

S/081/62/000/001/039/067
B168/B101

AUTHORS: Kuznetsov, G. G., Zhuk, N. P., Lyubinskiy, B. E.

TITLE: Electrolytic pickling of high alloys

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 1, 1962, 343, abstract
1K129 (Sb. "Korroziya i zashchita konstrukts. metallich.
materialov", M., Mashgiz, 1961, 53-71)

TEXT: Electrolytic pickling - anodic, cathodic, a.c. and a.c. with
bipolar connection of specimens - was studied with a view to removing
the cinder from alloy EI435 (EI435) in solutions of H_2SO_4 . The
influence of H_2SO_4 concentration, of electrolyte temperature and of D on
the rate of this process, on the weight losses of the metal and on the
surface quality of the samples after corrosion was also studied.
[Abstracter's note: Complete translation.]

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S/133/62/000/009/006/009
A054/A127

AUTHOR: Lyubinskiy, B.E.

TITLE: The effect of small additions on the technological and mechanical properties of 3M607 (EI607) type alloys

PERIODICAL: Stal', no. 9, 1962, 846. - 848

TEXT: Tests on a laboratory and industrial scale were carried out to establish the effect of adding small amounts of calcium, boron and barium on the ductility and other properties of alloys containing nickel and chromium. The test alloys were smelted in a 150-kg induction type, furnace with basic lining on a fresh charge. Two heats (II, III) were smelted with the addition of 0.01, 0.005% B, one heat (IV) with 0.01% B and 0.1% Ca, one heat (V) with 0.01% B and 0.1% Ba, while two heats only with the addition of 0.1 and 0.2% Ca, (VI, VII). The test heats showed a higher ductility than the check heat without any of these additives. The highest notch toughness was observed for heats with Ca-addition, whereas the notch toughness of heats containing boron and boron + barium decreased upon raising the temperature to 1,150 - 1,200°C. Metallographic tests showed that the addition of calcium and boron promoted the formation of high-melting and stable compounds at

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the grain boundary, thus increasing the strength of the metal. It was also proved that the addition of B, Ca and Ba, while increasing the ductility of the alloy, did not affect its gas content as had been assumed by some authors. Out of seven test heats only one (III, containing 0.005% B) showed a lower oxygen and hydrogen content (by a factor of 1.5) than in heat I (without any additives). The test steels were also subjected to long holding times under the conventional operating temperatures of 650 and 700°C. For heats, I, V and VI the following parameters were obtained after gradual heat treatment and 20 hours' holding time at 750°C and without holding time at the last stage of the treatment at 650°C

Heat	t°C	σ_s kg/mm ²	σ_b kg/mm ²	δ %	ψ %
I	650	51.8	76.2	17.6	21.3
	700	51.4	69.4	11.8	14.0
V	650	51.5	80.3	23.6	39.9
	700	52.8	75.1	30.4	45.6
VI	650	45.8	73.8	25.6	25.7

The stability of properties and structure was tested by aging test heat samples

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at 700°C during periods varying between 48 and 3,000 hours. The hardness of metals containing the test additives deviated from that of the check sample by 20 H_B for holding times shorter than 500 hours, while above this holding time by not more than 10 - 15 H_B. It was therefore concluded that small additions of B, Ca and Ba increased the ductility of nickel-chrome alloys, while their strength characteristics and the stability of their mechanical properties did not change when held for a long time at 650 - 700°C. There is 1 figure.

ASSOCIATION: Zavod "Elektrostal'" ("Elektrostal'" Plant)

Card 3/3

LYUBINSKIY, B.E.

Effect of small additions on the technological and mechanical properties of EI607-type alloys. Stal' 22 no.9:846-848 S '62. (MIRA 15:11)

1. Zavod "Elektrostal'."
(Nickel-chromium alloys—Metallurgy)

LYUBINSKIY, G.M.

LAZAREV, A.A.; TROITSKIY, I.F.; BOLTINSKIY, V.N. professor, retsenezent;
LYUBINSKIY, G.M., inzhener, retsenezent; PESTRYAKOV, A.I., inzhener
redaktor; BROKSH, inzhener, redaktor; POPOVA, S.M., tekhnicheskii
redaktor.

[The KDM-46 engine] Dvigatel' KDM-46. Izd.2-e dop. i ispr. Moskva,
Gos.nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1955. 319 p.
(Tractors--Engines) (MLRA 8:10)

23962

S/103/61/022/007/008/008
D252/D302

9,8300

AUTHORS: Lyubinskiy, I.A., Milyutina, V.A. and Pozin, N.V.
(Moscow)

TITLE: Pulse-frequency telemetering transmitter

PERIODICAL: Avtomatika i telemekhanika, v. 22, no. 7, 1961,
934-938

TEXT: The pulse-frequency telemetering device ChTI-1 is designed for measuring small d.c. voltages. It produces rectangular pulses of duty ratio 2, which are proportional to the measured voltage. Noiseproof telemetering channels require a narrowing of the frequency range; hence the frequency range of the pulse produced by the device was chosen from 5 to 15 cycles. The device uses transistors.

Fig. 1 shows a block-diagram of the device: low-frequency filter 1, d.c. amplifier 2 which contains a modulator-converter of d.c. into a.c., an a.c. amplifier and a rectifier, pulse-generator 3, and unit 4 for retransforming frequency into voltage. The transmission factor for the closed system is approximately $1/\beta$ for large values of

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$k\beta$ (k being the transmission factor of the direct channel, and of the feedback channel). The placing of the filter in the direct channel permits (due to the absence of lag elements in the feedback channel) considerably simplifying the amplifier circuit by excluding the phase-sensitive stage. For comparison, the expressions for the transfer function are given: a) filter in direct channel

$$k'(p) = \frac{k_1(p)k_2k_3}{1 + k_1(p)k_2k_3\beta} = k_2k_3 \frac{1}{ap^2 + bp + c + k_2k_3\beta} ;$$

b) filter in feedback channel

$$k''(p) = \frac{k_2k_3}{1 + k_1(p)k_2k_3\beta} = k_2k_3 \left(1 - \frac{k_2k_3}{ap^2 + bp + c + k_2k_3\beta} \right) .$$

here $k_1(p) = \frac{1}{ap^2 + bp + c}$ is the transfer function of the RC-filter, k_2 - the amplification factor of the amplifier, k_3 - the voltage-into-frequency transformation factor. The transient functions for a) and b) are respectively

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$$h'(t) = \frac{k_2 k_3}{c + k_2 k_3 \beta} \left(1 - \frac{p_1 e^{-p_2 t} - p_2 e^{-p_1 t}}{p_1 - p_2} \right)$$

$$h''(t) = k_2 k_3 \left(\frac{c}{c + k_2 k_3 \beta} + \frac{p_1 e^{-p_2 t} - p_2 e^{-p_1 t}}{p_1 - p_2} \right)$$

where p_1 and p_2 are the roots of $ap^2 + bp + c + k_2 k_3 \beta = 0$. From the relationships for a two-link RC-filter it follows that for stable operation of the circuit it is necessary that the time-constant of the first link should be much larger than that of the second link. The device incorporates a torque-balance technique. One of the advantages of the chosen circuit is the possibility of considerably increasing the input resistance of the device, and that is due to the compensation of the input signal by the feedback voltage, in the circuit of the measured voltage. A new type of magnetic modulator M (with transverse excitation) is used. Its transmission factor is approximately 0.8 - 0.9 and does not depend on the voltage and frequency variations of the supply source and on the temperature

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of the surroundings over a wide range. The modulator is practically inertia-free. The a.c. amplifier consists of triodes of type P13B and P14 (triodes P₁, P₂, P₃, P₄) P₅ is a blocking generator. The device was laboratory-tested, and has the following main characteristics: pickup-voltage range: 25 milliv., input resistance of the order of 50 k Ω , stabilization time of frequency: 0.5 sec, size: 255 x 215 x 140 mm. Owing to the new type of magnetic modulator, the design was considerably simplified compared with previous devices (ChIS-D-1 or ChIC-D-2). The high-ohmic input results in greatly increased sensitivity (10^{-8} v) as stated in A.M. Pshenichnikov (Ref. 4: Statischeckoye peredayushchee ustroystvo chastotno-impuls'noy sistemy telemekhaniki, Avtomatika i telemekhanika, v. 18, no. 5, 1957). The device can be used for transmitting readings from a wide variety of d.c. pickups with small output strength, including thermoelement pickups, and pickups with bridge circuits, e.g. gas-analyzers for telemetering the methane concentration in mines. There are 4 figures and 4 Soviet-bloc references.

