MYASNIKOV, Yu.A. (Moskva); CHARNYY, I.A. (Moskva)

Approximate method for calculating gas injection into a water-bearing layer through a straight line of wells. Izv.AN SSSR.-Otd.tekh.nauk.Mekh. i mashinostr. no.4:47-51 Jl-Ag '62. (MIRA 15:8)

(Gas wells)

KOCHINA, I.N., MYASNIKOV, Yu.A.

Calculation of pressure in pumping fluid to a stratum through a rectilinear gallery. Izv.vys.ucheb.zav.; neft' i gaz 5 no.[illegible] 45-52 '62. (MIRA 17:4)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika I.M.Gubkina.

ACC NR: AP7004698 (A,N) SOURCE CODE: UR/0016/66/000/008/0012/0017

AUTHOR: Vishnyakov, S. V.; Myasnikov, Yu. A.; Panina, T. V.; Zhukova, L.D.

ORG: Central Disinfection Institute (Tsentral'nyy dezinfektsionnyy institut); Tula Oblast Sanitary-Epidemiological Station (Tul'skaya oblastnaya sanitarno-epidemiologicheskaya stantsiya)

TITLE: Devising a rodent control system for forest foci of renal hemorrhagic fever

SOURCE: Zh mikrobiol, epidemiol i immunobiol, no. 8, 1966, 12-17

TOPIC TAGS: ~~human ailment, renal hemorrhagic fever,~~ poison effect, pest control, ~~disease vector,~~ rodent, HEMORRHAGE, DIGESTIVE SYSTEM DISEASE, DISEASE CONTROL

ABSTRACT: Renal hemorrhagic fever in a forest focus was successfully controlled by poisoning the rats which are vectors of the disease. Two kg/ha of grain poisoned with zinc phosphide were applied by plane along poisoned zone 30 m wide separated by nonpoisoned zones 50—100 m wide. Near settled areas, bait containers with an open end were buried in the soil and placed 10—20 m apart. Poisoned bait and traps were used within buildings, usually during the winter. The poisoned zones around villages were especially effective in preventing the

Card 1/2 UDC: 616.61-002.151-022.6-084.449.932.34

ACC NR: AP7004698

penetration of new rat populations when the animals migrated. Orig. art. has: 5 tables.

[LP]
[WA-50]

SUB CODE: 06/ SUBM DATE: 7Jun65/ ORIG REF: 004

Card 2/2

YEMEL'YANOVA, O.S.; RAVDONIKAS, O.V.; YEGOROVA, L.S.; PANINA, N.V.; PILIPENKO, V.G.; RUDNEV, M.M.; SIL'CHENKO, V.S.; BESSONOVA, M.A.; UL'YANOVA, N.I.; VEDENEYEVA, Ye.V.; BORODIN, V.P.; SAMSONOVA, A.P.; MYASNIKOV, Yu.A.; LEVACHEVA, Z.A.

Approbation of an improved tularemia diagnosticum. Zhur. mikroobiol., epid. i immun. 40 no.10:85-92 O '63. (MIRA 17:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamaley AMN SSSR, Omskogo instituta prirodnoochagovykh infektsiy, Protivochumnogo instituta Kavkaza i Zakavkaz'ya, Voronezhskoy, Leningradskoy, Volgogradskoy, Tul'skoy sanitarno-epidemiologicheskikh stantsiy.

18(7)

AUTHORS: Myasnik ..., Yu. ..., Terekhov, Yu. S. [illegible]

TITLE: X-ray Investigation of Structural Distortions of Steel When Cleaning With a Blast of Metal Shot (Rentgenograficheskoye issledovaniye iskazheniy struktury stali pri drobestruynoy obrabotke)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1958, Nr 4, pp 202-206 (USSR)

ABSTRACT: This investigation concerned the influence of a surface treatment with metal shot (scrap) on the state of the atomic crystal lattice of metals of great hardness. All effects were separated according to the method by G. V. Kurdyumov and L. I. Lysak (Refs 2, 3, 4), as well as the method of harmonic analysis (Refs 5, 6). The following facts were ascertained by the experiments: 1) In hardened samples of steel 45 KhNMFA which had been tempered at 400° and subjected to cleaning with a blast of metal shot, no increase in crystalline distortions was ascertained at an increase in the operating time. 2) The methods of harmonic analysis and the methods developed by Kurdyumov - Lysak used for determining the crystal block

Card 1/2

X-ray Investigation of Structural Distortions of Steel When Cleaning With a Blast of Metal Shot SOV/163-58-4-35/47

Measurements showed that the size of blocks first decreases with the increase in operating time, but then stabilizes. The numerical values of the lattice distortions (crystalline distortions) and of the block size were determined by two methods independent of each other. They are approximately equal in both cases. There are 2 figures, 2 tables, and 6 references, 5 of which are Soviet.

ASSOCIATION: [illegible] gosudarstvennyy pedagogicheskiy institut (Leningrad State Pedagogical Institute)

SUBMITTED: January 31, 1958

Card 2/

SOV/[illegible]

18(3), 18(7)
AUTHORS: Myasnikov, Yu. G., Terminasov, Yu. S.

TITLE: X-Ray Structural Analysis of the Surface State of High-hardness Steels Subjected to Shot Peening (Rentgenograficheskoye issledovaniye sostoyaniya poverkhnosti staley vysokoy tverdosti pri drobestruynoy obrabotke)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 1, pp 154 - 159 (USSR)

ABSTRACT: This is an investigation of the effects of a discontinuous shot peening upon the surface structure of samples of 45KhNMFA and 60S2A steel. The samples were quenched in oil after having been kept at the hardening temperature for 1½ minutes. The hardness of the samples after this heat treatment was 46-48 $R_c$ (Rockwell C scale). This investigation was primarily directed towards a study of the influence of the distortions of the crystal lattice of the surface layers and of the grain sizes in these layers upon a certain generalized parameter which was termed "density of shot

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peening" (Ref 5). This quantity represents the amount of shot striking unit surface of the sample during the consolidation period. The duration of treatment was chosen to be the variable factor in this investigation. The shot used was of 1 mm size, and it was thrown against the surface at a constant velocity of 81 m/sec, the duration of treatment varied from 1 - 7.5 minutes. The X-ray structural analysis was carried out on the URS-50I ionization apparatus. The interference lines (110) and (220) for three samples of each type of steel the X-ray diagrams of which were exactly identical, were analysed. On the basis of the information gained the following can be stated: The distortions of the crystal lattice which are due to the heat treatment of steel 45KhNMFA are independently of the duration not modified by the shot peening treatment. The broadening of the interference lines is only ascribed to the reduction of the grain sizes. In steel 60S2A the lattice distortions during the first two minutes of treatment were found to proceed in correspondence with the reduction of grain size. Hence the process of crystal structure distortion may

X-Ray Structural Analysis of the Surface State of High- SOV/163-59-1-[illegible]/5
hardness Steels Subjected to Shot Peening

proceed along different lines, what depends upon the chemical composition of the steel and its thermal treatment. The difference detected may be investigated by means of the harmonic analysis. There are 3 figures, [illegible] tables, and 6 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy pedagogicheskiy institut (Leningrad Pedagogical Institute)

SUBMITTED: January 21, 1958

Card 3/3

S/137/60/000/011/031/043
A006/A001

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 11, p. 242, # 27174

AUTHORS: Myasnikov, Yu.G., Terminasov, Yu.S.

TITLE: Investigation of Shotblast Cold Hardening of Steel by the Roentgenographical Method

PERIODICAL: Tr. Leningr. inzh.-ekon. in-ta, 1959, No. 28, pp. 105 - 112

TEXT: An investigation was made with 60С2А (60S2A) and 45ХНМФА (45KhNMFA) steel. The method of Fourier's series and the analytical method were used to separate the effects of II order (fragmentation of domains and microdistortions of the lattice). It was established that in shotblast working microstresses increased in the surface layer when the shotblast time was extended. Etching-off surface strengthened layers revealed in a depth of 250 μ the presence of a layer where the magnitudes of microdistortions were by 25% less than on the sur-

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S/137/60/000/011/031/043
A006/A001

Investigation of Shotblast Cold Hardening of Steel by the Roentgenographical Method

face in the initial state; this is explained by partial annealing on account of heat liberated during shotblast treatment. It is established that the density of dislocations in the cold hardened layer is $3.10^{11}$ $cm^{-2}$. This is the lowest possible limit of its magnitude. There are 11 references.

I.K.

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

Card 2/2

MYaSNIKOV, Yu. G., Cand Phys-Math Sci — (diss) "Roentgenographic Investigation of Deformations of the Crystalline Structure of Steel Alloys During Fractional Flow Working," Kiev, 1960, 14 pp, 200 copies (Kiev State U im T. G. Shevchenko) (KL, 46/60, 123)

S/123/62/000/013/009/021
A004/A101

AUTHOR: Myasnikov, Yu. G.

TITLE: X-ray diffraction studies of shot-blast workhardening

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 13, 1962, 29, abstract 13B176 (In collection: "Kachestvo poverkhnosti detaley mashin. v. 5". Moscow, AS USSR, 1961, 256 - 259)

TEXT: The investigations were carried out with cylindrical specimens of the steel grades 60 C 2 A (60S2A) and 45 ХНМФА (45KhNMFA), subjected to heat treatment to a hardness of HRC 46 - 48 and subsequent surface hardening by metal shot of 0.9 - 1.0 mm in diameter. To determine the degree and nature of plastic deformation, the author investigated the effect of metal-shot treatment on the development of microdistortions and lumping in the surface layers, the distribution of microdistortions and the dimensions of crystal blocks from the surface into the depth. It was found that, after shot working, more microdistortions appeared in the steel in comparison with the initial state: in the 60S2A grade steel some 75% more, in the 45KhNMFA grade steel 18 - 20% more. At all investigated speeds, microdistortions in the 60S2A grade steel discontinued to change

Card 1/2

S/123/62/000/013/009/021
A004/A101

X-ray diffraction studies of shot-blast workhardening

er 1 - 1.5 minutes working. The growth of microdistortions ceases after - 2 min (from the beginning of working) at any working speed. That proves t the shot speed affects the development of microdistortions to a greater extent than the duration of machining. The depth of the workhardened layer depends on the machining duration and in a considerably less degree on the working speed. The author presents a diagram of the development of microstresses and lumping in materials subjected to workhardening. It is pointed out that this diagram is correct only in the case of great deformation stresses and a high degree of resistivity of the material to plastic deformation. There are 4 figures.

E. Spivak

[Abstracter's note: Complete translation]

Card 2/2

SONIN, S.D., prof.; CHERNYAK, I.L., kand. tekhn. nauk; MYASNIKOV, Yu.G., inzh.

Control of ground swelling by means of underground explosion charges. Ugol' 38 no.12:38-39 '63. (MIRA 17:1)

1. Moskovskiy institut radioelektroniki i gornoy elektromekhaniki.

MYASNIKOV, Z.M., inzh.

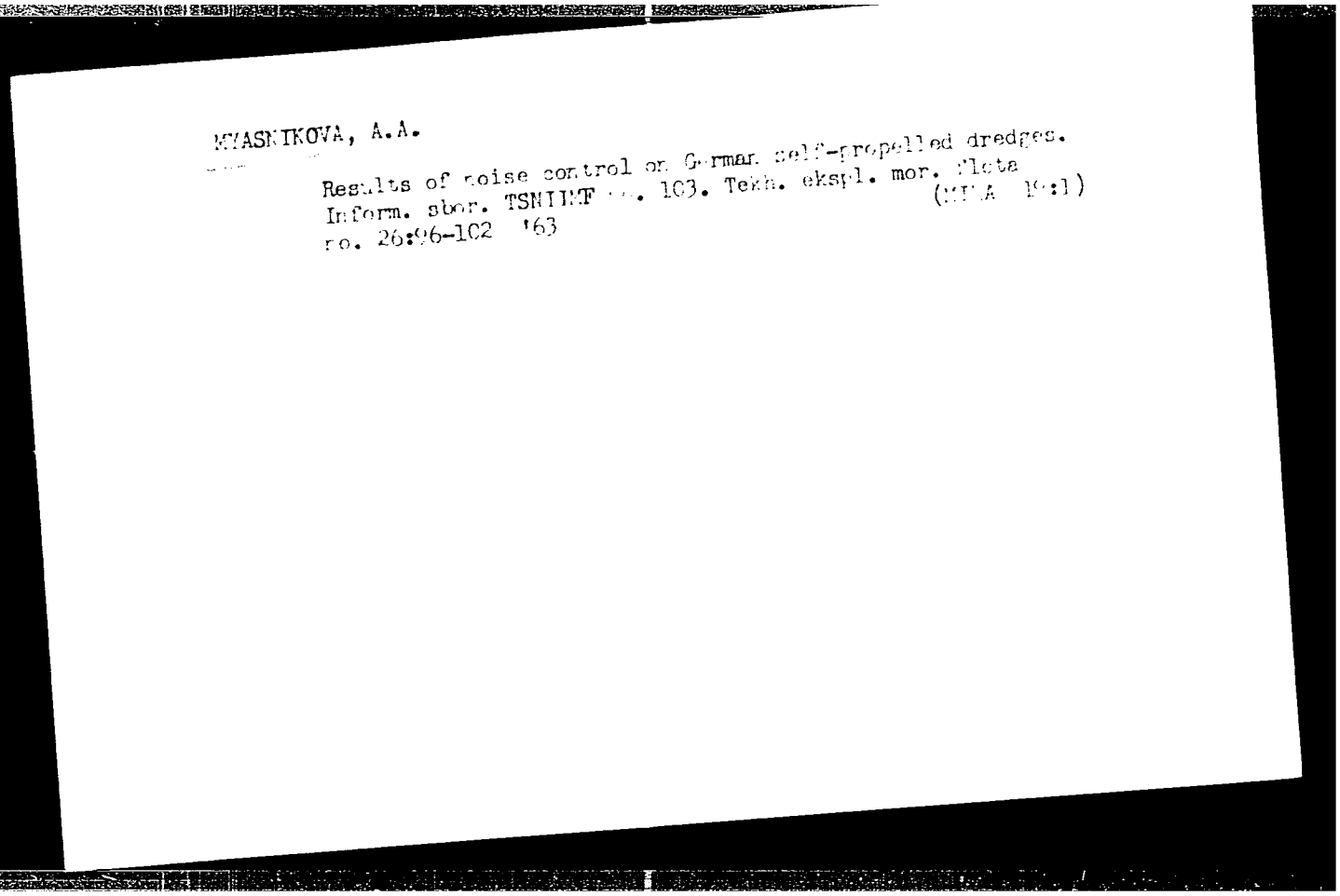
Ways of improving the operations of the tank car wash-and-steaming stations. Zhel.dor.transp. 44 no.8:44-49 Ag '62. (MIRA 15:8)

