

KRIVOSHEYKIN, Petr Ivanovich; SHELPINA, M.M., redaktor; RAKOV, S.I.,
tehnicheskij redaktor

[At the furnaces of the sulphuric acid plant] U pechei sernoki-
slotnogo tsekha. [Moskva] Izd-vo VTsSPS Profizdat, 1954. 46 p.

(MLRA 8:7)

1. Master pechnogo otdeleniya Voskresenskogo Khimicheskogo kombinata
imeni V.V.Kuybysheva.
(Sulfuric acid industry)

KRIVOSHEV, G. ; SLAVOV, G.

Amateur portable tape recorder. p. 37.

Vol. 4, no. 9, 1955
RADIO
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5, No. 4 April 1956

KRIVOSHIEV, G.N.

~~XXXXXXXXXX~~
Interventricular septum perforation in myocardial infarct.
Suvrem. med., Sofia 7 no.10:104-106 1956.

1. Iz Gradskata bolnitsa - Lovech (Gl. lekar: Iv. Krustev).
(MYOCARDIAL INFARCT, compl.
interventricular septum perf.)
(CARDIAC SEPTUM, perf.
interventric., in myocardial infarct)

1. KRIVOSHIPOV, I., PUTILOV, A.
2. USSR (600)
4. Horse Breeding
7. Concerning the article of P. Yu. Berlin about breeding for milk production. Konevodstvo, 22, No.11, 1952

9. Monthly List of Russian Acquisitions, Library of Congress, February, 1953. Unclassified

KRIVOSHLYK, B. YA.,

KRIVOSHLYK, B. YA.,

Agriculture & Plant & Animal Industry

Production of feeding stuffs.

Moskva, Gos. izd-vo selkhoz lit-ry, 1951.

Monthly List of Russian Accessions Library of Congress, April 1952. UNCLASSIFIED.

БРАУНШТЕЙН, М. Я.

Fodder base of the collective animal husbandry. Moskva, Gos. izd-vo kul 'turnoprosvetitel
'noi lit-ry, 1952. 85 p. (Bibliotekha V pomoshch' lektoru, no. 23) (54-24839)

SBI87.R8K68

GROMOV, Nikolay Genrikovich; KRIVOSHELYK, B.Ye., red.; GOR'KOVA, Z.D.,
tekhn.red.

[Champignons] Shampin'onny. Moskva, Gos.izd-vo sel'khoz.lit-ry,
1957. 167 p. (MIRA 13:1)
(Mushrooms)

LESIK, Boris Vasil'yevich, kand.sel'skokhoz.nauk; ~~KRIVOSHLYK, B.Ya., red.;~~
SOKOLOVA, N.N., tekhn.red.; ZUBRILINA, Z.P., tekhn.red.

[Methods for increasing the quality of bast fiber; hemp, ambary
hemp, and jute] Priemy povysheniia kachestva lubianogo volokna;
konoplia, konaf i dzhut. Moskva, Gos. izd-vo sel'khoz. lit-ry,
1958. 230 p. (MIRA 12:1)

(Bast)

KRIVOSHLYK, I.R., kand. tekhn. nauk; RUDNIK, M.I., inzh.;
KORKUNOV, G.S., inzh.

Selection of an efficient charge design in the Vsevolodo-
Vil'va open-pit mine. Vzryv. delo no.51/8:159-169 '63.
(MIRA 16:6)

1. Permskiy politekhnicheskiy institut.
(Vsevolodo-Vil'va region--Blasting)

KRIVOSHLYK, I.R., dotsent, kand. tekhn. nauk; KORKUNOV, G.S., gornyy inzh.; RUDNIK, M.I., gornyy inzh.

Efficiency of using divided charges with air spaces at the Vsevolodo-Vil'va limestone quarry. Vzryv. delo no.54/11: 328-330 '64. (MIRA 17:9)

1. Permskiy politekhnicheskiy institut.

ACC NR: AP7005681

SOURCE CODE: UR/0413/67/000/002/0155/0155

INVENTOR: Babkin, M. Ye.; Krivoshlykova, T. S.

ORG: none

TITLE: Closed, hollow, sealing profile for the pressurization of aircraft hatches and doors. Class 62, No. 190782.

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 155

TOPIC TAGS: aircraft fuselage, sealing device, aircraft pressurization, ~~HERMETIC SEAL~~
AIRFRAME COMPONENT, HERMETIC SEAL

ABSTRACT: An Author Certificate has been issued for a closed, hollow, sealing profile for the pressurization of aircraft hatches and doors, which operates on "pressure" (see Fig. 1). To improve its reliability and decrease unnecessary pressurization stresses, its upper part along the axis of symmetry is made with a cylindrical bulge extending outside as well as inside, and at the bottom is a bulging base with a spherical groove on the outside. Orig. art. has: 1 figure. [WH]

Card 1/2

UDC: 629.135/.138

ACC NR: AP7005681

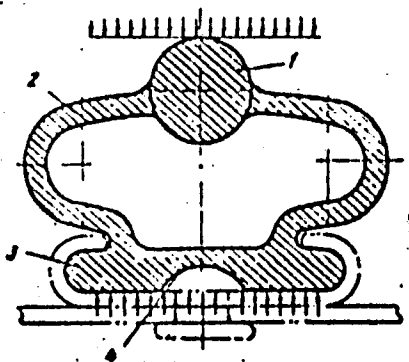


Fig. 1. Aircraft hatch and door seal

1 - Cylindrical bulge; 2 - flexible portion; 3 - base; 4 - spherical groove.

SUB CODE: 01, 13/ SUBM DATE: none/ ATD PRESS: 5115

Card 2/2

KRIVOSHOV, E., student V kursa; POTAPOV, M.G., kand.tekhn.nauk

Choosing a practical transportation system for the Kedrovka
deposit. Nauch. rab. stud. GNSO MGI no.7:93-107 1959.

(MIRA 14:5)

(Kedrovka region(Kemerovo Province)--Mining haulage)

PUKHOV, V. I: KRIVOSHITA YE. YE. and VELICHKIN, PA.

1940. Opyty po izucheniyu yavleniy immuniteta pri monyeyioze ovets. tam zhe, v. 8.

KRIVOSHIA, Ye. Ye. and LEONOV, M. M.

"Use of vaporization in surgery processes under battle-field conditions." In symposium:
Nauch.-prakt. raboty voyen-vet. sluzhby, Moscow, 1948, p. 11-14

SO: U-3850, 16 June 53. (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

KRIVOSHTA, Ye. Yo.

Pukhov, V. I., Velichkin, P. A., and Krivoshta, Ye. Ya. "A study of methods of radical prophylaxis in delafondiosis, al'fortiosis, and trichinonematosiis of horses kept in herds", (Report 2), Sbornik rabot po gel'mintologii (Vsesoyuz. in-t gel'mintologii im. akad. Skryabina), Moscow, 1948, p. 185-88.

SO: U-3042, 11 March 53, (Letopis'nykh Statey, No. 10, 1949).

KRIVOSHTA, Ye.Ye.

"Effectiveness of the Dehelminthization of Foals and Sucklings with Anoplocephalosis," Ye. Ye. KRIVOSHTA, Candidate of Veterinary Science, Rostov Oblast Veterinary Experimental Station, 3pp.

Discusses record of treatment applied to 435 foals. Root extract of male fern with normal filicine content dissolved in turpentine or carbon tetrachloride with vegetable oil added is almost 100% effective in-----.

(FDB;7hT81)

SO:Veterinariya; No.4; Apr 1948 uncl deg pp 21-23

КРИВОШТА, YE. YE.

RESHETNYAK, V. Z., PUKHOV, V. I. and KFIVOSHTA, YE. YE.

Materialy K Poznaniyu Immunologicheskoy Diagnostiki pri Diktiokaulese
Ovets, "Works on Helminthology" on the 75th Birthday of K. I. Skryabin, Izdat,
Akad, Nauk, SSSR, 1953, p. 572

Stavropol' Sci. Res. Veterinary Experiment Station

USDA/Disorders of Farm Animals. Diseases Caused by Helminths

R

Iss Jour : Ref Zhur - Biol., No 19, 1958, No 88270

Author : Krivoshta Ye.Ye.

