

D'YAKONOV, K.N.; RETEYUM, A. Yu.

Local climate of the Rybinsk Reservoir. Izv. AN SSSR Ser.  
geog no.4:47-54 '64 (MIRA 17:8)

1. Institut geografii AN SSSR.

DYAKONOV, K.N.

Landform studies in regions subjected to the influence of reservoirs.  
Izv. AN SSSR. Ser. geog. no.5:50-54, S-O '65.

(MIRA 18:10)

1. Institut geografii AN SSSR.

ANDREYEV, V.G., gornyy inzh.; D'YAKONOV, L.D., gornyy inzh.

Testing systems of dry centralized dust collecting during boring  
with a column hammer drill. Gor. zhur. no.4:64-67 Ap '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy i proyektnyy institut "Gipronikel",  
Leningrad.

S/032/61/027/002/017/026  
B134/B206

AUTHORS: D'yakonov, L. I. and Skakov, Yu. A.

TITLE: Camera for taking aimed radiographs

PERIODICAL: Zavodskaya laboratoriya, v. 27, no. 2, 1961, 205-206 ✓

TEXT: Microfocusing X-ray tubes can be used for the X-ray analysis of single microstructure elements. An X-ray camera is described which permits to produce sufficiently sharp beams by means of a customary X-ray tube, and to focus them onto the place to be examined of an order of magnitude of  $100\mu$ . The pictures can be taken without combination of the device with the optical system described by A. Kh. Geysler (Ref. 1). A cone system is used which is installed on the camera and the optical microscope. The camera is specially suitable for determining the orientation of single crystal grains. The camera consists of two collapsible parts (Fig.). The distance between sample and film is controlled by pulling out the left part A from part B. The latter is mounted directly on the YPC-55 (URS-55) instrument, or on the YPC-70

Card 1/3

Camera for taking aimed radiographs

S/032/61/027/002/017/026  
B134/B206

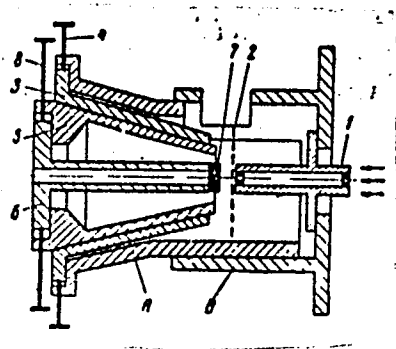
(URS-70) instrument, by means of a special holder. The sharpness of the beam is adjusted by means of two identical cones fixed on the camera (3) and on the stage, by shoving in the inner cone (5) with the sample holder (6). The sample (7) can be displaced vertically to the beam axis. When exactly focused, the axes of beam and the centering cone of the camera (3) coincide. After sharp focusing, the part of the micro-structure to be examined is brought into the cross hairs of the eyepiece by means of the microscrews (8). (1) is the collimator, (2) the film, and (4) are screws for displacing the centering cone. Owing to the small distance between sample and film (maximum 5mm), the exposure time can be reduced to a few hours. Single granules of a polished section of transformer steel with an average size of 100 $\mu$  were examined by means of the camera described. There are 1 figure and 1 Soviet-bloc reference.

ASSOCIATION: Moskovskiy institut stali (Moscow Steel Institute)

Card 2/3

Camera for taking aimed radiographs

S/032/61/027/002/017/026  
B134/B206



Card 3/3

L 16574-65 EWT(m)/EWP(t)/EWP(b) ESD(gs)/RAEM(c)/ESD(t)/SSD/AFWL/ASD(a)-5/  
AS(ep)-2/IJP(c) JD  
ACCESSION NR: AP5000300 S/0070/64/009/006/0938/0939

AUTHORS: Maslov, V. N.; D'yakonov, L. I.; Davy\*dov, A. A.; Shaforo-<sup>B</sup>  
stov, M. P.

TITLE: Epitaxial growing of germanium on the surface of germanium  
dendrites <sup>16</sup> <sup>27</sup>

SOURCE: Kristallografiya, v. 9, no. 6, 1964, 938-939, and insert  
facing p. 939

TOPIC TAGS: germanium, epitaxial growing, crystal growth, filament  
crystal

ABSTRACT: The authors describe the growth of an epitaxial layer of  
germanium on the surface of germanium dendrites. No earlier experi-  
mental data were published on the subject, nor were quantitative  
data given in earlier reports on epitaxial growth concerning the  
dependence of the growth rate on the gap between the source and the

Card 1/5

L 16574-65

ACCESSION NR: AP5000300

substrate or on the profile of the epitaxial layer. The ribbons used were 2--3 mm wide and 0.20--0.30 mm thick. A diagram of the setup is shown in Fig. 1 of the enclosure. The film was deposited in a quartz ampoule 40 mm in diameter. The substrate and the source were at a specified distance between two graphite blocks intended for equalization of the temperature. The process is realized in an oven with the temperature drop between the blocks amounting to  $\sim 25^\circ$  in the interval from 700 to 1000C. The growth rate was shown to increase linearly with decreasing gap, reaching a maximum of 9  $\mu$ /hr, which is much higher than obtained by others. The epitaxial layer on the dendrite duplicates clearly the characteristic shape of the dendrite teeth. The tests have also shown that the resolution of the epitaxial deposition increases rapidly with decreasing gap between the source and the substrate. The dependence of the rate of deposition and of the resolution on the gap width are shown in Fig. 2 of the enclosure. Orig. art. has: 3 figures.

Card 2/5



L 16574-65

ACCESSION NR: AF5000300

ASSOCIATION: Gosudarstvenny\*y nauchno-issledovatel'skiy proyektny\*y  
institut redkometallicheskoj promy\*shlennosti (State Scientific  
Research and Design Institute of the Rare Metal Industry)

SUBMITTED: 18Apr64

ENCL: 02

SUB CODE: SS

NR REF SOV: 000

OTHER: 003

Card 3/5

L 16574-65

ACCESSION NR: AP5000300

ENCLOSURE: 01

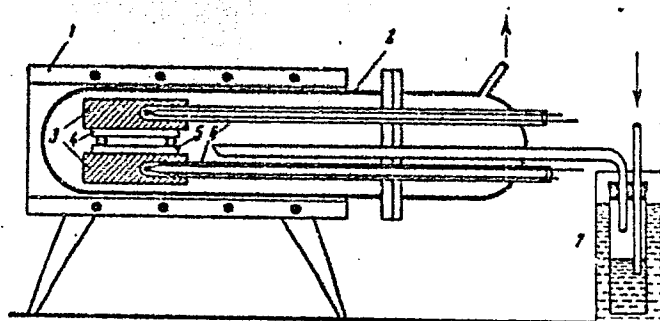


Fig. 1. Diagram of installation for epitaxial growing.

- 1 - Two-section oven, 2 - quartz ampoule, 3 - graphite blocks,
- 4 - source, 5 - substrate, 6 - quartz tubes with thermocouples,
- 7 - bubbler with water, immersed in cooling mixture

Card 4/5

L 16574-65

ACCESSION NR: AP5000300

ENCLOSURE: 02

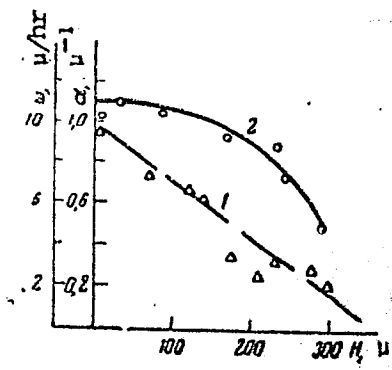


Fig. 2. Dependence of the settling rate  $w$  and of the resolution  $\alpha$  on the width  $H$  of the gap between the source and the substrate.

1 - Settling rate,  $w$ ; 2 - resolution,  $\alpha$ .

Card 5/5

D'YAKONOV, L.I.; MASLOV, V.N.; SAKHAROV, B.A.

Production of gallium phosphide single crystals by the method of epitaxial growth. Dokl. AN SSSR 163 no.1:76-78 J1 '65. (MIRA 18:7)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut redkometallicheskoj promyshlennosti.

