L 54477-65

ACCESSION NR: AT5013637

crystal violet. With arsenazo II and III, crystal violet is required in weakly acidic solutions, and rhodamine B in more acidic ones (0.1 - 6 M HCl). The results are similar to those obtained for curium by V. I. Kuznetsov, T. G. Akimova, and O. P. Yeliseyeva (Radiokhimiya, 4, 2, 188, 1963); heavier organic molecules of the precipitant (arsenazo) are more suitable for the coprecipitation. The general pattern of coprecipitation of Pa present in solutions in various states is presented (see Fig. 1 of the Enclosure). Depending upon the species in which Pa exists in the solution, the most complete coprecipitation is insured by the mechanism which is most suitable for the given species of Pa. Orig. art. has:

ASSOCIATION: None

SUBMITTED: 25Nov63 ENCL: 01 SUB CODE: IC, GC

NO REF SOV: 016 OTHER: 018

Card 2/3

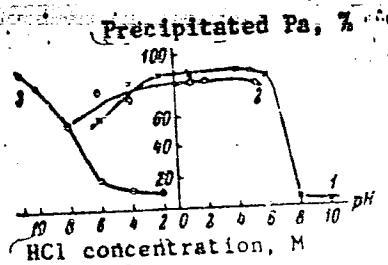

Figure 1. Coprecipitation of protactinium in the form of salts of chloride [illegible] protactinium 6 x 10^{-5} M, hydrochloride 0.1 %, tannin [illegible]; 2 - tannin + indoline hydrochloride, arsenazo II + rhodamine B /3-6 M HCl/; 3 - indoline hydrochloride.

Card 3/3

KUZNETSOV, V.I.; GORSHKOV, V.V.; AKIMOVA, T.G.; NIKOL'SKAYA, I.V.

Organic coprecipitants. Report No.21: Use of indifferent coprecipitants in the determination of uranium in natural waters. Trudy Kom. anal. khim. 15:296-305 '65. (MIRA 18:7)

AKIMOVA, T.I.; VASIL'CHENKO, V.N.

Selecting efficient parameters for fabric filling. Izv.vys. ucheb.zav.; tekh.tekst.prom. no.6:80-85 '59.
(MIRA 13:4)

1. Tashkentskiy tekstil'nyy institut, Tashkentskiy tekstil'nyy kombinat.
(Weaving)

83641

S/081/60/000/015/008/014
A006/A001

18.8300

Translation from: Referativnyy zhurnal, Khimiya, 1960, No. 15, p. 82, # 60701

AUTHORS: Rozenfel'd, I.L., Pavlutskaya, T.I., Zhigalova, K.A., Akimova, T.I.

TITLE: Methods of Electrochemical and Corrosion Investigations in Thin Electrolyte Layers

PERIODICAL: Tr. In-ta fiz. khimii AN SSSR, 1959, No. 7, pp. 22-40

TEXT: Information is given on methods and devices used to investigate the electrochemical and corrosion behavior of metals under thin electrolyte layers. It is exemplified on Cu in o.1 n. solution of NaCl, Na_2SO_4 and HCl and on Fe in 0.1 n. NaCl that a reduced thickness of the electrolyte layer entails an acceleration of the cathode process on account of facilitated O_2 reduction. A noticeable inhibition of the anode process was not observed. The authors investigated the nature of potential distribution, current density and resistivity on the electrode surfaces and the correlation of the polarization and ohmic resistivity R (ohm.). The corrosion process under thin electrolyte layers does almost not depend on R(ohm) and is mainly determined by electrode polarization, principally of the cathode. It was established that higher corrosion

34882

S/081/62/000/003/042/90
B156/B101

18.8310

AUTHORS: Persiantseva, V.P., Rozenfel'd, I. L., Novitskaya, M.A., Akimova, T.I., Labutin, A.L.

TITLE: Mechanism by which volatile inhibitors work

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 3, 1962, 327-328, abstract 3Ж211 (Vestn. tekhn. i ekon. inform. N.-i in-t tekhn.-ekon. issled. Gos. kom-ta Sov. Min. SSSR i khimii, no. 2, 1961, 68-76

TEXT: Research into the protective properties of a large number of compounds used as volatile corrosion inhibitors (VCI) has revealed a number of VCI which are effective at protecting steel and nonferrous metals from corrosion (a table is included). Study of the electrochemical behavior of steel in the presence of VCI has shown that a potential shift characteristic of adsorption of VCI by the metal surface takes place. The effects of four VCI are examined in detail; these are benzyl amine, morpholine, dicyclohexyl amine nitrite, and cyclohexyl amine carbonate. It has been found that VCI is adsorbed in the form of molecules or ions

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S/081/62/000/003/042/000
B156/B101

Mechanism by which ...

which develop as a result of hydrolysis in an aqueous film of electrolyte (complex organic cations, hydroxyl groups, or acid residue). These adsorbed groups in some cases only retard the rate of anodic reaction, and in other cases the rates of both anodic and cathodic reactions. It is pointed out that the properties which should be used as the basis on which to gauge the effectiveness of VCI are: the vapor pressure, the adsorption capacity and bond strength of the VCI or protective group and the metal surface, and also the degree to which electrochemical reactions, which govern the corrosion process, are retarded by the VCI. [Abstracter's note: Complete translation.]

Card 2/2

GORELYSHEV, N.V., dots., kand.tekhn.nauk; AKIMOVA, T.N., student;
PIMENOVA, I.I., student

Mechanical properties of bitumen in thin layers. Trudy MADI no.23:42-54 '58. (MIRA 12:1)
(Asphalt concrete) (Bitumen)

AKIMOVA, T.V.; GARKAVI, M.I.: SHAMSUTDINOV, K.Sh.

Aniline dying of sheepskins. Patent U.S.S.R. 77,911, Dec.31, 1949.
(CA 47 no.19:10239 '53)

AKIMOVA, T.V., inzhener.