1. Glavnyy konstruktor Khar'kovskogo proyektno-izyskatel'skogo instituta.

(Tank cars--Cleaning)

MYASNIKOV, Z.M., inzh. (Khar'kov); KOROTKOV, V.N., inzh. (Khar'kov)

Ways of improving the preparation of cars for grain transportation. Zhel.dor.transp. 44 no.9:87-89 S '62. (MIRA 15:9)
(Railroads—Freight cars) (Grain—Transportation)



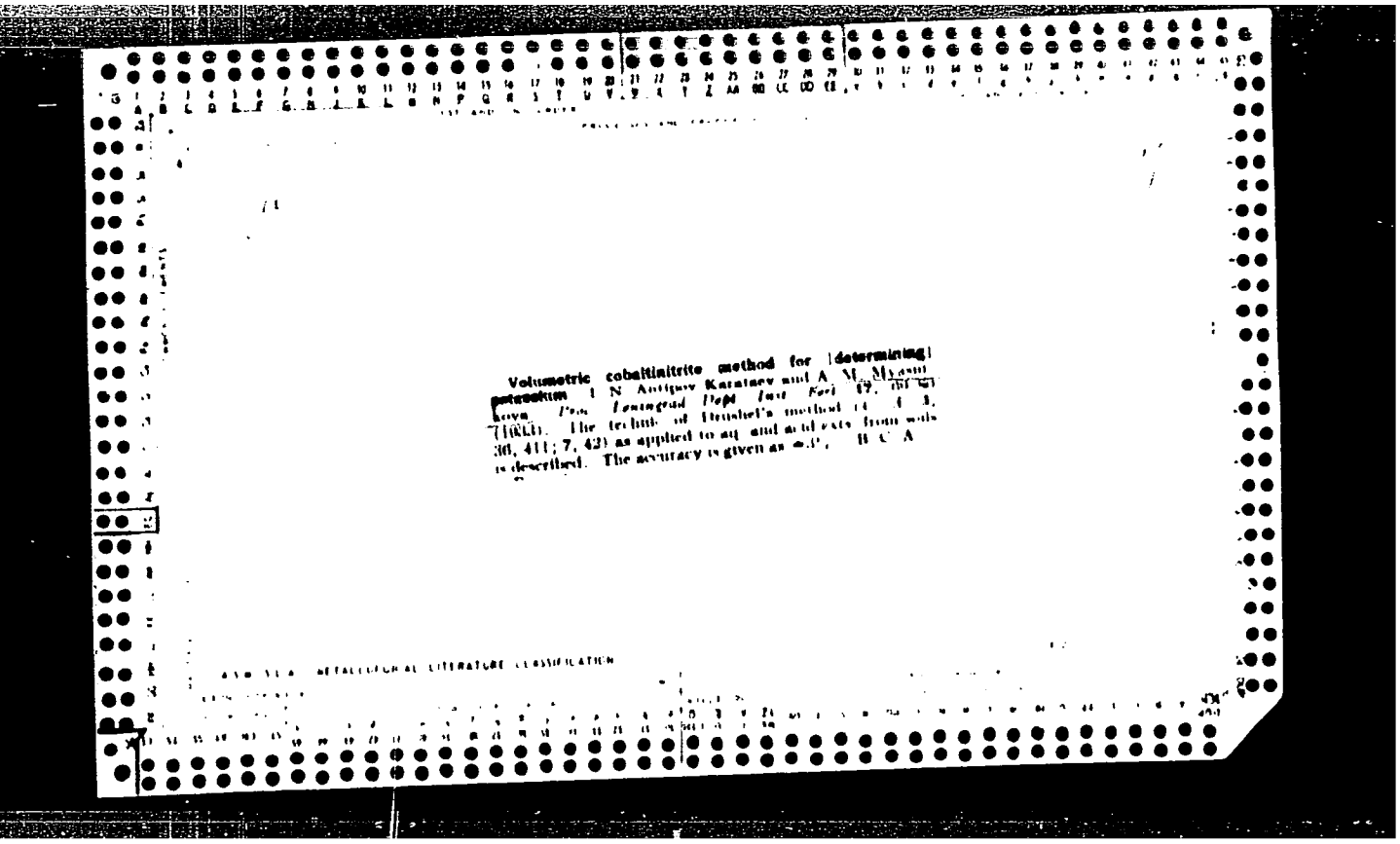
MYASNIKOVA, A.A.

Results of noise control on German self-propelled dredges. Inform. sbor. TSNIITF ... 103. Tekh. ekspl. mor. flota (MIRA 16:1) no. 26:96-102 '63

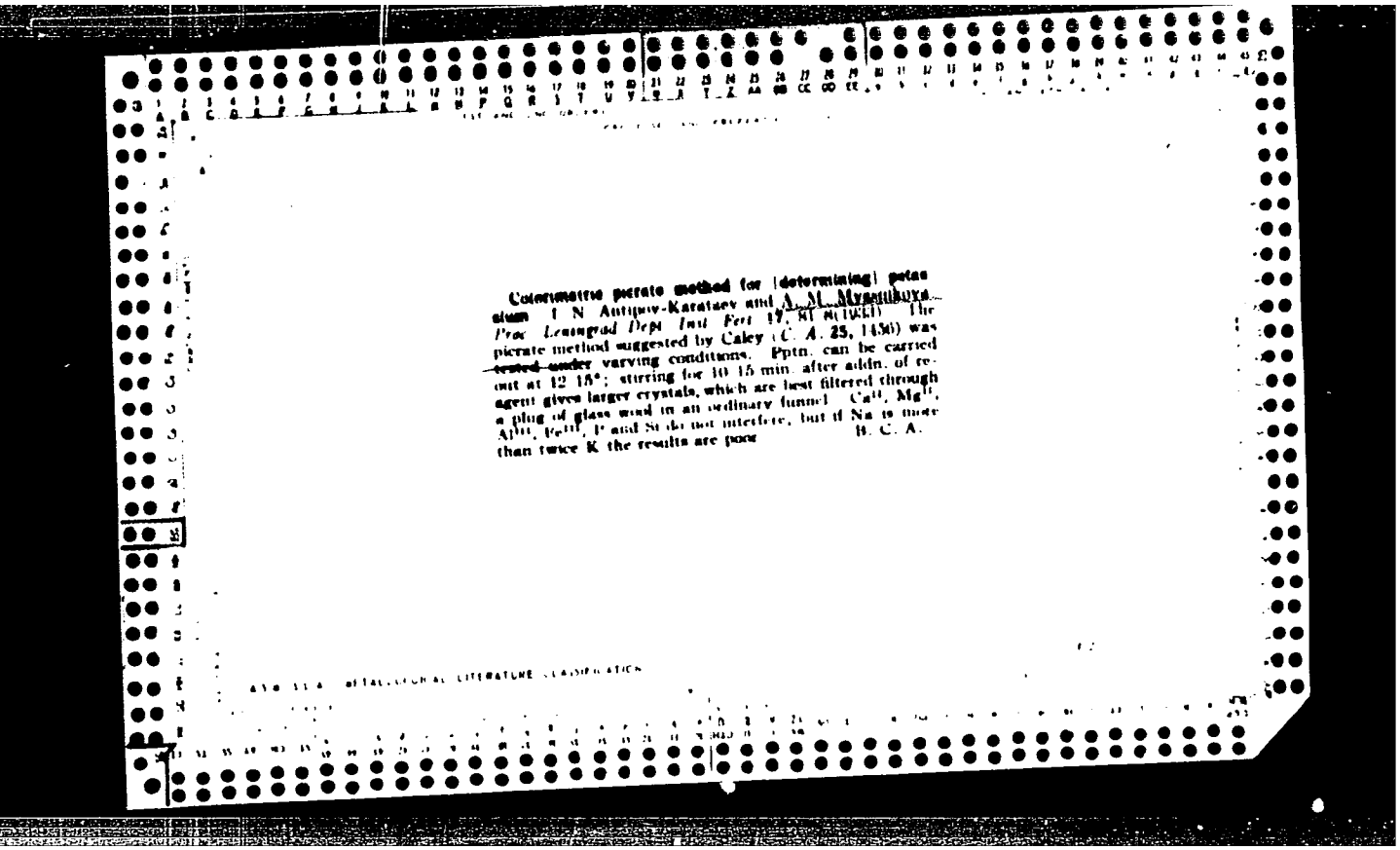
MYASNIKOVA, A.G.

Immediate and late results of splenectomy in Werlhof's disease. Probl.gemat.i perel.krovi 5 no.1:35-36 Ja '60. (MIRA 14:6)

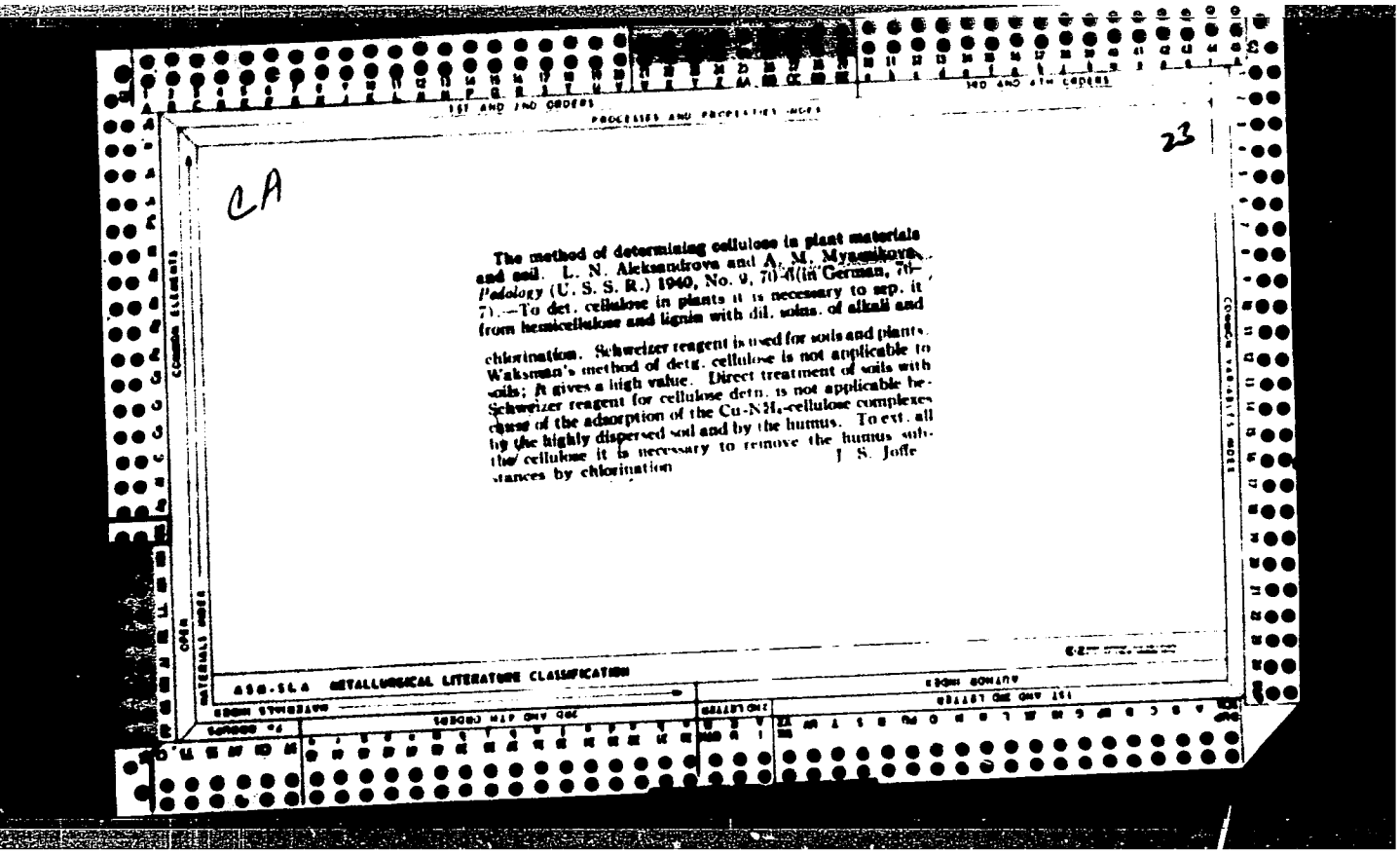
1. Iz kliniki gospital'noy khirurgii (zav. - chlen-korrespondent AMN SSSR prof. A.T.Lidskiy) Sverdlovskogo meditsinskogo instituta.
(SPLEEN—SURGERY) (PURPURA (PATHOLOGY))



Volumetric cobaltinitrite method for [determining] potassium. I. N. Antipov-Karataev and A. M. Myasnikova. Trans. Pom. Leningrad Dept. Inst. Fert. 17, 151-63 (1938). The technic of Drushel's method (C. A. 3, 711(1)) as applied to aq. and acid exts. from soils (30, 411; 7, 42) is described. The accuracy is given as ±2%. H. C. A.



Colorimetric picrate method for [determining] potassium. I. N. Antipov-Karataev and A. M. Myasnikova. *Proc. Leningrad Dept. Inst. Fert.* 19, 81–8(1941). The picrate method suggested by Caley (*C. A.* 25, 1456) was tested under varying conditions. Pptn. can be carried out at 12–18°; stirring for 10–15 min. after addn. of reagent gives larger crystals, which are best filtered through a plug of glass wool in an ordinary funnel. $Ca^{++}$, $Mg^{++}$, $Al^{+++}$, $Fe^{+++}$, $I^-$ and $SiO_3^{--}$ do not interfere, but if Na is more than twice K the results are poor. H. C. A.



