

LUBENETS, P. A.

*Lucerne*  
"Lucerne, Its Species, and Methods of Selection." Dr Agr Sci,  
All-Union Inst of Plant Growing, Leningrad, 1953. (RZhBiol, No 1,  
Sep 54)

SO: Sum 432, 29 Mar 55

LUBENETS, P.A., doktor sel'skokhozyaystvennykh nauk; TVERDOKHLEB, N.S.,  
agronom.

Cultivation practices for perennial grasses on the "Kuban" State  
Farm. Zemledelie 4 no.5:23-27 My '56. (MLRA 9:8)  
(Gul'kevichi District--Grasses)

LUBENETS, P. A.

CATEGORY : Cultivated Plants. Forages Grasses and roots.

RES. SOUR : *Russkaya Biologiya*, No. 5, 1959, No. 20365

AUTHOR : Lubenets, P.A.

INST. :

TITLE : Alfalfa and Sainfoin Selection.

ORIG. PUB.: *Selektsiya i semenovodstvo*, 1957, No.4, 18-23

ABSTRACT : The great diversity of form in alfalfa and sainfoin varieties and races are noted, which offer unlimited potentiality in free cross pollination being used as a means of producing new highly productive varieties. Attempts to breed new alfalfa and sainfoin varieties by selecting the most productive plants failed. For this reason the author suggests that the selection work involved in boosting the productivity of the varieties be made by finding

CARD: 1/3

COUNTRY :  
CATEGORY : Cultivated Plants.

ABS. JOUR.: Ref Zhur -Biologiya, No. 5 , 1959, No. 20365

Author :  
INST. :  
TITLE :

ORIG. PUB.:

ABSTRACT : out and breeding the most productive races. Selection stations have extensively carried out intravarietal and intraspecific crossing, however the hybrid varieties keep a high level of productivity only for three generations, and in succeeding generations approach the local varieties in productivity. The author suggests free cross pollination be used with maternal and paternal varieties in the 4th generation as one of the methods of retaining:

CARD : 3/3

ABS. JOUR.: Ref Zhur -Biologiya, No. 5 , 1959, No. 20365

AUTHOR :  
INST. :  
TITLE :

ORIG. PUB.:

ABSTRACT : a high productivity in the hybrid varieties. :  
--V.M. Kashmanova

CARD: 3/3

LUBENETS, P.A.

USSR/Cultivated Plants. Fodder

M-6

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1619

Author : P.A. Lubenets  
Inst : Not Given  
Title : Cultivation of Fodder Plants in Bulgaria

Orig Pub : Zemledelie, 1957, No 4, 67-71

Abstract : Among the perennial fodder grasses alfalfa covers the largest area (about 2% of the entire plowland); among grain-forage and ensilage plants, it is corn (about 19%); among one-year feeding cultivations, summer vetch (3.5%); winter wheat is utilized for green feed and for hay. Winter vetch, winter Panonskiy vetch, winter hairy vetch and the winter pea have begun to be set into wide-scale production.

Card : 1/1

USSR / Cultivated Plants. Fodder Crops.

M-5

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58625

Author : Lubenets, P. A.

Inst : Not given

Title : Organization of Production of Fodder in Bulgaria and Hungary

Orig Pub : Vest. s.-kh. nauki, 1957, No 5, 136-141

Abstract : Corn is one of the principal fodder crops in the majority of farms of Bulgaria and Hungary. Alfalfa and summer and winter vetch are cultivated in order to increase the content of crops in albumin. Red clover is sown in great quantities in the mountainous regions of Bulgaria. Winter rye and winter wheat, sown alone or in a mixture with winter vetch and winter pea are also components of the green mass area. Some farms in Bulgaria succeed in obtaining 3 harvests in a year on one field:

Card 1/2

USSR / Cultivated Plants. Fodder Crops.

M-5

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58625

rye, cabbage, corn. High sowing norms for seeds of alfalfa and clover are used: 30 - 40 for alfalfa and 25 - 30 kg/ha for red clover. The yields of alfalfa are: 45 cwt/ha on the average for hay; 80 - 120 in leading farms and up to 200 - on irrigated lands. The yield of alfalfa seeds is 0.6 - 1 cwt/ha on the average for the country but it mounts to 5 - 7 and even up to 11 - 13 in leading farms. -- S. A. Brushlinskiy

Card 2/2

75

LUBENETS, P.A., doktor sel'skokhozyaystvennykh nauk.

~~Forage crops in Canada.~~ Zemledelie 6 no.7:85-92 JI '58.

(Canada—Forage plants)

(MIRA 11:6)



KOSTIN, N.F.; LUBENETS, S.V.; ALEKSANDROV, K.S.

Selective etching of sodium chloride crystals. Kristallografiia  
6 no.5:737-744 S-0 '61. (MIRA 14:10)

1. Institut fiziki Sibirskogo otdeleniya AN SSSR.  
(Salt) (Crystallography)

LUBENETS, S.V.; KOSTIN, N.F.

Selective etching of potassium halides. Kristallografiia 7  
no.2:328-330 Mr-Ap '62. (MIRA 15:4)

1. Krasnoyarskiy institut fiziki Sibirskogo otdeleniya AN SSSR.  
(Potassium halide crystals) (Etching)

L 29986-66 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) JD/GG

ACC NR: AP6012490

SOURCE CODE: UR/0181/66/008/004/1227/1238

AUTHOR: Pariyskiy, V. B.; Lubenets, S. V.; Startsev, V. I.

ORG: Physicotechnical Institute of Low Temperatures, AN UkrSSR, Khar'kov (Fiziko-  
tehnicheskiy institut nizkikh temperatur AN UkrSSR)

TITLE: Mobility of dislocations in single-crystal potassium bromide

SOURCE: Fizika tverdogo tela, v. 8, no. 4, 1966, 1227-1238

TOPIC TAGS: potassium bromide, single crystal, crystal dislocation phenomenon, shear stress, crystal deformation

ABSTRACT: In view of the fact that the experimentally observed connection between the speed of dislocations and the applied voltage in these crystals have not yet been fully explained theoretically, the authors have attempted to obtain different information on the character of dislocation motion in single-crystal KBr, in which the motion of dislocations has not been heretofore investigated. The tests were made with annealed single crystals with dislocation density  $10^3 \text{ cm}^{-2}$  and with total impurity content  $2 \times 10^{-2}\%$ . The dislocation structure was exhibited by means of an etching procedure described by the authors earlier (Kristallografiya v. 7, 328, 1962). The motion of the dislocations was observed by applying mechanical loads in different manners (compression with a deformation machine, static load producing

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L 29986-66

ACC NR: AF6012490

pure flexure in an etchant, pulsed loading of long duration ( $2 \times 10^{-2}$  sec and above) or short duration ( $10^{-4}$ - $10^{-6}$  sec)). In addition, a special system was developed, which made it possible to produce a rectangular loading pulse and measure the magnitude and duration of the applied load directly during the loading, and regulate the applied load (Fig. 1). The operation of the system is briefly described. The results show that below a definite shear stress the dislocations hardly move, but above approximately  $80 \text{ g/mm}^2$  the dislocation velocity increases rapidly and then increases at a slower rate. There was little difference between edge and screw dislocations. The results exhibited a certain similarity with previously observed data for NaCl and LiF. The obtained experimental dependence of the dislocation speed on the applied load cannot be described in terms of a single thermal activation process with a constant activation volume, since this volume decreases by approximately 400 times on going from small velocities to larger velocities. The results also confirm the effects proposed by W. G. Johnston and J. J. Gilman (J. Appl. Phys. v. 30, 128, 1959), wherein the dislocations are first accelerated within a very short path (smaller than  $1.7 \mu$ ), after which they move uniformly. The delay of the dislocation motion following application of pulsed load decreases exponentially with increasing load. Orig. art. has: 9 figures and 6 formulas.