Inst : Novocherkassk Zootechnical Veterinary Institute

Title : Experimental Microceliasis Therapy in Sheep.

Orig Pub : Tr. Novocherkasskogo zootekhn.-vet. in-ta, 1957, vyp. 10,
329-331

Abstract : Microceliasis vaccine was experimentally tested on sheep which were naturally infected with Microceliasis. This vaccine consisted of dried Microceliasis extract (physiological solution), of antihelminthic cytotoxic serum, of onion and garlic phytoncides prepared in the form of an infusion from the pulp of these plants, and of corncobs in the form of a 10 percent infusion. All tested preparations proved ineffective.

Cont : 1/1

KRIVOGHFO, M.A.

Infectiousness and morbidity dynamics of tuberculosis in infants
in Alma-Ata. Zdrav. Kazakh. 23 no.4:56-58 '63. (MIRA 1715)

1. Iz kafedry gosptal'noy pediatrii (zaveduyashchiy - prof. A.I.
Avenitova) Alma-Atinskogo meditsinskogo instituta.

1. K. BALODIS, K. I. VORONIN, A. KLIVOCHEV

2. USSR (600)

4. Bee Culture - Equipment and Supplies

7. Bee flights during wintering. Pchelovodstvo 30 no. 1. 1953.

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

KRIVOSUDSKY, Jozef

"Economy, organization, and planning of cellulose and paper production"
by Z.V. Ucastkina [Uchastkina, Z.V.], G.B. Gasparov. Reviewed by Jozef
Krivosudsky. Papir a celuloza 18 no.3:71-72 Mr '63.

1. Vychodoslovenske celulozky a papierne, Hencovce.

KRIVOSUDSKY, Jozef.

"Electron microscopy of cellulose" by Ch.U.Usmanov [Usmanov, Kh.U], G.V.Nikonovic [Nikonovich, G.V.], Reviewed by Jozef Krivosudsky. Papir a celuloza 18 no.11:233 N'63.

I. Vychodoslovenske celulozky a papierne, Hencovce.

KRIVOSUDSKY, Jozef

"Handbook for engineers in the paper industry". Vol.3.
Reviewed by Jozef Krivosudsky. Papir a celuloza 18 no.11:
233 N'63.

1. Vychodoslovenske celulozky a papierne, Hencovce.

KRIVOSHEVSKY, Jozef

Conference on the two-stage sodium-calcium bisulfite boiling
of pulp. Papir a celuloza 19 no.11:293 N '64.

KRIVOTOROV, A.P.

Experimental study of the distribution of normal pressures where a stamp contacts a sand foundation. Osn., fund. i mekh grun. 5 no.2: 8-12 '63. (MIRA 16:3)

(Soil mechanics)

KRIVOTULENKO, U. F.

"Systematics, Geography, and Phylogeny of the Species *Leucophaea*
(Griseb.) Kriv. of the Genus *Festuca* L." Cand Biol Sci, Inst of
Botany, Acad Sci USSR, Leningrad, 1953. (RZhBiol, No 1, Sep 54)

SO: Sum 432, 29 Mar 55

KRIVOTULENKO, U.F.

New fescue species. Bot.mat.Gerb. 17:70-85 '55.
(Fescue)

(MLBA 9:5)

KRIVOTULENKO, U.F.

New sections of the genus *Festuca* L. Bot.mat.Gerb. 20:48-67
'60. (MIRA 13:7)

(Fescue grass)

KRIVOTULENKO, U.F.

Two- and three-cellular hairs in Siberian sheep's fescues.

Trudy Vost.-Sib.biol.inst.SO AN SSSR no.1:142-143 '62.

(MIRA 16:1)

(Siberia, Eastern--Fescue)

KRIVOUKHOV, V. A. PROF

FA76T30

USSR/Engineering
Tools, Cutting
Metals - Cutting

Mar 1948

"The Works of Soviet Scientists in the Field of Metal
Cutting," Prof V. A. Krivoukhov, Dr Tech Sci, 32 pp

"Stanki i Instrument" No 3

Briefly lists some of more important works published
by Russian and Soviet scientists during 1918-1948 in
the technology of cutting metals.

76T30

KRIVONKHOV, V. A..

"High-speed cutting of metals with KBYEK tools", by V. A. Krivonkhov, I. Ye. Brushteyn,
S. V. Yegorov, and D. N. Kozlov, Vestnik mashinostroeniya, 1948, No. 12, P. 37-42.

SO: U-2838, 12 Feb. 53, (Letopis' Zhurnal 'nykh Statey, No. 2, 1949).

M. A.

18.

The Work of Native (Russian) Scientists in the Field of Metal-Cutting.
V. A. Krivoukhov (Stanki i Instrument, 1948, 19, (3), 9-12).--(In Russian).
The first experiments in the cutting of metals were carried out in 1848. A
list of Russian scientists and investigators is given covering the period
1870-1948.--W. J. K.

D'YACHENKO, P. Ye., laureat Stalinskoy premii, doktor tekhnicheskikh nauk;
YAKOBSON, M. O., kandidat tekhnicheskikh nauk; KRIVOUKHOV, V. A., pro-
fessor, doktor tekhnicheskikh nauk, retsenzent; SEMENOV, S. P., kan-
didat tekhnicheskikh nauk, dotsent, retsenzent; LARIN, M. N., laureat
Stalinskoy premii, professor, doktor tekhnicheskikh nauk, redaktor;
BOBROVA, Ye. N., tekhnicheskiiy redaktor

[Surface quality in metal-cutting] Kachestvo poverkhnosti pri ob-
rabotke metallov rezaniem. Moskva, Gos. nauchno-tekhn. izd-vo mashi-
nostroitel'noi lit-ry, 1951. 207 p. (MIRA 9:1)
(Metal cutting)

KRIVOUKHOV, V. A.; MARKOV, A. I.

"Bonding of Minerals- Ceramic and Carbide Tool Bits with Heat Resistant
Glue," Stanki i Instrument, Vol 6, June 1952 pp 35-36.

Analysis B-85830, 26 May 55

KRIVOUKHOV, V. A.; MARKOV, A. I.

KRIVOUKHOV, V. A.; MARKOV, A. I.

Fusion

Fastening of mineral-ceramic and hard-
alloyed plates with heat-resistant paste.
Stan. 1 instr. 23 no. 35, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED

A A 17-UKD05 V.A.

GRANOVSKIY, G.I.; GRUDOV, P.P.; KRIVOUKHOV, V.A.; LARIN, M.N.; MALKIN,
A.Ya., TIKHONOV, A.Ya., *tekhnicheskiy redaktor*

[Metal cutting] Rezanie metallov. Pod red. V.A.Krivoukhova. Moskva.
Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1954. 472 p.
(Metal cutting) (MLRA 8:4)

KRIVOUKHOV, Vasilii Aleksandrovich, doktor tekhnicheskikh nauk; VORONOV, Aron Lazarevich, kandidat tekhnicheskikh nauk; BRUSHTEYN, B.Ye., kandidat tekhnicheskikh nauk, redaktor; BELITSKAYA, A.M., redaktor; LEBEDEVA, L.A., tekhnicheskii redaktor.

[High-frequency vibrations of the cutting tool during metal cutting]
Vysokochastotnye vibratsii reztza pri tochenii. Moskva, Gos.isd-vo obor.promyshl., 1956. 75 p. (Moscow, Aviatsionnyi institut. Trudy, no. 67)

(Cutting tools--Vibration) (Metal cutting) (MIRA 9:10)

~~KRIVOUKHOV, V. A., and BELOUSOV, A. I.~~

■ "Determination of Cutting Force from the Physical Characteristics of Machined Metals" p. 132-138, in the book Research in the Physics of Solids, Moscow, Izd-vo AN SSSR, 1957. 277 p. Ed. Bol'shanina, M. A., Tomsk Universitet, Siberskiy fiziko-tekhnicheskiy institut.

