ACCESSION NR: AP4039264

were prepared containing up to 2 % of manganese and up to 1 % of cadmium. The determination of the solubility was conducted by the microscopic analysis method of the faces of specimens which were subjected to preliminary electrolytic polishing and measurement of electrical systems. The solubility of cadmium and manganese in aluminum is shown in figure 1. Orig. art. has: 4 tables and 4 figures.

ASSOCIATION: None

SUBMITTED: 04Jul62 ENCL: 01

SUB CODE: MM NO REF SOV: 002 OTHER: 013

Card 2/3

ACCESSION NR: AP4039264

ENCLOSURE: 01

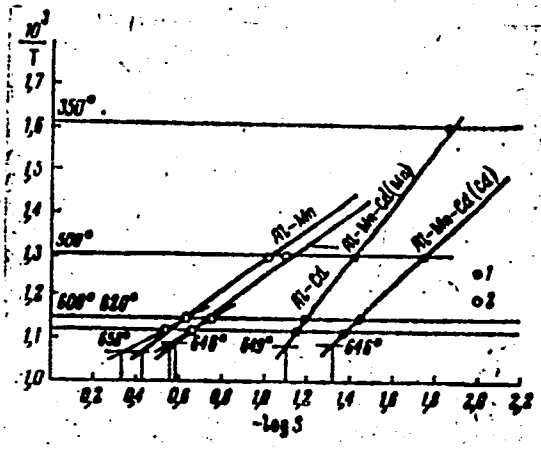

Fig. 1. Solubility of manganese and cadmium in aluminum: 1- Cd; 2- Mn. T is the absolute temperature and S is the maximum concentration of the dissolved element expressed in at. percent.

Card 3/3

SOV/24-58-8-16/37

AUTHORS: Drits, M. Ye., Mal'tsev, M. V., Padezhnova, Ye. M. and Sviderskaya, Z. A. (Moscow)

TITLE: Influence of Thorium on the Heat Resistance of Magnesium and Some of its Alloys (Vliyaniye toriya na zharoprochnost' magniya i nekotorykh ego splavov)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Otdeleniye Tekhnicheskikh Nauk, 1958, Nr 8, pp 93-97 (USSR)

ABSTRACT: According to published Western data (Refs.1-3), magnesium alloys with additions of 2 to 3% thorium have a high creep stability in the temperature range 300 to 350°C and satisfactory mechanical and technological properties. The authors of this paper applied the method of investigation of the short duration and the long duration hardness for the binary alloys of magnesium and thorium and for certain ternary alloys containing in addition to thorium, Ce, Mn, Al, Ca and Zn. The results of the hardness measurements of the binary alloys of magnesium and thorium in the as-cast state and after stabilisation at 300°C are entered in Table 1. The hardness values are entered in Table 2 for the same specimens after quenching in water at 565°C, at which temperature the specimens were

Influence of Thorium on the Heat Resistance of Magnesium and Some of its Alloys

held for sixteen hours; heating of the specimens was effected in quartz glass ampules from which air was evacuated and which were filled with sulphur powder. The influence of thorium on the hardness of the binary Mg-Th alloys at room and elevated temperatures is graphed in Fig.1. The diagram of state of the Mg-Th system, based on the micro-structural and thermal analyses, is reproduced in Fig.2; the diagram is of the eutectic type. Fig.3 shows reproductions of the micro-structure of Mg-Th alloys for 3 and 20% Th respectively and magnifications of 315 and 1000 times. The obtained results indicate that Mg-Th alloys have a high micro-hardness (306 kg/mm^2) which approaches in value the micro-hardness of Mg_2Ni, $MgNi_2$, etc; the micro-hardness of the eutectic is 118 kg/mm^2, the micro-hardness of the solid solution is 74 kg/mm^2. The effect of hardening of these alloys during heat treatment was investigated in detail on an alloy containing 10% Th. Fig.4 shows the curves of the kinetics of hardening of this alloy in a coordinate system hardness vs. time; the progress of

Influence of Thorium on the Heat Resistance of Magnesium and Some of its Alloys

ageing was investigated for ten hours. However, it was found that in all cases the hardness hardly changed after the first five hours. The highest hardness was obtained as a result of artificial ageing for three hours at 250°C. On the basis of the obtained results heat treatment regimes were selected for comparative investigation of the short duration and long duration hardness at 300°C; the obtained data are entered in Table 3. The hardness of ternary alloys was investigated under conditions similar to those pertaining to the binary alloys of Mg with Th; the results of these investigations as well as the compositions of the investigated alloys are summarised in Table 4. The best results at room temperature were obtained by alloying the Mg-3% Th alloy with Ce; the hardness of this alloy increased continuously with increasing Ce content. Ca and Zn have a positive influence in quantities of 0.5 to 1%. Small additions of Mn and Al lead to some decrease in the hardness and only a further increase of the Mn and Al contents

Influence of Thorium on the Heat Resistance of Magnesium and Some of its Alloys

brings about an increase in the hardness. In Fig.6 the influence is graphed of additions of Al, Ca, Ce, Mn and Zn on the long duration hardness of the Mg-3% Th alloy. An idea of the influence of the various components on the high temperature strength of a Mg-3% Th alloy can be gained from the data of Table 5, which contains a comparison of the short duration and the long duration hardness at 300°C (after stabilisation annealing at this temperature for 100 hours) of the ternary alloys; in addition to the better experimental results of the authors themselves, this table contains data for alloys Mg-Th-Zr and Mg-Th-Zr-Zn, alloys which are most widely publicised in Western literature. These alloys were produced by the authors and tested under conditions similar to those applied to the earlier investigated alloys. It can be seen that the highest hardening of Mg-Th alloys at elevated temperatures is ensured by such elements as Mn and Ce. For these, the highest hardness values were obtained, higher even than those containing zirconium and

SOV/24-58-8-16/37

Influence of Thorium on the Heat Resistance of Magnesium and Some of its Alloys

zinc. Engineer I. M. Bavykina and G. M. Bordina participated in the experiments.
There are 6 figures and 5 tables and 3 references, all of which are English.

SUBMITTED: October 8, 1957

1. Heat resistant alloys---Properties 2. Magnesium--Properties 3. Magnesium alloys--Mechanical properties 4. Magnesium alloys --Temperature factors 5. Magnesium alloys--Test results 6. Thorium --Metallurgical effects

Card 5/5

SOV/180-59-2-24/34

AUTHORS: Drits, M.Ye., Mal'tsev, M.V., and Padezhnova, Ye.M. (Moscow)

TITLE: Investigation of Alloys of the Ternary System Magnesium - Thorium - Manganese (Issledovaniye splavov troynoy sistemy magniy-toriy-marganets)

PERIODICAL: Izvestiya akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 2, pp 121-123 (+ 1 plate) (USSR)

ABSTRACT: In the work described the magnesium corner of the magnesium-thorium-manganese equilibrium diagram with up to 3% manganese and 9% thorium was investigated. The experimental work was carried out with the participation of G.M. Bordina. Grade Mrl magnesium (99.91% Mg), Mg - Mn (3.66% Mn) and Mg Th (16.72% Th) were used to prepare the alloys by fusion in steel crucibles under a flux layer (40-46% $MgCl_2$, 34.40% KCl, 5-8% $BaCl_2$ and 3-5% CaF_2). The ingots were forged at 450 °C and annealed at 550 °C for 100 hours and cut up. The specimens were sealed in quartz ampoules and subjected to prolonged heating at various temperatures followed by water quenching. Microstructures were determined after

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Investigation of Alloys of the Ternary System Magnesium-Thorium-Manganese

etching with 0.5% nitric acid. Fig 1 shows some microstructures. Fig 2 shows isothermal sections, and Fig 3 polythermal sections for 1% Th and 8% Th. The nature of the phases was further studied with the aid of X-ray structural analysis and local microhardness determinations. Thermal analysis of certain alloys was carried out to determine phase-change temperatures. There are 3 figures and 3 references, 2 of which are Soviet and 1 German.

Card 2/2

SUBMITTED: November 19, 1958

PADEZHNOVA, YE. D.

PHASE I BOOK EXPLOITATION SOV/4164

Vsesoyuznoye soveshchaniye po splavam redkikh metallov. 1st, Moscow, 1957

Redkiye metally i splavy; trudy... (Rare Metals and Alloys; Transactions of the First All-Union Conference on Rare-Metal Alloys) Moscow, Metallurgizdat, 1960. 438 p. 3,150 copies printed.