Spray gun dyeing of furs. Leg.prom. 14 no.2:41-42 F '54. (MLRA 7:5)
(Fur)

AKIMOVA, V.

Lightening the work of water-transportation workers. NTO 2 no.1:26 Ja '60. (MIRA 13:5)

1. Uchenyy sekreta' basseynovogo pravleniya Nauchno-tekhnicheskogo obshchestva vodnogo transporta, Leningrad.
(Shipping--Technological innovations)

L 27255-66 EWP(j)/EWT(m)/ETC(m)-6 RM/WW

ACC NR: AP6009932 SOURCE CODE: UR/0413/66/000/004/0149/0149

AUTHORS: Arav, R. I.; Akimova, V. A.; Popova, I. I.

ORG: none

TITLE: Method for producing thermal insulating material. Class 80, No. 179214

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 4, 1966, 149

TOPIC TAGS: insulating material, thermal insulation

ABSTRACT: This Author Certificate presents a method for producing thermal insulating materials from a mixture of magnesium trihydrocarbonate and asbestos heat-treated at 120—150C. To increase the degree of thermal stability of the material and to decrease its density, the mixture of magnesium trihydrocarbonate and asbestos (after the heat treatment) is subjected to additional baking at 550—600C for 4—6 hours.

SUB CODE: 11/ SUBM DATE: 04Apr64

Card 1/1 UDC: 666.941.2

PILITSYN, Mikhail Varfolomeyevich; KISELEV, Anatoliy Konstantinovich; BUROV, Vasiliy Sergeyevich; BELIK, Ivan Timofeyevich; AKIMOVA, V.G., red.

[Diamond grinding and lapping of hard-alloy cutting tools at the Voskov Plant. Grinding of ferrite articles with synthetic-diamond wheels on the MI bond; practice of the "Il'ich" Abrasive Plant] Almaznaia zatochka i dovodka tverdosplavnogo rezhushchego instrumenta na zavode im. Voskova. Shlifovanie ferritovykh izdelii krugami iz sinteticheskikh almazov na sviazke MI; opyt abrazivnogo zavoda "Il'ich" [By] V.S.Burov i I.T.Belik. Leningrad, 1965. 17 p. (MIRA 18:4)

BUROV, Vadim Sergeyevich; TATARKIN, Leonid Tikhonovich; DERGACHEV, Vladimir Andreyevich; AKIMOVA, V.G., red.

[Lapping with diamond pastes. Using diamonds in honing; practice of the "Il'ich" Abrasives Plant] Dovodka almaznymi pastami. Primenenie almazov pri khoningovanii; opyt abrazivnogo zavoda "Il'ich." Leningrad, 1965. 17 p. (MIRA 18:5)

AKIMOVA, V. V.

"The Action of Penicillin and Streptomycin upon Association of Bacteria in Anaerobic Infections," Khirurgiya, No.1, 1949

Inst. Epidemiol., Microbiol. & Infectious Diseases im. Gamalaye, AMS USSR

USSR/Microbiology - Microorganisms Pathogenic to Humans and Animals. F-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, 43343

Author : Terkhanova, I.O., Konokova, A.P., Akimova, V.V.
Inst : -
Title : Titrating Erythrogenic Scarlet Fever Toxin by the Quantitative Reaction of Complement Fixation.

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiologii, 1957, No 2, 26-32.

Abstract : A method is described for titration of erythrogenic scarlet fever toxin using RSK (Blood serum reaction) based on determination of the equivalence point in the toxin-antitoxin reaction. Using this method, the authors titrated over 100 samples of native, purified, and partially purified toxin. Agreement of results between the RSK titration and skin methods was noted.

Card 1/1

AKIMOVA, V.V.

PAVLOV, P.V.; AKIMOVA, V.V.; POMYANKEVICH, A.N.

Purified adsorbed scarlet fever toxin. Report No.1: Production of high-titer scarlet fever toxin and its purification. Zhur. mikrobiol.epid. i immun. 28 no.11:120-125 N '57. (MIRA 11:3)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(STREPTOCOCCUS,
scarlatinae, toxin, prep. & purification (Rus)

PAVLOV, P.V., AKIMOVA, V.V., PEMYANKEVICH, A.N.

Purified adsorbed scarlet fever toxin. Report No.2: Adsorption of purified scarlet fever toxin. Zhur. mikrobiol. epid. i immun. 29 no.9:8-10 S'58 (MIRA 11:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(STREPTOCOCCUS,
scarlatinae, toxin purification (Rus))

PAVLOV, P.V., MITEL'MAN, S.L., AKIMOVA, V.V.

Purified adsorbed scarlet fever toxin. Report No.3:Result of active immunization against scarlet fever with purified adsorbed scarlet fever toxin. Zhur.mikrobiol. epid. i immun. 29 no.9:11-15 S '58 (MIRA 11:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(SCARLET FEVER, prev. & control,
vacc. with purified adsorbed toxin (Rus))

PAVLOV, P.V.; AKIMOVA, V.V.; APANASHCHENKO, N.I.; ATSEROVA, I.S.

Experimental studies on antigenic and immunogenic properties of combined vaccines against scarlet fever, diphtheria, and whooping cough. Zhur.mikrobiol.epid. i immun. 30 no.5:42-48 My '59. (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(VACCINES AND VACCINATION,
scarlet fever-diphtheria-whooping cough vaccine, animal tests (Rus))
(SCARLET FEVER, immunol.
same)
(WHOOPING COUGH immunol.
same)
(DIPHTHERIA, immunol.
same)

KUSHKO, I.V.; AKIMOVA, V.V.

Comparative experimental study of 3 sorbed preparations of scarlet fever erythrogenic toxin. Zhur.mikrobiol.epid.i immun. 31 no.8:51-54 Ag '60. (MIRA 14:6)

1. Iz Otdela biokhimii i Otdela profilaktiki detskikh infektsiy Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(SCARLET FEVER) (TOXINS AND ANTITOXINS)

PAVLOV, P.V.; AKIMOVA, V.V.

