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Zaytsev, A. S.

(4) PHASE I BOOK EXPLOITATION SOV/2713

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 583 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): S.V. Kurbatov, Academician, and I.I. Novikov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and undergraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

COVERAGE: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 32 reports on: 1) modern methods for the production of stable radioactive isotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by: S.V. Levinskiy, Candidate of Medical Sciences; V.N. Prusakov, Candidate of Chemical Sciences; and V.V. Sokov, Candidate of Medical Sciences. See Sov/2081 for titles of volumes of the set. References appear at the end of the articles.

3. Yakovlev, G.N., and V.N. Dekov. Means of Developing Remote Control Methods in the Radiochemical Laboratories of the AN SSSR (Report No. 2026) 44

4. Malkov, M.P., A.G. Zel'dovich, A.N. Frumkin, and I.N. Danilov. Commercial Production of Deuterium by the Low-temperature Distillation Method (Report No. 2325) 54

5. Gvardzaiteli, I.G., R.Ya. Kucherov, and V.K. Tikhonova. Separation of Isotopes by Diffusion in a Steam Flow (Report No. 2086) 69

6. Zelotarev, V.S., A.I. Il'in, and Ye.G. Kumar. Separation of Isotopes on Electromagnetic Units in the Soviet Union (Report No. 2305) 87

7. Alekseyev, N.A., S.F. Bulygin, V.S. Zelotarev, R.V. Pasis, Ye.S. Chernorotov, and G.Ya. Shchepkin. Separation of Isotopes of Rare-earth Elements by the Electromagnetic Method (Report No. 2217) 102

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13. Ruzyantsev, S.V., and L.N. Matsyuk. The Tm^{170}, Ho^{166}, and Ce^{144} as Sources of Radiation for Checking Thin-walled Products (Report No. 2233) 160

14. Bruk, B.I., A.S. Zaytsalova, and G.I. Khyrrin. Studying the Redistribution of Elements in Metal Alloys and Weld Compounds by Autoradiographic and Radiometric Methods (Report No. 2236) 172

15. Grusin, P.L., A.I. Yevstyukhin, V.S. Pomel'yanov, G.G. Ryabova, G.B. Fedorov. Studying the Diffusion and Distribution of Elements in Alloys of Zirconium and Titanium Base by the Radioactive Isotope Method (Report No. 2326) 189

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PHASE I BOOK EXPLOITATION SOV/5752

Metallovedeniye; sbornik statey, No. 3 (Physical Metallurgy; Collection of Articles, No. 3), Leningrad, Sudpromgiz, 1959. 390 p. 3,200 copies printed.

Ed.: G. I. Kayyrin, Candidate of Technical Sciences; Literary and Tech. Ed.: N. I. Duromenko.

PURPOSE: This collection of articles is intended for scientific personnel at research and educational institutions and industrial plants and also for advanced students.

COVERAGE: The articles report the results of investigations of 1) the effect of various factors on the susceptibility of constructional and heat-resistant steels and titanium alloys to brittle failure at various temperatures under various conditions of loading (long-time, short-time, cyclic, noncyclic) 2) alloying, structure, and condition of alloys as related to their mechanical properties, and 3) corrosion resistance and evaluation of stainless and heat-resistant steels. The articles are accompanied by numerous Soviet and non-Soviet references. No personalities are mentioned.

Zav'yalov, A. S., Doctor of Technical Sciences, Professor. Nature of Steel-Embrittlement Processes During Heating and the Effect of Alloying Elements on Them 5

Teplova, Ye.D., Candidate of Technical Sciences; N. S. Teplov, Engineer; and Ye. A. Mirosenko, Technician. Effect of Nickel and Copper on Thermal Brittleness of Chrome-Molybdenum-Vanadium Constructional Steel 39

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ZAV'YALOV, A.S., doktor tekhn.nauk, prof.

Characteristics of the process of steel embrittlement under the effect of heating and the influence of addition elements on this process. Metallovedenie 3:3-38 '59. (MIRA 14:3)
(Steel--Brittleness)

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BRUK, B.I., kand.tkehn.nauk; ZAV'YALOV, A.S., doktor tekhn.nauk, prof.; KAPYRIN, G.I., kand.tekhn.nauk

Studying the redistribution of elements in metal alloys and welded joints by the method of autoradiography and radiometry. Metallovedenie 3:314-325 '59. (MIRA 14:3)
(Metallography) (Autoradiography)
(Radioisotopes—Industrial application)

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SOV/126-8-3-6/33

AUTHORS: Zav'yalov, A.S. and Bruk, B.I.

TITLE: On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

PERIODICAL: Fizika metallov i metallovedeniye, 1959, Vol 8, Nr 3, pp 349-361 (USSR)

ABSTRACT: The authors have carried out a calculation of the minimum thickness of the layer enriched in radioactive carbon along the austenitic grains capable of forming a preferential blackening zone on a photographic emulsion (Ref 5). The calculation has shown that in the case of the normally applied fresh photographic emulsions and the normal exposures and concentrations of radioactive carbon in the alloy, the minimum thickness of such a layer does not exceed 10^2 - 10^3 interatomic distances. The effectiveness of the application of the radiographic method to the study of the nature of distribution of impurities in iron alloys increases considerably if work is carried out in which a radioactive isotope of carbon is used. The reason for this is not only that the low energy of the β-spectrum of the C^{14} isotope enables sufficiently clear radiographs to be obtained but also

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On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

that the distribution of carbon in iron alloys is closely associated with the distribution of alloy elements. For instance, carbon tends to segregate in alloy zones which are enriched with carbide-forming elements, which can be seen from the radio-autograph shown in Fig 1, taken from a bimetallic specimen, tempered at 600°C, containing radioactive carbon. Fig 2 shows the microstructure of carbon steel containing 0.21% C after its surface had been saturated with silicon for 30 hours at 1050°C. Fig 3 shows the microstructure of a carburized layer of steel containing 4.4% silicon which had been slowly cooled after carburization. Fig 4 shows the distribution of carbon in an iron alloy containing 19.5% Si: a - optical exposure, b - radio-autograph. Fig 5 shows the distribution of carbon in an iron alloy containing 9.2% W: a - optical exposure, b - radio-autograph. Fig 6 shows the distribution of carbon in an iron alloy containing 1.9% W (radio-autograph). Fig 7 shows the distribution of carbon in an iron alloy containing 15% Mo: a - optical exposure,

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On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

b - radio-autograph. Fig 8 shows the microscopic distribution of carbon in an iron alloy containing 4.4% Si (radio-autographs): a - slowly cooled from 970°C, b - quenched from 950°C and B - quenched from 1200°C and tempered at 590°C for 10 hours. Fig 9 shows the distribution of carbon in un-alloyed iron containing 0.035% C after quenching from 1200°C and tempering at 590°C for 10 hours (radio-autograph). Fig 10 shows the microscopic distribution of carbon in iron alloys containing 15% Mo (radio-autograph): a - slowly cooled after crystallization, b - quenched from 1250°C, B - quenched from 1250°C and tempered at 800°C for 15 hours. Fig 11 shows the microscopic distribution of carbon in iron alloys containing 12% W (radio-autographs): a - slowly cooled after crystallization, b - quenched from 1250°C, B - quenched from 1250 and tempered at 800°C for 15 hours. The authors arrived at the following conclusions: The experimental data given in the present article and in papers by Zav'yalov et alii (Ref 5 and 6) testify to the fact that the following general mechanisms