Sponsoring Agencies: Akademiya nauk SSSR. Institut metallurgii; Komissiya po redkim metallam pri nauchno-tekhnicheskom komitete.

Ed.: I.N. Bogoyavlov; Ed. of Publishing House: O.M. Kazaryan; Tech. Ed.: P.G. Izmail'yeva.

PURPOSE: This collection of articles is intended for metallurgical engineers, physicists, and workers in the machine-building and radio-engineering industries. It may also be used by students of schools of higher education.

COVERAGE: The collection contains technical papers which were presented and discussed at the First All-Union Conference on Rare-Metal Alloys, held in the Institute of Metallurgy, Academy of Sciences USSR in November 1957. Results of investigations of rare-metal alloys, titanium and copper-base alloys with additions of rare metals are presented and discussed along with investigations of rhenium, vanadium, niobium, and their alloys. The effect of rare-earth metals on properties of magnesium alloys and steels is analyzed. The uses of rhenium as a dehydrating catalyst, electroplating material, and material suitable for making plugs for automobile electrical systems are discussed. Also, the effect of the addition of certain elements on the properties of heat-resistant steel is examined and alloys with special physical properties (particularly semiconductive alloys) are discussed. No personalities are mentioned. Soviet and non-Soviet references accompany some of the articles.

PART II. TITANIUM-BASE AND COPPER-BASE ALLOYS WITH RARE-METAL ADDITIONS

Rare Metals (Cont.) SOV/4164

Lebedev, V.V., I.G. Kornilov, and O.V. Tsvetkova. Wrought Magnesium Alloys With Rare-Earth Metals 209

Tikhova, K.N., V.A. Blokhina, and L.A. Afanas'yeva. Magnesium Casting Alloys With Rare-Earth Metals 219

Brik, M.T., M.V. Maltsev, Z.A. Svetlichnaya, Ya.M. Fedorchenko, and I.M. Pavlyuk. Investigation of Magnesium Alloys Containing Thorium 227

Afanas'yeva, Ye.Ye. Magnesium Alloys With Rare Metals 240

Mikheyev, I.M., and V.I. Dobatkin. Effect of Rare-Earth and Alkali-Earth Metals on Mechanical Properties of Magnesium Alloys of the Magnesium-Manganese and Magnesium-Manganese-Cerium Systems 259

PART V. RARE METALS IN STEELS

Bannikova, S.Ye. Effect of Rare-Earth Metals on Sulfur Distribution and Sulfide Precipitation in Chromium-Nickel-Molybdenum Steel 269

Card 6/8

DRITS, M.Ye., kand.tekhn.nauk; MAL'TSEV, M.Ye.; PADEZHNOVA, Ye.M.; BORDINA, G.M.

Investigating ternary system Mg - Th - Mn alloys. Issl.splav. tsvet.met. no.2:114-121 '60. (MIRA 13:5)
(Magnesium-thorium-manganese alloys)

L 44310-66 EWT(m)/EWP(t)/ETI IJP(c) JD/JG/JH

ACC NR: AP6019835 (A) SOURCE CODE: UR/0370/66/000/001/0149/0152

AUTHOR: Drits, M. Ye. (Moscow); Padezhnova, Ye. M. (Moscow); Bochvar, N. R. (Moscow)

ORG: none

TITLE: Constitution diagram of the Mg-Nd-Ni system in the Mg-rich region

SOURCE: AN SSSR. Izvestiya. Metally, no. 1, 1966, 149-152

TOPIC TAGS: phase analysis, ternary compound, magnesium base alloy, neodymium, nickel/ / FPK-55 thermal analyzer

ABSTRACT: Alloys of the Mg-Nd-Mn system containing small amounts of Ni display high mechanical properties at elevated temperatures. The elucidation of the role of Ni in strengthening the alloys of Mg with Nd and Mn as yet requires investigating the nature of the interaction between components in ternary (Mg-Nd-Mn, Mg-Nd-Ni and Mg-Mn-Ni) and quaternary (Mg-Nd-Mn-Ni) systems. In this connection, as well as considering that the constitution diagram of the Mg-Nd-Ni system in the Mg corner is as yet unknown, the article presents a diagram of the crystallization surface for this corner as based on the findings of thermal and microstructural analyses of Mg-Nd-Ni specimens specially melted in electric resistance furnaces

UDC: 669.017.13

Card 1/4

L 44310-66
ACC NR: AP6019835

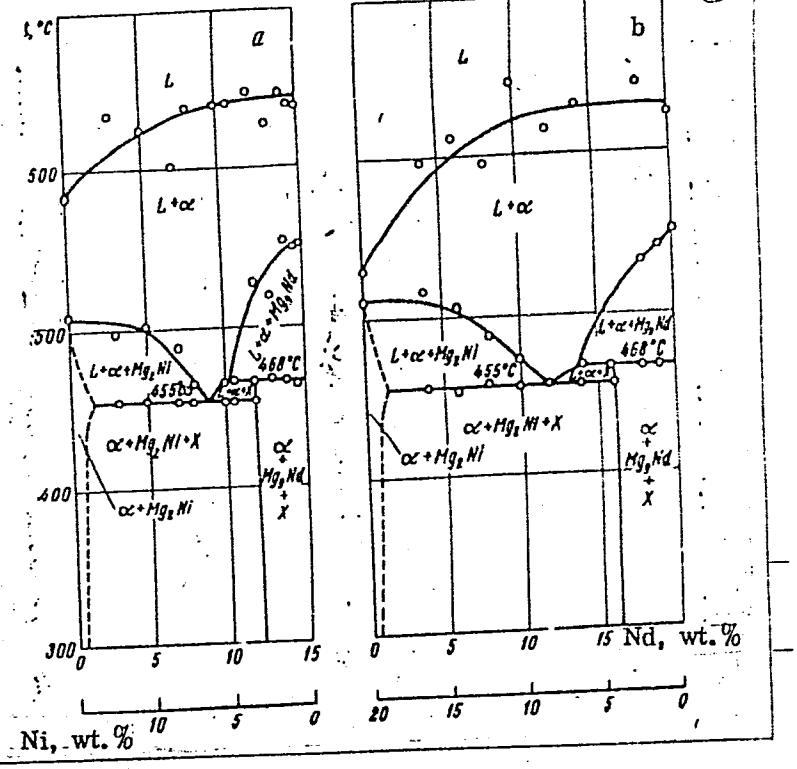

Fig. 1. Polythermic cross--sections of the Mg-Nd--Ni diagram with a fixed Mg content

(a - 85% mg; b - 80% Mg)

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L 42292-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/JH

ACC NR: AP6019774 SOURCE CODE: UR/0370/66/000/003/0165/0171

AUTHOR: Drits, M. Ye. (Moscow); Padezhnova, Ye. M. (Moscow)

ORG: none

TITLE: Phase composition and aging of alloys of the aluminum-copper-manganese-cadmium system

SOURCE: AN SSSR. Izvestiya. Metally, no. 3, 1966, 165-171

TOPIC TAGS: aluminum base alloy, phase composition, metal aging

ABSTRACT: The article gives the results of a study of the isothermal cross sections of alloys with a constant content of 0.5% manganese and 0.2% cadmium, and of an investigation of the effect of aging on some alloys. Materials for preparing the alloys to be tested were: aluminum (99.985%), cadmium (99.91%), and alloys made of electrolytic manganese and copper. The castings had a diameter of 20 mm and a height of 60 mm. After threefold deformation (shrinkage 50%) and twofold pressing (degree of compression about 60%), rods with a diameter of 6.5 mm were obtained. Between the deformations, homogenizing annealing at 500°C for 24 hours was performed. Final annealing at temperatures of 530, 500, and 400°C was carried out for 128, 200, and 600 hours, respectively. The content

Card 1/2 UDC: 669.715'3'74'73

Card 2/2

AUTHOR: Padezhnova, Ye. M.