SUBMITTED: December 29, 1960

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D252/D302

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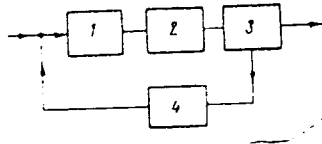


Рис. 1

Fig. 1

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L 8800-66 EEC(k)-2

ACC NR: AP5026957

SOURCE CODE: UR/0103/65/026/010/1746/1756

AUTHOR: Lyubinskyy, I. A. (Moscow); Pozin, N. V. (Moscow)

47
42
D

ORG: none

TITLE: Simulation of the information-handling processes which take place in a neuron.
I. Mathematical model and physical simulation of the impulse generation process

SOURCE: Avtomatika i telemekhanika, v. 26, no. 10, 1965, 1746-1756

TOPIC TAGS: bionics, neuron, electrophysiology, information theory, circuit theory

ABSTRACT: The authors study the properties of the neuron and formulate the principles of action for an analog having properties which are important from the standpoint of informational transformations. Introductory comments are given on the physiology of the neuron. An equation is derived for determining the moment of generation of the output impulse of the neuron. Conditions for neuron rhythm conversion are determined and the relationship between the output frequency and depolarization current is calculated. The basic properties and parameters of the neuron model are given together with an explanatory block diagram. Analysis of the equivalent circuit of the neuron is used as a basis

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UDC 62-506.2.001.57

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ACC NR: AP5026957

5
for design of the physical model of the impulse generating unit. The wiring diagram of this unit, based on a squegging oscillator, is given. The electrophysiological study and discussion of the properties of the neuron and its analog were carried out in association with physiologists of the Institute of Biophysics, AN SSSR (Institut biofiziki AN SSSR), Yu. I. Arshavskiy, M. B. Berkinblit, S. A. Kovalev and L. M. Chayiakhyan. The authors are deeply grateful for their help. Orig. art. has: 8 figures and 14 formulas.

SUB CODE: 09, 06, / SUBM DATE: 04Nov64 / ORIG REF: 01 / OTH REF: 007

jw

Card 2/2

ИТИН, В.А., доктор техн. наук, КФНТИ, г. Ленинград, Ул. Н. Н. Вавилова, 24, кв. 10,
техн. парк

Frequency meter using photoelectric method. Patent application no. 0813-14, 1955. (1955)

L 56535-65

ACCESSION NR: AP5016772

UR/0286/65/000/010/0086/0087
681.14

AUTHOR: Pozin, N. V.; Lyubinskiy, I. A.

TITLE: A model of a neuron. Class 42, No. 171179

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 86-87

TOPIC TAGS: bionics, neuron, electronic simulation

ABSTRACT: This Author's Certificate introduces: 1. A model of a neuron which contains input circuits and a generator unit in the form of a retarded blocking generator. Provision is made for simulating the mutual effect of processes in the dendrites and in the body of the neuron by using a storage circuit (e.g. using RC elements) at each of the inputs. 2. A modification of this model in which the output pulse frequency is proportional to the product of the frequency of the input signals. The storage circuit for each of the inputs is connected to the following input through a limiter, e.g. a diode, which limits the amplitude of the pulses fed to this input by a value which is equal to the voltage across the storage circuit. The storage circuit for the last input is connected to the control input of the generator unit. 3. A modification of this model which has two inputs. The average

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L 56535-65

ACCESSION NR: AP501672

frequency of the output pulses is proportional to the frequencies of the input signals when there is no time summation. Storage circuits with various discharge times are connected through a sum circuit to the control input of the generator unit. The cutoff threshold of the generator unit is taken higher than the greatest amplitude of the input pulses.

ASSOCIATION: none

SUBMITTED: 20May64

ENCL: 00

SUB CODE: LS, EC

NO REF SOV: 000

OTHER: 000

282
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L 14069-66

ACC NR: AP6002405 (A) SOURCE CODE: UR/0103/65/026/012/2221/2229

AUTHOR: Lyubinskiy, I. A. (Moscow); Pozin, N. V. (Moscow)

ORG: None

TITLE: Modeling of information transfer processes in a neuron. Part 2. Design principles of a neuron model which executes the simplest mathematical operations

SOURCE: Avtomatika i telemekhanika, v. 26, no. 12, 1965, 2221-2229

TOPIC TAGS: dendrite, neuron, anatomic model

ABSTRACT: The authors discuss current concepts on the role of dendrites in the operation of a neuron. It is stressed that taking into account the interaction of incoming signals in dendrites makes it possible to assume the existence in a neuron of the capability of fulfilling a broad range of operations with respect to the input signals. Line diagrams of different variations of a neuron model are presented. The model contains one active element, a semiconductor triode. It is demonstrated that the model can execute the operations of addition, subtraction, multiplication, and "subtraction with weight" of the frequencies of incoming pulse sequences in pulsed and analog modes

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UDC: 62-506.2.001.57

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ACC NR: AP6002405

of operation. It is pointed out that the properties of a live neuron which determine its role in the function of a nervous system are considerably more extensive than the properties now being simulated. In addition to the capability of a neuron for learning, it has, apparently, the capability for adaptation and spontaneous generation of pulses. Another article will be devoted to this subject. Orig. art. has: 8 figures and 14 formulas.

SUB CODE: 06, 09/ SUBM DATE: 05Mar65/ ORIG REF: 003/ OTH REF: 006

PC
Card 2/2

MODILEVSKIY, Ya.S.; LYUBINS'KIY, H.A.

Physiological causes of adventitious root formation. Bot. zhur. [Ukr.]
9 no.2:17-31 '52. (MLRA 6:11)

1. Institut botaniki Akademii nauk Ukraini'koi SSR, Viddil fiziologii.
(Roots (Botany))

LEBEDEV, S.I.; LYUBINSKIY, N.A., kandidat biologicheskikh nauk, otvetstvennyy redaktor; GRUDZINSKAYA, O.S., redaktor; SIVACHENKO, Ye.K., tekhnicheskiiy redaktor.

[Physiological role of carotene in plants] Fiziologicheskaya rol' karotina v rastenii. Kiev, Izd-vo Akademii nauk Ukrainskoi SSR, 1953.
158 p. [Microfilm] (MIRA 8:2)
(Carotene) (Botany--Physiology)

LYUBINS' KYY, M.A.

Problem of metabolism in the growing parts of plants. Bot.zhur.[Ukr.] 10
no.2:94-100 '53. (MLRA 6:6)

1. Instytut botaniky AN URSR. Viddil fiziologiyi roslyn.
(Plants - Metabolism)

LYUBINS'KIY, P.A.