Personalities: Zvorykin, K. A.; Usachev, Ya. G.; Kuznetsov, V. D.; Krivoukhov, V. A.; Rozenberg, A. M., and Bol'shanina, M. A. There are 5 figures and 6 references, all Soviet.

This collection of articles is meant for metallurgical physicists and for engineers of the metal-working industry. This book contains results of research in the field of M failure and plastic deformation of materials, mainly of metals. Problems of cutting, abrasion, friction, and wear of solid materials (metals) are discussed.

S/123/59/000/008/021/043
A004/A002

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 8,
pp. 74-75, # 29122

AUTHORS: Krivoukhov, V. A., Belousov, A. I.

TITLE: Determining the Cutting Forces on the Basis of the Physical
Characteristics of the Metals to be Machined

PERIODICAL: V sb.: Issled. po fiz. tverdogo tela. Moscow, AN SSSR, 1957,
pp. 132-138

TEXT: Formulae are presented to determine the cutting forces, suggested
by V. D. Kuznetsov, V. A. Krivoukhov and A. M. Rozenberg, which treat the
cutting process like a process of plastic compression. It is pointed out, that
the coefficients of chip shrinkage and friction, contained in the formulae,
render their practical use difficult. The total cutting power is composed of
the power of primary metal deformation in the cutting zone, the power of
secondary deformation, developed by the friction force at the front edge of the
cutting tool, power of secondary deformation, developed by the normal force at

Card 1/2

S/123/59/000/008/021/043
A004/A002

Determining the Cutting Forces on the Basis of the Physical Characteristics of the Metals to be Machined

the front edge of the tool, and the friction power at the back edge. As a result of calculations and of an analysis of the temperature field, the authors suggest a new formula for the determination of the cutting force P_z , based on the physical properties of the metals to be machined (specific gravity, specific heat, melting point, temperature conductivity, coefficient of friction between metal and tool), cutting elements (depth, feed), blank diameter, and tool angles in the plane. Experimental and calculated graphs of the cutting force $P_z = f(V, S)$ are presented. The divergence between experimental and calculation data does not exceed 6%. There are 5 figures and 6 references.

B. I. L.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

25(1)

PHASE I BOOK EXPLOITATION

SOV/1301

Krivoukhov, Vasilii Aleksandrovich, Boris Yefimovich Brushteyn, Sergey Vasil'yevich Yegorov, Arkadiy Grigor'yevich Chervyakov, Nikolay Alekseyevich Chelobov (Deceased), Mikhail Antonovich Myakishev, Vladimir Georgiyevich Bovin, Petr Grigor'yevich Petrukha, and Petr Dmitriyevich Bepakhotnyy

Obrabotka metallov rezaniyem (Metal Cutting) Moscow, Oborongiz, 1958. 627 p. 20,000 copies printed.

Reviewer: Klushin, M.I.; Ed. (Title page): Krivoukhov, V.A.; Ed. (Inside book): Arshinov, V.A., Candidate of Technical Sciences, Docent; Ed. of Publishing House: Suvorova, I.A.; Tech. Ed.: Rozhin, V.P.; Managing Ed.: Sokolov, A.I., Engineer.

PURPOSE: This textbook is for aeronautical vuzes giving a course on metal cutting.

COVERAGE: The book discusses in a concise form the physical fundamentals of metal-cutting processes using various types of tools and emphasizing the special features required for the aviation industry. A description and the basic designs of standard metal-cut-
Card 1/15

Metal Cutting

SOV/1301

ting tools are presented and their construction, mechanisms and automation are examined. In compiling the book results of investigations carried out in scientific research institutes of the machine-building industry and data from foreign literature were used. There are 66 references, all Soviet. No personalities are mentioned.

TABLE OF CONTENTS:

Introduction

3

SECTION I. METAL CUTTING

Ch. I. Basic Concepts of Elements and Geometry of Turning Cutting [Single-Point] Tools

5

1. Elements of the turning cutting tool

5

2. Surfaces and planes of coordinates for determining the angles of a cutting tool

7

3. Angles of the cutting tool

8

4. Purpose of tool angles

9

Card 2/15

~~KRIVOUKHOV, V.A.~~ doktor tekhn. nauk, prof.; BESPACHOTNYI, P.D., aspirant

Investigating deformations caused by metal cutting. Izv. vys.
zav.; mashinostr. no.1:94-105 '58. (MIRA 11:6)

1. Moskovskiy aviatsionnyy institut.
(Metal cutting) (Deformations (Mechanics))

KRIVOUEHOV, V.A.; MARKOV, A.I.

Investigating the characteristics of high-pressure cooling systems
in cutting heat-resistant alloys. Stan.i instr. 29 no.6:14-15 Jo '58.
(MIRA 11:7)

(Metal cutting--Cooling)

KRIVOUKHOV, V.A.

MOLOTOK, A.V.; DMITRIYEV, A.I.; GORBATENKO, A.I.; SHAROYAN-SARINGULYAN, G.P.; MALAKHOV, P.Ye.; KRIVOUKHOV, V.A., doktor tekhn.nauk; red.; GRANOVSKIY, G.I., prof., doktor tekhn.nauk, red.; TRET'YAKOV, I.P., prof., doktor tekhn.nauk, red.; ALEKSEYEV, S.A., dotsent, red.; MALOV, A.N., dotsent, kand.tekhn.nauk, red.; SHAKHNAZAROV, M.M., dotsent, red.; VOL'SKIY, V.S., red.; GAL'TSOV, A.D., red.; KABANOV, N.Ya., red.; TOLCHENOV, T.V., red.; KHARITONOV, A.B., red.; KHISIN, R.I., red.; SHOR, M.I., red.; SEMENOVA, M.M., red. izd-va; EL'KIND, V.D., tekhn.red.

[Time norms in general machinery manufacturing for applying coats of lacquer; large, medium, and small scale production] Obshech mashinostroitel'nye normativy vremeni na lakokrasochnye pokrytiya; krupnoseriinoye, seriinoye i melkoseriinoye proizvodstvo. Moskva, Gos.nauchno-tekhn.isd-vo mashinostroit. lit-ry, 1959. 83 p. (MIRA 12:6)

1. Moscow. Nauchno-issledovatel'skiy institut truda. Tsentral'noye byuro promyshlennykh normativov po trudu. 2. Rabotniki etdela trudovykh normativov Nauchno-issledovatel'skogo instituta traktore-sel'khozmashta (for Molotok, Dmitriyev, Gorbatenko, Sharoyan-Saringulyan, Malakhov).

(Painting, Industrial)

(Machinery industry)

24(8)

SOV/170-59-5-3/18

AUTHORS: Krivoukhov, V.A., Belousov, A.I., Buyanova, T.L.

TITLE: Cooling Properties of Liquids (Okhlazhdayushchiye svoystva zhidkostey)

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, 1959, Nr 5, pp 15-19 (USSR)

ABSTRACT: The cooling properties of liquids are estimated by the average rate of cooling of a specimen immersed in the liquid. The cooling rate depends also on the shape, dimensions and temperature conductivity of the specimen and on the conditions of the flow of the liquid around the specimen. The present investigation was undertaken to find a standard method of testing the cooling liquids and to study their cooling properties. The computation of the cooling of a solid body placed into a gaseous or liquid medium was carried out on the basis of G.M. Kondrat'yev's theory of regular processes. The experimental cooling rate is determined by the tangent of the angle of slope of the function $\ln \theta = f(\tau)$:

Card 1/2

$$m = \frac{\ln \theta_{init.} - \ln \theta_{final}}{\Delta \tau}$$

Cooling Properties of Liquids

SOV/170-59-5-3/18

The authors studied the effect of the nature and temperature of liquids, and of the flow velocity, on the rate of cooling. 32 different liquids were tested and the results are presented in Table 1. To increase the rate of cooling, a liquid must be chosen with maximum heat conductivity and minimum kinematic viscosity. The rate of cooling increases sharply with a decrease in the temperature of the cooling liquid. The effect of the flow velocity on the rate of cooling can be expressed by the following experimental formula:

$$\alpha = 0.12 + 0.00024 w,$$

where w is the velocity of the freely falling stream of liquid defined as follows:

$$w = w_0 \sqrt{2gH}$$

where w_0 is the velocity of liquid flow from a tank, and H is the height of the falling of the stream. There are 3 graphs, 1 diagram and 1 table

Card 2/2

KRIVOUKHOV, V.A., prof., doktor tekhn.nauk

Atlas of industrial electromechanical equipment. Part 1.
Electric drives and transmission devices. Elektrichestvo no.7;
95-96 JI '60. (MIRA 13;8)
(Machinery--Design)

BLAVOUKHOV, V.A.