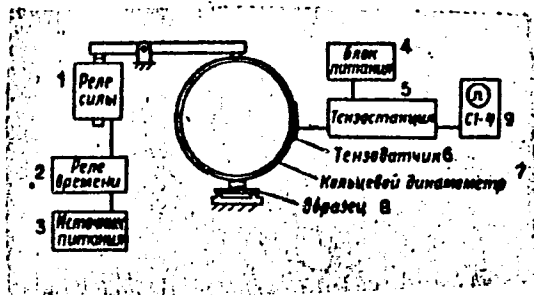
Card 2/3

L 29986-66

ACC NR: AP6012490

Fig. 1. Pulsed loading equipment for KBr crystals.

- 1 - Force relay, 2 - time relay, 3 - power source,
- 4 - power supply block,
- 5 - tension metering equipment,
- 6 - tension gauge,
- 7 - dynamotor, 8 - sample,
- 9 - oscilloscope.



SUB CODE: 20/ SUBM DATE: 26Jul65/ ORIG REF: 008/ OTH REF: 007

Card 3/3 *Jo*

LUBENETS, V. A., Cand of Agric Sci — (diss) "Corn as a ration for growing swine."

Kiev, 1957, 18 pp (Ukrainian Academy of Agricultural Sciences), 100 copies

(KL, 29-57, 92)

USSR / Farm Animals. Swine

Q-4

Abs Jour: Ref Zhur-Biol., No 3, 1958, 12130

Author : Lubenets V. A.

Inst :

Title : Corn in the Rations of Growing Swine (Kukuruza  
v ratsione rastushchikh sviney)

Orig Pub: Sots. tvarinnitstvo, 1957, No 2, 23-26

Abstract: Three tests were conducted in 1953-1955 on the state farms of the Dnepropetrovsk oblast in order to study rations with a large content of corn. The rations consisted of 65-70% of coarse corn grist and 30-35% of other feeds in various ratios. The tests showed that corn constitutes a good feed when supplemented by other feeds, rich in proteins, vitamins, and minerals.

Card 1/1

34

CHERNENKO, A.R., inzh.; DUBENETS, V.A., inzh.; LYASH, I.S., inzh.;  
KUNETS, G.G., inzh.; DOLINSKIY, H.A., inzh.

Making a drift with the use of a mine conveyor. Shakht. stroi.  
9 no.6:24-25 Ja '65. (MIRA 18:7)

1. Rudnik imeni Kominterna, Krivorozhakiy basseyn (for Chernenko,  
Dubnets, Lyash). 2. Nauchno-issledovatel'skiy gubernadnyy institut,  
Krivoy Rog (for Kunets, Dolinskiy).



SVECHIN, K.B.; LUBENETS, V.A.

"Origin and transformation of domestic animals" by S.N.Bogoliubskii.  
Reviewed by K.B.Svechin, V.A.Lubenets. Usp. sovr. biol. 49 no.3:388-  
390 My-Je '60. (MIRA 13:7)  
(DOMESTIC ANIMALS) (BOGOLIUBSKII, S.N.)

KOVALEV, A.F., kand. tekhn. nauk; LINNIK, G.F., kand. tekhn. nauk; BELASH,  
A.S.; SHKUTA, E.I.; LUBENETS, V.A.; KUKHTA, P.V.

Advantages of using hardening filling in Krivoy Rog Basin  
mines. Met. i gornorud. prom. no.1:56-59 Ja-F '64.

(MIRA 17:10)

LUBENETS, V. D.

LUBENETS, V. D. -- "Investigation of the Operation Process and Basis for Design of Piston Single-Stage Vacuum-Pumps With a Distributing Valve." Sub 19 May 52, Moscow Order of Labor Red Banner Higher Technical School Ineni Bauman. (Dissertation for the Degree of Candidate in Technical Sciences).

SO: Vechernaya Moskva, January-December 1952

1. ASLANOV, G. V.; GET'YE, V. A.; GUREVICH, YE. S.; LUBENETS, V. D.; SAMSONOV, N. M.; SEKUNOVA, O. N.; SIMONOVSKIY, I. V.; FRENKEL', M.; KRAPUNOV, B. P.
2. USSR (600)
4. Valves
7. Problem of the priority of Soviet science in examining the operation of spring-loaded valves. (Letters to the editor.) Vest. mash. 32 No. 11, 1952.

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

LUBENETS, V.D.

AID P - 1250

Subject : USSR/Engineering

Card 1/1 Pub. 110-a - 11/17

Author : Lubenets, V. D., Kand. of Tech. Sci.

Title : ~~Some questions relating to the calculation and methods of examination of rotary vane vacuum pumps~~  
Some questions relating to the calculation and methods of examination of rotary vane vacuum pumps

Periodical : Teploenergetika, 1, 44-51, Ja 1955

Abstract : A method is presented for plotting a theoretical indicator diagram and characteristics of a rotary vacuum pump. A method is analyzed of dividing the suction losses, which allows ascertaining the influence of various factors on the value of the pumping out capacity and on the degree of the vacuum created. Diagrams, charts.

Institution : Moscow Technical College (*Moscow Higher Technical School.*)

Submitted : No date

LUBENETS, V.D.

Design of sectional thick-walled pipes accounting for non-uniform axisymmetric heating. [Trudy] MVTU no.31:63-98 '55. (MLRA 8:5)  
(Pipe) (Thermodynamics)

LUBENETS, V.D., kandidat tekhnicheskikh nauk.

Investigation of the working cycle and fundamentals of design of  
one-step piston vacuum-pumps with valve distribution. [Trudy]  
MVTU no.52:5-40 '55. (MLRA 9:8)  
(Vacuum pumps)

LUBENETS, V.D., kandidat tekhnicheskikh nauk; CHISTYAKOV, F.M., kandidat tekhnicheskikh nauk; MYSHLYAYEV, L.V., inzhener.

Investigating high-pressure compressor performance. [Trudy] MVTU  
no.52:83-115 '55. (MLBA 9:8)

(Compressors)



LUBENETS, V. O.

14(1)

PHASE I BOOK EXPLOITATION

SOV/2472

Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya

Konstruirovaniye i issledovaniye kompressorov i vakuum-nasosov (Design and Investigation of Compressors and Vacuum Pumps) Moscow, Mashgiz, 1958. 90 p. (Series: Its: Sbornik statey, 22) 5,000 copies printed.

Ed.: V.A. Romyantsev, Engineer; Ed. of Publishing House: A.M. Monastyrskaya; Tech. Ed.: A.F. Uvarova; Managing Ed. for Literature on Machine Building and Instrument Construction (Mashgiz): V.V. Pokrovskiy, Engineer.

PURPOSE: This collection of articles is intended for scientists and engineers working in the field of compressor manufacture, and also for students of vuzes specializing in compressors and vacuum pumps.

COVERAGE: The booklet consists of five articles. The first article presents investigation results and design data for determining resistances in strip-type automatic diaphragm valves. The second articles presents for the first time results of the investigation of large diameter diaphragms used in diaphragm-type compressors. The third article presents, also for the first time, experimental results and methods for designing metallic packings for piston-compressor  
Card 1/2

Design and Investigation of Compressors (Cont.)

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rods. The fourth article presents test results and theoretical data for designing two-stage piston vacuum pumps. The last article presents data on designing diffusion-type oil vacuum pumps. No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

Kondrat'yeva, T.F. Determination of Energy Losses in the Automatic Valves of Piston Compressors	3
Moskalev, V.A. Investigating the Strength of Compressor Diaphragms	21
Sekunova, O.N. Engineer. Performance of Piston Compressor Packings	33
Frolov, Ye.S., Engineer; and V.D. Lubenets, Candidate of Technical Sciences, Volumetric and Power Characteristics of a Two-stage Vacuum Pump With a Slide-Valve Gear	
Pomerantsev, A.A., Professor, Doctor of Physical and Mathematical Sciences and K.P. Shumskiy, Candidate of Physical and Mathematical Sciences. The Theory of High-vacuum Steam-Injector Pump Nozzles	81

AVAILABLE: Library of Congress

Card 2/2

GO/gmp  
11-24-59

YEGOROV, Leonid Andrianovich, kand.tekhn.nauk; ROZANOV, Vladimir  
Grigor'yevich, kand.tekhn.nauk; VISHNYAKOV, N.N., kand.tekhn.  
nauk, retsenzent; JUREVETS, V.D., kand.tekhn.nauk, red.;  
LEZHNEVA, Ye.I., red.izd-va; MIKIND, V.D., tekhn.red.