CA

23

The method of determining cellulose in plant materials and soil. L. N. Aleksandrova and A. M. Myasnikova. *Pedology* (U. S. S. R.) 1940, No. 9, 70-6 (in German, 76-7).—To det. cellulose in plants it is necessary to sep. it from hemicellulose and lignin with dil. solns. of alkali and chlorination. Schweizer reagent is used for soils and plants. Waksman's method of detg. cellulose is not applicable to soils; it gives a high value. Direct treatment of soils with Schweizer reagent for cellulose detn. is not applicable because of the adsorption of the $Cu(NH_3)_4$-cellulose complexes by the highly dispersed soil and by the humus. To ext. all the cellulose it is necessary to remove the humus substances by chlorination. J. S. Joffe

CA

**The characteristics of the process of humus formation in carbonate soils of sod** V. V. Ponomareva and A. M. Myasnikova (Leningrad State Univ.). *Pochvovedenie* 1951, 721-35.—Carbonate soils of sod.-con Silurian limestone in the Leningrad province) show an intermediate (between chernozem and podzols) content of fulvic acid, the highest being in the podzols. The ratio of fulvic acid to humic acid in the sod-carbonate soils is much lower than that of the podzol soils adjoining the area, being close to 1, whereas in podzols it is up 2.8. The different groups of org. substances, humic acid, fulvic acid, and ulmins were sepd. by the Tyurin method and analyzed for elemental compn. of all fractions and exchange capacity of humic acid. The fulvic acids, $NH_4$, and water-sol. fractions, resp., were analyzed for pH, degree of dissocn., base satn. capacity, and meq. H.

I. S. Joffe

PONOMAREVA, V.V.; MYASNIKOVA, A.M.

Contributions to the study of the composition of humus and some problems of the origin of rendzina soils. Uch.zap.Len.un. no.174: 39-82 '54. (MLRA 8:4)
(Humus) (Soils)

MYASNIKOVA, A.M.

Characteristics of the rate of humus accumulation and the quality of humus in grey soils of the Vorskla Forest Reserve. Uch.zap.Len.un. no.221:73-93 '56. (MLRA 10:3)
(Vorisovska District--Forest soils)
(Humus)

J-2

USSR / Soil Science. Genesis and Geography of Soils.

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77375

Author : Ponomareva, V. V.; Myasnikova, A. M.
Inst : Central Museum of ~~Soil Science~~, AS USSR
Title : Materials for the Study of Soils of the Central Part of the Karelian Isthmus

Orig Pub : Sb. rabot Tsentr. muzeya pochvoved. AN SSSR, 1957, vyp. 2, 113-144

Abstract : Turf-latent-podzolic and alluvial-humus-ironstone soils, which the authors place with the northern variant of brown forest soils, are widespread in the Karelian Isthmus. The physical-chemical properties of the soils are examined. In the 0-100 cm layer of the brown forest soils, there is contained 232 t/ha of humus and 9.7 t/ha of N. A deep humus profile is formed by the moving forms of the humus compounds - by fulvicacids, the predominance of which over

Card 1/3

USSR / Soil Science. Genesis and Geography of Soils. J-2

Abs Jour : Ref. Zhur - Biologiya, No 17, 1958, No. 77375

- 5.9%. On the loamy and clayey stratified lake deposits under mixed forests, turf-podzolic-gley and gleyey soils are met. The slow movement of soil solutions in these soils conditions the development of processes of podzolic formation and gley. In the 0-20 cm layer, there is concentrated up to 80% of the humus reserves - 140 t/ha. The turf-podzolic-gley soils are characterized by the linking of processes of removal of ulmic acids connected with Fe and of fulvicacids connected with Al. According to the reserve of nutrients, Ca, and humus, these soils belong among the best in the region investigated loamy and sandy soils on the binomial alluvials of lake terraces are of intermediate agricultural value. -- S. A. Nikitin.

Card 3/3

MIASNIKOVA, A.M.

Characteristics of accumulation and quality of humus in gray soils of the Vorskla Forest Reserve. Uch. zap. IGU no.221:73-93 '56.
(Borisovka District--Forest soils) (Humus) (MLRA 10:8)

YERMAN, B. A.; ESSEL', A. Ye.; BRONITSKAYA, Ye. Yu.; SHUBINA, S. B.; MYASNIKOVA, A. T.

"Tsitofotometricheskoye opredeleniye soderzhaniya rnk v kletkakh tkani, zarazhennykh rnk-soderzhashchim virusom."

report presented at Symp on Virus Diseases, Moscow, 4-9 Oct 64.

Institut virusnykh infektsiy, Sverdlovsk.

YERMAN, B.A.; PLOTNIKOV, N.P.; KADKINA, Ye.V.; MYASNIKOVA, A.T.; SHUBINA, S.B. (Sverdlovsk)

Morphology and cytochemistry of the cells of the HEp-2 tissue culture under normal conditions and in enterovirus infections. Arkh. pat. 26 no.9:47-55 '64. (MIRA 18:4)

1. Sverdlovskiy nauchno-issledovatel'skiy institut virusnykh infektsiy (dir. G.F.Bogdanov).

MYASNIKOVA, A.V.; RALL', Yu.S.; TRISVYATSKIY, L.A., doktor tekhn. nauk, prof.; SHATILOV, I.S.; LETNEV, B.Ya., red.

[Commercial study of grain and the products of its processing] Tovarovedenie zerna i produktov ego pererabotki. Moskva, Kolos, 1965. 486 p. (MIRA 18:8)

BRAZ, G.I.; MYASNIKOVA, B.V.; YAKUBOVICH, A.Ya.; BAROV, V.I.

Syntheses in the 1,3,5-triazine series. Part 4: Carbethoxy-substituted triazines. Zhur. ob. khim. 34 no.9:2980-2987 S '64. (MIRA 17:11)

1. Fiziko-khimicheskiy institut imeni L.Ya. Karpova.

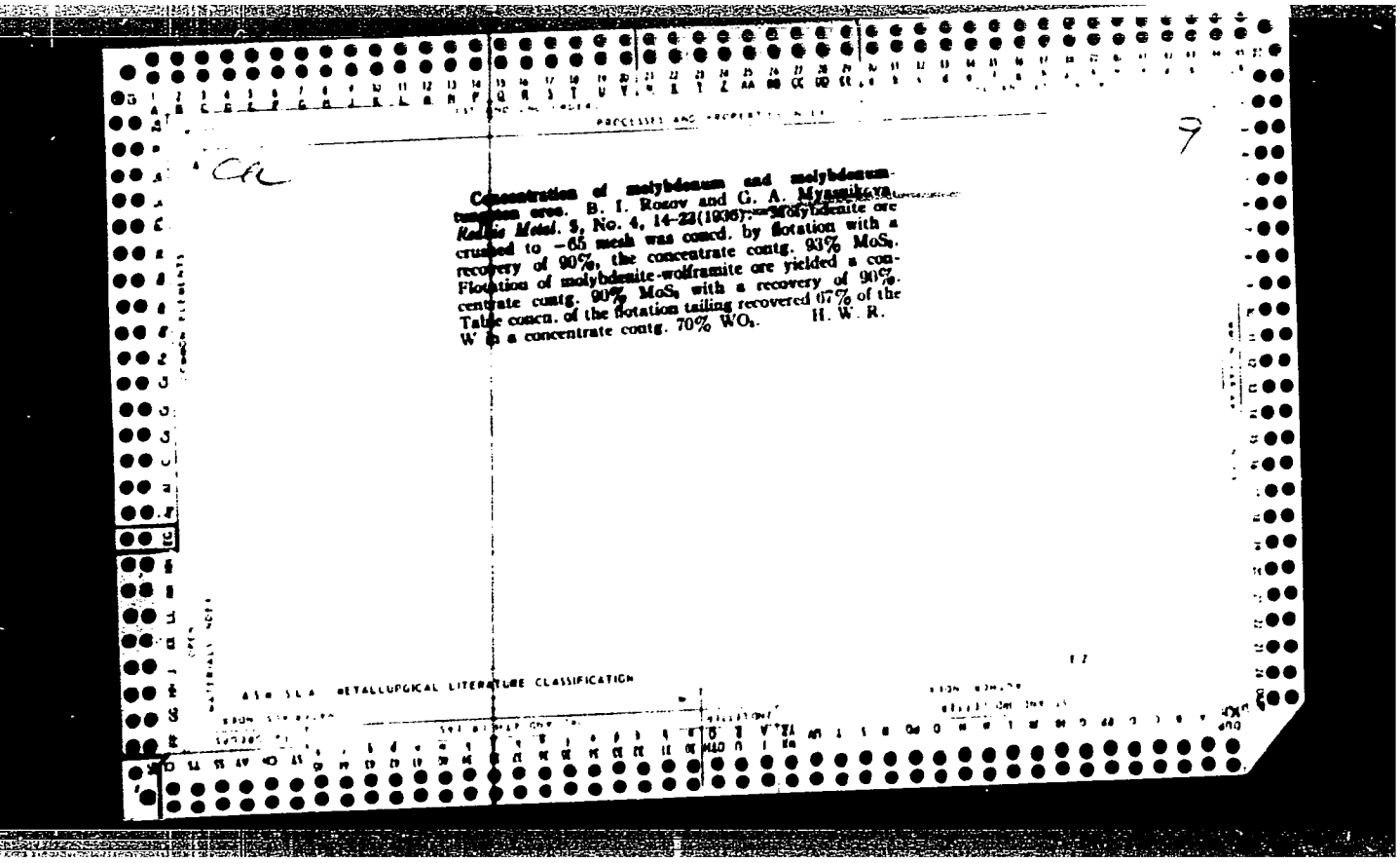
DUBROVINSKIY, S.B.; LOGINOVA, N.S.; MIRISMAILOV, M.I.; MYASNIKOVA, D.Ye.

Clinical and epidemiological state of diphtheria in Tashkent (1955-1956). Trudy Tash. NIIVS 5:124-138'62. (MIRA 16:10)
(TASHKENT — DIPHTHERIA)

SHARIPOV, M.K.; MYASNIKOVA, D.Ye.; MURZOVA, V.P.

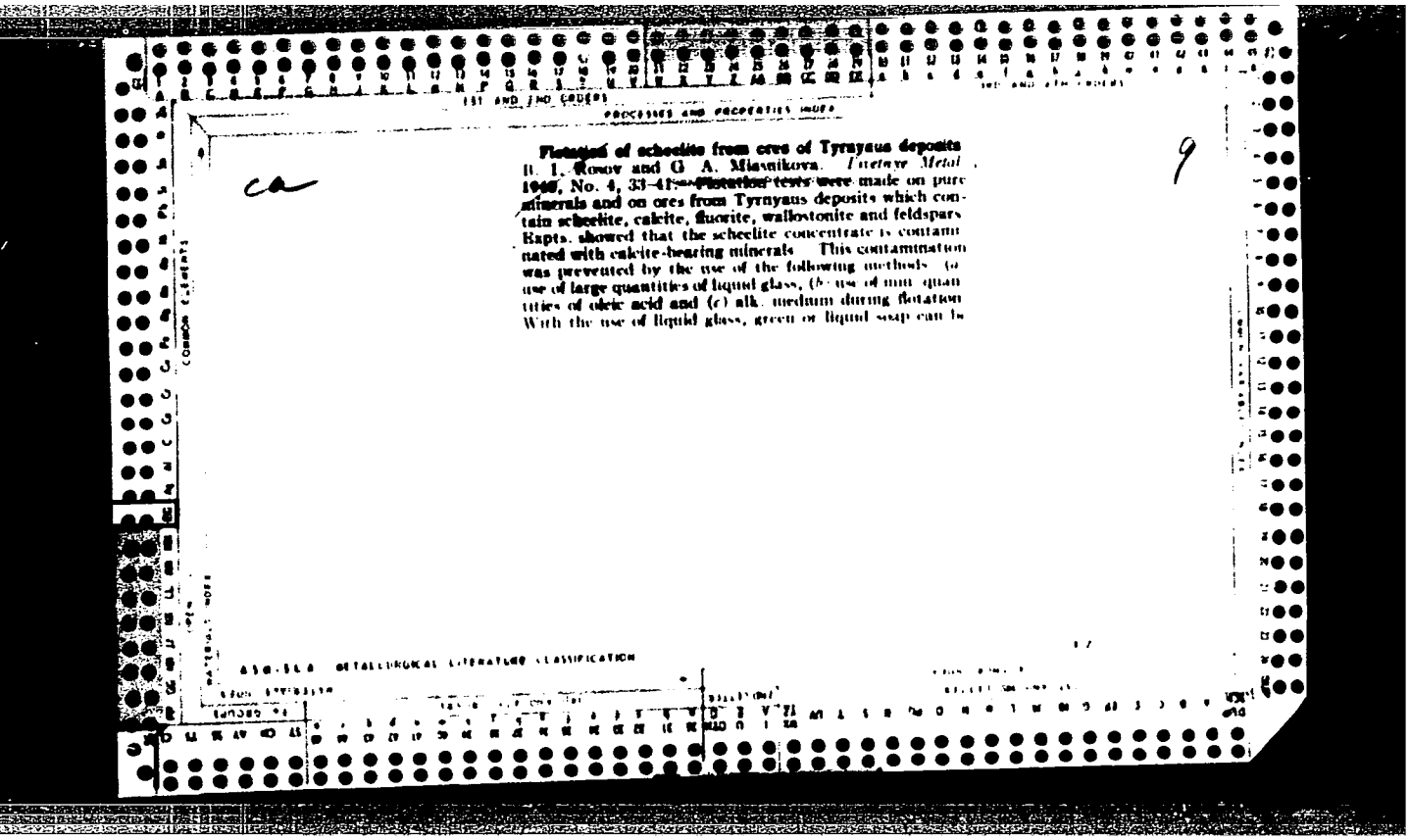
Incidence of scarlet fever in Tashkent (1947-1957). Sbor.nauch.trud. TashGMI 22:355-359 '62. (MIRA 18:10)