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On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

operate in the distribution of elements in metallic alloys: 1. If at a given temperature the element content does not exceed its limiting solubility in the solvent metal, then this element is distributed throughout the crystal body relatively evenly and does not exhibit a tendency to preferential segregation along the periphery or centre of the crystal. 2. If the element content at a given temperature exceeds its limiting solubility in the solvent metal, then the excess of this element will segregate along the alloy crystal boundaries in the form of a phase enriched with the given element or in a structurally free state. If the temperature of the alloy is changed its components, in accordance with the equilibrium diagram, can either concentrate in the grain boundary zones (if the limiting solubility of the element decreases) or they can distribute themselves within the crystal more evenly (if the solubility of the element increases). 3. If a one-phase alloy has reached a stage, as a result of change in temperature or concentration conditions, which precedes

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On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

separation of a new phase, then those components of the alloy concentrate along the grain boundaries of this alloy or along the boundaries of finer crystal formations, e.g., mosaic blocks, with which the precipitating phase has become enriched. 4. The presence in the alloy of some elements exerts an influence on the distribution within the crystals of other elements. 5. The investigation carried out shows that when considering the grain boundary layers of multi-atomic thickness it is not possible to assume that some elements are horophilic and others horophobic with respect to the solvent metal (horophilic elements are those which lower the surface energy of phases, horophobic elements are those which raise it). The tendency of the components of metallic alloys to segregation along grain boundaries, or to diffusion from the peripheral to the central layers of the grains, cannot be determined by any constant property of a given element in relation to the solvent element but it can from the relationship between the concentrations of components in alloys at a given temperature, which can be found from the

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On the Factors Determining the Distribution of Elements Within Metallic Alloy Crystals

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equilibrium diagram. In systems of more than two components, this relationship can also be found from the difference in the bond forces between the elements forming a given alloy. In accordance with the equilibrium diagram of a given alloy, the same element in various temperature ranges and at various component concentrations of a one-phase system can segregate preferentially either in the surface layers or in the centres of crystals. There are 11 figures and 6 Soviet references.

SUBMITTED: August 6, 1958

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S/659/62/009/000/008/030
I003/I203

AUTHORS: Bruk, B. I. and Zav'yalov, A. S.

TITLE: Redistribution of carbides as one of the forms of structural instability of ferrous alloys

SOURCE: Akademiya nauk SSSR, Institut metallurgii. Issledovaniya po zharoprochnym splavam. v. 9. 1962. Materialy Nauchnoy sessii po zharoprochnym splavam (1961 g.), 60–66

TEXT: The movements of the excess phase (in this case the carbide phase) towards the grains boundaries is one of the forms of structural changes rarely mentioned in the literature. Structural changes taking place on heating of ferric and austenitic steels 1 × 19H10(1Kh19N10), 1 × 15H25M5(1Kh15N25M5)10 × MΦ(10KhMF) 10 × MΦC3 (10KhMFS3) to various temperatures were investigated by using the C^{14} isotope as a radioactive indicator. The photomicrographs taken show that a concentration of the excess phase may take place along the grain boundaries and crystal planes. The presence of the cabide-forming elements in constructional steels inhibits the movement of the above phases towards the grain boundaries during prolonged heating In a Cr-Mo-V-Si perlitic steel such a process takes place most rapidly in the range of temperatures from 350° to 500°C. The data on the temperature range and on the kinetics of the process of redistribution of carbides in steel, obtained in this work clarify the nature of the process by which the steels become brittle when subjected for a long time to high temperatures. There are 6 figures and 1 table.

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S/129/62/000/003/003/009
E021/E335

18.7100

AUTHORS: Bruk, B.I., Candidate of Technical Sciences and Zavyalov, A.S., Doctor of Technical Sciences, Professor

TITLE: Redistribution of carbides as a form of structural instability of steel

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1962, 14 - 18

TEXT: The structural instability of the following steels was studied by autoradiography, using C_{14} as the indicator.

	C	Cr	Mo	V	Si	Mn	Ni
1Х19Н10 (1Kh19N10)	0.07%	19.3	-	-	0.30	0.22	10.1
1Х15Н25М5* (1Kh15N25M5)	<0.12	15-17.5	5.5-7	0.1-0.2	0.5-1	1-2	24-27
10ХМФ (10KhMF)	0.07	1.6	0.88	0.23	0.23	0.30	-
10ХМФС3 (10KhMFS3)	0.06	1.6	0.89	0.22	2.7	0.32	-

* Standard composition.

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E021/E335

Redistribution of ....

Microphotographs showed that when the high-chromium steel 1Kh19N10 is held at 600 °C for 100 hours and especially for 1 000 hours the carbon shows up in the austenite grain boundaries. The presence of carbide-forming elements in the steel retards the redistribution of the carbide phase. Holding the 10KhMF steel for 1 000 °C at 340, 500 or 650 °C resulted in no marked localization of carbon. The presence of non-carbide-forming elements led to intensive redistribution of the carbides in the grain boundaries; this is illustrated by microphotographs of the 10KhMFS3 steel containing 2.7% Si. Thus, the intensifying action of 2.7% Si is greater than the retarding action of 1.6% Cr + 0.89% Mo + 0.22% V. The redistribution of carbon in the pearlitic steel containing Cr, Mo, V and Si is more intensive at 350 and 500 °C than at 650 °C. This is because at the lower temperature the mobility of atoms in the grain boundaries is much greater than the mobility within the grains. With increase in temperature the difference in mobility in the boundary and in the grain becomes smaller. In addition to this, at higher temperatures

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Redistribution of S/129/62/000/003/003/009
E021/E335

carbides of the cementite give way to stronger carbides, the solubility of which is small in α-iron. There is also a decrease in the quantity of the carbide phase at higher temperatures because of the increase in solubility of carbon in α-iron. There are 6 figures and 1 table.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, A.S.; KUSNITSYNA, Z.I.

Diagrams of isothermal transformation of austenite. Izv.vys. uchebzav.; chern.met. 5 no.11:156-162 '62. (MIRA 15:12)

1. Severo-zapadnyy zaochnyy politekhnicheskiy institut.
(Steel—Metallography) (Phase rule and equilibrium)

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BRUK, B.I.; ZAV'YALOV, A.S.

Redistribution of carbides as one of the forms of structural instability of iron alloys. Issl. po zharopr. splav. 9:60-66 '62. (MIRA 16:6)

(Iron alloys--Metallography)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

S/148/62/000/011/009/013
E071/E451

AUTHORS: Zav'yalov, A.S., Kuznitsyna, Z.I.