Brotherly relations of Ukrainian and Russian scientists in the
development of Soviet plant physiology. Bot.zhur.[Ukr] 11 no.3:
5-11 '54. (MLRA 8:7)
(Botany--Physiology)

LIUBINSKIY, N. A.

USSR/Plant Physiology - Growth and Development.

I-5

Abs Jour : Ref Zhur - Biol., No 5, 1958, 20000

Author : Liubinsky, N.A., Okanenکو, A.S.

Inst :

Title : A Summary of the Discussion on Phytohormones.

Orig Pub : Ukr: botanichnii zh., 1956, No 4, 13, 83-104.

Abstract : In a survey article N.A. Liubinsky and A.S. Okanenکو summarised the discussion on phytohormones which was carried on in pages of the Ukrainian Botanical Journal in the period 1952-1955. The majority of the participants in the discussion condemned the negative approach to the problem of phytohormones. A detailed evaluation of their role as regulators of growth and other life processes in plants was given, and paths for further study of natural and synthetic growth agents were indicated. Vlasuk P.A., Porutsky G.V., Chailakhian M.Kh., Matskov F. and Gupalo P.I. pointed out in letters to the editor

Card 1/2

LYUBINSKIY, Nikolay Arkhipovich; OKSIYUK, P.F., doktor biologicheskikh nauk, otvetstvennyy redaktor; GRUDZINSKAYA, O.S., redaktor izdatel'stva; ROZENTSVEYG, Ye.N., tekhnicheskiy redaktor

[Physiological principles of the vegetative propagation of plants]
Fiziologicheskie osnovy vegetativnogo razmnozheniia rastenii.
Kiev, Izd-vo Akad. nauk USSR, 1957. 222 p. (MLRA 10:6)
(Plant propagation)

LYUBINSKIY, M. A.

USSR/General Problems. Methodology. History. Scientific Institutions and Conferences. Teaching. Problems of Bibliography and Scientific Documentation. A

Abs Jour : Ref Zhur-Khimiya, No 5, 1958, 16687

Author : Lyubinskiy M. A., Okanenko A. S.

Inst : Not given

Title : Development of the Physiology and Biochemistry of Plants in the Ukraine in Forty Years (1917-1957).

Orig Pub : Ukr. botanichniy zh., 1957, 14, No 3, 42-52

Abstract : No abstract

Card 1/1

LYUBINSKIY, N.A. [Liubins'kiy, N.A.]; PORUTSKIY, G.V. [Poruts'kiy, G.V.]

G.Kh.Molotkovskii; on his 6th birthday. Ukr.oot.zhur.
16 no.4:102-105 '59. (MIR. L:11)
(Molotkovskii, Georgii Khrisanfovich, 1900)

LYUBINSKIY, N.A. [Liubyns'kyi, M.A.]

Charles Darwin's contribution to plant physiology. Ukr.bot.zhur.
16 no.5:28-40 '59. ~~1959~~ (MIRA 13:4)
(Plant physiology)
(Darwin, Charles Robert, 1809-1882)

MOLOTKOVSKIY, Georgiy Khrisanfovich; LYUBINSKIY, N.A., doktor biolog.
nauk, otv.red.; POLUBICHKO, B.V., red.; MALYAVKO, A.V.,
tekhn.red.

[Polarity in plant development] Poliarnost' razvitiia rastenii.
L'vov, Izd-vo L'vovskogo univ., 1961. 261 p.

(MIRA 15:5)

(Polarity (Botany))

LYUBINSKIY, N.A. [Liubyns'kyi, M.A.]

M.V.Lomonosov's scientific contribution to botany; on the 250th anniversary of his birth. Ukr.bot.zhur. 18 no.6:102-110 '61.
(MIRA 15:3)
(Lomonosov, Mikhail Vasil'evich, 1711-1765)

DAM'YE, N.G., kand. med. nauk; LYUBOSHITS, N.A.

Fractures of the pelvic bones in children. Vest. khir. no.10:
102-106 '64. (MIRA 19:1

1. Iz Tsentral'nogo instituta travmatologii i ortopedii (dir. -
prof. M.V. Volkov) i travmatologicheskogo otdeleniya (zav. - kand.
med. nauk N.G. Dam'ye) Moskovskoy gorodskoy detskoy bol'nitsy No.20
imeni Timiryazeva.

LYUBINSKIY, N.I.; SHIRYAYEV, I.N.; KNIZHNIKOV, M.G.; GLADYSHEV, S.S.; KIVER,
V.F.; SPARIN, V.I., agronom

Use advanced cultivation practices for sunflowers. Zemledelie 27
no.4:47-51 Ap '65. (MIRA 18:4)

1. Orenburgskaya oblastnaya sel'skokhozyaystvennaya opyt'naya stantsiya (for Lyubinskiy).
2. Predsedatel' kolkhoza imeni Kirova, Oktyabr'skogo rayona, Orenburgskoy oblasti (for Shiryayev).
3. Predsedatel' kolkhoza "Pamyat' Il'icha" Dinskogo rayona, Krasnodarskogo kraya (for Knizhnikov).
4. Glavnyy agronom kolkhoza "Pamyat' Il'icha", Dinskogo rayona, Krasnodarskogo kraya (for Gladyshev).
5. Starshiy agronom Pologskogo proizvodstvennogo upravleniya, Zaporozhskoy oblasti (for Kiver).

BARON, S.G.; GREBENNIKOV, V.V.; LYUBINSKIY, N.M.; TSEYTLIN, G.D.;
BARONOV, A.Ya., red.

[Easing the start of engines in winter] Oblegchenie puska
dvigatelei v zimnee vremia. Moskva, Nauchno-tekhn. izd-
vo M-va avtomobil'nogo transporta i shosseinykh dorog
RSFSR, 1963. 70 p. (MIRA 17:10)

BARON, S.G.; GREGOROV, Y.V.; LEVIN, N.A.; LOKVA, G.A.;
BARONOV, A.Ya., red.

[Easing the start of engines in winter] Uspokoyeniye puzha
dvigatelei v zimnee vremya. Moskva, Mashina-tekhn. izd-
vo M-va avtomobil'nogo transporta i inzheneriya SSSR
RSFSR, 1963. 70 p. (S11117:10)

LYUBINSKIY, N.M.

KHANIN, N.S., kandidat tekhnicheskikh nauk; LYUBINSKIY, N.M., inzhener, retsenzent; BUDNIKOV, V.A., inzhener, redaktor.

[IaAZ-204 and IaAZ-206 engines; building, principles of operation, and repair] Dvigateli IaAZ-204 i IaAZ-206; ustroistvo, osobennosti ekspluatatsii i remonta. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. i sudostroit. lit-ry, 1954. 262 p. (MLRA 7:6)
(Automobiles--Engines)

BRONSHTEYN, L.A., dotsent; AFANAS'YEV, L.L., dotsent, BASH, M.S., dotsent;
VLASKO, Yu.M., inzh.; ZEMSKOV, P.F., inzh.; KRAMARENKO, G.V.,
dotsent; LEYDERMAN, S.R., dotsent; LIV'YANT Ya.A., ispoln.obyazan-
nosti dotsenta; LYUBINSKIY, N.M., inzh.; MAYDENOV, B.F., inzh.;
FINKEL'SHTEYN, A.L., inzh.; KHROMOV, A.A., inzh.; CHUDINOV, A.A.,
inzh.; GOBERMAN, I.M., red.; GALAKTIONOVA, Ye.N., tekhn.red.;
DONSKAYA, G.D., tekhn.red.

