

CIA-RDP86-00513R001032000042-6 MALYSHEV, Yu.F., inzh. Investigating winter tracks of the DT-54A tractor. Mekh. i elek. sots. sel'khoz. 19 no.6:55-57 '61. (MIRA 14:12) 1. TSentral'naya mashinoispytatel'naya stantsiya. (Crawler tractors — Gold weather operations)

26031

\$/139/61/000/003/011/013 E073/E335

Resistance to Abrasive Wear ...

There are 1 figure and 9 Soviet references.

ASSOCHATION:

Sibirskiy fiziko-tekhnicheskiy institut pri Tomskom gosuniversitete imeni V.V.Kuybysheva

(Siberian Physicotechnical Institute of

Tomsk State University imeni V.V. Kuybyshev)

October 21, 1960

SUBMITTED:

Card 5/6

2500

S/139/61/000/003/011/013 E073/E335

Resistance to Abrasive Wear

a fresh abrasive surface. The wear was taken as the mean arithmetical value of 6-12 successive measurements. Aluminium was used as a reference standard. The results are plotted in Fig. 1 - H_D kg/mm², ϵ , $E \cdot 10^3$ kg/mm² all as functions of the

β-phase quantity in %. It can be seen that the hardness increases with increasing percentage of the β-phase, whilst the relative wear-resistance and the modulus of elasticity remain practically unchanged. The obtained results show that the relative wear-resistance of heat-treated brass is in better qualitative agreement with the modulus of elasticity than with other mechanical characteristics of the resistance of the brass to deformation, particularly hardness. This bears out earlier results in that an increase in wear-resistance can be obtained only if the increase in hardness is combined with an increase in the bond forces of the atoms in the crystal lattice.

Card 4/6

26031

Resistance to Abrasive Wear

S/139/61/000/003/011/013 E073/E335

supplement earlier investigations on the resistance-to-wear of heat-treated brass by determining the modulus of elasticity which is considered as a characteristic of the bond forces between the individual atoms. The investigations were made on J.W. (L62) brass and for obtaining various ratios between the α - and β -phases the following heat-treatments were applied: annealing at 550 °C and quenching from 500, 550, 600, 650, 700, 750 and 800 °C. The quantity of β -phase in these was determined and their hardness was measured. Following that, specimens were produced for determining the modulus of elasticity and for abrasive-wear tests. The modulus of elasticity was determined by means of ultrasonics on specimens 1.4 x 2.9 x 14 mm, taking in each case the mean arithmetical value of 4 specimens. The abrasive-wear tests were carried out according to well-known techniques of M.M. Khrushchov and M.A. Babichev, using electrocorundum paper No. 180 as an abrasive surface. was under a load of 1.2 kg at a relative speed of movement of 1.8 m/min. After covering a distance of 2.1 m, the specimen was weighed with an accuracy of Ool mg and each new pass was on

Card 3/6

26092

Resistance to Abrasive Wear ...

S/139/61/000/003/011/013 E073/E335

M. M. Khrushchov and M. A. Babishev (Ref. 5: DAN SSSR, 131, No. 6, 1960) expressed the view that the resistance to wear showed a better correspondence with the modulus of elasticity than with the hardness measured by indentation. The latter two authors proposed the following relation between the relative resistance to wear £ and the modulus of elasticity £ for pure metals:

$$\epsilon = 0.49 \times 10^{-4} E^{1.3}$$

It is stated that this relation holds for binary alloys with an unlimited series of solid solutions as well as for binary alloys with limited solubility in the eutertic and for a number of minerals. The authors of this paper believe that the correspondence between E and E is of a more general nature than the correspondence between the relative wear resistance and the hardness measured by indentation. The here described investigations were made in order to

Card 2/6

18 8200

2808

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S/139/61/000/003/011/013

E073/E335

AUTHORS:

Savitskiy, K_*V_* and $Malyshev_*$ Yu_*F_*

TITLE

Resistance to Abrasive Wear and Godulus of

Elasticity of Heat-treated Brass

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika,

1961, No.3, pp.164-166

In earlier work of one of the authors it was shown TEXT's that the increase in Rockwell hardness and other strength characteristics of brass caused by increasing the quantity of the β≖phase during quenching from various temperatures had practically no influence on the resistance to abrasive wear and on the hardness determined by stretching. One of the authors (Ref. 3: Izvestiya vuzov MVO SSSR, Fizika, No. 2, 1958) expressed the view that evaluation of the wear-resistance of metals and alloys purely on the basis of hardness and other mechanical characteristics which were dependent on resistance to deformation did not provide an unequivocal relation between the mechanical properties and the wear resistance, and that the internal bonds between the atoms have to be taken into consideration. F. T. Barwell (Ref. 4: Mashinostroyeniye, No. 4: 58, 1958), Card 1/6

MALYSHEV, Yu.F.

Comparative testing of the DSSh-14 tractor chassis and the DT-14 tractor. Avt.i trakt.prom. no.9:22-24 S '57. (MIRA 10:11)

1. TSentral'naya mashinoispytatel'naya stantsiya Ministerstva sel'skogo khozyaystva SSSR.

(Tractors--Testing)

AUTHOR:

Malyshev, Ye.V., Engineer

SOV-117-58-4-7/21

TITLE:

Some Problems in the Die-Shearing of Thin Laminated Plastics (Nekotoryye voprosy vyrubki tonkolistovykh sloistykh plastmass)

PERIODICAL:

Mashinostroitel', 1958, Nr 4, pp 25-27 (USSR)

ABSTRACT:

The article contains general information and technologic recommendations for die-shearing of laminated plastics with fabric, paper, glass fiber fabrics or asbestos used as fillers. The behavior of laminated plastics in the shearing dies is described. Recommendations are made concerning the preheating temperatures for textolite "A", getinax "B", "AB" and "G $_{\rm V}$ "; the work clearances and the punch taper angle. A stripper design is also recommended (Figure 6). There are 2 photographs,

3 sets of diagrams and 1 graph.

1. Plastics--Processing 2. Dies--Applications

Card 1/1

USSR/Cultivated Plants - Fruits. Berries.

M-6

Abs Jour

: Ref Zhur - Biol., No 7, 1958, 30018

pollinating variety three branches of each plus flowers were cut off, placed in cans with water and hung up in the crowns of those trees of the variety to be pollinated. In the presence of full self-sterility of the Paper Rennet the pollen of the foreign varieties raised the formation of the germs by up to 91%; up to 12% of the flowers formed normal fruit. With the flowers of the pollinator suspended in the crowns of the pollinated variety the Paper Rennet tree's productivity increased by 5-14 times. The best pollinators were the Simirenko Rennet and the London Pippin.

Card 2/2

USSR/Cultivated Plants - Fruits. Derries.

M-6

Abs Jour

: Ref Zhur - Biol., No 7, 1958, 30018

Author

Malyshev, Ye.O., Goncharenko, Ye.G.

Inst

The Moldavian Institute for Norticulture, Viticulture

and Wine-Making.

Title

: The Effect of Pollinators on the Increased Productivity

of the Apple.

Orig Pub

Sadovodstvo, vinogradarstvo i vinodeliye Moldavii, 1957,

No 2, 21-23.

Abstract

The investigations were made in 1956 at the Moldavian Institute for Horticulture, Vituculture and Wine-Making. Both castrated and non-castrated Paper Rennet apple flowers were pollinated with its own pollen and with that of 6 other varieties. This experiment was furthermore arranged

accordingly: in the beginning of the flowering of each

Card 1/2

MALYSHEV, Yu.I.

Quinidine therapy of cardiac fibrillation in mitral stenosis patients following commissurotomy. Terap. arkh. 34 no.10: 90-93 0'62 (MIRA 17:4)

1. Iz otdeleniya grudnoy khirurgii (zav. G.N. Shvind)
Chelyabinskoy oblastnoy klinicheskoy bol'nitsy (glavnyy vrach
N.S. Klyukov). Nauchnyy rukovoditel' raboty - zav. kafedroy
grudnoy khirurgii i anesteziologii Leningradskogo ordena Lenina
mastituta usovershenstvovaniya vrachey prof. S.A. Gadzhiyev.

MALYSHEV. Ye.I., dotsent, kand.sel'skokhozyaystvennykh nauk Intervarietal crossing of tomatoes for the purpose of obtaining seeds with hybrid vigor. Trudy Kish. sel'khoz. inst. 19:103-123 (MIRA 14:1) 160, (Tomato breeding)

USSR/Cultivated Plants. Potatoes. Vegetables. Melons.