L 3075-66 EWT(1)/EWT(m)/EWP(1)/T/EWP(t)/EWP(b)/EWA(c) IJP(c) JD/GG  
ACCESSION NR: AP5018077

UR/0020/65/163/001/0076/0078

AUTHOR: D'yakonov, L. I.<sup>44,55</sup>; Maslov, V. N.<sup>44,55</sup>; Sakharov, B. A.<sup>44,55</sup>

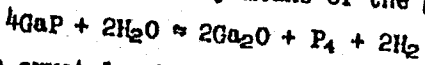
65  
62  
8

TITLE: Epitaxial growing of single-crystal gallium phosphide

SOURCE: AN SSSR. Doklady, v. 163, no. 1, 1965, 76-78

TOPIC TAGS: epitaxial growing, gallium compound, semiconducting material

ABSTRACT: The purpose of the investigation was to check on the applicability of the sandwich method (E. Sirtl, J. Phys. Chem. Solids v. 24, no. 11, 1285, 1963) to the production of large plate-like gallium phosphide single crystals, and to investigate the main factors influencing the growth rate and the quality of the epitaxial layers. The epitaxial growing was by means of the gas-transport reaction with water vapor



using needle-like single crystals obtained from the gas phase by interaction between phosphorus vapor and gallium monoxide in an argon stream. The details of the growth procedure are described. Samples up to 700 μ thick were grown in 70 hours at a rate which started at 30--40 μ/hr and slowed down to 7--15 μ/hr. The presence of moisture hindered the epitaxial growth by causing oxidation of the substrate surface. The morphology of the epitaxial layers depends on the orientation of the

Card 1/2

L 3075-66

ACCESSION NR: AP5018077

3

surface and on the perfection of the substrate crystal structure. The best results were obtained on substrates with (111) orientation. Although the Debye pattern of the epitaxially grown single crystals indicates the presence of only one phase in the sample, the presence of several per cent of gallium arsenide impurity has been noticed. Although the content of this impurity can be reduced by lowering the substrate temperature, this leads to a deterioration of the photoluminescent and electroluminescent properties of the sample. The gallium phosphide obtained had n-type conductivity, with carrier density  $10^{16}$ - $10^{18}$   $\text{cm}^{-3}$ , carrier mobility  $114 \text{ cm}^2/\text{v-sec}$  at density  $2 \times 10^{17} \text{ cm}^{-3}$ , and resistivity  $0.2 \text{ ohm-cm}$  at room temperature, with a gallium arsenide content of 6 mol.%. This report was presented by N. P. Sazhin. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut red-kometallicheskooy promyshlennosti (State Scientific-Research and Design Institute of the Rare-Metal Industry)

SUBMITTED: 23Dec64

44.55

ENCL: 00

SUB CODE: SS

NR REF SOV: 002

OTHER: 009

*(Signature)*

Card 2/2

L 10860-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/JW

ACC NR: AP5028718

SOURCE CODE: UR/0363/65/001/011/1892/1897

AUTHOR: D'yakonov, L. I.; Kistova, Ye. M.; Maslov, V. N.; Sakharov, B. A.

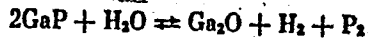
ORG: Giredmet

TITLE: Study of the transport of GaP during epitaxial growing in a moist hydrogen atmosphere

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 11, 1965, 1892-1897

TOPIC TAGS: gallium compound, phosphide, epitaxial growing

ABSTRACT: A theoretical and experimental study of the kinetic relationships governing the transport of gallium phosphide in epitaxial growing was made in a system where the substrate and source were located close to each other, i. e., the arrangement employed in the sandwich method. The assumptions made by R. F. Lever (*J. Chem. Phys.* 37, 1174, 1962) were checked for the transport of GaP, which in moist hydrogen can be represented as



and found to be correct. A computational formula is derived which shows that the transport velocity is directly proportional to the temperature gradient and square root of the water vapor pressure, and depends almost exponentially on the temperature.

Card 1/2

UDC: 546.681'181.1:548.55

56  
55  
B  
27

L 10866-66

ACC NR: AP5028718

The activation energy is equal to one-half of the change in the enthalpy of the above transport reaction. Orig. art. has: 3 figures, 14 formulas.

SUB CODE: 20,11,07/    SUBM DATE: 23Jun65/    ORIG REF: 005/    OTH REF: 008

HW  
Card 2/2



L 10235-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) LIP(c) JD/GG

ACC NR: AP6001232

SOURCE CODE: UR/0363/65/001/012/2154/2157

AUTHOR: D'yakonov, L. I.; Lishina, A. V.; Maslov, V. N.; Nashel'skiy, A. Ya.; Sakharov, B. A.

68  
B

ORG: Giredmet

TITLE: Epitaxial growing of single crystals of gallium phosphide-gallium arsenide solid solutions

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 1, no. 12, 1965, 2154-2157

TOPIC TAGS: single crystal, single crystal growth, epitaxial growing, chemical transport reaction, gallium arsenide, gallium phosphide, quasibinary solid solution, semiconductor single crystal

ABSTRACT: Single crystal epitaxial layers of  $GaP_xAs_{1-x}$  solid solutions have been deposited on GaAs single crystal wafers of a given crystallographic orientation by a chemical-transport reaction in a close-spaced system (sandwich method). The purpose of the work was to grow  $GaP_xAs_{1-x}$  layers thick enough to be used separately from the substrate in various semiconductor devices of the most advanced type. References to Western sources suggested the use of  $GaP_xAs_{1-x}$  solid solutions in laser diodes, luminescent diodes with noncoherent emission characteristics, and in light modulating devices. Earlier, the sandwich method was successfully applied by Soviet scientists

Card 1/2

UDC: 546.681'181.1+546.681.191

10435-85

ACC NR: AP6001232

to deposition of thick GaP epitaxial layers [N. P. Sazhin, V. N. Maslov. DAN SSSR, 160, 171 (1965)]. The close-spaced system used in the present study was similar to that described by F. H. Nicoll [J. Electrochem. Soc., 110, 1165 (1963)]. The source material was a ground mixture of GaAs and GaP crystals, which was placed in a cavity on the surface of the lower graphite block. Water vapor carried by a stream of hydrogen was the transporting medium. The substrate was heated in a vertical resistance furnace to a maximum of 880C; the temperature gradient between the source and the substrate blocks was 10—20C. The growth rate was 7—15  $\mu$ /hr. Under the above conditions, the single crystal epitaxial  $\text{GaP}_x\text{As}_{1-x}$  mirror-like layers, up to 700  $\mu$  thick and to 3  $\text{cm}^2$  in area, were prepared on (111)B GaAs substrate. Composition of the layers was dependent on the composition of the charge. Transport of components between the source and the substrate was accomplished in the 1:1 ratio, if the substrate was maintained at 872—875C. Therefore, a given ratio of the components could be obtained over the entire composition range of  $\text{GaP}_x\text{As}_{1-x}$  solid solutions ( $x = 0-1$ ). The problem was discussed of the application of this theoretically anomalous, transport of components to other semiconductor quasibinary systems. Orig. art. has: 1 figure.

[JK]

SUB CODE: 20 SUBM DATE: 07Jun65/ ORIG REF: 003/ OTH REF: 017/ ATD PRESS:

4163

Card

2/2

USSR /Diseases in Animals. Diseases Caused by Protozoa R

Abs Jour: Ref Zhur-Biologiya, No 16, 1958, 74230

Author : D'yakonov, L. P.

Inst : All-Union Institute of Experimental Veterinary  
Medicine

Title : On the Spontaneous Infection of Merino Sheep in the  
Nogayskaya Steppe with Hemosporidiosis

Orig Pub: Tr. Vses. in-ta eksperim. veterinarii, 1957, 21,  
171-176

Abstract: No abstract

Card 1/1

D'YAKONOV, L.I., aspirant

Geographical distribution of anaplasmosis of sheep in the  
U.S.S.R. Veterinariia 35 no.11:17-19 N '58.      (MIRA 11:11)

1. Laboratoriya protozoologii Vsesoyuznogo instituta eksperimental'noy  
veterinariii.  
    (Anaplasmosis)      (Sheep--Diseases and pests)

D'YAKONOV, L.P.

Acute theileriasis in sheep. K.Raghvachary, M. Reddy. Reviewed  
by L.P.D'iakonov. Veterinariia 36 no.1:88 Ja '59.  
(MIRA 12:1)

(Theileriasis) (Raghvachary, K.) (Reddy, M.)

D'YAKONOV, L.P., aspirant

Role of the tick *Rhipicephalus Turanicus* B. Pom., 1940 in the  
epizootiology of hemosporidiosis in sheep [with summary in English].  
Veterinariia 36 no.3:30-32 Mr '59. (MIRA 12:4)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.  
(Ticks as carriers of disease) (Hemosporidia)  
(Sheep--Diseases and pests)

D'YAKONOV, L. P., Cand Vet Sci (diss) -- "Investigation of babesiasis, anaplasmosis, and theileriasis of merino and coarse-wooled sheep". Moscow-Kuz'minki, 1960. 20 pp (All-Union Inst of Experimental Vet Med of the All-Union Order of Lenin Acad Agric Sci Im V. I. Lenin), 180 copies (KI, No 14, 1960, 135)

AKULOVA, N.S., kand.veterin.nauk; D'YAKONOV, L.P., kand.veterin.nauk; KUTASHOVA,  
A.N., mladshiy nauchnyy sotrudnik; KAZAKOV, M.A., mladshiy nauchnyy so-  
trudnik

Use of chlortetracycline against anaplasmosis in sheep. Veterinariia 40  
no.9:29-31 S 63. (MIRA 17:3)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.



D'YAKONOV, L.P., kand. veterin. nauk

Detecting the blood parasite Eperythrozoon ovis in sheep.  
Veterinariia 41 no.2:62-63 F '64. (MIRA 17:12)

1. Vsesoyuznyy institut eksperimental'noy veterinarii.

~~DIKONOV, MIKHAIL ALEKSEEVICH~~  
DIKONOV, MIKHAIL ALEKSEEVICH. ...Puteshestviia v poliarnye strany. Tret'e, dopolnennoe izdanie pod red. V.IU. Mese. Leningrad, Izdatel'stvo Vsesoiuznogo arkticheskogo instituta, 1933. 207 p. Bibliography: p. 189-207. NN DLC: 6580.D5 1933

SO: LC, Soviet Geography: Part I, 1951, Uncl.