[Centralized automotive freight haulage] Tsentralizovannye pere-
vozki gruzov avtomobil'nym transportom. Pod obshchei red. I.M.
Gobermana. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transpor-
ta i shosseinykh dorog RSFSR, 1960. 206 p. (MIRA 13:9)

1. Moscow. Avtomobil'no-dorozhnyy institut.
(Transportation, Automotive)

MARGOLIS, Semen Yakovlevich; YAKOBASHVILI, Andrey Mikhaylovich;
LYUBINSKIY, Natan Markovich; YABLOKOV, V.I., red.

[Specialized rolling stock for automotive freight haulage;
works practice of the Main Moscow Automotive Transportation
Organization] Spetsializirovannyi podvizhnoi sostav dlia
gruzovykh avtomobil'nykh perevozok; iz opyta raboty Glav-
mosavtotransa. Moskva, Avtotransizdat, 1963. 213 p.
(MIRA 17:4)

LYUBINSKIY, S.Yu. [Liubins'kiy, S.IU.]

Improve the maintenance of machinery. Mekh. sel' hosp. 10 no.4:3-5
Ap '59. (MIRA 12:6)

1. Nachal'nik upravleniya ekspluatatsii mashinno-traktornogo parka
Ministerstva sel'skogo khozyaystva USSR.
(Agricultural machinery--Maintenance and repair)

LYUBINSKIY, Ya.S.; RUNETS, G.K.

Automatic device for turning on and off the motors of an exhaust
fan. Prom.energ. 18 no.4:6-7 Ap '63. (MIRA 16:2)
(Fans, Electric)

LYUBINSKIY, Ya.S., KVASNEVSKIY, A.N.

Device for straightening grinding wheels. Mashinostroitel'
no.1:29 Ja '65. (MIRA 18:3)

LYUBINSKIY, Ya.S.; SHILOV, Yu.A.

Flexible coupling of the electric motor with the lathe rest.
Mashinostroitel' no.6:17 Je '64. (MIRA 17:8)

GOLOMIDOV, I.N., assistant; LYUBINSKIY, Ye.A., assistant

Mathematical modeling of the control system for excavator electric drives with compensated longitudinal field amplifiers. Izv. vys.ucheb.zav.; gor.zhur. no.3:105-110 '58. (MIRA 12:8)

1. Sverdlovskiy gornyy institut.

(Excavating machinery--Electric driving)

(Electric controllers--Mathematical models)

LYUBINSKIY, Ye.N., podpolkovnik meditsinskoy sluzhby

Conditions associated with the formation of a perforation through
the brain from gunshot wounds. Voen.-med.zhur. no.12:37-42 '59.
(MIRA 14:1)

— (BRAIN—WOUNDS AND INJURIES) (GUNSHOT WOUNDS)

LYUBINSKIY, Ye. N., Cand. Med. Sci., — (diss) "Pathological anatomy of initial period of gunshot wounds of the brain," Moscow, 1961, 15 pp (Central Institute for the Advanced Training of Physicians), 250 copies (KL-Supp 9-61, 191)

1. LYUBINSKIY, Yu. S.: TOKARCHUK, D. A.
2. USSR (600)
4. Feeding and Feeding Stuffs
7. Something new mechanizing feed preparation on the swine farm.
Korm.baza 3 No. 10, 1952.

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

LYUBINSKIY, Yu.S. [Lyubyns'kyi, IU.S.]

Point of honor for all machine operators. Mekh.sil'. hozn.
9 no.3:19-20 Mr '59. (MIRA 11:4)

1. Nachal'nik upravlinnya ekspluatatsii mashinno-traktornogo parku
Ministerstva sil's'kogo gospodarstva URSS.
(Agricultural machinery--Maintenance and repair)

LYUBINSKIY, Yu.S. [Liubins'kyi, I.U.S.]

Characteristics of the operation of tractors under cold weather
conditions. Mekh. sel'. hosp. 9 no.9:3-4 S '58. (MIRA 11:10)

1. Nachal'nik upravleniya ekspluatatsii mashinno-traktornogo parka
Ministerstva sel'skogo khozyaystva USSR.
(Tractors--Cold weather operations)

LYUBINSKIY, Yu.S. [Liubins'ky1, I.U.S.]

For maximum utilization of the means of mechanization in harvesting
corn. Mekh. sil'. hosp. 11 no.7:6-8 J1 '60. (MIRA 13:10)

1. Glavnyy inzhener po ekspluatatsii mashinno-traktornogo parka
Ministerstva sel'skogo khozyaystva USSR.
(Corn(Maize)--Harvesting)

LYUBINSKIY, Yu.S. [Liubyns'kiy, IU.S.]

Introducing a new system in the maintenance of tractors. Mekh.
sil'. hosp. 12 no. 2:9-12 F '61. (MIRA 14:4)

1. Zamestitel' nachal'nika glavnogo upravleniya mekhanizatsii i
novoy tekhniki Ministerstva sel'skogo khozyaystva USSR.
(Tractors—Maintenance and repair)

LYUBINSKIY, Yu.S. [Liubyns'kiy, IU.S.], inzh.

Move the stacks from fields into barns. Mekh. sil'. hosp.
14 no.9:20 S '63. (MIRA 17:1)

LYUBISHCHEV, A.A. (Ul'yanovsk)

"Quantitative Estimate of Similarity"

Report presented at the 3rd Conference on the use of Mathematics in Biology,
Leningrad University, 23-28 Jan. 1961
(Primeneniye matematicheskikh Metodov v Biologii. II, Leningrad, 1963 pp 5-11)

LYUBISHCHEV, A. A.

BAKHTIN, V. S., DAVYDOV, P. N., KOVALEV, N. V., LYUBISHCHEV, A. A. and

PROIDA, P. A. "To Take into Account the Mass Scale Economical Experiment,"

Zashchita Rastenii, vol. 8, no. 1, 1931, pp. 341-350. 421 D36

SO: SIRA SI, 90-53, 15 Dec. 1953

LYBTSIONOV, A. I.

LYBTSIONOV, A. I. "Principles of Estimation of the Degree of
Field Crop Health at Harvest," Vegetation, v. 7,
1935, pp. 12-20. 421 P002

SOURCE: SIRA 3140-93, 15 Dec. 1953

LYUBISHOV, A. A.

LYUBISHOV, A. A. "On the Determination of Injuries by the
Method of Artificial Injury," potanicheskii Zhurnal, Ann. Coll.
Nauk USSR, no. 1, 1974, pp. 17-22. (S) J 7475

SOURCE: CIRA 5130-53, 15 Oct. 1983

LYUBISHCHEV, A.A.

LYUBISHCHEV, A.A.

Problems in the ecological study of agricultural pests of
Kirghizistan. Trudy Biol. inst. Kir FAN SSSR no.1:157-171
'47. (MIRA 8:10)
(Kirghizistan--Agricultural pests)

LYUBISECHEV, A.A.; TURDAKOV, F.T., red.; ANOKHINA, M.V., tekhn. red.

[Methods of making population counts and zone surveys of
insects] K metodike kolichestvennogo ucheta i raionirovaniia
nasekomykh. Frunze, Akad. nauk Kirgizskoi SSR, 1958. 166 p.
(MIRA 11:11)

(Insects)

LYUBISHCHEV, A.A.

Use of biometry in systematics. Vest.LGU 14 no.9:128-136
'59. (MIRA 12:5)

(BIOMETRY)

(INSECTS--CLASSIFICATION)

LYUBISHCHEV, A. A.

Quantitative evaluation of similarity. Prim. mat. metod.
v bi.ol. no.2:152-160 '63. (MIRA 16:11)

LYUBISHCHEV, A.A.

