob.khim. 31 no.6:1806-1811 Je '61. (MIRA 14:6)

1. Leningradskiy gosudarstvennyy universitet i Leyptsigskiy
institut organicheskoy khimii.
(Glycidic acid) (Aniline)

MARTYNOV, V. F.

Dissertation defended for the degree of Doctor of Chemical Sciences
at the Institute of Organic Chemistry imeni N. D. Zelinskiy in 1962:

"Investigation in the Field of Chemistry of Glycidic Acids and
Related Compounds."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

MARTYNOV, V.F.; TITOV, M.I.

Use of methyl dichloroacetate in the Darzens reaction. Zhur. ob.
khim. 32 no.1:319-320 Ja '62. (MIRA 15:2)
(Acetic acid) (Darzens reaction)

MARTYNOV, V.F.; TITOV, M.I.

Fluorine organic compounds. Part 1: Darzens reaction in the
synthesis of α -fluoro- β -hydroxyacids. Zhur.ob.khim. 32
no.3:718-721 Mr '62. (MIRA 15:3)

1. Leningradskiy gosudarstvennyy universitet.
(Fluorine organic compounds) (Esters)

MARTYNOV, V.F.; KASTRON, Ya.N.

Compounds containing a three-membered oxide ring. Part 27:
Interaction of aniline with ethyl ester of β -methyl- β -phenyl-
glycidic acid. Zhur.ob.khim. 32 no.3:721-723 Mr '62.
(MIRA 15:3)

1. Leningradskiy gosudarstvennyy universitet.
(Aniline) (Glycidic acid)

MARTYNOV, V.F.; BELOV, I.B.

Compounds containing three-membered oxide ring. Part 24: Interaction of esters of β -aryl-substituted glycidic acids with hydrazine hydrate. Zhur.ob.khim. 32 no.6:1734-1738 Je '62. (MIR: 15:6)

1. Leningradskiy gosudarstvennyy universitet.
(Glycidic acid) (Hydrazine)

MARTYNOV, V.F.; BELOV, I.B.

Compounds containing a three-membered oxide cycle. Part 30:
Determination of epoxide oxygen in glycidic esters. Zhur.ob.khim.
32 no.7:2341-2345 J1 '62. (MIRA 15:7)

1. Leningradskiy gosudarstvennyy universitet.
(lycidic acid) (Oxygen-Analysis)

MARTYNOV, V.F.; SHCHELKUNOV, A.V.

Synthesis of indoles based on glycidic acid nitriles. Zhur.ob.khim.
32 no.7:2381 J1 '62. (MIRA 15:7)

1. Leningradskiy gosudarstvennyy universitet.
(Indole) (Glycidic acid)

MARTYNOV, V.F.; TIMOFEYEV, V.Ye.

Darzens reaction with ethyl ester of chloromethylphosphinic acid. Zhur.ob.khim. 32 no.10:3449 0 '62. (MIRA 15:11)

1. Leningradskiy gosudarstvennyy universitet.
(Phosphinic acid) (Darzens reaction)

MARTYNOV, V.F.; BELOV, I.B.

Reaction of ethyl esters of α -halocinnamic acids with hydrazine hydrate.
Zhur.ob.khim. 33 no.4:1092-1095 Ap '63. (MIRA 16:5)

1. Leningradskiy gosudarstvennyy universitet.
(Cinnamic acid) (Hydrazine)

MARTYNOV, V.F.; TITOV, M.I.

Darzens reaction used in the synthesis of oxychloride compounds.
Zhur.ob.khim. 33 no.4:1380-1381 Apr '63. (MIA 16:5)

1. Leningradskiy gosudarstvennyy universitet.
(Esters) (Chlorine compounds) (Darzens reaction)

MARTYNOV, V.F.; BELOV, I.B.

Compounds containing a three-membered oxide ring. Preparation
of N-unsubstituted hydroxy-pyrazolidones. Zhur. ob. khim. 33
no.8:2461-2464 Ag '63. (MIPA 16:11)

1. Leningradskiy gosudarstvennyy universitet.

MARTYNOV, V.F.; TITOV, M.I.

Study of compounds containing a three-membered oxide ring.
Part 32: Use of Darzens reaction for the synthesis of
 α -chloro- β -hydroxy compounds. Zhur. ob. khim. 34 no.7:
2125-2128 71 1962 (MIRA 17:8)

1. Leningradskiy gosudarstvennyy universitet.

PART 7. ...

... of the ... powder containing ...
... 35% ... of the Darzens reaction for the ...
... synthesis. Zhur. ob.khim. 34 no.12:3896-3897 (1962)

Leningradskiy ... universitet.

MARTYNOV, V.F., BESPALOVA, Zh.D.; TITOV, M.I.

Synthesis of protected hexapeptide carbobenzoxy-L-phenylalanyl-L-leucyl-L-leucyl-L-phenylalanyl-L-leucyl-L-leucyl methyl ester. Vest. LGU 20
no.10:159-161 '65. (MIRA 18:7)

MARTYNOV, N. G.

"Bacteriophage action on retinal on dogs and cats", (VCS, Department of Surgery), Collected works No. 14, of Leningrad Veterinary Institute USSR Ministry of Agriculture, 1 245, Sel'khozgiz, 1954.

MARTYNOV, V.G., dotsent

Some indices of mineral and vitamin metabolisms in cows during
the period of pregnancy and after calving. Veterinaria 41
no.2:78-81 F '64. (MIRA 17:12)

1. Troitskiy veterinarnyy institute.

MARTYNOV, V.G., dotsent

Hysterography in the retention of the placenta. Veterinariia
41 no.7:76-77 J1 '64. (MIRA 18:11)

1. Troitskiy veterinarnyy institut.

USSR/Diseases of Farm Animals - Pathology of Reproductions.

R-5

Abs Jour : Ref Zhur - Biol., No 14, 1958, 64697

Author : Khokhlov, A.L., Martynov, V.G.