TITLE: Study of phase equilibria of the Al-Cu-Mn-Cd system in the aluminum-rich region

SOURCE: AN SSSR. Izvestiya. Metally

ABSTRACT: The practical applications of the five-component Al-Cu-Li-Mn-Cd system

I 63339-65
ACCESSION NR: AP5017480

[illegible] manganese, and cathode copper. Microstructural photographs of the investi-
[illegible] and cadmium in aluminum. Cadmium is an [illegible]
[illegible] rack solutions as well as alloys grain and phase boundaries [illegible]

ASSOCIATION: [illegible]
SUBMITTED: 20Nov64
[illegible]

Card 2/2

S/509/62/000/011/009/019
E071/E351

AUTHORS: Drits, M.Ye., Sviderskaya, Z.A., Rokhlin, L.L., Padezhnova, Ye.M. and Yakovleva, L.I.

TITLE: The relationship between strength at elevated temperature and composition of magnesium-base alloys

SOURCE: Akademiya nauk SSSR. Institut metallurgi. Trudy. no. 11. Moscow, 1962. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya. 124 - 132

TEXT: A study of the relationship between composition and strength at high temperatures for deformed and heat-treated magnesium alloys was carried out, as the only available data covered a limited number of alloys, in the cast state. The binary alloys investigated over a temperature range of 150 - 300 °C were: Mg-Al; Mg-Zn; Mg-Mn; Mg-Th; Mg-Ce; Mg-Nd and Mg-Ca. Cast ingots, after cleaning by machining, were pressed into rods, 10.5 mm in diameter, being deformed by 88%. The Mg-Al and Mg-Zn alloys were homogenized before pressing (at 400 and 340 °C, respectively) for 50-60 hours; the remaining alloys were not homogenized. The pressing temperature was 300 - 440 °C, the temperature

Card 1/3

The relationship between ....

of the container being 250 - 400 °C. Specimens prepared from these rods were hardened in water at 60 - 70 °C, Mg-Al from 415 °C, Mg-Zn from 315 °C, Mg-Mn, Mg-Th and Mg-Ce from 550 °C, Mg-Nd from 520 °C and Mg-Ca from 490 °C, following which they were stabilized at the test temperature for 100 hours. The strength-testing of the alloys at elevated temperatures was carried out by determination of the hardness under prolonged loading (hours). The results showed that the best structure for obtaining the maximum heat-resistance would be different for each system, depending on the nature of the intermetallic components. In systems having a high solubility of the alloying element in solid magnesium and marked changes in solubility with temperature, the best structure is a highly-alloyed solid solution (Mg-Al, Mg-Zn). This is particularly the case at higher temperatures. In such systems an intense development of the interactions at the inter-phase boundaries and a strong tendency to weakening in the second phase itself lead in most cases to heterogenization of the structure having little effect. In systems with a severely limited

S/509/62/000/011/009/019
E071/E351

The relationship between ....

alloying-element solubility in solid magnesium and a small change in the solubility with temperature, the strongest effects of alloying are shown by those with a structure of decomposed solid solution (Mg-Mn, Mg-Th, Mg-Ce, Mg-Nd, Mg-Ca). The appearance in the alloy structure of dispersed particles of heat-resistant secondary phases and the absence of noticeable interaction at the interphase boundaries at elevated temperatures allow heterogenization to exert a strong influence. A comparison of the authors' results and the published data show a correspondence in the nature of the relationships despite the fact that the authors' results were obtained on deformed and heat-treated materials, and the published data were for cast alloys. There are 5 figures.

Card 3/3

L 12599-63 BDS/EWP(q)/EWT(m) AFFTC/ASD JD
ACCESSION NR: AP3003477 S/0078/63/008/007/1661/1667

56

AUTHOR: Drits, M. Ye.; Kadaner, E. S.; Padezhnova, Ye. M.

TITLE: Phase diagram of the aluminum-manganese-cadmium system in the area of high aluminum concentration

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 7, 1963, 1661-1667

TOPIC TAGS: Al, Mu, cadmium, mechanical property, corrosion property, eutectic property

ABSTRACT: Research on the interaction of components in the system Al-Mn-Cd is of practical interest since alloying with manganese and cadmium indicates a favorable effect on mechanical and corrosion properties. Study of the ternary diagram for Al-Mn-Cd was begun from triangulation of the system by 2 polythermal sections with constant content of aluminum equal to 99 and 95% in order to determine that in the aluminum angle there are 3 areas of primary crystallization: MnA_{14}, MnA_{16} and Alpha. The data obtained agreed best with results of work by Dix, Fink and Wiley which determined

Card 1/2

L 12599-63
ACCESSION NR: AP3003477

eutectic temperature at 658.5C, content of manganese at eutectic 1.95%, temperature of first peritectic reaction during cooling 680F and during heating 710C. Orig. art.has: 9 figures.

ASSOCIATION: none

SUBMITTED: 2Aug62 DATE ACQ: 02Aug63 ENCL: 00

SUB CODE: CH, ML NO REF SOV: 003 OTHER: 016

Card 2/2

89632

S/509/60/000/004/004/024
E021/E106

18.1245

AUTHORS: Drits, M.Ye., Mal'tsev, M.V., Sviderskaya, Z.A., and Padezhnova, Ye.M.

TITLE: Alloys of Magnesium Containing Thorium

PERIODICAL: Akademiya nauk SSSR. Institut metallurgii. Trudy, No.4, 1960. Metallurgiya, metallovedeniye, fiziko-khimicheskiye metody issledovaniya, pp. 74-83

TEXT: Several binary and ternary magnesium-thorium alloys have been investigated using additions of manganese, cerium, aluminium, zinc, calcium and zirconium. The properties of magnesium-thorium alloys and also the effects of the additions on the properties at both room and elevated temperature were examined. The alloys were cast in a 20 mm diameter metallic mould heated to 50-60 °C. The main method of investigating the properties consisted of short-time (30 sec) and long-time (60 min) hardness measurements. The hardnesses were measured at room temperature and 300 °C using a 10 mm ball and a 100 kg load. The alloys were stabilised at 300 °C for 100 hours before testing. Measurements were also made after quenching from 565 °C. A marked increase

Card 1/3

Calcium and zinc had a positive effect up to 0.5-1%, further additions showing no change. Low additions of manganese and aluminium gave a decrease in hardness. Further additions gave an increase. The greatest effect on the prolonged hardness at 300 °C was shown by 0.6-1% manganese. Cerium also showed an increase, but to a lesser degree.
There are 5 figures, 6 tables and 3 English references.

Fig.2

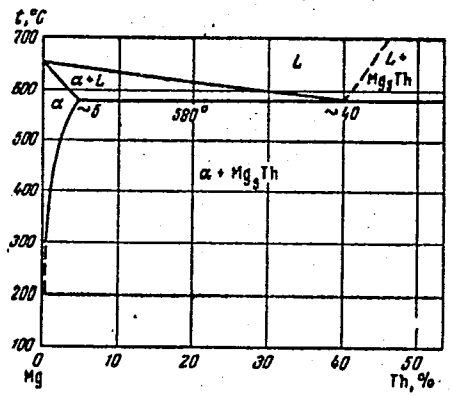

Рис. 2. Диаграмма состояния сплавов Mg — Th

Card 3/3

DRITS, M.Ye.; MAL'TSEV, M.V.; SVIDERSKAYA, Z.A.; PADEZHNOVA, Ye.M.; TROKHOVA, V.F.

Effect of additional alloying on the properties of alloys in the system Mg - Th - Mn. Issl. splav. tsvet. met. no.3:86-92 '62. (MIRA 15:8)

(Magnesium-thorium-manganese alloys)

DRITS, M. Ye.; KADANER, E.S.; PADEZHNOVA, Ye.M.; BOCHVAR, N.R.

Determination of the mutual solubility boundaries of manganese and cadmium in solid aluminum. Zhur. neorg. khim. 9 no.6:1397-1402 Je '63 (MIRA 17:8)

PADGORETSKIY, M. I.

Padgoretskii, M. I. The statistical adaptation of experiments on the absorption of shower particles. Page 959.

The P. N. Lebedev Inst. of Physics
Acad. of Sci., USSR
June 26, 1950.

SO: Journal of Experimental and Theoretical Physics, Vol. 20, No. 10, October, 1950.

PADGORETSKIY, M. I. and KHVOLES, V. A.

"Concerning the utilization of chance coincidence for measurements of large intensities in the work with counters," Journal of Exptl. and Theoretical Physics, Vol. 18, No. 4, 1948.

PADGORNYY, I. M.