Rapid determination of strength and force dependences for establishing norms according to cutting conditions. Stan. Instr. 31 no. 6:02-34 Jo '60.

(Metal cutting)

(I.L. 14:2)

KRIVOUKHOV, V.A.

SOV/5788

PHASE I BOOK EXPLOITATION

Krivoukhov, V. A., S. V. Yegorov, B. Ye. Brushteyn, A. I. Markov, A. G. Chervyakov, P. D. Bepakhotnyy, A. I. Belousov, and A. D. Chubarov

Obrabatyvayemost' rezaniyem zharoprochnykh i titanovykh splavov (Machinability of Heat-Resistant and Titanium Alloys) Moscow, Mashgiz, 1961. 243 p. Errata slip inserted. 4500 copies printed.

Ed. (Title page): V. A. Krivoukhov; Reviewer: A. M. Karatygin, Candidate of Technical Sciences; Ed. of Publishing House: N. A. Ivanova; Tech. Ed.: A. F. Uvarova; Managing Ed. for Literature on Cold Working of Metals and Machine-Tool Making: V. V. Rzhavinskiy, Engineer.

PURPOSE: This book is intended for technical personnel concerned with the machining of metals. It may also be useful to students at schools of higher education.

Card 1/02

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APPROVED FOR RELEASE 06/14/2000

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Cracks in Machining Heat-Resistant
and Titanium Alloys

3

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S/121/62/000/001/002/004
D040/D113

AUTHORS: Krivoukhov, V.A., Yegorov, S.V., Rudnev, A.V., and Sukhanova.

TITLE: Ways of improving the effect of coolants on cutting tools

PERIODICAL: Stanki i instrument, no. 1, 1962, 30-33

TEXT: Methods of improving the effect of coolants on cutting tools are discussed. As stated in investigations conducted by VNI and other organizations, the effect of the application of cutting coolants by any of the four existing methods (by falling jet, high- and low-pressure, and fan) differs

Ways of improving the ...

S/121/62/000/001/002/004
D040/D115

higher at 1-2°C than at 20°C; this contradicts the conclusions drawn by Boston and Gilbert that the best effect is reached with a fluid temperature of 12-20°C (Ref. 3: Influence of Applying Cutting Fluids of Different Temperatures when Turning Steel, "Transactions of the ASME", v. 67, no. 4, 1945, p. 217-224). It could not yet be decided if it was advisable to use cutting fluids cooled as low as -10 to -20°C, since the viscosity of fluids at this temperature is too high and humidity from the air condenses on the machines and produces corrosion. It is recommended to keep the fluid temperature between -2 and 20°C or use a 5-10% emulsion with a stable temperature of 10-12°C. A special refrigerator unit of 70,000 kcal/hr capacity designed by VIII and using one AK-4ϕY 60/30 (AK-4FE60/10) compressor-condenser freon unit is briefly described. A schematic diagram of the unit is included. Conclusions: (1) In machining refractory alloys under the conditions used in the investigations, the best results are obtained using low-pressure and high-pressure cooling methods. The latter is recommended for machining with shallow cut, and the former with deeper cut (2 mm and deeper); (2) The results of the investigations are to be considered only as the first step towards determining the proper use of the modern cooling

Card 2/3

Ways of Improving the ...

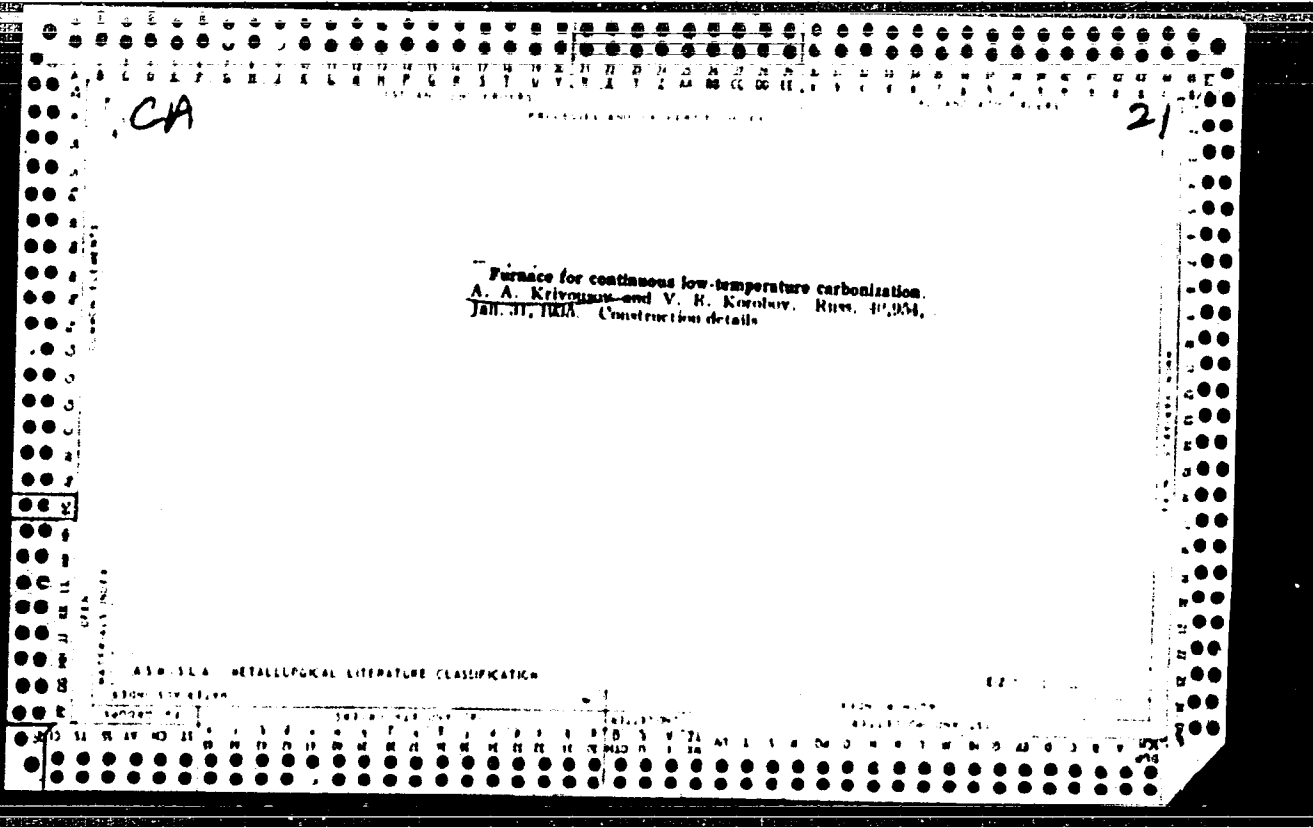
S/121/02/000/ 01/002/001
D040/D113

Methods: (2) A stable required temperature of the cutting fluid is important for raising the durability of cutting tools. There are 5 figures and 1 reference: 2 Soviet and 1 non-Soviet-bloc. The English-language reference is: Boston, O., Gilbert, W., Influence of Applying Cutting Fluids of Different Temperatures when Turning Steel, "Transactions of the ASME", v. 67, no. 4, 1945, p. 217-224.

