MOSCOVICI, Ana; CORNEA, A.

Chloridizing roasting of oxidated ores. Rev. chimie Min. petr 14 no.11/12:661-668 N-D'63.

MOSCOVICI, Ana

MOSCOVICI, Ana; COMISA, A.

Bucharest, Revista de Chimie, No 11-12, Nov-Dec 63, Vol 14, pp 661-668

"The Chloridizing Roasting of Oxidated Ores. Remarks Concerning the Chlorine Exchange Between Calcium Chloride and the Oxides of several Metals."

L 49214-65 EWT(1)/T/EWP(t)/EWP(b)/EWA(h) Pz-6/Peb IJP(c) JD/AT

ACCESSION NR: AP4045683 R/0003/64/015/008/0510/0513 25 B

AUTHOR: Moldovan, I.; Moscovici, Ana; Teodorescu, C.; Gaciu, V.

TITLE: A semi-industrial installation for the manufacture of high-purity germanium 18 27

SOURCE: Revista de chimie, v. 15, no. 8, 1964, 510-513

TOPIC TAGS: germanium refining, germanium purification, germanium semiconductor, germanium tetrachloride, germanium dioxide, zone melting 18 21

ABSTRACT: A procedure is described for obtaining the high-purity germanium necessary in the manufacture of semiconductors for the electronics industry. The starting material is mineral germanium concentrate or germanium wastage from the manufacture of semiconductors. The process involves the following steps: A) The mineral concentrates are treated with HCl and the wastage with chlorine gas. Germanium tetrachloride is obtained in both cases, according to the reactions: $GeO_2 + HCl = GeCl_4 + H_2O + 42.4$ KCal, and $Ge + 2Cl_2 = GeCl_4 + 130$ Kcal. The germanium tetrachloride is then distilled, starting at 83C, and collected as a transparent oily liquid (density = 1.88). B) Germanium tetrachloride is purified by fractional distillation in a column of quartz glass and separated from most of the metal chlorides having a higher or lower boiling point ($FeCl_4$; $AlCl_3$; $CuCl_2$; $MgCl_2$;

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L 49214-65

ACCESSION NR: AP4045683

$SbCl_3$; BCl_3; $AsCl_3$; $SiCl_4$). C) The pure germanium tetrachloride (1-10 p.p.m, impurities) is then hydrolized in deionized water, yielding germanium dioxide according to the reaction: $GeCl_4 + 2H_2O \rightleftarrows GeO_2 + 4\ HCl$. D) Germanium dioxide is dried at 120C and subsequently calcined in an autoclave at 250 C. E) The calcined germanium dioxide is then reduced with hydrogen at 650C. The black powder of metallic germanium is then melted at 1000 C, resulting in metallic germanium with a resistance of 5-13 ohm.cm, corresponding to 1 p.p.m. impurities. G) Finally, the purification is increased by zone-melting, resulting in a polycrystalline product having a resistance of >50 ohm.cm impurities of 10^{-15} - 10^{-14} atoms/cc. This high-purity germanium is very suitable for the manufacture of semiconductors. Orig. art. has: 6 figures, 4 tables and 2 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: IC, MM

NO REF SOV: 000 OTHER: 000

Card 2/2

L 49235-65 EWT(1)/EPA(s)-2/T/EWP(t)/EWP(b)/EWA(h) Pz-6/Pt-7/Peb IJP(c) JD/JG/AT

ACCESSION NR: AP4047858 R/0003/64/015/009/0535/0541

AUTHOR: Olaru, M.; Segarceanu, T.; Moscovici, A.

TITLE: The purification of technical grade indium for the purpose of obtaining the pure indium used in semiconductors

SOURCE: Revista de chimie, v. 15, no. 9, 1964, 535-541

TOPIC TAGS: indium refining, indium purification, indium semiconductor, semiconductor manufacture, cadmium sublimation, iodine complex, electrolytic refining, indium anode, amalgam electrolysis

ABSTRACT: The possibility of obtaining pure indium (In= 99.999%) from indigenous (Romanian) technical-grade indium (In =90-93%) found in the by-products resulting from metallurgical processing of zinc is investigated. Various steps for the elimination of such impurities as Cd, Pb, Sn, Cu, Zn, Tl, etc. are described in detail. The elimination of cadmium may be carried-out by the "distillation method" in an electric furnace provided with a recovery system for the volatilized Cd, at an optimum temperature of 950C and an optimum duration which is directly proportional to the initial content of Cd (usually 2-4 hours). Satisfactory results are obtained when the initial content of Cd is more than 2%; an average of 97% Cd is

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L 49235-65

ACCESSION NR: AP4047858

found in the volatilized product, while only traces of indium are lost; Pb, Sn and Cu remain with the indium. Another method permits the simultaneous elimination of very small quantities (0.1-0.9 %) of Cd, Cu, Pb and Sn, and is based on the formation of iodine complexes, which are very stable in comparison with indium complexes. The method consists of treating the melted indium, suspended in glycerol, with KI or small quantities of iodine at a temperature of 170-180C, according to the reaction: $Cd + I_2 + KI \rightarrow (CdI_4)K_2$. The end of the reaction is marked by the appearance of indium iodide on the surface of the metallic indium. Further purification is carried-out by electrolysis with soluble anodes made of indium (freed of cadmium); cathodes were made of titanium while the electrolyte was an indium [illegible] ion (chloride or sulfate). Metals with a normal potential which is [illegible] that of indium (thallium, cadmium) remain as anodic deposits and are [illegible] to eliminate, while [illegible] metals of normal potential more negative than sodium are ionized in the electrolyte, starting from a [illegible] pure indium [illegible] content), a purity of 99.95% may be obtained with this method. Finally, the elimination of micro-impurities is accomplished by the "amalgam electrolysis method" carried out in a plexi-glass bipolar cell, the amalgam being prepared by dis-

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L 49235-65

ACCESSION NR: AP4047858

solving pure indium in mercury (in concentration in amalgam = 2%). Spectroscopic and polarographic analysis showed total impurities of 0.0007 - 0.0002 % (indium = [illegible] - 99.9998%). Cu, Al and Hg were found to be present, the other impurities being beyond the limit of spectroscopic detection. Orig. art. has: 15 tables, 8 figures and 4 formulas.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: MM, IC

NO REF SOV: 009 OTHER: 005

Card 3/3

RUMANIA/Human and Animal Physiology - Nervous System. V-12

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4443

Author : J. Ungher, R. Brosteanu, V. Hestianu, M. Lillis, B. Moscovici, V. Pompilian

Inst : Commun. Academy RPR

Title : Electroencephalographic Study of Animals under the Effects of Lead Intoxication.

Orig Pub : Commun. Acad. RPR, 1956, 6, No 8, 1033-1043

Abstract : During the initial 2-3 weeks of chronic Pb injection to dogs (phase I -- brain matter affected) the animals revealed general unrest; at the same time EEG showed [illegible] and [illegible] -waves, reduced amplitude of potentials and a failure of the cerebral cortex to adjust to the rhythmic light stimulus. A preponderance of the inhibitory process was observed in phase II which was marked by a

Card 1/2

BRAHAD, B.; PILAT, L.; MOSCOVICI, B.; LILLIS, H.; PETRESCU, L.; SARE, I.

Etiology of pneumoconioses in coal miners. Probl. ter., Bucur. no.7:141-150 1957.

(PNEUMOCONIOSIS
in coal miners, incidence & etiol.)