M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20353.

pistil begins to take pollen only after the flower blossoms. During large-scale crossings the best results (75 - 100% fruit set) were obtained by pollinating the yellow buds and half opened blossoms, during which, in the latter case, a significantly greater amount of seeds was yielded in comparison with the fruit obtained through self-pollination. When pollinating flowers in later phases of development a portion of the flowers became self-pollinated. If the percent of hybrids in the one-day flowers is 70-80, in the two-day flowers 45-55, then in the three-day ones in all 10-20% is reached. A description is given of the techniques of crossing according to this new method.

Card : 2/2

USSE/Cultivated Plants. Potatoes. Vegetables. Melons.

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20353.

Author : Ye. Walyshev, R. Shul. men.

: Kishinev Agricultural Institute. : A New Method of Obtaining Tomato Hybrid Seeds. (Novyy spo-Inst Title

sob polucheniya gibridnykh semyan pomidorov).

Orig Pub: Agrikultura shi viteritul Moldovey, 1957, No 6, 48-52; Zemledeliye i zhivotnovodstvo Moldevii, 1957, No 6, 47-51.

Abstract: In the Kishinev Agricultural Institute a method of crossing tomatoes was used by means of the transfer of the

anthers of one variety to the flowers of the other simultaneously with castration. To do this, the column of anthers was removed together with the blossom's corolla and hafted on the style of the pistil of the other variety's castrated flower. It was established that the

: 1/2 Card

USSR/Cultivated Plants - Grains.

M.

Abs Jour

: Ref Ziur - Biol., No 9, 1958, 141047

Author

: Malyshuv, Ye.

Inst

: Kishinev Agricultural Institute.

Title

: New Varieties of Sugar Corn.

Orig Pub

: Zemledeliye i zhivotnovodstvo Moldavii, 1957, No 4, 20-24

Abstract

The work was carried out by the Kishinev Agricultural Institute. Using the method of sex hybridization of geographically remote forms, two varieties were developed. popushoi auriu (golden corn) was created by means of free pollination (without castration) of the American sugar corn variety Golden Bantam with the local gravelly orange holdavanka and a subsequent separation of the best plants according to the initial characteristics. Popushoi auriu

Card 1/2

MALYSHEV, YE, I.

USSR/Cultivated Plants.- Fruits, Berries

M-8

Abs Jour : Ref Zhur - Biol., No 1, 1958, No 1723

: Ye. I. Malyshav, Iu.K. Zoti Author

: Not Given Inst

: A New Variety of Apple Tree Title

Orig Pub : Sadovodstvo, vinogradarstvo i vinodeliye Moldavii, 1957, No 1,

16-18

Abstract: A new variety of the apple tree, the Sara naliv, is described (a hybrid of the Sara sinan and Beliy naliv).

: 1/1 Card

MALYSHMY Te.I., mand, sel'skokhosysystvennykh nank; KACHANOVA, N., red.; [Principles of vegetable breeding and seed production] Osnovy

Belektsii i semenovodstva ovoshohnykh kulitur dlia uslovii

Bel

USSR/Cultivated Plants. Fruits. Berries.

M

Abs Jour: Ref Zhur-Biologiya, No 5, 1958, 20497.

Author : Ye. I. Malyshev, Yu. K. Zoti

: Not given Inst

: An Interesting New Variety of Cherry. (Novyy interesnyy Title

sort chereshni).

Orig Pub: Sadovodstvo, vinogradarstvo i vinodeliye moldavii, 1956,

No 6, 29.

Abstract: No abstract.

: 1/1 Card

MALYSHEV Ye . 1. USSR/Cultivated Plants - Fruits, Derries. 11-8

Abs Jour

: Ref Zhur - Edol., No 9, 1953, 39501

Author

Halyshev, Yc.I., Zoti, Yu.K.

Inst

ritle

: A New and Interesting Variety of Cherry Tree.

Orig Pub

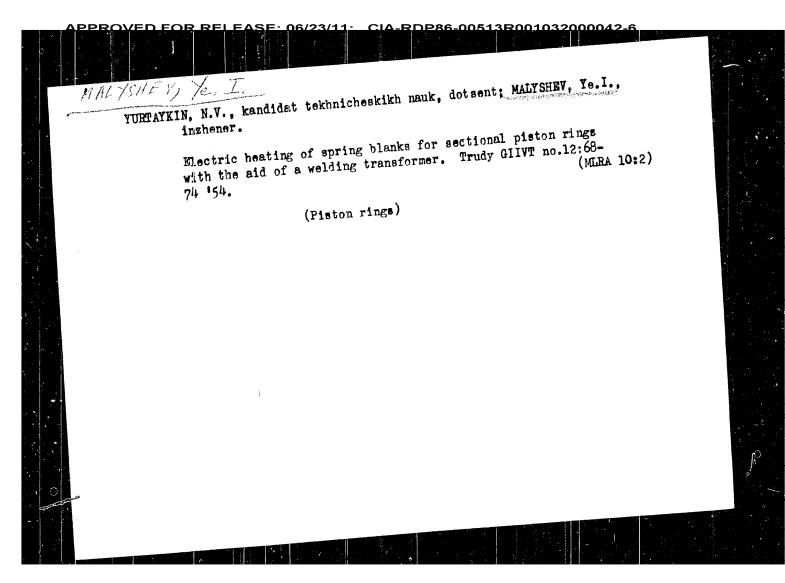
: Sadovodstvo, vinograd stvo i vinodeliye Moldavii, 1956,

No 5, 11-12

Abstract

: A new cherry tree variety, Krasa Moldavii, was grown by Yu.K. Zoti. During his stay in the Rumanian Carpathians, he noticed that the local people had many tree roots grown from kernels which had been scattered on the ground in a casula conner. He selected a powerful cherry tree (maternal) which had very big Truits with fibrous severless flesh and big kernels. Then he chose a second tree (paternal) which was not fully developed and which had small but sweet, juicy and tender berries, and interbred the 2 trees.

Card 1/2



EOCHKAREV, V.P., kand. geol.-miner. nauk; NIKITINA, L.G., kand. geol.-miner. nauk; SHAPIRO, S.M., kand. geol.-miner. nauk; EYDINOVA, N.M., st. inzh.; GOLOBOROD'KO, G.L., inzh.; PERLIK, G.P., inzh.; BANDALETOV, S.M., kand. geol.-miner. nauk; VLADIMIROV, N.M., kand. geol-miner. nauk; SADYKOV, A.M., kand. geol.-miner. nauk; MALY SHEV, Ye.G., ml. nauchn. sotr.; BERKALIYEV, N.A., st. inzh.; EYDÍNOV, Yu.I., st. inzh.; MUKHAMEDZHANOV, S.M., kand. geol.-miner. nauk; ISABAYEV, T.T., st. inzh.; MOTOV, Yu.A., inzh.; KOLOTILIN, N.F., kand. geol.miner. nauk; LAPIDUS, Zh.D., inzh.; SHOYMANOVA, M.M., inzh.; YAREMCHIV C.c., inzh.: BARROT-do MARNI A.V., kand. miner. nauk [deceased]; MIKHAYLOV, B.P., st., inzh.; SATPAYEV, K.I., akademik, glav. red. [deceased]; MEDOYEV, G.TS., otv. red.; DMITROVSKIY, V.I., red.; SFMENOV, I.S., red.; BRAILOVSKAYA, M.Ya., red.; KORO LEVA, N.N., red.

> [Irtysh-Karaganda Canal; engineering geological conditions] Kanal Irtysh - Karaganda; inzhenerno-geologicheskie usloviia. (MIRA 18:5) Alma-Ata, Nauka, 1965. 169 p.

(Continued on next card)

KIROV, S.A., kand.tekhn.nauk; LISTOV, A.M., kand.tekhn.nauk; KOPYSHTA, I.L., inzh.; DRCZDOV, V.A., kand.tekhn.nauk; TITORENKO, N.Ye., kand.tekhn.nauk; BUTOR, A.I., inz.; Prinimali uchastiye:

ALEKEYEV, A.P., kand.tekhn.nauk; MALYSHEV, Ye.G., kand.tekhn.
nauk; GACARIN, Yu.A., inzh.; TITOV, S.A., inzh.; TUMARINSON, N.S.
insh.; KRUTIKOV, V.I., inzh., red.; MEDVEDEVA, M.A., tekhn.red.

[Completely precast buildings with few stories] Polnosbornye
maloetazhnye zdaniia. Moskva, Vees. izdatel'sko-polige.
ob"edinenie M-va putei soobshcheniia, 1962. 87 p. (Vsesoiuznyi
nauchno-issledov. institut transportnogo stroitel'stva. Trudy
no.44).