TITLE: On the diagrams of isothermic transformation of austenite

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Chernaya metallurgiya, no.11, 1962, 156-162

TEXT: The kinetics of martensite transformation were studied and results are given for steels 37ХН3А (37KhN3A) and ШХ15 (ShKh15), whose M points are above 300°C and around 160°C respectively. The steels were austenized in vacuo, the microstructure being photographed at 165 times magnification while hot after holding 10 to 20 minutes; the specimens were then cooled in vacuo to the martensitic transformation temperature and held there within ± 3°, the microstructure being photographed at intervals. The steel 37KhN3A was almost completely transformed to martensite after 60 minutes at the M point (320°C); with steel ShKh15, the transformation was rapid during the first 15 minutes of holding at the M point (160°C). One minute after cooling to 290°C, steel 37KhN3A contained relatively much martensite, the amount formed gradually increasing until, after

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90 minutes, transformation was almost complete. A small amount of martensite formed during cooling steel ShKh15 to 130°C, which was not increased appreciably by holding at that temperature. Above 200°C the needles formed grew larger, the possibility of needle growth depending on temperature. Twinning planes behave similarly to grain boundaries, as has been found for other steels. The results show that isothermal martensite transformation can take place and above T_k complete transformation is possible so confirming the transformation diagram previously proposed by one of the present authors (ZhTF, v.22, no.1, 1952, 148). At temperatures which allow redistribution of carbon in austenite without carbon formation, transformation will take place in localized regions only, but when the temperature is high enough to allow both redistribution of carbon and carbide formation the gradual loss of carbon by the austenite finally allows complete transformation. If T_k is the temperature above which carbides can form and be rejected by the austenite, above T_k all the austenite will transform isothermally into martensite, but below T_k there will be only carbon redistribution within the grains and

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On the diagrams of isothermic ... S/148/62/000/011/009/013
E071/E451

only partial transformation occurs. There are 5 figures.

ASSOCIATION: Severo-zapadnyy zaochnyy politekhnicheskiy institut (North Western Correspondence Polytechnic Institute)

SUBMITTED: April 14, 1962

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, A.S.; KAZANTSEVA, Ye.A.

Surface wave antenna with wide-angle scanning of the beam. Izv. vys. ucheb. zav.; radiotekh. 6 no.2:199-200 Mr-Ap '63. (MIRA 16:6)

1. Rekomendovano Laboratoriyey radiofiziki Sibirskogo fiziko-tekhnicheskogo instituta pri Tomskom gosudarstvennom universitete imeni V.V. Kuybyshevа.
(Antennas(Electronics)) (Radio—Antennas)

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gradients may persist for an indefinite time in certain [illegible]

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

March 17, 1962 (initially)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BRUK, Boris Il'ich; ZAV'YALOV, Andrey Sergeyevich; VOL'PE, L., red.

[Radioactive isotopes and nuclear radiations in metallurgy and machinery manufacture; textbook on the use of nuclear energy in the national economy] Radioaktivnye izotopy i iadernye izlucheniia v metallurgii i mashinostroenii; uchebnoe posobie po primeneniiu iadernoi energii v narodnom khoziaistve. Leningrad, Severo-Zapadnyi zaochnyi politekhn. in-t, Pt. 2. 1965. 173 p.
(MIRA 19:1)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

L 38976-66 EWT(m)/T/EWP(t)/ETI IJP(c) JD/JG

ACC NR: AP6013362 SOURCE CODE: UR/0370/66/000/002/0107/0109

AUTHOR: Sandomirskiy, M. M. (Leningrad); Zav'yalov, A. S. (Leningrad)

ORG: none

TITLE: Effect of rare earth metals on the grain size and fine structure of structural steel

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1966, 107-109

TOPIC TAGS: structural steel, austenite, cerium, lanthanum, praseodymium, neodymium

ABSTRACT: The effect of cerium, lanthanum, praseodymium, and neodymium (added in amounts of 0.15, 0.30, 0.60, and 1.2%) on the grain size of 35KhN3 and 35KhN3MF steels, on the tendency of the grain to grow during heating, and on the fine structure of the steel was studied. The grain size during heating was determined by the boundary oxidation method; the size of mosaic blocks was determined by x-ray diffraction. The rare earth elements were found to hinder appreciably the growth of austenite grains during heating and to raise markedly the temperature at which a rapid growth of grain begins. These effects increased with rising rare earth content. At moderately high temperatures (800-850°C), the rare earths are thought to decrease the degree of disorientation of austenite grains. X-ray data showed that the rare earths decrease the size of mosaic blocks somewhat following quenching, and strongly inhibit the growth of the blocks during heating of the steel. This influence of rare earths

UDC: 669.14.018.29

Card 1/2

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L38976-66

ACC NR: AP6013362

is attributed to the inhibition of the process of segregation of carbon from the supersaturated α-phase. Orig. art. has: 2 figures and 1 table.

SUB CODE: 11/ SUBM DATE: 23Oct64/ ORIG REF: 007

Card 2/2 MLP

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

GUBANOV, V.Ye., inzh.; VASIL'YEV, K.A.; ZAV'YALOV, A.S.; KOMOGORTSEV, P.Ya., red.; BEGICHEVA, M.N., tekhn.red.

[Ship systems] Sudovye sistemy. Moskva, Izd-vo M-va rechnogo flota SSSR, 1951. 458 p. (MIRA 12:3)
(Marine pipe fitting) (Ships--Equipment and supplies)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

L 33115-66

ACC NR: AP6024083 SOURCE CODE: UR/0144/66/000/002/0235/0236

AUTHOR: Zav'yalov, A. S.; Get'man, A. A.; Molchanov, V. D.; Krasyuk, N. P.; Agranovskiy, K. Yu.; Borger, A. Ya.; Greyer, L. K.; Yesakov, V. P.; Miller, Ye. V.; Pyatman, K. I.; Abryutin, V. N.; Gubanov, V. V.; Oranskiy, M. I.; Yevseyev, N. Ye.; Morkin, G. B.; Sinol'nikov, Ye. M.; Avilov-Karnauldiov, B. N.; Bogush, A. G.; Bolyayev, I. P.; Pekker, I. I.; Chernyavskiy, F. I.

ORG: none

46
B

TITLE: O. B. Bron (on his 70th birthday)

SOURCE: IVUZ. Elektromekhanika, no. 2, 1966, 235-236

TOPIC TAGS: electric engineering personnel, circuit breaker

ABSTRACT: Osip Borisovich Bron was born in 1896 in Klintsi. In 1920, he graduated from the physics-math faculty of Khar'kov Technological Institute. He became a professor in 1930. He defended his doctor's thesis in 1940. During the second world war, he was in the navy. After demobilization in 1950, Engineer Colonel Bron went to work teaching at the Leningrad Industrial Correspondence School. He became the head of the Chair of Theoretical Bases of Electrical Technology in 1958. He is closely associated with scientific and development work, and has cooperated closely in this area with the Leningrad "Elektrosila" plant since 1946. His work has been in the areas of spark-damping and high-power circuit breakers. He has published over 140 scientific works and 19 inventions. [JPRS]

SUB CODE: 05, 09 / SUBM DATE: none

Card 1/1

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, A.V.