1. Kafedra epidemiologii (zav. kafedroy - prof. M.V.Soshnikova) Tashkentskogo gosudarstvennogo meditsinskogo instituta.

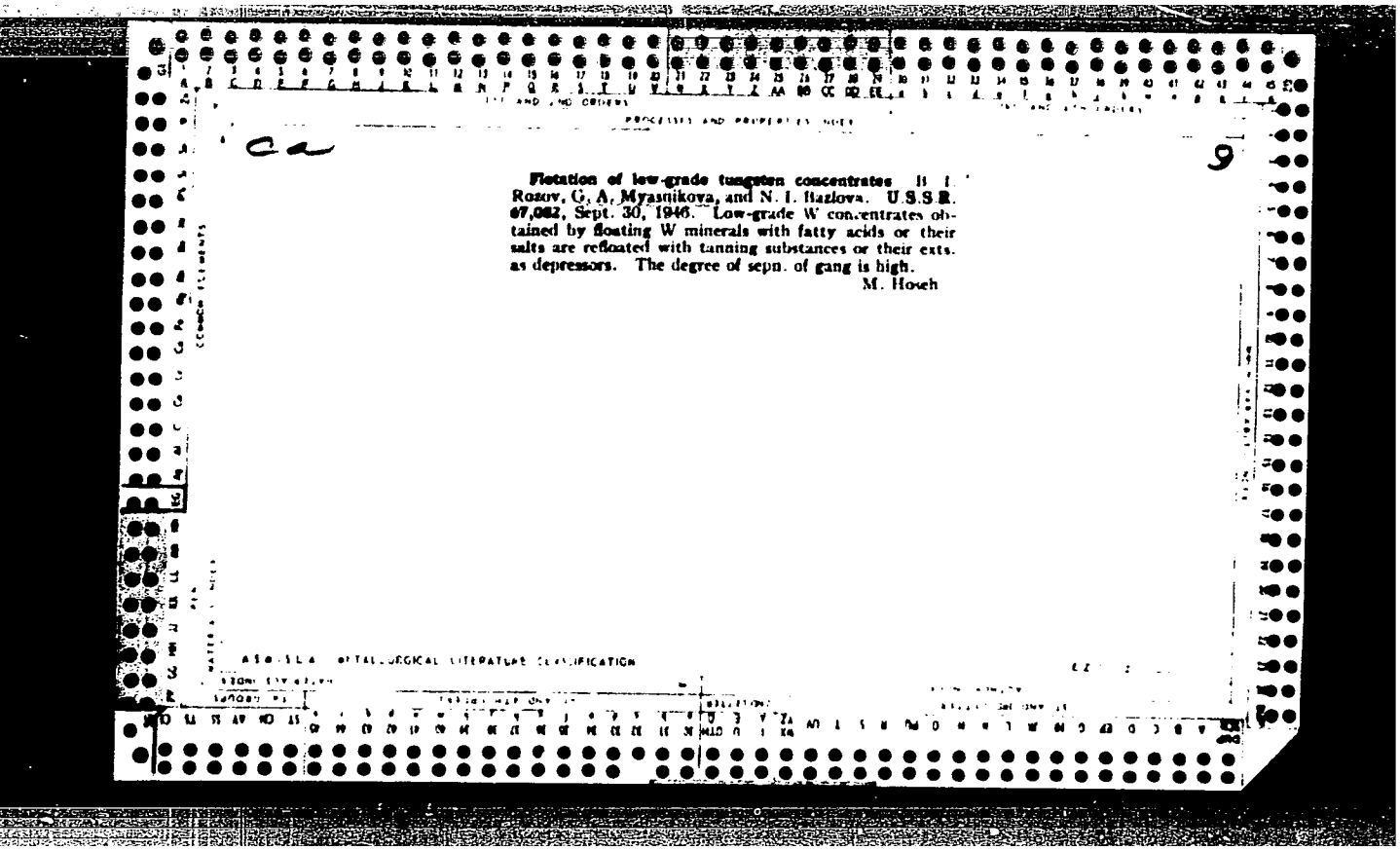


Concentration of molybdenum and molybdenum-tungsten ores. B. I. Rosov and G. A. Myasnikova. *Redkie Metal.* 5, No. 4, 14-22(1936).—Molybdenite ore crushed to −65 mesh was concd. by flotation with a recovery of 90%, the concentrate contg. 93% $MoS_2$. Flotation of molybdenite-wolframite ore yielded a concentrate contg. 90% $MoS_2$ with a recovery of 90%. Table concn. of the flotation tailing recovered 67% of the W in a concentrate contg. 70% $WO_3$. H. W. R.

A14 S1.4 METALLURGICAL LITERATURE CLASSIFICATION



**Flotation of scheelite from ores of Tyrnyaus deposits**
B. I. Rosov and G. A. Miasnikova. *Tsvetnye Metal.*, 1948, No. 4, 33–41.—Flotation tests were made on pure minerals and on ores from Tyrnyaus deposits which contain scheelite, calcite, fluorite, wallostonite and feldspars. Expts. showed that the scheelite concentrate is contaminated with calcite-bearing minerals. This contamination was prevented by the use of the following methods: (*a*) use of large quantities of liquid glass, (*b*) use of min. quantities of oleic acid and (*c*) alk. medium during flotation. With the use of liquid glass, green or liquid soap can be



**Flotation of low-grade tungsten concentrates** B. I. Rozov, G. A. Myasnikova, and N. I. Bazlova. U.S.S.R. 67,082, Sept. 30, 1946. Low-grade W concentrates obtained by floating W minerals with fatty acids or their salts are refloated with tanning substances or their exts. as depressors. The degree of sepn. of gang is high.

M. Hoseh

CA

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**Protective action of ammonium compounds in the flotation separation of pyrite and arsenopyrite.** I. N. Plaksin and G. A. Myazdinova. *Doklady Akad. Nauk U.S.S.R.* 72, 97-9(1950); cf. *C.A.* 43, 970*e*. A study of protective action of ammonium salts on ores during flotation in limed media. Ammonium salts used in the expts. were the carbonate, nitrate, and chloride. Expts. were made under const. conditions in a lab. flotation machine of 150 cc. cell capacity. Potassium ethylxanthate in the amt. of 200 g./ton was used as collector and 240 g./ton of pine oil was employed as the frother. The period of flotation was 10 min. Best results were obtained with $NH_4Cl$. It was found that to get good sepn. of pyrite and arsenopyrite, the lime and ammonium salt should be supplied simultaneously. It was concluded that the ammonium salt has the function of preventing formation of lime films on pyrite surfaces to a certain extent. Two tables and three graphs present the data. One table gives the content of the chief components in the pyrite and arsenopyrite samples used. The second table shows the influence of $NH_4Cl$ in lime media on recovery of arsenic in the nonfroth product. The graphs show (1) influence of ammonium salts on recovery of arsenopyrite from lime media in the nonfroth product; (2) relation of recovery of arsenopyrite to time of mixing of pulp with $Ca(OH)_2$ and $NH_4Cl$; and (3) content of lime in the liquid phase of the pulp. Gladys S. Macy

Mining Inst., AS USSR

MYASNIKOVA, G. A.

USSR/Mining - Mineral Dressing, Flotation Jul 51

"Protective Action of Ammonium Salts During Flotation of Pyrite, Arsenpyrite and Other Sulfide Minerals in Lime Medium," I. N. Plaksin, Corr Mem, Acad Sci USSR, G. A. Myasnikova

"Iz Ak Nauk SSSR, Otdel Tekh Nauk" No 7, pp 1046-1064

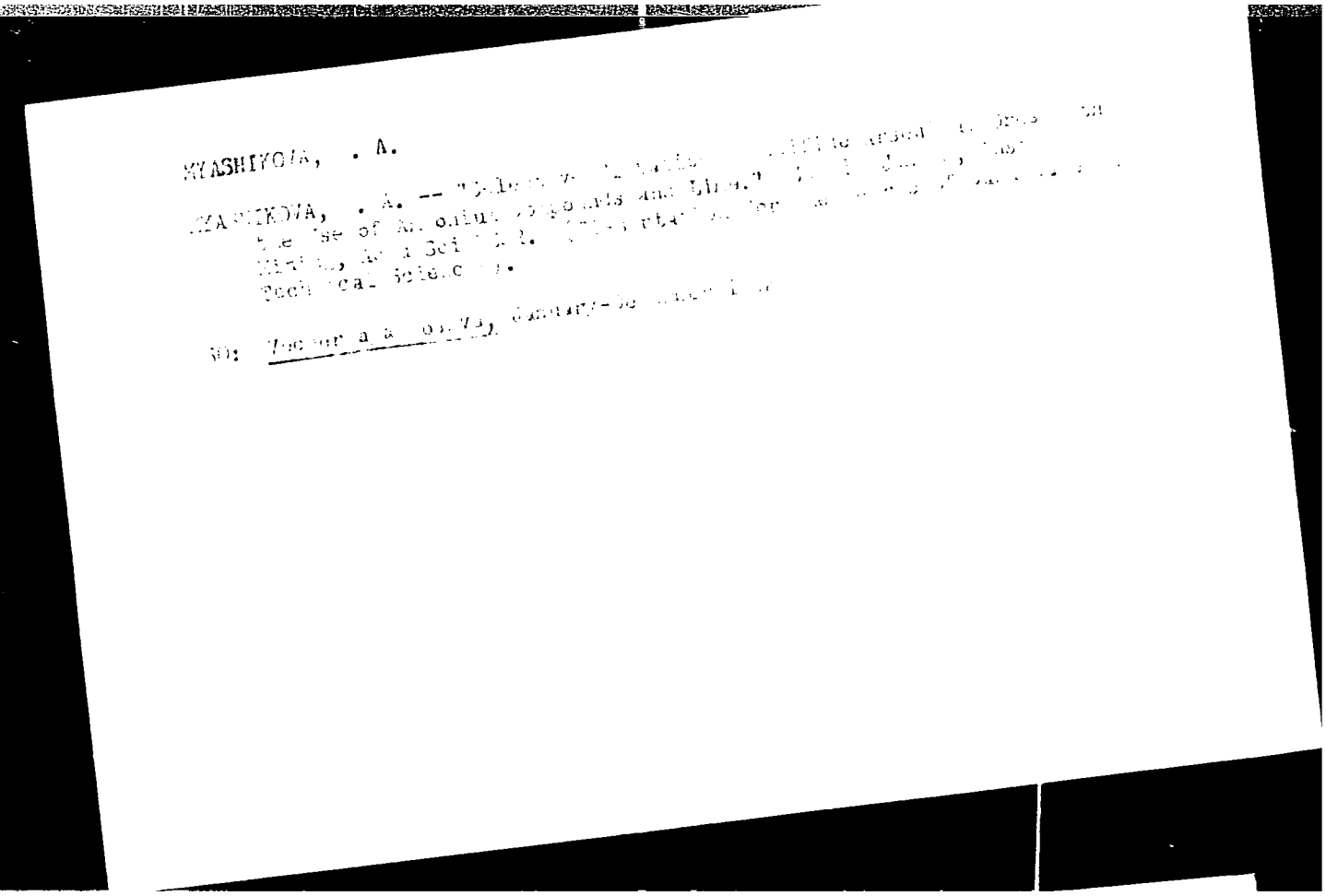
Establishes that ammonium salts promote flotation of pyrite, sphalerite, pyrrhotite and galenite and have no effect on arsenopyrite. Studies application of ammonium salts for selective flotation of concentrates contg pyrite and arsenopyrite, and

205T92

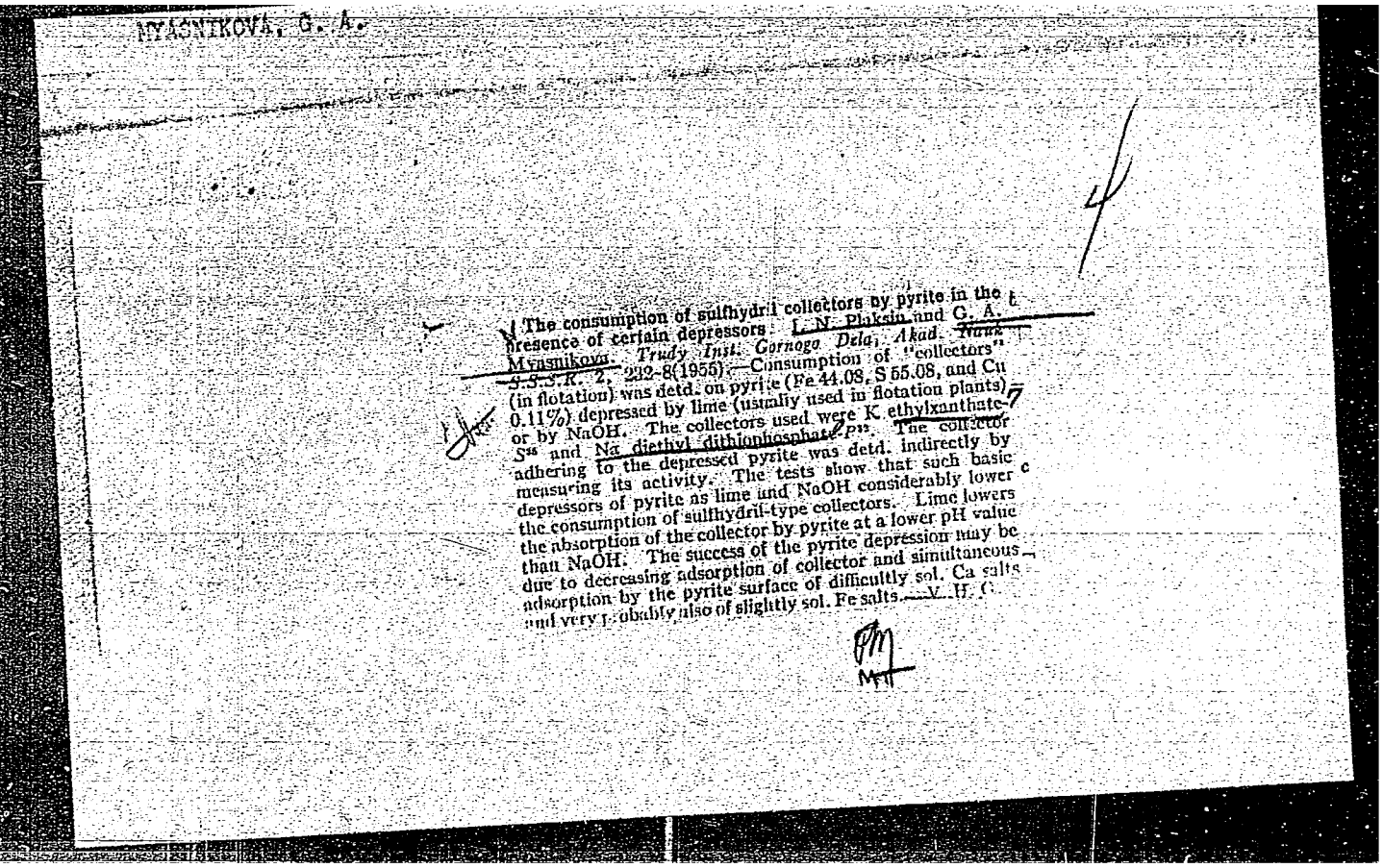
USSR/Mining - Mineral Dressing, Flotation (Contd) Jul 51

205T92

establishes difference in effect of lime on flotability of same minerals. Ammonium salts in neutral medium have no effect on flotation of pyrite and arsenopyrite. Submitted 4 Nov 50.