(Railroads—Buildings and structures)
(Precast concrete construction)

MALYSHEV, Ye.G., kand.tekhn.nauk; TITORENKO, N.Ye. Using vibrated brick panels in construction for the transportation industry. Transp.stroi. 10 no.3:31:-37 Mr 160. (Building blocks)
(Transportation-Buildings and structures)

ZMALYSHEV. MALYSHEV, Ye., kand. tekhn. nauk. New crane for assembly work on one- and two-story buildings, Gor. i sel'. stroi, no.11:16 N '57.
(Cranes, derricks, etc.) (MIRA 11:1) MALYSHEV, Ye., kand.tekhn.nauk, MALYSHEV, Ye., kand.tekhn.nauk Methods of aligning and ferming horizontal construction joints in large blocks. Gor.i sel.stroi. no.8/9:13-15 Ag-S '57.

(MIRA 10:12) (Concrete blocks)

ACC NR: AR6036307

conditions, which eliminates additional errors during accelerated operating conditions; the device scale can be graduated both in absolute values (kg, m³, and revolutions) and in per-unit values (kg/h, m³/min, rpm, km/hr, etc.), which facilitates the reading of indexes and their processing. The diagrams of the equipment for measuring fuel consumption per hour, number of revolutions, air consumption, and fuel consumption, which were used during the tests of the DG-108 engine are described. They have shown good indexes and have given highly accurate measurements of the parameters. [Translation of abstract] [NT]

SUB CODE: 21/

Card 2/2

ACC NRI AR:6036307

SOURCE CODE: UR/0273/66/000/009/0024/0025

AUTHOR: Malyshev, V. Ya.

TITLE: Automatic equipment for measuring parameters while testing internal combustion engines of tractors and automobiles

SOURCE: Ref. zh. Dvigateli vnutrennogo sgoraniya, Abs. 9.39.154

REF SOURCE: Tr. Chelyab. in-ta mekhaniz. i elektrifik. s. kh., vyp. 24, 1965, 113-118

TOPIC TAGS: automatic measurement, measuring instrument, internal combustion engine, tractor, time constant, fuel consumption, parameter, engine performance characteristic, performance test

ABSTRACT: Methods are proposed for measuring revolutions, fuel consumption, air, etc., based on setting the time constant for measuring all the parameters specified for texts. Following are the advantages of the methods: the measuring procedure is simplified, especially when dealing with a great number of parameters; the time of measuring remains constant under all operating

Card 1/2

UDC: 621. 432:531. 76.08

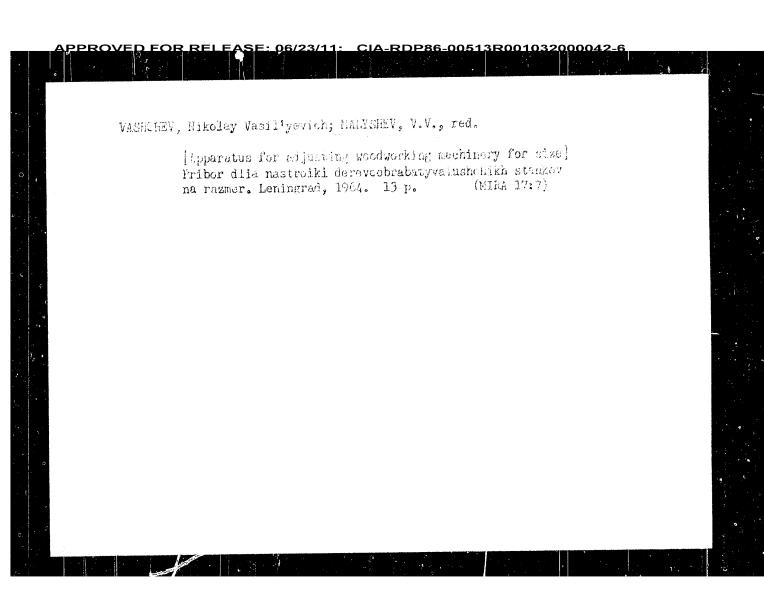
MALTSHIV, V.Ya., kand. tekhn. nauk Determining the external forces acting on the moldboard of a bulldozer. Stroi. i dor. mash. 7 no.4:12-14 Ap 162. (MIRA 16:7) (Bulldozers)

RASHKOV, S. Ye.; ISAYEV, A.M.; OSTROVSKIY, A.P.; SHNAPIR, Ya.I.; MALYSHEV, V.Ya.; BORISOV. B.V. Method of fire drilling. Gor. zhur. no.7:76 Jl '62. (MIRA 15:7) (Boring machinery)

MALYSHEV, V. Ya.

Malyshev, V. Ya. -- "Investigation of the Effect of the Parameters of the Pre-Cumbustion Chambers of the KDM-46 Engine When Operating According to the Gas-Fluid Process." Min Higher Education USSR. Chelyabinsk Inst of the Mechanization and Electrification of Agriculture. Chair of "Tractors and Automobiles." Chelyabinsk, 1956. (Disseration For the Degree of Wandidate in Technical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114



KNYAZEV, Sergey Aleksandrovich, kand. tekhn.nauk; MALYSHEV, V. V., dots., kand. tekhn.nauk, retsenzent; KORSHUNOV, A.N., kand. tekhn. nauk, retsenzent; LAUTNER, E.M., dots., kand. tekhn.nauk, otv. red.; BEZGODOVA, L.V., red.; URITSKAYA, A.D., tekhn. red. [Machines and instruments for mechanical processing of wood; general problems in the theory of cutting] Stanki i instrumenty po mekhanicheskoi obrabotke drevesiny; obshchie voprosy teorii rezaniia. Lektsiie alla studentov fakuliteta mekhanicheskoi tekhnologii drevesiny. Leningrad, Vses. zaoch-(MIRA 16:3) nyi lesotekhn. in-t, 1963. 37 p. (Woodworking machinery)

BAVEL'SKIY, Mikhail Davydovich; MALYSHEV, V.V., red.; MEL'NIKOVA M.S., red. izd-va; LOBANKOVA, R.Ye., tekhn. red

[Automatic and semiautomatic machinery for woodworking] Avtomaty i poluavtomaty mekhanicheskoi obrabotki drevesiny. Mockva, Goslesbumizdat, 1961. 422 p.

(Woodworking machinery) (Automatic control)

SIMSON, Ivan Isaifovich; MALYNEV, V.V., dotsent, kand.tekhn.nauk, retsonzent; MCRCZOV, N.A., dotsent, kand.tekhn.nauk, red.; CHFAS, M.A., red.izd-ve; SHCHETINIMA, L.V., tekhn.red.

[Safety engineering in woodworking] Tekhnika bezopasnosti pri mskhanicheskoi obrabotke drevesiny. Izd.2., perer. i dop. Moskve, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960.

(MIRA 14:1)

(Woodworking machinery-Safety appliances)

MALTSHEY, V.Y., kand.tekhn.nauk

Cutting tools equipped with hard-alloy bits. Der. prom. 7
no.8:7-9 Ag '58. (MIEA 11:9)

1. Leningradskaya lesotekhnicheskaya akademiya im. S.M.Kirova.

(Woodworking machinery)

MALYSHEV, V.V.

MIKHAYLOV, V.N., doktor tekhn. nauk; KULIKOV, V.A., kard. tekhn. nauk; AIMUKHOV, V.F., inzh.; MALYSHEV, V.V., inzh.; FUFYREVA, K.C., inzh.;

Organizing conveying for assembly work of metal railroad-car windows. Nauch. trudy Len. lesotekh. akad. no.76:77-82 157.

(Railroads-Cars-Construction) (MIRA 11:4)

(Conveying machinery)

MALYSHEV, V.V., kand.tekhn.nauk Graduated straightedge for checking the tensioning of gang and band saws. Der.prom.6 no.12:18 D '57. (MIRA 10:12) 1. Leningradskaya ordena Lenina lesotekhnicheskaya akademiya im. S.M.Kirova. (Saws)

MALYSHEV, V.V.,
MALYSHEV, MALYSHEV, MALYSHEV,
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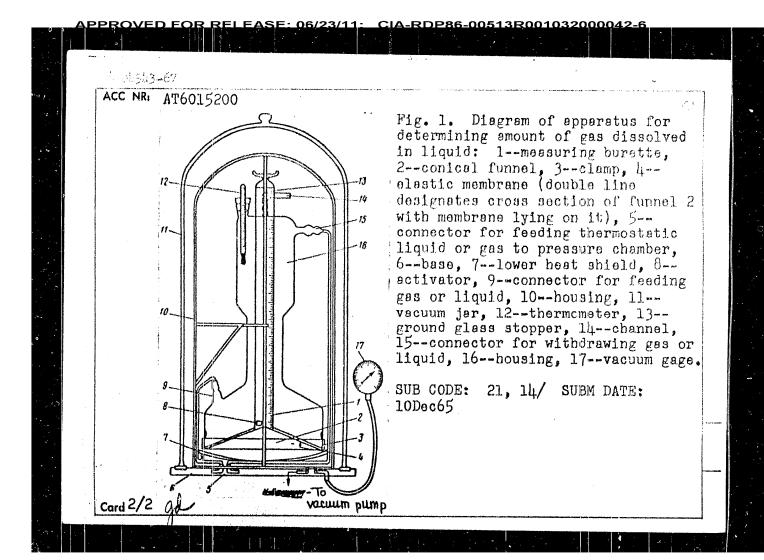
MALYSHEV, V.V., kandidat tekhnicheskikh nauk; VINOGRADOV, V.A., inzhener.