Two new palaeartic species of the genus *Chaetocnema* of the group *Ch. concinna* March. (Coleoptera, Chrysomelidae, Halticinae). Ent. oboz. 42 no.4:858-863 '63. (MIRA 17:8)

KALITOVSKIY, Ye.F., kand. med. nauk; KENTTS, V.V., kand. med. nauk;
KRASNIKOVA, Ye.Ya.; LYUBISHCHEV, S.A.

Causes and prevention of morbidity of the peripheral nervous
system in industrial plants. Zdrav. Bel. 9 no.8:54-56 Ag'63
(MIRA 17:3)

1. Belorusskiy nauchno-issledovatel'skiy institut nevrologii,
neyrokhirurgii i fizioterapii (direktor I.P. Antonov, nauchnyy
rukovoditel' - akademik AN BSSR D.A. Markov).

CHEREMIN, Ivan Ksenofontovich. Prinimali uchastiye: KODANEV, I.M., prof.;
LYUBISHEV, V.G., zootekhnik; TARASOVA, K.A., red.; SERGEYEVA, M.I.,
~~tekhn. red.~~

[Seven-year plan of the collective farm] Semiletnei plan kolkhoza.
Gor'kii, Gor'kovskoe knizhnoe izd-vo, 1961. 77 p. (MIRA 15:1)

1. Predsedatel' kolkhoza "Niva" Rabotkinskogo rayona (for
Cheremin).

(Collective farms)

LYUBISHIN, A. A.

Mbr., Lab., Republic Psychiatric Hospital, Kazakh People's Commissariat Health,
Kzyl-Orda, -1946-.

Medicine.

Mbr., Exptl. Lab., People's Commissariat Health, Kazakh SSR, -1939-.

"The Pharmacological Action of the Leaves and Roots of the Crataegus Altaica,"

SO: Farmakol. i Toksikol., 2, No. 4, 1939;

"Pharmacological Aspect of Eremosparton Aphyllum,"

SP: Farmakol. i Toksikol., 9, No. 2, 1946.

LYUBISHIN, A.A.; LAZAREVA, V.S.

Comparative action of toxic products obtained from the fungi
Fusarium sporotrichiella and Fusarium poae. Trudy Oren. otd.
Vses. fiziol. ob-va no.2:95-99'60. (MIRA 16:8)

1. Kafedra farmakologii (zav. - prof. A.A.Lyubushin) Oren-
burgskogo meditsinskogo instituta.
(FUSARIUM-TOXICOLOGY)

KORNEYCHUK, G.P.; ROYTER, V.A.; VOL'FSON, V.Ya.; ZHIGAYLO, Ya.V., LYUBITELEVA,
A.Z.

Characteristics of the catalytic oxidation of naphthalene. Part 2:
Oxidation of naphthalene of long layers of vanadium catalysts. Ukr.
khim. zhur. 26 no.4:432-439 '60. (MIRA 13:9)

1. Institut fizicheskoy khimii im. L.V. Pisarzhevskogo AN USSR i
Rubezhanskiy khimicheskiy kombinat.
(Naphthalene) (Vanadium)

137-58-4-8521

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4 p 314 (USSR)

AUTHORS: Lyubimov, A. P. Lyubimov, Yu. N.

TITLE: Measurement of the Vapor Pressure of Liquid Indium by Means of the Mass Spectrograph (Izmereniye davleniya parov zhidkogo indiya s pomoshchyu mass-spektrografa)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 36 pp 191-195

ABSTRACT A method of mass spectrometric determination of the vapor pressure of a metal over its liquid phase has been developed. The test metal was In (99.977% pure). The tests were run on the MS-4 mass spectrograph with certain changes in the circuit of its ion source. The test metal was placed in a special depression in a quartz capsule within the heater. A thermocouple for temperature measurement was introduced into the interior space of the capsule until it touched the inside of the depression. The free surface of the fused metal was positioned opposite the opening in the ion source box. Ionization of the vapor phase was by an electron beam of 90 and 96 ev energy from the filament of an electron gun. The heater design made it possible to obtain

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137-58-5-8521

Measurement of the Vapor Pressure (cont.)

temperatures of up to 1065°K. The minimum (600-650°K) was governed only by the possibilities available for amplifying the ion flux and the presence of background. It is noted that the criterion for the minimum is not the temperature, but the appropriate vapor pressure, the limit of which is 10^{-10} mm Hg for In. The measurements and calculations were based on the use of In¹¹⁵ (95.5%). Certain values were checked by means of In¹¹³. The experiments made it possible to measure the vapor pressure of metallic In in the 646-1065°K temperature interval, and the heat of evaporation of In, which proved to be 55.74 kcal/mole, was determined by the slope of the curve for the relation of vapor pressure to temperature. It was found that the mass spectrometric method makes it possible to determine only the relative values of the expressions for vapor pressure $P = f(T)$. Knowledge of the transient coefficient B, is required to determine the absolute values of the vapor pressure. It was found that the value of the ionic flux, all other conditions being equal, depends upon the energies of the electrons ionizing the vapor. The curve of values of ionic flux relative to acceleration potential of the electron gun shows a maximum. The position of the maximum varies with variation in temperature.

- | | |
|---|-------------------------------|
| 1. Indium (Liquid)--Vapor pressure--Measurement | 2 Indium (Liquid) L.G. |
| --Mass spectrum | 3. Mass spectra--Applications |
| | 4 Metals--Mass spectrum |

Card 2/2

LYUBITOV, Yu.N.

Opredelenie davleniy parov metallov i splavov na
mass-spektrometre.

report submitted for the 5th Physical Chemical Conference on
Steel Production.

MOSCOW 30 JUN 1959

AUTHORS: Lyubitov, Yu. N., Polyanskiy, V. M. SOV, 20-125-1-36/67

TITLE: Calculation of a New Cell for Measuring the Pressure of Saturated Vapors of Metals (Raschet novoy yacheyki dlya izmereniya davleniya nasyshchennykh parov metallov)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 125, Nr 1, pp 135-138 (USSR)

ABSTRACT: First the authors give a brief survey of the stage of the problem. In the article under review a cell for the evaporation of metals is calculated which does not feature the deficiencies of the Langmuir and Knudsen cell, though the positive characteristics of these cells are taken into account for the new cell. The authors employ the analogy of the laws of evaporation and thermal radiation, as well as the mathematical apparatus by means of which O. N. Talenskiy (Ref 3) calculated the cylindrical model of an absolutely black body. For the Langmuir cell the following holds: The particle hitting the metal surface remains there or is reflected by it and condensed on a condenser which is colder than the metal surface. The vapor particle attains the surface practically once. This cell resembles a "gray body" in the sense of thermal radiation. The Knudsen cell, on the other hand, is

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SOV/20-125-1-36/67

Calculation of a New Cell for Measuring the Pressure of Saturated Vapors of Metals

characterized by the following: each vapor particle hitting the metal surface is reflected by the wall with a certain probability, and hits the surface again. Consequently, the vapor particle attains the evaporation surface several times. The Knudsen cell resembles an "absolutely black body". The vapor escaping through the effusion aperture does not disturb considerably the equilibrium. Further, the authors indicate the similarity between the characteristic features of radiation and evaporation. Under the given conditions the vapor pressure is equal to the third part of its energy formed per unit of volume (in this connection only the kinetic energy of the particles is taken into account).