D'YAKONOV, M. D.; LASTOVENKO, V. A., nauchnyy sotrudnik

How we mechanize vegetable gardening. Mekh. sil'. hosp. 14  
no.2:27-29 F '63, (MIRA 16:4)

1. Glavnyy inzh. sovkhoza "Komunar" Khar'kovskoy oblasti  
(for D'yakonov). 2. Ukrainskiy nauchno-issledovatel'skiy insti-  
tut ovoshchevodstva i kartofelya (for Lastovenko).

(Vegetable gardening)  
(Agricultural machinery)

BRIL', M.T.; D'YAKONOV, M.F.

Prevention of pyoderma at the construction of the V. I. Lenin Volga-Don navigable canal. Vest. vener., Moskva no. 1:23-25 Jan-Feb 1953.

(CJML 24:2)

1. Professor for Brill'; Candidate Medical Sciences for D'yakonov.
2. Of the Dermato-Venereological Clinic (Director -- Prof. M. I. Brill'), Stalingrad Medical Institute (Director -- Docent V. S. Yurov).

*BRIL', M. F.*  
BRIL', M.T., professor; D'YAKONOV, M.F., dotsent.

Results of treating pregnant syphilitics according to the 1949  
systems. Vest.ven.i derm. no.2:43-46 Mr-Apr '54. (MLRA 7:4)

1. Iz kozhno-venerologicheskoy kliniki (direktor - professor M.T.Brill')  
Stalingradskogo meditsinskogo instituta (direktor - professor V.S.Yurov).  
(Syphilis) (Pregnancy, Complications of)

D'YAKONOV, M.F., dotsent

Immediate and late results of penicillin-pyrogenic therapy of rabbits  
infected with syphilis. Vest.derm.i ven. 33 no.5:83-86 S-0 '59.

(MIRA 13:2)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zaveduyushchiy -  
prof. M.T. Brill') Stalingradskogo meditsinskogo instituta (direktor -  
prof. V.S. Yurov).

(SYPHILIS exper.)

(PENICILLIN pharmacol.)

(FEVER THERAPY)

D'YAKONOV, M. F.

Doc Med Sci - (diss) "Experimental and clinical observations on penicillin-pyrogenic and mixed therapies for various forms of syphilis." Orenburg, 1961. 17 pp; (First Leningrad Medical Inst imeni Academician I. P. Pavlov); 300 copies; price not given; (KL, 5-61 sup, 199)

D'YAKONOV, M. F., dotsent

Results of treating syphilitic patients with penicillin-pyrogen therapy in association with arsenic preparations and heavy metal salts. Vest. dermat. i ven. 34 no.1:47-54 Ja '60. (MIRA 14:12)

1. Iz kafedry kozhnykh i venericheskikh bolezney (zav. - prof. M. T. Brill'), Stalingradskogo meditsinskogo instituta (dir. - prof. V. S. Yurov).

(SYPHILIS) (PENICILLIN) (FEVER THERAPY)



~~D'YAKONOV, M.G.~~, inzhener-kapitan 1 ranga; LADYGIN, V.I., inzhener-kapitan 2 ranga, redaktor; BERDNIKOVA, Ye.B., tekhnicheskii redaktor.

[Designs of internal combustion marine engines; album of drawings.] Konstruktsii korabel'nykh dvigatelei vnutrennego gorenia; al'bom risunkov. Moskva, Voennoe izd-vo Ministerstva vooruzhennykh sil SSSR, 1946. 95 p. (MLRA 8:3)  
(Marine engines)

L 14827-65 EWA(k)/EWT(1)/EEG(k)-2/T/EEG(b)-2/ENF(k)/EWA(m)-2 Po-4/PI-4/PI-4  
IJP(c)/AFWL/ASD(a)-5/SSD/AFETR/ESD(gs)/ESD(t) WG/JHB  
ACCESSION NR: AP4047915 S/0056/64/047/004/1483/1495

AUTHORS: D'yakonov, M. I.; Perel', V. I.

3

TITLE: Coherence relaxation during diffusion of resonance radiation

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47,  
no. 4, 1964, 1483-1495

TOPIC TAGS: relaxation kinetics, relaxation time, resonance radia-  
tion, radiation diffusion, density matrix, polarization

ABSTRACT: Equations are derived for the time variation of the off-  
diagonal elements (in terms of the magnetic quantum numbers) of the  
density matrix of excited gas atoms in the absence of radiation dif-  
fusion. In the case when the density matrix is diagonal, these  
equations coincide with the known radiation diffusion equation. It  
is shown that in the case of complete capture of the radiation there  
are two relaxation times for linear and circular polarization, re-

Card 1/2

L 14827-65

ACCESSION NR: AP4047915

spectively, and expressions for these times are given. Approximate expressions are obtained for these relaxation times and also for the decay time of the excited state when the capture is incomplete. The calculated pressure dependence agrees with the experimental data. The case of radiation diffusion in a limited volume, for which the expressions become very complicated, is taken into account in a manner similar to that used by J. P. Barrat (J. Phys. Rad. v. 20, 657, and 633, 1959). Orig. art. has: 36 formulas and 6 figures.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR (Physicctechnical Institute, Academy of Sciences SSSR)

SUBMITTED: 17Apr64

ENCL: 00

SUB CODE: NP, OP

NR REF SOV: 007

OTHER: 008

Card 2/2

LF(C)  
ACCESSION NR: AP5001844

S/0056/64/047/006/2213/2221

AUTHOR: D'yakonov, M. I.

TITLE: Theory of resonant scattering of light by a gas in the presence of a magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 47, no. 6, 1964, 2213-2221

TOPIC TAGS: light scattering, resonant scattering, double resonance, parametric resonance, polarization

ABSTRACT: Formulas for the intensity of the light scattered by a gas in a magnetic field are derived for arbitrary total angular momenta of the normal and excited states. Earlier theoretical studies of these effects were confined to the case in which the total angular momentum of the excited level was unity and that of the lower level zero. Certain resonance effects (double resonance, excitation with modulated light, parametric resonance) for arbitrary angular momenta are also considered, and the sorts of experiments in which the relaxation times

Ccrd 1/2

L 22182-65

ACCESSION NR: AP5001844

2

for circular and linear polarization can be observed are indicated. "The author thanks V. I. Perel' for suggesting the topic and for help with the work." Orig. art. has: 29 formulas.

ASSOCIATION: Fiziko-tehnicheskiy institut im. A. F. Ioffe Akademii nauk SSSR  
(Physicotechnical Institute, Academy of Sciences SSSR).

SUBMITTED: 17Jun64

ENCL: 00

SUB CODE: OP

NR REF SOV: 004

OTHER: 007

Card 2/2

APPROVED FOR RELEASE: 08/22/2000

APPROVED FOR RELEASE: 08/22/2000

8/0056/65/048/001/0345/0352

APPROVED FOR RELEASE: 08/22/2000

TITLE: Coherence relaxation of excited atoms in collisions

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 48, no. 1, 1965,

CLASS: atomic collision, relaxation time, polarization, excited atom

ABSTRACT: This is an extension of earlier research by the authors (ZhETF, v. 47, dealing with relaxation of coherence resulting from the dragging of The present paper shows that there is an analogous situation in relaxation due to collisions. The problem treated is that of the nondiagonal density matrix of excited atoms in a gas, owing to collisions between the excited atoms and normal atoms. The relaxation term is handled by changing to a new representation. The new diagonal elements have the physical meaning of inverse relaxation times of the polarization (and plane). The calculation of the relaxation time is carried through

L 31954-65

2

ACCESSION NR: AB5004409

to conclusion for the case in which the total angular momentum of the excited state is unity and that of the ground state is zero. This occurs when light is scattered by vapor of even isotopes of cadmium or mercury. "We thank I. N. Band for his contribution in the numerical calculations." Orig. acc. has: 30 formulas.

Source: Fiziko-tehnicheskoy Institut im. A. F. Ioffe Akademii Nauk SSSR  
Physical Institute, Academy of Sciences SSSR

RECEIVED: 14 Jul 64

ENCL: 00

SUB CODE: HP, OP

2

OTHER: 006

2/2

L 8876-66 EEC(k)-2/EWA(h)/EWP(k)/EWT(1)/FBD/EWA(m)-2/T DJP(G)/SCTR

ACC NR: AP5026610

SOURCE CODE: UR/0056/65/049/004/1169/1179

AUTHOR: <sup>44,55</sup> D'yakonov, M. I.