Hew type of instrument for making frame dowels. Der. prem. 6 no.5:16
My '57, (MIRA 10:6)

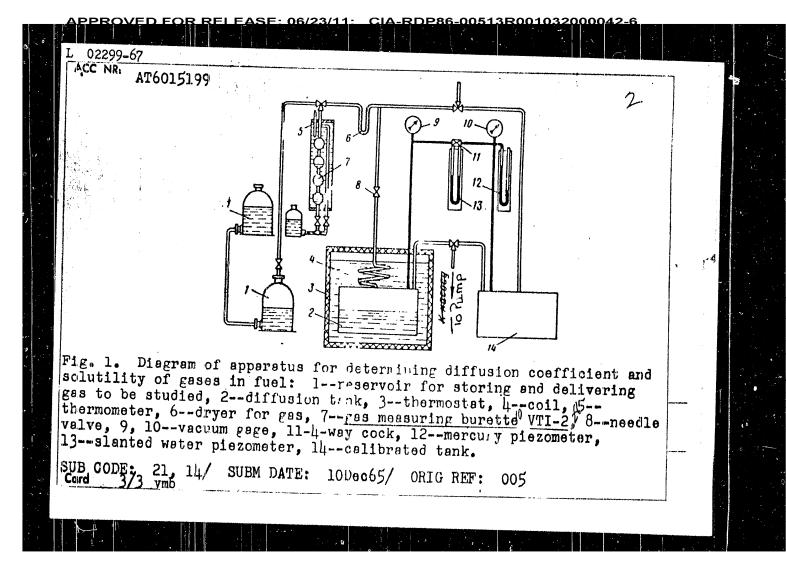
1. Leningradskaya erdena Lemna lesotekhnicheskaya akademiya im, S.M.

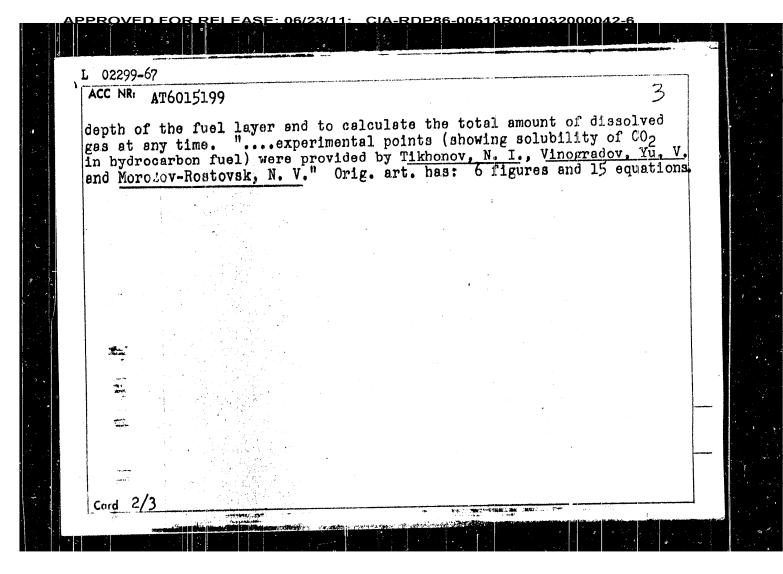
Kireva. (Woodwerking machinery)

LAVRUKHINA, A.K.; REVINA, L.D.; MALYSHEY, V.V.; SATAROVA, L.M.; SU KHUN-GUY (Su Hung-kuei); KALICHEVA, I.S.; FIRSOVA, L.D. Further study of the proudets of Iron spallation by 660 MeV protons. Radiokhimiia 5 no. 6:721-732 '63. (MIRA 17:7)



L 04543-67 EWT(m)/T FDN/WE/CD ACC NR: AT6015200 (A,N)SOURCE CODE: UR/0000/66/000/000/0096/0098 AUTHOR: Borisov. V. D.; Gogitidze, L. D.; Logvinyuk, V. P.; Makerenkov, V. V.; Melyshev, V. V.; Panchenkov, G. M.; Yakovlevskiy, V. V. ORG: none 14 Apparatus for determining the amount of gas dissolved in a liquid TITLE: SOURCE: Metody otsenki ekspluatatsionnykh svoystv reaktivnykh topliv i smazochnykh materialov (Methods for the performance evaluation of jet propellants and lubricants). Moscow, Izd-vo Mashinostroyeniye, 1966, TOPIC TAGS: OPIC TAGS: gas analysis, gas analyzar, solubility, petroleum fuel ABSTRACT: A simple apparatus for determining the amount of gas dissolved in a liquid was designed so that it could be used as a gas pipette for VTI, Orsat or other gas analyzers. A special feature of the apparatus (see Fig. 1) is the use of an elastic membrane to equalize the pressure between the measuring burette and the surrounding space, and measurement of the volume of liberated gases at different pressures and temperatures. A deviation of 3.5% was found in the measurement of gases separated from a hydrocarbon fuel. Water and other liquids may be used in the determinations. Orig. art. has: 1 table and 1 figure. Card 1/2 662,753,22:629,13,001,1





EWI(m)/I FDN/WE/GD AT6015199 (AN) SOURCE CODE: UR/0000/66/000/000/0087/0095 AUTHOR: Gogitidze, L. D.; Logvinyuk, V. P.; Makarenkov, V. V.; Malyshev, V. V.; Panchenkov, G. M.; Yakovlevskiy, 61 Btl ORG: none TITLE: Determining nonstationary solubility of gas in hydrocarbon fuels SOURCE: Metody otsenki eksplustatsionnykh svoystv reaktivnykh topliv 1 smazochnykh materialov (Methods for the performance evaluation of jet propellants and lubricants). Moscow, Izd-vo Mashinostroyeniye, 1966, 87-95 TOPIC TAGS: petroleum fuel, fuel property, solubility, diffused gas, applied mathematics, aircraft fuel tank ABSTRACT: A simple method was worked out and equipment was designed for determining the solubility and the diffusion coefficient of a gas in liquid under nonstationary conditions. This involves direct measurement of the volume of gas dissolved in the liquid (see Fig. 1). Conditions approximate those in the wing tanks of heavy subsonic sircraft. Equations given for calculating the nonstationary solubility of gas in a liquid enable one to calculate the gas concentration according to the Card 1/3662.753.22:629.13.001.4

L 10198-63 ACCESSION NR: AP3000029

inelastic cross section of 150-MeV protons with iron nuclei is 568 plus or minus 162 mb. The considerable difference between the distributions of the products at 150 and 560 MeV proton energies is probably due to the formation, absorption, and scattering of pions, which increases the probability of transferring large excitation energy to a nucleus at 660 MeV proton energy. Comparison of the total cross section for the inelastic interaction of the iron nuclei with the protons at the two energies with optical-model calculations yields and estimate for the radius of the Fe-56 nucleus, namely (1.21) 10 sup -13 cm. 'The authors express their gratitude to L. S. Kalicheva, L. D. Firsova, and T. I. Kholodkovskaya who took part in this work.'

ASSOCIATION: none

SUBMITTED: 060:t62 DATE ACQ: 12Jun63 ENCL: 00

SUB CODE: PH NR REF SOV: 005 OTHER: 016

bm/*CL* Card 2/2

L 10198-61 EPF(a)/EPF(n)-2/ENT(n)/BDS--AFFTC/ASD/SSD--

Pr-LI/Pu-Li ACCESSION NR: AP3000029 s/0056/63/044/005/1429/1436

AUTHOR: Lavrukhina, A. K.; Revina, L. D.; Malyshev, V. V.; Satarova, L. M.