C-5

USSR/Nuclear Physics

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11250

Author : Padgornyy, I.M.

Inst : Not given

Title : X-Ray Emitted Upon Start of Gas Discharge.

Orig Pub : Dokl. AN SSSR, 1956, 108, No 5, 820-822

Abstract : Brief report of certain results of an investigation on the X-rays occuring during an electric discharge in hydrogen at low pressures, 10^{-2} -- 10^{-1} mm mercury. The X-rays of the discharge were emitted from a discharge through aluminum windows and were recorded with the aid of a luminescent crystal and a photomultiplier with an oscillograph. Simultaneous oscillograms were also taken of the voltage on the discharge tube. It is shown that a pulse of X-rays of duration of approximately

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USSR/Nuclear Physics C-5

Abs Jour : Ref Zhur - Fizika, No 5, 1957, 11250

1 microsecond appears at the instant when the voltage drops across the electrode. It is established that as the hydrogen pressure increases, the intensity of the starting X-ray radiation diminishes and at a pressure of approximately 1 mm mercury it becomes vanishingly small. The results obtained are explained by the influence of ionization losses of the electrons.
See also Referat Zhur Fizika, 1957, 6077.

Card 2/2

REVIN, I.A., inzh.; PUSHCHINSKAYA, A.A., inzh., red.; PADGUFAROVA, S.I., red.; IL'YUSHENKOVA, T.P., tekhn. red.

[Adjusting equipment; survey] Ad"iustazhnoe oborudovanie; obzor. Moskva, TSintimash, 1960. 90 p. (MIRA 15:7)
(Rolling (Metalwork))--Equipment and supplies)

PADIL'YA, Eberto [Padilja, Eberto], kubinskiy zhurnalist

Friendship. Vnesh. torg. 43 no.8:8-9 '63. (MIRA 16:8)
(Russia--Foreign economic relations--Cuba)
(Cuba--Foreign economic relations--Russia)

USSR / General and Specialized Zoology. Insects. Forest
Pests.

Abs Jour : Ref Zhur - Biol., No 17, 1958, No 78572

Author : Fedin, I. M.
Inst : Not given
Title : Larch Sawfly Platycampus Ovatus Zadd. (Hymenoptera, Tenthredinidae) in the Forests of the USSR.

Orig Pub : Entomol. obozreniye, 1957, 36, No 4, 640-642.

Abstract : The larch sawfly was noted among the fauna of USSR for the first time in 1954, whereas it is common in Central Europe. Its life cycle in the Ukraine was studied. The durations for all phases of development, description of imago and larvae are given. The sawfly has two generations yearly. The pest is found more often in plantations of larch of II-III classes of age; the amount of damage to the needles on separate trees by three species, together with Lygaeonematus laricis and L. duplex, reached 25%. For control, dusts of DDT (5.5%) and hexachlorocyclohexane 12% are recommended. -- Ye. L. Irons.

41

Card 1/1

PADISAK, M.

"The dispatcher service of MAGYAR RADIO." p. 12. (MAGYAR RADIO, Vol. 9. no. 11, Mar. 1953. Budapest.)

S: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

FADISAK, M.

"The dispatcher service of Hungarian radio." p. 3. (MAGYAR RADIO, Vol. 9, no. 17, Apr. 1953. Budapest.)

SO: Monthly List of East European Accessions, Vol. 2, #8, Library of Congress August, 1953, Uncl.

PADISAK, M.

"On the Track of Winter Potatoes and Cheap Onions; Notes of a radio correspondent" p. 9
(Magyar Radio, Vol. 9, No. 45, November, 1953, Budapest)

SO: Monthly List of East European Accessions, Vol. 3, No. 3, Library of Congress, March 1954, Uncl.

PADIVENKO, I.K., inzh., VOSKOYNIKOV, M.A., inzh.

Machinery and automatic devices designed by a group of factroy workers. Stroi.mat. 5 no.7:26-30 Jl '59. (MIRA 12:10)
(Irpen-- Brick industry--Equipment and supplies)

PADIY, N. N.

Larch- Ukraine

Pests of larch seeds in the Ukrainian SSSR Les. khoz. no. 1, 1952.

Monthly List of Russian Accessions. Library of Congress. September 1952. UNCLASSIFIED.

PADIY, N. N.

June Bug (Lachnosterna)

Use of hexachloran to control the larvae of June bugs in forest nurseries.
N. N. Padiy. Les. Khoz. no. 8, 1952.

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

PADIY, M. N.

"Larch Tree Planting Pests in the Ukrainian SSR and Measures for Fighting Them." Cand Biol Sci, Inst of Zoology, Acad Sci Ukrainian SSR, Kiev, 1953. (RZhBiol No 1 Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (13) SOL Sum. 598, 29 Jul 55

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25779

Author : Pedi'y N.N.
Inst : Not Given
Title : The Protection of Reconstructed Plantings from Pests in the Vinnitsa region. (Zashchita reconstruiruyemykh nasazhdeniy Vinitskoy oblasti ot vrediteley).

Orig Pub : Nauchn. tr. Ukr. s.kh. akad., 1956, 8, 231-240

Abstract : In the Vinnitsa oblast 274 species of insects, harmful for the forest, were found. The principal primary pests were: the winter measuring worm moth, the pooling moth, the gypsy moth, the brown-tail moth, the filver "lunka", the oak flea and others. The winter measuring worm moth bred in multitudes especially in maturing, sparse, pure oak plantings without an underbrush and in turf-covered soil. Raising of mixed plantings with an underbrush of a variety of trees, impeding the sparsity of the plantings and regulating pasturing in the

Card : 1/3

USSR/General and Special Zoology. Insects P

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25779

forest created unfavorable conditions for mass propagation of the principal pests and favorable conditions for predacious insects, parasites and birds. To control the winter measuring worm moth it was recommended that the larvae infected with tachinos (Bessa selecta) during the time of their going into the soil for purposes of passing into the chrysalis stage be transferred from dying out centers of infection into newly developing; for control of the gypsy moth it was recommended to transfer the coccoons of the ichneumon fly Apanteles porthetriae (prior to their emergence) from dying out centers into newly developing ones. In order to improve the sanitary conditions of the trees it was necessary to carry out sanitary cutting of all dry trees in the region before the larvae of the secondary pests passed into the chrysalis stage. In order to increase the resistance to the Dutch disease and to infestations with elm bark beetles and with ash bark beetles it was necessary to limit the elm varieties to 10% and the ash tree varieties to 20% of the plantings. The turkestan

Card : 2/3

USSR/General and Special Zoology. Insects P

Abs Jour : Ref Zhur - Biol., No 6, 1958, No 25779

elm tree, more resistant to the Dutch disease, and the green ash tree, less frequented in the Vinnitsa oblast by secondary pests than the common ash tree, should be introduced into the plantings.

Card : 3/3

PADIY, N.N.

Larch sawfly Platycampus ovatus Zadd. (Hymenoptera, Tenthredinidae) in forest plantations of the U.S.S.R. Ent. oboz. 36 no.3:640-642 '57. (MIRA 10:9)

(Sawflies) (Larch--Diseases and pests)

PADIY, N. N.

USSR / General and Specialized Zoology. Insects. Pests of Wood and Buildings. P

Abs Jour : Ref Zhur - Biologiya, No 16, 1958, No. 73735

Author : Padiy, N. N.; Spektor, M. R.
Inst : Not given
Title : The Use of DDT in Sanitary Felling to Destroy Trunk Pests

Orig Pub : Lesn. khoz-vo, 1958, No 6, 84

Abstract : Pine logs 30 - 48 cm. in diameter, which were completely infested with engraver beetles and partially with pine beetles, were sprayed with a 5% solution of DDT in diesel oil when about 10% of the larvae had stopped feeding, but the pupae were not yet formed. After 2 weeks, the logs were stripped. As a result all larvae perished; 36.7% of the pupae and adult beetles perished in logs with bark 3 - 5 cm. thick; 88.4%, with

Card 1/2

PADIY, N.N., dotsent

Formula for calculating the necessary amounts of poisonous chemicals. Zashch. rast. ot vred. i bol. 5 no.9:39-40 S '60. (MIRA 15:6)

1. Ukrainskaya akademiya sel'skokhozyaystvennykh nauk, g. Kiyev. (Insecticides) (Herbicides)

PADIY, Nikolay Nikolayevich; BREDIKHIN, A.M., red.; PEVZNER, V.I., tekhn. red.