Increasing the apomorphine effect with zinc or copper sulfates in the treatment of chronic alcoholism. Zhur. nevr. i psikh. 63 no.2:284-287 '63 (MIRA 16:11)

1. Kafedra normal'noy fiziologii (zav. - prof. I.D.Boyenko) Chitinskogo meditsinskogo instituta.

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APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAVIYALOV, A.V.

Differential sensitivity of kinesthetic and thermal analyzers in healthy persons and in patients with neurogenic cardiovascular diseases. Zhur. vys. nerv. deiat. 16 no.1:96-102 Ja-F '66. (MIRA 19:2)

1. Kafedra normal'noy fiziologii Chitinskogo meditsinskogo instituta i voyennyy gospital' No. 321. Submitted October 10, 1964.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BOYENKO, I.D.; ZAV'YALOV, A.V.; CHERKASHINA, V.L.

Some new methodological works on the course in sports physiology. Uch.zap.Chit.gos.ped.inst. no.8:120-125 '63. (MIRA 17:4)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, A.V.

Nature of the hangover and causes of the excessive use of alcohol. Zhur. nevr. i psikh. 60 no.11:1510-1514 '60. (MIRA 14:5)

1. Kafedra normal'noy fiziologii (zav. - prof. I.D.Boyenko) Chitinskogo meditsinskogo instituta.
(ALCOHOLISM)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, A.V.; NIKOLAYEV, V.I.

Effect of cytiton and Thermopsis tincture on the emetic effect of apomorphine under clinical and experimental conditions. Zhur.nevr.i psikh. 61 no.3:439-445 '61. (MIRA 14:7)

1. Kafedra farmakologii (zav. - kand.med.nauk V.I.Nikolayev) Chitinskogo meditsinskogo instituta.
(ANALEPTICS) (APOMORPHINE) (BUSH PEA)
(VOMITING)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

SOV/19-58-6-555/685

AUTHORS: Shlyapnikov, A.I., Ustinov V.G., and Zav'yalov, A.V.

TITLE: A Machine for Reinforcing Base Paper Cartridges with Metal Rings (Ustroystvo dlya armirovaniya metallicheskimi kol'tsami osnovnykh bumazhnykh patronov)

PERIODICAL: Byulleten'izobreteniy, 1958, Nr 6, p 122 (USSR)

ABSTRACT: Class 54c, 4. Nr 113703 (584781 of 19 Oct 57). Submitted to the Committee for Inventions and Discoveries at the Ministers Council of USSR. A machine including a bin for cartridges, two magazines for the upper and lower rings, a mechanism transporting the cartridges to the work positions, a punching mechanism in the form of a head with guide holes for punches, and a mechanism for rolling-in the rings; the machine design is simplified by means of a spring-loaded ejector bushing with slots for punches mounted centrally in the punching head, and a cylindrical mandrel with a ring thrust bead and two adjusting nuts.

Card 1/1

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

PETROV, A.P., doktor tekhn. nauk, prof.; DUVALYAN, S.V., kand. tekhn. nauk; ABADUROVA, Ye.V., inzh.; ZHURAVLEV, M.M., inzh.; KHANDKAROV, Yu.S., inzh.; SAMARINA, N.A., inzh.; ZAV'YALOV, B.A., kand. tekhn.nauk; BERNGARD, K.A., doktor tekhn. nauk, prof.; VASIL'YEV, G.S., kand. tekhn. nauk; BIKCHENTAY, M.A., inzh.; FROLOV, I.A., inzh.; SIDEL'NIKOV, V.M., inzh.; MOKROUSOVA, N.I., inzh.; POZAMANTIR, E.I., kand. tekhn. nauk; GLUZBERG, E.A., retsenzent; MAKSIMOVICH, B.M., kand. tekhn. nauk, retsenzent; PREDE, V.Yu., inzh., red.

[Use of electronic digital computers in compiling train sheets]Sostavlenie grafika dvizheniia poezdov na elektronnykh tsifrovykh vychislitel'nykh mashinakh. Moskva, Transzheldorizdat, 1962. 199 p. (MIRA 15:9)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov).
(Railroads--Train dispatching)
(Railroads--Electric equipment)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

TANASHEV, R.I.; ZAV'YALOV, A.Ya.

[Mechanized loading in lumber transportation] Mekhanizirovannaia pogruzka drevesiny na lesovoznyi transport. Arkhangel'sk, Arkhangel'skoe knizhnoe izd-vo, 1963. 69 p. (MIRA 17:5)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, B.A., kand.tekhn.nauk; NEUGASOV, N.M., dotsent; KAPUSTINA, I.A., inzh.; KUL'TIN, B.I., inzh.

Automatic dispatcher control system. Sbor. trud. LIIZHT no.205:3-20 '63. (MIRA 18:1)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, B.A. (Moskva)

System of optimum automatic train traffic control in railroad districts with "avtodispetcher" systems. Izv. AN SSSR. Energ. i transp. no.5:625-630 S-O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KANTOR, I.I.; DEMBO, A.R.; ZAV'YALOV, B.A.

Conference on scientific problems of the development of transportation in the U.S.S.R. Izv. AN SSSR. Energ. i transp. no.5:659-664 S-O '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

EYLER, A.A., kand.tekhn.nauk (g.Leningrad); ZAV'YALOV, B.A., inzh. (g.Leningrad)

Automatically controlled train dispatching. Zhel.dor.transp. 43 no.4:21-26 Ap '61. (MIRA 14:3)
(Railroads—Train dispatching) (Automatical control)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, B. A.

Cand Tech Sci - (diss) "Methods of programming tasks in automatic control of the movement of trains from districts with the use of computers." Moscow, 1961. 12 pp; with diagrams; (Ministry of Railways USSR, All-Union Scientific Research Inst of Railroad Transport); 200 copies; free; (KL, 7-61 sup, 236)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KOTLYARENKO, N.F., kand.tekhn.nauk, dots.; ZAV'YALOV, B.A., inzh.

Selecting electric parameters for d.c. relays. Sbor.LIIZHT no.161:247-261 '58. (MIRA 11:12)
(Electric relays) (Railroads--Signaling)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

PETROV, A.P., prof.; EYLER, A.A., dotsent; NEUGASOV, N.M., dotsent; BOSIN, M.I., dotsent; ZAV'YALOV, B.A., inzh.

Experiment in traffic control in a railroad section with the aid of the "Ural-1" calculating machine. Vest.TSNII MPS 20 no.3:52-56 '61. (MIRA 14:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta i Leningradskiy institut inzhenerov zheleznodorozhnogo transporta imeni V.N.Obraztsova.

(Railroad—Traffic)
(Electronic calculating machines—Programming)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV B.G.

GOI'MAN, Lev Davydovich, kand.tekhn.nauk; LETNEV, B.Ya., inzh., nauchnyy red.; ZAV'YALOV, B.G., red.; GOROKHOV, Yu.N., tekhn.red.