Inst : Leningrad Veterinary Institute.

Title : Caesarean Section in Cows (1st Report)

Orig Pub : Sb. rabot. Leningr. vet. in-t, 1957, vyp. 16, 48-51.

Abstract : No abstract.

Card 1/1

MARTYNOV, V.G., kand.vet.nauk

Novocaine-penicillin block in retained placenta in cows and
goats. Veterinariia 35 no.12:56-57 D '58. (MIRA 11:12)

1. Troitskiy veterinarnyy institut.
(Novocaine) (Penicillin) (Veterinary obstetrics)

MARTYNOV, V.G., doctant

Use of glucose in the retention of the placenta in cows.
Veterinariia 41 no.4:87-88 Ap '65.

(MIRA 13rd)

1. Troitskiy veterinarnyy Institut.

ACCESSION NR: AP4013297

S/0135/64/000/002/0041/0041

AUTHOR: Dorofeyev, V. M. (Professor); Murkin, L. P. (Engineer); Shadov, V. P. (Engineer); Sivirkin, V. F. (Engineer); Marty*nov, V. I. (Engineer)

TITLE: Gas-arc welding torch with vortex stabilization of the arc

SOURCE: Svarochnoye proizvodstvo, no. 2, 1964, 41

TOPIC TAGS: welding, welding torch, gas-arc welding torch, arc stabilization, vortex arc stabilization

ABSTRACT: The article describes the GEG-1A gas-arc welding torch with vortex arc stabilization, developed and produced at the Kuyby*shevskiy aviatsionnyy institut (Kuyby*shev Aviation Institute). The anode is in the form of a copper nozzle with an output diameter of 3.5 mm and a sliding seating arrangement in a tin housing. The cathode used is a tungsten rod 7 mm in diameter set in a fixed position with respect to the nozzle. The electrode assembly is cooled by water fed into the tin electrode holder. The nozzle and electrode assemblies are insulated from each other by a textolite casing with screwed-in nipple for argon feed. The argon is fed into the chamber through two tangential apertures. The introduction into the torch of vortical argon feed eliminated nozzle wear. All three major torch assemblies (nozzle unit, housing electrode unit) are threaded
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ACCESSION NR: AP4013297

together and sealed with layers of conventional technical rubber. Electric current is supplied from a single PS-500 welding converter. A particular feature of the argon supply system is the presence in it of a jet 1.19 mm in diameter; during operation of the torch, a supercritical pressure gradient is set up on this jet, providing for constant argon consumption for the established pressure and variable torch operation modes. The technical specifications of this torch are listed. Orig. art. has: 2 figures.

ASSOCIATION: Kuybyshvskiy Aviatsionnyy Institut (Kuybyshv Aviation Institute)

SUBMITTED: 00

DATE ACQ: 26Feb64

ENCL: 00

SUB CODE: ML, SD

NO REF SOV: 000

OTHER: 000

Card 2/2

1. MARTYNOV, V. K., Min. Eng.
2. USSR (600)
4. Mining Engineering
7. Releasing ore at an inclined terminal. Gor zhur No 12 1952.

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

MALAKHOV, G.M.; LUGAVSKOY, S.I.; MARTYNOV, V.K.; NIKULIN, S.E., GUMINSKIY, M.V.
RYZHOV, P.A., redaktor; PARTSEVSKIY, redaktor; MIKHAYLOVA, tekhnicheskii
redaktor.

[Reducing waste and loss of iron ore in the working of mines in Krivoy
Rog Basin] Snizhenie poter'i razubozhivaniia zheleznoi rudy pri razra-
botke mestorozhdenii Krivorozhskogo basseina. Moskva, Gos. nauchno-
tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1955.208 p.
(Krivoy Rog--Iron mines and mining) (MLRA 9:4)

МАКИ ЯЕВ, В.К.

KAPLUNOV, Rodion Pavlovich, professor, doktor; PROKOP'YEV, Yevgeniy Petrovich, professor, doktor; STARIKOV, Nikolay Antonovich, professor, doktor; BRICHKIN, Aleksandr Vasil'yevich, professor, doktor; MALAKHOV, G.M., professor, doktor, retsenzent; STESHENKO, A.I., retsenzent; NEKIN, V.V., professor, doktor, retsenzent; MARTYNOV, V.K., kandidat tekhnicheskikh nauk, retsenzent; ARSENT'YEV, A.I., kandidat tekhnicheskikh nauk, retsenzent; KULIKOV, V.V., kandidat tekhnicheskikh nauk, retsenzent; DEMIN, N.S., doktor tekhnicheskikh nauk, retsenzent; TARASOV, L.Ya., redaktor; PARTSEVSKIY, V.H., redaktor; BREKKE, O.G., tekhnicheskii redaktor

[Underground workings of ores and deposits] Podzemnaia razrabotka rudnykh i rossypnykh mestorozhdenii. Moskva, Gos.nauchno-tekhn. izd-vo lit-fy po chernoi i tsvetnoi metallurgii, 1955. 680 p.
(Mining engineering)

(MIRA 9:3)

MARTYNOV, V.K.; STARIKOV, N.I.; LAVRINENKO, V.P.

Multiple operation work organization in sub-level caving. Gor.zhbir.
no.6:19-22 Je '55. (MLRA 8:8)

(Mining engineering)

MARTYNOV, Vitaliy Kos'movich; KHOROSHEV, Oleg Vasil'yevich; YAKHONTOV, A.D., red.; SMOLODZHEV, A.Ye., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Operator of mine drainage units; a textbook for on-the-job training of workers] Mashinist shakhtnykh vodootlivnykh ustanovok; uchebnoe posobie dlia proizvodstvenno-tekhnicheskogo obucheniia rabochikh. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1959. 200 p. (MIRA 12:4)
(Mine pumps)

MARTY, W. H. K., author.