[Brief guide to pests feeding on needles and leaves] Kratkii opredelitel' khvoe-i listogryzushchikh vreditelei. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1961. 78 p. (MIRA 14:8)
(Forest insects—Identification)

KHRAMTSOV, Nikolay Nikolayevich; PADIY, Nikolay Nikolayevich

[Trunk pests of forest trees and their control] Stvolovye vrediteli lesa i bor'ba s nimi. Moskva, Lesnaia promyshlennost', 1965. 158 p. (MIRA 19:1)

PADJEN, Ladislav, ing.

Course in the protection and measurement techniques for the personnel of distributive enterprises. Energija Hrv 10 no. 1/2:53. '61

ACC NR: AP6018230 (N) SOURCE CODE: UR/0416/66/000/002/0048/0052

AUTHOR: Padkin, V. (Lieutenant Colonel; Member of Medical Service; Candidate of Medical Sciences)

ORG: None

TITLE: Health and well-being of the submariner

SOURCE: Tyl i snabzheniye sovetskikh vooruzhennykh sil, no. 2, 1966, 48-52

TOPIC TAGS: health, human physiology, nuclear submarine, food service equipment, special purpose clothing, naval medicine

ABSTRACT: The hardships of crew life aboard nuclear submarines on long submerged patrols, the climatic conditions encountered on long cruises, and their influence on crew physiology are discussed. Special clothing, including expendable (one time wear) clothing, is discussed. Deficiencies, including inadequate food service, and a plea made for more qualified food service personnel, improved galley equipment for submarines, and a need for prepackaged and frozen prepared foods, are highlighted. Medical service is discussed, including mention of operating facilities. Deficiencies in certain dosages of common medicines are criticized. The need for improved forms and methods for maintaining physical fitness on board submarines is suggested as the best way to maintain the all around physical well-being of the submariner. Orig. art. has: 2 figures.

SUB CODE: 06,15/SUBM DATE: None

Card 1/1

PADL, V.

Application of ion exchangers of Czechoslovak make for water demineralization.

p. 356 (ENERGETIKA) Vol. 6, no. 8, Aug. 1956,
Praha, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,
March 1958

PADLEY J. A.

A brief note on starch chemistry. J. A. Radley. *Vestnik Sloven. Kem. Društva* 1, 113–16(1954)(in English).—A review with 25 references. N. Plavšić

SELYE, H.; PADMANABHAN, N.; STREBEL, R.

Histogenesis of connective tissue caldification caused by $KMnO_4$ and "other calcifiers". Cas. Lek. Cesk. 101 no.16/17:523-526 27 Ap '62.

1. Institut interniho lekarstvi a experimentalni chirurgie, Universita v Montrealu, Kanada.

(CALCIFICATION etiology)
(CONNECTIVE TISSUE pharmacol)
(ANTISEPTICS toxicol)

PADNYA, V., inzh.

Effect of using piers according to time sheets on idle periods of loading and unloading ships. Rech. transp. 19 no.3:10-14 Mr '60. (MIRA 14:5)

(Piers) (Cargo handling)

PADNYA, V. A.

Padnya, V. A. "Mechanization of loading-unloading work in the Moscow railroad terminal," Gor. khoz.-vo Moskvy, 1948, No. 12, pp. 28-33

SO: U-3264, 10 April 53 (Letopis 'Zhurnal 'nykh Statey, No. 4, 1949).

PADNYA, V.A.; PETUKHOV, G.S.; SUCHKOV, A.I., redaktor; KUDRYAVTSEVA, L.K., tekhnicheskiy redaktor

[Mechanization of loading and unloading of lumber in railroad transportation] Mekhanizatsiia pogruzki i razgruzki lesomaterialov na zheleznodorozhnom transporte. Moskva, Gos. lesbumizdat, 1950. 63 p. [Microfilm]. (MLRA 8:7)
(Loading and unloading) (Lumber--Transportation)

PADNYA, V.A., inzhener.

New fork lift trucks. Gor.khoz.Mosk. 24 no.2:28-32 F '50.
(Fork lift trucks) (MLRA 7:11)

POTAPOV, V.P., redaktor; KANSHIN, M.D.; L'VITSYN, N.F.; MASTERITSYN, N.N.; NOZDRIN, A.A.; NIKITYUK, A.P.; PADNYA, V.A.; RIDEL', E.I.; FERAPONTOV, G.V.; SHAMAYEV, M.F.; SHATSKAYA, E.P.; GULEV, Ya.F., redaktor; VERINA, G.P., tekhnicheskiy redaktor.

[Advanced methods for workers in material handling] Peredovye metody truda kommercheskikh rabotnikov. Moskva, Gos. transp. zhel-dor. izd-vo, 1953. 262 p. [Microfilm] (MLRA 7:11)
(Material handling)

PADNYA, V.A., inzhener.

Self-mounting gantry cranes. Mekh.stroi. 10 no.10:23-25 O '53.
(MLRA 6:9)
(Cranes, derricks, etc.)

POTAPOV,V.P.;BARKAN,I.N.; DEM'YANKOV,N.V.; KANSHIN,M.D.; L'VITSYN,N.F.; MASTERITSYN,N.N.; NOZDRIN,A.A.; PADNYA,V.A.; RIDEL',E.I.; FERAPONTOV,G.V.; SHAMAYEV,M.F.; SHATSKAYA,E.P.; SHAVKIN,G.B., inzhener, redaktor; KHITROV,P.A., tekhnicheskiy redaktor

[Advanced methods in shipment and commercial handling of goods] Peredovye metody truda gruzovykh i kommercheskikh rabotnikov, Izd. 2-oe. Moskva, Gos.transp.zhel-dor. izd-vo, 1955. 286 p.
(MLRA 9:2)

(Material handling) (Transportation--Equipment and supplies)

Pudnyn, V.N.

BERNSHTEVICH, I.I., kandidat tekhnicheskikh nauk; BOGIN, N.M., kandidat tekhnicheskikh nauk; BYKOV, Ye.I., inzhener; VLASOV, I.I., kandidat tekhnicheskikh nauk; GRITSEVSKIY, M.Ye., inzhener; GRUBER, L.O., inzhener GURVICH, V.G., inzhener; DAVYDOV, V.N., inzhener; YERSHOV, I.M., kandidat tekhnicheskikh nauk; ZASORIN, S.N., kandidat tekhnicheskikh nauk; IVANOV, I.I., kandidat tekhnicheskikh nauk; KRAUKLIS, A.A., inzhener; KROTOV, L.B., inzhener; LAPIN, V.B., inzhener; LASTOVSKIY, V.P., dotsent; LATUNIN, N.I., inzhener; MARKVARDT, K.G., professor, doktor tekhnicheskikh nauk; MAKHAYLOV, M.I., professor, doktor tekhnicheskikh nauk; NIKANOROV, V.A., inzhener; OSKOLKOV, K.N., inzhener; OKHOSHIN, L.I., inzhener; PARFENOV, K.A., dotsent, kandidat tekhnicheskikh nauk; PERTSOVSKIY, L.M., inzhener; POPOV, I.P., inzhener; PORSHNEV, B.G., inzhener; RATNER, M.P., inzhener; ROSSIYEVSKIY, G.I., dotsent, kandidat tekhnicheskikh nauk; RYKOV, I.I., kandidat tekhnicheskikh nauk; RYSHKOVSKIY, I.Ya., dotsent, kandidat tekhnicheskikh nauk; RYABKOV, A.Ya., professor [deceased]; TAGER, S.A., kandidat tekhnicheskikh nauk; CHERNYSHEV, M.A., doktor professor, doktor tekhnicheskikh nauk; EDIN, L.Ye., professor, doktor tekhnicheskikh nauk; YURENEV, B.N., dotsent; AKSENOV, I.Ya., dotsent, kandidat tekhnicheskikh nauk; ARKHANGEL'SKIY, A.S., inzhener; BARTENEV, P.V., professor, doktor tekhnicheskikh nauk; BERNGARD, K.A., kandidat tekhnicheskikh nauk; BOROVOY, N.Ye., dotsent, kandidat tekhnicheskikh nauk; BOGDANOV, I.A., inzhener; BOGDANOV, N.K., kandidat tekhnicheskikh nauk; VINNICHENKO, N.G., dotsent, kandidat ekonomicheskikh nauk;