The integral density of radiation $\theta = \sigma T^4$ corresponds to the vapor pressure. The aforementioned similarity may be expressed in the following manner: the accommodation coefficient $\alpha = \eta/\nu$ corresponds to the degree of blackness ϵ , and the difference $1 - \alpha = \gamma$ corresponds to the reflection coefficient ρ . The evaporation is characterized by the following quantities: condensation constant η (i.e. by the number of particles which are con-

Card 2/4

SOV/20-125-1-36/67

Calculation of a New Cell for Measuring the Pressure of Saturated Vapors of Metals

densed per unit of area and time), ν - the number of particles which, in the presence of an effusion aperture, hit the inner surface of the Knudsen cell per unit of time with respect to the unit of area. In the cell under investigation the vapor enters interaction with the sample surface and the cell walls. According to the authors, there is no interaction whatever between vapor particles and the walls, apart from physical adsorption. This may be brought about by fastening various materials (with complex composition of the molecular crystals) to the walls. The authors then determined the ratios of cell parameters at which the vapor contained therein corresponds to the "absolutely black body" (as in the case of the Knudsen cell). Further, an expression for the vapor pressure at the outlet of the cell is computed. This expression generalizes the formulae set up by Langmuir and Knudsen. The results of the computation of the cellular parameters are contained in a table. The cell in question may be imagined as a container that is filled to the brim with saturated vapor. There are 1 figure, 1 table, and 3 references, 1 of which is Soviet.

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SOV. 20-105-1-56 61

Calculation of a New Cell for Measuring the Pressure of Saturated Vapors of Metals

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy imeni A. A. Baykov)

PRESENTED: October 1, 1958, by I. P. Bardin, Academician

SUBMITTED: September 18, 1958

Card 4/4

Lyubtsov, Yu. N.

ISSUE: NOV EMBLATION
SOV/85/4
SOV/10-3-5

Abstracts from USSR. Institute metallurgii

Metallurgy, Metallurgy, Fiziko-khimiya i spetsializatsiya
 [Physical and Chemical Research Methods in Metallurgy and Specialized Areas,
 Issue No. 10, 1980, 52 p. (Series: 1981, 799, 5) English translation
 inserted, 2,800 copies printed.

Reporting Agency: Metallurgy from USSR. Institute metallurgii (Inst) A.A. Baykov.

Resp. Ed.: I.P. Bort'. Advertisement (Abstract). Ed. of Publishing House:
 V.A. Il'inskiy. Tech. Ed.: T.P. Polono'.

REMARKS: This collection of articles is intended for metallurgists and metal
 researchers.

CONTENTS: This collection contains articles on metallurgy, metal science, and
 physicochemical research methods. Special articles discuss the structure
 and properties of some metals and alloys, the effect of cold treatment and
 treatment on the properties of alloys are analyzed, and instruments and
 techniques on the properties of alloys are analyzed.

151
 Kabanov, A.M., and P.I. Shchegolev. Physicochemical Study of the
 Structure of the Surface of the System

156
 Gerasimov, Ye. M., and Ye. A. Zhurav. Study of the Structure and of
 the Physicochemical Properties of Polymers of Polyethylene Glycol
 Containing Nickel, Cobalt, Vanadium, and Manganese

162
 Kabanov, A.M., and P.I. Shchegolev. On the Evaluation of the Reaction
 of Thermal Reduction of Lithium Oxide by Silicon in the Presence of
 Calcium Oxide

166
 Gerasimov, Ye. M., V.Y. Serebrennyy, and Ye. A. Zhurav. State Diagram
 of the V-Ti System

171
 Petrov, D.A. Problems of Solubility and State of Impurities in Semi-conductors

183
 Zhurav, Ye. M., M.O. Kabanov, and I.M. Dolgoploskov. Study of the
 Electrical Properties of $Zn_{1-x}Si_x$ Alloys

189
 Gerasimov, Ye. M., and G.M. Shchegolev. Radioisotopic Method and Experimental
 Unit for Determining the Radiation Capacity of Molten Metals

193
 Shchegolev, I.Y. Study of the Process of Continuous Secondary Electron
 Emission in a Single-Channel Multiplier

196
 Gerasimov, Ye. M. Rapid Method for the Determination of Iron in Alloys

198
 Kabanov, A.M., and A.Y. Arshinov. Determination of Metallic Impurities
 in Steels

202
 Kabanov, A.M., and A.Y. Arshinov. Polarography of Large Quantities
 of Uranium

208
 Ignatov, D.Y. Principles and Apparatus for Studying the Processes
 of Oxidation of Metals and Alloys

214
 Lyubtsov, Yu. N. On the Use of Mass Spectrometric Methods of Analysis
 in the Study of the Structure of Metals

216
 Gerasimov, Ye. M. Mechanical Principles of Barman Tests

Card 6/7

LYUBITOV, Yu.M.

Using methods of mass spectrometry for analyses in physical
metallurgy. Trudy Inst.met. no.5:238-243 '60. (MIRA 13:6)
(Mass spectrometry)
(Physical metallurgy)

S/263/62/000/010/007/013
I028/1250

AUTHOR: Lyubotov. Yu. N.

TITLE: Determination of the pressure of metal and alloy vapors by a mass-spectrometer

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 10, 1962, 29, abstract 32.10.219. In collection "Fiz-khim. osnovy proiz-va stali". M., AS USSR, 1961, 320-330



TEXT: This is a communication on mass-spectrometer measurements of the pressure of vapors for multi-component systems. The design of a cylindrical cell for the measurement of the pressure of metal and alloy vapors is given. The thermodynamical properties of some alloys of the system Ag-Au and the absolute value of the pressure of nickel vapor are determined. An attempt is made to connect the values of the Langmuir coefficient with the emissivity.

[Abstracter's note: Complete translation.]

Card 1/1

S/659/62/008/000/026/028
I048/I248

AUTHOR: Lyubitov, Yu.N.

TITLE: A mass spectrometric investigation of the vapor pressure of metals and alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgii, Issledovaniya po zharoprochnym splavam. v.8. 1962. 205-210

TEXT: This is a theoretical discussion of the evaporation of monomer or dimer vapors of metals from cylindrical cells. The coefficient of evaporation (defined as the ratio of the rate of evaporation from the metallic surface to the rate of effusion of the vapors from the ideal Knudsen cell) is affected by the nature of the evaporating surface material, while the coefficient of effusion (the ratio of effusion from the surface studied to the effusion from the ideal Knudsen cell) is affected by both the nature and the geometry of the surface studied). A general equation is derived for the flow of material from the bottom of the cylindrical cell, showing that satu-

Card 1/2

S/659/62/008/000/026/028
I048/I248

A mass spectrometric investigation...

rated vapors exist on the bottom of cylinders with a height above a certain limiting value. The total flow from the cylinder does not consist of saturated vapors, indicating that the radiation from a cylinder of infinite height may not be black radiation. Other equations derived by the authors allow the calculation of the coefficients of evaporation at different temperatures, the determination of the effusion coefficients for cylindrical cells of various sizes, the calculation of cell parameters providing the existence of saturated vapors on the cell bottom, the analysis of mass-spectrometric data when monomer and dimer lines are overlapping, and the calculation of dissociation constants from rate of evaporation data. The work is presented as a further development of the work of Glausing (Ann. Phys., 12, 961, 1932) [sic] on molecular flows in tubes. There are 2 figures.

Card 2/2

LYUBITOV, Yu.N.

Calculating the rate of evaporation from a cylinder. Inzh.-
fiz.zhur. 5 no.1:55-58 Ja '62. (MIRA 15:3)

1. Institut metallurgii, Moskva.
(Evaporation)

LYUBITOV, Yu.N.

Determination of the coefficients of interaction between saturated vapors of a complex composition and the surface of an effusion chamber. Zhur.fiz.khim. 37 no.8:1864-1866 Ag '63. (MIRA 16:9)

1. Institut metallurgii im. A.A.Baykova.
(Vapor pressure)

LYUBITOV, Yu.N.