79  
8

ORG: <sup>44,55</sup> Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences, SSSR (Fiziko-  
tekhnicheskiy institut Akademii nauk SSSR)

TITLE: Theory of a gas laser in a weak longitudinal magnetic field

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 4, 1965, .  
1169-1179

TOPIC TAGS: *gaseous state laser, coherent light, Zeeman effect, monochromatic radiation, longitudinal magnetic field, weak magnetic field* 21,44,55

ABSTRACT: The emission from a gas laser in a longitudinal magnetic field is analyzed under the assumption that the Zeeman splitting is much smaller than the Doppler line width. The frequency of the resonator is assumed to be the same as the atomic frequency in the absence of a magnetic field. The polarizability of the gas in a magnetic field is evaluated with an accuracy to terms quadratic in the electric field strength. The threshold regime is investigated under the assumption that the Q factors for oscillations polarized along the x axis and along the y axis are different. It is shown that as long as the magnetic field strength is smaller than some critical value  $H_0$  the radiation is linearly polarized and the frequency is constant. The polarization direction rotates in the magnetic field from 0 to 45°. At magnetic field strengths exceeding the critical value, right-hand and left-hand elliptically polari-

Card 1/2

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L 8876-66

ACC NR: AP5026610

zed oscillations with different frequencies arise. The dependence of the critical field, rotation of direction of polarization, and frequency shifts on pumping exceeding the threshold value are qualitatively investigated. At sufficiently intense pumping the heating frequency for  $H > H_0$  depends on the magnetic field strength in a non-monotonous fashion, and a second region of linear polarization appears. The results of the theory agree with the experiments. Orig. art. has: 34 formulas and 1 figure.

[CS]

SUB CODE: 20/ SUBM DATE: 17Apr65/ ORIG REF: 001/ OTH REF: 004/ ATD PRESS:

4152

Card 2/2

*ndo*

L 16089-66 EWT(1) IJP(c) WW/CG

ACC NR: AF5027658

SOURCE CODE: UR/0051/65/019/005/0662/0667

AUTHOR: D'yakonov, M. I.

41  
40  
B

ORG: none

TITLE: Hyperfine structure measurement by resonance scattering of modulated light

SOURCE: Optika i spektroskopiya, v. 19, no. 5 1965, 662-667

TOPIC TAGS: optics, light scattering, light modulation, resonance scattering, nuclear spin, modulated light 21,44,55

ABSTRACT: The resonance scattering of modulated light was investigated under the condition when the width of the line of the source was greater than the hyperfine fission. The formula obtained for the intensity of the scattered light under arbitrary electronic moments of the principal and excited states and arbitrary nuclear spin was:

$$I_0 \sum_{F'G} \langle Fm || F'm' \rangle (e_{k\lambda}, \langle F'm' | d | G\mu \rangle) (e_{k\lambda}, \langle Fm | d | G\mu \rangle)^*$$

Card 1/2

UDC: 535.338.333+535.36.001.1

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ACC NR: AF5027658

where  $I_0$  is a constant of proportionality;  $\langle F_m | f | F'_m \rangle$  is the density matrix of the excited atoms;  $e_{k\lambda}$  is the unit polarisation vector;  $\langle F_m | d | G \mu \rangle$  is the matrix element of the dipole moment operator of the atom. The intensity of the scattered light contained the modulated component which with respect to resonance depended on the light frequency. Moreover, the resonances occurred when the modulation frequency coincided with the distances between sub-levels of the hyperfine structure of the excited state. Rules of selection and relative resonance intensities were also obtained. The author expresses thanks to V.I. Perel for help. Orig art. has: 2 tables and 23 formulas.

SUB CODE: 20/ SUBM DATE: 12Sep64/ ORIG REF: 006/ OTH REF: 003

Card 2/2 SM

ACC NR: AP6007226

SOURCE CODE: UR/0056/66/050/002/0448/0456

AUTHOR: D'yakonov, M. I.; Perel', V. I.

46  
B

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences  
SSSR (Fiziko-tehnicheskij institut Akademii nauk SSSR)

TITLE: Dependence of the radiation emission intensity of a gas laser  
on magnetic field strength

25,4

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 50,  
no. 2, 1966, 448-456

TOPIC TAGS: gas laser, laser emission, laser radiation

ABSTRACT: A simplified model used to investigate the dependence of emission intensity of a gas laser on the longitudinal and transverse magnetic fields makes it possible to interpret this phenomenon on the basis of notches in the gain-frequency characteristic. In the model, the area of these notches is proportional to the intensity of radiation emission. The intensity of radiation emission has a minimum at a zero magnetic field and a second minimum when the Zeeman splitting of the levels  $\Omega$  coincides with the detuning of the resonator  $\delta$ . At  $\Omega \sim \delta$  a nonmonotony may appear which depends on a shift of the generation frequency by the magnetic field analogous to that which takes place with

Card 1/2

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ACC NR: AP6007226

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a weak magnetic field. This nonmonotony appears only at sufficiently large pumping. In a transverse magnetic field, in addition to the peculiarities at  $\Omega = 0$  and  $\Omega = \delta$ , a minimum of radiation emission can also appear at  $\Omega = 2\delta$ , i.e., the emission intensity of radiation has a minimum when the Zeeman splitting of the levels equals a double detuning of the resonator. This last peculiarity can appear only if in the laser's emission the light of both polarizations  $\chi_1$  and  $\chi_{-1}$  ( $\chi_1, \chi_{-1}$  are polarizations along the left and the right circle) is present. The intensity minima can be interpreted as being the result of a merging of the notches. A nonmonotonic dependence of generation frequency on the magnetic field can also occur during merging of the notches. Orig. art. has: 24 formulas and 4 figures. [JA]

SUB CODE: 20/ SUBM DATE: 02Aug65/ ORIG REF: 004/ OTH REF: 005  
ATD PRESS: 4219

Card 212 BLG

L 25954-66 FBD/ERT(1)/EEG(k)-2/T/EWP(k)/EWA(h) IJP(c) WQ

ACC NR: AP6011559

SOURCE CODE: UR/0051/66/020/003/0472/0480

AUTHOR: D'yakonov, M. I.; Perel', V. I.

ORG: none

TITLE: Contribution to the theory of a gas laser in a magnetic field

SOURCE: Optika i spektroskopiya, v. 20, no. 3, 1966, 472-480

TOPIC TAGS: gas laser, laser theory, dipole moment, light polarization, magnetic field

ABSTRACT: To explain the increase in laser radiation power in a weak longitudinal magnetic field, the nonmonotonic dependence of the beat frequency between the left- and right-polarized oscillations on the magnetic field in a laser, or the influence of the longitudinal and transverse magnetic fields on the polarization of a laser emission, the authors calculate the dipole moment induced in the gas by the field of a standing electromagnetic wave in the presence of a magnetic field. This approach, a qualitative description of which was presented by the authors earlier (ZhETF v. 50, 448, 1966), obviates the need for rigorous application of Maxwell's equations and the associated mathematical difficulties. To obtain quantitative results, the authors calculate the polarizability tensor of the gas for arbitrary moments of the upper and lower states and for arbitrary direction of the magnetic field. The dipole moment is calculated accurate to cubic terms in the electric field of the wave under the assumption that the g-factors of the working levels are equal. The results are then used

Card 1/2

UDC: 621.375.9: 535.001.1

L 25954-66

ACC NR: AF6011559

to obtain the stationary states of the electromagnetic field in the laser and to determine the stability of these states in longitudinal and transverse magnetic fields. Single-mode operation is considered, and it is assumed that in the absence of a magnetic field there is no preferred polarization direction. Stationary solutions are then obtained for the laser equation in the longitudinal and transverse magnetic fields, and the stability of the different oscillation modes is studied. Orig. art. has: 32 formulas and 1 table. [02]

SUB CODE: 20/ SUBM DATE: 27Jul65/ ORIG REF: 006/ OTH REF: 010/ ATD PRESS: 4257

Card 2/2 FID

L 05782-07 EWT(1) AT

ACC NR: AP6031450 SOURCE CODE: UR/0056/66/051/002/0612/0616

AUTHOR: D'yakonov, M. I.

70  
B

ORG: Physicotechnical Institute im. A. F. Ioffe, Academy of Sciences SSSR  
(Fiziko-tehnicheskiy institut Akademii nauk SSSR)

TITLE: Splitting of ion lines due to the ion rotation in a magnetic field

SOURCE: Zh eksper i teor fiz, v. 51, no. 2, 1966, 612-616

TOPIC TAGS: ion interaction, ion rotation, cyclotron, magnetic field, spectral line, radiation, Doppler effect, Zeeman effect

ABSTRACT: The author shows that if the cyclotron frequency of ion rotation in a magnetic field  $\Omega$  exceeds the natural width of the ion spectral line  $\gamma$ , then the Doppler contour of each Zeeman component in the radiation, directed across the magnetic field, should split into a number of peaks. The distance between neighboring peaks is equal to  $\Omega$ , and the width of each peak is determined by the natural width of line  $\gamma$ . The author thanks V. I. Perel and Ye. Ya. Shneyder for valuable advice and discussions. Orig. art. has: 1 figure and 9 formulas. [Based on author's abstract]

SUB CODE: 20/ SUBM DATE: 12Mar66/ OTH REF: 002/

Card 4/1 eqe



D'YAKONOV, M.M.