[Present-day construction of hydraulic presses] Sovremennye konstruktsii gidravlicheskikh pressov. Moskva, Vses. uchebno-pedagog. izd-vo Trudrezervizdat, 1957. 76 p. (MIRA 11:4)
(Hydraulic presses)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAVYALOV B.G.

LUR'YE, Gerts Borisovich; FREYDBERG, V.Z., kand. tekhn.nauk, nauchnyy red.; ZAV'YALOV, B.G., red.; SAMUYLOVA, A.G., tekhn.red.

[Advanced grinding technology] Progressivnaia tekhnologii shlifovaniia. Moskva, Vses. uchebno-pedagog. izd-vo Trudreservizdat, 1957. 125 p. (MIRA 11:4)

(Grinding and polishing)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KOMPAN, Y.G.; PEVNAYA, I.Yu.; ZAV'YALOV, B.M., red.

[Industrial aesthetics; a bibliography of literature published from 1958 to 1962] Tekhnicheskaia estetika; bibliograficheskii ukazatel' 1958-1962 gg. 1 kv. Kiev, Kievskii dom nauchno-tekhn. propagandy, 1962. 14 p. (MIRA 16:10)

(Bibliography--Aesthetics)
(Bibliography--Human engineering)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, B.M.

For furthur improvement in publishing. Visnyk AN URSR 28 no.3:42-47 Mr '57. (MLRA 10:5)
(Academy of Sciences of the Ukrainian S.S.R.)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Co

12

Enriching bakery products and pastry in vitamin C. A. Zavyalov and E. Zavyalov. *Sovet Mukomol'e Khlebopechenie* 11, No. 9, 41-[illegible]; *Chimie & Industrie* 38, 1182.—Concd. exts. of briar roses or of coniferous needles and briar rose flour were used as sources of vitamin C. By incorporating these into the dough, the bread was given an antiscorbutic value 60% (rye bread) or 70% (wheat bread) that of the product added. Bread and pastry thus prepd. have a characteristic, agreeable taste, recalling that of honey or of cream. A. P.-C.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

S/035/62/000/006/045/064
A001/A101

3,2300

AUTHORS: Zav'yalov, F. P., Kakhkhorov, A.

TITLE: Moments of brightness peaks of the carrier-rocket of the third Soviet artificial Earth's satellite

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 76, abstract 6A587 ("Byull. st. optich. nablyudeniya iskusstv. sputnikov Zemli", 1960, no. 12, 30 - 38, English summary)

TEXT: Thirty-three photographs of the Sputnik III carrier-rocket were processed. They were taken with a НАФА 3С/25 (NAFA 3S/25) camera at Dushanbe during the time from July 21 to October 22, 1958. The moments of rocket brightness peaks according to Universal Time and rocket coordinates at these moments are presented in a table.

V. G.

[Abstracter's note: Complete translation]

Card 1/1

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BRONKALLA, V.; CHUPRINA, R.I., nauchnyy sotrudnik; KLEPIKOVA, L.A., nauchnyy sotrudnik; BRATIYCHUK, M.V.; NEVEL'SKIY, A.V., mladshiy nauchnyy sotrudnik; KAKHKHOROV, A.; ZAV'YALOV, N.P.; VOLYNSKIY, B.A.

Results of photographic observations of artificial earth satellites. Biul.sta.opt.nabl.isk.sput.Zem. no.1:14-22 '60. (MIRA 13:5)

1. Bahel'sberskaya observatoriya, Berlin, Germanskaya Demokraticheskaya Respublika (for Bronkalla). 2. Astrosovet AN SSSR (for Chuprina, Klepikova). 3. Nachal'nik stantsii opticheskikh nablyudeniy Uzhgorodskogo gosuniversiteta (for Bratiychuk). 4. Astronomicheskaya observatoriya Ural'skogo gosuniversiteta, Sverdlovsk (for Nevel'skiy). 5. Stantsiya fotonablyudeniy iskusstvennykh sputnikov Zemli 068 Instituta astrofiziki AN Tadzhikskoy SSR, Stalinabad (for Kakhkhorov, Zav'yalov). 6. Nachal'nik stantsii nablyudeniy iskusstvennykh sputnikov Zemli pri Yaroslavskoy pedinstitute (for Volynskiy).
(Artificial satellites—Tracking)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, F.P.; KAKHKHOROV, A.

Maxima of brightness of the rocket carrier of the third Soviet artificial earth satellite. Biul.sta.opt.nabl.isk.sput.Zem. no.12: 30-38 '60. (MIRA 14:12)

1. Stantsiya fotonablyudeniy iskusstvennykh sputnikov Zemli Instituta astrofiziki AN Tadzhikskoy SSR.
(Artificial satellites)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, F.P., elektromekhanik

How to manufacture a glass dial plate. Avtom., telem. i sviaz' 7 no.8:35 Ag '63. (MIRA 16:9)

1. Volgogradskaya distantsiya signalizatsii i svyazi Privolzhskoy dorogi.

(Railroads—Electric equipment)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KOLMAKOV, V.M.; ZAV'YALOV, F.P.

Continuous control of the lagging in photographic observations of artificial earth satellites. Biul.sta.opt.nab.isk.sput.Zem. no.11:3-7 '60. (MIRA 14:12)
(Artificial satellites--Optical observations)
(Astronomical photography) (Electronic control)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

POLETSKIY, A. T., dotsent; YESIN, G. D., kand. tekhn. nauk;
ZAV'YALOV, G. A., aspirant

Stability of uniform rotation and of the frequency of natural vibrations of a centrifugal clutch. Izv. vys. ucheb. zav.; mashinostr. no.7:5-13 '62. (MIRA 16:1)

1. Chelyabinskiy politekhnicheskiy institut.

(Clutches(Machinery)—Vibration)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G.; ZAV'YALOV, G.A.

Graphoanalytic analysis of the motion of the journal in a bearing. Trudy Inst.mash.Sem.po teor.mash. 22 no.87:31-38 '61. (MIRA 14:8)

(Bearings (Machinery))

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

POLETSKIY, A.T.; YESIN, G.D.; ZAV'YALOV, G.A.

Stability and frequencies of natural vibrations of a centrifugal clutch. Teor. mash. i mekh. no.94/95:111-118 '63. (MIRA 16:11)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G.; ZAV'YALOV, G.A.