PILAT, L.; MOSCOVICI, B.; LILLIS, R.; MUICA, N.

Studies of the cardiovascular system in silicosis. Med. int., Bucur. 9 no.9:1372-1382 Sept 57.

1. Institutul de igiena muncii si boli profesionale RFR.
(SILICOSIS, manifestations
cardiovasc., ECG, circ. & resp. funct. tests)
(CARDIOVASCULAR SYSTEM, function tests
in silicosis)
(ELECTROCARDIOGRAPHY, in various dis.
silicosis)
(RESPIRATION, function tests
in silicosis)

PILAT, L.; IORGA, M.; MOSCOVICI, B.

Clinical aspects of mercury poisoning. Med. int., Bucur. 10 no.4: 621-627 Apr 58.

1. Institutul de Igiena muncii si boli profesionale R.P.R.
(MERCURY, poisoning
subacute, by mercury vapors, clin. aspects, case reports & ther.)
(DIMERCAPROL, ther. use
mercury pois., case reports)
(EDATHAMIL, ther. use
mercury pois., case reports)

MUICA, N.; PILAT, L.; MOSCOVICI, B.

Pneumotachographic examinations of coal miners. Med. int., Bucur. 10 no.5:717-728 May 58.

1. Lucrare efectuata in Institutul de igiena muncii si boli profesionale al R. P. R., Bucuresti, director, prof. Dinischiotu.

(RESPIRATION, function tests
pneumotachographic study of coal miners)

(MINING, eff.
coal-mining, on resp., pneumotachographic exam. of miners)

Chemical Products and Their Application. (Part 1) Safety Technique. Sanitary Engineering.

Abs Jour : Ref Zhur - Khimiya, No 10, 1959, No. 39400

Author : Pilat, L.; Lillis, R.; Moscovici, B.; Barhad, G.
Inst : Not given
Title : Clinical Observations on Silicosis with Rapid Evolution

Orig Pub : Med. interna, 1958, 10, No 6, 879-889

Abstract : This is a report on clinical observations and functional studies of the cardiopulmonary system, and of the results of medical treatment of 113 workmen from the same plant producing firebricks sick with a fulminant form of silicosis. The clinical peculiarities of this rare form of silicosis are noted. The problem of determining the decrease in the working capacity of sick workers and of their work organization is examined. -- N. Kulagina

Card 1/1

PILAT, L., dr.; MOSCOVICI, B., dr.; LILLIS, M., dr.; MUICA, N., dr.; LILLIS, R., dr.

The pneumoconiosis of coal miners. Med.intern., Bucur 12 no.10: 1493-1502 O '60.

1. Lucrare efectuata in Clinica de boli profesionale, director: prof. G.G.Dinischiotu.
(PNEUMOCONIOSIS) (COAL MINERS)

TANASESCU, S., dr.; PILAT, L., dr.; LILIS, R., dr.; GEORGESCU, A.M., dr.; MOSCOVICI, B., dr.; DINISCHIOTU, G.T., prof.

Clinical aspects of occupational sensitization to antibiotics. Med. intern., Bucur 12 no.11:1667-1670 N '60.

1. Lucrare efectuata in Clinica de boli profesionale I.M.F., Bucuresti.
(ANTIBIOTICS toxicology) (ALLERGY etiology)
(OCCUPATIONAL DISEASES case reports)

LUPU, N. Gh., acad.; DINISCHIOTU, G. T.; PAUN, R.; POPESCU, I. Gr.; FOTESCU, L.; ZAMFIRESCU-GHEORGHIU, Marcela; OLARU, Cornelia; IOTA, C. G.; MOSCOVICI, B.; MOLNER, C.; URSEA, N.; LOWE, Judith; WEINER, S.; In colaborare cu AVACHIAN, A.; BICLESAN, I.; DUMITRESCU, I.

Investigations of allergy to ricin. Stud. cercet. med. intern. 2 no.5:639-652 '61.

(RICINUS toxicology) (ALLERGY etiology)

PILAT, L., dr.; MOSCOVICI, B., dr.; GEORGESCU, A. M., dr.

Parathion poisoning. (Clinical cases). Med. intern. 13 no.11:1567-1573 N '61.

1. Lucrare efectuata in Clinica de boli profesionale a I.M.F. Bucuresti.

(PARATHION toxicology)

PILAT, L., dr.; MULCA, N., dr.; MOSCOVICI, B., dr.

Aspects of occupational sensitization caused by yeasts. Med. intern. 15 no.9:1091-1092 S '63.

1. Lucrare efectuata in Clinica de boli profesionale a I.M.F. si in Laboratorul de boli profesionale al I.I.P.M., Bucuresti.
(RESPIRATORY ALLERGY) (CANDIDA)
(OCCUPATIONAL DISEASES)

MUICA,N., dr.; MOSCOVICI,B., dr.; PILAT,L., dr.

Physiopathology of cor pulmonale in silicosis. Med. intern. 16 no.3:265-272 Mr'64.

1. Lucrare efectuata in Clinica de boli profesionale a I.M.F., Bucuresti, si in Sectia de fiziologie a muncii si patologie profesionala a I.I.P.M.

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MOSCOVICI, C.
13C

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25

The behaviour of *Coxiella burnetii* in various physical and chemical conditions. H. Halmovici and C. Moscovici (*R. C. Acad. sci. Paris*, 1950, 230, 744–746). *Coxiella burnetii*, the agent of Q fever, remains active for least 7 days in water or milk, and survival is favoured by urine or saliva. It resists normal temp. desiccation for 30 days or more. It is killed at 60°, but can survive at least 30 min. at 50 while temp. down to −20° does not affect it. Survival times are 3 days in 0·8% formaldehyde, 2 days in 0·6% formaldehyde 5 min. in 50% alcohol, and 1 hr. on irradiation by a 30 w. bactericidal lamp, at 75 cm. *Coxiella* lives for 46 days in milk, even after salting and smoking, and penicillin and streptomycin have no appreciable action.

F. R. Hanna

HERISAN, S.; MOSCOVICI, I.; NICOLAESCU, T.; MAXIM, Cristina; FOTINO, Marilena

Auto-immune hemolytic anemia with pulmonary hemosiderosis. Med. int., Bucur. 9 no.12:1869-1875 Dec 57.

1. Spitalul "Dr. V. Babes" si Centrul de hematologie.
(ANEMIA HEMOLYTIC, case reports
auto-immune anemia with pulm. hemosiderosis)
(HEMOSIDEROSIS, case reports
pulm., with auto-immune hemolytic anemia)

MOSCOVICI, I., dr.; ANANASIU, T., dr.; TANASESCU, Doina, dr.

Pickwick syndrome. Med. intern. (Bucur) 16 no.9:1091-1094 S '64.

1. Lucrare efectuata in Serviciul de medicina interna al Spitalului "Dr. V. Babes", Bucuresti.

MOSCOVICI, I., dr.; ATANASIU, T., dr.; COJOCARU, N., dr.; TANASESCU, Doina, dr.

Clinical isolated gastric tuberculosis. Med. intern. (Bucur.) 17 no.4:473-476 Ap '65.

1. Lucrare efectuata in Serviciul de boli interne, Spitalul "Dr. V. Babes", Bucuresti.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310017-9"

DANIELESCU, G.; MIRZA-EMINET, L.; SCHWARTZ, J.; MOSCOVICI, O.