TITLE: Smallation of Fe Nuclei induced by 150-MeV protons

SOURCE: Thurnal eksper. 1 teoret. fiziki, v. 44, no. 5, 1963, 1429-1436

TOPIC TAGS: Nuclear reactions, iron, low-energy protons, spallation, isotope

ABSTRACT: Continuing their earlier work on the spallation of iron isotopes by 660-MeV protons (Geokhimiya, no. 11, 955, 1961 and Radiokhimiya, in press), the authors studied nuclear reactions at lower energies, aimed at clarifying volume effects in the distribution of cosmogenic nuclides in meteorites. To this end, the main features of spallation of iron nuclei by 150-MeV protons were studied. An empirical equation is found for the production cross sections of the spallation products. The majority of the product nuclei were found to be near the bottom of the stability valley. The weighted numbers of the emitted neutrons and protons are 2.9 and 2.7, respectively. The cross section for the

Card 1/2

distribution

The application of zirconium molytdate and

8/063/63/008/002/015/015 A057/A126

ammonia solution. The obtained inorganic ion exchange substances were filled into glass columns (5 cm long, 0.5 cm² inner cross section), 2 cm high. In preliminary experiments the sorption of Rb³⁶, Cs¹³⁴, Pr²¹² and Sr⁹⁰ was determined by the batch technique using the hydrogen and ammonia form respectively of the exchange substance. Ro, Cs, and Fr did not adsorb on the ammonia form neither from the neutral nor from the C.3 M NH4Cl solution, while Sr adsorbed with 87.5%. From 0.3 M HCl 11.5% Cs. 14.2% Fr, but no Sr was adsorbed by zirconium molybdate. The effect of separation of Sr⁹⁰ with 0.1 M HCl from Cs¹³⁴ with 4 M NH4NO₃ or from Pr¹⁴² with 4 M NH4NO₃ on zirconium molybdate in H⁺ form is incomplete, since about 10% of the cesium activity remains on the columns. Cs¹³⁴ was eluted with 95 - 97% efficiency using as eluent a mixture of 4 M NH4NO₃ and 2 M HCl. The method was diveloped for the separation of short lived radioisotopes and of highly active products respectively. There is 1 figure.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii im. V.I. Vernadskogo AN SSSR (Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy AS USSR)

SUBMITTED:

May 28, 1962

Oard 2/2

s/063/63/008/002/015/015 A057/A126

AUTHORS:

Lavrubhina, A.K., Malyshev, Y.Y., Rodin, S.S.

TITLE:

The application of zirconium molybdate and titanium dioxide to the

group separation of elements

Zhurnal vsesoyuznogo khimicheskogo obshchestva imeni D.I. Mendeleyeva, v. 8, no. 2, 1963, 227 - 229 PERIODICAL:

The Heparation of elements by means of ion-exchange columns filled with zircomium molybuate and titanium dioxide was investigated. In the present paper results are given on the separation of the basic fission elements Rb and Cs from Sx and Ba, and from rare earths. Zirconium molybdate was prepared by very slow addition of 200 ml 1.4 M ammonium molybdate solution to 400 ml 1.2 M Zirconium chloroxide solution at vigorous stirring, which was continued after the precipitation for 15 min. The precipitate was filtered off, washed for 24 h and dried for 100 h. If suspended in water, 0.2 - 0.5 mm diameter particles were obtained. The same technique was applied to the preparation of titanium dioxide from 200 ml. 7% titanium tetrachloride solution and a 20% surplus of 20%

Card 1/2

S/056/62/043/001/001/056

Production of light nuclei by ...

There are 2 figures and 3 tables.

ASSOCIATION: Institut geokhimii i analiticheskoy khimii Akademii nauk SSSR (Institute of Geochemistry and Analytical Chemistry of the Academy of Sciences USSR)

SUBMITTED: December 26, 1961 (initially)

March 27, 1962 (after revision)

card 3/3

Production of light nuclei by ...

S/056/62/043/001/001/056 B154/B108

Cu and neighboring elements is a result of spallation and symmetric fission. Formation of lighter isotopes from all target nuclei occurs via

fission and fragmentation. The ratio $\frac{\sigma(\text{Na}^{24})}{\sigma(\text{F}^{18})}$ is always >1 and amounts

to 2.5, 5.0, 2.8, 1.3 and 1.8 for Cu, Sb, U, Bi and Sn, respectively. The measured values of o in the bombardment of Bi are virtually equal for all light nuclei which may be due to the spherical symmetry of these nuclei.

The energies of the fragments from Cu fission (Na 24 nuclei) in the angular interval of 15-80° are greater and the energies in the angular interval

of 100-160° are smaller than the Coulomb repulsion of Na 24 (20 MeV) so that asymmetric fission is supposed. The considerable anisotropy observed in the angular interval of 10-30° and the fragments with energies greater than that of Coulomb repulsion are indicative of fragmentation contributing to the process. The integral yield in fragments of a certain type depends on the "separation energy" $E = m_B + m_F - m_\Lambda$ (m_Λ - mass of target

nucleus, $m_{\rm F}$ - mass of fragment, $m_{\rm B}$ - mass of additional fragment).

Card 2/3

S/056/62/043/001/001/056 B154/B108

AUTHORS:

Lavrukhina, A. K., Moskaleva, L. P., Malyshev, V. V.,

TITLE:

Production of light nuclei by bombarding heavy elements with

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 43, no. 1(7), 1962, 3-7

The authors investigate the cross sections of for the production of Be⁷, F¹⁸, Na²⁴, Mg²⁸, Si³¹, P³² by 660 Mev proton bombardment of Al, Cu, Sb, Sn, Bi, J. The relative contributions of fission and fragmentation in Na^{24} production are estimated from the energy and angular distributions of the Na²⁴ nuclei produced by bombarding Cu. The Al, Cu, Sb, and U targets were bombarded in the usual way (A. K. Lavrukhina, et al. Atomn. energ., 3, 285, 1957); Sn and Bi were kept in special graphite containers. The authors conclude that the production of Si³¹ and P³² by bombarding

Card 1/3

MALYSHEV, Vladimir Serafimovich; KHUDYAKOV, G.V., red.; KAYDANEK, K.B., [The richer the collective farm the nearer the great goal] Bogache kolkhoz - blizhe velikaja tsel'. Orenburg, Orenburgskoe knizhnoe izd-vo, 1962. 22 p. (MIRA 15:5) 1. Predsedatel' kolkhoza "Rossiya." Perevolotskogo rayona, Orenburgskoy obl. (for Malyshev). (Orenburg Province-Collective farms)

SOBOLEV, S.K., ingh.; KUDRIN, V.A., kand.tekhn.nauk; OYKS, G.N., doktor tekhn.nauk; TEMBIN, K.G., doktor tekhn.nauk, V rabote prinimali uchastyye; BLIZMYUKOV, S.A.; ROZHKOV, I.M.;

MALISHW, V.S.

Desulfuration of pig iron outside the blast furnace by lime with the addition of aluminum powder. Sbcr.Inst.stali no.39:5-15 '60. (MIRA 13:7)

1. Kafedra metallurgii stali Moskovskogo ordena Trudovogo Krasnogo Znameni instituta stali im. I.V.Stalina. (Cast iron-Metallurgy) (Desulfuration)

MALYSHEV. V.S., gornyy inzhener.; NEKRASOV, O.P., gornyy inzhener.; RYTIKOV, K.M., Systems of mining thin, flat skarn deposits. Gor. zhur. no.2:14-18 F '57. (MLRA 10:4) 1. Dzhenichkinskoye rudoupravleniya. (Mining engineering) (Silicates)

BUKETOV, Ye.A.; BURDAKOV, Yu.D.; KIRR, L.D.; KLYACHEVA, Z.S.; MALYSHEV, V.P. Shaft furnace calcination of electrolytic copper slime. Toyet. met. 38 no.4:28-30 Ap 165. (MIRA 18:5)

SOKOLOV, V.I.; MALTSH.V. V.I.; ST. FARIOV, V.F. Improvement in cost winnes technology and an increase in laker productivity at the Polyanevo-Severneye hydraulic mine. Upol' 39 no.9:6-10 \$ 164. 1. Shakhta "Yolysay wakaya-leverneya" (for dokalov). 2. Kombinat Kuzbassugol* (for H. Yohev, Stepanov).

KULAKOV, Mikhail Vasil'yevich; SHCHEPKIN, Sergey Ivanovich; MALYSHEV,
V.F., kand.tekhm.nauk, retsenzent; ANDERS, V.R., inzh.,
retsenzent; MORDOVSKIY,S.I., kand.tekhm.nauk, red.; TAIRGVA,
A.I., red. izd-va; CHERNOVA, Z.I., tekhm. red.; UVAROVA, A.F.,
tekhn. red.

[Automatic control and measuring devices for chemical industries]
Avtomaticheskie kontrol'no-izmeritel'nye pribory dlia khimicheskikh proizvodstv. Moskva, Mashgiz, 1961. 552 p. (MIRA 15:8)
(Chemical industries) (Automatic control)

CIA-RDP86-00513R001032000042-6 KRAYNES, L.Ya., inch.; MALYSHEV, V.P., inch.; MITROFAROV, Ye.N., kand. tekhn. New methods for combined assembling of prestressed reinforced concrete construction elements. Biul. tekh. inform. po stroi. 5 no.5:14-17 My '59. (MIRA 12:8) (Precast concrete construction)

MALYSHEV, V.P.,inzh, Methods of testing certain types of elements in construction yards. Biul.tekh.inform. 5 no.2:21-22 F '59. (MIRA 12:4) (Precast concrete--Testing)

USSR / Electricity

G

Abs Jour

: Ref Zhur - Fizika, No 4, 1957, No 9621

Abstract

: where $\pmb{\mathcal{E}}$ is the dielectric constant of the material of the grains of the charge. It is concluded therefore that in a contact mass it is possible to employ several formulas derived for homogeneous dielectrics, using $\pmb{\mathcal{E}}_{eq}$.