Card 3/3

KRIVOUKHOV, Y.A.; YEGOROV, S.V.; RUDNEV, A.V.; SUKHANOVA, M.A.

Increasing the effectiveness of cooling of metal-cutting tools.
Stan.i instr. 33 no.1:30-33 Ja '62. (MIRA 15:2)
(Metal-cutting tools--Cooling)
(Metalworking lubricants)



Analysis

5

Automatic Absorbing Vessel for Gas Analysis. N. A. Oruzieva and A. A. Krivonozov. (*Zarodskaya Laboratoriya*, 1960, No. 1, 113-114). (In Russian). In the apparatus for gas analysis described, the rapid absorption of gases by liquids is achieved by rapid circulation with a solenoid pump and pulverization. The method has been successfully used for the determination of hydrogen in coke-oven gas and is also suitable for the determination of carbon monoxide.—a. g.

REF ID: A6

USSR/Metals - Foundry, Processes

Aug 51

"On the Theory of Gas Injection Through a Conical Sprue," N. K. Isatov, V. A. Krivousov, Engineers, Chelyabinsk Metallurgical Plant

"Litey Proiz" No 8, pp 16-19

In the process of pouring, considerable vacuum may be created in sprue, causing injection of air and gases through fissures or pores in the walls of sprue. Analytical solution of this problem is unsatisfactory: hydraulic loss due to friction never was accounted for and law for pressure distribution along height of sprue was not established. Attempts hydraulic analysis, 1st excluding pressure loss of molten metal and then taking this loss into account.

PA 197T73

80V/68-59-9-4/22

AUTHORS: Donde, M.V., Kagasov, V.M. and Kriyousov, A.A.

TITLE: Blending of Coals on a Coal Stock Yard

PERIODICAL: Koks i khimiya, 1959, Nr 9, pp 10 - 12 (USSR)

ABSTRACT: An outline of the mechanised coal stockyard at the Chel-yabinsk Metallurgical Works (Figure 1) and the results of its operation as a blending plant are given. The stockyard is in two symmetrically situated parts 200 m by 76 m, each with a travelling bridge crane. The delivered coal is tipped and passed into bunkers from which it is transferred into the trench running along the yard. From the trench coal is spread in thin layers by the controlled opening of the travelling grab, forming regular piles (Figure 2). The recovery of the blended coal is done by removing with the grab either the whole cross-section or a part of the cross-section of the pile, depending on the width of piles. Special investigations were carried out in order to determine the degree of blending obtained. Properties of the individual coal types comprising the blend - Table 1; variability of the properties of coals during stocking and recovered from the stock - Table 2.

Card 1/2 The results obtained indicated that a high degree of

SOV/68-59-9-4/22

Blending of Coals on a Coal Stock Yard

blending was obtained e.g., standard deviation for ash was reduced from 1.0 to 0.50 - 0.36, for volatile content from 1.02 to 0.36 and for swelling index from 32.8 to 21.6. It is concluded that the operation of the stock yard as a blending medium is satisfactory.

There are 2 figures, 2 tables and 5 Soviet references.

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod
(Chelyabinsk Metallurgical Works)

Card 2/2

IPATOV, N.K., kand. tekhn. nauk; KRIVONOSOV, V.A., kand. tekhn. nauk

pressure distribution along the height of a cylindrical foundry
sprue. Lit. proizv. no.1:40-41 Ja '66.

(MIRA 19:1)

YEGOROV, V.I. (Moskva, st. Leninskaya, Styaln. fak. i shkolnyy derzgi.
Do vostrebovaniya); KHEKHEKIN, A.F.; KHLYBTSOV, Ya.A.; CEKHIY, V.D.

Healing of fractures in Arctic regions. Grtep., travm. i protez.
26 no.3:29-31 Mr '65. (MIRA 18:7)

VASIL'KOVA, I.V.; KRIVONOSOVA, I.V.; SUSAREV, M.I.; TOLKACHEV, S.S. [deceased]

X-ray study of the mutual solubility of solid phases in the
ternary systems $KCl - NaCl - CrCl_3$ and $KCl - NaCl - VCl_3$.
Vest. LGU 20 no.16:126-132 '65. (MIRA 18:9)

KRIVOUSOVA, I.V.; VASIL'KOVA, I.V.; SUS'REV, M.F.

Thermographic study of the system $Cl_3 - NaCl - KCl$ Zhur. prikl.
khim. 37 no.11:2348-2353 N '64 (MIRA 18:1)

KRIVGUSOVA, I.V.; VASILKOVA, I.V.; SUSAROV, N.P.

Concentration regions of ternary eutectics in the system
H₂O - KCl - K₂Cr₂O₇. Zhur. prikl. khim. 37 no.10:2198-2203
0 164. (MIRA 17:11)

TEZIKOV, A., kand. tekhn. nauk; KRIVOV, A., inzh.

Containers for the transportation and storage of dry ice. Khol.
tekhn. 34 no.4:48-50 O-D '57. (MIRA 11:1)

(Dry ice)

KRIVOV, A.

Use of flexible shells in the design of thin retaining walls.
Mor. flot 20 no.10:38-40 0 '60. (MIRA 13:10)

1. Zamestitel' nachal'nika otdela gidrotekhniki Lennorproyekta.
(Retaining walls) (Polymers)

KRIVOV, A.A.; GAPONENKO, I.M.; USENKO, S.F., uchitel'; KUL'MAN, A.G., prof.

Editor's mail. Khim. v shkole 17 no.3:82-83 My-Je '62. (MIRA 15:6)

1. Pedagogicheskiy institut, g. Daugavpils, Latvyskaya SSR (for Krivov). 2. Besedinskaya srednyaya shkola, Kurskaya oblast' (for Usenko).

(Chemistry)

KOBULASHVILI, Sh.N.; ROTENBERG, A.G.; ROMANOV, M.N.; KRIVOV,
A.G.; KAPLUN, M.S., red.; MEDRISH, D.M., tekhn.red.

[New apparatus for quick freezing] Nove skoromorozil'-
nye apparaty; nauchnoe soobshchenie. Moskva, Gostorgizdat,
1963. 65 p. (MIRA 17:1)

KRIVOV, A.I., inzh.

Hinge for high pressure air and hydraulic pipelines. Sudostroenie
28 no.8:45-46 Ag '62. (MIRA 15:8)
(Marine pipe fitting)

GORYUNOV, B.F., kandidat tekhnicheskikh nauk; GUDANETS, N.A., kandidat tekhnicheskikh nauk; ZLATOVERKHOVNIKOV, L.F., kandidat tekhnicheskikh nauk; KAGAN, Ya.Kh., kandidat tekhnicheskikh nauk; KRIVOV, A.K., inzhener; KUROCHKIN, S.N., inzhener; LYAKHNITSKIY, V.Ye., doktor tekhnicheskikh nauk, professor; NOVIKOV, A.F., kandidat tekhnicheskikh nauk; ROMASHOV, D.G., inzhener; SHENTSEL', V.K., kandidat tekhnicheskikh nauk; KUZ'MIN, T.P., redaktor; ZAYTSEV, N.N., redaktor; MELDOVA, B.S., redaktor izdatel'stva; TIKHONOVA, Ye.A., tekhnicheskiy redaktor

[Port hydrotechnical installations; construction and design] Portovye gidrotekhnicheskie sooruzhenia; konstruirovaniye i raschet. Moskva, Izd-vo "Morskoi transport," 1956. 537 p. (MIRA 9:11)
(Harbors)

KLIMOV, Yu.M.; CHIKIN, V.V.; ANISIMOV, M.I.; BARSKOV, I.M.; VINOGRADOV,
Yu.V.; GAVRILOV, A.N.; GAUKHMAN, L.A.; GOLOV, A.P.; GOL'DMAN,
L.S.; GRIBENNIKOV, G.I.; YEFIMOV, A.N.; ZALUTSKIY, M.S.; ZAYTSEVA,
A.V.; OIYRYSH, A.I.; KANDARITSKIY, V.S.; KAPRANOV, I.A.; KOVALEV,
N.I.; KOVALEVSKIY, K.A.; KOLOSOV, A.F.; KRIVOV, A.S.; KRYLOV, R.M.;
LEVITAS, A.G.; MALYGIN, M.A.; MORALEVICH, Yu.A.; MOTYLEV, A.S.;
NESTEROV, M.V.; NIKOL'SKIY, A.V.; ORLOV, G.M.; ORLOV, Ya.L.;
PARENSKIY, V.M.; POLYAKOV, A.S.; RYBIN, V.I.; SVANIDZE, K.M.;
STRIGIN, I.A.; TAKOYEV, K.F.; TRUBNIKOV, S.V.; CHERNYSHEVA, L.N.;
CHESNOKOV, N.Ye.; SHAMBERG, V.M.; STRUMILIN, S.G., akademik, red.;
ANTOSENKOVA, L., red.; MIKAELYAN, E.; red.; MUKHIN, Yu., tekhn.red.