Precipitation in gel with scarlet fever toxin. Zhur. mikrobiol. epid. i immun. 31 no. 10:39-44 O '60. (MIRA 13:12)

1. Iz Otdela profilaktiki detskikh infektsiy Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(SCARLET FEVER)

PAVLOV, P.V.; MITEL'MAN, S.L.; AKIMOVA, V.V.

Preparations for active immunization against scarlet fever. Nauch. osn. proizv. bakt. prep. 10:129-134 '61. (MIRA 18:7)

1. Institut epidemiologii i mikrobiologii im. Gamalei AMN SSSR.

PAVLOV, P.V.; AKIMOVA, V.V.; LEONOVA, A.G.; KASHINTSEVA, N.S.

Experimental study of combined vaccine for active immunization against scarlet fever, diphtheria, whooping cough and tetanus. Zhur. mikrobiol., epid. i immun., 40 no.9:3-10 S'63. (MIRA 17:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

MITEL'MAN, S.L.; AKIMOVA, V.V.

Reactogenicity and immunological effectiveness of sorbed scarlet fever-diphtheria-pertussis-tetanus vaccine. Zhur.mikrobiol., epid. i immun. 42 no.12:34-39 D '65. (MIRA 19:1)

1. Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

BARAYANTS, A.A.; SMILLER, M.R.; KOLESNIK, M.K.; BALYUK, O.N.; SINADSKIY, N.Ye., kand.med.nauk; GLUZMAN, Yu.D.; RUDENKO, G.D., kand.med.nauk; AKIMOVA, Ye.A., promyshlennyy vrach; SIDENKO, K.I.

Discussions. Vop. travm. i ortop. no.13:47-60 '63. (MIRA 18:2)

1. Glavnyy vrach lechebnogo ob"yedineniya shakhty "Dolinskaya", kombinata "Sakhalinugol'" (for Barayants). 2. Zaveduyushchiy Yuzhno-Sakhalinskim gorodskim travm[illegible]logicheskim punktom (for Smiller). 3. Kholmskoye upravleniye stroitel'noye upravleniye Sakhalinshakhtostroya (for Kolesnik). 4. Doverennyy vrach Dorozhnogo komiteta professional'nogo soyuza rabochikh zheleznodorozhnogo transporta (for Balyuk). 5. Irkutskiy gosudarstvennyy nauchno-issledovatel'skiy institut travmatologii i ortopedii (for Sinadskiy). 6. Starshiy inspektor Gosudarstvennoy avtomobil'noy inspekisii (for Gluzman). 7. Leningradskiy nauchno-issledovatel'skiy institut travmatologii i ortopedii (for Rudenko). 8. Glavnyy vrach meditsinskogo ob"yedineniya goroda Shakhterska, Sakhalinskaya oblast' (for Sidenko).

AKIMOVA, YE. I.

S/133/62/000/001/002/010
A054/A127

AUTHORS: Lapotyshkin, N. M., Boychenko, M. S., Candidates of Technical Sciences, Leytes, A. V., Akimova, Ye. I., Slivchanskaya, V. V., Engineers

TITLE: Special features of crystallization in continuous casting

PERIODICAL: Stal', 22, no. 1, 1962, 30 - 33

TEXT: There is no definite opinion concerning the effect of the crystallization rate on the grain structure and chemical composition of continuous castings. To solve this problem, tests were carried out at the TsNIIChM and a new method was applied to determine the crystallization rate, which is based on the distance between the dendrite axes: when the solidification rate is increased, the interaxial distance between secondary dendrites decreases. The tests were carried out with carbon steel and transformer steel. To obtain a clear picture of the dendritic structure, the carbon steels were water-hardened at 950 - 1,050°C and annealed (in water) at 650°C. The crystallization rate at various depths was also checked by introducing the radioactive isotope of sulfur (S^{35}), for "45" and Ст .3 (St.3) steels, poured at a 0.7 m/min rate in crystallizers, 200 x 200 mm

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Special features of...

and 175 x 420 mm size. The St.3 steel was partly poured in a stationary 175 x 420 mm crystallizer and partly by bottom pouring, into conventional molds (180 x 560 and 300 x 300 mm in size). The metal temperature prior to pouring was 1,560 - 1,570°C, the pouring rate in the continuous equipment: 0.7 m/min and in the standard molds: 0.4 - 0.6 m/min. The macrostructural tests showed that the zone of acicular dendrites was about twice that of the ingots obtained in the standard mold. The density of the dendrite zone in continuous casting was also higher than in the standard ones. By measuring the interaxial distance between dendrites it was found that the solidification rate in continuous castings was about 30% higher than in the standard molds. The difference was most striking in a 10 - 50 mm thick layer under the surface of the casting. The surface-to-vlume ratio also affects the solidification rate: the 300 x 300 mm ingots solidify slower than the 180 x 560 mm ingots. The interaxial distance of secondary dendrites in carbon steel and transformer steel ingots first increased steadily, upon approximating the axial zone of the ingot, then decreased slightly due to the change in the ratio of the solidifying surface to the volume of the still liquid metal. Other factors of continuous casting (the carbon content of the steel and its temperature in 200 x 200 mm ingots, the rate of pouring and the intensity of second-

Card 2/4

Special features of...