[Piston-type air compressors for motor vehicles; theory, design,  
construction, and testing] Avtomobil'nye porshnevye kompressory;  
teoriia, konstruktsiia, raschet i ispytaniia. Moskva, Gos.  
nauchno-tekhn.izd.mashinostroit.lit-ry, 1958. 235 p. (MIRA 12:2)  
(Automobiles--Brakes) (Air compressors)

FROLOV, Ye.S., inzh.; ~~LUBKINETS~~, V.D., kand. tekhn. nauk.

Volume and energy characteristics of double-stage vacuum pumps  
with valve distribution. Sbor. st. NIIKHIMMASH no.22:65-80 '58.  
(Vacuum pumps) (MIRA 11:6)

LUBENETS, V.D., kand.tekhn.nauk, dots.; FROLOV, Ye.S., kand.tekhn.nauk;  
VASIL'YEV, V.I., inzh.; VLASOV, V.M., inzh.; ZAKHAROV, B.D., inzh.

Investigating the performance of the VN-120 vacuum-pump. Izv. vys.  
učeb.zav.; mashinostr. no.4:166-171 '59. (MIRA 13:4)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana.  
(Vacuum pumps)

LUBENETS, V.D., kand.tekhn.nauk

Thermal analysis and design of high-speed piston vacuum pumps  
with valve distribution. [Trudy] MTU no.95:5-25 '60.

(MIRA 14:8)

(Vacuum pumps)

LUBENETS, V.D., kand.tekhn.nauk, dotsent

Theoretical characteristics of two-stage piston vacuum pumps  
with valve distribution. [Trudy] MTU no.95:26-48 '60.

(MIRA 14:8)

(Vacuum pumps)

LUBENETS, V.D., kand.tekhn.nauk, dotsent

Determination of mechanical losses in rotary vacuum pumps and  
compressors and stress analysis of blades. [Trudy] MVTU no.95:  
49-76 '60. (MIRA 14:8)

(Vacuum pumps) (Compressors)



LUBENETS, V.D., kand.tekhn.nauk; MYSHLYAYEV, L.V., kand.tekhn.nauk

Designing intermediate connectors for large horizontal com-  
pressors. [Trudy] MVTU no.95:85-94 '60. (MIRA 14:8)  
(Compressors)

LUBENETS, V.D., kand. tekhn. nauk, dotsent; VASIL'YEV, V.I., inzh.

Results of the test of a rotary vacuum pump with a partial  
internal compression. Izv. vys. ucheb. zav.; mashinost. 20.9:  
110-114 '64. (MIRA 17:12)

1. Moskovskoye vysshoye tekhnicheskoye uchilishche imeni N.E.  
Baumana.

LUBENETS, V.D., kand. tekhn. nauk, dotsent

Method for the segregation of losses in rotary vacuum pumps.  
Izv. vys. ucheb. zav.; mashinostr. no.4:91-98 '65.

(MIRA 18:5)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni Baumana.

LUBENETS, V.D., kand. tekhn. nauk, dotsent

Calculating internal overflow in rotary vacuum pumps.

Izv. vys. ucheb. zav.; mashinostr. no.5:84-86 '65.

(MIRA 18:11)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche im.  
Baumana.

1964-65 EWT(1)/EPA(s)-2/EPF(n)-2/TWC/v ...  
AP3000868 P3-4/P1-4 HW 5/0143/64/000/010/0119/0132

32  
33

AUTHOR: Lubenets, V. D. (Candidate of technical sciences, Docent); Vasil'yev, ...  
Vedenin, V. A. (Engineer)

TITLE: The ideal working regimen and theoretical indicative diagrams of a two-rotor vacuum pump with partial internal compression

SOURCE: IVUZ. Mashinostroyeniye, no. 10, 1964, 119-132

TOPIC TAGS: vacuum pump, pump design, pump operation, rotary pump, two rotor pump, internal compression, gas distribution, pressure valve

ABSTRACT: The authors studied a twin-rotor vacuum pump from the points of view of the phases of gas distribution, the limits of indicative strength, and the forces acting on the rotors. The pump is illustrated in Fig. 1 of the Enclosure. The basic definitions of the system's parameters were made in each case, and descriptive functions were set up. Since, in general, there were 3 variables, one of them a construction variable, each variable was plotted as a function of the other for varying values of the construction parameter. A rotary pump with pressure valves produces a significantly lower pressure than pumps without valves. The difference in the internal indicative pressure increases with increasing intake

Two 1/4

L 25690-65

ACCESSION NR: AP5000868

pressure and with decreasing  $m$ , this being a construction parameter reflecting a decrease in radius. Therefore, pressure valves increase the economy of operation of a vacuum pump. For  $m \leq 0.721$  the indicative pressure curves show a maximum. For  $m > 0.721$  the curve has no maximum, but increases uniformly with decreasing pressure ratios. An increase in  $m$  increases the internal indicative pressure, but the maximum shifts toward lower pressures. Under various equivalent conditions, the absolute value of the internal indicative pressure decreases with decreasing delivery pressure. Orig. art. has: 8 numbered formulas, 5 graphs, 1 drawing and 2 tables.

ASSOCIATION: MVTU im. N.E. Baumana

SUBMITTED: 08Apr64

ENCL: 02

SUB CODE: IE, ME

NOV 1964

OTHER: 10

LUBENETS, V.D., kand. tekhn. nauk, dotsent

Calculating low-vacuum multistage systems. Izv. vys. ucheb.  
zav.; mashinostr. no. 10:99-105 '65 (MIRA 19:1)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni  
Baumana. Submitted June 29, 1965.

LUBNETS, Ye.

LUBNETS, Ye.

~~Boatswain Gainutdinov. Mor.flot 17 no.11:25-26 H '57. (MIRA 10:12)~~

1.Murmanskoye Arkticheskoye parokhodstvo.  
(Gainutdinov, Khakim Kuleevich)



LUBENETS, YE. K.

see Alimova, Ye. K.

1926  
S/194/62/000/009/008/100  
D222/D309

9.7/00

AUTHORS: Karachantsava, N. Ya. and Lubennikava, I. L.

TITLE: Semiconductor devices in computer technology

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 9, 1962, abstract 9-1-119 s (Izv. AN BSSR, Ser. Fiz.-tekh. n., 1961, no. 1, 59-74 (Beloruss.))

TEXT: The general problems of using semi-conductor diodes and triodes in digital computers are considered, in particular in the units of the digital computer designed in the In-t matematiki i vychislitel'noy tekhniki AN BSSR (Mathematics and Computing Techniques Institute of the AS BSSR). This machine will use 3,500 diodes and about 1,000 transistors; the capacity of the high-speed storage unit is of the order of 20,000 binary digits. The basic pulse and switching circuits containing junction transistors are described. The block diagrams and the basic constructional details of the paper tape reading unit, paper tape output unit and of the paper tape reading unit, paper tape output unit and of the output printer

Card 1/2

Semiconductor devices in ...

S/194/62/000/009/008/100  
D222/D309

are given. П1Э, П1Ж, П14 (P1E, P1Zh, P14) type transistors are used. The printing unit uses a modernized CT-35 (ST-35) type telegraph apparatus, the diode decoder is built with Д1Ж (D1Zh) diodes. 11 references. [Abstracter's note: Complete translation.]