Speech presented at a meeting on the history of Central Asiatic peoples of the pre-October period. Sov.etn. no.3:124-128 '54.  
(Soviet Central Asia--History) (MIRA 7:11)

D'YAKONOV, M.M. [deceased]

Preliminary results of the Tajik archaeological expedition in 1953.  
Dokl. AN Tadjh. SSR no. 11:9-15 '54. (MLRA 9:9)

1. Institut istorii, arkhologii i etnografii AN Tadjhikskoy SSR.  
Predstavleno deystvitel'nym chlenom AN Tadjhikskoy SSR, prof. A.A.  
Semenovym.  
(Tajikistan--Excavations (Archaeology))

D'YAKONOV, M.M.[deceased]; LITVINSKIY, B.A.

Literature on the archaeology of Tajikistan published in 1953.  
Dokl.AN Tadzh.SSR no.11:81-84 '54. (MLRA 9:9)

1.Institut istorii, arkhologii i etnografii AN Tadzhikskoy SSR.  
Predstavleno deystvitel'nyim chlenom AN Tadzhikskoy SSR, prof.  
A.A. Semenovym.  
(Bibliography--Tajikistan--Archaeology) (Tajikistan--Archaeology--  
Bibliography)

*D'yakonov M.V.*

PANFILOVA, L.I., kandidat tekhnicheskikh nauk; D'YAKONOV, M.V., inzhener.

Experience with "cold" concrete. Transp. stroi. 7 no.2:2-5 P '57.  
(Concrete construction) (MLRA 10:4)

Y  
D'YAKONOV, N.

Dogovornaia kampania - moguchee sredstov privlecheniia gruzov na vodu. [The campaign for contracts is a powerful medium of attracting freight for water transportation]. (Vodnyi transport, 1935, no. 2, 7-9).

DLC: HE561.R8

Dovit'sia korenogo pereloma v navigatsii. [To bring about drastic changes in navigation]. (Vodnyi transport, 1937, no. 6, p. 14-18).

DLC: HE561. R8

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress Reference Department, Washington, 1952, Unclassified.

BARDIN, I.; BELAN, R.; BEKHTIN, N.; BOYKO, V.; BORISOV, A.; BYCHKOV, V.;  
VASILENKO, S.; VINOGRADOV, V.; VISHNEVSKIY, A.; VODNEV, G.; DVORIN,  
S.; DZHAPARIDZE, Ye.; DIDENKO, V.; D'YAKONOV, N.; ZHURAVLEV, S.;  
ZAKHAROV, A.; IVANOV, I.; KIRSANOV, M.; KOLYADA, G.; KOROBV, P.;  
LESKOV, A.; LUKICH, L.; LYUBIMOV, A.; MELESHKIN, S.; MYRTSYMOV, A.;  
PERTSEV, M.; PETRUSHA, F.; PETERSKIY, A.; POPOV, I.; RAYZER, D.;  
ROZHKOV, A.; SAPOZHNIKOV, L.; SEDOV, P.; SOKOLOV, P.; TEVOSYAN, I.;  
TIKHONOV, N.; TISHCHENKO, S.; FILIPPOV, B.; POMENKO, N.; SHELKOV,  
A.; SHREMET'YEV, A.

Fedor Aleksandrovich Merkulov. Koks i khim.no.7:62 '56. (MLRA 9:12)  
(Merkulov, Fedor Aleksandrovich, 1900-1956)

D'YAKONOV, N.A., kandidat tekhnicheskikh nauk; ALENDER, I.Z., redaktor;  
BORISOV, A.S., tekhnicheskii redaktor.

[Manufacture of grand and upright pianos.] Proizvodstvo roialnoi  
i pianino. Moskva, Rosgiznestprem, 1955. 370 p. (MLRA 9:1)  
(Piano--Construction)

~~D'YAKONOV, Nikolay Nikolayevich, kandidat ekonomicheskikh nauk; KHOTBYEV,~~  
~~A.A., redaktor; GUBIN, M.I., tekhnicheskiy redaktor~~

[From a backward peasantry to a country of large-scale socialist farming] Iz otstaloj melkokrest'ianskoi - v stranu krupnogo sotsialisticheskogo sel'skogo khoziaistva. Moskva, Izd-vo "Znanie," 1957. 45 p. (Vsesoiuznoe obshchestvo po rasprostraneniu politicheskikh i nauchnykh znaniy. Ser. 3, no.14) (MLRA 10:9)  
(Agriculture)



D'YAKONOV, N.N.; MOROZOV, V.D.; LUK'YANOVA, A.I.

Using the optical polarization method for studying the distribution  
of stresses in benches of open pit sides. Trudy Inst.gor.ce 'a AN  
Kazakh.SSR 14:108-115 '64. (MIRA 18:1)

1. Gornyy otdel AN Uzbekskoy SSR.

SOV/137-57-10-18802

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 52 (USSR)

AUTHOR: D'yakonov, N.S.

TITLE: Ways to Cut Pig-iron Cost (Rezervy snizheniya sebestoimosti chuguna)

PERIODICAL: Tr. Nauchn.-tekhn. o-va chernoy metallurgii, 1956, Vol 8, pp 518-523

ABSTRACT: An analysis of calculations shows that substantial possibilities for the cutting of pig-iron costs (PIC) exist at our plants. One of the more important possibilities for cutting PIC lies in reduction of consumption of raw material, the cost of which is 75-90% of PIC. Raw material consumption may be cut by reducing carry-off of dust, savings in coke consumption, improvement in sinter strength, and reduction in losses of coke in grinding. Another and most important source for reduction in PIC is reduction in conversion costs, which come to 10-20% of PIC. The main reason for high conversion expenditures is excess labor, the high costs of the services of power, transportation, and repair departments, unsatisfactory utilization of blast-furnace capacities, and large losses in blast. Of high

Card 1/2

SOV/137-57-10-18802

' Ways to Cut Pig-iron Cost

significance in reducing PIC is complete utilization of smelting by-products, i.e., gas and slag. At forward-looking plants (the Magnitogorsk Metallurgical Kombinat and the Kuznetsk Metallurgical Kombinat) by-product value completely balances out conversion costs. Yet at most plants 50-70% of the blast-furnace slag is not utilized, and at some ~ 30% of the blast-furnace gas is also not employed.

F.K.

Card 2/2

137-50-6-11569

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 46 (USSR)

AUTHOR: D'yakonov, N.S.

TITLE: Economic Problems of Steel Production (Voprosy ekonomiki proizvodstva stali)

PERIODICAL: Tr. Nauchno-tekhn. o-va chernoy metallurgii, 1957, Vol 18, pp 126-136

ABSTRACT: During the past Five-Year Plan the cost (C) of production in ferrous metallurgy showed a steady decline. However, the unit cost of 1 ton of steel varies very widely from plant to plant and department to department, e.g. taking the Magnitogorsk Metallurgical Kombinat (MMK) as 1.0, Novo-Tagil is 1.3, Makeyevka is 1.36, "Zaporozhstal'" is 1.27, im. Dzerzhinskiy is 1.31, the Chelyabinsk Metallurgical Plant (ChMZ) is 1.48. In the C structure of open-hearth carbon steel (OHCS), the chief item is the cost of the charge of metal, this being 70-72% in modern shops and 52-59% in old ones. The volume of the metal charge per ton of steel in 1956 at various plants ranged from 1076-1160 kg for molten charging and 1129-1152 kg for solid charging. Rejects constituted 4-23 kg and losses came

Card 1/3

137-53-6-11569

Economic Problems of Steel Production

to 49-92 kg per ton of steel. The second item in the C structure of OHCS comprises the expenses on addition materials (ore, fluxes); it came to 1.2-7% of the C of OHCS. The next item comprises expenses on conversion, which fluctuated from 18 to 46% of the C of OHCS. For furnaces of identical capacity at various plants, the relative magnitude of conversion expenses came to 1.0 for the Kuznetsk Metallurgical Kombinat (KMK), 1.09 for the MMK, 1.52 at "Zaporozhstal'", 1.66 at Novo-Tagil, and 2.31 at ChMZ. A considerable portion of the conversion cost represents that of the fuel, which is 5-18% of the C of OHCS. The consumption of conventional fuel per ton of steel is from 144 to 378 kg, and at specific plants is as follows, in kg: MMK 144, KMK and "Zaporozhstal'" 149, ChMZ 229, and im. Petrovskiy 196. Power represents 0.4-3.3% of the C of OHCS, the consumption in kwh per ton of steel being 4.7 at KMK, 5.8 at MMK, 7.6 at Voroshilovsk, and 10.5 at ChMZ. Direct labor costs (for production workers) are in the range of 1.5-7% of the C of OHCS. The cost of depreciation of replaceable equipment ranged from 1.6 to 5.9% of the C of OHCS, it was governed largely by the cost and unit consumption of molds, representing (in kg/t) 16-18 at KMK and MMK, 27 at the im. Voroshilov Plant, 29 at Red October, and 25 at im. Petrovskiy. Maintenance costs ranged from 6 to 13.8% of the C of OHCS. Unit consumption of refractories at various plants was (in kg/t): 22.5 at Card 2/3

137-58-6-11569

Economic Problems of Steel Production

at KMK, 25.6 at MMK, 41.3 at the im. Dzerzhinskiy plant, 36.8 at Makeyevka and 34.1 at Voroshilovsk. Transportation expenses at various plants varied considerably, constituting, for example, 1.1% at KMC and 2.1% at Makeyevka. The final item in the C structure of OHCS represents general plant-overhead costs, amounting to 1.6-3.9%.