Vibrations of a flexible rotor on an elastic oil cushion. Teor. mash. i mekh. no.96/97:98-104 '63. (MIRA 17:1)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G., doktor tekhn.nauk,prof.; ZAV'YALOV, G.A., aspirant

Effect of inertia of the lubrication layer on the motion stability of the stud of a finite-length bearing. Izv.vys.uchob.zav.; mashinostr. no. 12:38-48 '63. (MIRA 17:9)

1. Chelyabinskiy politekhnicheskiy institut.

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BUROVITS, A.G.; ZAV'YALOV, G.A.; LYSOV, A.N. (Chelyabinsk)

"On the development of the hydrodynamical theory of the high-speed oil-film bearings"

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 January - 5 February 1964

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G.; ZAV'YALOV, G.A. (Chelyabinsk)

Integration of Prandtl equations for the case of an unsteady viscous fluid motion in a lubrication layer. Izv.AN SSSR. Mekh.i mashinostr. no.1:155-158 Ja-F '64. (MIRA 17:4)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G.; ZAV'YALOV, G.A.; GROBOV, V.A., doktor tekhn.nauk, retsenzent
GOREBOV, P.S., kand.tekhn.nauk, red.
[Stability of shaft motion in fluid friction bearings]
Ustoichivost' dvizheniia valov v podshipnikakh zhidkostnogo treniia. Moskva, Izd-vo "Mashinostroenie" 1964. 146 p.
(MIRA 17:7)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

BURGVITS, A.G., kand.tekhn.nauk, dotsent; ZAV'YALOV, G.A., aspirant

Determining the value of the radial gap in sliding bearings proceeding from the securing of the steadiness of system motion. Izv.vys.ucheb.zav.; mashinostr. no.10:94-102 '61. (MIRA 14:12)

1. Chelyabinskiy politekhnicheskiy institut.
(Bearings (Machinery)—Testing)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

L 22159-67 EWT(m) DJ

ACC NR: AP6025688 SOURCE CODE: UR/0380/66/000/003/0092/0101

AUTHOR: Burgvits, A. G. (Chelyabinsk); Zav'yalov, G. A. (Chelyabinsk)

ORG: none

42
B

TITLE: Approximate integration of the Prandtl equations for the unsteady state motion of a gas lubricant

SOURCE: Mashinovedeniye, no. 3, 1966, 92-101

TOPIC TAGS: unsteady flow, gas lubricant, Prandtl boundary layer

ABSTRACT: The article is a mathematical treatment of the problem of the laminar lubricating layer between a fixed bearing and a moving pin; in this case, the velocity of sliding in bearings with a gas lubricant is always less than the critical velocity which determines the upper limit for the existence of laminar flow. The basic equations of the dynamics of a viscous gas are:

$$\rho\frac{\partial \mathbf{V}}{\partial t}+\rho(\mathbf{V}\nabla)\mathbf{V}=\rho\mathbf{F}-\operatorname{grad}\left(p+\frac{2}{3}\mu\operatorname{div}\mathbf{V}\right)+2\operatorname{Div}(\mu\dot{S}),$$
$$\frac{\partial\rho}{\partial t}+\operatorname{div}(\rho\mathbf{V})=0, \qquad (1)$$

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ACC NR: AP6025688

where ρ is the density of the gas lubricant; V is the velocity vector of a particle of the gas; ∇ is a Hamiltonian operator; F is the density vector of the mass forces; μ is the dynamic viscosity coefficient; p is the hydrodynamic pressure; Div (μ S) is the divergence of the tensor μ S; S is the tensor of the deformation rates. If flow of the lubricant along the axis of the bearing is neglected, Equation (1) can be written:

$$\rho\left(\frac{\partial v_x}{\partial t}+v_x\frac{\partial v_x}{\partial x}+v_y\frac{\partial v_x}{\partial y}\right)=-\frac{\partial p}{\partial x}+2\frac{\partial}{\partial x}\left(\mu\frac{\partial v_x}{\partial x}\right)+$$
$$+\frac{\partial}{\partial y}\left[\mu\left(\frac{\partial v_x}{\partial y}+\frac{\partial v_y}{\partial x}\right)\right]-\frac{2}{3}\frac{\partial}{\partial x}\left[\mu\left(\frac{\partial v_x}{\partial x}+\frac{\partial v_y}{\partial y}\right)\right],$$
$$\rho\left(\frac{\partial v_y}{\partial t}+v_x\frac{\partial v_y}{\partial x}+v_y\frac{\partial v_y}{\partial y}\right)=-\frac{\partial p}{\partial y}+\frac{\partial}{\partial x}\left[\mu\left(\frac{\partial v_x}{\partial y}+\frac{\partial v_y}{\partial x}\right)\right]+$$
$$+2\frac{\partial}{\partial y}\left(\mu\frac{\partial v_y}{\partial y}\right)-\frac{2}{3}\frac{\partial}{\partial y}\left[\mu\left(\frac{\partial v_x}{\partial x}+\frac{\partial v_y}{\partial y}\right)\right], \qquad (2)$$
$$\frac{\partial\rho}{\partial t}+\frac{\partial(\rho v_x)}{\partial x}+\frac{\partial(\rho v_y)}{\partial y}=0.$$

It is assumed that the thickness of the lubricating layer is small compared to the radius of the pin; then:

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L 04739-67

ACC NR: AP6025688

$$\theta = \frac{x}{r}, \quad y_1 = \frac{y}{\delta}, \quad u_1 = \frac{v_x}{U^*}, \quad v_1 = \frac{v_y}{V^*}, \quad p_1 = \frac{P\delta^2}{\mu r U^*}$$

$$\tau = \frac{t}{T}, \quad \rho_1 = \frac{\rho}{\rho_0}, \quad \nu_1 = \frac{\nu}{\nu_0}. \qquad (3)$$

Here r is the radius of the bearing; δ is the radial gap, equal to the difference of the radii of the bearing and the pin. The characteristic velocity V^* in the direction of the coordinate y is small compared with the characteristic velocity U^* in the direction of the coordinate x, since these velocities are connected by the relationship $V^* = \psi U^*$, where $\psi = \delta/r$ is the relative radial gap of a bearing with a gas lubricant, and satisfies the condition $\psi \ll 1$. The characteristic time is $T = 1/\omega$, where ω is the angular rate of rotation of the pin. The characteristic density ρ and the kinematic viscosity ν are taken as the corresponding values for the lubricant entering the bearing. The article proceeds to a mathematical solution of the above problem. Orig. art. has: 37 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 06May65/ ORIG REF: 013

Card 3/3 gd

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.G.

Some data on the spawning stock of the Pyasina whitefish Coregonus nasus Pall. as an object of acclimatization. Vop. ikht. no.16:121-130 '60. (MIRA 14:4)

1. Taymyrskiy national'nyy okrug Krasnoyarskogo kraya.
(Pyasina Valley—Whitefishes)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOVA, A.Yu.; ZAV'YALOV, G.I.; PRILEZHAYEVA, N.A.

Broadening of the mercury λ2537 Å resonance line in the presence of some complex molecules. Izv. vys. ucheb. zav.; fiz. no.5:3-7 '64. (MIRA 17:11)

1. Krasnodarskiy pedagogicheskiy institut imeni 15-letiya Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

S/139/61/000/004/023/023
E032/E314

AUTHORS: Zav'yalov, G.I. and Zav'yalova, A.Yu.