(Continued on next card)

BENESHEVICH, I.I.----(continued) Card 2.
VASIL'YEV, V.F.; GONCHAROV, N.G., inzhener; DKRIBAS, A.T., inzhener; DOBROSEL'SKIY, K.M., dotsent, kandidat tekhnicheskikh nauk; DLUGACH, B.A., kandidat tekhnicheskikh nauk; YEFIMOV, G.P., kandidat tekhnicheskikh nauk; ZEMELINOV, S.V., professor, doktor tekhnicheskikh nauk; ZABELLO, M.L., kandidat tekhnicheskikh nauk; IL'IN, K.P., kandidat tekhnicheskikh nauk; KARETNIKOV, A.D., kandidat tekhnicheskikh nauk; KAPLUN, F.Sh., inzhener; KANSHIN, M.D.; KOCHNEV, P.P., professor, doktor tekhnicheskikh nauk; KOGAN, L.A., kandidat tekhnicheskikh nauk; KUCHURIN, S.F., inzhener; LEVASHOV, A.D., inzhener; MAKSIMOVICH, B.M., dotsent, kandidat tekhnicheskikh nauk; MARTYNOV, M.S., inzhener; MEDEL', O.M., inzhener; NIKITIN, V.D., professor, kandidat tekhnicheskikh nauk; PADNYA, V.A., inzhener; PANTELEYEV, P.I., kandidat tekhnicheskikh nauk; PETROV, A.P., professor, doktor tekhnicheskikh nauk; POVOROZHENKO, V.V., professor, doktor tekhnicheskikh nauk; PISKAREV, I.I., dotsent, kandidat tekhnicheskikh nauk; SERGEYEV, Ye.S., kandidat tekhnicheskikh nauk; SIMONOV, K.S., kandidat tekhnicheskikh nauk; SIMANOVSKIY, M.A., inzhener; SUYAZOV, I.G., inzhener; TAIDAYEV, F.Ya., inzhener; TIKHONOV, K.K., kandidat tekhnicheskikh nauk; USHAKOV, N.Ya., inzhenr; USPENSKIY, V.K., inzhener; FEL'DMAN, E.D., kandidat tekhnicheskikh nauk; FERAPONTOV, G.V., inzhener; KHOKHLOV, L.P., inzhenr; CHERNOMORDIK, G.I., professor, doktor tekhnicheskikh nauk; SHAMAYEV, M.F., inzhener; SHAPIRKIN, B.I., inzhener; YAKUSHIN, S.I., inzhener; GRANOVSKIY, P.G., redaktor; TISHCHENKO, A.I., redaktor; ISAYEV, I.P., dotsent, kandidat tekhnicheskikh nauk, redaktor; KLIMOV, V.F., dotsent kandidat tekhnicheskikh

(Continued on next card)

BENESHEVICH, I.I.--- (continued) Card 3.

nauk, redaktor; MARKOV, M.V., inzhener, redaktor; KALININ, V.K., inzhener, redaktor; STEPANOV, V.N., professor, redaktor; SIDOROV, N.I., inzhener, redaktor; GERONIMUS, B.Ye., kandidat tekhnicheskikh nauk, redaktor; ROBEL', R.I., otvetstvennyy redaktor

[Technical reference manual for railroad engineers] Tekhnicheskii spravochnik zheleznodorozhnika. Moskva, Gos. transp.zhel-dor. izd-vo. Vol.10. [Electric power supply for railroads] Energosnabzhenie zheleznykh dorog. Otv.red. toma K.G.Markvardt. 1956. 1080 p. Vol.13. [Operation of railroads] Ekspluatatsiia zheleznykh dorog. Otv. red. toma R.I.Robel'. 1956. 739 p. (MLRA 10:2)

1. Chlen-korrespondent Akademii nauk SSSR (for Petrov)
(Electric railroads) (Railroads--Management)

SHUKSTAL', Ya.V., kand. ekonom. nauk; VERKHOVSKIY, I.A., kand. ekonom. nauk; FOMIN, V.M., kand. ekonom. nauk; MEZENEV, N.I., inzh.; DMITRIYEV, V.I., kand. ekonom. nauk; PADUYA, V.A., inzh.; Prinimali uchastiye: ZOTIKOVA, V.I., kand. ekonom. nauk; YELISEYEVA, T.V., inzh.; KUBLITSKAYA, V.Kh., inzh.; KUDRYAVTSEVA, T.N., inzh.; MEZENEV, N.I., inzh.; TIKHONCHUK, M.K., inzh.; FEDOSOVA, V.N., tekhnik; DOBSHITS, M.L., red. izd-va; TIKHOMIROVA, S.G., tekhn. red.; LAUT, V.G., tekhn. red.

[Scope of the use of railroads and motorvehicles for short-distance freight haulage] Sfery primeneniia zheleznodorozhnogo i avtomobil'nogo transporta pri perevozke gruzov na korotkie rasstoianiia. Moskva, Izd-vo Akad. nauk SSSR, 1961. 197 p. (MIRA 15:2)

1. Akademiya nauk SSSR. Institut kompleksnykh transportnykh problem.

(Transportation, Automotive) (Railroads--Freight)

PRAVIKOVA, G.P.; PADNYAN, V.A., inzh., nauchno-tekhn. red.;
SPANOVSKAYA, A., otv. za vypusk; VOROTNIKOVA, L.F., tekhn. red.

[Mechanization and automation of loading and unloading operations in railroad transportation in the U.S.S.R. and foreign countries; bibliographic index of Soviet literature] Mekhanizatsiia i avtomatizatsiia pogruzochno-razgruzochnykh rabot na zheleznodorozhnom transporte v SSSR i za rubezhom; bibliograficheskii ukazatel' otechestvennoi literatury. Moskva, Vses. izdatel'sko-poligr. ob"edinenie M-va putei soobshcheniia, 1961. 86 p. (MIRA 15:3)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya. TSentral'naya nauchno-tekhnicheskaya biblioteka.
(Bibliography--Loading and unloading)
(Bibliography--Railroads--Freight)

PADNYA, V.A., nauchnyy sotrudnik

Regularities in the transportation processes and their effect on the selection of means of mechanization of loading and unloading operations in automotive transportation. Trudy MIEI no.17:74-93 '61. (MIRA 14:11)
(Transportation, Automotive)
(Loading and unloading)

PADNYA, Vitaliy Akimovich; LEPSKIY, A.V., redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Loading and unloading machines in railroad transportation; a reference manual] Pogruzochno-razgruzochnye mashiny na zheleznodorozhnom transporte; spravochnik. Moskva, Gos.transp.zhel-dor. izd-vo, 1956. 458 p. (MLRA 10:1)
(Loading and unloading)

PADNYA, Vitaliy Akimovich; BAZANOV, A.F., kand. tekhn. nauk, retsenzent; SHISHLYKOV, Ye.S., inzh., red.; USENKO, L.A., tekhn. red.

[Loading and unloading machines] Pogruzochno-razgruzochnye mashiny; spravochnik. Izd.2., perer. i dop. Moskva, Transzheldorizdat, 1963. 502 p. (MIRA 16:7)
(Loading and unloading--Equipment and supplies)

ACCESSION NR:

sorption was shown to be a function of the strength of the electric

PADO, G.S.

37952

S/181/62/004/005/055/055
B162/B108

AUTHORS: Siterman, M. Sh., Krol', L. Ya., Medvedev, V. A., Orlova, M. P., and Pado, G. S.

TITLE: Impurity band conductivity in n-type GaAs

PERIODICAL: Fizika tverdogo tela, v. 4, no. 5, 1962, 1383-1385

TEXT: Results are given of measurements of the resistivity ρ, the Hall coefficient A and the magnetic resistance $\frac{\Delta\rho}{\rho}$ on single crystals of n-type GaAs with impurity concentrations of 10^{16} - 10^{17} cm^{-3}, at which interaction between the impurities and formation of an impurity band not fusing with the conduction band can be expected. The specimens were produced by zone melting in a horizontal boat of an ingot of chemically pure Ga and As. Analysis of the data shows that the single crystal specimens at temperatures below 55°K display conductivity in the impurity band. This effect is absent in the more contaminated single-crystal and polycrystalline specimens. The Hall mobility in the conduction band

Card 1/2

S/181/62/004/005/055/055
B162/B108

Impurity band conductivity in ...

is three to four times greater than in the impurity band. The magnetic resistance of the single-crystal specimens measured in a field of 2200 oe becomes negative at temperatures below 20°K, and for a polycrystal ~~42%~~ over the whole range of 1.7° - 300°K. The conductivity in the impurity band in n-type GaAs does not lead to a change in the sign of the Hall effect at the lowest temperatures, as might have been expected for holes in the impurity band.