Method of determining the saturated vapor pressure of low-volatility
substances. Zhur.fiz.khim. 37 no.8:1917-1919 Ag '63.
(MIRA 16:9)

(Vapor pressure)

LYUBITOV, Yu.N.; OSHCHEPKOV, P.K., prof., doktor tekhn. nauk,
otv. red.

[Calculating the interaction of molecular flows with the
vessels containing them] Raschet vzaimodeistviia molekulyarnykh potokov s ograzhdaiushchimi ikh sosudami. Moskva, Nauka, 1964. 146 p. (MIRA 17:8)

ACCESSION NR: AT4035156

S/2765/64/000/000/0358/0365

AUTHOR: Lyubitov, Yu. N.

TITLE: A calculation of the vaporization rate of metal from cylindrical vessels into a vacuum and a mass-spectrometric investigation of metal and alloy vapor pressures

SOURCE: Konferentsiya po fiziko-khimicheskim osnovam proizvodstva stali, 6th, 1961. Fiziko-khimicheskiye osnovy* proizvodstva stali (Physicochemical basis of steel production); trudy* konferentsii. Moscow, Izd-vo "Nauka," 1964, 358-365

TOPIC TAGS: metal vaporization, sublimation, metal vapor pressure, alloy vapor pressure, mass spectrometer, monomeric vaporization, dimeric vaporization, knudsen ideal cell theory

ABSTRACT: The article presents a theoretical treatment of monomeric and dimeric vaporization which results in expressions permitting: determination of the vaporization coefficients of non-volatile materials at different temperatures; determination of the effusion coefficients of cylindrical vessels depending on their caliber; calculation of parameters for

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ACCESSION NR: AT4035156

a vapor equilibrium (saturation); mass spectroscopic identification in case of an overlapping of mono- and dimeric lines; calculation of the dissociation constant from vaporization rates in cylinders of different caliber; and determination of thermodynamic characteristics for difficult volatile substances with the use of a mass spectrometer. The treatment is supported by Knudsen's ideal cell theory, the Langmuir open-surface vaporization concept and Gorokhov's work on vapor partial pressures and the determination of dissociation constants in a binary effusion chamber. Orig. art. has: 4 figures and 17 formulas.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 30Apr64

ENCL: 00

SUB CODE: MM, GP

NO REF SOV: 003

OTHER: 004

Card 2/2

ACCESSION NR AM5004493

BOOK EXPLOITATION

Lyubotov, YU. N.

Calculation of the interaction of molecular flow with the vessel containing it (Raschet vzaimodeystviya molekulyarnykh potokov s ograzhdayushchimi ikh sosudami), Moscow, Izd-vo "Nauka", 1964, 146 p. illus., biblioc. Errata slip inserted. 1,500 copies printed. (At head of title: Akademiya nauk SSSR. Gosudarstvennyy komitet po chernoy i tsvetnoy metallurgii pri Gosplane SSSR. Institut metallurgii im. A. A. Baykova)

TOPIC TAGS: molecular flow, vacuum technology, vacuum melting, microelectronics, film, thermodynamics, particle emission, gasdynamics

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Ch. I. Distribution of molecules leaving a flat surface in space. Balance of mass on the surface -- 5

Ch. II. Energy exchange on the surface -- 13

Ch. III. Movement of rarefied gases in cylindrical tubes I -- 20

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L 41849-65

ACCESSION NR AM5004493

- Ch. VI. Movement of rarefied gases in conical and bent tubes -- 48
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SUBMITTED: 07 Jul 64

SUB CODE: MM, GP

NO REF SOV: 029

OTHER: 092

Card *ce* 2/2

L 36410-65 ENT(1) IN(c) WY

ACC NR: AP6022018

SOURCE CODE: UR/0120/66/000/003/0150/0162

AUTHOR: Lyubotov, Yu. N.; Ivanov, Yu. M.

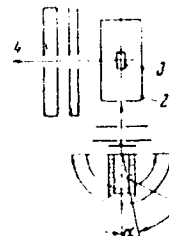
ORG: Moscow Institute of Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Mass-spectrometer outfit for studying the distribution of intensity of molecular beam in space

SOURCE: Pribory i tekhnika eksperimenta, no. 3, 1966, 160-162

TOPIC TAGS: mass spectrometer, molecular beam

ABSTRACT: The development is reported of a special outfit consisting of an MI-1301 (Soviet-made) mass spectrometer and a special chamber. The chamber houses a molecular gun with a mechanism for moving it with respect to the ionization space of the spectrometer. The molecules emerging from evaporation cell 1 (see figure) enter ionization box 2 at right angles to electron 3 and ion 4 beams. The driving mechanism is explained. The angular distribution of Mg^{24} particles emerging from a cylindrical effusion crucible is shown, as is the curve of beam-density distribution over the cross-section of the crucible port. The ion-current measurement error is 3% or less. The outfit operates at pressures 0.0001-1 torr in the molecule source. Furnace-temperature stability is 1°/hr or better within 300-1000C. Orig. art. has: 5 figures.



[03]

Fig. 1. Molecular gun

SUB CODE: 20 / SUBM DATE: 25May65 / ORIG REF: 003 / OTH REF: 001 ATD PRESS: 5039

Card 1/1

UDC: 621.384.8:539.198

ACC NR: AP6034237

SOURCE CODE: UR/0120/66/000/005/0173/0176

AUTHOR: Siprikov, I. V.; Lyubitov, Yu. N.

ORG: none

TITLE: Use of an electron multiplier with a continuous dynode in mass spectrometry

SOURCE: Pribory i tekhnika eksperimenta, no. 5, 1966, 173-176

TOPIC TAGS: mass spectroscope, electron multiplier, MASS SPECTROMETRY

ABSTRACT: Some characteristics of an electron multiplier with a continuous dynode are considered. The electron multiplier (see Fig. 1), used in MI-1301 and MI-1303 mass spectrometers, includes the following: a multiplier steel cavity (6), mass spectrometer analyzer tubes (4), ion receivers (2, 3, and 5), a positive ion path (1), an ion collector (7), and a pressure tube (8). The positive ions pass through ion receivers, enter the multiplier through the grid, and interact with the electroconductive layer on the dynode plates. Input and output ion currents are measured with electrometric amplifiers. The output ion current is also measured with a ratemeter which has a maximum counting speed of about 10^5 pulses/sec. The working range for the voltage U_k applied to the dynode plates is between 1 and 2.4 kv. Parasitic pulses caused by feedback occur for voltages in excess of 2.4 kv. Orig. art. has: 5 figures.

Card 1/2

UDC: 621.385.15:621.34.8

ACC NR: AP6034237

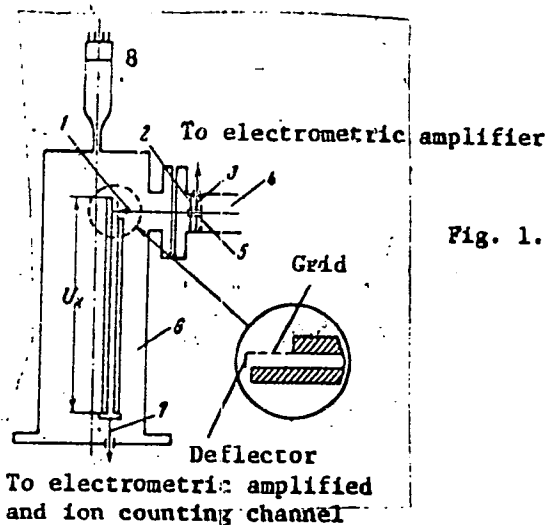


Fig. 1. Electron multiplier diagram

SUB CODE: 07, 10/ SUBM DATE: 26Aug65/ ORIG REF: 002/ OTH REF: 003/

Card 2/2

1980-1981, N., ...