ary cooling) were also studied. In these tests, 4 heats of "45" steel and У 7 (U7) steel were investigated. The increase in temperature during the pouring of U7 steel slightly reduced the crystallization rate. An increase in the pouring rate (from 0.5 to 0.7 m/min) decreased the solidification rate by about 0.3 cm/min. As to the intensity of secondary cooling, it was established that if 2 l/sec cooling water (0.5 l per 1 kg steel) were consumed, the solidification rate somewhat increased, while upon raising the water consumption to 5 l/sec, this had no effect on the average solidification rate. The relation between the crystallization rate in the cross section of the ingot, the structure and the distribution of non-metallic inclusions was studied in 200 x 200 mm continuous castings. The distribution of inclusions depended in the first place on the arrangement of structural zones. The smallest amount of inclusions was found in the fine-grained zone of the skin, while the amount of inclusions increased in the zone of acicular grains and still more in the transient zone between acicular and spheroidal grains. Dendritic liquation was studied in continuous and standard castings of transformer steel with 4.2 - 4.4% Si content, by comparing the microhardness of the dendrite axes and of the interaxial zones. Greater hardness was observed for the interaxial zones than for the axial parts. The differences in ΔH_B indicated the degree of dendritic liquation, which was higher for the standard castings than

Card 3/4

for the continuous ones. The ΔH_B values gradually decreased starting from a depth of 60 mm below the surface to the central sections. In continuous castings, therefore, the dendritic non-homogeneity was lower than in the standard castings. There are 3 figures and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc. The reference to the English-language publication reads as follows: D. M. Lewis, I. Savage, Metallurgical Reviews, 1956, v. 1, pt. 1.

ITSKOVICH, G.M.; NIKOLAYEV, N.A.; AKIMOVA, Ye.I.; KOROBOVA, N.A.; PRAVDINA, T.E.; KAMYSHEVA, L.P.

Characteristics of continuous transformer steel ingots. Stal' 23 no.7: 643-648 Jl '63. (MIRA 16:9)
(Steel ingots) (Continuous casting)

NIKOLAYEV, N.A.; AKIMOVA, Ye.I.

Effect of manganese in steelmaking on the quality of continuously cast slabs. Stal' 23 no. 3:226-227 Mr '64. (MIRA 17:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni I.P.Bardina.

NIKOLAYEV, N.A.; AKIMOVA, Ye.I.; MIRONOVA, N.A.

Carburizing the surface of electrical steel ingots during continuous casting. Stal' 23 no.5:419-420 My '63. (MIRA 16:5)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii.
(Continuous casting) (Surface hardening)

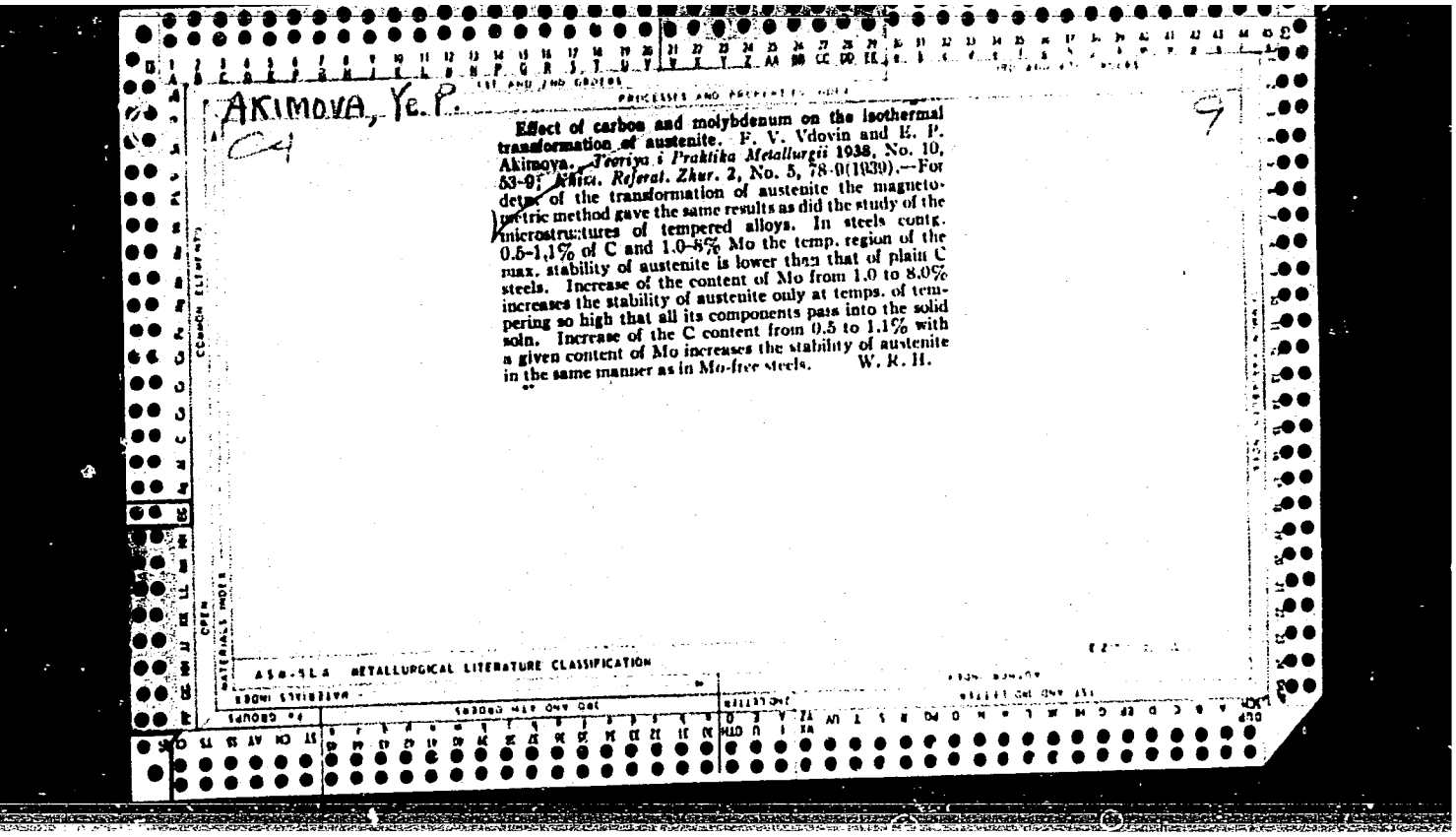
AKIMOVA, Ye.I.; LAPOTYSHKIN, N.M.; LEYTES, A.V.