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ACC NR: AF6021945

(A)

SOURCE CODE: UR/0188/66/000/002/0060/0068

AUTHOR: Braginskiy, V. B.; Martynov, V. K.

ORG: Department of Physics of Oscillations (Kafedra fiziki kolebaniy)

TITLE: Investigation of the influence of an intermediate body on gravitational interaction

SOURCE: Moscow. Universitet. Vestnik. Seriya III. Fizika, astronomiya, no. 2, 1966, 60-68

TOPIC TAGS: gravitation effect, general relativity theory

ABSTRACT: The authors describe an experiment undertaken for the purpose of observing the influence of an intermediate body on the static gravitational interaction. This experiment is similar to that performed by one of the authors in 1961 (Braginskiy et al., ZhETF v. 43, no. 7, 52, 1962), using a modulation technique with an electro-mechanical transducer and electronic circuitry to separate the signal from the noise. The experiments were made with a torsion pendulum consisting of two identical masses (25 g each) and a tungsten wire. One mass served as a trial body and the other mass as part of a variable capacitor serving as a pickup for the oscillations. The torsion pendulum is kept in vacuum not worse than 10^{-4} mm Hg. From the change in capacitance it was possible to deduce whether a third body changes the static gravitational force on the other body. The small changes in the oscillation amplitude were processed by means of a statistical method similar to that used by Etvos, Pekar, and Fekete (Ann.

Card 1/2

UDC: 521.12: 531.5

ACC NR: AP6031945

der Phys. v. 68, 11, 1922). It is concluded, with 95% reliability, that within a level of 1.5×10^{-11} the intermediate body exerts no static gravitational interaction. Possible consequences of this experiment are discussed. It is mentioned that the accuracy of such an experiment can be increased by 1 - 1.5 orders of magnitude. The authors thank Prof. V. V. Migulin and G. I. Rukman for valuable discussions, and Ya. M. Dzhileykin and P. M. Kasushchnov for help with the work. Orig. art. has: 3 figures and 3 formulas.

SUB CODE: 20/ SUBM DATE: 05Nov65/ ORIG REF: 008/ OTH REF: 005

Card 2/2

MARTYNOV, V.M., inzh.

Modernizing the molding unit for manufacturing gypsum-slag panels
by the vertical method. Stroi.mat. 7 no.6:26-27 Je '61.
(MIRA 14:7)

(Precast concrete--Equipment and supplies)

ZHELUDEV, I.S., inzh.; MARTYNOV, V.M., inzh.

Redesigning a shop making ~~gypsum~~-concrete slabs. Stroim. mat 8
no.10:25-26 0 '62. (MIRA 19:11)

(Gypsum products)

MARTYNOV, V.M. (Khar'kov, Netchenskaya naberezhnaya, 13, kv. 17)

Sliding sciatic hernia. Vest. khir. 74 no.5:71-72 J1-Ag '54.
(MLRA 7:10)

1. Iz khirurgicheskoy kliniki (zav. prof. G.M.Gurevich) Kar'-
kovskogo meditsinskogo stomatologicheskogo instituta.

(HERNIA,
sciatic sliding)

MARTYNOV, V.M.; KAUL'BA, M.S.

Method for determining the molecular weights of lubricant vapors.
Nefteper. i neftokhim. zhurnal-63 1963 (MIRA 1967)

1. Vsesoyuznyy naftokhimiya i neftovaya metall'skiy institut po pererabotke
nefti.

17 AND THE OTHER

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1. Some problems of the theory of emulsions. V. M. Martynov. *Kolloid. Zhur.* 10, 23-31(1948).—Surface-energy considerations applied to transition layers between 2 liquids lead to the conclusion that in a given pair of liquids, emulsification preferably takes place in such a direction as to result in an emulsion in which the liquid possessing a higher value of the ratio β/α (compressibility/thermal expansion) forms the dispersed phase. Known effects of addn. of a 3rd component gas, in many cases, β be accounted for by the effects of the solutes on the ratio β/α ; in particular, the increase of β/α of H_2O due to dissolved substances explains the fact that aq. solns. may be emulsifiable in org. liquids that do not emulsify pure H_2O . The theory also explains known facts of reversals of emulsification with variation of the concn. of the stabilizer. Thermodynamic analysis points to the possibility of existence of a crit. pressure of mixing of 2 liquids.

N. Tern

ABB-513 METALLURGICAL LITERATURE CLASSIFICATION

FROM STUDENT

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MARTYNOV, V. M.

PA 78T8

USSR/Chemistry - Emulsions
Chemistry - Dispersion

May/June 1948

"The Critical Dispersion of Highly Concentrated Emulsions," V. M. Martynov, Cen Inst of Aviation Fuels and Lubricants, TSIATIM, 5 pp

"Kolloid Zhur" Vol X, No 3 -p. 218-22

Explains method whereby it is possible to determine the critical dispersion of highly concentrated emulsions on the basis of their relative viscosity, and conversely to determine the viscosity of the system on the basis of its critical dispersion. Submitted 12 Mar 1947.

78T8

Jul/Aug 49

USSR/Physics - Dispersion
Chemistry - Emulsions

"Several Problems in the Theory of Emulsions: II, Density of Emulsions in Relation to the Degree of Dispersion," V. M. Martynov, Cen Sci Res Inst of Avn Fuels and Oils, Moscow, 4 1/2 PP

"Kolloid Zhur" Vol XI, No 4

Experimental proofs of theories relating to the fact that density of emulsions at constant temperatures and under the influence of outside pressures depend on the degree of dispersion. Determined that surface tension increases with growth of outside

63/497110

Jul/Aug 49

USSR/Physics - Dispersion (Contd)

pressure on the division boundary of the system benzene-water solution of sodium oleate. Shows that the thickness of the transfer layer at the division boundary of the system benzene-water solution of sodium oleate is about 4.7 angstrom units. Submitted 25 Feb 48.