B.F.

1. Steel industry--USSR
2. Steel industry--Economic aspects

Card 3/3

SAMARIN, A.M.; YEFIMOV, L.M.; VESEIKOV, N.G.; ORMAN, R.Z.; SHABANOV, A.N.;  
MOROZENSKIY, L.I.; GRANAT, I.Ya.; TOCHINSKIY, A.S.; ALYAVDIN, V.A.;  
DANILOV, P.M.; PETRIKEYEV, V.I.; POPOV, B.N.; BOBKOV, T.M.;  
ROSTKOVSKIY, S.Ye.; GAVRISH, D.I.; D'YAKONOV, N.S.; TIMOSHPOL'SKIY,  
M.N.; ROMANOV, V.D.; POCHTMAN, A.M.; MELESHKO, A.M.; PODGORETSKIY,  
A.A.; OFENGENDEN, A.M.; BRONSHTeyN, V.M.; PRIDANTSEV, M.V.; LIVSHITS,  
G.L.; ROZHKOV, V.A.; RUTES, V.S.

Reports (brief annotations). Biul. TSNIICM no.18/19:15-16 '57.  
(MIRA 11:4)

1. Chlen-korrespondent AN SSSR (for Samarin). 2. Tsentral'nyy  
nauchno-issledovatel'skiy institut chernoy metallurgii (for Rutes,  
Rostkovskiy, Pridantsev, Livshits, Rozhkov). 3. Stal'proyekt (for  
Shabanov). 4. Kuznetskiy metallurgicheskiy kombinat (for Alavdin,  
Danilov, Petrikeyev). 5. Zavod "Elektrostal'" (for Popov).  
6. "Dneprospetsstal'" (for Bobkov). 7. Glavogneupor Ministerstva  
chernoy metallurgii SSSR (for Gavrish). 8. Planovoye upravleniye  
Ministerstva chernoy metallurgii SSSR (for D'yakonov). 9. Otdel  
rabochikh kadrov, truda i zarplaty Ministerstva chernoy metal-  
lurgii SSSR (for Timoshpol'skiy). 10. Glavvtorchernet Ministerstva  
chernoy metallurgii SSSR (for Romanov). 11. Giprestal' (for  
Pochtman). 12. Zavod im. Voroshilova (for Meleshko). 13. Zavod  
"Zaporozhstal'" (for Podgoretskiy). 14. Stalinskiy metallurgicheskiy  
zavod (for Ofengenden). 15. Nizhne-Tagil'skiy metallurgicheskiy  
kombinat (for Bronshteyn).

(Steel--Metallurgy)

D'YAKONOV, G. B.: Master Biol Sci (diss) -- "The arterial vessels of the muscle tendons acting on the toes of the posterior extremities of domestic animals". Moscow, 1958. 15 pp (Moscow Vet Acad of the Min Agric USSR), 140 copies (KL, No 6, 1959, 129)



D'YAKONOV, P.

"Nature in the Moscow area," Sev. foto 17 no.3:68-69 Mr '57.  
(Moscow--Photography--Exhibitions)      (MIRA 10:6)

D'YAKONOV, P.

Work contribution of the Kuban Basin transportation  
employees. Rech. transp. 22 no.4:6 Ap '63. (MIRA 16:4)

1. Nachal'nik Kubanskogo lineynogo parokhodstva.

(Kuban--Inland water transportation)

D'YAKONOV, P.A.

D'YAKOV, P.A.

"Geography lessons in the 7th class." A.A.Dommeti, I.I.IUrkevich.  
Reviewed by P.A.D'iakonov. Geog.v shkole 18 no.4:67-69 J1-Ag'55.

(MIRA 8:10)

(Dommeti,A.A.) (IUrkevich,K.I.) (Geography--Studying and teaching)

D'YAKONOV, P.A.

Use of practical application in eighth class geography lessons. Geog.  
v shkole 18 no.5:46-49 S-0 '55. (MIRA 8:12)  
(Geography, Economic--Study and teaching)

D'YAKONOV, P. I. and S. N. SHOPIN

Tekhnimum istopnika. Pod. red. M. M. Shehegoleva. Utverzhdeno v kachestve uchebn. posobia dlia massovykh kvalifikatsii. Moskva, Izd-vo Narkomkhoza RSFSR, 1945. 103 p. illus.

Minimum of technical knowledge for stokers.

DLC: TH7467.S48

SO: Manufacturing and Mechanical Engineering in the Soviet Union, Library of Congress, 1953.

*UL'YANINOV, P.I.*

KISSIN, M.I., kandidat tekhnicheskikh nauk, dotsent; ~~D'YAKONOV, P.I.~~,  
kandidat tekhnicheskikh nauk, dotsent, retsenzent; UL'YANINSKIY,  
S.V., professor, retsenzent; TURKUS, A.V., dotsent, redaktor;  
DAKHNOV, V.S., tekhnicheskiiy redaktor.

[Heating and ventilation] Otoplenie i ventiliatsiia. Pt. 1.

[Heating] Otoplenie. Moskva, Gos. izd-vo stroit. lit-ry, 1947. 353 p.  
(Heating) (MLA 8:2)

D'YAKONOV, P. I.

D'yakonov, P. I. - "Theoretical estimate of convective diaphragm coating apparatus,"  
Sbornik trudov Stroit. in-ta Mosk. soveta, Issue 2, 1948, pp. 72-73

SO: U-3600, 10 July 53, (Letopis i Zhurnal Nayk Stroy, No. 6, 1953).

D'YAKONOV, P. N.

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Lea Poluostrova Kamchatki  
(Forests of the Kamchatka Peninsula, by)  
G. F. Starikov (1) P. N. D'yakonov.  
Moskva, Goslesbumizdat, 1952.

116 (2) p. Illus., Diagr., Map, Tables.

"Literatura": p. 115-(117)



DYAKONOV, I. N.

5727. DYAKONOV, F. N. Lesa Poluostrova Kamchatki. Izd. 2-Ye Pereabot. Khabarovsk, Kn. izd., 1954. 152 s. s Ill.; 1 L. Skem. 20sm. 5,000 Ekz. 4r V per.--Bibliogr; s. ~~143~~-147 (91 Nazv.)-(55-1422 634.94 (57.343.5) (0613.)

SO: Knizhnaya, Letopis, Vol. 1, 1955

*D'YAKONOV, P.N.*

STARIKOV, G.F.; D'YAKONOV, P.N.

Fires in the foliated forests of the Amur Valley. Vop.geog.  
Dal'.Vost.no.3:150-153 '57. (MIRA 10:12)  
(Amur Valley--Forest fires)

*D'YAKONOV, P.N.*

12-1-20/26

AUTHORS: Nikol'skaya, V.V. and Chichagov, V.P.

TITLE: Some New Books from the Magadan Publishing House (O nekotorykh novykh knigakh Magadanskogo knizhnogo izdatel'stva)

PERIODICAL: Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva, 1958, # 1, pp 93 - 95 (USSR)

ABSTRACT: The authors review several books of interest to geographers. "The Chukotka Forests" (Lesa Chukotki) by G.F. Starikov and P.N. D'yakonov represents a collection of material gathered over 10 years of bioecological investigations. The reviewer states that in spite of some deficiencies the book is a valuable scientific work.

"The Chukotka National Okrug" (Chukotskiy natsional'nyy okrug) by I.V. Gushchin and A.I. Afanas'yev contains historical and geographical essays, which are sometimes superficial.

"Agriculture of the Magadan Oblast" (Sel'skoye khozyaystvo Magadanskoy oblasti.) by A.P. Vas'kovskiy, P.P. Pasechnik, S.V. Fadryga, and O.K. Chalenko, tells of the experiences of agricultural workers of the Magadan oblast', which is the more interesting because of the utilization of new areas

Card 1/2

Some New Books From the Magadan Publishing House

12-1-20/26

in the north. In spite of the many of authors the book is a complete and finished work.

"A Volcano in the Polar Region" (Vulkan v. Zapolyar'ye by Ye.K. Ustiyev is a description of a trip to an extinct volcano in the Anyuy river basin which is of great interest to geographers.

AVAILABLE: Library of Congress

Card 2/2

D'YAKONOV, P. P.

PA 23937

USSR/Medicine - Morphology

Nov/Dec 52

"Bourgeois Morphology in a Blind Alley," Prof P. P.  
D'yakonov

"Arkhir Anat, Gistol, i Embriol" Vol 29, No 6,  
pp 90-92

Author states that the subject of morphology was hardly discussed at the 65th session of US anatomists. Reports on a variety of themes were presented but these reports were either attempts at sensationalism or vicious, fanatically reactionary discourses of racialism. Author thinks that this proves that bourgeois morphology has reached the point of crisis and degeneration.

239T37

1. D'YAKONOV, P. P.
2. USSR (600)
4. Nervous System
7. Significance of V. M. Bekhterev's works in the development of neurology in Russia. Arkh. anat. gist. i embr. 30, No. 1, 1953.