Gard 2/2

KOROCHANTSEVA, N.Yu. [Karachantsava, N.IA]; LUBENNIKOVA, I.L. [Lubennikava,  
I.L.]

Semiconductor devices in computer engineering. Vestsi AN BSSR Ser.  
fiz.-tekh. nav. no. 1:59-74 '61. (MIRA 14:4)  
(Semiconductors) (Electronic calculating machines)

L 01097-67

ACC NR: AP6026337

(N)

SOURCE CODE: UR/0308/66/000/005/0036/0037

AUTHOR: Lubenov. R. (Candidate of technical sciences, Lecturer, Department head);  
Kas'yanov, V. (Aspirant)

28  
B

ORG: Waterways and Ports Department, OIIMF (Kafedra "Vodnyye puti i porty" OIIMF)

TITLE: Improving efficiency in the utilization of gravitational docking facilities

SOURCE: Morskoy flot, no. 5, 1966, 36-37

TOPIC TAGS: marine engineering, stress analysis, marine equipment, *HARBOR FACILITY*

ABSTRACT: Improved methods of calculation are used to show how gravitational docking facilities may be more effectively used. A formula is derived for the contact stresses generated in the dock by a uniformly distributed useful load which agrees satisfactorily with experimental data for most gravitational docking facilities. A theoretical analysis of the stress diagram for active pressure gives a formula for the effective zone of a temporary load as a function of the angle of internal friction. It is pointed out that the present standards for use of docking facilities have rigid restrictions on the loading zone with no consideration to variations in the structural characteristics and operational requirements of individual facilities. In particular, no consideration is given to the characteristics and arrangement of the contact edge, the height of the structure, the physical and mechanical properties of the underlying

Card 1/2

UDC: 627.343/344.004.1

L 01097-67

ACC NR: AP6026337

Foundation and other factors in establishing the zones of operational loading for gravitational docking facilities. These standards should be corrected for more effective use of docking facilities. An expression is given in the two-dimensional approximation for the optimum level of operational use of docking facilities in terms of the active pressure from a uniformly distributed load. The results of this paper may be used in formulating standards for new dock facilities and for periodic adjustment of the operational data for existing facilities. Origrt. has: 2 figures, 4 formulas.

SUB CODE: 13/ SUEM DATE: None

Card 2/2

vlr

SOV/124-58-10-11588

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 10, p 128 (USSR)

AUTHOR: Lubenov, R. V.

TITLE: Results of Experimental Verificiation of Certain Theoretical Hypotheses in Determination of the Thrust Pressure of Soil Upon a Buttress Wall (Rezultaty eksperimental'noy proverki nekotorykh teoreticheskikh polozheniy po opredeleniyu raspornogo davleniya grunta na podpornuyu stenk)

PERIODICAL: Nauchn. tr. Odessk. in-t inzh. morsk. flota, 1957, Nr 13, pp 206-225

ABSTRACT: Bibliographic entry

Card 1/1

LUBENOV, R.V., kand.tekhn.nauk, dotsent

Effect of size, location, and acting time of net loads on the bearing capacity of gravitational type wharves and on their traffic capacity. Nauch.trudy OIIMF no.13:226-234 '57.

(MIRA 11:11)

(Wharves)



LUBENOV, R. <sup>✓</sup> kandidat tekhnicheskikh nauk.

Recommendations on increasing the rate of loading gravity moorings.  
Mor. flot 17 no.4: 19-21 Ap '57. (MLRA 10:4)

1. Odesskiy institut inzhenerov morskogo flota.  
(Loading and unloading) (Hydraulic engineering)

LUBENOV, R.V.; YAKOVLEV, P.I.

Present state of the problem of calculating displacements of  
retaining walls. Gidrotekhnika no.2:147-151 '62. (MIRA 16:5)  
(Retaining walls) (Earth pressure)

LUBENSKAYA, F.M.

Clinical aspect of blood picture in toxicosis of newborn. Vopr.pediat.  
19 no.1:35-40 1951. (CIML 20:7)

1. Of the Department of Hospital Pediatrics (Head--Honored Worker  
in Science Prof. A.F. Tur, Corresponding Member of the Academy of  
Medical Sciences), Leningrad State Pediatric Medical Institute.

**LUHENSKAYA, F. M.**

Metastases of newborn septicemia. Vopr. pediat. 19 no. 5:52-57  
1951. (CLML 21:3)

1. Of the Department of Hospital Pediatrics (Head -- Honored Worker in Science Prof. A. F. Tur, Corresponding Member of the Academy of Medical Sciences USSR), Leningrad Pediatric Medical Institute (Acting Director -- Prof. Yu. A. Kotikov).

ACC NR: AP6033069 (N) SOURCE CODE: UR/0201/66/000/003/0074/0080

AUTHOR: Parkhutsik, P. A.; Lubenski, M. Z.

ORG: Physicotechnical Institute AN BSSR (Fiziko-tekhnicheskiy institut AN BSSR)

TITLE: Effect of rare metals on the properties of the alloy ALLOV

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 3, 1966, 74-80

TOPIC TAGS: aluminum alloy, antiwear additive, endurance test, ultimate strength, plastic strength/ ALLOV alloy

ABSTRACT: The authors report results of experiments on the influence of small additions of titanium, zirconium, vanadium, and cerium on the properties and macroscopic structure of cast aluminum alloy ALLOV, tested in the cast and heat-treated states. The preparation of the test ingots is described. The plots of the hardness against the percentage of additive are given, and a table of the ultimate strength and of the elongation for different percentages of additives is included. The results show that up to 0.3 - 0.4% of the additive improves the hardness of the heat-treated alloy, but at higher percentages the additive has no further effect. The average increase in hardness is 10%, and in the endurance 20 - 30% without a change in plastic properties. An explanation of the modification effected by the additive is presented and photographs of the microstructure in the cast state are included. Orig. art. has: 2 figures and 2 tables.

SUB CODE: 11,20/ SUBM DATE: 20Apr66/ ORIG REF: 007/ OTH REF: 003

Card 1/1

ACC NR: AP7002885

SOURCE CODE: UR/0201/66/000/004/0129/0131

AUTHOR: Lubenskiy, M. Z.; Parkhutik, P. A.

ORG: none

TITLE: Thermal expansion of AL10V alloy modified with titanium, zirconium and cerium

SOURCE: AN BSSR. Vestsi. Seryya fizika-tekhnichnykh navuk, no. 4, 1966, 129-131

TOPIC TAGS: aluminum alloy, titanium containing alloy, zirconium containing alloy, cerium containing alloy, thermal expansion, aluminum alloy thermal expansion

ABSTRACT: The thermal expansion of specimens of AL10V aluminum alloy modified with 0.02, 0.05, 0.1, 0.3, 0.5 or 1.0% of titanium, zirconium or cerium has been tested in temperature ranges of 20-100, 20-200, 20-300 and 20-400C. It was found that modifying with 0.05-0.1% of zirconium or titanium lowers the coefficient of linear expansion by 5-7% as compared with unmodified AL10V alloy. A further increase in titanium or zirconium decreases the coefficient of expansion to a point where it becomes the same as that of unmodified alloy. Cerium has little or no effect on the coefficient of expansion, except at 20-100C, where a slight decrease of linear expansion was observed. Orig. art. has: 2 figures.

SUB CODE: 11/ SUBM DATE: 07Sep66/ ORIG REF: 011

Card 1/1

LUBENSKIY, A.M. [Lubens'kyi, A.M.]

Travelling club of atheists. Nauka i zhyttia 9 no.7:  
53-54 J1 '59. (MIRA 12:11)

1. Khudozhniy kerivnik Lebedins'kogo rayonnogo budinku  
kul'turi, Sums'ka oblast'.  
(Lebedin District--Community centers)  
(Atheism)

LUBENSKIY, I.S., insh.