[Dictionary of the seven-year plan from A to Z] Slovar' semiletki
ot A do IA. Moskva, Gos.izd-vo polit.lit-ry, 1960. 397 p.
(Russia--Economic policy) (MIRA 13:7)

KRIVOV, D.A., polkovnik, voyenny letchik 1-go klassa

Flights in a closed cabin. Vest. protivovozd. obor. no.6:
40 Je '61. (MIRA 14:8)
(Instrument flying--Study and teaching)

KRIVOV, I.

A forgotten decision. Prem. keep. no. 2:34-35 P '56.
(Serpukhev--Cooperative Societies)

(MLRA 9:7)

USSR/Physics - Dielectrics

Card : 1/1

Authors : Vorbyev, A. A., Vodopyanov, K. A. and Krivov, M. A.

Title : Dielectric losses and rupture of alkali-halide salt crystals

Periodical : Dokl. AN SSSR, 96, Ed. 6, 1135 - 1136, June 1954

Abstract : Investigations confirmed that dielectric losses are an ionic phenomenon. The magnitude of dielectric losses in alkali-halide salt crystals and their electrical strength are connected with the energy of the crystalline lattice. An increase in the energy of the lattice and in activation energy is followed by an increase in electrical stability of the structure. Such a change is also followed by a reduction of dielectric losses in the crystals. A minimum value of electric strength corresponds to the maximum angle of dielectric losses. Four references. Graphs.

Institution : Siberian Physico-Technical Scient. - Research Institute and the S. M. Kirov Polytechnicum, Tomsk

Presented by : Academician A. F. Ioffe, March 15, 1954

KRIVOV, M. A.

FD-3214

USSR/Physics, Conferences

Card 1/1 Pub. 153-23/28

Authors : Gutin S. S. and Krivov M. A.

Title : Scientific conference of the Siberian Physicotechnical Institute

Periodical : Zhur. Tekh. Fiz., 25, No 7, 1332-1334, 1955

Abstract : A conference was held in Tomsk at the end of January as celebration of 25 years of existence of the Siberian Physicotechnical Institute. The director of the Institute, corresponding member of the Acad. Sci. USSR, V. D. Kuznetsov opened the session. The topics discussed were: Solid state physics, theoretical physics, electric insulation, optics and spectroscopy, electric and magnetic controls. A brief report is given of all presented papers.

Institution: --

Submitted : --

KRIVOV, M. A.

USSR/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60927

Author: Vodop'yanov, K. A., Vorob'yev, A. A., Krivov, M. A.

Institution: None

Title: Dielectric Losses, Electric Strength of Crystals of Alkali Halide Salts and Lattice Energy

Original

Periodical: Izv. Tomskogo politekhnicheskogo universiteta, 1956, 83, 22-26

Abstract: From graph plotted on the basis of literature and personal data the following conclusions are derived: on increase of energy of conductivity activation, lattice energy, heat of formation of solid compound and temperature of fusion in the series of alkali halide salts with different anions or cations there is observed increase of electric strength E and decrease of the angle of dielectric losses $\text{tg}\delta$. In the system KBr-KI maximum of curve $\text{tg}\delta = f$ (composition) and minimum of curve E are at 50% KI. In the same system $\text{tg}\delta$ increases with increase in temperature more sharply than

Card 1/2

USSR/Physical Chemistry - Crystals, B-5

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60927

Abstract: with pure KBr or KI. For a NaCl crystal beginning of rapid rise of $\text{tg}\delta$ and rapid drop of E coincide ($\sim 225^\circ$); both effects are attributed to rapid weakening of bonds between ions beginning at above stated temperatures. The conclusion is reached that dielectric losses and spark-over are determined by strength of bond between particles in crystal.

Card 2/2

KRIVOU, M. A.

TABLE I BOOK CITATIONS SM/2964

Synthesizing of polypropylene materials. Moscow, 1957

Report on the investigation of the physical properties of the polymers of the third generation (Dissertation in the field of Physical and Physical Chemistry of Semiconductors; Transactions of the Third Conference) Moscow, 1959. 149 p. Error 819 inserted. 1,200 copies printed.

Department Agency. Abstracts and SM. Institute of Metallurgy Acad. Sci. USSR. Serp. Ed. I. D. Abramov. Doctor of Chemical Sciences; M. of Publishing House P. F. Solov'ev.

PROCES: This collection is intended for technical and scientific personnel concerned with the investigation and production of semiconductor materials. It may also be used by students in schools of metallurgy.

CONTENTS: The collection contains reports submitted at the Third Conference on Semiconductor Materials, held at the Institute of Metallurgy Acad. Sci. USSR, Moscow, in May 1957. The reports deal with problems of obtaining and investigating germanium, silicon, and semiconductor compounds. The collection was first edited by D. A. Petrov, Doctor of Technical Sciences. References accompany each of the reports.

Galimov, Y. F. On the Problem of the Role of Some Factors in the Growth Process of Single Crystals from a Melt 21

Balypov, E. B. Investigation of Some Cases of Diamond-Type Crystals 29

On the Theory of the Multidimensional Theory of the Growth of Single Crystals (Academy of Sciences, Russian People's Republic). Concerning the Problem of Semiconductor Polymers 40

Myzdant, Z. (Institute of Basic Technical Problems, Polish Academy of Sciences). Properties of P-n Junctions in Germanium Single Crystals Withdrawn from the Melt by Rolling 43

Samoylov, I. (Institute of Physics, Polish Academy of Sciences). Effect of the Substitution of Minority Carrier Carriers on Light Emission from Germanium 49

Bagov, A. A., V. G. Kosheva, and Ye. G. Kiseleva. Diffusion and Solubility of Iron Oxide in Germanium 52

Vysikh, A. P., and V. A. Pivovarov. Investigation of Polymers of Semiconductors with Small 57

Vasil'yevskiy, Z. B., and Ye. G. Kosheva. Investigation of Properties and Solubility of Some Semiconductors in Germanium during Crystallization 62

Tsvetkov, I. (Institute of Technical Physics, Czechoslovak Academy of Sciences). Problem of Obtaining Pure Silicon 64

Petrov, D. A., Ye. G. Kosheva, V. V. Koshcheyevskiy, V. G. Kosheva, and V. D. Chertkovskiy. Growth of Silicon Single Crystals 69

On the Problem of the Role of Some Factors in the Growth Process of Single Crystals from a Melt by Rolling 78

Abel'yev, G. B., N. I. Alifanov, A. I. Babushkin, and G. N. Alifanov. Effect of Balling Impurities on the Physical Properties of Germanium 80

Abel'yev, G. B., G. A. Abzalov, A. I. Babushkin, and Z. A. Alifanov. On the Diffusion of Germanium in Polycrystalline Germanium 89

Dobin, L. D., and B. D. Arshinov. Problems of Alloying Semiconductors with Small 94

Metshnikov, I. B., V. I. Uspenskiy, and V. D. Puzanov. Effect of Some Impurities on the Physical Properties of Germanium Single Crystals 107

Trofimov, A. P., and G. A. Fedotova. Effect of Temperature and Certain Impurities on the Dark Resistance and Photoconductivity of Germanium Single Crystals 112

Kuznetsov, I. (Institute of Technical Physics, Czechoslovak Academy of Sciences). Semiconductor Compounds with an Excess of One of the Components 117

Shvartz, I. I. Effect of Surface Condition on the Electrical Properties of Type II-III Compounds 120

Petrov, D. A., N. I. Alifanov, V. V. Koshcheyevskiy, A. G. Chertkovskiy, and G. V. Kiseleva. Properties and Investigation of the Semiconductors of Multicrystals 127

AVAILABLE: Library of Congress

SM/2964
7/14/59
X/20/59

9.4300 (3203, 3005, 1137)

26.2532

21513

S/139/61/000/002/008/018

E032/E414

AUTHORS: Krivov, M.A., Malisova, Ye.V., Presnov, V.A. and Synorov, V.F.