Changes in higher nervous activity of white mice after anti-rabies vaccination and subsequent inoculation with street virus.
Stud. cercet. inframicrobiol., Bucur. 6 no.1-2:55-63 Jan-June 55

(CENTRAL NERVOUS SYSTEM, physiology
higher nervous funct., eff. of rabies vacc. & subsequent inoculation with street virus, in mice)
(RABIES, immunol.
vacc., eff. on higher nerv. funct. in mice)

SCHWARTZ, J.; MOSCOVICI, O.; CAJAL, N.; SAMUEL, J.; UMITRESCU, ;
ADERCA, I.

Changes in hemagglutinating properties in mortal cases of epidemic hepatitis during the period November 1954-April 1955. Stud.cercet. inframicrobiol., Bucur. 6 no. 3-4:413-418 July-Dec. 1955.

(HEPATITIS, EPIDEMIC, virus
hemagglutinating properties, changes in mortal cases of viral hepatitis during period November 1954-April 1955)
(HEMAGGLUTINATION
inhib. properties of viral hepatitis virus, changes in mortal cases during period November 1954-April 1955)

MOSCOVICI, O.; SAMUEL, J.; SCHWARTZ, J.; FRIEDMANN, I.; WIEGLER, R.; SANDULESCU, T.

Complement fixation test in diagnosis of mumps infections. Stud. cercet. inframicrobiol., Bucur. 8 no.3:387-393 1957.

(MUMPS, diagnosis
complement fixation test)

(COMPLEMENT
fixation test in diag. of mumps)

COUNTRY : Rumania T
CATEGORY : Human and Animal Physiology, Neuromuscular Physiol

ABS. JOUR. : Ref Zh., No. 5 1958, No. 22377

AUTHOR : Portocala, R., Moscovici, O.
INST. : --
TITLE : An Electrophoretic Investigation of Muscle Proteins in Newborn Mice. Changes in the Proteinogram Associated with Experimental Infection with Coxsakie Virus.
ORIG. PUB. : Comun. Acad. RPR, 1957, No. 12, 1085--1088
ABSTRACT :

By means of electrophoretic investigations it was established that there are 3 protein fractions in the tissue studied, which differ from each other in speed of migration and are designated fractions a, b, and c by the author. When the muscles were infected with Coxsakie virus, an increase was noted in the percentage of fraction b and a simultaneous reduction in the percentage of fraction c contained in the tissue.

Card: 1/1

PORTOCALA, R.; SCHWARTZ, J.; MOSCOVICI, O.; IONESCU, N.I.

Electron microscope study of the development of disorders of the myofibrils in infant mice infected with Coxsackie virus. Arkh. pat. 23 no.2:33-40 '61. (MIRA 14:2)
(COXSACKIE VIRUSES) (MUSCLES—DISEASES)

MOSCOVICI, Rudolf, ing.

Aspects of the wear of the peg-cam system in motors with a high number of revolutions. Metalurgia constr mas 14 no.5:407-410 My '62.

1. Uzina Steagul Rosu, Brasov.

MOSCOVICI, S.

Gearing; terminology and symbols. p. 25

ZAREA, Bucuresti, Vol 8, No. 3, Mar., 1956

SO: East European Accessions List (EEAL) Library of Congress, Vol 8, No. 3, Mar., 1956

MOSCOVICI, S.; VOINESCU, N.

International Standards Organization; 5th Session of the Technical Committee for Roller Bearings ISO/TC 4, p. 27/
(Standardizarea, Vol. 9, No. 1, Jan. 1957, Bucuresti, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC, Vol.6, No. 8, Aug 1957, Uncl.

MOSCOVICI, S.

Propositions of the ISO concerning symbols for bearings. p. 345.
(STANDARIZAREA. Vol. 9, no. 7, July 1957, Rumania)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957
Uncl.

BALANESCU, I.N.; MOSCU, I.

Contributions to the study of fatigue in industrial labor through studies of physical states. Rev psihologie 9 no.1 7-36 '63.

BALANESCU, I.N.; MOSCU,I.; GHEORGHIU,V.; MINZAT,I.; VRANCEANU,M.

Studies on the motor reaction to the action of words during sleep. Rev psihologie 10 no.1:23-39 '64

MOSCU, Iudith

Some considerations on abyssal psychology. Rev psihologie 10 no.4:331-343 '64.

1. Institute of Psychology, Rumanian Academy, Bucharest.

RUMANIA UDC: 613.2-099:576.881.49.093.1

SZEGLI, Lucia, Dr, MOSCU, M., Dr, NEGUT, M., Dr, SALNEA, I., Dr, PEAHA, Margareta, Dr, and ZAMFIR, Maria, Technician. Work performed at the "Dr I. Cantacuzino" Institute of Microbiology, Parasitology, and Epidemiology (Institutul de Microbiologie, Parazitologie, si Epidemiologie "Dr. I. Cantacuzino"), Bucharest.

"Isolation of Salmonella Vom. from a Focus of Toxicoalimentary Infection."

Bucharest, Microbiologia, Parazitologia, Epidemiologia, Vol 11, No 5, Sep-Oct 66, pp 413-418.

Abstract [Authors' English summary modified]: The authors report an outbreak of alimentary toxinfection with a strain of B-group salmonella, namely Salmonella vom. Approximately 400 individuals were affected after eating some pork; the germs were isolated from approximately 47 percent of the patients and from the meat. The clinical evolution was benign. The germs were sensitive only to streptomycin, chloramphenicol and neomycin.

Includes 5 references, of which 3 Rumanian, one German and one English-language. -- Manuscript submitted 9 December 1965.

1/1

MOSCU V.

RUMANIA/Chemical Technology. Chemical Products and Their Uses. Part IV. Cellulose and Its Derivatives. Paper. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 50311

Author : Moscu, V., Frey, H.
Inst : -
Title : Improvement of Draft Cellulose Quality for the Production of Paper Bags.

Orig Pub : Celluloza si hirtie, 1957, 6, No 3, 90-93

Abstract : Improvement was attained by increasing the sulfite content of alkali digester, and by changing the conditions of digestion. -- From the author's resume.

Card : 1/1

MOSCU, V.

Washing the cellulose sulfate in [illegible] pers. p 235

BCELULOZA SI HIRTIE (Asociatia Stiintifica a Inginerilor si Tehnicienilor din Romania si Ministerul Industriei Petrolului si Chimie) Bucuresti, Romania Vol. 8, no. 10, Oct, 1959

Monthly List of East European Accessions (EEAI) LC, Vol. 9, no.2, Feb. 1960

Uncl.

MOSCU, V., ing.

Choping and sorting straws for cellulose manufacture. Cel hirtie 11 no.2:70-72 F'62.

MOZOLOWSKI, W.; ZYDOWO, M.; KALINOWSKI, J.; MOSCZCZYNSKA, Z.

A characterization of the blood-serum in the newborn child, in the parturient woman, and in the healthy non-pregnant woman, by means of refraction, viscosity and specific gravity. Bull. internat. Acad. polon. sc. Classe med no.1-10:65-78 Jan-Dec 50. (CIML 20:8)

COUNTRY : RUMANIA
CATEGORY : Chemical Technology. Chemical Products and Their Applications. Cellulose and Its Derivatives. Paper H
ABS. JOUR. : RZhKhim., No 17, 1959, No. 63048

AUTHOR : Voseanu, A.
INSTITUTE : -
TITLE : A Technological Process for the Refining of Reed

ORIG. PUB. : Celul. si hirtie, 1958, 8, No 1, 3-5

ABSTRACT : A technological process for the refining of reed is analyzed, indicating the utilities consumption. A new technological process is proposed. Bibliography covers 12 titles.