YYASHIYOVA, . A.



MYASNIKOVA, G. A.

The consumption of sulfhydril collectors by pyrite in the presence of certain depressors. L. N. Plaksin and G. A. Myasnikova. *Trudy Inst. Gornogo Dela, Akad. Nauk S.S.S.R.* 2, 232-8(1955).—Consumption of "collectors" (in flotation) was detd. on pyrite (Fe 44.08, S 55.08, and Cu 0.11%) depressed by lime (usually used in flotation plants) or by NaOH. The collectors used were K ethylxanthate-$S^{35}$ and Na diethyl dithionophosphate-$P^{32}$. The collector adhering to the depressed pyrite was detd. indirectly by measuring its activity. The tests show that such basic depressors of pyrite as lime and NaOH considerably lower the consumption of sulfhydril-type collectors. Lime lowers the absorption of the collector by pyrite at a lower pH value than NaOH. The success of the pyrite depression may be due to decreasing adsorption of collector and simultaneous adsorption by the pyrite surface of difficultly sol. Ca salts and very probably also of slightly sol. Fe salts.—V. H. (illegible)

AUTHORS: Plaksin, I. N., Corresponding Member of the AS USSR, and Myasnikova, G. A. 20-117-5-38/54

TITLE: **Using the Radioactive Isotope $Cr^{51}$ to Study Galena and Pyrite Depression in Selective Flotation**
(Primeneniye radioaktivnogo izotopa $Cr^{51}$ dlya izucheniya depressii galenita i pirita pri selektivnoy flotatsii).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 117, Nr 5, pp. 864-866 (USSR)

ABSTRACT: The authors used for the first time labelled chromium $Cr^{51}$ for the study of the labelled bichromate- and chromate ion. It is known that these ions depress the two mentioned minerals in the flotation. After the study of the chromate adsorption the distribution of the bichromate among the products of the foam flotation was investigated. The experimental results with the adsorption of the solved bichromate with labelled chromium are described in detail by the equation of Freyndlikh (figure 1). However, a transition to other compounds can take place here in the adsorption. Indissoluble salts can be deposited as chromate, sometimes as basic chromate. Figure 2 shows the experimentally found dependences of the adsorption and extraction into the foam

product on the dosing of the potassium bichromate. It appears from the diagram that the minimum flotation extraction, i.e. a depression state of the minerals, corresponds to the maximum value of the chromate adsorption. The strength of the adhesion of the bichromate to galena can be characterized by desorption by means of rinsing with different quantities of destilled water. Figure 3 gives such desorption curves. They show that at most 32-35% of the adsorbed chromate can be desorbed with water. Hence follows a sufficiently stable chromate adhesion to galena. Furthermore the adsorption of potassium bichromate by galena was measured according to the pH of the medium. The results of the direct determination of the adhesion of bichromate to galena at a constant bichromate concentration are given in figure 4. Within the range of the acid solutions this dependence is described satisfactorily by the equation of Freyndlikh. The adsorption remains almost constant in the neutral and in the alkaline range. The results of the flotation experiments of a quartz-galena-mixture by

Using the Radioactive Isotope $Cr^{51}$ to Study Galena and Pyrite Depression in Selective Flotation

20-117 -5-38/54

ethylxanthogenate in presence of potassium bichromate at pH of 1,8 up to 7 show that the bichromate (chromate) quantity adsorbed by the foam product decreases with decreasing pH considerably. This quantity increases considerably from pH 5,5 on and reaches the 13 fold at pH 7,0. The same applies in the case of pyrite flotation, however, to a somewhat smaller extent. In experiments with minimum chromate adsorption both minerals (pyrite and galena) are extracted into the foam product in a maximum quantity, i. e. no depres ion takes place. Hence it follows that the reason for the depression of galena and pyrite by chromates can be found in the formation of only to a very small extent soluble middle or alkaline chromates on their surface. The adsorption of chromium salts prevents the mineral particles from adhering to the air bubbles inspite of the presence of the xanthogenate ions on the surface. The abrupt decrease of the chromide adhesion to sulphides at pH <6,0 corresponds to the transition of the bichromate ion into the chromate ion in the liquid phase.

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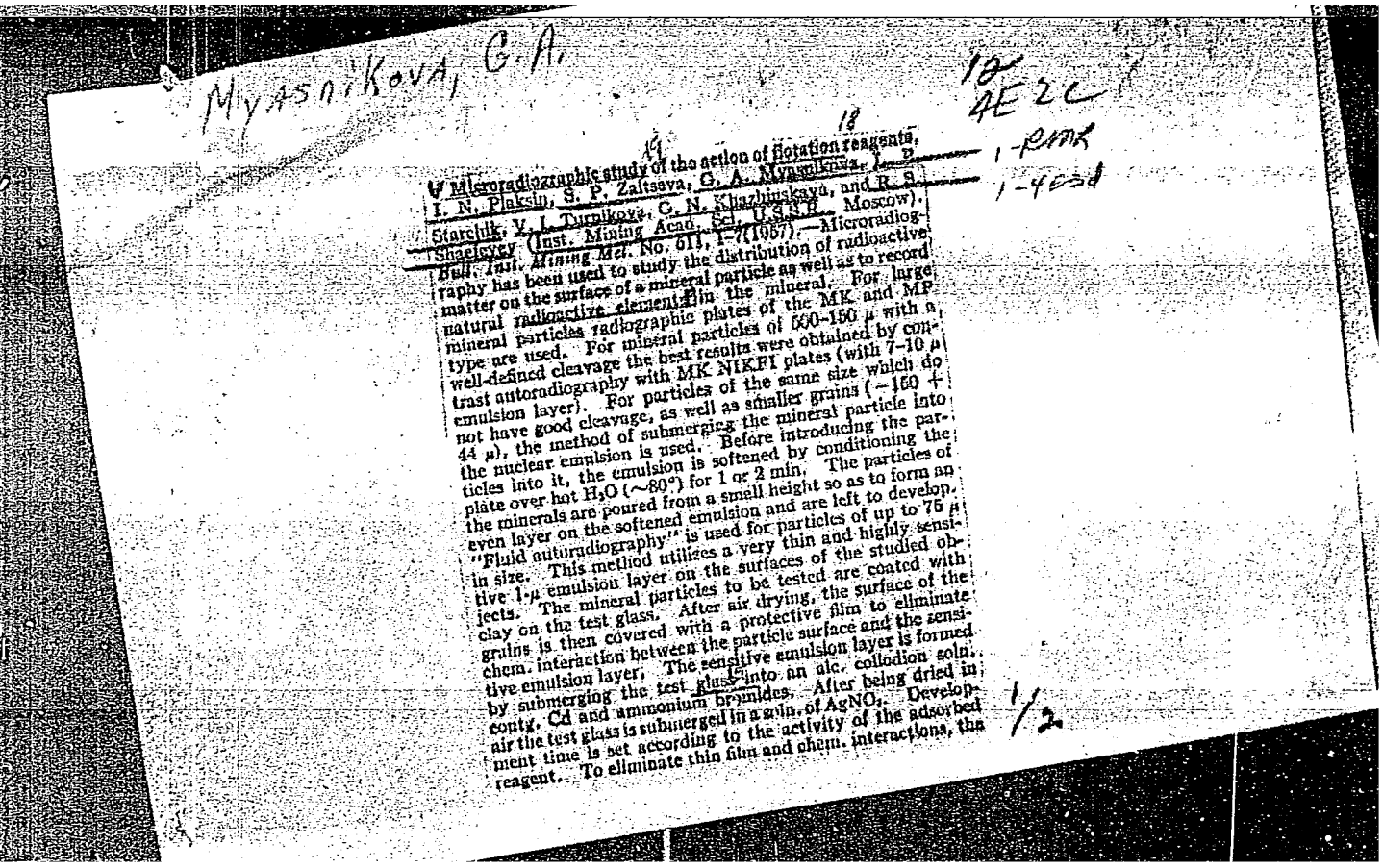
20-117-5-38/54

**Using the Radioactive Isotope $Cr^{51}$ to Study Galena and Pyrite Depression in Selective Flotation**

There are 4 figures.

SUBMITTED: September 2?, 1957

Card 4/4



Myasnikova, G. A.

Microradiographic study of the action of flotation reagents, I. N. Plaksin, S. P. Zaitseva, G. A. Myasnikova, V. P. Starchik, V. I. Turnikova, G. N. Khazhinskaya, and R. S. Shaelayev (Inst. Mining Acad. Sci. U.S.S.R., Moscow). *Bull. Inst. Mining Met.* No. 611, 1-7(1957).—Microradiography has been used to study the distribution of radioactive matter on the surface of a mineral particle as well as to record natural radioactive elements in the mineral. For large mineral particles radiographic plates of the MK and MP type are used. For mineral particles of 500–150 μ with a well-defined cleavage the best results were obtained by contrast autoradiography with MK NIKFI plates (with 7–10 μ emulsion layer). For particles of the same size which do not have good cleavage, as well as smaller grains (−150 + 44 μ), the method of submerging the mineral particle into the nuclear emulsion is used. Before introducing the particles into it, the emulsion is softened by conditioning the plate over hot $H_2O$ (~80°) for 1 or 2 min. The particles of the minerals are poured from a small height so as to form an even layer on the softened emulsion and are left to develop. "Fluid autoradiography" is used for particles of up to 75 μ in size. This method utilizes a very thin and highly sensitive 1-μ emulsion layer on the surfaces of the studied objects. The mineral particles to be tested are coated with clay on the test glass. After air drying, the surface of the grains is then covered with a protective film to eliminate chem. interaction between the particle surface and the sensitive emulsion layer. The sensitive emulsion layer is formed by submerging the test glass into an alc. collodion soln. contg. Cd and ammonium bromides. After being dried in air the test glass is submerged in a soln. of $AgNO_3$. Development time is set according to the activity of the adsorbed reagent. To eliminate thin film and chem. interactions, the

PLAKSIN, I.N. ZAITSEVA, G.A.

12
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1 Rml
H-4E3L

collodion soln. temp. and that of the $AgNO_3$ should not be above 1°. Also, to do away with the veiling film enough $H_2SO_4$ to give pH 2.5 is added to the soln. of the $AgNO_3$. Grains of metallic Ag are formed in the warm soln. of $AgNO_3$ on sensitive centers in the emulsion layer which originate during the passage of β-particles. The development is conducted in a soln. of ferrous sulfate with the addn. of ale. and AcOH. Change of AcOH concn. helps to vary the size of Ag grains from 0.2 to 10 μ. When there is great activity in the prepn. it is convenient to reduce the grain size, while in the case of slight activity the study of the mineral surface is best carried out by using big grains of Ag. Radiometric and radiographic studies have also been made on flotation test products by using flotation reagents that contain radioactive isotopes. When the test was terminated the flotation products were filtered and washed in the filter to remove the reagent mechanically entrained between the mineral particles. The flotation products were then dried in air, and the av. sample of the product was subjected to radiometric measurements. The detn. of the activity of the samples was done by mica end-window counters. Comparison has been used as the basis for the study of the activity of the powders. For every set of reagent adsorption tests a standard of the same wt. and chem. content was prepd. contg. all the assigned amts. of radioactive isotope. Flotation studies over a no. of yrs. have shown that the use of added O gives pos. practical results. Radioactive isotopes introduced into the flotation reagents have shown that in a deoxidized medium the collectors are characterized by absence of collecting ability.

C. W. Schuck

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S/180/60/000/02/018/028
E111/E152

AUTHORS: Zaytseva, S.P., Myasnikova, G.A., Plaksin, I.N., Starchik, L.P., Tyurnikova, V.I., Khazhinskaya, G.N., and Shafeyev, R.Sh. (Moscow)

TITLE: Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

PERIODICAL: Izvestiya Akademii nauk SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1960, Nr 2, pp 120-132 (USSR)

ABSTRACT: This paper, which includes a survey, was presented by Plaksin at the general meeting of the Otdeleniye tekhnicheskikh nauk (Technical Sciences Division) AN SSSR (Academy of Sciences, USSR) on 27th October 1959. It points out that radioactive methods are particularly suitable for flotation research, where they have been applied by various Soviet research organisations including the Institut gornogo dela (Mining Practice Institute) AN SSSR (Acad.Sci. USSR) (Refs 1 and 2). The methods developed there are: contact microradiography, in which pulp particles are fixed on a cover glass which is then placed on photographic film; trace microradiography, in which the particles are immersed directly in

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Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

photographic emulsion; "wet" microradiography, based on the physical adsorption and maturing of silver crystals on active centres in emulsion in a silver-ion containing solution (developed by Gomberg for biological and metallographic use). Experiments with $S^{35}$-containing mercapto reagents showed that under normal conditions there was no direct and unique relation between the average density of the collecting-agent layer on the mineral and its flotability (Fig 1). Automicroradiography gave the first experimental proof of the unevenness of the coverage of particle by collecting agent (Fig 2); this work was supplemented by measurements of the electric properties of sulphide-mineral surfaces. The donor and acceptor regions were revealed (Fig 3) by polarization in a solution of $CuSO_4$ (or $AgNO_3$) and of KI (or $K_3[Fe(CN)_6]$), respectively. Microautoradiographic studies showed that reagent-distribution is uneven from particle to particle: only those particles which are slightly or not covered with reagent do not appear in the

Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

froth product (Fig 4). Using the microradiographic method the nonuniformity of various flotation-reagent absorptions by various minerals has been studied (Refs 10-14). With the aid of a special apparatus designed at the Institute by S.V. Bessonov (Ref 16), the influence of oxygen-content on flotation was investigated: some oxygen was found to be essential for flotation, the uniformity of reagent distribution on the froth-product particle surface rising with increasing oxygen concentration. The attachment of ethyl xanthate on some minerals, denied by some non-Soviet workers, was demonstrated using radioactive isotopes (Refs 23, 37 and 40). Investigation of these minerals (zinc blende and pyrrhotine) enabled the influence of their crystal-lattice defects on flotation to be shown. Fig 5a shows the effect of grams of pine oil per ton of mineral on recovery of pyrrhotine, and Fig 5b shows the corresponding effect on the absorption of various xanthates on the mineral. Fig 6 gives corresponding curves for addition of type DS

Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

detergent (mainly consisting of alkylaryl sulphonates): as the detergent feed rises more and more pyrrhotine grains have nonuniform xanthate distribution (Figs 7a and 7b give microradiographs for froth product particles for 200 and 1800 g of detergent per ton, respectively). Work with marked xanthate has shown that chromates do not displace that reagent from sulphide-mineral surfaces (Refs 26, 27) and, using $Cr^{51}$ the depressing action of chromate has been studied in relation to the amount added and the pH of the solution. Fig 8 shows dichromate adsorption by galenite as a function of pH; in Fig 9 the adsorption of chromate (A) and the recovery of froth fractions of galenite (curves 1, 4) and pyrite are shown as functions of potassium dichromate added (g/ton). Under acid conditions the Freundlich isotherm is followed in Fig 8; an alkaline solution adsorption stays virtually constant. In Fig 9 maximum adsorption for both minerals corresponds to minimum flotation recovery and conversely. The authors conclude that the depressive

Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

action of chromates on these minerals is due to the formation on the mineral surface of very insoluble medium or basic chromates which prevent adhesion of particles to bubbles. Marked tridecylamine has been used to investigate the reaction of a cationic collecting agent with minerals. Fig 10 shows the adsorption of the reagent from aqueous solution of its acetates on huebnerite, quartz, fluorite and calcite (curves 1, 2, 3 and 4, respectively). Recoveries of huebnerite and quartzite were compared with tridecylamine absorption by them for pH of 1.5-10.0. Flotation experiments were also carried out with mixtures of minerals using marked tridecylamine (100 g/ton) at pH = 1.5. Complete separation into two products was possible, with 41-67% of the reagent absorbed by the froth product and only 1-4% by the non-froth. Experiments were made on the firmness of adhesion of cationic collecting agents on non-sulphide mineral surfaces in which 1-150 ml volumes of distilled water were used to wash tridecylamine from mineral powders:

Use of Radioactive Isotopes and Nuclear Radiations in the Investigation of the Flotation Process

adhesion was strong on huebnerite and wolframite and less so on quartz, calcite and fluorite (Fig 11 gives absorption as functions of water volume). Microradiograms (Fig 12) show that tridecylamine is unevenly distributed on the huebnerite-particle surface. The authors give some examples of radioactive isotope applications. Plaksin and M.A. Goldin have proposed a pulp-density test device based on radioactive caesium. A special launder proposed by the authors has given good results in prolonged tests at the Yuzhnyy gornoobogatitel'nyy kombinat (Southern Mining Beneficiation Combine). Quantitative analysis of ore dressing products could be obtained by bombardment with alpha particles to cause neutron emission. This has been applied to fluorite ores, with a special installation for bombardment (from $Po^{210}$ on platinum foil) in which the powder enclosed in a container was placed on a table on a type SCh-3 neutron counter with the source above it. Working curves for the test elements are previously prepared. Particle size has

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Use of Radioactive and Nuclear Radiations in the Investigation of the Flotation Process

no appreciable effect and the fast neutrons emitted are not absorbed in the material. This procedure is simpler and safer than previously proposed (Refs 32, 33) methods. For aluminium-containing ores the authors propose the transmutation of $Al^{27}$ into $P^{30}$ by alpha particles from $Po^{210}$, the decay of the phosphorus giving high-energy positrons. This method, with suitable working curves, enables 0-100% $Al_2O_3$ to be determined sufficiently accurately without interference from other elements, and requires a sample of 1 g or less. There are 12 figures and 42 references, of which 30 are Soviet, 11 English and 1 is German.

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SUBMITTED: December 4, 1959

PLAKSIN, I.N.; ZAYTSEVA, S.P.; MYASNIKOVA, G.A.; TYURNIKOVA, V.I.; KHAZHINSKAYA, G.N.; MAKARENKO, M.G., red. izd-va; VOLKOVA, V.V., tekhn. red.

[Use of radioactive isotopes in studying flotation] Primenenie radioaktivnykh izotopov dlia issledovaniia protsessov flotatsii. Moskva, Izd-vo Akad. nauk SSSR, 1963. 97 p. (MIRA 16:5)

(Flotation) (Radioisotopes)

L 20089-65 EWP(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-10 RPL/
ACCESSION NR: AP4049926 ASD(m)-3 WW/JW/ S/0020/64/159/003/0630/0631
RM

AUTHOR: Yakubovich, V. S.; Myasnikova, G. V.; Braz, G. I.; Yakubovich, A. Ya.

TITLE: Synthesis of polybenzoxazole

SOURCE: AN SSSR. Doklady, v. 159, no. 3, 1964, 630-631

TOPIC TAGS: benzoxazole, polybenzoxazole synthesis, heat resistant polymer, dihydroxybenzidine, isophthalyl dichloride, isophthalic acid, terephthalic acid

ABSTRACT: To obtain polymers with high thermal stability, the authors studied the condensation of 3,3'-dihydroxybenzidine with isophthalyl dichloride. The process is a two-step reaction: 1) formation of a poly(hydroxy amide) at 0C and 2) formation of a polybenzoxazole through intramolecular ring closure at 350C. The authors synthesized poly-2,2'-(m-phenylene)-6,6'-dibenzoxazole:

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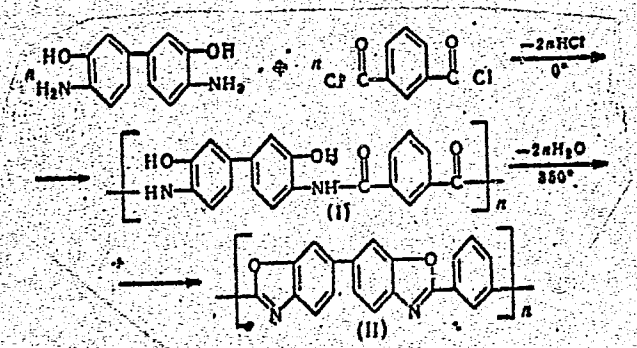
L 20089-65

ACCESSION NR: AP4049926



This polybenzoxazole, $(C_{20}H_{10}N_2O_2)_n$, is soluble in concentrated $H_2SO_4$ and insoluble in dimethyl sulfoxide, N-methylpyrrolidinone, and dimethylacetamide. The interesting fact observed was that solutions of (I) in $H_2SO_4$ reveal a distinct fluorescence. After heat treatment in vacuum (up to 500C and 0.01 mm Hg), (I) becomes insoluble in $H_2SO_4$. The above described synthesis was repeated with the use of the terephthalic dichloride resulting in the preparation of poly-(3,3'-

Card 2/3

L 20089-65
ACCESSION NR: AP4049926

dihydroxydiphenylterephthalamide). Orig. art. has: 1 figure.

ASSOCIATION: Fiziko khimicheskiy institut im. L. Ya. Karpova (Physico-chemical Institute)

SUBMITTED: 25Jun64 ENCL: 00 SUB CODE: OC, GC

NO REF SOV: 001 OTHER: 003 ATD PRESS: 3158

Card 3/3

BRAZ, G.I.; MYASNIKOVA, G.V.; YAKUBOVICH, A.Ya.; BAZOV, V.P.; SAKODYNSKIY, K.I.

Simultaneous trimerization of acetonitrile and trichloroacetonitrile. Zhur.ob.khim. 33 no.6:1939-1941 Je '63. (MIRA 16:7)

1. Fiziko-khimicheskiy institut imeni L.Ya.Karpova.
(Acetonitrile) (Polymerization)

L 17996-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6006981 (A) SOURCE CODE: UR/0190/66/008/002/0272/0277

AUTHOR: Braz, G. I.; Kardash, I. Ye.; Yakubovich, V. S.; Myagnikova, G. V.; Ardashnikov, A. Ya.; Oleynik, A. F.; Pravednikov, A. N.; Yakubovich, A. Ya. 34 B

ORG: Physical Chemistry Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Polybenzoxazoles: 1 preparation and thermal degradation 15, 44, 55

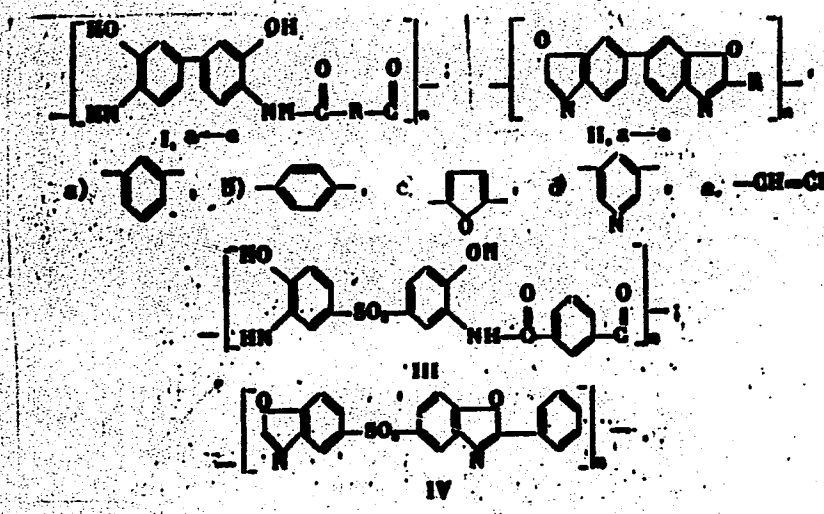
SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 2, 1966, 272-277

TOPIC TAGS: heat resistant polymer, polyoxamide, polybenzoxazole

ABSTRACT: New high-thermal-stability polybenzoxazoles have been prepared which withstand temperatures up to 520—530C in vacuum. Polyoxamide intermediate products (I, a—e) were prepared by low-temperature (~ 0C) polycondensation of 3, 3'-dihydroxybenzidine with isophthaloyl, terephthaloyl, 2,5-furandicarbonyl, 3,5-pyridinedicarbonyl, and fumacyl chlorides in dimethylacetamide. The polyoxamides were converted to the polybenzoxazoles (II, a-e) by thermal cyclodehydration. In addition, polycondensation of bis(4-hydroxy-3-aminophenyl) sulfone with isophthloyl chloride produced polyoxamide III which was converted to polybenzoxazole IV.

Card 1/3 UDC: 541.64+678.01:54+678.67

L 17996-66
ACC NR: AP6006981



where a)  b)  c)  d)  e) —CH=CH—



III



IV

All the polyoxamides except III were colored materials, and all were soluble in conc. $H_2SO_4$ and in some amide solvents. Polybenzoxazoles IIa and IIb are soluble in conc. $H_2SO_4$ and insoluble in amide solvents, even in the presence of LiCl; II c—e are insoluble in conc. $H_2SO_4$, apparently owing to cross-linking. The poly-

Card 2/3

L 12996-66
ACC NR: AP6006981

benzoxazoles show bright luminescence. Structures were confirmed by IR spectroscopy and elemental analyzing. Orig. art. has: 3 tables, 3 figures, and 4 formulas. [SM]

SUB CODE: 11/ SUBM DATE: 13Mar65/ ORIG REF: 001/ OTH REF: 009/ ATD PRESS: 4213

Card 3/3

MYASNIKOVA, I.A.

Effect of ascorbic acid and of vitamin A on the development of experimental cholester in atherosckerisus. Tr.Akad. med. nauk SSSR. Vol.20:103-107 1952. (CIML 25:5)

1. Of the Institute of Therapy (Director --A.L. Myasnikov, Active Member AMS USSR), Academy of Medical Sciences USSR.

MYASNIKOVA, K.I.(Khabarovsk)

Correspondence education of pharmacists. Apt.delo 4 no.4:51-52 Jl-Ag '55. (MLRA 8:10)

(PHARMACY, education,
in Russia, correspondence courses)

L 55850-65 EWT(m)/EWP(w)/EWA(d)/EWP(t)/T/EWP(b)/EWP(z)/EWA(c) Pad IJP(c)
JD/HW/JG

ACCESSION NR: AP5013122 UR/0370/65/000/002/0175/0179
669.017.12

29
28
D

AUTHOR: Kornilov, I. I.; Myasnikova, K. P.

TITLE: The phase diagram and some properties of nickel-rhodium alloys
27 21

SOURCE: AN SSSR. Izvestiya. Metally, no. 2, 1965, 175-179

TOPIC TAGS: nickel alloy, rhodium alloy, metal physical property, metal mechanical property, binary phase diagram
14

ABSTRACT: The phase diagram was determined using thermal, microstructural and x-ray analysis. Electrical resistance, microhardness and hardness at room and elevated temperatures (up to 1273°K) were investigated. The phase diagram shows a complete series of solid solutions extending from pure Ni to pure Rh. Electropolished samples of cast and heat treated specimens were used for the microstructural studies. Lattice parameter versus composition showed an upward deviation from Vegard's law. The deviation is similar to those (observed by other researchers) in Ni-Ru and Ni-Pd. Alloying Ni with Rh leads to an abrupt initial increase in resistivity and a lowering of the temperature coefficient. These quantities are

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L 55850-65

ACCESSION NR: AP5013122

maximum and minimum respectively at approximately 30% Rh. Hardness increases with Rh addition reaching a maximum at 55-60% Rh, near the composition of $NiRh_3$. An anomalously high hardness is noticed at 61% Rh, especially in the microhardness results. X-ray investigations were carried out to check for superlattice lines although none were found. The authors plan a more detailed study of the ordered structure. Hardness was observed on specimens given 30% and 60% deformation by rolling. Room temperature hardness for the 30% deformation showed an increase of about twice the undeformed value. Further deformation to 60% led to lower hardness and cracking in some specimens. Orig. art. has: 3 figures, 3 tables.

ASSOCIATION: none

SUBMITTED: 10Nov64 ENCL: 00 SUB CODE: MM

NO REF SOV: 005 OTHER: 002

Card 2/2

S/598/62/000/007/006/040
D267/D307

AUTHORS: Boriskina, N. G. and Myasnikova, K. P.