ASSOCIATION: Institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (Institute of Physicotechnical and Radiotechnical Measurements) Moscow

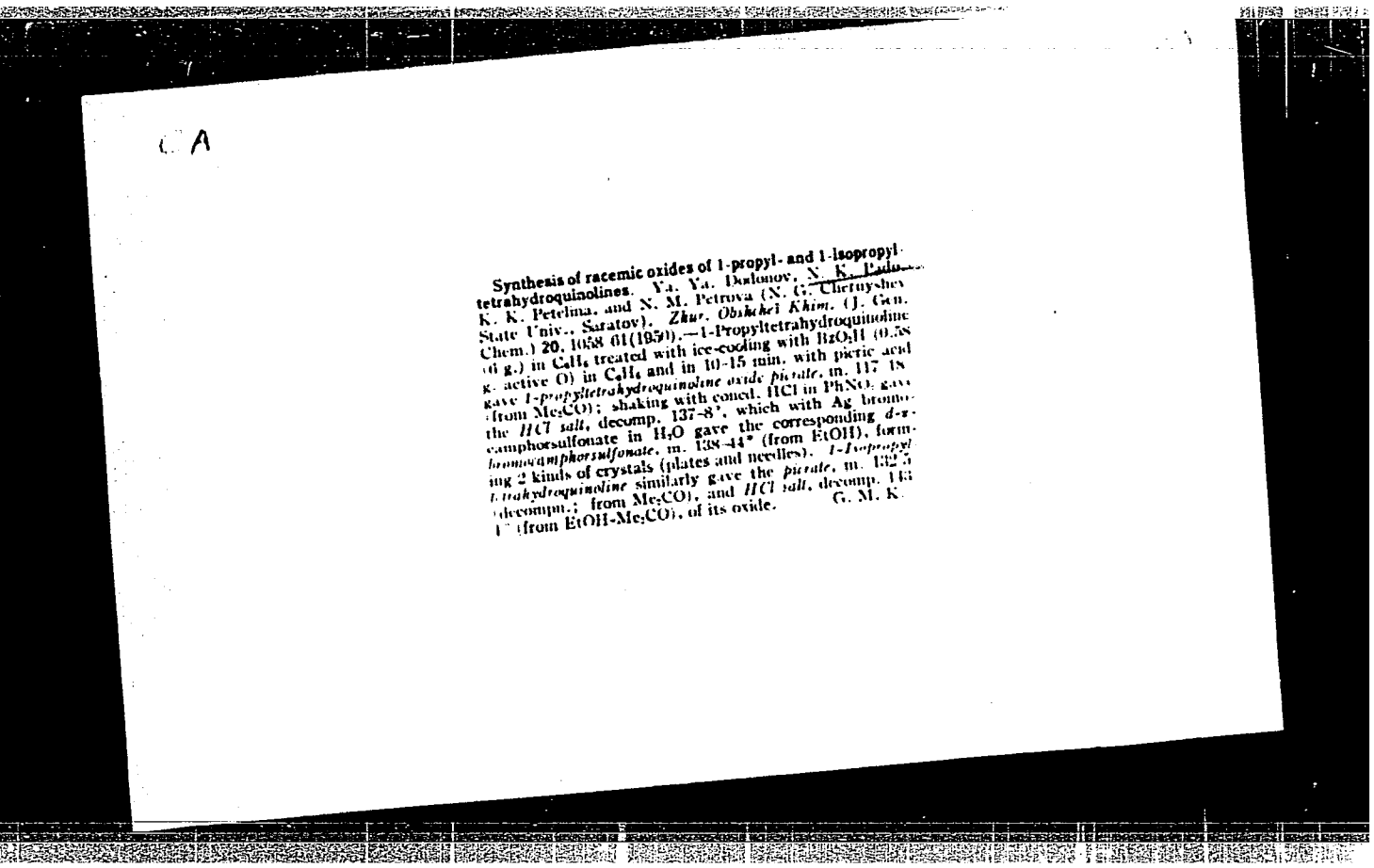
SUBMITTED: November 16, 1961 (initially)
February 14, 1962 (after revision)

Card 2/2

PADO, J.
ENDRE, S.

March of the brigade. p. 18.
(LUDOVY ROZHLAS., Vol. 9, no. 14, Mar. 1953, Czechoslovakia)

SO: Monthly List of East European Accessions, Vol. 2 #8, Library of Congress, August 1953, Uncl.



CA

Synthesis of racemic oxides of 1-propyl- and 1-isopropyltetrahydroquinolines. Ya. Ya. Bulonov, N. K. Ladu... K. K. Petelina, and N. M. Petrova (N. G. Chernyshev State Univ., Saratov). *Zhur. Obshchei Khim.* (J. Gen. Chem.) **20**, 1058-61(1950).—1-Propyltetrahydroquinoline (6 g.) in C_6H_6 treated with ice-cooling with BzO_2H (0.58 g. active O) in C_6H_6 and in 10–15 min. with picric acid gave *1-propyltetrahydroquinoline oxide picrate*, m. 117–18° (from Me_2CO); shaking with concd. HCl in $PhNO_2$ gave the *HCl salt*, decomp. 137–8°, which with Ag bromocamphorsulfonate in H_2O gave the corresponding *d-α-bromocamphorsulfonate*, m. 138–44° (from EtOH), forming 2 kinds of crystals (plates and needles). *1-Isopropyltetrahydroquinoline* similarly gave the *picrate*, m. 132.5° (decompn.; from Me_2CO), and *HCl salt*, decomp. 163° (from EtOH-Me_2CO), of its oxide. G. M. K.

PADO, R.

Mutual relation of protozoans and symbiotic algae in Paramaecium bursaria I. The influence of light on the growth of symbionts. Folia biol. (Krakow) 13 no.2:173-182 '65.

1. Institute of Plant Physiology, of Teacher Training College, Krakow.

S/121/61/000/005/001/005
D040/D112

1.1100
1.1110

AUTHOR: Padogin, A.A.

TITLE: Scientific research work of ENIMS in 1960

PERIODICAL: Stanki i instrument, 32, no. 5, 1961, 3-8

TEXT: A general review of experimental research in the field of metal-cutting machine tools conducted by ENIMS in 1960 is presented in 7 sections. 1) Design trends, machine types, specialization of plants. Dimension series were established for basic machine tool types. A plan for 1960-1965 includes set dates for design development, debugging and the start of series production of machines. Machine tool types were specified, and the specialization of plants continued. Every plant will be specialized in one or more types of machines and components. 2) Automation and mechanization. New hydraulic, electrical and mechanical systems and devices were designed, including gear pumps of 5 and 8 liter/min capacity for a pressure of 32 Kg/cm^2, two tubeless blade-type pumps for 50 Kg/cm^2; one small 3 liter/min blade pump for minor feeds in automatic standard-unit machine tools; a series of electrically controlled slide valves for electro-hydraulic tracing systems

Card 1/7

Scientific research work...

and program control with motion feedback. Telephone and telegraph relays were tested and found applicable in discrete control systems. A small-size economical d.c. drive was developed after the industry started the output of ТВК (PVK) type silicon rectifiers for 50-100 amp and up to 300 v. The drive velocity is controlled by relaxation of the excitation field. A 7-30 kw main drive was designed that is suitable for grinders, lathes, pipe-threading machines etc. Development of 72,000 and 96,000 r.p.m. internal grinding heads on aerodynamic bearings continued; the possibility of creating a 50,000-100,000 r.p.m. head design (with compressed air driving a turbine and "lubricating" the bearings) was examined. Work continued on numerical program control systems for machine tools. The pilot units of a gear milling and a gear grinding machine with synchronous pulse shafts and electronic controls replacing the machine apron were successfully tested. Mechanical stepless velocity variators were further developed. New variators included ВР-1 (VR-1) and ВР-3 (VR-3) types with mobile discs and wide V-belt; notched belts were tested. They work noiselessly, without vibration and at a constant speed. ENIMS and other organizations worked on different mechanical vairators. A review of Soviet and foreign handling devices was made to provide aid to designers. Standardized resettable auto-