Card: 1/1

H - 146

MOSEANU, Al., ing.

New means of loading ships with reed bales. Cel hirtie 10 no.12:421-428 D'61.

MOSFANU, I.

TECHNOLOGY

Periodicals: CELULOZA SI HIRTIE. Vol. 7, no. 6, June 1958

MOSFANU, I. The reed harvester. p. [illegible].

Monthly List of East European Accessions (EEAL) LC, Vol. [illegible], No. [illegible], February 1959, Unclass.

MOSEICH, A., (Kirovskaya oblast')

Module silicate brick. Stroi. mat., izdel. k konstr. 2 no.7: 26 Jl '56. (MLRA 9:10)

1. Direktor Strizhevskogo zavoda.
(Bricks--Standards)

L 4852-65 AFWL/RAEM(a)/ESD(gs)/ESD(t)

ACCESSION NR: AP4048425 S/0181/64/006/011/3438/3443

AUTHORS: Lebed', B. M.; Mukha, L. Ya.; Mosel', V. I.

TITLE: Nonlinear phenomena in an yttrium iron garnet at low frequencies

SOURCE: Fizika tverdogo tela, v. 6, no. 11, 1964, 3438-3443

TOPIC TAGS: yttrium iron garnet, nonlinearity, single crystal, resonance line width, temperature dependence

ABSTRACT: To extend earlier investigations by one of the authors (Yu. M. Yakovlev, B. M. Lebed') over a wider range of crystallographic directions, temperatures, and alternating-field amplitudes, the temperature dependence of the width (ΔH) of the ferromagnetic resonance line in polished spherical single-crystal $Y_3Fe_5O_{12}$ (1.2 mm dia.) was investigated at field amplitudes above threshold. The measurements were made at 2590 and 1496 Mcs by a method explained

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L 14852-65
ACCESSION NR: AP4048425

elsewhere (B. M. Lebed' and Yu. M. Yakovlev, PTE no. 6, 107, 1962). Comparison of the curves obtained for different crystallographic directions shows that the nonlinear relaxation present at temperatures below 20° has a clearly pronounced anisotropy, with a maximum in the [100] direction. A fine structure in the temperature variation of the line width is observed at both frequencies. It is suggested that the observed jumplike broadening of the resonance lines is due to the existence of nonlinear phenomena connected with the many-magnon relaxation processes. The threshold value of the amplitude of the alternating field is independent of the temperature or of the frequency (in the 1000--2590 Mc range). Orig. art. has: 3 figures and 6 formulas.

ASSOCIATION: None

SUBMITTED: 27Dec63

ENCL: 00

SUB CODE: SS, EM

NR REF SOV: 004

OTHER: 005

Card 2/2

L 02257-67 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) GG/WW/JD

ACC NR: AP6015475 (N) SOURCE CODE: UR/0181/66/008/005/1533/1535

AUTHOR: Lebed', B. M.; Mukha, L. Ya.; Mosel', V. I.; Titova, A. G.

ORG: none

54
52
B

21

TITLE: Ferromagnetic resonance in a single crystal of the garnet $Bi_{0.5}Ca_{2.5}Fe_{3.75}V_{1.25}O_{12}$

SOURCE: Fizika tverdogo tela, v. 8, no. 5, 1966, 1533-1535

TOPIC TAGS: ferromagnetic resonance, single crystal structure, temperature dependence, garnet

ABSTRACT: The aim of the present work is to investigate the temperature dependence of the line width of ferromagnetic resonance ΔH on the single crystal $Bi_{0.5}Ca_{2.5}Fe_{3.75}V_{1.25}O_{12}$. The single crystals were obtained by the method of crystallization from the melt with the composition

$$28CaCO_3 \cdot 40Fe_2O_3 \cdot 6V_2O_5 \cdot 4Bi_2O_3 \text{ mol\%}$$

at a cooling rate of 2C/hr. The temperature dependence was measured on a polished spherical specimen of the single crystal in the temperature range of 4.2—630K at five fixed frequencies in the range of 495—9250Mc. It is established that the minimal width of the line $\Delta H = 0.5$ e at the frequency of 9250Mc is observed at 4.2K for the [111] direction. For direction [100] at the

Card 1/2

L 02257-67
ACC NR: AP6015475

2

same temperature, $\Delta H = 1.3$ e. With a decrease in frequency, the anisotropy of ΔH decreases and the minimal width of the line is observed at higher temperatures. In conclusion, the authors express their gratitude to A. G. Gurevich and A. P. Erastova for interest in the work. Orig. art. has: 1 formula and 2 figures.

SUB CODE: 20/ SUBM DATE: 21Oct65/ ORIG REF: 002/ OTH REF: 003

Card 2/2 pb

MOSELEVSKIY, F. M.; Docent

USSR/Medicine -Ultraviolet Rays Jan/Feb 50

"Exposure of a Scarlet Fever Ward to Ultraviolet Radiation," Prof. M. L. Koshkin, Docent, F. m. Moselevskiy, R. I. Eru, Chair of Gen Hygiene, Chair of Children's Infections, Khar'kov, Med Inst

"Pediatriya" No 1, pp 30-38

Tests effect of subject radiation on bacterial contamination of the air and various objects in a scarlet fever ward and effect of radiation on patients. Finds radiation reduces number of bacteria, especially streptococci. Observes no harmful results in patients of subject ward. Definite decrease in complications is apparent. Includes five tables. Chief Chair of Gen Hygiene: Prof M. L. Koshkin. Chief, Chair of Children's Infections: Docent A. I. Pevzner.

PA 163T32

TARASEVICH, N.I.; MOSELI, M.

Study of the method of the spark spectral analysis of solutions. Vest.Mosk.un. Ser.2:Khim. 18 no.6:70-73 N-D '63. (MIRA 17:4)

1. Kafedra analiticheskoy khimii Moskovskogo universiteta.

MOSELIANI, D.V.

Case of sarcomatosis in pheasants. Soob.AN Gruz.SSR 23 no.3: 319-321 S '59. (MIRA 13:3)

1. AN GruzSSR, Institut zoologii, Tbilisi. Predstavleno akademikom N.N.Ketskhoveli.
(Pheasants--Diseases and pests)
(Leukemia)

MOSELIANI, D.V.; RODONAYA, T.E.

Material on the pathomorphological changes in the lungs during protostrongyliasis in hares. Soob.AN Gruz.SSR 23 no.6:719-729 D '59. (MIRA 13:6)

1. Institut zoologii AN GruzSSR, Tbilisi. Predstavleno chlenom-korrespondentom Akademii L.P.Kalandadze.
(Lungworms) (Hares--Disease and pests)

MOSENDZ, F.D., mayor meditsinskoy sluzhby (L'vov)

Spontaneous benign pneumothorax. Vrach.delo no.4:409 Ap '57.
(PNEUMOTHORAX) (MLRA 10:7)

18(5)

SOV/125-59-10-1/16

AUTHOR: Makara, A.M., and Slutskaya, T.M., Candidates of Technical Sciences, and Mosendz, N.A., Engineer

TITLE: The Welding of High-Quality Steels by Means of Fused Fluxes

PERIODICAL: Avtomaticheskaya svarka, 1959, Nr 10, pp 3-8 (USSR)