TITLE: Investigating the solubility of iron, manganese and copper in α-titanium

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i yego splavy. no. 7, Moscow, 1962. Metallokhimiya i novyye splavy, 61-67

TEXT: This research was carried out in order to fill the existing gap, the more so as Fe, Mn and Cu (also Cr and Si) have a considerable effect on the properties of multicomponent alloys used in industry. The various alloys of Ti with Fe, Mn and Cu were prepared by levitation melting in He, with subsequent heat treatment with or without deformation. The following results were obtained from the investigation of solubilities: (1) about 0.5 wt-% Fe dissolves at the temperature of the eutectoid transformation (585 - 600°C); in the temperature range 550 - 400°C the maximum solubility of Fe in α-Ti remains constant at ca. 0.4 wt-%; (2) the so-

Card 1/2

Investigating the solubility ...

lubility of Mn at the temperature of the eutectoid transformation (550°C) is 0.4 wt-% and remains constant at 0.3 - 0.4 wt-% in the range 550 - 400°C; (3) the maximum solubility of Cu in α-Ti is ca. 1.5% at the temperature of the eutectoid transformation (798°C) and does not vary in the interval 798 - 400°C. There are 5 figures and 1 table.

Card 2/2

L 14308-65 EPR/EWT(m)/EWP(b)/EWP(t) ASD(m)-3/AFTC(p) JD/JG/MLK
ACCESSION NR: AT4048048 S/0000/64/000/000/0030/0037

AUTHOR: Mikheyev, V. S.; Myasnikova, K. P. B

TITLE: The phase structure of alloys of the Ti-Al-Fe-Cr-Si system with a constant aluminum and silicon content (0 27 27 27 27 27

SOURCE: Soveshchaniye po metallurgii, metallovedeniyu i primeneniyu titana i yego splavov. 5th, Moscow, 1963. Metallovedeniye titana (Metallography of titanium); trudy* soveshchaniya. Moscow, Izd-vo Nauka, 1964, 30-37

TOPIC TAGS: alloy structure, alloy hardness, alloy phase composition, titanium alloy, aluminum alloy, iron alloy, chromium alloy, silicon alloy

ABSTRACT: The series of strong alloys formed by chromium, iron, silicon, and boron on a titanium-aluminum base has been well-studied. The present work continues the experiments of Kornilov on the tetrahedral Ti (0.3% Si)-Al-Fe-Cr system, but with the amount of aluminum held constant at 7.5% by weight and varying the amounts of iron and chromium from 3:1 to 1:1 and 1:3, while keeping their total weight between 0.2 and 30%. Materials used for the experiment were sponge titanium, electrolytic chromium, silicon, aluminum, and iron with carbon, manganese, phosphorus, and sulfur impurities. Samples weighing 20 g were prepared in an arc

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L 14308-65
ACCESSION NR: AT4048048

furnace in an argon atmosphere with a loss of below 0.5%. The samples were cast in rods 7 mm in diameter. All thermal operations were carried out in sealed, evacuated quartz ampoules. The samples were heated to temperatures of 1100, 1000, 800, and 500C and held there for 10, 15, 300, and 750 hours, respectively. The samples were then subjected to microscopic and X-ray analyses. Their hardness was measured by Vickers' method, and their electrical resistance was determined by means of a potentiometer. The results of all these measurements were carefully plotted on graphs showing the phase equilibria boundaries as a function of temperature for each composition, and the electrical resistance and hardness as functions of temperature and composition. (See Figs. 1 and 2 of the Enclosure). Orig. art. has: 1 table, 10 graphs, and 10 photomicrographs.

ASSOCIATION: none

SUBMITTED: 15Jul64 ENCL: 02 SUB CODE: MM

NO REF SOV: 013 OTHER: 002

Card 2/4

L 14308-65
ACCESSION NR: AT4048048

ENCLOSURE: 01

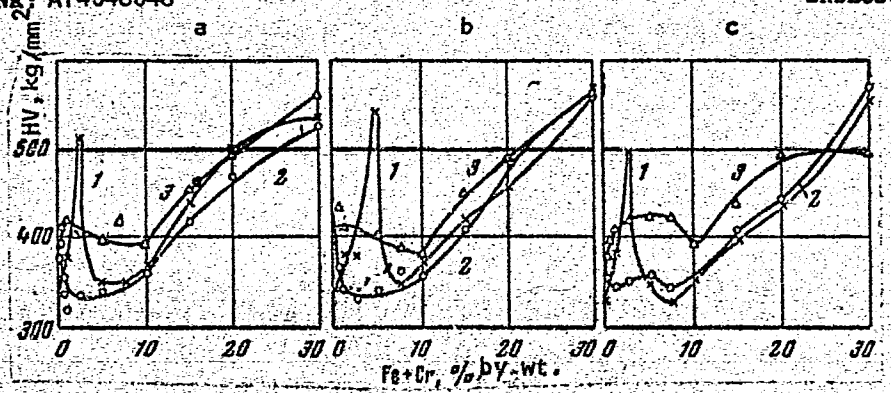


Fig. 1. Dependence of alloy hardness on alloy composition and temperature:
a) section I, Fe:Cr = 3:1; b) section II, Fe:Cr = 1:1; c) section III, Fe:Cr = 1:3.
1 - alloys quenched from 1000C; 2 - alloys quenched from 800C; 3 - alloys annealed at 500C.

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L 14308-65
ACCESSION NR: AT4048048

ENCLOSURE: 02

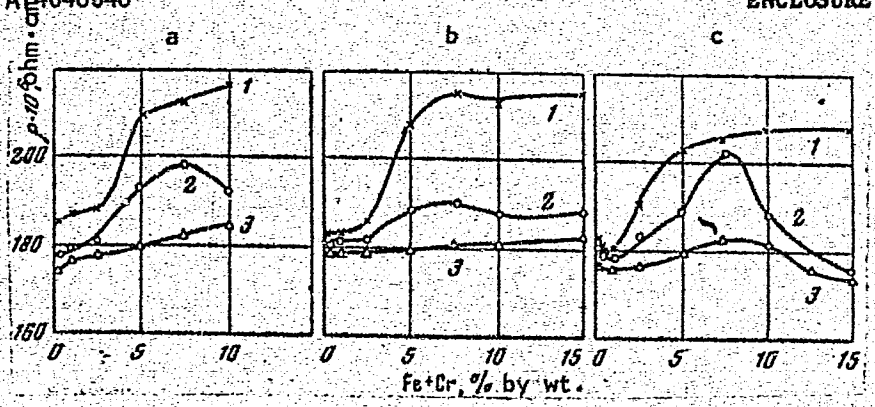


Fig. 2. Dependence of alloy electrical resistivity on alloy composition and temperature:
a), b), c) as in Fig. 1 above; 1, 2, 3 as in Fig. 1 above.

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ACCESSION NR: AP4029839 S/0279/64/000/002/0156/0160

AUTHOR: Mikheyev, V. S. (Moscow); Chernova, T. S. (Moscow); Myasnikova, K. P. (Moscow); Markovich, K. P. (Moscow)

TITLE: On the composition and structure of the intermetallic compound phase in alloys of the Ti-Al-Cr-Fe-Si-B 6 component system

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 2, 196[illegible], 156-160

TOPIC TAGS: titanium base alloy, aluminum containing alloy, chromium containing alloy, iron containing alloy, silicon containing alloy, boron containing alloy, alloy composition, phase composition, intermetallic compound phase

ABSTRACT: To determine the nature of intermetallic phase present in six-component aluminum-base alloys, the authors studied two series of alloys containing 0.5-15.0% chromium, 0.5-15.0% iron, 0.5-15.0% silicon, 0.01% boron. One series did not contain aluminum, and the other had a 3 and 6 wt.-% aluminum content. The alloys were melted from TG-00 sponge titanium, A-000 aluminum, KR-0 reduced technical iron, electrolytic chromium, and chromium-boron master alloy containing 10% of the latter. The alloys were melted in an arc vacuum furnace. The alloys were studied by means of microstructural and x-ray structural analyses after an-

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ACCESSION NR: AP4029839

nealing at temperatures of 1200, 1100, 800, and 500°C over periods of 4, 25, 200, and 500 hours, respectively. In evaluating the results the authors concluded that the phase in question is $Ti_5Si_3$ precipitating along the line of secondary crystallization from the beta-titanium-base solid solution. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: none

SUBMITTED: 16Sep63 ENCL: 00 SUB CODE: MM

NO REF SOV: 004 OTHER: 004

Card 2/2

L 8400-65 EWT(m)/EWP(q)/EWP(b) Pad ASD(m)-3/AS(mp)-2 JD/HW/JG B

ACCESSION NR: AP4043925 S/0279/64/000/004/0159/0165

AUTHOR: Kornilov, I. I. (Moscow); Myasnikova, K. P. (Moscow)

TITLE: Phase diagram and some physical properties of alloys of the nickel-ruthenium system

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 4, 1964, 159-165

TOPIC TAGS: nickel ruthenium system, nickel ruthenium alloy, alloy phase diagram, alloy structure, alloy microhardness, alloy electric resistivity, alloy microstructure

ABSTRACT: The phase composition, microstructure, hardness, microhardness, and electric resistivity of 26 binary Ni-Ru alloys containing from 0 to 100% Ru were investigated. The alloys were melted from 99.99% pure Ni and 99.98% pure Ru in an electric arc furnace in argon under a pressure of 300 mm Hg. After a 10—30% reduction, the alloy ingots were homogenized at 1673K for 5 hr, and then heat-treated to suit individual tests. During reduction the as-cast alloys with up to 50% Ru did not crack, while those with more than 50% Ru did crack.

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L 8400-65
ACCESSION NR: AP4043925

The phase diagram of the Ni-Ru system (see Fig. 1 of the Enclosure) shows that crystallization of the melt proceeds according to a peritectic ($\beta + L = \alpha$) reaction at 1823 ± 10K. At this temperature, the solubility of Ru and Ni in each other is at a maximum of 41 and 53 at%, respectively; the corresponding figures for 873K are 7.0 and 5.0 at%. The lattice constants of Ni and Ru solid solutions change linearly with the concentration of the second component. The lattice constant of the α-solid solution increases with increased Ru content; the lattice constants of the β-solid solution decrease with increased Ni content, although the c/a ratio remains practically constant. No phase transformations occur in the Ni-Ru alloys in the solid state. Microhardness of the α- and β-solid solutions increases with increased content of the alloying elements, regardless of the quenching temperature. In the two-phase region, the microhardness of each phase remains constant for a given quenching temperature. Changes in the specific resistivity and hardness of the alloys, depending on the alloying element concentration and temperature, follow the pattern for the systems with limited solid solutions. Orig. art. has: 6 figures and 2 tables.

ASSOCIATION: none

Card 2/4

L 8400-65
ACCESSION NR: AP4043925 0

SUBMITTED: 25Feb64 ATD PRESS: 3101 ENCL: 01

SUB CODE: MM NO REF SOV: 005 OTHER: 001

Card 3/4

L 8400-65

ACCESSION NR: AP4043925

ENCLOSURE: 01

0

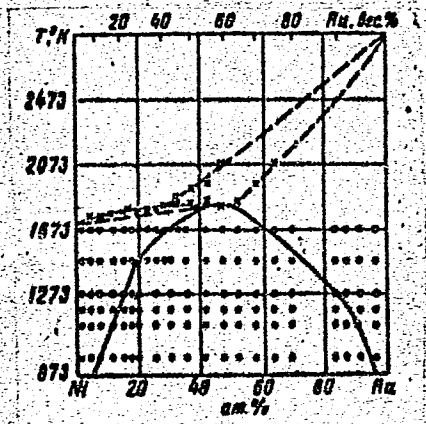


Fig. 1. Phase diagram of the Ni-Ru system

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L 24244-66 EWT(1)/ETC(f)/EPF(n)-2/EWG(m)/EWA(d)/EWA(1) WW/GS

ACC NR: AT6006931 SOURCE CODE: UR/0000/65/000/000/0441/0451

46
B+1

AUTHOR: Myshkova, L. I.

ORG: Leningrad State University im. A. A. Zhdanov (Leningradskiy gosudarstvennyy universitet

TITLE: Investigation of heat fluxes in break-away zones

SOURCE: Teplo- i massoperenos. t. II: Teplo- i massoperenos pri vzaimodeystvii tel s potokami zhidkostey i gazov (Heat and mass transfer. v. 2: Heat and mass transfer in the interaction of bodies with liquid and gas flows). Minsk, Nauka i tekhnika, 1965, 441-451

TOPIC TAGS: turbulent heat transfer, heat flux, laminar heat transfer, laminar boundary layer, turbulent boundary layer

ABSTRACT: The aim of the work was an investigation of heat transfer processes in the bottom sections of bodies moving at a high supersonic velocity. The investigation was based on the following assumptions: 1) the flow in the mixing zone is laminar (turbulent) and is described by the corresponding equations for the laminar (turbulent) boundary layer; 2) the statistical pressure everywhere in the bottom region is constant, with the exception of cases where "interaction" is taken into account; 3) the temperature of the gas is everywhere constant in the

Card 1/2

L 24244-66

ACC NR: AT6006931 O

stagnation zone, and is equal to the temperature at the null line in the mixing zone. The following expression was used for investigation of heat transfer in the bottom zone:

$$Nu_x = \frac{\alpha x}{\lambda} = -\lambda \left(\frac{\partial \bar{T}}{\partial y}\right)_{y=y_0} \frac{1}{\bar{T}_d - 1} \frac{x}{\lambda},$$

where $\alpha$ is the heat transfer coefficient; $\lambda$ is the heat conductivity coefficient; $y_0$ is the ordinate of the lower limit of the mixing zone. Results are given in a series of curves. Orig. art. has: 17 formulas and 5 figures.

SUB CODE: 20/ SUBM DATE: 09Nov65/ ORIG REF: 005/ OTH REF: 001

Card 2/2 dda

ISAKOVA, N.A.; POLIKARPOVA, V.F.; MOGILEVSKAYA, R.A.; REMIZ, Z.K.; BELOVA, G.A.; FIKHTENGOL'TS, V.S.; GAMONOV, I.V., red.; MYASNIKOVA, L.B., red.

[Analysis of the products of the synthetic rubber industry] Analiz produktov proizvodstva sinteticheskikh kauchukov. Moskva, Khimiia, 1964. 315 p. (MIRA 17:12)

1. Leningrad. Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka.

GRIGOROV, O.N., prof.; KARPOVA, I.F.; KOZ'MINA, Z.P.; TIKHOMOLOVA, K.P.; FRIDRIKHSBERG, D.A.; CHERNOBEREZHSKIY, Yu.M.; MYASNIKOVA, L.B., red.

[Manual on laboratory work in colloid chemistry] Rukovodstvo k prakticheskim rabotam po kolloidnoi khimii. Izd.2., perer. i dop. Moskva, Khimiia, 1964. 330 p. (MIRA 18:3)

S/204/63/003/001/003/013
E075/E436

AUTHORS: Fel'dblyum, V.Sh., Komissarova, G.P., Myasnikova, L.D., Kryukov, S.I., Farberov, M.I.