Preliminary freezing as a method of preventing the freezing  
together of soil and ballast. *Biul.stroi.tekh.* 12 no.10:6-7  
0'55. (MIRA 12:1)  
(Soil freezing) (Gravel--Transportation)



GOFMAN, M.M., VASIL'YEVA, A.I.; LUBENSKIY, N., red.; TOPOROV, P., tekhn. red.

[Intensified loading of combines on the North Caucasian railroad]  
Opyt Severo-kavkazskoi zheleznoi dorogi po uplotnennoi pogruzke  
kombainov. Rostov-na-Donu, 1957. 19 p. (MIRA 11:10)

1. Dorozhnoye Nauchno-tekhnicheskoye obshchestvo, gruzovaya sluzhba  
Severo-Kavkazskoy zheleznoy dorogi (for Gofman, Vasil'yeva)  
(Combines(Agricultural machinery))--Transportation

KARAPETIAN, Gurgen Beybutovich; ZVORYKIN, Serafim Vasil'yevich;  
Prinimali uchastiye: YURCHENKO, P.I.; LEVIN, R.R.; LUBENSKIY,  
V.D., kand.tekhn.nauk. LYUBARSKIY, A.L., retsenzent; SOKOLOVSKIY,  
V.I., red.; DUGINA, N.A., tekhn.red.

[Deep well drilling rigs] Burovye ustanovki glubokogo burenia.  
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 367 p.  
(MIRA 14:1)

(Oil well drilling rigs)

LUBENSKIY, Ye.G.

~~Introduction of air into the subarachnoid space in acute injuries of the brain. Vopr. neurokhir. 16 no. 5:55-59 Sept-Oct 1952. (CIAM 23:3)~~

1. Of the Clinical Department (Head -- Prof. I. S. Babchin), Leningrad Scientific-Research Neurosurgical Institute imeni Prof. A. L. Polenov (Director -- Prof. V. N. Shamov, Active Member AMS USSR).

GOL'TSMAN, Ye.M.; LUBENSKIY, Ye.G.; POTANINA, M.N.

Eosinophilic granuloma of the skull [with summary in English, p.157].  
Vest.khir. 77 no.3:59-64 Mr '56. (MLRA 9:7)

1. Iz Leningradskogo nauchno-issledovatel'skogo neyrokhirurgicheskogo instituta imeni prof. A.L.Polenova (dir. - prof. V.N.Shamov)  
(EOSINOPHILIC GRANULOMA  
cranium, diag.)  
(GRANIUM, neoplasms  
eosinophilic granuloma, diag.)

LUBENSKIY, Ye.G. (Leningrad)

Fixation of the spine with bone fragments for the prevention of secondary displacement. Vop. neirokhir, 27 no.2:1-4  
Mr--Ap '63. (MIRA 17:2)

1. Nauchno-issledovatel'skiy neyrokhirurgicheskiy institut imeni A.L. Polenova (dir. -- prof. V.M. Ugryumov), Leningrad.

UGRYUMOV, V.M., prof.; LUBENSKIY, Ye.G.; KALINER, S.S.; KACHAYEV, V.L.;  
DUBIKAYTIS, Yu.V.; FEDOROVA, I.D.

Surgical treatment of traumatic epilepsy in adults. Vop. neurokir.  
28 no.2:41-45 Mr-Apr '64. (MIRA 18:2)

1. Leningradskiy nauchno-issledovatel'skiy neurokhirurgicheskiy  
institut imeni A.L. Polenova (direktor - prof. V.M. Ugrumov).

LUBENSKIY, Ye.G., kand. med. nauk; KLEMENT, A.A., kand. med. nauk

Experience in using preserved homotransplants of the dura mater.  
Vest. khir. 94 no.1:82-88 Ja '65. (MIRA 18:7)

1. Iz Leningradskogo nauchno-issledovatel'skogo nayrokhirurgicheskogo instituta imeni A.L.Polenova (dir. - prof. V.M.Ugryumov) i Leningradskogo nauchno-issledovatel'skogo instituta perelivaniya krovi (nauchnyy rukovoditel' - prof. A.N.Filatov).

LUBENSKIY, Yu.M., kandidat meditsinskikh nauk (Khabarovsk)

Effect of surgical intervention and anesthesia on diuresis.

Klin. med. 31 no.11:71-75 N '53. (MLRA 6:12)

(Diuretics and diuresis) (Anesthesia) (Surgery, Operative)



BOLOTOV, K.F.; LUBENSKIY, Yu.M., kandidat meditsinskikh nauk.

Agricultural injuries. Sov.med. 19 no.4:63-66 Ap '55. (MLRA 8:6)

1. Iz gosptal'noy khirurgicheskoy kliniki (zav. -prof. A.M.Dykhno)  
Krasnoyarskogo meditsinskogo instituta.  
(WOUNDS AND INJURIES, prev. and control,  
in agriculture, in Russia)  
(AGRICULTURE,  
inj., prev. in Russia)

LUBENSKIY, Yu.M., kandidat meditsinskikh nauk

Trauma in forestry. Sov.med. 20 no.6:76-80 '56.

(MIRA 9:9)

1. Iz gospital'noy khirurgicheskoy kliniki (dir. prof. A.M.Dykhno)  
Krasnoyarskogo meditsinskogo instituta.

(ACCIDENTS,

in forestry workers (Rus))

(AGRICULTURE,

accid. in forestry workers (Rus))

LUBENSKIY, Yu.M., kandidat meditsinskikh nauk

Changes in the secretory function of the kidneys in acute radiation sickness; experimental research (a preliminary report). Urologiia 21 no.3:33-38 J1-S '56. (MLRA 9:12)

1. Iz kafedry gospital'noy khirurgii (zav. - prof. A.M.Dykhno) Krasnoyarskogo meditsinskogo instituta.

(RADIATION SICKNESS, exper.  
causing kidney funct. disord.)

(KIDNEY DISEASES, etiol. and pathogen.  
exper. radiation sickness)

17(10, 14)

SOV/177-58-7-10/28

AUTHOR: Lubenskiy, Yu.M., Candidate of Medical Sciences

TITLE: Penetrating Bullet Wounds of the Abdominal Cavity  
in Acute Radiation Sickness

PERIODICAL: Voenno-meditsinskiy zhurnal, 1958, Nr 7, pp 50-53  
(USSR)

ABSTRACT: The article deals with the characteristics of the course of penetrating bullet wounds of the abdominal cavity in acute radiation sickness. According to data of I.Ya. Tikhonin, I.S. Kas'yanov, G.Ye. Gustavson and G.A. Tsebut, who studied the effect of morphium-ether narcosis and the operation of animals after radiation with sublethal doses of ionizing rays, many of the experimental animals died from radiation sickness and secondary infections. S.P. Mokrovsckaya stated that general radiation of animals sharply aggravates the reactivity of the organism. L.M. Kotel'nikov is of the opposite opinion.

Card 1/2

SOV/177-58-7-10/28

Penetrating Bullet Wounds of the Abdominal Cavity in Acute Radiation Sickness

He did not observe a slowing-down of the regeneration process of the tissues. Based on experiments on dogs, the author concludes that combined injuries have certain peculiarities and differ from ordinary wounds of the abdominal cavity. In animals with combined injuries, pronounced phenomena of general oppression were observed. In all radiated animals the number of neutrophils increased and the number of lymphocytes diminished. Others formed elements of the peripheral blood, the indicators of hemoglobin and the erythrocyte sedimentation reaction were also changed. There are 2 graphs.