ABSTRACT: While D.M. Rabkin, A.M. Makara and Yu. N. Gotal'skiy, of the Ye. O. Paton Institute of Electric Welding, developed fused fluxes (Types AN-15 and AN-42) of low silicon and manganese content back in 1951 for use in the welding of steel of medium hardness, this article is concerned with the results of tests showing that the use of Type AN-15 fused flux in the welding of high-quality steel can raise the toughness to over 6 kilogram meters/cm^2. The authors concur with A.V. Lyubavskiy [Ref 2] in his theory that the presence of oxygen in the metal of the seam is the cause of the low toughness, but add that the phosphorus content is also an important factor. Of the fluxes tested it was found that the content of phosphorus in flux Type AN-348A (made from Chiatura ore) amounted to as much as .12%, meaning a percentage of as much

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as 1% in the welded seam; the toughness of the seam thus decreased accordingly, this drop also being heightened by the presence of carbon and manganese in the seam. To obtain a high degree of toughness in the welding of high-quality steel it is thus necessary to keep the SiO_2 and MnO content to a minimum. It is also stressed that fluxes intended for such welding should be of maximum basicity, in order to lower the sulfur and phosphorus content in the seams, to raise their resistance to the formation of crystallization cracks, and also to improve the initial structure of the metal of the seam [Refs 6 and 7]. Fluxes answering to these requirements are given in Table 1. Flux Type AN-15, which is superior to all others, is made up of aluminum oxide, feldspar, fluoric spar, caustic magnesite and manganese ore, its 2.2%MnO content reducing the oxidation of manganese in the seam and cutting the phosphorus content to virtually nil; it is simple in manufacture and versatile in use. Tests were conducted on this flux by means of test-pieces of 30KhGSNA steel tubing 100-300mm in diameter, with walls

8, 16 and 25mm thick; the welding was carried out by Types 18KhMA and Kh5M electrode wire. Fig 1 shows a cross-section of the seam-edge, and the welding process was as follows: layer 1 - I_{sv} = 200 amps, U_d = 26 volts, V_{sv} = 15 m/hour; layer 2 and subsequent layers - I_{sv} = 350 amps, U_d = 30 volts, V_{sn} = 19 m/hour. The edges were previously heated to 250°C. Table 2 gives the chemical composition of the upper-layer metal of several multi-layer seams and also furnishes data on tests on Type AN-348A flux, showing that the use of AN-15 flux cuts the content of oxygen by 200% and of phosphorus by 100%. Fig 2 is a diagram of the method used for cutting tubes of 3 thicknesses, and the macro-structure of the seam is given in Fig 3. Table 3, containing the results of tests carried out on the test-pieces after the thermal processing of 30KhGSNA steel (temperature at 900°C, annealing at 250-300°C), indicate that the toughness of the metal of the seam is raised to an average of 8 kilogram meters/cm^2. In their conclusion the authors stress the advantages of this flux: low oxygen and

SOV/125-59-10-1/16

The Welding of High-Quality Steels by Means of Fused Fluxes

phosphorus content, high toughness, and simplicity of application. There are 3 tables, 2 diagrams, 2 photographs, and 7 Soviet references.

ASSOCIATION: Ordena trudovogo krasnogo znameni institut elektrosvarki imeni Ye.O. Patona AN USSR (Order of the Red Banner of Labor Institute of Electric Welding imeni Ye.O.Paton AS UkrSSR)

SUBMITTED July 2, 1959

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18 8260
18 1130

24776
S/125/61/000/008/002/014
D040/D113

AUTHORS: Slutskaya T.M., and Mosendz, N.A.

TITLE: The effect of chemical composition on the mechanical properties of non-tempered medium-alloy steels

PERIODICAL: Avtomaticheskaya svarka, no. 8, 1961, 20-24

TEXT: Results are presented of an experimental investigation in which it was proven that high strength and sufficient plasticity in metal with up to 0.20%C can be achieved by complex alloying. The purpose of this study was to find metal compositions which had high strength after normalization and subsequent high tempering, and which were suitable for the manufacture of large elements. Twenty types of steel in four groups with different Mn and Cr content were smelted using the electro-slag method. The mechanical properties of the metal were contrary to those of a metal smelted by the industrial method, the latter having a somewhat lower (30%) plasticity. All four steel composition groups contained up to 0.5% Mo and V and the carbon content varied from 0.8 to 0.20%; nickel, tungsten and boron were added to several melts; Mn and Cr content was as follows: up to 1% Mn and 1.75% Cr in the first group, up to 1% Mn and 3.5% Cr in the second, up to 1.8% Mn

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and 1.75% Cr in the third, and up to 1.8 Mn and 3.5% Cr in the fourth. Ingots were upset 3.5 times to a thickness of 30 mm and heat treated according to the process recommended by TsNIITMash for normalizing and high tempering extremely thick metal. For normalization, the specimens were heated to 900°C, held for 4 hours, and cooled at a rate of 100°/hr; for high tempering, they were heated to 600-700°C, held for 4 hours, and cooled at 50°/hr. The following results were obtained: (1) Steels, which had been normalized and tempered at 650°C, had the best mechanical properties (in combination). Tempering temperature must be raised to 700°C if higher impact toughness is required; tempering at 600°C abruptly reduces the toughness, apparently due to brittleness. (2) Of the steels in the first group steel containing 0.20%C, 0.13% Si, 1.0% Mn, 1.75% Cr, 1.15% Ni, 0.41% Mo, 0.32% V, and 0.[illegible]% W had the best mechanical properties. (3) Steels in the third group, containing no tungsten and with higher Mg content did not have better mechanical properties. (4) Steels of the second group are interesting from the point of view of the manufacture of chemical equipment in which, because of increased Cr content, the metal must be strong enough to resist hydrogen corrosion. Cr-Mn steel containing 0.12-0.16% C and additionally alloyed with Mo and V without Ni additions may have a yield limit above 40 kg/mm²

together with an impact toughness of more than 8.5 kg-m/cm^2. (5) The fourth group consisted of two subgroups: nickelfree steels, and steels containing about 1% Ni. The nickelfree steel contained 1.5-1.7% Mn and 2.5-3.5% Cr. After tempering at 650°C it had a maximum strength of 75 kg/mm^2 and impact toughness of about 5-5.5 kg-m/cm^2; tempering at 700°C resulted in a maximum strength of 65-68 kg/mm^2 with an impact toughness of 7.5-9 kg-m/cm^2. The best steel in the second subgroup contained 0.15% C, 0.22% Si, 1.64% Mn, 2.52% Cr, 0.85% Ni, 0.34% Mo and 0.29% V. Its properties after tempering at 700°C are as follows: impact toughness - 7 kg-m/cm^2 and maximum strength - 65 kg/mm^2. There are 2 figures, 1 table and 10 references: 9 Soviet-bloc and 1 non-Soviet bloc references. The reference to the English language publication reads as follows: C.L.M. Cottrell and B.Y. Bradstreet, Vanadium as Replacement for Molybdenum in Low-Alloy Steels, "British Welding Journal", No. 2, 1954.