TITLE: Study of the absorption spectrum of mercury vapour in the region near λ 2537 Å in the presence of vapours of certain alcohols

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 4, 1961, 168 - 171

TEXT: The authors have investigated the absorption spectrum of mercury vapour near λ 2537 Å in the presence of the following vapours: CH_3OH, C_2H_5OH and $C_3H_5(OH)_3$. The absorption spectra were photographed at various temperatures between 180 and 700 °C, while the concentration of mercury vapour was maintained at $9.1 \times 10^{16} cm^{-3}$. The vapours under investigation were introduced into sealed-off quartz tubes and the spectrum was examined with the ИСП-22 (ISP-22) spectrograph. The resonance mercury line was not appreciably broadened in the presence of $C_3H_5(OH)_3$ and, therefore, the present report is concerned with the other two vapours only.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

In the presence of CH_3OH and C_2H_5OH extensive continus were found on either side of the resonance line. A typical result is shown in Fig. 1. The shortwave continuum is higher in intensity and extends over a shorter wavelength range. The central region $\Delta\nu \sim 38\ cm^{-1}$ on either side of the resonance line was excluded (it is indicated by the broken lines in Fig. 1) from the analysis of the experimental results. A plot was made in each case of 1) $\int k_\nu d\nu$ as a function of the pressure of the alcohol vapour at constant temperature and constant mercury concentration, 2) $\int k_\nu d\nu$ as a function of the temperature of the tube, and 3) $\log k_\nu$ as a function of $\log(\nu_0 - \nu)$ for the longwave part of the continuum. It was found that the first and the third of the above plots gave straight lines but the second did not. In fact, $\int k_\nu\, d\nu / m$ was found to be approximately proportional to $T^{1/2}$. It is

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

suggested that the continuum is due to a pair of colliding Hg, M particles and not the complex Hg + M. The intensity distribution on the long-wave side is identical with H. Kuhn's distribution (Ref. 4 - Phil. Mag., 18, 987, 1934):

$$I_s = \frac{AC^{1/2}}{(\nu_o - \nu)^{\frac{n+3}{n}}}$$

where C is the constant in the interaction-energy formula $E = C/R^n$. The value of the exponent n was found to be equal to 6 both for Hg + CH_3OH and Hg + C_2H_5OH. This suggests that the long-wave part of the continuum is due to a statistical effect. This is in agreement with the theory reported by I.I. Sobel'man (Ref. 5 - UFN, 51, 551, 1954) and A. Unzol'd (Ref. 8 - Review articles. Present problems of astrophysics and solar physics, IL, 1951).

Card 3/4

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

Study of ....

S/139/61/000/004/023/023
E032/E314

There are 5 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The three English-language references mentioned are: Ref. 4: quoted in text: Ref. 2: K. Huhn, Proc. Roy.Soc., A158, 212, 1937; Ref. 9: H. Horodniczy, A. Jablonsky, Nature, 142, 1122, 1938.

ASSOCIATION: Krasnodarskiy pedagogicheskiy institut imeni 15-letiya VLKSM (Krasnodar Pedagogical Institute imeni Fifteenth Anniversary VLKSM)

SUBMITTED: April 7, 1960

Card 4/4

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.I.; ZAVYALOVA, A.Yu.

Investigating the absorption spectra of mercury vapors in the region of λ 2537 Å in the presence of vapors of certain spirits. Izv.vys.ucheb.zav.; fiz. no.4:168-171 '61. (MIRA 14:10)

1. Krasnodarskiy pedagogicheskiy institut imeni 15-letiya Vsesoyuznogo Leninskogo kommunisticheskogo soyuza molodezhi.
(Mercury--Spectra) (Spirits--Spectra)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

S/139/61/000/004/023/023
E032/E314

AUTHORS: Zav'yalov, G.I. and Zav'yalova, A.Yu.

TITLE: Study of the absorption spectrum of mercury vapour in the region near λ 2537 Å in the presence of vapours of certain alcohols

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, no. 4, 1961, 168 - 171

TEXT: The authors have investigated the absorption spectrum of mercury vapour near λ 2537 Å in the presence of the following vapours: CH_3OH, C_2H_5OH and $C_3H_5(OH)_3$. The absorption spectra were photographed at various temperatures between 180 and 700 °C, while the concentration of mercury vapour was maintained at 9.1×10^{16} cm^{-3}. The vapours under investigation were introduced into sealed-off quartz tubes and the spectrum was examined with the ИСП-22 (ISP-22) spectrograph. The resonance mercury line was not appreciably broadened in the presence of $C_3H_5(OH)_3$ and, therefore, the present report is concerned with the other two vapours only.

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

In the presence of CH_3OH and C_2H_5OH extensive continus were found on either side of the resonance line. A typical result is shown in Fig. 1. The shortwave continuum is higher in intensity and extends over a shorter wavelength range. The central region $\Delta\nu \sim 38\ cm^{-1}$ on either side of the resonance line was excluded (it is indicated by the broken lines in Fig. 1) from the analysis of the experimental results. A plot was made in each case of 1) $\int k_\nu d\nu$ as a function of the pressure of the alcohol vapour at constant temperature and constant mercury concentration, 2) $\int k_\nu d\nu$ as a function of the temperature of the tube, and 3) $\log k_\nu$ as a function of $\log(\nu_0 - \nu)$ for the longwave part of the continuum. It was found that the first and the third of the above plots gave straight lines but the second did not. In fact, $\int k_\nu\, d\nu / m$ was found to be approximately proportional to $T^{1/2}$. It is

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suggested that the continuum is due to a pair of colliding Hg, M particles and not the complex Hg + M . The intensity distribution on the long-wave side is identical with H. Kuhn's distribution (Ref. 4 - Phil. Mag., 18, 987, 1934):

$$I_s = \frac{AC^{1/2}}{(\nu_o - \nu)^{\frac{n+3}{n}}}$$

where C is the constant in the interaction-energy formula $E = C/R^n$. The value of the exponent n was found to be equal to 6 both for Hg + CH_3OH and Hg + C_2H_5OH . This suggests that the long-wave part of the continuum is due to a statistical effect. This is in agreement with the theory reported by I.I. Sobel'man (Ref. 5 - UFN, 51, 551, 1954) and A. Unzol'd (Ref. 8 - Review articles. Present problems of astrophysics and solar physics, IL, 1951).

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

Study of ....

S/139/61/000/004/023/023
E032/E314

There are 5 figures and 10 references: 7 Soviet-bloc and 3 non-Soviet-bloc. The three English-language references mentioned are: Ref. 4: quoted in text: Ref. 2: K. Huhn, Proc. Roy.Soc., A158, 212, 1937; Ref. 9: H. Horodniczy, A. Jablonsky, Nature, 142, 1122, 1938.

ASSOCIATION: Krasnodarskiy pedagogicheskiy institut imeni 15-letiya VLKSM (Krasnodar Pedagogical Institute imeni Fifteenth Anniversary VLKSM)

SUBMITTED: April 7, 1960

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"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

REBRIK, B.N., kand.tekhn.nauk. arshiy nauchnyy sotrudnik; ZAV'YALOV, G.N.; VASHURIN, A.A., inzh ..ATSKELEVICH, M.N., inzh.