Card 2/2

LUBENSKIY, Yu.M., kand.med.nauk

! Changes in the secretory function of the stomach in acute radiation sickness; experimental study [with summary in English]. Vest. rent. i rad. 33 no.4:63-66 J1-Ag '58 (MIRA 11:8)

1. Iz kafedry gosptal'noy khirurgii (zav. - prof. A.M. Dykhno) Krasnoyarskogo meditsinskogo instituta.

(STOMACH, eff. of radiations

changes in secretory funct. after x-irradiation in dogs (Rus))

(RADIATIONS, inj. eff.

same (Rus))

(GASTRIC JUICE,

secretion, eff. of x-ray single dose total body irradiation in dogs (Rus))

(ROENTGEN RAYS, effects,

total body single dose, on gastric juice secretion in dogs (Rus))

LUBENSKIY, Yu. M.

Aleksandr Mikhailovich Dykhno. Khirurgiia 34 no.3:140-141 Mr '58.  
(OBITUARIES (MIRA 12:1)  
Dykhno, Aleksandr M. (Rus))

LUBENSKIY, Yu., kand.med.nauk

In Memory of A.M.Dykhno. Vest.khir. 80 no.3:158-159 Nr '58.  
(MIRA 11:4)

(DYKHNO, ALEKSANDR MIKHAILOVICH, 1909-1957)



LUBENSKIY, YU. M., DOG MED SCI, <sup>*Data*</sup> ~~"MATERIAL"~~ ON GUNSHOT  
WOUNDS OF THE ABDOMINAL CAVITY WITH INTESTINAL INJURY  
UNDER CONDITIONS OF PENETRATING RADIATION. (EXPERIMENTAL  
~~INVESTIGATIONS~~ <sup>*studies*</sup>). " TOMSK, 1960. (TOMSK STATE MED INST).  
(KL, 3-61, 228).

LUBENSKIY, Yu. M., kand. med. nauk

Surgical treatment of splenogenic cirrhosis of the liver.  
Khirurgia 37 no.7:85-87 J1 '61. (MIRA 15:4)

1. Iz kafedry gosspital'noy khirurgii (zav. - prof. N. V. Rozovskiy)  
Krasnoyarskogo meditsinskogo instituta.

(LIVER\_CIRRHOSIS) (SPLEEN\_SURGERY)

LUBENTSOV, I.T., inzh.-podpolkovnik; DENISOV, A.M., podpolkovnik  
tekhnicheskoy sluzhby; GORYACHEV, V.T., podpolkovnik; KOSOROTOV,  
B.V., inzh.-polkovnik, red.; SOLOMONIK, R.L., tekhn.red.

[Manual for the maintenance of the GAZ-51, GAZ-63, GAZ-69, and  
GAZ-69A mototrucks] Rukovodstvo po tekhnicheskomu obsluzhiva-  
niiu avtomobilei GAZ-51, GAZ-63, GAZ-69 i GAZ-69A. Moskva, Voen.  
izd-vo M-va obor.SSSR, 1960. 147 p. (MIRA 13:6)

1. Russia (1923- U.S.S.R.) Ministerstvo oborony.  
(Mototrucks--Maintenance and repair)

**LUBETSOV, V.F.; ROMBRO, S.Ya.**

An electronic precision phase-meter for measuring phase differences in sinusoidal voltages. Izv. tekhn. no.2:20-23 Mr-Ap '55. (MIRA 8:9)

(Electronic measurements)

LUBENTSOV, V.F., red.; MATVEYEVA, A.Ye., tekhn. red.

[Instructions 215-54 for checking the frequency of electric oscillations of highly-stable oscillators; principal methods and regulations] Instruksia 215-54 dlia poverki chastoty elektricheskikh kolebani vysokostabil'nykh generatorov; osnovnye polozenia i metody. Izd. ofitsial'noe. Moskva, 1957. 35 p. (MIRA 14:5)

1. Russia(1923- U.S.S.R.) Komitet standartov, mer i izmeritel'nykh priborov.

(Oscillators, Electric--Testing)

Lubentsov, V.F.  
3(0)

PHASE I BOOK EXPLOITATION

SOV/2205

Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy

Izmereniye vremeni; sbornik (Measurement of Time; Collection of Articles)  
Moscow, Standartgiz, 1958. 115 p. (Series: Its: Trudy, /vyp./ 1)  
Errata slip inserted. 2,000 copies printed.

Additional Sponsoring Agency: USSR. Komitet standartov, mer i izmeritel'nykh priborov.

Resp. Ed. of this vol: A.I. Konstantinov; Editorial Board: G.D. Burdun, A.L. Dukler, V.I. Yermakov (Deputy Chairman), M.K. Zhokhovskiy, L.M. Zaks, A.I. Konstantinov, V.F. Lubentsov (Chairman), M.P. Orlova, L.M. Pyatigorskiy, I.G. Rusakov, N.A. Sorokin (Resp. Secretary), V.N. Titov; Ed. of Publishing House: S.M. Davydova; Tech. Ed.: M.A. Kondrat'yeva.

PURPOSE: This book is intended for astronomers, geodesists, and other scientific personnel interested in the precise determination of time.

COVERAGE: This is the first of a series of periodicals to be published by the  
Card 1/4

## Measurement of Time (Cont.)

SOV/2205

All-Union Scientific Research Institute of Physical-Technical and Radio-Technical Measurements. The present volume is concerned with the measurement of time and represents some of the work of the Central Scientific Research Bureau of the Unified Time Service during the years 1947-1951. References accompany each article.

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Lubentsov, V.F. The State Time Service	5
The article covers the development of the State Time Service for the past ten years. The development is described in relation to the corresponding requirements of science and industry.	
Pavlov, N.N. The Views of V. Ya. Struve on the Problem of Evaluating the Precision of Interpolation and Extrapolation of Clock Corrections	13
This article is devoted to the study of clock rates. Comparisons are made of the views and methods of Gauss, Struve, and Preypich.	
Dolgov, P.N. The Differential Method of Deriving Mean Corrected Moments of Rhythmic Time Signals and Evaluating Their Accuracy	25
This article describes the technique of computing standard time by differential method. This method was developed for practical use in the Time Service by N. Kh. Preypich.	

Card 2/4

Measurements of Time (Cont.)

SOV/2205

- Titov, V.N. The Relation Between the Mean Square Variation of the k-Diurnal Rate and the Mean Square Variation of the Diurnal Rate of Clocks 34
- Fedochenko, F.M. The Isochronization of Pendulum Oscillations of Pendulum Oscillations 39  
This article deals with investigations of methods to increase the accuracy of astronomic pendulum clocks.
- Tupitsyn, O.V. Investigation of the Causes of the Systematic Acceleration of the Diurnal Rate of Astronomic Pendulum Clocks Manufactured by the "Etalon" Plant 48
- Vlasov, B.I. The Random Components of the Movement of Pulkova (Observatory) Azimuth Marks 54  
This article discusses the stability of targets used by the Pulkova Observatory for azimuth determination over a long period of time.
- Pruss, K.V. The Photo Chronoscope - A Device for the Precise Registration of Instants of Time 60

Card 3/4



Measurements of Time (Cont.)

SOV/2205

A complete description of the design and principles of operation of photo chronoscope is given. The description is well illustrated with diagrams and photographs.

Konstantinov, A.I. and A.I. Solov'yev. Basic Determination of the Longitude of the Astronomic Station in Irkutsk During 1947-1948

72

This article describes the program used in the precise determination of the difference in longitude Moscow-Irkutsk. This work served to give the Irkutsk Time Service a precise longitude value and to establish a base for determining personal equations of astronomers.

Dolgov, P.N. The Work of the Time Service of the Soviet Union During 1948, 1949, and 1950

103

This article evaluates the results of the time services of the USSR for the years cited based on the analysis of the monthly bulletins of moments of time signals and moments of standard time.

AVAILABLE: Library of Congress (QB 213.V9)

Card 4/4

MM/gmp  
9-1-59

ЛУБЕНТОВА, В.Ф.