ASSOCIATION: Ordena Trudovogo Krasnogo Znameni Institut elektrosvarki im. Ye.O. Patona AN USSR (Electric Welding Institute "Order of the Red Banner of Labor" im. Ye.O. Paton of the AS UkrSSR)

SUBMITTED: December 27, 1960

L 20103-65 EWT(m)/EWP(w)/EWA(d)/T/EWP(t)/EWP(b) ASD(m)-3 MJW/JD
ACCESSION NR: AP4045454 S/0125/64/000/009/0001/0010

AUTHOR: Makara, A. M. (Doctor of technical sciences); Mosendz, N. A. (Engineer)

TITLE: The nature of the effect of a metal joint on crackformation in the welding area

SOURCE: Avtomaticheskaya svarka, no. 9, 1964, 1-10

TOPIC TAGS: metal joint, austenite transformation, bainite, martensite, cold crack plastic deformation

ABSTRACT: The authors discuss numerous papers dealing with the effect of the weld seam on crack formation. They developed a method of testing the joints for resistance to cold cracking by the application of tensile stresses to ferritic-pearlitic, bainite-martensitic and austenitic butt joints during the cooling off period. It was found that the difference between the maxima and minima stresses did not exceed 25% in the individual spots. A special series of tests was conducted to investigate deformation in the joint area of butt-welded 35Kh3N3M steel plates, δ =12mm. The resistance to cold cracking was substantially enhanced in all specimens by the formation of stresses in excess of 10 kgG/mm^2 at a maximum

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ACCESSION NR: AP4045454

temperature of 500 C. These stresses intensified the austenite transformation at high temperatures. The initial stage of austenite transformation in the weld area shifts from the martensite region into the bainite region resulting in better structure and improved quality. The effect of the chemical composition and the metal structure of the joint on cold cracking strength is attributed to the physical properties of the joint metal and the structural transformations which affect the process of deformation in the weld area and, consequently, the kinetics of austenite transformation the bainite and martensite regions. Under the action of ~10 kgG/mm^2 stresses at the initial stage of bainite and martensite transformation in 35Kh3N3M steel under conditions of continuous cooling plastic deformation is highly developed. It follows that welding stresses are somewhat lowered which also enhances cracking strength. The authors propose a method of predetermined deformation during cooling to increase the resistance to cold cracking. A further study is suggested with a view of investigating the effect of deformation on austenite transformation in a great variety of alloy steels and under different welding conditions. Orig. art. has: 7 figures and 2 tables

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L 20103-65
ACCESSION NR: AP4045454

ASSOCIATION: Institut elektrosvarki imeni Ye. O. Patona AN UkrSSR (Institute of Electric Welding AN UkrSSR)

SUBMITTED: 27Jun64 ENCL: 01

SUB CODE: MM NO REF SOV: 010 OTHER: 006

Card 3/4

L 20103-65
ACCESSION NR: AP4045454

ENCLOSURE: 1

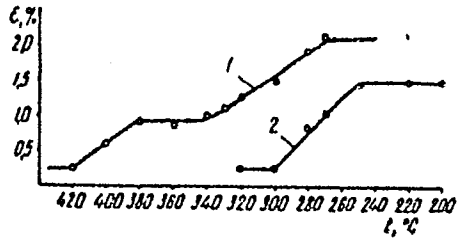

fig. 1

Plastic deformation under the action of stress application according to the type of joints with (1) an austenitic weld and (2) a ferritetic-pearlitic weld

Card 4/4

MAKARA, A.M.; MOSENDZ, N.A.; SIDORETS, N.M.; KOSTYUCHENKO, V.A.

Welding centrifugal [illegible]
a thickness of 3mm. Avtom. [illegible] 89

MAKARA, A.M.; DZYKOVICH, I.Ya.; MOSENDZ, N.A.; GORDAN', G.N.

Investigating the microscopic chemical heterogeneity in welds. Avtom.svar. 18 no.11:5-11 N '65.

(MIRA 18:1)

1. Institut elektrosvarki im. Ye.O.Patona AN UkrSSR.
Submitted April 13, 1965.

L 24457-66 EWT(m)/EWP(v)/T/EWP(t)/EWP(k) IJP(c) JD/HW/HW/JG

ACC NR: AP6012277 (N) SOURCE CODE: UR/0125/65/000/011/0005/0011

55

AUTHOR: Makara, A. M.; Dzykovich, I. Ya.; Mosendz, N. A.; Gordan', G. N.

47
B

ORG: Institute of Electric Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: Investigation of microscopic chemical heterogeneity in weld joints

18 18

SOURCE: Avtomaticheskaya svarka, no. 11, 1965, 5-11

TOPIC TAGS: welding, x ray analysis, alloy steel, weld evaluation, cooling rate, high strength steel, seam welding

ABSTRACT: Localized x-ray analysis is used for studying the effect of cooling rate on the degree of chemical nonhomogeneity in welded seams of high-strength steel as a function of the content of basic alloying elements (silicon, manganese, chromium, nickel, molybdenum and tungsten) and also for determining the relationship between this nonhomogeneity and the concentration of carbon in the seam, as well as the content of carbon combined with alloying elements. Electroslag, electric arc and electron beam methods were used to give a wide range of cooling rates. Welded specimens of KhGSN, Kh2GSNVM and Kh3M were studied. It is shown that the degree of microscopic chemical heterogeneity in the joints remains nearly constant throughout a wide range of cooling rates and variations in acicular crystallite sizes. The degree of liquation of

UDC: 621.791.053 : 620.192.3

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L 24457-66

ACC NR: AP6012277

8

elements in the weld seams is considerably dependent on carbon concentration, nature of the impurity element and the system used for alloying. The degree of molybdenum liquation increases rapidly with carbon concentration, tungsten shows somewhat less dependence, while the liquation of chromium, silicon, manganese, and nickel is affected only slightly by an increase in carbon content. Molybdenum and vanadium liquate out much more readily than chromium, silicon and manganese; nickel is not segregated in this manner at all in many cases. Further studies are needed on the development of chemical microheterogeneity in weld seams as a function of crystallization conditions, concentration and nature of impurity elements and alloying systems. Orig. art. has: 3 figures, 3 tables.

SUB CODE: 11,13/ SUBM DATE: 13Apr65/ ORIG REF: 008/ OTH REF: 002

Card 2/2 dla

L 01454-67 EWT(m)/EWP(t)/ETI IJP(c) JH/JD/HW

ACC NR: AP6030266 (N) SOURCE CODE: UR/0125/66/000/008/0006/0009

47
B

AUTHOR: Makara, A. M.; Dzykovich, I. Ya.; Gordan', G. N.; Mosendz, N. A.

ORG: Institute of Electric Welding im. Ye. O. Paton, AN UkrSSR (Institut elektrosvarki AN UkrSSR)

TITLE: Chemical micrononhomogeniety of cast alloys as a function of cooling rate

SOURCE: Avtomaticheskaya svarka, no. 8, 1966, 6-9

TOPIC TAGS: cast alloy, aluminum base alloy, copper base alloy, zinc containing alloy, nickel containing alloy, cooling rate, metal crystallization

ABSTRACT: Local x-ray spectral analysis is used for studying the effect of cooling rate on the degree of liquation of alloying elements in aluminum-zinc (15 wt.% Zn) and copper-nickel (15 wt.% Ni) alloys. The alloys were melted from 99.99% pure components in alundum and steel crucibles 20 mm in diameter and 30 mm high. The difference in cooling rates was produced by using cold water, air or by furnace cooling. Some of the copper-nickel alloys were also poured into tapered water-cooled molds to obtain intermediate cooling rates. The cooling curves showed a pronounced inflection point corresponding as a rule to the equilibrium liquidus temperature. This temperature was taken as the end of crystallization on curves where this point was not fixed. The experimental data show that the degree of liquation of zinc in the Al-Zn alloys and of

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UDC: 621.791;620.192.4

L 07434-67
ACC NR: AP6030266

nickel in the Cu-Ni alloys increases sharply as the cooling rate is accelerated reaching a maximum at comparatively low cooling rates (about 1-3°C/sec) where it remains constant with a further increase in cooling rate. The development of chemical microinhomogeniety (dendrite liquation) during crystallization changes the composition of interdendrite boundaries and the temperature range of alloy crystallization. This should have a corresponding effect on the technological properties of the alloy in this range. These data may be used for explaining the connection between the type of phase diagram and the resistance of the alloy to the formation of hot cracks. The composition of the dendrite axes in aluminum-zinc alloy is determined by the equilibrium solidus point and is independent of cooling rate over a wide range. Orig. art. has: 4 figures, 1 table.