Card

: 3/3

[사용자 사용자 사용자 기계 시대를 하다 수 시간 경험 가능과 그 사용자 하다 가는 사람이 없었다.

USSR / Electricity

G

Abs Jour

: Ref Zhur - Fizika, No 4, 1957, No 9621

Abstract

: losses: P=9A.a . f.tg.8. [=+a-=(E-)]",

where P are the specific dielectric losses in watts/cubic centimeters, E_{av} is the intensity of the average macroscopic field in kv/cm, f is the frequency, a is a coefficient representing the volume occupied by spheres in a unit contact mass, and A = 5.55 is a proportionality coefficient. Comparison between (1) and an analogous formula obtained on the basis of the laws of electrodynamics shows that the contact mass, subject to the above assumptions, behaves in a high frequency electric field as a homogeneous material, relative to the dielectric losses, with equivalent dielectric cons-

tent: $\frac{7ac}{L + a - a(c-1)J^2}$

Card

: 2/3

3R001032000042-0

MALYSHEV,

USSR / Electricity

Abs Jour

: Ref Zhur - Fizika, No 4, 1957, No 9621

Author

: D'yakonov, G.K., Malyshev, V.P.

Inst

: Not given

Title

: Concerning the Problem of Dielectric Heating of a Contact

G

Orig Pub

: Tr. Kazansk. khim. - tekhn. in-ta, 1955, vyp. 19-20, 7-13

Abstract

: A contact mass is considered as an aggregate of a large number of spheres of small dimensions which makes it possible to employ averages, used in the theory of magnetic field in a medium filled with dipoles. Using various supplementary simplifications, in particular, assuming that the reacting substances are as a result of the high temperature form an ideal gas with ϵ = 1 and $\tan \delta$ = 0, and also a that ϵ and tand of the dielectric are independent of the temperature, the authors derive the following equation for the

CArd

: 1/3

D'YAKONOV, G.K. [docenned]; ZEETTOV, A.A.; PELYSEEV, V.P.; MOSMOVSKAYA, L...; OSEROV, C.K.; USPENOV, A.G. Investigating the temperature field of furniess for the specials of butadiene. Trudy KKHPI no. 10:713-221 153 [equal. 156]. (IEM 10: (Butadiene) (Temperature—Northebosement) (Furnices) (IIIA 1:11)

ACC NRI AP7002982 to instrument 1--junction; 2--pair with right-hand winding; 3--pair with left-hand winding SUB CODE: 13, 09/ SUBM DATE: 31Dec64 Card 2/2

ACC NR

AP7002982

SOURCE CODE: UR/0413/66/000/024/0080/0080

INVENTOR: Gorchakov, G. M.; Malyshev, V. N.

ORG: None

TITLE: A thermocouple. Class 42, No. 189606

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 24, 1966, 80

TOPIC TAGS: thermocouple, alternating magnetic field, temperature measurement

ABSTRACT: This Author's Certificate introduces a thermocouple for measuring temperature in a high-frequency magnetic field. The device contains two thermal electrodes with a common junction. Shielding from induced industrial-frequency emf is provided by using an additional thermocouple identical to the basic unit with a common or separate hot junction. The electrodes are wound in opposite directions and the cold

Card 1/2

UDC: 536.532;621.316.761.2

MANAROV, L.L. MELYSHEV, V.N. Might - CoClo - H2O at 50 and 60°C. Ziar. Hz. Liniu. 29 no. 23:2766-2768 N '65. le luntrgradakly gosučanstvennyy universitet tuest lefe Chdanova.

MALYSHEV, V.N.; SIUL'TS, M.M.; MAKAROV, L.I. Equilibrium of anomalous mixed crystals. Zhur. fiz. khim. 39 no.6:1504-1507 ve 165. (Miss 18 (MIRA 18:11) 1. Demingradskiy gosadarstvennyy upiversitet imeni Zhdanove. Submitted Moreh Pi. 1966.

Examination of the Densities of Mixed KC1-RbC1 S/181/60/002/01/20/035
Crystals and of the Diffusion of Rubidium Ions BCC8/B014
Therein

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: April 9, 1959

Examination of the Densities of Mixed KCl-RbCl Crystals and of the Diffusion of Rubidium Ions

s/181/60/002/01/20/035 B008/B014

was found between the melting-point curves, the "outflow", the diffusion coefficients D, and the defectiveness of the mixed crystals. The tempers ture dependence of the diffusion coefficients was studied on three samples ture dependence of the diffusion coefficients was studied on three samples (KCl, RbCl, and an equimolecular mixed crystal) (cf. Table 4). The results obtained are represented as a function log D = f(T) in Fig. 3. The three

straight lines run parallel within the experimental limit of error. This indicates that the diffusion process in the preparations under consideration requires the same activation energy. Calculations have shown that it amounts to 35000 ± 300 cal/mole. This may be explained by the fact that the binding energy between the K+ (or Rb+) ions and the Cl anion is virtually equal in crystals of any composition. The authors refer to N. S. Kurnakov's papers. The X-ray structural analysis was carried out by Ye. V. Stroganov and Engineer I. Kozhina. The authors thank Professor A. N. Murin for his helpful advice. There are 3 figures, 4 tables, and 12 references, 5 of which are Soviet.

Card 2/3

<u> APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6</u>

S/181/60/002/01/20/035 B008/B014

24.7500

AUTHORS:

Makarov, L. L., Lur'ye, B. G., Malyshev, V. N.

TITLE:

Examination of the Densities of Mixed KC1 RbC1 Crystals

and of the Diffusion of Rubidium Ions Therein

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 1, pp. 88-92

TEXT: The authors examined the densities of mixed KCl-RbCl crystals at 25°C and determined their concentration of vacancies according to Shottki (Table 1). Fig. 1 represents the dependence of the degree of occupation of the elementary lattice n upon the composition. The difference between the results obtained by the authors and M. S. Ivankina (Ref. 7) is probably due to the different preparation of the samples. The configuration component of the entropy change in the development of mixed KCl-RbCl crystals was calculated with regard to the vacancies (Table 2). The results obtained are in agreement with experimental data. Next, the authors studied the diffusion of Rb⁺ ions at 670°C by means of the radioisotope R⁸⁶. The results of diffusion measurement are given in Table 3. An analogy

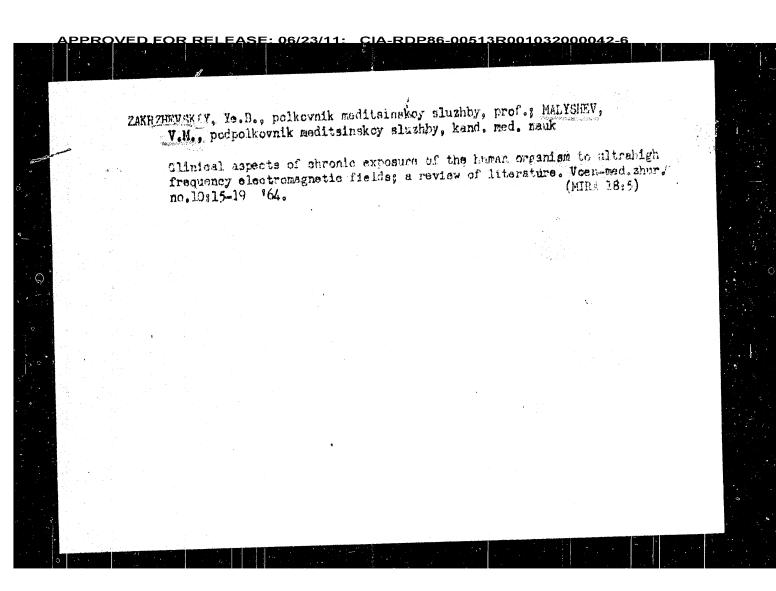
Card 1/3

CIA-RDP86-00513R001032000042-6 PETRICHENKO, A.M.; ZAYATS, A.A.; MALYSHEV, V.N. A CONTRACTOR OF THE PARTY OF TH New instrument designed for measuring the compactness of casting (MLRA 8:10) molds. Zav.lab.21 no.7:849-870 155. 1. Khar'kovskiy avtomobil'nodoroshnyy institut (Measuring instruments)

ANOSOV, F.V., inzh.; KUZMINSKIY, S.S., inzh.; MALYSHEV, V.M., kand.tekhn.nauk Research on the construction of hydraulic turbines at the Leningrad Metalworking Plant (22d Congress of the CPSU). Energomashinostroenie (MIRA 18:6) 11 no.3:3-8 Mr 165.