Card 2/7

matic lines for machining general-use machine parts were designed, e.g. a line for double-rim gears (Fig. 1); a line for end mill shanks and pipe fittings (Fig. 2); a semi-automatic vertical lathe series for the use in lines and separately; an electro-mechanical deburring machine; a series of bevel gear cutters. 3) Machining methods, technology. This included electric and ultrasonic machining. Data for designing heavy electric-pulse machines were obtained in experiments. Khar'kovskiy politekhnicheskiy institut (Khar'kov Polytechnic Institute) designed a new unipolar pulse generator for ENIMS which raises the metal removal rate to 11,000 mm^3/min, more than double what was possible before. A tool feed control system was developed for automation of universal electric-pulse machines; it raised the work productivity 10-15%, and one operator can operate several machines. Combinations of ultrasonic working with various mechanical motions of the workpiece were investigated and suggestions made for conversion of screw machines into ultrasonic machines for machining round bodies, profile machining and cutt-off operations. The "4770A" ultrasonic cutting machine and the "4773" ultrasonic broaching machine were designed for extensive use in industry. 4) Accuracy. The causes of inaccurate work of circular grinders were studied and analogous investigations started with other machine tool types.

Card 3/7

Scientific research work ...

raised to the level of СЧ 28-48 (SCh 28-48) iron by treating liquid supola metal with ferromolybdenum in combination with ferrotitanium. Residual stress relief by vibration of castings and simultaneous impregnation of steel surface with silicon and carbon was studied. Liquid case hardening with ultrasound effect was tried, and the result was twice faster hardening, economy of silicon carbide (6% was needed instead of 10%) and about 1.5 times lower cost. 6) Modernization. Data on modernization of 13,000 obsolete machine tools at 400 plants were processed and recommendations issued. 7) Standardization. Data of static rigidity investigations of past years (with methods and measuring instruments developed at ENIMS) were completed, and standardization of rigidity requirements was continued. A standardization plan for component units of unit-head machine tools and draft standards for dimensions of various machine tools were prepared. There are 8 figures.

Card 5/7

PADOGIN, A.A.

Conference of mechanical engineers. Stan.i instr. 32 no.10:41-42 O '61. (MIRA 14:9)

(Mechanical engineering)

S/121/62/000/006/003/011
D040/D113

AUTHOR: Padogin, A.A.

TITLE: The most important works of ENIMS completed in 1961

PERIODICAL: Stanki i instrument, 33- no. 6, 1962, 6-8

TEXT: Research conducted by ENIMS in 1961, dealt with the following: Standardization of transfer machine lines and machines for such lines to be produced during 1962-1965; standard types of special machine tools for steam and gas turbine blades, and of unit-head machine units to be produced by specialized plants; the development of the machine tool industry in the U.S., and West-European countries; designing of a program controlled transfer machine line for shafts, 15-50 mm in diameter and 100-400 mm long; a quickly-resettable automatic transfer line for machining two-diameter gear clusters of 4 different dimensions; a range of 5 universal copying and program-controlled machine tools, the elements of which are 92% the same; a range of program-controlled coordinate tables for radial drilling machines; a range of electric drives with magnetic and silicon amplifiers, and 3 types of step-by-step motors;

Card 1/2

PADOGIN, A.A.

Research and design work of the Experimental Research Institute of the Machine-Tool Industry in 1962. Stan.i instr. 34 no.5:6-8 My '63. (MIRA 16:5)

(Machine-tool industry--Technological innovations)

PADOGIN, A.A.

The 30th anniversary of the Experimental Research Institute of Machine tools (ENIMS). Stan. i instr. 34 no.11:38-39 N '63. (MIRA 16:12)

PADUGIN, A.A.

Works of the Experimental Scientific Research Institute for Machine Tools in 1963. Stan. i instr. 35 no.7:13-20 Jl '64. (MIRA 17:10)

PADOGIN, A.A.

Machine tools and industrial aesthetics. Stan. i instr. 36 no.2:42-43 F '65. (MIRA 18:3)

PADOL'SKIS, M.P. [Padolskis, M.]; YANITSKIY, I.V. [Janickis, J.]

Some physicochemical properties of sodium selenopentathionate.
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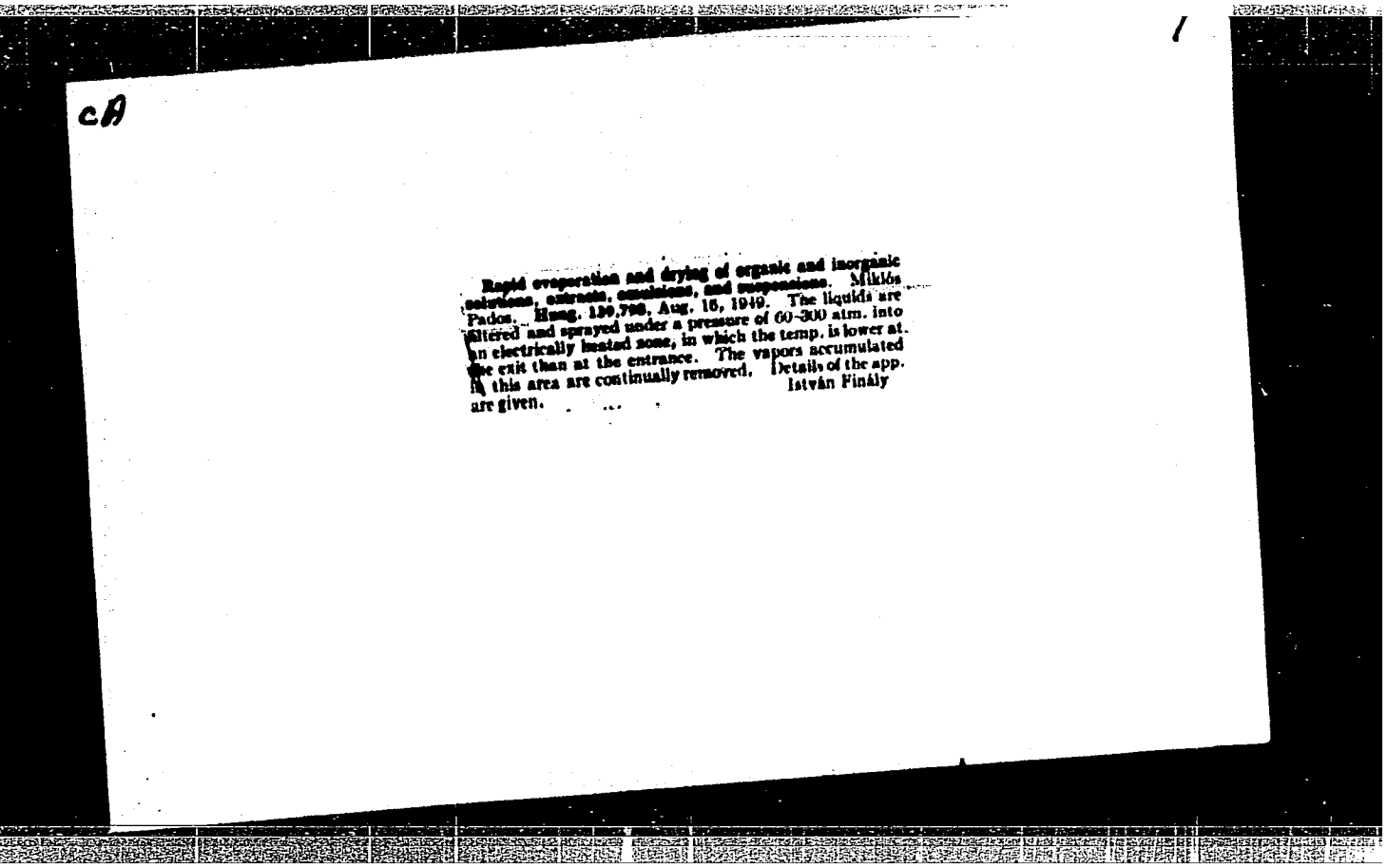

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