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

D'YAKOV, R. P., *Cond Tech Sci* -- (also) "experimental study of a  
centropetal turbine with internal *partial steam feed*  
~~partial steam supply~~." Kiev, 1958.  
10 pp (Min of Higher Education USSR. Kiev Order of Lenin Polytech Inst),  
150 copies (11,44-58,182)

D'YAKONOV, R.I.

KIRILLOV, Ivan Ivanovich, prof.; YABLONIK, Rakhmiyel' Mordukhovich; KARTSEV, Lev Vasil'yevich; GOGOLEV, Ivan Grigor'yevich; KUZ'MICHEV, Ryurik Vladimirovich; KHUTSKIY, Gennadiy Ivanovich; D'YAKONOV, Rostislav Ivanovich; PSHENICHNIY, Victor Dmitriyevich; TVERSHKOV, Aleksandr Aleksandrovich; SHUBENKO, L.A., retsenzent; GWRASIMOVA, D.S., tekhn. red.

[Aerodynamics of the blading of steam and gas turbines] Aerodina-  
mika protechnoi chasti parovykh i gazovykh turbin. Pod red. I.I.  
Kirillova. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-  
ry, 1958. 246 p. (MIRA 11:10)

1. Bryanskiy institut transportnogo mashinostroyeniya (for Kirillov).
2. Chlen-korrespondent Akademii nauk USSR (for Shubenko).  
(Tubromachines--Aerodynamics)



67129

~~8(6)~~ 10.3000

SOV/143-59-11-14/19

AUTHOR: D'yakonov, R.I., Candidate of Technical Sciences

TITLE: The Gas Flow, Limited by Plane Walls, Around Axially Symmetric Bodies

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, 1959, Nr 11, pp 108-114 (USSR)

ABSTRACT: This is a report on a special series of experiments carried out by the laboratory of turbo-engines of the Bryansk Institute of Transportation-Machine Building. The goal of the experiments was to establish the coefficients of frontal resistance of the profiled steam-guiding tubes (having axial symmetry) in low-power centripetal turbines with partial admission of the working medium to the gas flow area. Detailed data on the experiments are given and illustrated. The conclusions are as follows: 1) If flow-limiting walls are installed, the coefficients of the profile-resistance on profiles having axial symmetry considerably increase if compared to the same kind of

Card 1/3

67129

SOV/143-59-11-14/19

The Gas Flow, Limited by Plane Walls, Around Axially Symmetric Bodies

coefficients established for the case when axially symmetric profiles are bypassed by an unlimited flow of gas. Within the range of high indexes of clogging, an irrelevant change in the value of the clearance is followed by a substantial change in the value of the profile-resistance coefficients. 2) At low indexes of jamming, the profile-resistance coefficient of a streamlined steam-guiding tube is considerably lower than that of an oval strut; at high indexes of jamming, the profile-resistance coefficient of a streamlined tube is a bit higher than that of an oval tube. There are 1 diagram, 2 sets of diagrams, 1 table, 3 graphs, 1 set of graphs, and 4 Soviet references.

ASSOCIATION: Bryanskij institut transportnogo mashinostroyeniya  
Card 2/3

67129

The Gas Flow, Limited by Plane Walls, Around Axially Symmetric  
Bodies

SOV/143-59-11-14/19

(Bryansk Institute of Transportation-Machine Building)

SUBMITTED: June 27, 1959

Card 3/3

4

GOGOLEV, I.G., kand. tekhn. nauk; B'YAKONOV, R.I.

Specification of the consumption coefficients for the measuring  
nozzles of experimental systems. Izv. vys. ucheb. zav.; energ. 4  
no. 3:115-117 Mr '61. (MIRA 14:3)

1. Bryanskiy institut transportnogo mashinostroyeniya Pred-  
stvalena kafedroy trubnostroyeniya.  
(Turbines)

KIRILLOV, I.I., doktor tekhn.nauk, prof.; GOGOLEV, I.G., kand.tekhn.nauk,  
dotsent; D'YAKONOV, R.I., kand.tekhn.nauk; KLIMTSOV, A.A., inzh.

Aerodynamic study of the outlet nozzle of a gas turbine.  
Izv. vys. ucheb. zav.; energ. 4 no.8:56-59 Ag '61.

(MIRA 14:8)

1. Bryanskiy institut transportnogo mashinostroyeniya.  
Predstavlena kafedroy turbostroyeniya.  
(Gas turbines)

KIRILLOV, I.I., doktor tekhn.nauk, prof.; GOGOLEV, I.G., kand.tekhn.nauk;  
D'YAKONOV, R.I., kand.tekhn.nauk; KLIM'SOV, A.A., inzh.

Experimental BITM air turbines. Izv.vys.ucheb.zav.; energ. 5  
no.5:119-122 My '62. (MIRA 15:5)

1. Bryanskiy institut transportnogo mashinostroyeniya. Predstavlena  
kafedroy turbostroyeniya.  
(Air turbines)

S/143/62/000/009/003/003  
D238/D308

AUTHORS: Gogolev, I.G. and D'yakonov, R.I.,  
Candidates of Technical Sciences

TITLE: The turbine-stage models at the Bryansk  
Institute of Transport Machine Construc-  
tion

PERIODICAL: Izvestiya vysshikh. uchebnykh zavedeniy.  
Energetika, no. 9, 1962, 126 - 129

TEXT: The most common experimental models for in-  
vestigating the performance of the bladed section of turbines are  
based on air tests, offering simple and cheap models adaptable to  
laboratory conditions. Similar advantages reside with cast guide  
blades and working blades, in addition to providing an accurate  
blade profile. The blades are manufactured from Silumin, bronze  
and other readily melted alloys. Relatively simple models can be  
employed for tests at low speeds with Mach number between 0.3  
and 0.4. Steel or aluminium wires are employed for shrouding.

Card 1/2

The turbine-stage models ...

S/143/62/000/009/003/003  
D238/D308

Experiments in the manufacture of turbine stage models employing silumin blades cast in metal moulds have demonstrated the possibility of manufacturing them under laboratory conditions quickly and cheaply. There are 3 figures.

ASSOCIATION: Bryanskiy institut transportnogo mashinostroyeniya (Bryansk Transportation Machinery Institute)

SUBMITTED: July 10, 1961

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Card 2/2



L 4006-66 EWT(d)/EWT(m)/EWP(w)/EWP(f)/EWP(v)/T-2/EWP(k)/EWA(c)/ETC(m) WW/EM  
ACCESSION NR: AP5024421 UR/0286/65/000/015/0125/0125

AUTHORS: Kirillov, I. I.; Gogolev, I. G.; D'yakonov, R. I.

TITLE: A turbine with tangential feed of working medium. Class 46, No. 173545

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 125

TOPIC TAGS: turbine, turbine design, turbine disk 24

ABSTRACT: This Author Certificate presents a turbine with tangential feed of working medium (see Fig. 1 on the Enclosure). The turbine contains a nozzle apparatus fixed to the casing, a disk with working vents tangentially distributed on its cylindrical surface, and a directing mechanism with rotary tubes for returning the working medium to the disk. To increase the operational economy, the tubes lie in a plane perpendicular to the rotation axis of the disk so as to provide a smooth flow of working medium between the inlet and the outlet of the turbine. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 06Jan64

ENCL: 01

SUB CODE: PR

NO REF SOV: 000

OTHER: 000

Card 1/2

UDC: 621.438

L 4006-66

ACCESSION NR: AP5024421

ENCLOSURE: 01

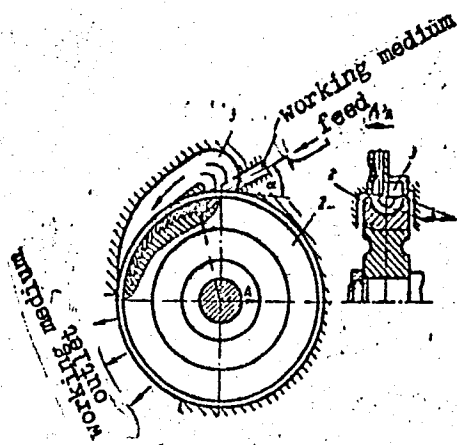


Fig. 1. 1- nozzle apparatus; 2- disk with working vents; 3- directing mechanism with rotary tubes

*fish*  
Card 2/2

37859

S/143/62/000/005/003/003  
D238/D308

26.2120

AUTHORS: Kirillov, I.I., Doctor of Technical Sciences, Gogolev, I.G., Dyakonov, R.O., Candidates of Technical Sciences, and Klimentsov, A.A., Engineer

TITLE: The BITM experimental air turbines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Energetika, no. 5, 1962, 119 - 122

TEXT: Several plants are available in the BITM for aero-dynamic investigations on steam and gas turbine stage models at low speeds. New experimental plants for high speeds, already operating or in construction, are described. Multiple experimental turbines have been constructed for stages in-line providing tests on either one or two stages. The turbines were designed so as to provide a flexible experimental test rig suitable for various investigations. A second frame was built into the rig for this purpose on which a second working disc could be mounted. In this way both rotors could be connected by a flexible shaft and measurements taken of the total torque, or each disc could be connected with its hydraulic brake and measurement Card 1/2