TITLE: The synthesis of isoprene from propylene. 1. Analysis of aluminium alkyls in the process of dimerization of propylene

PERIODICAL: Neftekhimiya, v.3, no.1, 1963, 13-19

TEXT: The aim of the work was to investigate the methods for the analysis of activity and composition of aluminium alkyls. The analysis consists of determining the ratio of the "active" aluminium in $AlR_3$, where R - an organic radical, to total Al. The methods used to determine the "active" Al were: 1) the indicator method of Razuvayev and Grayevskiy, 2) the Ziegler ammoniacal method, 3) the Tepenitsyna-Farberova oxidation-reduction method, 4) decomposition of $AlR_3$ with $H_2O$ with the subsequent measurement of the evolved gas volume. The first two methods gave correct values of the activity but are tedious in operation. The authors improved the Ziegler method by using di- or trimethylamine in place of $NH_3$, which greatly decreased the analysis time. Examination of

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S/204/63/003/001/003/013
E075/E436

The synthesis of isoprene ...

$AlR_3$ used several times for the catalysis of the dimerization of propylene showed that the first portion of the higher hydrocarbons (byproducts) forming during the reaction attach themselves to Al, or displace a part of the lower alkyl groups in $AlR_3$. Thus $AlR_3$ used several times as catalyst is a complex mixture of aluminium alkyls, the molecules of which contain propyl and isobutyl groups and at least one $C_9 - C_{12}$ group. There are 2 figures and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut monomerov dlya SK
Yaroslavskiy tekhnologicheskiy institut
(Scientific Research Institute of Monomers for
Synthetic Rubber, Yaroslavl Technological Institute)

SUBMITTED: June 9, 1962

Card 2/2

FEL'DBLYUM, V. Sh.; MYASNIKOVA, L.D.; KRYUKOV, S.I.; FARBEROV, M.I.

Synthesis of isoprene from propylene. Neftekhimiia 4 no.2: 257-261 Mr-Ap'64 (MIRA 17:8)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka, Yaroslavl' i Yaroslavskiy tekhnologicheskiy institut.

KRYUKOV, S.I.; KUT'IN, A.M.; KOMISSAROVA, G.P.; MYASNIKOVA, L.D.; FARBEROV, M.I.

Dimerization of propylene by means of aluminum alkyls. Izv. vys. ucheb. zav.; khim. i khim. tekh. 7 no.5:821-826 '64 (MIRA 18:1)

1. Yaroslavskiy tekhnologicheskiy institut. Kafedra tekhnologii osnovnogo organicheskogo sinteza i sinteticheskogo kauchuka.

L 54964-65 EWT(m)/EWG(m) RWH/RM

ACCESSION NR: AP5012109 UR/0191/65/000/005/0054/0055
661.183.123

12 B

AUTHOR: Shaburov, M.A.; Myasnikova, L. G.; Belonogova, Yu. I.

TITLE: Effect of the degree of cross linking of anion exchange resins on their thermal stability

SOURCE: Plasticheskiye massy, no. 5, 1965, 54-55

TOPIC TAGS: anion exchange resin, resin heat stability, polymer structure, resin cross linkage, divinylbenzene copolymer, polymer degradation, deamination

ABSTRACT: The paper reports data on the influence of the content of divinylbenzene (DVB), present in the anion exchanger AV-17 (OH form) in amounts of 2, 6, and 16%, on the stability of this resin to $H_2O$, methanol, ethanol, and their aqueous solutions at 100C. The decline in the exchange capacity of the resins was found to be a function of the heating time in all cases. Heat treatment causes simultaneous reactions of deamination and degradation of strongly basic groups; the average rates of these reactions were calculated and compared. As the DVB content increases, the space lattice of the resin acquires a more rigid

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ACCESSION NR: AP5012109

0

structure, swelling decreases, and the active groups become more exposed; this causes an increase in their electrostatic repulsion, and a weakening of the bond with the framework of the resin. In ethanol and methanol, the rate of the deamination is substantially higher than in water; this is caused by the reaction of the amino groups with these media. It is suggested that the thermal stability of the resin will be higher in inert nonpolar solvents than in polar ones, but the resin will lose its water of hydration, which will cause the active groups to come closer together; this will result in a weakening of the C-N bond and in the creation of conditions conducive to the detachment of the amino groups. Orig. art. has: 2 tables.

ASSOCIATION: None

SUBMITTED: 00 ENCL: 00 SUB CODE: GC, OC

NO REF SOV: 005 OTHER: 004

Card 2/2

MYASNIKOVA, L. K.: Master Med Sci (diss) -- "On the functiona. state of the higher portions of the brain of children suffering from ascaridosis". Khar'kov, 1959. 11 pp (Khar'kov State Med Inst), 200 copies (KL, No 11, 1959, 12)

L 60159-65 EWT(m)/EPF(c)/EWG(v)/EWP(j)/T Pc-4/Pe-5/Pr-4 JAJ/RM

ACCESSION NR: AP5016507 UR/0190/65/007/006/1041/1044

678.01:53+678.675

AUTHORS: Zhurkov, S. N.; Marikhin, V. A.; Myasnikova, L. P.; Slutsker, A. I.

TITLE: Electron microscopic study of the orientation of polycapramide

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 6, 1965, 1041-1044, insert facing p. 1042, and top half of insert facing p. 1043

TOPIC TAGS: electronmicroscopy, polycapramide, polymer, tensile strength, tensile stress, resin, caprone / JEM 5Y electron microscope

ABSTRACT: The transformation of the original spherulite structure of caprone into an oriented structure was studied in order to elucidate the disorder → order processes in polymers subjected to a longitudinal stress. The polymer studied was caprone (polycaprolactam) prepared from a solution of caprone in formic acid. The investigation was carried out on an electron microscope of type JEM-5Y. The specimens were elongated at room temperature to 35, 75, and 230% of their original length. The direction of elongation on the electron microscope photographs was determined after S. N. Zhurkov, V. A. Marikhin, L. P. Romankova, and A. I. Slutsker (Vysokomolek. soyed., 4, 2821, 1962). On the basis of electron

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L 60139-65

ACCESSION NR: AP5016507

2

microscope pictures it is concluded that during elongation of the specimen the spherulite structure breaks down and a new fibrillar structure is generated which gradually spreads out over the bulk of the polymer. Orig. art. has: 3 photographs and 1 illustration.

ASSOCIATION: Fiziko-tekhnicheskiy institut im. A. F. Ioffe (Physico-Technical Institute) 44

SUBMITTED: 20Jul64 ENCL: 00 SUB CODE: EC,OC

NO REF SOV: 007 OTHER: 007

Card 2/2

S/081/63/000/004/017/051
B166/B186

AUTHORS: (17) Kalabina, A. V., Myasnikova, L. S., Kolmakova, E. F., Sheetakova, I. R., Pavlova, M. P., (18) Kalabina, A. V., Prileshayeva, Ye. N., Yakovleva, Z. I.

TITLE: Studies in the field of synthesis and conversions of vinylaryl esters. No. 17. Synthesis and certain properties of α,β-dibromethylaryl esters. No. 18. The addition of mercaptans to vinyl esters of the aromatic series

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1963, 238, abstract 4Zh122 (Izv. Fiz.-khim. n.-i. in-ta pri Irkutskom un-te, v. 5, no. 1, 1961, 193 - 206, 225 - 237)

TEXT: (17) Bromination of the vinyl esters of phenol (I), o-cresol (II), n-tert-butylphenol and thymol (III) in $CCl_4$ gave the respective α,β-dibromethyl esters (IV - VII), which have lachrymatory properties; without the solvent partial polymerization takes place. IV - VII probably exist in the form of two tautomeric forms $CH_2BrCHBrOAr \rightleftharpoons [CHBr{=}CHO(H)Ar]^+Br^-$, as ionic Br is easily back-titrated by aqueous solutions of NaOH and $AgNO_3$.

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Studies in the field of... S/081/63/000/004/017/051
B166/B186

whilst IV - VII themselves are smoothly converted into β-bromvinyl esters (BVE) when vacuum distilled, yield 80 - 85%. Hydrolysis of IV - VII proceeds in two distinct stages: first of all under the action of $H_2O$ cold there is dissociation of the weak oxonium complex, and the BVE which forms only splits with long boiling in an acid medium. Into a solution of 0.14 moles I in 40 ml $CCl_4$ at -5°C (3 - 8°C inside the flask) were stirred, over a period of 1.5 - 2 hrs, 0.15 moles dry $Br_2$ in 20 ml $CCl_4$, and IV, $C_8H_8OBr_2$, was distilled off, yield 97.2%, b.p. 129 - 130°C/12 mm Hg, $n^{20}D$ 1.5849, $d_4^{20}$ 1.7418, fumes in air. 3 g IV and 50 ml water were shaken in a closed bottle at 45 - 50°C for 5 hrs, this was extracted with ether, and 1.19 g phenol BVE (VIII) was separated by distillation, b.p. 100 - 102°C/10 mm Hg, $n^{20}D$ 1.5750, as well as 1.405 g IV. 1 g VIII and 25 ml 5% $H_2SO_4$ were heated, stirring at ~100°C for 6 - 7 hrs; this was neutralized with alkali and extracted with ether; after evaporating, $BrCH_2CHO$ was separated from the residue in the form of a semicarbazone; the alkaline layer was treated with 10% $H_2SO_4$, $C_6H_5OH$ was extracted with ether. V - VII were synthesized under similar conditions

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Studies in the field of...

(below are given: the substance, yield %, b.p. in °C/mm Hg, $n^{20}D$, $d_4^{20}$): V, 97.6, 133 - 134/14, 1.5718, 1.5662, (BVE, b.p. 145 - 148°C/35 mm Hg, $n^{20}D$ 1.5662); VI, 96.1, 126 - 127.3, 1.5450, 1.4909; VII, 97.5, 149 - 150.4, 1.5548, 1.4595.

(18) The addition of ethyl- and butylmercaptans to I - III was achieved by ionic and radical mechanisms, leading to $CH_3CH(SR)OAr$ (IX) and $RSCH_2CH_2OAr$ (X) respectively. Substitutes of the first kind in the benzene ring considerably simplify radical addition. The thioacetals produced are easily hydrolysed with dilute $H_2SO_4$ and split quantitatively when X is treated with $HgCl_2$, which proves their structure to be that of β adducts; under these conditions IX is highly stable. 0.1 mole I, 0.1 mole $C_2H_5SH$ and 0.02 g azodiisobutyrodinitrile were heated in a sealed ampoule at 90 - 100°C for 24 hrs, and X (R = $C_2H_5$, Ar = $C_6H_5$), $C_{10}H_{14}OS$, was distilled, yield 85.02%, b.p. 123.5°C/3 mm Hg, $n^{20}D$ 1.5433, $d_4^{20}$ 1.0543. The other X were produced under similar conditions (below are given: R, Ar, the gross formula, yield %,

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Studies in the field of...

b.p. in °C/mm Hg, $n^{20}D$, $d_4^{20}$); $C_4H_9$, $C_6H_5$, $C_{12}H_{18}OS$, 97.20, 141.0 - 142.0/2, 1.5313, 1.0118; $C_2H_5$, o-$CH_3C_6H_4$ (Xa), $C_{11}H_{16}OS$, 97.19, 139.0/7, 1.5394, 1.0352; $C_2H_5$, 3-$CH_3$-5-iso-$C_3H_7C_6H_3$, $C_{12}H_{22}OS$, 98.61, 166.0 - 167.0/12, 1.5270, 1.0023. A weak stream of dry $SO_2$ was bubbled for 1 - 2 min into a cooled ampoule containing 0.1 mole I and 0.1 mole $C_2H_5SH$; this was allowed to stand for 3 - 4 hrs and then neutralized with dry $H_2CO_3$, giving IX (R = $C_2H_5$, Ar = $C_6H_5$) (IXa), $C_{10}H_{14}OS$, yield 68.5%, b.p. 62 - 63.00C/3 mm Hg, $n^{20}D$ 1.5365, $d_4^{20}$ 1.0436. A mixture of 0.2487 g IXa and an excess of 20% solution of $HgCl_2$ in alcohol was allowed to stand for 2 - 3 hrs, methyl orange was added and 97.52% HCl was found by titration with 0.1 N NaOH. A stream of $SO_2$ was bubbled for 0.5 - 1 min into a mixture of 0.1 mole II and 0.15 mole $C_2H_5SH$, after 20 - 25 min IX was separated by distillation (R=$C_2H_5$, Ar = o-$CH_3C_6H_4$), $C_{11}H_{16}OS$, yield 60.0%, b.p. 74 - 75°C/12 mm Hg, $n^{20}D$ 1.5250, $d_4^{20}$ 1.0084, as well as Xa (in view of traces of $O_2$), yield 3.1 g. For the previous communication see RZhKhim, 1961, 5Zh101. [Abstracter's note: Complete translation.]

Card 4/4

GAIN, M.I.; MYASNIKOVA, M.L.

How to improve medical service among workers and employees of industrial enterprises of the Republic. Zdrav. Bel. 7 no.6:3-6 Je '61.
(MIRA 15:2)

1. Nachal'nik Upravleniya lechprofpomoshchi Ministerstva zdravookhraneniya BSSR (for Gain). 2. Starshiy inspektor lechprofpomoshchi Ministerstva zdravookhraneniya BSSR (for Myasnikova).
(WHITE RUSSIA--MEDICINE, INDUSTRIAL)

MYASNIKOVA, M.M., insh.

Knit fabrics with casein fiber content. Tekst.prom. 20 no.6: 87-88 Je '60. (MIRA 13:7)
(Textile fibers, Synthetic)
(Casein)

MYASNIKOVA, M. N.

Myasnikova, M. N. "On the problem of the pathogenesis and treatment of thrombophlebitis," Trudy Kuybyshevsk. gos. med. in-ta, Vol. I, 1948, p. 154-61

SO: U-2888, Leptopis Zhurnal'nykh Statey, No..1, 1949

MYASNIKOVA, M.N.

Clinical picture and diagnosis of diaphragmatic hernias. Klin. med., Moskva 31 no.4:45-46 Apr 1953. (CLML 24:4)

1. Of the Hospital Surgery Clinic of Ryazan' Medical Institute imeni I. P. Pavlov and Ryazan' Oblast Hospital imeni Semashko.