... ..

... ..

(SIA 18:5)

LYUBITSKAYA, A.I.

Influence of different regions of the visible spectrum on the developmental stages of embryos and larvae of the fish [with English summary in insert]. Zool.zhur. 35 no.12:1873-1886 D '56.
(MLRA 10:1)

1. Gosudarstvennyy estestvenno-nauchnyy institut imeni K.F. Lomagta.
(Embryology--Fishes) (Light--Physiological effect)

LYUBITSKAYA, A.I.; DOROFYEVA, Ye.A.

Effect of visible light, ultraviolet rays, and temperature on the body metamerism of fishes. Report No.3: Effect of ultraviolet rays on the viability and body metamerism of *Osmerus eperlanus eperlanus* (L.) and *Perca fluviatilis* L. Vop. ikht. 1 no.3:497-509 '61. (MIRA 14:11)

1. Zoologicheskiy institut AN SSSR.
(Ultraviolet light--Physiological effect)
(Embryology--Fishes)
(Vertebrae)

LYUBITSKAYA, A.I.

Effect of visible light, ultraviolet rays, and temperature on the
metamerism of the fish body. Report No.1. Zool. zhur. 40 no.3:397-407
Mr '61. (MIRA 14:3)

1. Zoological Institute of the U.S.S.R. Academy of Sciences,
Leningrad.

(Fishes--Anatomy) (Light--Physiological effect)

(Temperature--Physiological effect)

LYUBITSKAYA, A.I.

"Sense organs of the lateral line system and their significance in the behavior of fishes" by N.N.Disler. Reviewed by A.I.Liubitskaya.
Zool. zhur. 40 no.4:628-629 Ap '61. (MIRA 14:3)
(Sense organs--Fishes) (Disler, N.N.)

LYUBITSKAYA, A.I.; DOROFYEVA, Ye.A.

Effect of visible light, ultraviolet rays, and temperature on the metamerism of the fish body. Report No.2: Effect of ultraviolet rays on the survival and body metamerism of *Esox lucius* L. and *Acerina cernua* L. Zool.zhur. 40 no.7:1046-1057 J1 '61. (MIRA 143?)

1. Zoological Institute of the U.S.S.R. Academy of Sciences, Leningrad.
(Light--Physiological effect) (Embryology--Fishes)

5.3610

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SOV/79-30-3-59/69

AUTHORS: Grigor'yeva, N. Ye., Gintse, I. K., Lyubitskaya, T. A.

TITLE: Products of Hydrogenation of N-phenylpyridinium Chloride. Condensation of N-phenylpiperidinium Hydrochloride With p-Dimethylaminobenzaldehyde

PERIODICAL: Zhurnal obshchey khimii, 1960, Vol 30, Nr 3, pp 1031-1037 (USSR)

ABSTRACT: This is a continuation of previous work (N. Ye. Grigor'yeva, A. B. Organes'yan, I. A. Mysh, ZhOKh, 27, 1565, 1957) on hydrogenation of N-phenylpyridinium chloride (I) over a platinum catalyst under different conditions. The method used was described previously (see above reference). Condensation of N-phenylpiperidinium hydrochloride (II) with p-dimethylaminobenzaldehyde (III) was also studied. It was found that an hydrogenation of (I) over a platinum catalyst, a mixture of N-phenyl- and N-cyclohexylpiperidinium hydrochlorides is formed. The

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Products of Hydrogenation of N-phenylpyridinium
Chloride

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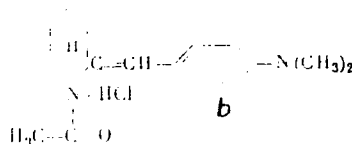
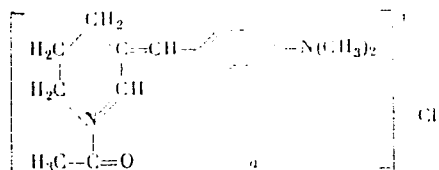
hexylpiperidinium hydrochlorides is formed. The ratio of the two hydrochlorides in the mixture depends on the conditions of hydrogenation. Condensation of (II) with (III) in acetic anhydride first forms a blue dye. The latter is unstable and on heating decomposes with formation of a red dye. The blue dye was not isolated. Its color is very close to that of Michler's benzhydrol, and it is possible that they are analogs. The red dye is slightly soluble in water, more soluble in alcohol and dichloroethane. It does not crystallize, and has the following absorption maxima: in alcohol 496, in water 504, and in dichloroethane 504 m μ . It is suggested that the red dye is a salt with structure a:

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Products of Hydrogenation of N-methyl-
pyridinium Chloride

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307/79-30-3-53/63



There are 2 figures; 2 tables; and 5 references,
1 U.S., 2 German, 2 Soviet. The U.S. reference is:
C. F. Winans, H. Adkins, J. Am. Chem. Soc., 54, 306
(1932).

ASSOCIATION: Kharkov State University (Kharkovskiy gosudarstvennyy
universitet)

SUBMITTED: September 1, 1958

Card 3/3

LYUBITSYNA, M.I.

Problem of the individual approach to the pupil in the educational
theory and practice of the prerevolutionary Russian school. Uch.
zap.Len.un. no.214:155-170 '56. (MLRA 10:3)
(Educational psychology)

5(3)

AUTHORS: Furman, M. S., Shestakova, I. B., SOV/20 121:5 21 62
Arest Yakubovich, I. L., Lyubitsyna, N. A.

TITLE: Oxidation of n-Butane Solved in Acetic Acid by Air Under Pressure (Oksleniye n-butana v rastvore uksusnoy kisloty vozdukhom pod davleniyem)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 124, No 5, p. 1083-1084 (USSR)

ABSTRACT: Under relatively high temperatures (350-400°C) the oxidation of butane in the gaseous phase results in an entire scale of oxygen-containing products (Refs 1-3). It has recently been pointed out (Refs 4-8) that the oxidation of n-butane under pressure in the liquid phase is much more selective and leads under milder conditions to valuable organic products: acetic acid, ethyl acetate, and methyl ethyl ketone. This oxidation can be effected either below the critical temperature of butane ($T_c = 152^\circ\text{C}$, Refs 4-5) or above the same, with the aid of solvents (Refs 6-8). The latter method seems to be more promising. The authors have chosen acetic acid as a solvent in which butane is soluble and which, under the existing conditions is indifferent to oxidation and forms itself an oxidation product.

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Oxidation of n-Butane Solved in Acetic Acid by Air
Under Pressure

SOV. 20-121 5-14 '62

of butane. Cobalt stearate was used as a catalyst. The experiment was carried out through six hours at various velocities of the air stream which served for oxidation. Figure 1 shows the results. They make the advantages of the oxidation above T_c apparent. Figure 2 contains statements on the influence of the catalyst on the process carried out at 60 atmospheric excess pressure and 165°. The catalyst increases the yield of useful products and directs the process toward a predominant formation of acetic acid. There are 2 figures and 8 references, 3 of which are Soviet.

ASSOCIATION. Zosudarstvenny nauchno issledovatel'skiy i proyektnyy institut khimii i promyshlennosti (State Scientific Research and Design Institute for Nitrogen Industry)

PRESENTED. October 8, 1958, by S. I. Vol'fkovich, Academician

SUBMITTED. September 19, 1958

Card 2/2