The BITM experimental air turbines

S/143/62/000/005/003/003  
D238/D308

red separately. Tests could also be carried out with mutually opposing rotation. The second frame can be set up at different distances from the first, affording tests with different transitions between the stages, with a different stage admission. This is important when investigating the flow after the regulation stage. Investigations can also be carried out on the inlet and outlet nozzles operating simultaneously with the turbine stage. An experimental turbine has been designed also for testing the stages of large steam and gas turbines at high acoustic velocities. The turbine is designed for operating up to 12,000 r.p.m., developing a power of 200 kW. Experience has shown that universal experimental turbines are complicated and expensive in operation. Relatively simple experimental turbines should be fitted up for solving particular problems. Test rigs are recommended affording a number of standard units. There are 5 figures and 2 Soviet-bloc references. ✓

ASSOCIATION: Bryanskiy institut transportnogo mashinostroyeniya  
(Bryansk Institute of Transport Machine Construction)

SUBMITTED: September 20, 1960

Card 2/2

L 45966-66 EWT(1)/EWT(m) SCTB JKT/DD/RD/JT/GD/JXT(CZ)  
ACC NR: AT6030697 SOURCE CODE: UR/0000/66/000/000/0081/0084

AUTHOR: Cherkasov, V. K.; Ushakova, G. S.; Piguzova, L. I.; Devyatko, A. V.;  
Mokhov, V. G.; Solov'yev, V. I.; Portnova, K. M.; D'yakonov, R. V.; Martynova, R. A.;  
Ratts, L. B.

51  
B+1

ORG: none

TITLE: The possibility of using the multifunctional properties of zeolites in a  
physical and chemical air-regeneration system

SOURCE: Konferentsiya po kosmicheskoy biologii i meditsine, 1964. Materialy. Moscow,  
Inst. mediko-biol. problem, 1966, 81-84

TOPIC TAGS: life support system, closed ecological system, space biology

ABSTRACT: A physical-chemical air "regeneration" system which has been proposed for  
manned spaceflight is shown in Fig. 1. In this system CO<sub>2</sub> is removed from cabin air  
by adsorption on zeolite. The carbon dioxide then undergoes vacuum desorption from  
the zeolite and passes through a CO<sub>2</sub> collector to the catalytic reactor, where it  
is reduced with hydrogen from the electrolyzer to water and methane. The water returns  
to the electrolyzer and is broken down into oxygen (used for human  
respiration) and hydrogen. The disadvantages of this method are the difficulties of  
creating a vacuum on board a spacecraft and the additional electrical energy required  
to operate the CO<sub>2</sub> collector. Studies have shown that specially treated B-zeolite

L 45966-66

ACC NR: AT6030697

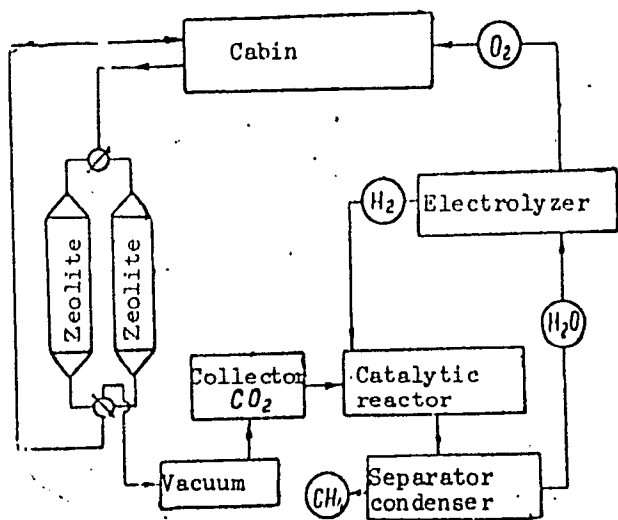


Fig. 1. Schematic diagram of a physical and chemical air "regeneration" system

can be used in such a system for both sorption and catalysis, retaining its properties through a number of cycles. An improved air "regeneration" scheme using B-zeolite is shown in Fig. 2. Cabin air is purified by passing through a B-zeolite

Card 2/3

ACC NR: AT6030697

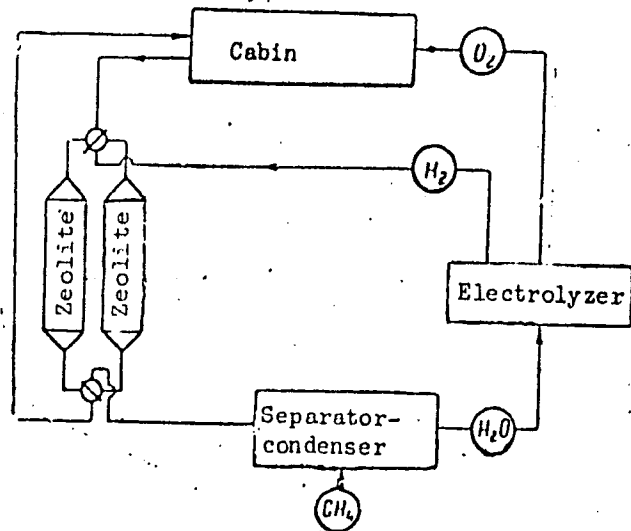


Fig. 2. Schematic diagram of a physical-chemical air "regeneration" system using B-zeolite

adsorber. Hydrogen derived from electrolysis is then passed through zeolite in a second adsorber, simultaneously desorbing CO<sub>2</sub> and reducing it to water and methane. The water is electrolyzed as in the first system. Temperature regulation is very important for the successful operation of this system, since a 7—12C temperature variation alters the gas conversion level by 10—15%. Orig. art. has: 3 figures.[JS]

SUB CODE: 06/ <sup>22</sup> SUBM DATE: 14Apr66/ ATD PRESS: 5086  
Card 3/3 hs

L 43733-65 EWT(1)/EWP(m)/FCS(k) Pd-1

S/0124/65/000/003/B113/B114

ACCESSION NR: AR5009485

SOURCE: Ref. zh. Mekhanika, Abs. 3B697

AUTHOR: D'yakonov, S.G.; Usmanov, A.G.

TITLE: Some statistical principles of turbulence in the presence of shear

CITED SOURCE: Tr. Kazansk. khim.-tekhnol. in-ta, vyp. 32, 1964, 36-43

TOPIC TAGS: turbulence theory, pulsation entropy, turbulence temperature, turbulence heat capacity, transverse shear, aerodynamics

TRANSLATION: The authors propose the use of the following concepts within the framework of the theory of turbulence: "pulsation entropy"  $S_T$ , defined by the equation  $S_T = -k_B \int \rho(u^i) \ln \rho(u^i) du^i$ , where  $\rho(u^i)$  is the probability density for pulsation rate  $u^i$  and  $k_B$  is Boltzmann's constant; turbulence temperature  $T$  and turbulence heat capacity  $C$ . The latter are defined on the basis of  $S_T$  by employing ratios of partial derivatives of  $S_T$  to classical thermodynamics. Using some semi-empirical hypotheses, formulated in a rather unclear fashion, the authors evolve a relationship between  $T$ ,  $C$  and the dissipation energy  $\epsilon$ . This relationship makes it possible to calculate, for instance, the distribution

Card 1/2



L. 43733-65

ACCESSION NR: AR5009485

of magnitudes  $T$ ,  $C$  and  $C'$  along the crosssection of a channel after preselecting values of two constants. A.M. Yaglom

SUB CODE: ME, TD ENCL: 00

*llc*  
Card 2/2

DYAKONOV, S. G.; USMANOV, A. G.

"Application of similarity theory to statistical analysis of anisotropic turbulence."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Kazan' Chemical-Technological Inst.

D'YAKONOV, V., dotsent.

New tables for determining position latitudes by the altitude of celestial bodies in proximity of the meridian. Mor.flot 16 no.11:30-32 N'56. (MIRA 10:1)

1. Leningradskoye Vyssheye morekoye uchilishche.  
(China--Nautical astronomy)

22319

S/133/61/000/004/015/015  
A054/A127

183200

AUTHORS: Petrov, K. M., D'yakonov, V. A.  
TITLE: Vacuum treatment of open-hearth furnace alloy steel  
PERIODICAL: Stal', no. 4, 1961, 383

TEXT: At the kombinat im. A. K. Serova (Integrated Plant imeni A. K. Serov) a great amount of open-hearth alloy steel was produced in a 90-ton ladle at a residual pressure of 3 - 8 mm pressure/merc. col. When vacuum-treating the metal jet during pouring over from one ladle to another, in this case of non-reduced  $\text{UX15}$  (ShKh15) steel, melted in an acid open-hearth furnace with an addition of 45% ferrosilicon and aluminum the amount of oxide inclusions of a 90-mm<sup>2</sup> ingot is reduced to 0.50 points. The whole melting process has been cut down to 30 minutes by carrying out the oxidization process directly in the vacuum installation and not in the furnace. The globular inclusions were reduced to 0.40 points by oxidization with calcium-silicon and vacuum treatment of the molten metal jet. The life of ball bear-

Card 1/2