63/497110

PA 63/497110

MARTYNOV, V. M.

MARTYNOV, V.

DA 38/49T113

USSR/Physics
Surface Tension
Mathematics - Applied

Mar 49

"The Problem of the Dependence of Surface Tension on
the Radius of the Curve of the Surface of Separation"
V. Martynov, Inst of Aviation Fuels and Oils, Moscow.
3 PP

"Zhur Fiz Khimii" Vol XIII, No 3

Theoretical discussion of subject relationship
involving several formulas for various conditions
through original work by author and reference to
previous work in subject.

38/49T113

The shape of drops in highly disperse emulsions and fogs.
V. M. Martynov. *Kolloid. Zhur.* 12, 350-62(1950) --
Surface tension σ of a surface, whose radius of curvature is
 r , is $\sigma_r = \sigma_0 - 2(\Delta V/\Delta S)r$; σ_0 is surface tension of a plane sur-
face, and $\Delta V/\Delta S$ is the variation of vol. with surface at const.
pressure and temp. (cf. *C.A.* 43, 6040a). Hence, a non-
spherical surface may have a lower energy F than the
spherical surface enclosing an equal vol. On the assumption
of probable values for $\Delta V/\Delta S$ it is found, e.g., that a dodeca-
hedron has a lower F than the sphere of equal vol. if r is
 10^{-6} cm or less. Emulsions often have nonspherical drops.
Thus, an emulsion of PhOH in 0.8% aq. Na stearate at 56°
contained many disk or filament-like particles. They may
have equil. shapes.
J. J. Bikerman

MARTYNOV, V. M.

769

✓ Syneresis in lubricating greases. I. Mechanism and kinetics of syneresis: V. M. Martynov. *Khim. i Tekhnol. Topliva* 1956, No. 6, 61-7. Assuming that all pores are alike and that the rate of oil flow through the structural maze of Li stearate obeys the Poisson principle, the follow-

Feed 1

ing kinetic relation describing syneresis was derived: $v = kt / (1 + ct)$, where $k = Q_0 P / [8 \alpha \eta N^2 (1 + \alpha)]$ and $c = Q_0 P / 8 \alpha \eta N^2$; Q_0 , N , and l are, resp., the initial vol., the total no., and the length of the pores, P is pressure and t time of flow, η viscosity of the liquid phase, and α a proportionality coeff. The initial syneresis rate is the direct function of the spec. area of the metallic soap particles and is not related to the reaction rate of high-mol. compds. The sepd. oil partially remained on the soap; the thickness of the film in the instance of "MVP" oil at 20° was approx. 8 μ . The extent of the observed syneresis in oil at 18-20° after 25 hrs. agreed well with calcd. results from the equation.

A. P. Katloby

J.M. 2

MARTYNOV, V.M.

Synaeresis of greases; effect of temperature on the synaeresis of gels of lithium stearate in instrument oil. Khim.i tekhn.topl.no.9:63-66 S '56. (MLRA 9:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut Neftyanoy promyshlennosti.

(Lubrication and lubricants) (Syneresis) (Stearates)

Martynov, V.M.

Chem ✓ Effect of cooling on the emulsifying power of proteins.
 V. M. Martynov (All-Union Sci. Research Inst. Conversion
 of Peat and Gas, Moscow). *Kolloid. Zhur.* 18, 412-8
 (1956); *cf. C.A.* 33: 7778c. — One vol. of an almost neutral
 $x\%$ casein (I) soln. could emulsify 8.6, 10.5, and 11.3 vol.
 of heptane when x was 4, 8.2, or 10.1, resp. When I was
 kept at -16° and then used as emulsifying agent at room
 temp., it could emulsify 4.3, 2.7, and 2.2 vol. C_7H_{16} at the
 above x , and the vol. emulsified was smaller still after cool-
 ing to -72° . The surface area of 1 cc. heptane in the
 emulsion was, e.g., at $x = 8.2\%$, 143, 65, and 48 sq. m.
 after no cooling, cooling to -16° , and cooling to -72° ,
 resp. After cooling to -16° the viscosity and the optical
 activity of 8% I soln. at room temp. were by about 15%
 greater than before cooling. The rate of cooling of a 10%
 I soln. was equal to that of H_2O above 1° but less than that
 of H_2O below -1° . Cooling to -1.5° caused no irrever-
 sible changes. Lower temps. must have caused permanent
 aggregation.
 I. J. Bikerman

PM

LFH

*All Sci Res Inst for Processing of
 Petrol & Gas & Production of Artificial Liquid
 Fuels (VNIIP) ?*

MARTYNOV, V. M.

SOV/81-59-19-69227

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 19, p 394 (USSR)

AUTHOR:

Martynov, V.M.

TITLE:

On the Mechanism of the Protective Action of Consistent Lubricants From Atmospheric Corrosion

PERIODICAL:

Tr. Vses. n.-i. in-t po pererabotke nefi i gaza i polucheniya iskusstv. zhdk. topliva, 1958, Nr 7, pp 414 - 433

ABSTRACT:

The theoretical principles of the mechanism of protective action of consistent lubricants (CL) from atmospheric corrosion have been considered. Starting from the idea that corrosion is mainly determined by the penetration of moisture and O₂ through a lubricant layer to the surface of the metal the author states: CL in thin layers should have a minimum moisture and air penetrability; CL should not contain components capable of dissolving in an adsorption film of moisture and increasing thereby its electric conductivity; it is desirable that protected metal and decrease its wettability by water; it is expedient to dry carefully the surfaces to be protected before application of CL

Card 1/2

SOV/81-59-19-69227

On the Mechanism of the Protective Action of Consistent Lubricants From Atmospheric Corrosion

to carry out the conservation at a relative humidity of the atmosphere below the critical point (for iron and copper $\sim 75\%$); it is desirable to apply CL to the metal in a uniform layer and to treat the surface of the metal to the highest smoothness possible. On the device developed by the author the investigation of the moisture penetrability of 5 CL's (tsiatim - 201, -221, -205, gun lubricant and technical vaseline) and of the hygroscopicity of the tsiatim-221 lubricant has been carried out. The highest moisture penetrability has tsiatim-221, the lowest -205. It has been confirmed that the penetration of water vapors through a lubricant obeys Fick's law of diffusion, and the value of penetrability increases with temperature according to the exponential law.