SUB CODE: 11/ SUBM DATE: 16Mar66/ ORIG REF: 014/ OTH REF: 002

Card 2/2

LOPATA, A.Ya., kandidat tekhnicheskikh nauk; MAN'KO, N.S., inzhener; MOSENKIS, M.G., inzhener; KOSTENKO, G.F., redaktor; TRYASUNOVA, P.G., redaktor; SERDYUK, V.K., inzhener, redaktor.

[The 1336M and 1336R turret lathes; directions for maintaining and adjusting] Tokarno-revol'vernye stanki 1336M i 1336R; rukovodstvo po obsluzhivaniiu i naladke. Izd.2-oe. Pod red. G.F. Kostenko i P.G.Triasunova. Kiev, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1956. 64 p. (MLRA 9:6)

1.Kiyevskiy zavod stankov-avtomatov.
(Lathes)

MOSENKIS, [illegible]

25(5) PHASE I BOOK EXPLOITATION SOV/2703

Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye

Mekhanizatsiya i avtomatizatsiya v mashinostroyenii; [sbornik statey] (Mechanization and Automation in Machine Manufacturing; Collection of Articles) Moscow, Mashgiz, 1959. 286 p. 8,000 copies printed.

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Ukrainskoye respublikanskoye pravleniye.

Ed. of Publishing House: M.S. Soroka; Chief Ed. (Southern Division, Mashgiz): V.K. Serdyuk, Engineer; Editorial Board: M.M. Gul'ko, S.Sh. Zaslavskiy, A.Ya. Lopata, N.M. Lych, M.L. Orlikov, I.D. Faynerman, Ye.M. Khaymovich (Resp. Ed.), and S.I. Kharagorgiyev.

PURPOSE: This book is intended for engineering and technical personnel in machine and instrument-manufacturing plants and scientific research institutes.

COVERAGE: This book contains reports made by workers of machine and instrument-

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manufacturing plants, scientific research institutes, and educational institutions at the 2nd Kiyev Scientific and Technical Conference devoted to problems of mechanization and automation of production processes. The Conference was sponsored by the Kiyev Oblast Administration of the NTO Mashprom (Scientific and Technical Division of the Machine-Manufacturing Industry) and the Ukrainian Republic Administration of the NTO Priboroprom (Scientific and Technical Division of the Instrument Manufacturing Industry). These reports describe current problems encountered in automation of equipment, technological and control operations, and progressive work practices in manufacturing machines and instruments. I.I. Greben', S.M. Zamanskiy, A.G. Ivakhnenko, V.L. Mesezhnikov, M.G. Mosenskis, and A.M. Farber participated in preparing the book. There are no references.

TABLE OF CONTENTS:

Mechanization and (Cont.) SOV/2703

Automation of the Timing Process and Unused Productive Capacities of Technologically Closed Sectors (B.A. Babich) 276

AVAILABLE: Library of Congress

Card 6/6 JG/Jb
1-5-60

KHAYMOVICH, Ye.M., otv.red.; GUL'KO, M.M., red.; ZASLAVSKIY, S.Sh., red.; LOPATA, A.Ya., red.; LYCH, N.M., red.; ORLIKOV, M.L., red.; FAYNERMAN, I.D., red.; KHARAGORGIYEV, S.I., red.; V retsenzirovanii i redaktirovanii prinimali uchastiye: GREBEN', I.I.; ZAMANSKIY, S.M.; IVAKHNENKO, A.G.; MESEZHNIKOV, V.L.; MOSENKIS, M.G.; FARBER, A.M.. SOROKA, M.S., red.izd-va.

[Mechanization and automation in the machinery industry] Mekhanizatsiia i avtomatizatsiia v mashinostroenii. Moskva, Gos. nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1959. 286 p. (MIRA 12:8)

1. Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskoye oblastnoye pravleniye.
(Automation) (Machinery industry)

S/121/61/000/005/002/005
D040/D112

AUTHORS: Tarasinkevich, P.P., Mosenkis, M.G., and Savtsov, Yu.A.

TITLE: Program controlled automatic turret lathe

PERIODICAL: Stanki i instrument, no. 5, 1961, 8-13

TEXT: The design and operation of the 1341П (1341P) lathe (Fig. 1) is described in detail. It is produced by the Kiyevskiy zavod stankov-avtomatov (Kiyev Automatic Machine Tool Plant) and is a modification of the "1341" lathe produced since 1958. Some of the component units are new, some changed. The drum type capstan head with 16 tool seats is mounted parallel to the machine spindle and fixed in the various positions by a wedge pin that is retracted by an electromagnet for release. Separate reversible electric motors and electromagnetic friction clutches are used for rapid capstan head turns and longitudinal run of the carriage saddle. Cutting feed is from the change gear box (Fig. 2) with a two-speed motor (1), four electromagnetic clutches (2) and a double-rim gear, producing altogether two series of eight (each) automatically changing feeds (3). Usual multidisc electromagnetic clutches are used for cross feed and rapid

Card 1/12

head turns. Longitudinal feed and fast run of the carriage saddle is from special electromagnetic gear clutches working fast with high torque (fluctuations of the uncoupling time are not above 0.01 sec.). The workpiece clamping and feed mechanism is actuated by a pump-like unit in the machine frame, mounted with its motor on a hydraulic panel. The hydraulic system (Fig. 3) is shown in position "rod is clamped, pressure rising" (drain is not shown in diagram). It works automatically as follows: after the command "rod feed", an electromagnet (2) is switched on; a slide valve (3) moves right and oil flows into the releasing and rod-feed spaces; after completed feed, pressure in the feed space rises, and a pressure relay (6) switches off the electromagnet of the slide valve (3). Now oil moves into the right space in a cylinder (7) for clamping, then the pressure in it rises and oil under the left end of another slide valve (5) moves it right and opens the way to the right space in a feed cylinder (8). Increasing pressure is applied to the workpiece. A pressure relay (4) then gives the command for cutting. Oil flows through a drain valve (1) to lubricate the change gear box. Pressure in the system is 12 Kg/cm^2. Spaces between the slide valves and their bushings are large (0.04-0.06 mm, in diameter) to ensure smooth operation without fine oil filters. All motions are produced by electrically controlled mechanisms, and the program is contained on a single 185x278 mm

punched card of hard paper with 77 horizontal lines (sufficient for most complicated setting) and 20 vertical columns, six of which are designed for fixing coded numbers of revolution and feeds (decoding is indicated on the card margin), and other cards for noncoded commands. The punched card is prepared as for usual turret lathes and serves for work of identical shape and different dimensions. The data determining work dimensions are on a feedback transmitter of the machine elements' position, or "magnetic stops unit" ("blok magnitnykh uporov"), developed at the Institut avtomatiki Gosplana USSR (Automation Institute of the Gosplan UkrSSR). Its program carrier is a silver-coated brass drum with a ferromagnetic compound on its surface. The combination of two program carriers (punched card and position feedback transmitter) controls the machine automatically. The magnetic stops' accuracy is 0.02 mm, work length is accurate within 0.1 mm. The lathe operator produces the first piece by manual control and "records the stops" on the magnetic drum. Program is changed by replacing the punched card, wiping the drum and making a new record. The two units together constitute one major component called a "command unit" ("kommandoapparat"). The card is placed on the brass drum, which has 20 brushes, which can contact the card only through the card perforations. Intermediate relays coupled with the brushes transmit the command readings.