TITLE: A Study of Some Physical Properties of Polycrystalline GaAs

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1961, No.2, pp.66-70

TEXT: This paper was first reported at the Third Conference of Schools of Higher Education on Semiconductors and Dielectrics, Leningrad, 1960.

The resistivity, thermoelectric power and the Hall coefficient of polycrystalline specimens of gallium arsenide were measured. The original material was synthesized directly from arsenic and gallium and was zone refined six times (this will be described in a separate paper). The final specimens were rectangular in form and their dimensions were $2 \times 2 \times 7 \text{ mm}^3$. The resistivity and the Hall coefficient were measured with the aid of ohmic tin contacts fused into the specimens in a vacuum at temperatures of the order of 600 to 700°C. Before measurements were begun, the specimens

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A Study of Some Physical ...

S/139/61/000/002/008/018
E032/E414

were immersed in a solution containing 20 ml of NaOH and 4 ml of 30% H_2O_2 (G.A.Averkiyeva, O.V.Yemel'yanenko, Ref.1) After this treatment they were washed in boiling distilled water. Fig.1 shows the temperature dependence of the electrical conductivity and carrier concentration calculated from the Hall measurements under the assumption that the hole concentration was negligible. It is estimated from the slope of the curve representing concentration as a function of temperature that the activation energy of the donor impurities was 0.12 ev. Fig.2 shows the thermoelectric power as a function of temperature for two gallium arsenide specimens at different average temperatures. Using the Pisarenko formula (Ref.2) the magnitude of the effective mass of the carriers was estimated to be of the order of $0.27 m_0$. The experimentally determined temperature dependence of the concentration was compared with its theoretical value computed from the formula

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A Study of Some Physical ...

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E032/E414

$$n = \frac{K_A + N_A}{2} \left\{ \left[1 + \frac{4K_A(N_A - N_D)}{(K_A + N_A)^2} \right]^{1/2} - 1 \right\};$$

$$K_A = (2\pi m_e^* k T / h^2)^{3/2} e^{-\Delta E_A / k T},$$

where N_D and N_A are the donor and acceptor impurity concentrations, m_e^* is the effective electron mass, and ΔE_D is the donor activation energy. It was found that $N_D = 1.18 \times 10^{18} \text{cm}^{-3}$ and $N_A = 1.10 \times 10^{18} \text{cm}^{-3}$. In addition, the contact potential difference of gallium arsenide specimens relative to a standard platinum electrode was measured. The measurements were carried out on polished and etched specimens in air and in vacuum at various temperatures in the range 20 to 85°C. Fig. 4 shows the temperature dependence of the contact potential difference of germanium and gallium arsenide in air. The continuous and dashed curves refer to etched and polished specimens respectively. Fig. 5 shows the contact potential difference as a function of air pressure after etching. Fig. 6 shows the variation

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E032/E414

X

A Study of Some Physical ...

in the contact potential difference on heating in vacuum. A quantitative analysis of these results is not given since the specimens were polycrystalline and the results are therefore said to be "not entirely reliable". The general conclusion is that changes in the surface properties of gallium arsenide are associated with the properties of surface compounds formed during the etching process and subsequent adsorption of components from the surrounding medium. Students I.A.Vinitskaya and L.Ye.Smirnova took part in the measurements. Acknowledgments are expressed to the Senior Scientist of SFTI, Candidate of Physical Mathematical Sciences A.P.Izergin and Engineer V.A.Zgayevskiy of the Technical Division for taking part in discussions of the results. There are 6 figures and 6 references: 3 Soviet and 3 non-Soviet.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete imeni V.V.Kuybysheva.
(Siberian Physicotechnical Institute at the Tomsk State University imeni V.V.Kuybyshev)

SUBMITTED: October 17, 1960
Card 4/6

S/137/62/000/002/059/14
AC05/A101

AUTHORS: Presnov, V. A., Izergin, A. P., Krivov, M. A., Vyatkin, A. P.,
Stroitelev, S. A., Mel'chenko, E. N., Malisova, Ye. V., Selivanova,
V. A., Grigor'yeva, A. G.

TITLE: Investigation of gallium arsenide

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 40, abstract 20304
(V sb. "Vopr. metallurgii i fiz. poluprovodnikov", Moscow, AN SSSR,
1961, 70 - 75)

TEXT: The authors studied electrophysical and rectifying properties of GaAs crystals. Specimens were obtained by alloying in ampoules and were purified by zonal melting. Single-crystal or coarse-domain moldings were cut out of the specimens. It was found that the specific resistance of specimens produced by alloying in ampoules was lower by 20 times than that of specimens prepared by synthesizing during zonal melting. The anomalous course of resistance changes in a magnetic field was established. The effective electron mass was estimated to be $m^* = 0.027$. Activation energies of admixtures $\Delta E_{acc} = 0.25$ ev and $\Delta E_{don} = 0.12$ ev were found. For the n-type, higher rectifying factors ($10^4 - 10^5$) and

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Investigation of gallium arsenide

S/137/52/000/002/059/144
AC05/A101

more, and for the p-type 10^2), counter voltages, and voltage breakdown resistance were obtained. The height of the rectifying barrier was found to be equal to 0.8 ev.

B. Golovin

[Abstracter's note: Complete translation]

Card 2/2

37720

S/139/62/000/002/016/028
E039/E435

24.7760

AUTHORS: Krivov, M.A., Malisova, Ye.V., Presnov, V.A.,
Chernova, N.V.

TITLE: The properties of germanium alloyed with titanium

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Fizika.
no.2, 1962, 108-113

TEXT: The Ge-Ti alloy was formed by the diffusion of a thin film of Ti deposited on germanium in a vacuum and then heated to 800°C for 8 hours. The samples were subsequently annealed at 450°C for 7 hours and then cooled slowly. Under these conditions the concentration of Ti changes exponentially with depth in the sample. In order to obtain data for a more uniform distribution, measurements were made on the face of the sample which was initially coated with Ti and then ground after alloying. The electrical conductivity and Hall effect in alloyed and control samples were measured for temperatures in the range 100 to 480°K. The temperature dependence of these parameters for the alloyed samples had the same general form as for Ge. Typical values for the concentration of donors and acceptors in n-type samples are
Card 1/2

S/139/62/000/002/016/028
E039/E435

The properties of germanium ...

$N_D = 4.79 \times 10^{15} \text{cm}^{-3}$; $N_a = 4.71 \times 10^{15} \text{cm}^{-3}$ and in p-type
 $N_D = 2.4 \times 10^{15} \text{cm}^{-3}$ and $N_a = 2.58 \times 10^{15} \text{cm}^{-3}$. It is shown that
atoms of Ti have a large diffusion coefficient in Ge
($D = 5.5 \times 10^{-7} \text{cm}^2/\text{sec}$). In the germanium lattice titanium
produces acceptor levels with $\Delta E = 0.2 \text{ eV}$. The adsorption of
atoms of Ti on the surface of Ge is accompanied by a lowering of
the negative surface charge. It is possible to form an inversion
n-type layer on the surface of p-type germanium owing to the
formation of a positive surface charge with the absorption of a
large quantity of Ti atoms. The diffusion of atoms of Ti into
germanium from a film is accompanied by the formation of electron-
hole transitions; hence it can be used in the preparation of
diodes and triodes. There are 5 figures.