P. Kazhdan ✓

Card 2/2

SOV/81-59-16-58543

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 16, p 416 USSR.

AUTHORS: Martynov, V.M., Kaulina, M. M., Kochkova, R.I.

TITLE: Aging and Volume-Mechanical Properties of Consistent Lubricants

PERIODICAL: Tr. Vses. n.-i. in-t po pererabotke nefi i gaza i polucheniyu
iskusstv. zhidk. topliva, 1958, Nr 7, pp 433-448

ABSTRACT: The changes in volume-mechanical properties (effective viscosity (η), and strength limit (τ_{nr}) of the consistent lubricants (CL) tsiatim-201 and -221 have been studied. These changes were caused by the partial separation of the liquid phase and also by the oxidation of CL, which take place while storing CL in the packing material or on products. The oils were pressed out mechanically from CL. For oxidation a layer of CL with a thickness of 1 mm, applied on to a steel plate, was irradiated by a quartz lamp at $75 \pm 2^\circ\text{C}$ up to attaining the desired depth of oxidation. Samples of CL were also investigated which had been taken from machine parts after storing under actual conditions, η and τ_{nr} were determined with a rotation viscosimeter of V.P. Pavlov's type. At

Card 1/2

Aging and Volume-Mechanical Properties of Consistent Lubricants

SOV/81-59-16-58543

the elimination of up to 20% of oil the increase of η in both investigated CL is insignificant. The increase of η at the expense of the elimination of oil from CL stored under actual conditions can manifest itself in the operation of only especially precise mechanisms; τ_{hr} of CL increases in proportion to the oil elimination in a higher degree than η does. During oxidation η and τ_{hr} of CL-201 and -221 increases in the beginning (in CL-221 in the beginning, at small speed gradients η falls sharply). It has been established that τ_{hr} and η of CL practically do not change. During storing of CL-221 its η within 19 months rose 3-4.5 times and τ_{hr} 40 times. This is explained not by oxidation or separation of the oil, but by absorption of moisture from the air.

V. Kazhdan.

Card 2/2

AUTHORS: Martynov, V. M. and Kuchinskaya, N. D. SOV/65-58-10-14/15
TITLE: Diffusion of Water Vapours Through Thin Layers of Lubricating Oils (Proniknoveniye parov vody cherez tonkiye sloi konsistentnykh smazok)
PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 10, pp 64 - 69 (USSR)

ABSTRACT: The formation of polymolecular adsorption layers on metal surfaces, covered with lubricating oils, can be defined by the diffusion of water vapours through the protective oil layer. The rate of sorption and desorption is relatively high when compared to diffusion because the sorption equilibrium is established quickly and thereafter limited by diffusion. The rate of passing of moisture through the oil layer can be defined by the rate of diffusion. The authors have used Fik's equation (Ref.11) which applies to the diffusion of gases if they do not chemically interact with the material of the membrane. Water vapours are only dissolved in very minute quantities in most lubricating oils without forming new chemical compounds, therefore, Fik's equation is applicable. A modified equation is given for determining the rate of diffusion during

Card 1/3

Diffusion of Water Vapours Through Thin Layers of Lubricating Oils SOV/65-58-10-14/15

corrosion where new chemical compounds are formed. Various deficiencies of the test apparatus, used in previous experiments, are pointed out and a modified testing device is described. Experimental data on the moisture diffusion of lubricating oils at 20°C are given in the form of a graph (Fig.2). All tested lubricants showed a linear dependence between the quantity of moisture passing through the oil layer and the time. The diffusion of water vapour is practically independent on the relative moisture between 60 and 100% (Table 1) and the rate of diffusion decreases linearly (Fig.3). The influence of the thickness of the oil layer on the diffusion of the water vapour is shown in Table 2. Data in both tables indicate that the rate of diffusion varies considerably within one group of oils i.e. for Tsiatim 201 it is 1.5 times higher and for Tsiatim 205 by 25 to 30 times lower than for Tsiatim 221. Atmospheric corrosion is, therefore, reduced to a low degree when using Tsiatim 205. R. Berrer (Ref.9) showed that the gas and vapour diffusion through organic membranes depends on the temperature. The authors used his equation for characterising the water vapour diffusion through oils (Table 3 and

Card 2/3

SOV/65-58-10-14/15
Diffusion of Water Vapours Through Thin Layers of Lubricating Oils

Fig.4). They also calculated the activation energy; for Tsiatim 221 this equalled 7,750 cal/mole. There are 4 Figures, 3 Tables and 16 References: 2 English and 14 Soviet.

ASSOCIATION: VNII NP

Card 3/3

19.0200

77033
SOV/65-60-3-6/23

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)

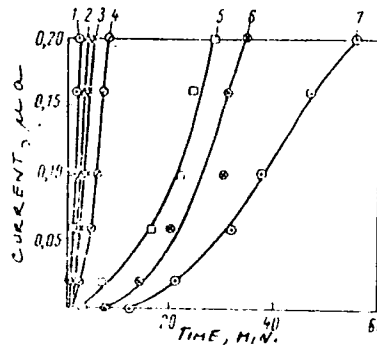
ABSTRACT: The authors studied the ability of different lubricating oils to protect a metal from corrosion by means of a microgalvanic couple. Since the corrosion current is strictly proportional to the diffusion rate of oxygen to the metal surface through the lubricant layer, on this basis it was possible 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

Card 1/5

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

Electrochemical Evaluation of the
Protective Properties of Consistent
Lubricants

77933
SOV/65-60-3-6/29

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.