A step-by-step device makes the drum turn. The kinematic system is given (Fig. 6). The punched card drum (2) mounted on a shaft (25) on insulating bushings is coupled with a gear (23) through a spline bushing (33). The drum (2) is coupled with the magnetic drum (29) through gears (23), (26), and (27) with a 1:1 ratio. When the carriage saddle runs or the capstan head turns, a tie rod (30) moves a carriage (31) with a magnetic head (32) along the magnetic drum. A run-electromagnet (ЭМХ) switches on and turns a lever (17) on its axle (13) as indicated by an arrow (K); the pawl on the lever turns a ratchet wheel (16), and a Geneva cross movement (14). A ball (15) locks it. The Geneva movement turns the drums (2 and 29) through a worm shaft (22), gear clutch (19), the spline bushing (33) and shaft (25). When the ratchet wheel completes one turn, the lever (17) presses on a limit switch and disconnects the run-electromagnet. The command unit is shown in a photograph (Fig. 7) with removed cover. The basic electric command elements are placed in it. The main one is a highly sensitive magnetic modulation head, ММГ(MMG), designed at the Automation Institute of the Gosplan UkrSSR (Fig. 8 and photo Fig. 9). It records current pulses on the magnetic drum during machine setting and takes the readings during automatic operation. It is a combination of an ordinary magnetic head and a magnetic amplifier. The output voltage is proportional to

the reproduced magnetic flux and independent from its variation rate. The output signal of the "MMG" is in the form of an amplitude-modulated carrier or the second voltage harmonic of the excitation generator formed in the "MMG". In the diagram (Fig. 8), (1) is a permalloy core and (2) a permalloy modulator in the form of a toroid. The record windings are on the permalloy core. The excitation windings on the modulator together with the capacitors (C_1 and C_2) and variable resistor (R) form a bridge circuit. Excitation generator voltage is supplied to the a б diagonal and unbalance voltage removed from the в г diagonal through a diode (Д). Excitation current produces a closed magnetic flux (фб) in the toroid. Magnetic flux (фв) removed by the head from the magnetic drum passes through the permalloy core and branches out in the toroid (2). Thus the excitation flux in one bridge arm coincides with the flux being removed from the magnetic drum, while in the other arm they are opposite. The inductance of the excitation windings changes, the bridge becomes unbalanced, and unbalance voltage reaches the amplifier unit input through a detector. The head is screened to protect it from the outer electrostatic fields. The control panels contain the manual controls for setting. The intermediate electric elements are placed in a separate cabinet connected with the lathe by cables

with plugs. The power and protection elements on the lathe are those normally used for machine tools. The intermediate relays on it are КДРШ-1 (KDRSh-1) plug code relays. The circuits of the electromagnetic clutches are controlled by КДРТ (KDRT) relays. The feed and amplifier units are in the top right part of the cabinet. The high-frequency component of detected signals is filtered in the amplifier unit, then amplified, shaped into square pulses and led into a thyratron trigger circuit that controls corresponding elements in the relay circuit. The feed unit supplies the necessary voltages to different points in the amplifying unit and consists of a kenotron rectifier with electronic voltage stabilization and a selenium rectifier with rectified current stabilization. Feed to both rectifiers is from one power transformer. The turret lathe is fitted with blocking and safety devices, and a signal system giving work, emergency and warning signals. There are 10 figures.

MOSENKIS, M.G.

The KA-104 semiautomatic six-spindle lathe. Biul.tekh.-ekon. inform.Gos.nauch.-issl.inst.nauch. i tekh.inform. 16 no.11: 45-47 '63. (MIRA 16:11)

MOSEWSIS, Yu.M. (Chita

Deformation of a building in Chita Province. Gosst. [illegible] gmin. 6 no.5:19-[illegible] '64. [illegible]

ACC NR: AP6015713 (A,N) SOURCE CODE: UR/4013/66/000/009/0126/0126

INVENTOR: Vasil'yev, D. P.; Vitozhents, E. V.; Chernetsov, I. B.; Berlin, V. B.; Mosenkov, V. N.

ORG: None

TITLE: Direct rpm controller for low-power gas turbine engines. Class 46, No. 181448 [announced by the Central Scientific Research and Design Institute of Vehicle and Stationary Engine Fuel Equipment (Tsentral'nyy nauchno-issledovatel'skiy i konstruktorskiy institut toplivnoy apparatury avtotraktornykh i statsionarnykh dvigateley)]

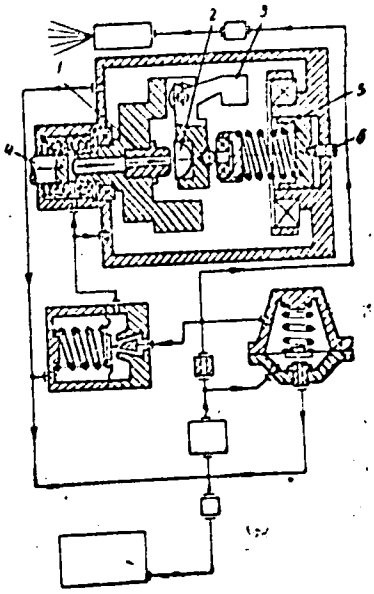
SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 126

TOPIC TAGS: speed regulator, gas turbine engine

ABSTRACT: This Author's Certificate introduces: 1. A direct rpm controller for low-power gas turbine engines. The unit contains an actuating mechanism made in the form of a nozzle which interacts with a flat valve located in the arm of a balanced spring-loaded centrifugal weight mounted on the cross connection of the power shaft. Construction is simplified and friction is reduced by locating the nozzle and the fuel channel in the power shaft. 2. A modification of this device which may be adjusted during engine operation by using a spring which acts on a lever and is equipped with a screw for varying tension.

Card 1/2 UDC: 621.438-531.6-552.9

ACC NR: AP6015713



1—nozzle; 2—flat valve; 3—weight; 4—power shaft; 5—spring; 6—screw

SUB CODE: 13, 21/ SUBM DATE: 04May64

Card 2/2

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535.51 : 535.43

6947 On the dependence of the depolarization factor [illegible] of light scattered from dilute colloidal [illegible] in the [illegible] in Serbo-Croatian, with summary in German.

The known theoretical relations between the ρ values for light plane-polarized at various angles to the scattering plane are confirmed for scatter from a colloidal solution. Undiffused sunlight is passed through a polaroid to the solution cell, light scattered at 90° enters a Wollaston prism and the intensities of the 2 beams are matched visually by an adjustable Nicol. G. S. LOTHIAN

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(Quantum theory) (Coulomb functions)
(Centrifugal force) (Differential equations)

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Marin Katalinic; an obituary. Bul sc Jug 5 no.3:95-96 Jl '60. (EEAI 10:5)

(Katalinic, Marin) (Physicists, Croatian)

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1. Fizicki institut, Skopje.

APPROVED FOR RELEASE: 07/12/2001 CIA-RDP86-00513R001135310017-9"