ARONSON, A.Ya., kand. tekhn. nauk; BUGOV, A.U., kand. tekhn
nauk; MALYSHEY, V.M., kand. tekhn. nauk; SKEYLEW, I.A.,
inzh.; FRANK-KAKEMETSKIY, G.Kh., kand. tekhn. nauk;
POSTOYEV, V.S., kand. tekhn. nauk, retsenzent; ORGO, V.M.,
kand. tekhn. nauk; red.

[Strength calculation of the perts of hydraulic turbines]
Maschet na prochnost detalei gifroturbin. Moskva, Mashincustroenie, 1965. 391 p. (MIMA 18:10)



APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6

VOROB'YEV, I.T.; MALYSHEV, V.M.

Testing experimental specimens of the IAMZ gearboxes. Ayt.prom. 28 no.8:28-29 Ag '62. (MIRA 16:3)

1. Yaroslavskiy motornyy zavod.

(Motor vehicles—Transmission devices)

MALYSHEV, V.M., inzh. Determination of the turning force of rotor blades in the presence of decelarative braking. Energomashinostroenie 8 no.11:17-20 N 62. (MIRA 16:1) (Hydraulic turbines)

MALYSHEV, V.M., inzh. Reply to I.I. Shriro's remarks. Energomashinostroenie 8 no.10:45 0 '62. (MIRA 15:11) (Kama Hydroelectria Power Station-Turbines-Testing)

MALYSHEV, V.M., inzh. Some results of the testing of the semiuniflow unit of the Kama Hydroelectric Power Plant during accelerating. Energomashinostroenie 7 no.9:1-5 S '61. (MIRA 14:9) (Kama Hydroelectric Power Station-Turbines-Testing)

-- -- 05/23/11- CIA-RDP86-00513R0010320000

SOV/124-58-4-4777

On the Stress Analysis of the Metallic (cont.)

studied when the conical shells are absent and the edges of the terus are clamped directly. Condition (14) representing the independence of the integration constants of the conical-shell equation used by the authors for the calculation of the truncated cone is only true for a non-truncated cone a obtained.

1. Turbines--Stresses 2. Stress analysis 3. Conical shells--Respendent

Card 2/2

SOV/124-58-4-4777

Translation from: Referativnyy zhurnal, Mekhanika 1958 Nr 4. p 155 (USSR)

Malyshev, V. M., Mikhevev, V. I. AUTHORS:

On the Stress Analysis of the Metallic Spiral Housing of a Water TITLE: Turbine (O raschete na prochnosť metallicheskov spiral'r.ov

kamery gidroturbiny)

PERIODICAL: V sb.; Gidroturbestroyeniye. Vol 4. Moscow Leningrad.

Mashgiz, 1957, pp 211-232

The axisymmetrical stress and strain condition of a thin ABSTRACT:

walled container is investigated. The container consists of an annular torus-shaped shell of revolution connected to two truncated-cone shells. The inner edges of the container (the edges of the conical shells) are rigidly clamped. The calculation was carried out according to the theory of thin-walled shells of revolution, with the flexure of the generatrix taken into consid eration. When determining the integration constants for the homogeneous differential equation of a conical shell, the reciprocal influence of its edges is ignored. The differential equation representing the torus-shaped shell is reduced to the Bessel

equation by means of simplifications. A particular case is

Card 1/2

APPROVED FOR REL FASE: 06/23/11: CIA-RDP86-00513R001032000042-6

124-11-12444

The Pitch Control of the Working Blades of a Variable-pitch Turbine During a Runaway Condition, (continued)

control of the working blades in the sense of opening, all other conditions being equal, requires a smaller effort from the servomechanism than in the sense of closing, and that it also requires a shorter time.

The equations afford a means, on the basis of static model tests and the given parameters of the full-scale turbine in any given specific case, of determining the law of variation of the blade pitch and the dependence of the number of revolutions of the turbine with time.

M. F. Zhukov

Card 2/2

MALYSHEV, V.M.

124-11-12444

Translation from: Referativnyy Zhurnal, Mekhanika, 1957, Nr 11, p 17 (USSR)

AUTHOR: Malyshev, V.M.

TITLE: The Pitch Control of the Working Blades of a Variable-pitch Turbine

During a Runaway Condition (Razvorot rabochikh lopastey povorotno-

lopastnoy turbiny v usloviyakh razgona.)

PERIODICAL: Sb: Gidroturbostroyeniye, Nr I, Moscow-Leningrad, Mashgiz,

1955, pp 292-310.

ABSTRACT: A theoretical evaluation of the influence of the pitch control of the working blades of a hydraulic turbine on the runaway speed of the runner, in an attempt to find means for the protection of turbines against a runaway condition resulting from a failure of the governor. The runaway process of a hydraulic turbine is investigated in conditions of varying blade pitch. The study (which does not take into account any water-hammer phenomena) results in the establishment of non-linear differential equations which describe the motion of the runner of a variable-pitch turbine in conditions of a constant head and

a constant gate opening, when the turbine is running away because of

a breakdown of the actuator coupling. It is shown that the pitch

Card 1/2

MALYSHEV, V.M. Removal of a nddele from the extrapleural cavity. Khirurgiia no.8: 77 Ag. 155. (MIRA 9:2) 1. Iz Kiselikhinskogo tuberkuleznogo gospitalya invalidov Otechestvennoy voyny. (PLEURA-FOREIGN BODIES)

MALYSHEV, V. M.: "The nerves of the pharynx and larynx of cettle" (Anatomic research). Leningrad, 1955. Min Higher Education USSR, Leniagrad Veterinary Inst. (Dissertation for the Degree of Candidate of Science of Biological Sciences)

S0: Knizhnava Letoris', No. 41, 8 Oct 55

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6

<u>1, 22261-66</u>

ACC NR: AR6005173

SOURCE CODE: UR/0058/65/000/009/A018/A018

30

AUGHORS: Aref'yev, I. M.; Malyshev, V. I.; Fautian, S. G.

TITIE: Vacuum spectrometer for the far infrared

SOURCE: Ref. zh. Fizika, Abs. 9A146

REF. SOURCE: Tr. Komis. po spektroskopii. AN SSSR, t. 2, vyp. 1, 1964, 650-655

TOPIC TAGS: ir spectrometer, vacuum, diffraction grating

TRANSLATION: A vacuum long-wave ir spectrometer is described, for the region 60 - 1000μ with four interchangeable echelettes with d = 0.25, 0.5, 1.2 mm, measuring 300 x 300 mm.

SUB CODE: 20

Card 1/1 nst

CHERDYNTSEV, V.V.; MALYSHEV, V.I.; KAZACHEVSKIY, I.V.; BORISOV, I.V. Isotopic composition of uranium and thorium in the zone of supergenezis. Studies of the peat bog matter. Geokhimila no.5:399-403 My '64. 1. Geological Institute of the Academy of Sciences, U.S.S.R., Moscow.

ACC NR AF6034764 in which E is the charge on an electron; k is a coefficient depending on the material and the condition of the surface layer of electrons and on the nature of the ions coming from the electrode; V_1 is the ionization potential of the gas; λ_1 is the length of the free flight path of a molecule of the gas; V_{1p} is the ignition potential of the discharge; d is the distance between electrodes; p is the pressure of the gas. Experimental data on surface ionization are compared satisfactorily with values claculated on the bases of the above theoretical considerations. Orig. art. has: 23 formulas and 5 figures. SUB CODE: 09,20/ SUBM DATE: none/

ACC NR AP6034764 AUTHOR: Barantseva, O. D. (Taganrog); Malyshev, V. A. (Taganrog) UR/0407/66/000/001/0043/0050 ORG: none TITIE: Study of the surface ionization of dielectrics by determination of the conditions for ignition of the discharge SOURCE: Elektronnaya obrabotka materialov, no. 1, 1966, 43-50 TOPIC TAGS: dielectric property, surface io ization, ignition point, electric ABSTRACT: The article presents an approximate calculation of the conditions for ignition of a discharge and an experimental application of the theory of ignition in the presence and in the absence of an external ionizer. According to Townsend, the breakdown condition is described by the equality where of and of are the first and third Townsend coefficients, determined by the Card 1/2 7 = ke Up . (3)

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6

L 32006-66

ACC NR: AP6020198

maximum), i.e., for the range which is of the greatest interest from the point of view of obtaining short pulses with high peak intensity. In the range of smaller values of N_i/N_p , from 1.1 to 1.8, the experimental values differ from theoretical by a magnitude larger than the possible experimental error. Going to the range of duration from the values predicted by theory, the form of the giant pulse changes also. The authors thank Yu. S. Ivanov for his help in performing the experiment. SIB CODE. 204 and 5 and 2 tables.