Card 3/5

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)	(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

Electrochemical Evaluation of the
Protective Properties of Consistent
Lubricants

SC 77-1-1-1-1-1-1

Key to Table 1 (1) Temperature, °C; Thickness of the
lubricant layer, 0.1 mm. A solution of NaCl was applied
on top of the lubricant layer; (2) Lubricant;
Penetration ability of water vapor, g/cm²/hr;
Induction period, minutes; (3) Experimental rate calcu-
lated; (4) Test temperature; (5) Test time, hours;
(10) Technical name.

Card 5/5

MARTYNOV, V.M.

PIM-2 device for determining the evaporability of lubricants.
Nefteper. i neftekhim. no.8:40-43 '63. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke
nefti i gaza.

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

Determination of the saturated vapor pressure of lubricants.
Khim. i tekhn. topl. i masel 8 no.12:62-65 D '63. (MIRA 17:1)

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

MARTYNOV, V.M.

Determining the moisture content of lubricants. Nefteper. i
neftekhim. no.5:25-27 '64. (MIRA 17:8)

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

MARTYNOV, V.M.; MOLOZOVA, H.V.

Determining the chemical stability of lubricants from the rate of oxygen absorption. Paper presented at the 1st International Conference on the Chemistry of Lubricants, Moscow, 1974.

1. Vsesoyuznyy nauchno-issledovaniy institut po pererabotke nefti i gaza i,oucheniya i spetsializirovannogo ucheniya po teorii i praktiki.

L 43117-65 EWT(m)/EPF(e)/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 neftekhmiya, 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,

Card 1/1

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: VMI NF

SUBMITTED: 00

ENCL: 02

SUB CODE: FP

NO REF SOV: 003

OTHER: 002

Card 2/4

MARTYNOV, V.M.; MOROZOVA, M.V.; KUCHINSKAYA, N.D.

Bedying grease in case of absorption of water vapors. *Nefteper. i
neftekhim.* no.1:26-28 '65. (MIRA 18'6)

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

1 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

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

32
31
B

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 cm² of grease coating. The test duration varied from 1 to 15 days. An empirical equation is proposed

$$m = m_1 e^{-B/R \left(\frac{1}{T} - \frac{1}{T_0} \right)} \sqrt{\frac{T}{T_0}}$$

Card 1/2

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, GG

NO REF SOV: 008

OTHER: 006

App
Card 2/2

L 13049-56 EWT(m)/T DJ

ACC NR: AP5027589

SOURCE CODE: UR/0065/65/000/011/0046/0050

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

58
B

ORG: VNII NP

TITLE: Thermal stability of lubricants 1174

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 11, 1965, 46-50

TOPIC TAGS: thermal stability, lubricant property, oxidation kinetics

ABSTRACT: The thermal stability of lubricants can be determined from the rate of absorption of oxygen, or, if the substance does not react with oxygen, from the increase in the vapor pressure over the lubricant at constant temperature. A device based on these principles and equipped with a differential manometer was used to determine the thermal stability (in the presence and absence of oxygen) of the following lubricants: PMS-20, PMS-100, didecyl benzylsuccinate, VNII NP-278, thiodivaleric ester, TsiATIM-201, and AMG-10. The decomposition or oxidation rate of the lubricants was found to vary exponentially with the temperature. The temperature at which a lubricant can be used is determined by the magnitude of the activation energy of the decomposition or oxidation, the service time, and the amount of the lubricant. It is shown that the curves of the decomposition (or oxidation) kinetics at low temperatures can be plotted from data obtained at higher temperatures. Orig. art. has: 5 figures, 1 table, and 3 formulas.

SUB CODE: 07 / SUBM DATE: none / ORIG REF: 004 / OTH REF: 001

Card 1/1 HW

UDC:621.892:530.096

2

L 29707-66 EWT(m)/T DJ
ACC NR: AP6015114 (A)

SOURCE CODE: UR/0065/66/000/005/0023/0026

AUTHOR: Martynov, V. M.

34
B

ORG: VNIINP

TITLE: Kinetics of isothermal evaporation of lubricating materials from thin layers under static conditions //³

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1966, 23-26

TOPIC TAGS: evaporation, lubricant, vapor pressure

ABSTRACT: The paper presents a derivation and experimental verification of the kinetics of isothermal evaporation of multicomponent lubricating systems from a thin layer under static conditions. It is postulated that Raoult's law applies to lubricating materials, i.e., that the partial vapor pressure of a component is proportional to its concentration in the condensed phase. It is also assumed that the evaporation of each component occurs independently of the presence of the other components. The derived equations describe the kinetics of isothermal evaporation from a thin layer and may be used in evaluating the amount of oil evaporated during any

Card 1/2

UDC: 665.521.5 : 620.181.5

L 29707-66

ACC NR: AP6015114

interval of time at constant temperature at a given velocity of the air flow. Orig.
art. has: 2 figures and 9 formulas.

SUB CODE: 11,07/ SUBM DATE: 00/ ORIG REF: 012/ OTH REF: 000

Card 2/2 CC

1. MARTYNOV, V. M.: KRYLOV, A. V., Prof.
2. USSR (600)
4. Field Crops
7. Best varieties of cereal and oil plants and perennial grasses for irrigation farming. Dost. sel'khoz. No. 4, 1952.

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

1. KRYLOV, A. V. and MARTYNOV, V. M. Profs.
2. USSR (60)
4. Afforestation
7. Grassland agriculture; lecture 6 in series designed to help those taking courses for raising qualifications of collective farm foresters. Les 1 step' 4 no. 12, 1962.

9. Monthly List of Russian Accessions, Library of Congress, March 1963, Unclassified.

1. MARTYNOV, V. M.
2. USSR (600)
4. Wheat
7. Preparatory crops for winter and spring wheat, Sov. agron., 11, No. 2, 1953.