24(0); 5(4); 6(2) PHASE I BOOK EXPLOITATION SOV/2215

Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii imeni D.I. Mendeleeva

Referaty nauchno-issledovatel'skikh rabot; sbornik No. 2 (Scientific Research Abstracts; Collection of Articles, Nr 2) Moscow, Standartgiz, 1958. 139 p. 1,000 copies printed.

Additional Sponsoring Agency: USSR, Komitet standartov, mer i izmeritel'nykh priborov.

Ed.: S. V. Reshetina; Tech. Ed.: M. A. Kondrat'yeva.

PURPOSE: These reports are intended for scientists, researchers, and engineers engaged in developing standards, measures, and gauges for the various industries.

COVERAGE: The volume contains 128 reports on standards of measurement and control. The reports were prepared by scientists of institutes of the Komitet standartov, mer i izmeritel'nykh priborov pri Sovete Ministrov SSSR (Commission on Standards, Measures, and Measuring Instruments under the USSR Council of Ministers). The participating institutes are: VNIIM - Vsesoyuznyy nauchno-issledovatel'skiy metrologii imeni D.I. Mendeleeva (All-Union Scientific Research Institute of Metrology imeni D.I. Mendeleev) in Leningrad; Sverdlovsk branch of this institute; VNIIX - Vsesoyuznyy nauchno-issledovatel'skiy institut komiteta standartov, mer i izmeritel'nykh priborov (All-Union Scientific Research Institute of the Commission on Standards, Measures, and Measuring Instruments), created from VNIIMP, Moskva; VNIIT (All-Union Institute of Measures and Measuring Instruments) October 1 1958; VNIIPRI - Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific Research Institute of Physicotechnical and Radio-engineering Measurements) in Moscow; KHOIMP - Khar'kovskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Khar'kov State Institute of Measures and Measuring Instruments); and NOIMP - Novosibirskiy gosudarstvennyy institut mer i izmeritel'nykh priborov (Novosibirsk State Institute of Measures and Measuring Instruments). No personalities are mentioned. There are no references.

Torchigrebko, S.S. (VNIIM). Studying Recurrent Errors of Micrometric Screws of Level Triers 45

Solov'yeva, L.A. (VNIIM). Studying the Curvature of the Tube of Levels 45

Buzhnev, L.D., V.F. Lubentsov, S.M. Okhotina, and P.A. Sapan'on (KHOIMP). Widening the Spectrum of Standard Frequencies Produced by the KHOIMP Standard Frequency Unit to 10<sup>10</sup> Cycles per Second 47

Sasin, A.G. (VNIIPRI). Quartz Resonator With a Quality Factor of 10<sup>11</sup> - 10<sup>10</sup> 47

Gripenko, I.V., Ye.D. Novgorodov, M. Kh. Reparidse, T.S. Gurenyuk, Yu.M. Libin, and A.I. Samoylovich (KHOIMP). Developing Quartz Elements of Oblique Cut 48

Bryzhev, L.D., S.D. Sapozhnikov, V.M. Titov, P.P. Yestaf'ev, and V.I. Yur'enko (KHOIMP). Developing and Studying Simple and Suitable Oscillators and Convertors of High Stability for Time and Card 10/27 49

Lubentsov, V.F., S.M. Okhotina, and P.A. Sapan'on (KHOIMP). Apparatus for Checking Micro Voltmeters 101

LUBENTSOV, V.F.

~~State Line Service.~~ Trudy VNIIPTRI no.1:5-12 '58.

(MIRA 12:4)

(Time measurements)

AUTHOR: Lubentsov, V.F. SOV/115-58-1-36/50

TITLE: In the International Advisory Committee for Determination of the Second (V mezhdunarodnom konsul'tativnom komitete po opredeleniyu sekundy)

PERIODICAL: Izmeritel'naya Tekhnika, 1958, Nr 1, pp 82 - 84 (USSR)

ABSTRACT: The article contains general information on the work of the International Advisory Committee for Determination of the Second (MKKS) organized at the International Committee of Measures and Weight, and in particular on the first session of the Committee in June 57. The Institut fizikotekhnicheskikh i radiotekhnicheskikh izmereniy SSSR (Institute of Physicotechnical and Radiotechnical Measurements) is represented in the Committee whose purpose is the preparation of recommendations for the practical development of international time standards. Burdun and Lubentsov participated in the aforementioned session.

1. Time--Standards

Card 1/1

LUBENTSOV, V.F.

ARTEM'YEVA, Ye.V.; LUBENTSOV, V.F.

Additional errors in the frequency of electric oscillations  
during their transmission. Izv. tekhn. no. 2: 82-85 Mr-Apr '58.

(MIRA 11:3)

(Oscillators, Transmission)

AUTHOR: Lubentsov, V.F. SOV-115-58-3-30-41

TITLE: Controlling the Temperature of Quartz Elements (Regulirovaniye temperatury kvartseykh elementov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 3, pp 83 - 90 (USSR)

ABSTRACT: A thermostat for the quartz element of primary standard quartz generators is described, assuring constant temperature of the quartz element with maximum error of  $\pm 0.002^{\circ}\text{C}$  at a temperature change of the ambient medium by not more than  $0.5^{\circ}\text{C}$ . The thermostat design, illustrated (Fig. 4), is based on principles expounded previously [Ref. 3 and 4] by Booth and Dixon in "J.I.E.E.", 1935, v.77, and Turner, in "J.I.E.E.", 1935, v. 81, and features a closed copper cylinder inserted into one end of a plexiglass cylinder, with the measuring bridge placed in the hollows left in the thick end walls of the cylinder. Detailed description of all thermostat elements is given along with pertaining calculations. There are 3 diagrams, 1 circuit diagram, 5 graphs and 8 references, 4 of which are Soviet and 4 English.

1. Thermostats--Design 2. Quartz--Applications

Card 1/1

LUBENSOV, V.F.

Sixth International Congress on Chronometry. Izv.tekh. no.1:  
62-64 Ja '60. (MIRA 13:5)  
(Time measurements--Congresses)

3100

S/115/60/000/06/09/031  
B007/B014

9.4300

AUTHOR: Lubentsov, V. F.

TITLE: On the Standard for Time and Frequency

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 6, pp. 12-17

TEXT: The author studied the errors of quartz clocks<sup>a</sup>, their origin, and the conditions to be satisfied by methods of error control by means of molecular clocks for the purpose of obtaining a uniform time scale. First, the author studied the constancy of the oscillation frequency  $f_k$  in the case of quartz clocks and of the oscillation frequency  $f_m$  in the case of molecular clocks. Both of them are complicated functions of a large number of variables. The inconstancy of  $f_k$  is reduced by regulating the temperature of the quartz cell, the feed voltage, and a series of other measures, with the exception of the inconstancy of the quartz cell itself. It is shown that  $f_m$  depends on the changes of many parameters, so that an automatic regulation of the main parameters of the generator is of special importance

Card 1/3



On the Standard for Time and Frequency

S/115/60/000/06/09/031  
B007/B014

in the development of molecular clocks. For the purpose of the Gosudarstvennaya sluzhba vremeni i chastoty (State Time and Frequency Service) it would be convenient to utilize the high constancy of the oscillation frequency for molecular generators and to use them as continuously working molecular clocks. The following methods of manufacturing such clocks are described: 1) Division of the oscillation frequency of molecular generators up to 1 cycle, which is, however, very complicated. 2) Automatic frequency control (AFC) of  $f_k$  according to  $f_m$  (Ref. 14). 3) Automatic phase control (APC) of  $f_k$  according to  $f_m$ . 4) Joint integral measurement of  $f_k$  and  $f_m$ . Conclusion: Periodic control of  $f_k$  according to  $f_m$  is inconvenient for the storage of time. Among the methods of continuous automatic control or measurement of  $f_k$  according to  $f_m$ , automatic phase control and integral measurement should be preferred. The constancy of  $f_m$  may be increased during uninterrupted operations lasting for some time by reducing the effect of parameter changes of molecular generators, by adjusting them to an optimum mode of operation, and by automatic regulation

Card 2/3

01275

On the Standard for Time and Frequency

S/115/60/000/06/09/031  
B007/B014

of these parameters. It is pointed out that a continuous operation of the clocks is one of the principal requirements, and that by a further development of molecular clocks these might be used to calibrate time and frequency. There are 6 figures, 1 table, and 15 references: 8 Soviet, 5 German, and 2 English.