Answering readers ies. Elek. i tepl.tiaga 6 no.8:42-44 Ag '62. (MIRA 17:3)

1. Otdeleniye elektrifikatsii Vsesoyuznogo nauchno-issledovatel'skogo instituta zheleznodorozhnogo transporta Ministerstva putey soobshcheniya (for Rebrik). 2. Glavnyy tekhnolog po avtotormozam Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Zav'yalov).

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KLIMOV, N.N., inzh.; ZAV'YALOV, G.N.; MURZIN, L.G.

Answering readers' queries. Elek. i tepl.tiaga no.8:40 Ag '63. (MIRA 16:9)

1. Glavnyy tekhnolog po avtotormozam Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Zav'yalov).
2. Nachal'nik otdela teplotekhniki Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Murzin).
(No subject headings)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.N.; YASENTSEV, V.F., kand. tekhn. nauk, red.; KISELEVA, N.P., inzh., red.

[Control of brakes and their servicing in trains] Upravlenie tormozami i obsluzhivanie ikh v poezdakh. Moskva, Izd-vo "Transport," 1964. 170 p. (MIRA 17:4)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

MAMCHENKO, V.P., inzh.; BELKIN, M.N., inzh. [deceased]; ZAV'YALOV, G.N., inzh.; DZHAVOKHIN, T.V., inzh.; CHEPYZHOV, B.F., inzh.; MOLYARCHUK, V.S., kand. tekhn. nauk; KRUCHININ, M.S., inzh.; AVDUKOV, M.I., inzh.; MEL'NIKOV, V.Ye., red.; MEDVEDEVA, M.A., tekhn. red.

[Manual for the locomotive engineer] Rukovodstvo parovoznomu mashinistu. Izd.2., ispr. i dop. Pod obshchei red. V.S. Moliarchuka. Moskva, Transzheldorizdat, 1963. 389 p. (MIRA 16:12)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya. (Locomotives--Handbooks, manuals, etc.)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.N.; KRYLOV, V.I.; OZOLIN, A.K.; RUDKOV, G.V.; KHATSKELEVICH, M.N., inzh.

Replies to the inquiries of our readers. Elek.i tepl.tiaga 7 no.1,43-44 Ja '63. (MIRA 16:2)

1. Glavnyy tekhnolog po avtotormosam Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey sooobshcheniya (for Zav'yalov). 2. Nachal'nik tormoznoy laboratorii Moskovskogo tormoznogo zavoda (for Krylov). 3. Zamestitel' nachal'nika spetsial'nogo konstruktorskogo byuro Moskovskogo tormoznogo zavoda (for Ozolin). 4. Zamestitel' nachal'nika proyektno-tekhnologicheskogo otdela po remontu i ekspluatatsii teplovozov pri zavode im. Il'icha (for Rudkov).

(Railroads--Signaling) (Diesel locomotives)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.N., inzh., otv. za vypusk; BOBROVA, Ye.N., tekhn. red.

[Instructions on automatic brakes for the locomotive engineer; canceling the TsT 1747 Instruction on automatic brakes for the locomotive engineer from October 15, 1962]Instruktsiia po avtotormozam mashinistu lokomotiva; v otmenu Instruktsii po avtotormozam mashinistu lokomotiva TsT 1747 ot 15 oktiabria 1953 g. Moskva, Transzheldorizdat, 1962. 85 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.)Glavnoye upravleniye lokomotivnogo khozyaystva.

(Railroads--Brakes)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

GORN, Vasiliy Nikolayevich; MAKHOVIKOV, Dmitriy Ivanovich; ZAV'YALOV, G.N., redaktor; VERIHA, G.P., tekhnicheskiy redaktor.

[Semiautomatic brake release accelerator] Poluavtomaticheskii uskoritel' otpuska tormozov. Moskva, Gos.transportnoe zhel.dor. izd-vo, 1954. 22 p. (MLRA 8:9)
(Brakes)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

ZAV'YALOV, G.N.

[Organization of automatic brake sections and brake repair in locomotive shops] Organizatsiia avtotormoznogo khoziaistva i remont tormozov v parovoznykh depo. Iad. 2-e, pererabot. i dop. Moskva, Transzheldorizdat, 1953. 367 p. (MLRA 7:11D)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KHATSKELEVICH, M.N., inzh.; ZAV'YALOV, G.N.; NOVIKOV, A.V., inzh.; OZOLIN, A.K., inzh.; LAPIN, V.B., inzh.; DANILOV, V.I., inzh.

Replies to the inquiries of our readers. Elek.i tépl.tiaga 5 no.9:45-46 S '61. (MIRA 14:10)

1. Glavnyy tekhnolog po avtotormozam Glavnogo upravleniya lokomotivnogo khozyaystva Ministerstva putey soobshcheniya (for Zav'yalov).

(Railroads—Brakes) (Diesel locomotives)
(Insulating oils)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

CHASHCHINA, Luker'ya Ivanovna; ZAV'YALOV, G.P., red.; ZLOBIN, M.V., tekhn. red.

[My experience in raising calves] Moi opyt vyrashchivaniia molodniaka. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 7 p. (MIRA 11:7)

1. Telyatnitsa Presnovskogo molochno-myasnogo sovkhoza, Presnovskogo rayona, Severo-Kazakhstanskoy oblasti.
(Calves)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

SHAKENOV, Kanash; ZAV'YALOV, G.P., red.; ZLOBIN, M.B., tekhn. red.

[Principle of material selfinterest of collective farmers] Printsip material'noi zainteresovannosti kolkhoznikov. Alma-Ata, Kazakhskoe gos. izd-vo, 1958. 71 p. (MIRA 11:10)
(Collective farms)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

TAKIROV, Musatay; IOFFE, S.Ye., redaktor; ZAVIYALOV, G.P., redaktor; OYSTRAKH, V.G., tekhnicheskiy redaktor

[The party group in the struggle for technical progress] Partiinaia gruppa v bor'be za tekhnicheskii progress. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 18 p. (MLRA 9:10)

1. Mashinist ugol'nogo kombayna, partgrupporg shakhty No.1-bis tresta Kirovugol' kombinata "Karagandaugol'" (for Makirov)
(Communist Party of the Soviet Union--Party work)
(Coal mines and mining)

APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8"

"APPROVED FOR RELEASE: 03/15/2001 CIA-RDP86-00513R001964020001-8

KULAKOV, Nikolay Pavlovich; IOFFE, S.Ye., redaktor; ZAV'YALOV, G.P., redaktor; OYSTRAKH, V.G., tekhnicheskiy redaktor

[The communists are the organizers of the struggle for coal; the work practice of the Party group in the Kalinin Mine of the "Karagandaugol'" combine] Kommunisty - organizatory bor'by za ugol'; kombinata "Karagandaugol'. Alma-Ata, Kazakhskoe gos. izd-vo, 1956. 14 p. (MIRA 9:10)

(Communist Party of the Soviet Union--Party work)
(Coal mines and mining)

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3RD AND 4TH ORDERS

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