Determining the crystallization front by the distance between dendrite axes. Sbor. trud. TSNIICHM no.32:72-74 '63. (MIRA 16:12)

NIKOLAYEV, N.A.; AKIMOVA, Ye.I.

Effect of the crystallization rate on the composition of sulfur inclusions in continuously cast 65G steel ingots. Stal' 24 no.7: 646 Jl '64. (MIRA 18:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii imeni I.P.Bardina.



AKIMOVA, Ye. P.

C4

9

Effect of carbon and molybdenum on the isothermal transformation of austenite. F. V. Vdovin and E. P. Akimova. *Teoriya i Praktika Metallurgii* 1938, No. 10, 53-9; *Khim. Referat. Zhur.* 2, No. 5, 78-9(1939).—For detn. of the transformation of austenite the magnetometric method gave the same results as did the study of the microstructures of tempered alloys. In steels contg. 0.5–1.1% of C and 1.0–8% Mo the temp. region of the max. stability of austenite is lower than that of plain C steels. Increase of the content of Mo from 1.0 to 8.0% increases the stability of austenite only at temps. of tempering so high that all its components pass into the solid soln. Increase of the C content from 0.5 to 1.1% with a given content of Mo increases the stability of austenite in the same manner as in Mo-free steels. W. R. H.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AKIMOVA, YE. P.

137-58-2-3003

Translations from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 2, p 111 (USSR)

AUTHORS: Akimova, Ye.P., Shchegol', T.S.

TITLE: Introduction of Metallized Mandrels for Use in Stainless-steel Piercing (Vnedreniye metallizirovannykh opravok dlya proshivki zagotovok iz nerzhaveyushchey stali)

PERIODICAL: Byul. nauchno-tekhn. nform. Vses. n.-i. trubnyy in-t, 1957, Nr 3, pp 86-91

ABSTRACT: A new method is proposed for increasing the durability of piercing-mill mandrels. It consists in metallizing the mandrel tips. The chemical composition recommended for the metal coating is the following: 3.0 - 3.5 percent Ni, $\leq$ 0.2 percent C, $\leq$ 0.4 percent Si, 0.41 percent Mn. The metallizing apparatus is described, also the procedure for preparing the metal wire to be used in the process. The mandrels are annealed for 3 hours at 980°C, then cooled in the furnace down to 500°C at a rate of 100°/hr. Introduction of this method at the Lenin Plant increased mandrel durability 2-3 times, which made it possible: 1) to cut mandrel consumption by 40 percent, 2) to lengthen the billets for piercing from 700 to 1300 mm, 3) to cut the quantity of

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137-58-2-3003

Introduction of Metallized Mandrels for Use in Stainless-steel Piercing

unpierceable billets from 8 - 12.7 to 0 - 1.07 percent, 4) to cut from 3 to 0.27 percent the tubing rejected because of internal scabs. The metal-consumption index dropped from 1.196 to 1.107.

G.K.

1. Hard surfacing—Applications 2. Piercing mills—Equipment

Card 2/2

SOV/137-59-1-1436

Translation from: Referativnyy zhurnal. Metallurgiya, 1959, Nr 1, p 189 (USSR)

AUTHORS: Yankovskiy, V. M., Akimova, Ye. P.

TITLE: An Improved Method for Preparation and Etching of Microsections of Austenitic Stainless Steels (Usovershenstvovannyy metod podgotovki i travleniya shlifov iz austenitnykh nerzhaveyushchikh staley)

PERIODICAL: Byul. nauchno-tekhn. inform. Vses. n.-i. trubnyy in-t, 1958, Nr 4-5, pp 173-177

ABSTRACT: A description of a method of electrolytic polishing and etching of microsections of stainless austenitic steels for the purpose of evaluating the dimensions of the grains. After routine polishing, the specimens are subjected to electropolishing in a concentrated HNO_3 solution at a current density of 10-12 a/cm^2 and a potential of 6-7 v. The quality of the finish was such that grain boundaries could be exposed during subsequent etching in a 5% solution of oxalic acid. It was possible to perfect the method even further by means of placing the specimen horizontally above an Al or stainless steel cathode having the shape of an inverted "L" so that the

Card 1/2

An Improved Method for Preparation and Etching of Microsections (cont.)

specimen made contact with the surface of the electrolyte. In this case, polishing occurs at the first instant of the passage of current; this, inasmuch as the volume of the electrolyte enclosed between the specimen and the cathode is very small, is followed by surface etching 2-3 seconds later. In addition to eliminating the need for painstaking polishing of specimens on fine abrasive papers, the method described also makes it possible to completely eliminate the operations of mechanical polishing and to replace protracted electrolytic etching in a 5% solution of oxalic acid by a rapid polishing-etching process in HNO_3.

M. Sh.

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16(7) SOV/32-25-4-26/71

AUTHORS: Akimova, Ye. P., Shevchenko, V. I., Alpatov, Ye. N.

TITLE: Scale for the Valuation of Inclusions of the Titanium-nitride Type in Rolled Steel (Shkala dlya otsenki vklyucheniy tipa nitridov titana v stal'nom prokate)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 4, pp 444-445 (USSR)

ABSTRACT: Highly alloyed steels with small admixtures of titanium are much in use at present. Titanium energetically binds the nitrogen dissolved in the steel, and forms nitrides which are very hard but poorly plastic. Evenly distributed inclusions of this kind do not deteriorate the quality of the steel; but in practice, these inclusions can often be observed as lines and strips which may lead to destructions in rolling. A special scale with five marks was developed for the valuation of these linear nitride inclusions (Figure). Every group of marks has two standard samples characterized by a certain degree of distribution of the inclusions. The nitride lines consist of individual inclusions with an average diameter between 3 and 10μ. The standard samples were fixed after determining the surface of all nitride inclusions visible in a micrograph; the nitride inclusions were divided into 3 groups (3, 5 and 10μ).