✓

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ACCESSION NR: AT4026433

S/2589/62/000/059/0046/0049

AUTHOR: Zhdanova, N. F.; Lubentsov, V. F.

TITLE: The Q-factor and resonance frequency of quartz elements as functions of temperature in the 80-770K range

SOURCE: USSR. Komitet standartov, mer i izmeritel'ny\*kh priborov. Trudy\* institutov Komiteta, no. 59 (119), 1962. Issledovaniya v oblasti izmereniya chastoty\* (Investigations in the field of frequency measurement), 46-49

TOPIC TAGS: frequency measurement, resonance frequency, quartz, quartz element, Q factor, resonance frequency temperature dependence, Q factor temperature dependence

ABSTRACT: Since quartz elements are used in various types of highly accurate generators and clocks exposed to variable conditions, the Q-factor was determined every 0.1 C by measuring the time of the free oscillation-amplitude attenuation of the quartz element a specific number of times, using a special automatic instrument. The error in the measurement of Q is determined by inconsistencies in the measurement of the attenuation time and, in the case of the instrument employed, was on the order of  $\pm 3\%$  for  $Q = 2 \cdot 10^4$  and on the order of  $\pm 1\%$  for  $Q = 6 \cdot 10^4$  and above. The resonance frequency  $f_0$  was measured by the so-called heterodyne method, the quartz element being excited either by the circuitry of

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the Q-measuring instrument or according to a resonance curve using a frequency standard and an audio generator. The error in the measurement of  $f_0$  did not exceed  $+1 \cdot 10^{-7}$ . For measurements in the 80-300K range, a vacuum-sealed quartz element was placed in a massive copper cylinder which was lowered into a Dewar flask with liquid nitrogen. The complete test methodology is described in the article. For measurements in the 300-770K interval, a quartz bar was fastened by a tungsten wire, about 0.03 microns in diameter, in a conventional box-type holder set in a tube of quartz glass in which a pressure of approximately  $1 \cdot 10^{-5}$  mm of mercury was maintained. Measurements in the 300-770K interval were conducted for 28-30 hours and the results in the determination of  $f_0$ , with the heating and cooling of the quartz bar, coincided for the same temperature within  $\pm 0.1$  cycle. The dependence of Q and  $f_0$  on the environmental temperature was determined for various types of fastening arrangements and quartz element holders. The test conditions are described in some detail in the text. From the results of the investigation it follows that in a temperature interval of approximately 80-130K for bars with a certain type of fastening arrangement and 80-200K for bars fastened differently, there are abrupt changes in Q as a result of the use of silk wires for the binding. As temperature is lowered from 300 to 80K, the Q factor generally increases by an average of 2-20 times in the 80-110K region. For fastening arrangements and electrodes of identical construction, Q as a temperature function remains, on the average, the same. As the temperature is increased

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from 300 to 770K, an increase in Q is observed for the bars in the approximate region of 350-380K, after which the Q decreases until the 770K mark. It was also found that the variation in resonance frequency  $f_0$  with temperature is gradual and smooth. For quartz bars with electrodes superimposed on the surface, the dependence of  $f_0$  on temperature in the 80-300K interval is of the type shown in Fig. 1 of the Enclosure. The change in  $f_0$  takes place primarily as a result of changes in the geometric dimensions of the quartz bar, electrodes and elastic properties of the quartz, while the effect of the change in electrode dimensions is of noticeable significance, in the given case, due to the small gap between the surface of the bar and the exciting electrodes. Orig. art. has: 7 figures.

ASSOCIATION: Komitet standartov, mer i izmeritel'ny\*kh priborov (Committee for Standards, Measures and Measuring Instruments)

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LUBENTSOV, V.F.

Accuracy of frequency measurements based on standard frequencies.  
Izm. tekhn. no. 12:30-34 D '64. (MIRA 18:4)

LUBENTSOV, V.F.

Temperature regulation in air-conditioned rooms. Izm. tekhn.  
no.8:20-23 Ag '65. (MIRA 18:9)

120-3-23/40

*LUBENTSOV, YU.V.*

AUTHORS: Rzhevkin, K.S., Senatorov, K.Ya. and Lubentsov, Yu.V.

TITLE: A "Characterograph" for Semiconductor Triodes.  
(Kharakteriograf dlya poluprovochnikovykh triodov)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1957, Nr 3, pp.81-84  
(USSR)

ABSTRACT: An instrument is described which has been designed for oscillographic investigation of the characteristics of point and plane (junction) semi-conductor triodes with earthed bases. The four following families of characteristics are measured:

- (1)  $U_e = f(i_k)$  with  $i_e$  constant,
- (2)  $U_k = f(i_k)$  with  $i_e$  constant,
- (3)  $U_e = f(i_e)$  with  $i_k$  constant,
- (4)  $U_k = f(i_e)$  with  $i_k$  constant,

where U represents voltage, i - current, e - emitter, k - collector. To obtain the characteristics, linearly changing current pulses (Fig.2e) are applied to the emitter or collector circuit and stepped current pulses (Fig.2z) are applied to the collector or emitter circuit respectively. The circuit connections are altered by a switch to

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## A "Characterograph" for Semiconductor Triodes.

give the required characteristic. A voltage proportional to the linearly changing current is applied to the X amplifier of a CRT, and a voltage from the appropriate semiconductor electrode is applied to the Y amplifier. Calibration is obtained by measuring the voltages on the electrodes and the current through the triode. The circuit is given in Fig.1 and the waveforms in Fig.2. The circuit consists of the following: multivibrator ( $\mathcal{N}_1$  - Fig.2a); sawtooth generator ( $\mathcal{N}_{16}$  - Fig.2b); step voltage generator ( $\mathcal{N}_2, \mathcal{N}_3, \mathcal{N}_4, \mathcal{N}_5$  - Fig.2b); cathode follower, supplying the emitter current ( $\mathcal{N}_5$  - Fig.2b); cathode follower, used to draw the collector current ( $\mathcal{N}_{15}$  - Fig.2e). Diodes  $1/2\mathcal{N}_{12}, \mathcal{N}_{14}$  establish the DC components and diodes  $\mathcal{N}_{13}, \mathcal{N}_{10}, 1/2\mathcal{N}_{11}, \mathcal{A}_1$  together with the meter  $\Pi_4$  measure the linearly changing current. Meter  $\Pi_2$  measures the step current. The

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A "Characterograph" for Semiconductor Triodes.

characterograph is supplied by the rectifier BYC-1, and UO-4 together with photographic recording is used for displaying the characteristic curves. Figs. 3 and 4 show oscillograms of the characteristics of point and plane semi-conductor triodes; Fig. 5 shows the collector characteristics for a plane triode in the region of saturation. There are 5 illustrations and no references.

ASSOCIATION: Department of Physics of the Moscow State University  
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M. V. Lomonosova)  
SUBMITTED: January 26, 1956.

AVAILABLE: Library of Congress.

Card 3/3 1. Semiconductors-Analysis 2. Triodes-Analysis 3. Instrumentation

LUBER, A.A.

"Zoning of the vegetation and botanical provinces in the USSR during the permian."

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LUBERDA, JERZY

LUBERDA, Jerzy (Krakow, Pradnicka 37, II Klin, Chir. A.M.)

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349-360 Ap '54.

1. Z II Kliniki Chirurgicznej Akademii Medycznej w Krakowie.  
Kierownik: prof. dr J.Jasienski.  
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