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

MARINICH, P.Ye., redaktor; USHAKOVA, Ye.I., akademik, redaktor; BAGRAMOV, G.G., redaktor; YEVDOKIMOV, M.M., redaktor; MARTYNOV, V.M., redaktor; BUDYUK, V.P., redaktor; GUREVICH, M.M., tekhnicheskiy redaktor

[Methods of state testing of varieties of farm crops; vegetables, melons and squash, potatoes, and fodder root crops] Metodika gosudarstvennogo sortoispytaniia sel'skokhoziaistvennykh kul'tur; ovoshchnye, bakhchevye kul'tury, kartofel' i kormovye korneplody. Pod red. P.E.Marinicha i dr. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 260 p. (MLRA 9:9)

(Plants, Cultivated)

MARTYNOV, V.M., kandidat sel'skokhozyaystvennykh nauk.

Heading of wheat in recently reclaimed lands. Priroda 45 no.7:126
Jl '56. (MIRA 9:9)

1. Gosudarstvennaya komissiya po sortoispytaniyu sel'skokhozyaystven-
nykh kul'tur, Moskva.
(Wheat)

MARTYNOV, V.M., kandidat sel'skokhozyaystvennykh nauk.

Harvesting of spring wheat in the eastern regions. Priroda 45 no.8:
124-125 Ag '56. (MIRA 9:9)

1. Goskomissiya po sorteispytaniyam, Moskva.
(Siberia--Wheat)

MARTYNOV, V.M., kandidat sel'skokhozyaystvennykh nauk.

Cessation of fall growing of winter wheat. Priroda 45 no.11:124
N '56. (MLRA 9:11)

1. Gosudarstvennaya komissiya po sortoispytaniyu sel'skokhozyay-
stvennykh kul'tur, Moskva.
(Wheat)

Country : USSR
CATEGORY :
ABR. JOUR. : RZBiol., No. 19, 1950, No. 86978
AUTHOR : Martynov, V. M.
INST. :
TITLE : Testing Varieties of winter wheat Following
a Catch Crop in the Non-Chernozem Zone
ORIG. PUB. : Inform. byul. Gos. kouds. po sortoispyt.
s.-kh. kultura pri k-ve s.kh. SSSR, 1957,
№ 12207 : Growing of catch crops is possible in the
non-chernozem zone on utilization of early varieties of
such crops. Fertilizers must be applied prior to their
planting. Yield of winter wheat following catch crop is
somewhat lower than following plowed fallow, but in 1000
units the grain harvest exceeds that following the latter.
Usually the following catch crops are used: vetch-oats
mixture, early potatoes in suburban areas, peas, corn for
green forage or early silage. Clover gives unsatisfactory
results. -- n. I. Kazachek.

DATE: //

BOYEV, Nikolay Dmitriyevich; BUDYUK, Vasilii Poltonovich; MARTYNOV,--
Valentin Mikhaylovich, kand.sel'skokhoz.nauk; PLESHKOV, B.I.,
red.; ~~FEDOTOVA, I.P.~~, tekhn.red.

[Growing oilseed plants in the Trans-Ural region, Siberia
and Kazakhstan] Vozdelyvenie maslichnykh kul'tur v Zaural'e,
Sibiri i Kazahstane. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1959. 162 p. (MIRA 12:10)
(Siberia--Oilseed plants) (Kazakhstan--Oilseed plants)

1. MARTYNOV, V. N.
2. USSR (600)
4. Blood - Corpuscles and Platelets
7. Age changes in the reticulocytes in the peripheral blood of karakul lambs. Soob. TFAN SSSR no. 30, 1951.

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

MARTYNOV, V. N.

"Experimental Investigation of the Process of Stripping in Roll Mills. Thesis for degree of Candi. Technical Sci. Sum of Jan 50, Central Sci Re. Inst of Technology and Machine Bldg.

Summary 21, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

MARTYNOV, V.N., kandidat tekhnicheskikh nauk; UNKSOV, Ye.P., kandidat tekhnicheskikh nauk, redakter; POPOVA, S.M., tekhnicheskii redakter.

[Investigating roll press forging processes] Issledovaniia protsessa shtampovki v val'tsakh. Pod red. E.P. Unksova. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroitel'noi lit-ry, 1952. 53 p. (Moscow. Tsentral'nyi nauchno-issledovatel'skii institut tekhnologii i mashinostroeniia. Nauchno-tekhnicheskaiia informatsiia, no.10). (MLRA 9:7)
(Forging)

ARISTOV, V.M., kandidat tekhnicheskikh nauk; MARTYNOV, V.N., kandidat tekhnicheskikh nauk.

Producing automobile and tractor forgings with forging rollers. Avt.trakt.
prom.no.5:20-24 My '53. (MLBA 6:5)

1. Central Scientific Research Institute of Machine Building.
(Automobiles--Apparatus and supplies) (Forging)

MARTYNOV, V.N

MAIN BOOK EXPLANATION 807/5559

Abdalya nauk SSSR. Institut metallurgii. Nauchny sovety po probleme zharychey metallov

Issledovaniya po zharychym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Etkov; Tech. Ed.: I.P. Kus'min; Editorial Board: I.P. Bardin, Academician, G.V. Kuznetsov, Academician, N.V. Agayev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Gding, I.M. Pavlov, and I.P. Sedin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

CONTENTS: This book, consisting of a number of papers, deals with the properties of heat-resisting steels and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of steels. The effects of various elements such as Cr, Ni, and V on the heat-resisting properties of various alloys are studied. Deformability and workability of certain steels as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electroporesis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds between atoms in metal. Tests of rupture and compressor blades are described. No preambles are included. Reference accompany most of the articles.

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PLANS I BOOK REPERTOIRE 807/1586
Technologically approach to books i. ob'yaznoy obrabotki (Handbook on Open and Closed Die Forging) Moscow, Mashgiz, 1959. 966 p. 15,000 copies printed.