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SOV/32-25-4-26/71

Scale for the Valuation of Inclusions of the Titanium-nitride Type in Rolled Steel

The total area of the nitride inclusions of the first group of marks was assumed with 170μ^2(as for large inclusions according to the scale ChMTU 2581-54), and was increased for each following group by a geometrical progression of 2. There is 1 figure.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific Research Institute of Tubes)

Card 2/2

S/133/61/000/012/005/006
A054/A127

AUTHORS: Akimova, Ye.P.; Rudoy, V.S.; Shevchenko, L.N.; Nesterova, N.N.

TITLE: The effect of the ЭИ847 (EI847) steel smelting process on the quality of tubes

PERIODICAL: Stal', no. 12, 1961, 1,113 - 1,114

TEXT: During the finishing of hot-rolled EI847 (chrome-nickel-molybdenum-niobium) steel tubes laminations were found in the steel structure. To establish the cause of these defects, the effect of the smelting process on the tube quality, the distribution of nonmetallic inclusions in the billets and the metal ductility were studied. 26 heats were smelted under the following conditions A - in electric arc furnace; reduction with calcium-silicate; B - in electric arc furnace; reduction by means of aluminum; C - in induction furnace; reduction with calcium silicate; D - in induction furnace; reduction with boron calcite; E - in electric arc furnace, with subsequent electro-slag remelting. The content of globular and sulfide inclusions was very low for all heats; the oxide content, however, was rather high: for heats A: 7.5 - 4; for heats B: 7 - 3; for heats C: 6 - 4; for heats D: 3. The best results were obtained

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The effect of the ЭИ847 (EI847) steel ....

for heats E, i.e., heats smelted according to the A and B variant and with subsequent electroslag remelting. Indices for oxide-inclusions between 1 and 2.5 were registered for these heats and , besides oxide inclusions, no other impurities were observed. The steel ductility was tested by its piercing properties and by hot torsion at 1,000 - 1,275°C. Also these properties were found to be better for steels smelted in arc furnaces and subjected to electroslag remelting. The ductility of the steel produced by electroslag remelting increases continuously at rising temperatures, whereas in steels produced in arc furnaces without electroslag remelting it drops above 1,250°C. The formation of film on tubes made of steels remelted by the electroslag process was prevented and laminations with knurled edges and dark base (2 - 3 mm in length), often found in conventional tubes, were not observed either in tubes manufactured by the new process. As regards the consumption coefficients the same rules were found as for the above-mentioned parameters: the consumption coefficient for heats A' is 17, for heats A" and B: 1.9 - 3.1, for C - D: 2.0 - 2.5, for steel remelted with electroslag E: not more than 1.6 - 2.0. The tests were carried out in cooperation with S.I. Vasilenko, I.I. Zuyev, O.S. Vil'yams, R.V. Lagutina, A.Ya. Dergach, V.P. Kitanenko, N.S. Kirvalidze, N.S. Yakimenko, V.D. Samoylenko [Nikopol'skiy yuzhnotrubnyy zavod (Nikopol' Yuzhnotrubnyy Plant)].

S/028/61/000/011/003/004
D221/D301

AUTHORS: Vinograd, M.I., Kiseleva, S.A., Akimova, Ye. P., Apolovnikova, L.G., Shevchenko, L.N., Kedrina, A.M., and Krasnova, A.K.

TITLE: The metallographic method of determining non-metallic inclusions

PERIODICAL: Standartizatsiya, 25 no. 11, 1961, 27-33

TEXT: The draft standard: "Steel - The metallographic method of determining inclusions" was prepared by the Tsentral'nyy nauchno-issledovatel'skiy institut chernoy metallurgii (Central Scientific Research Institute of Ferrous Metallurgy) and the Ukrainskiy nauchno-issledovatel'skiy trubnyy institut (Ukrainian Scientific Research Institute of Pipes). It includes a scale, covers non-metallic inclusions, and envisages random sampling when the disposition of material is unknown, or from three points along the height of ingots. The project recommends discussion on the quantity of specimens which would ensure the required accuracy.

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The suggested scale for evaluating non-metallic inclusions distinguishes three groups: Oxides, globular and sulphides. The scale division is based on the area taken up by the inclusions in one field of viewing, and which increases in a geometrical progression of 2 when passing from one mark to another. In 1959, the UkrNITI developed a special scale for streaky nitride inclusions of titanium in steel rolled sections. The project prescribes a 90 - 110 times magnification. The area taken up by inclusions of mark 3 is equal to that of the same mark scale of (GOST) 80-160. There are tabulated areas of various inclusions and their classification necessitates the separation of silicates into an individual group. They form greatly deformed, plastically deformed and non-deformed inclusions. The project assumes the average mark from the maxima of specimen evaluations of inclusions as a criterion of casting. This is confirmed by statistical analysis. The errors in determining the average mark, and the method of their calculation for some types of inclusions are defined by the project of the standard. There are 2 figures, 5 tables and 9 Soviet-bloc references.

ACCESSION NR: AT4007048 S/2598/63/000/010/0254/0261

AUTHOR: Ostrenko, V. Ya.; Bogoyavlenskaya, N. V.; Bobrikov, L. D.; Akimova, Ye. P.; Usov, V. K.; Okhramovich, L. N.; Il'ovskaya, L. A.