4

ASSOCIATION: Sibirskiy fiziko-tekhnicheskii institut pri Tomskom
gosuniversitete imeni V.V.Kuybysheva (Siberian
Physicotechnical Institute at Tomsk State University
imeni V.V.Kuybyshev)

SUBMITTED: August 5, 1961

Card 2/2

Investigation of the kinetic characteristics of highly doped indium antimonide. V. A. Kokoshkin (10 minutes).

Synthesis, doping, and preparation of single crystals of gallium arsenide. A. P. Izergin, A. G. Grigor'yeva, V. N. Chernigovskaya, G. M. Ikonnikova.

Crystallization of gallium arsenide under different pressures of arsenic vapor. S. S. Khlubkov, V. A. Celivanova, G. M. Ikonnikova.

Influence of impurities on the electrical properties of gallium arsenide. M. A. Krivov, Ye. V. Malisova, G. V. Malyanov.
(Presented by M. A. Krivov--15 minutes).

Reports presented at the 3rd National Conference on Semiconductor Compounds, Kishinev, 16-21 Sept 1963

ACCESSION NR: AP3000933

8/0139/63/000/002/0114/0118

AUTHOR: Krivov, M. A.; Malisova, Ye. V.; Kalyanov, S. V.

TITLE: Effect of Gamma irradiation on some properties of gallium arsenide

SOURCE: Izv. VUZ; Fizika, no. 2, 1963, 114-118

TOPIC TAGS: irradiation of semiconductors, gallium arsenide, Gamma irradiation, irradiation, semiconductors

ABSTRACT: The effect of gamma irradiation on the electroconductivity and Hall effect of n- and p-type gallium arsenide monocrystals has been investigated. Rectangular 10 x 2 x 2-mm specimens with a current-carrier concentration of 10^{16} - $10^{17}/\text{cm}^3$ were used. Measurements were made by the compensation method. Co^{60} with an energy of 1.25 Mev served as the gamma source. It was found that gamma irradiation decreases conductivity in both n- and p-type specimens. Irradiation at room temperature reduces the Hall coefficient and carrier mobility, while it increases carrier concentration in both types of specimens. Irradiation causes stable radiative distortion of the crystal lattice, which produces the acceptor and donor levels. The concentration of holes in the specimens is higher after irradiation. The increase in current-carrier density over the entire temperature range from 150 to 473K is the result of ionization of acceptor levels,

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ACCESSION NR: AP3000933

which appears due to irradiation. Acceptor ionization energy was found to be 0.051 ev. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: Sibirskiy fiziko-tehnicheskiy institut pri Tomskom gosuniversitete imeni V. V. Kuybyshcheva (Siberian Physicotechnical Institute at the Tomsk State University)

SUBMITTED: 10Mar62

DATE ACQ: 11Jun63

ENCL: 00

SUB CODE: NS

NO REF SOV: 001

OTHER: 004

Card 2/2

"APPROVED FOR RELEASE: 06/14/2000

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of the electron is considered, and the effective mass of the electron is taken to be the energy of the electron in the lattice.

... found to be about three orders higher than the analytical results. The discrepancy is attributed to the imperfections of the experiment and to the approximations of the analytical method. It is also possible that the ...

... (State University)

SUBMITTED: 26Nov63

ATD PRESS: 3103

INCL: 00

SUB CODE: 88, NF

NO REF SQV: 003

OTHER: 006

L 2716-66 EWT(m)/T/EWP(t)/EWP(b)/EWA(c) LJP(c) JD/JC
ACCESSION NR: AP5017185 UR/0139/65/000/003/0148/0150

AUTHOR: Krivov, M. A.; Malisova, Ye. V.; Shishkova, G. S.

TITLE: Electric properties of gold-doped gallium arsenide

SOURCE: IVUZ. Fizika, no. 3, 1965, 148-150

TOPIC TAGS: gallium arsenide, gold containing alloy, ionization, impurity level

ABSTRACT: This investigation was undertaken because gold is used for contacts in gallium-arsenide devices, but there are no published data on the electric activity of the gold in gallium arsenide. The tested crystals were doped with gold either by introducing the gold in the melt or by diffusion from a gold film deposited on the crystal surface. The doped crystals had n-type conductivity, with the number of electrons in the crystal decreasing with increasing gold content. The ionization energy of the gold levels could not be determined, probably because of the high donor density and the limited solubility of the gold. Comparison of the surface-diffusion sample with a standard undoped sample shows that the introduction of the gold should give rise to two new acceptor levels in the gallium arsenide. One of the levels is at 0.046 ev, but the identification of the second level is difficult. It is most likely that the gold replaces a gallium atom at the lattice point, and forms together with the interstitial copper present in the original

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B

Card 1/2

L 2716-66
ACCESSION NR: AP5017185

material a complex with ionization energy 0.046 ev. Orig. art. has: 3 figures.

ASSOCIATION: Sibirskiy fiziko-tehnicheskiy institut imeni V. D. Kuznetsova
(Siberian Physicotechnical Institute)

SUBMITTED: 28 July 64

ENCL: 00

SUB CODE: 88, EM

NR REF SOV: 000

OTHER: 003

mlr
Card 2/2

L 1145-66 ENT(1)/ENT(m)/T/EMP(t)/EMP(b)/EWA(h) IJP(c) JD/AT
ACCESSION NR: AP5021184 ^{44.55} UR/0139/65/000/004/0156/0165
AUTHOR: Krivov, M. A.; Malyanov, S. V. ^{44.55} 53
TITLE: Effect of x-rays on the electrophysical properties of germanium and of germanium p-n junctions. 1. Electrophysical properties of germanium exposed to soft x-rays ^{21, 44.55} 21
SOURCE: IVUZ. Fizika, no. 4, 1965, 156-165
TOPIC TAGS: germanium, pn junction, x irradiation, radiation damage, Hall effect, electric conductivity, relaxation, recombination radiation

ABSTRACT: The purpose of the work was an investigation of the change in the electric conductivity of irradiated germanium samples having different types of conductivity and various values of resistivity, to determine the mechanism whereby the non-equilibrium carrier concentration relaxes, and to determine the effect of variation of the properties of the material on the changes in the parameters of germanium p-n junctions. Both n- and p-type germanium samples were used, divided into two resistivity groups (~2 and ~39 ohm-cm). The apparatus was such that the conductivity and the Hall effect of the sample could be measured during the x-irradiation. The effective energy of the incident x-ray photon was 18.5 kev. Irradiation of low-

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L 1115-66

ACCESSION NR: AP5021184

resistivity samples did not affect the carrier density noticeably, a fact attributed to the very high carrier density in the conduction band. In the case of high-resistivity samples, the carrier density increases strongly with irradiation, and saturation sets in even after relatively small absorbed doses. This is attributed to the onset of noticeable recombination. The relaxation of the excess carrier density following impact recombination is analyzed, and it is shown that at low excitation levels the impact relaxation exhibits a linear character. It is shown analytically that the dominating effect in x-irradiated germanium is impact recombination, and that irradiation of germanium with soft x-rays (effective wavelength 0.67 Å) results in a very large absorption coefficient and produces a large carrier-density gradient in the x-ray propagation direction, with a maximum on the surface. The experimentally measured gradient agreed well with the theoretical calculation. "The authors thank Docent V. I. Gaman for valuable advice and diploma candidate R. A. Popo for help with the work." Orig. art. has: 8 figures, 30 formulas, and 1 table.

ASSOCIATION: Sibirskiy fiziko-tekhicheskiy institut imeni V. D. Kuznetsova [02]
 (Siberian Physicotechnical Institute)

SUBMITTED: 05Feb64

ENCL: 00

SUB CODE: SS,EM

NO REF SOV: 008

OTHER: 005

ATD PRESS: 4/100

Card 2/2