SUB CODE: 20/ SUBM DATE: 13Dec65/ ORIG REF: 004/ OTH REF: 004/ ATD FRESS: 502/

Card 2/200

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6

L 32006-66 FED/EWT(1)/EEC(k)-2/T/EWP(k) LIP(c) WG ACC NR: AP6020198 SOURCE CODE: UR/0056/66/050/006/1458/1463

AUTHOR: Malyshev, V. I.; Markin, A. S.

ORG: Physics Institute im. Lebedev, AN SSSR (Fizicheskiy institut AN SSSR)

TITLE: Investigation of the dependence of duration and form of a giant pulse on the coefficient of inversion population

SOURCE: Zh eksper i teor fiz, v. 50, no. 6, 1966, 1458-1463

TOPIC TAGS: laser pulsation, nanosecond pulse, pulse duration modulation, pulse shape

ABSTRACT: The possibility of an experimental quantitative verification of the theory of giant pulse formation was investigated. Lasers with neodymium glass rods of different sizes were used in the experiment. A solution of polymethine coloring material in nitrobenzene was used as a passive Q-switch. By changing the concentration of this substance the transmission coefficient of the solution was varied from 0.35 to 0.98. The duration and shape of giant pulses were measured for various values of population inversion, and the results were compared with the theoretical predictions. The experiment showed a good agreement between the values of the giant pulse duration, calculated theoretically and obtained experimentally in a range of N_1/N_p from 1.8 up to 4.5 (N_1 is the density of population inversion. When Q is restored, N_p is the density of population inversion when the pulse reaches

Card 1/2

APPROVED FOR RELEASE: 06/23/11: CIA-RDP86-00513R001032000042-6.

L 20195-66

ACC NRI AP6007213

resonator length, c - velocity of light). The structure and its depth of modulation were unstable from pulse to pulse if the entire output of the rod struck the photocell, but the use of a diaphragm increased both the stability and the depth of modulation. The beats are shown to be connected with the existence of isolated generation regions in different parts of the rod cross section, and the diaphragm is shown to decrease the contribution of the nonaxial modes to the radiation incident on the photocell. When the neodymium-glass rod is moved along the resonator (whose length is kept constant at 320 cm) the modulation frequency also changes, but this change occurs abruptly at a certain distance between the center of the rod to the mirror. It is shown that this behavior can be explained by regarding the resonator + rod system as a compound waveguide and calculating the change in the parameters of this compund waveguide resulting from displacement of the rod. A similar discrimination is observed also when the laser was operated without Q switching, in the usual spike mode, but the depth of modulation is smaller. 'The authors thank P. A. Bazhulin for interest, T. I. Kuznetsova and S. G. Rautian for discussions, and Yu. S. Wanov for help with the experiments." Orig. art. has: 2 figures and 1 table." [02]

SUB CODE: 20/ SUEM DATE: 03Aug65/ ORIG REF: 004/ OTH REF: 004/ ATD PRESS: 42/4

Card 2/2 7/1

I 2019 -66 FBD/EWT(1)/EWP(e)/EWT(m)/EEC(k)-2/T/EWP(k)/EWA(h) IJP(c) WG/WH.

SOURCE CODE: UR/0056/66/050/002/0339/0342

AUTHOR: Malvinev. V. I.; Markin, A. S.

ORG: Physics Institute im. P. N. Lebedev, Academy of Sciences SSSR (Fizicheskiy in-

TITLE: Discrimination of axial oscillation modes in a laser with external mirrors

SOURCE: Zhurnal eksperimental noy i teoreticheskoy fiziki, v. 50, no. 2, 1966,

TOPIC TAGS: laser modulation, laser radiation, resonator, neodymium glass

ABSTRACT: The purpose of the investigation was to observe beats produced in a neodymium-glass laser by interference between axial modes, and to investigate the dependence of the beat frequency and the resultant modulation on the distance between the mirrors and on the location of the neodymium-glass rod inside the laser cavity. A laser with external mirrors having reflection coefficients of 98 and 65%, respectively, was used. The neodymium-glass rod was 12 mm in diameter and 120 mm long. The Q switching was by means of a bleaching filter, described by the authors earlier (Pis ma ZhETF v. 1, no. 3, 49, 1965), installed near one of the mirrors. The laser emission was recorded with a coaxial photocell connected directly to the deflecting plates of an oscilloscope. The optical length of the resonator could be varied between 40 and 320 cm. As the length was increased from 40 to ~150 cm, the duration of the giant pulse increased from 25 to 80 nsec, and the waveform of the pulse remained smooth. At greater lengths a regular structure appeared on the waveform, with a period 21/c (L-

Card 1/2

LITVINOVA, N.F.; MALYSHEV, V.J. Spectral determination of boron in metallic calcium and calcium oxide. Thur. enal. khim. 21 no. 1383-86 '66 (MIRS 19:1) 1. Thatitut geokhimii i analiticheskoy khimii imeni Vernadakogo AN SSSR, Moskva.

I 36825-66 EWT(m)/EWF(t)/ETI IJP(c) ES/WW/JW/JD/JG ACC NR: AP6014143 SOURCE CODE: UR/0075/65/020/012/1353/1358 AUTHOR: | Turovtseva, Z. M. (Deceased); Malyshev, V. I.; Moskov, A. S. ORG: none TITLE: Determination of nitrogen and oxygen in uranium hexafluoride Zhurnal analiticheskoy khimii, v. 20, no. 12, 1966, 1353-1358 TOPIC TAGS: quantitative analysis, oxygen, nitrogen, uranium compound, ABSTRACT: The method described is based on measurement of the intensity of the nitrogen bands $\lambda = 4278$ Å or $\lambda = 4236$ Å and the oxygen line λ =7772 Å under special discharge conditions in an enriched mixture of air with UF6. The concentrations of nitrogen and oxygen are determined by a nomograph obtained with the use of specially prepared standard solutions. The article contains detailed schematic diagrams of the apparatus used. It then proceeds to a description of a photoelectrical method for determination of the amount of air in UF. The sensitivity of the method is approximately the same as that of the photographic method. Orig. art. has: 6 figures. SUB CODE: 07/ SUBM DATE: 21Apr64/ OTH REF:

UDC:

Card 1

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ACC NR: AP6013

AP6013017

thallium lamp, together with thallium emission from the Tl atoms in TlI vapor, was incident on a monochromator slit, and measured with a photoelectric attachement (FEP-1). The widths and shapes of the spectral lines were measured by photographing the spectra obtained with the aid of a Fabry-Perot interferometer, using an ordinary photometry technique. The data reduction procedure is described. The an ordinary photometry technique. The data reduction procedure is described. The results show that the concentration of the metastable Tl atoms decreases with increasing pressure of the extraneous gas. Ammonia and oxygen decreased the concentration of the Tl atoms at the metastable level with approximately equal efficiency, whereas the hydrogen was much less effective. The measurements yield for the cross sections for ine stic collisions values of the order of 10⁻¹⁶ cm² for the cross sections for ine stic collisions values of the order of 10⁻¹⁶ cm² for ammonia and oxygen, and 10⁻¹⁸-10⁻¹⁹ cm² for hydrogen. The authors thank the late P. A. Bazhulin and S. G. Rautian for continuous interest in the work and valuable advice. Orig. art. has: 3 figures, 8 formulas, and 1 table.

2

SUB CODE: 20/ SUBM DATE: 27 Nov64/ ORIG REF: 004

Card 2/2 mc

31505-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6013017 SOURCE CODE: UR/0051/66/020/004/0554/0560

Dudkin, V. A.; Malyshev, V. I.; Sorokin, V. N. AUTHOR:

64 62 ORG: none

TITLE: Investigation of the influence of extraneous impurities on the concentration of thallium atoms in the metastable state

Optika i spektroskopiya, v. 20, no. 4, 1966, 554-560

TOPIC TAGS: thallium, metastable state, crystal impurity, collision cross section, inelastic scattering, Atom, ABSORPTION COLFFICIENT

ABSTRACT: The authors have investigated experimentally the influence of different impurities on the concentration of thallium atoms in a metastable state $6P_3/2$. These atoms were obtained by photodissociation of TII molecules, making it possible to vary extensively the nature of the extraneous gases and their pressure. The impurities were molecular hydrogen, oxygen, and ammonia at different pressures. The concentration of the metastable atoms was determined by measuring the integral coefficient of absorption of the Tl atoms produced during the photodissociation. The photodissociation was produced in TLI vapor at a temperature 460C and a pressure 2-3 Torr by the absorption of ultraviolet from a mercury lamp. Light from a

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UDC: 539.186.3: 546.683