TITLE: Development of a production process for AT-3 titanium alloy tubes

SOURCE: AN SSSR. Institut metallurgii. Titan i yego splavy*, no. 10, 1963. Issledovaniya titanovy*kh splavov, 254-261

TOPIC TAGS: titanium alloy, AT-3 titanium alloy, AT-3 alloy tube, tube rolling, hot rolling, cold rolling, AT-3 titanium alloy property, titanium aluminum chromium alloy, iron containing alloy, silicon containing alloy, boron containing alloy

ABSTRACT: The effect of thermal treatment on the mechanical properties of AT-3 alloy and parameters affecting the cold and hot rolling of tubes of this alloy were investigated in the laboratories of the Ukrainskiy nauchno-issledovatel'skiy trubny*y institut (Ukrainian Scientific-Research Institute for Tubes) and the Nikopol'skiy yuzhnotrubny*y zavod (Southern Tube Plant, Nikopol). At temperatures of 800-900C the mechanical properties and hardness of AT-3 were markedly altered by hardening in water but essentially unchanged by cooling in air or in a kiln. This effect is explained by the fixation of the intermediate $\alpha + \beta$ structure during hardening in water. These alloys demonstrated high ductility in a wide range

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ACCESSION NR: AT4007048

of rolling temperatures (1975-1125C). A maximum deformation of 55% can be attained by cold rolling of such tubes, while hot rolling of these tubes proceeds normally. The problems involved are sticking of the metal to the rolling device and the formation of a gas-saturated film on the hot rolled tube. These problems have been solved by additional mechanical treatment, such as etching, coating with an oxide film, and lubrication with a mixture of castor oil and talc. Some of these recommended procedures are discussed. Orig. art. has: 6 figures and 3 tables.

ASSOCIATION: Institut metallurgii AN SSSR (Metallurgical Institute, AN SSSR)

SUBMITTED: 00	DATE ACQ: 27Dec63	ENCL: 00
SUB CODE: MA, ML	NO REF SOV: 000	OTHER: 000

Card 2/2

ACCESSION NR: AT4007059 S/2598/63/000/910/0357/0361

AUTHOR: Ostrenko, V. Ya.; Akimova, Ye. P.; Il'vovskaya, L. A.

TITLE: Investigation of AT-4 titanium alloy suitability as tube material

SOURCE: AN SSSR. Institut metallurgii. Titan i yego splavy*, no. 10, 1963. Issledovaniya titanovy*kh splavov, 357-361

TOPIC TAGS: titanium alloy, AT-4 titanium alloy, AT-4 alloy tube, AT-4 alloy hot ductility, titanium alloy tube, tube rolling

ABSTRACT: The six-component titanium-base alloy AT-4, developed previously for sheet-rolling and forging, has been investigated for suitability for seamless tube manufacture by hot rolling. The chemical composition of AT-4 is 3.5-5.0% Al, 0.4-0.9% Cr, 0.25-0.60% Fe, 0.25=0.60% Si, 0.01% B, and the rest titanium. Basically, aluminum is an alpha stabilizer; and chromium, iron, and silicon are beta stabilizers. At room temperature the alloy consists mainly of alpha-solid solution and a small amount of beta phase. According to a practice adopted for testing of materials for tube manufacture, the alloy AT-4 has been tested in hot twisting and piercing. Phase transformation and response to heat treatment have also been studied. It has been found that the number of twist turns-to-failure increased sharply from 9 to 28 with an increase in temperature from

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ACCESSION NR: AT4007058

900 to 1000C; the number of turns increased further up to 1100C, and decreased beyond that point. From twisting tests it has been concluded that plasticity of AT-4 is slightly lower than that of pure titanium, but higher than that of carbon steel. Further, hot rolling of AT-4 alloy seamless tubes is possible in a temperature interval from 1000 to 1200C. In piercing tests, conclusions on plasticity have been made from the surface appearance of test barrels and from loads transmitted to the press. It is concluded that piercing can be normally performed at 1050-1200C; at lower temperatures defects develop in the barrels; at higher temperatures clamping conditions of barrels get worse. Titanium barrels were of higher quality than similarly produced carbon steel barrels. It has been established that AT-4 responds to heat treatment. Orig. art. has: 6 figures.

ASSOCIATION: Institut Metallurgii AN SSSR (Metallurgical Institute AN SSSR)

SUBMITTED: 00 DATE ACQ: 27Dec63 ENCL: 00

SUB CODE: MM NO REF SOV: 000 OTHER: 000

Card 2/2

AKIMOVA, Ye.P., kand. tekhn. nauk; MELASHENKO, M.V., inzh.

Dependence of the strength of metallized mandrels of piercing mills in automatic pipe rolling equipment on the preparation of mandrel noses and the heat treatment. Proizv. trub no.11:106-109 '63. (MIRA 17:11)

1. AKIMOVA, Ye V.

2. USSR (600)

4. Chemistry, Physical and Theoretical - Study and Teaching

7. How to introduce the gram atom and gram molecule concepts to pupils, Khim. v shkole, No. 6, 1952.

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

MIKHAYLOV, G.S. [Mykhailov, H.S.]; PRESNYAKOVA, G.N. [Presniakova, H.M.]; AKIMOVICH, I.N. [Akymovych, O.M.]

Superhigh vacuum obtained by means of electronically bombarded chromium. Ukr.fiz.zhur. 7 no.1:73-74 Ja '62. (MIRA 15:11)

1. Institut radiofiziki i elektrotekhniki AN UkrSSR, Khar'kov.

(Vacuum) (Chromium) (Electrons)

USSR/Farm Animals - General Problems. G-1

Abs Jour : Ref Zhur - Biol., No 10, 1958, 83278

Author : Matusevich, V.F., Goryanov, V.T., Akimovich, L.S.
Inst : -
Title : Experimental Iodization of Fodder.

Orig Pub : Zhivotnovodstvo, 1958, No 1, 30-32

Abstract : Feedings of iodized fodder increased milk yields of cows and produced weight gains in calves, piglets, and chicks. It is recommended that animals received the following dosages of iodized salts daily: horses, 15-70 gr, large horned cattle, 25-60 gr, swine and sheep, 5-15 gr; and birds, 0.5-1 gr.