M. (Title page); M.V. Storchov; Ed. (Inside book); S.B. Evtushov, Engineer; Ed. of Publishing House; S.M. Gliner, Engineer; Tech. Ed.: T. P. Sobolova; Managing Ed. for Information Literature (Mashgiz): V.I. Erylov, Engineer.

NOTES: The handbook is intended for engineers and technicians working in forging and die forging shops and in engineering design bureaus. It may also be used by teachers and students of technical schools.

CONTENTS: The handbook contains information on processes of forging and die forging and on methods of preparing dies for forging. Information is given on the technology of forging, the properties of forgings and their heat treatment, and on engineering characteristics of basic machinery and engineering equipment, on die making and on technical-economic indexes and engineering standardization. The authors state that problems of manufacture by forging and press forming which have only been discussed up to now in periodicals and special publications are discussed in greater detail in the handbook. To provide the reader with a more complete picture of the subject, all items

Making forgings by the combination process
Making group II forgings
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C. XIV. Working on Special Purpose Machines

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Force required for forge rolling
Processing by heading (in dies) (A.S. Bryubakov, Candidate of Technical Sciences) 699

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S/182/60/000/001/004/008

A161/A029

26.2122
AUTHORS: Bagatov, B.N.; Martynov, V.N.; Povarov, V.S.

TITLE: Progressive Trends in Production of Forgings for Steam and Gas Turbine Blades

PERIODICAL: Kuznechno-shtampovochnoye proizvodstvo, 1960, No. 1, pp. 17 - 19

TEXT: Brief general information is given on new precision forging methods for turbine and compressor blades. TsNIITMASH has developed a new technology consisting in extrusion and rolling operations, and straightening combined with heat treatment. The first experimental blades for the 7th stage of PT-600-6 (GT-600-6) turbine and 14th and 16th stages of BK-50-1 (VK-50-1) are shown (Figs. 1 and 2) in shaping stages beginning with cylindrical billet and ending with ready forged blade. For comparison, the forging equipment used in industry at the time being, and suggested by LF VPTI on Leningradskiy filial VPTI tyazhelogo mashinostroyeniya (Leningrad Branch of VPTI of Heavy Machine Building) and by TsNIITMASH is listed in tables (Table 1 and 2). All methods give the same 2 - 3 mm machining allowance, but the new method requires simpler equipment and less power. The TsNIITMASH version (right in Table 1) takes a specialized 1,000-ton hydraulic press for ex-

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Progressive Trends in Production of Forgings for Steam and Gas Turbine Blades

trusion; specialized 315-ton forging rolls for rolling, and a special 2,000-ton press for straightening-sizing. The general trend is organization of specialized production centers. Organisational suggestions have been made also by NIAT. TsNIITMASH has suggested five plan versions for line production of blade forgings for stationary steam and gas turbines. All systems either eliminate milling or require only little of it, raise the metal utilization coefficient from 0.2 to 0.5, and cut the work and costs from 35 to 50% compared to the present production practice. An approximate equipment layout is shown (Fig 3) for production of turbine and compressor blades with constant as well as varying cross section area and without reinforcement of the work portion. A hot-rolled round bar is straightened in machine "1", passes to a centerless stripping machine "2" for removing surface defects, then it is heated, and cut into blanks in a special die in a crank press, "3", then the blanks are heated without formation of scale to the temperature of the upper deformation interval, lubricated, flattened and extruded in a special press, "4", in single heating, cleaned after cooling in the installation "5", they pass into inspection and go on into the heating furnace "6" with protective atmosphere, pass into special forging rolls "7" and from

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Progressive Trends in Production of Forgings for Steam and Gas Turbine Blades

there into the first die groove, then into the second die. Here the blade is deformed to the final size, and twisted in the output if necessary. Rolled forgings are cleaned, pass inspection, and go into heat treatment on the furnaces "8" and "9", and into the straightening press "10". This process has been tested in experiments at TsNIITMASH, and no deterioration of metal structure has been observed. The blade material is mentioned to be 2X13 (2Kh13) steel. Foreign practice in production of turbine blades is also briefly outlined, and reference is made to a German article (Ref. 2). There are 3 figures, 2 tables and 2 references: 1 Soviet and 1 German.

Card 3/3

MARTYNOV, V N

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PHASE I BOOK EXPLOITATION

SOV/5799

Unkov, Ye.P., Doctor of Technical Sciences, Professor, Ed.

Sovremennoye sostoyaniye kuznechno-shtampovogo proizvodstva (Present State of the Pressworking of Metals) [Moscow] Mashgiz, 1961. 434 p. 5000 copies printed.

Ed. of Publishing House: A.I. Sirotin; Tech. Ed.: B.I. Model'; Managing Ed. for Literature on the Hot Working of Metals: S.Ya. Golovin, Engineer.

Title: Kuznechno-shtampovoye proizvodstvo v SSSR (The Pressworking of Metals in the USSR) by: A.V. Altykis, D.I. Berezhkovskiy, V.F. Volkovitskiy, I.I. Girsh (deceased), L.D. Gol'man, S.P. Granovskiy, N.S. Dobrinskiy, A.I. Zimin, S. L. Zlotnikov, A.I. Kagalovskiy, P.V. Lobachev, V.N. Martynov, Ye.N. Moshnin, G.A. Navrotsky, Ya.M. Okhrimenko, G.N. Rovinskiy, Ye.A. Stozha, Yu.L. Rozhdestvenskiy, N.V. Tikhomirov, Ye.P. Unkov, V.F. Shcheglov, and L.A. Shofman, Eds: Ye.P. Unkov, Doctor of Technical Sciences, Professor, and B.V. Rozanov.

Title: Kuznechno-shtampovoye proizvodstvo v ChSSR (The Pressworking of Metals in the Czechoslovak SR) by: S. Burda, F. Brazdil, F. Drastik, F. Zlatohlavok

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