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MIKHAYLOV, G.S. [Mykhailov, H.S.]; AKIMOVICH, I.N. [Akymovych, O.M.]; PRONINA, I.G. [Pronina, I.H.]

Production of a superhigh vacuum by means of oxide electronic semiconductors pulverized by electron bombardment. Ukr. fiz. zhur. 7 no.12:1367-1368 D '62. (MIRA 15:12)

1. Institut radiofiziki i elektorniki AN UkrSSR, Khar'kov.
(Vacuum) (Semiconductors) (Electron beams)

L 47337-66 EWT(m)/EWP(e)/EWP(t)/ETI IJP(c) AT/JG/JD/WH

ACC NR: AR6025746 SOURCE CODE: UR/0058/66/000/004/A071/A071

62
B

AUTHOR: Mikhaylov, G. S.; Akimovich, I. N.; Stefanishina, A. V.

TITLE: Obtaining thin films of oxide electronic semiconductors by the method of vacuum condensation with heating of the evaporated substance by electron bombardment

SOURCE: Ref. zh. Fizika, Abs. 4A598

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 22-25

TOPIC TAGS: semiconducting film, condensation reaction, electron bombardment, vacuum technique

ABSTRACT: The possibility was investigated of obtaining thin films of oxide electronic semiconductors with n-type conductivity "synthesized" from oxides of metals of the Ti subgroup of group IV of the periodic system and oxides of rare-earth metals, by the method of evaporation and condensation in vacuum with direct heating of the samples of the evaporated substance by electron bombardment. The initial samples of the substance were obtained by sintering chemically pure oxides in a hydrogen atmosphere or in vacuum (10^{-4} - 10^{-5} mm Hg). Sputtering by electron bombardment was carried out at $V_a \approx 1 - 2$ kv and $J_a \approx 100 - 200$ ma. The evaporation and condensation were carried out under conditions of high vacuum (10^{-5} - 10^{-6} mm Hg) or superhigh vacuum (10^{-7} - 10^{-9} mm Hg). Both isotropic and anisotropic substrates, heated to different temperatures, were used. The properties of the films depend strongly on the produc-

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ACC NR: AR6025746 O

tion technique, especially on the vacuum conditions. [Translation of abstract]

SUB CODE: 20

Card 2/2 pc

ACC NR: AP6030497 SOURCE CODE: UR/0275/66/000/006/B016/B016

AUTHOR: Mikhaylov, G. S.; Akimovich, I. N.; Stefanishina, A. V.

TITLE: Producing thin films of oxide electronic semiconductors by the method of vacuum condensation with the substance vaporized by electron bombardment

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 6B104

REF SOURCE: Sb. Simpozium. Protsessy sinteza i rosta kristallov i plenok poluprovodnik. materialov, 1965. Tezisy dokl. Novosibirsk, 1965, 22-25

TOPIC TAGS: semiconducting film, electron bombardment

ABSTRACT: The possibility was studied of producing thin films of oxide electronic semiconductors ("synthesized" from metal oxides of Ti-subgroup, the 4th group of the Periodic System, and from oxides of rare-earth metals) by the method of vaporization and condensation in vacuum, with the vaporization accomplished by electron bombardment. Source specimens were obtained by sintering chemically pure oxides in hydrogen or in vacuum (10^{-4}-- 10^{-5} torr). The electron-gun spraying was performed at V_a = 1--2 kv and I_a = 100--200 ma. The vaporization and condensation were conducted in high (10^{-5}-- 10^{-6} torr) or superhigh (10^{-7}-- 10^{-9} torr) vacuum. Both isotropic and anisotropic backings heated to various temperatures were used. The film properties strongly depend on the processing, particularly on the vacuum conditions. V. U. [Translation of abstract]

Card 1/1 SUB CODE: 11, 09, 20 UDC: 621.315.592:548.552:541.49

AKIMOVICH, N.N.

Importance of observatories in the progress of research in the Ukrainian magnetic field. Trudy Ukr. NIGMI no.5:51-54 '56.
(Ukraine--Magnetism, Terrestrial) (MLRA 10:9)
(Ukraine--Meteorological observatories)

AKIMOVICH, N.N.

From the history of geophysical research in Odessa. Trudy OGMI no.17: 131-138 '58. (MIRA 12:7)
(Odessa--Geophysical research)

AKIMOVICH, N. N.

SOV/50-59-2-23/25

3(7), 3(3)

AUTHORS: Anapol'skaya, L. Ye., Gandin, L. S.

TITLE: Conference on Applied Climatology (Soveshchaniye po prikladnoy klimatologii)

PERIODICAL: Meteorologiya i gidrologiya, 1959, Nr 2, pp 69 - 70 (USSR)

ABSTRACT:
Between October 27 and 31, 1958 a Conference on Applied
Climatology was held at the Glavnaya geofizicheskaya observa-
toriya im. A. I. Voyeykova (Main Geophysical Observatory
imeni A. I. Voyeykov). The conference was convened upon re-
quest of the Glavnoye upravleniye gidrometeorologicheskoy
sluzhby (Main Administration of the Hydrometeorological Ser-
vice). 91 institutes participated, among them 8 scientific
research institutes of the Hydrometeorological Service, 20
UGMS, 17 planning organizations, and 34 scientific research
institutes of various authorities. In all, participation
amounted to 254 persons. 22 papers were read. V. P. Pastukh
spoke on the experience of the GGO in the field of aiding
the economy, O. A. Drozdov on space and time characteristics
of the climate, V. N. Sokolov on the use of the calculation
technique, N. K. Klyukin on the work accomplished in the
field of applied climatology of the Northeast of the USSR,
Ye. S. Rubinshteyn spoke on the method developed by him
for the determination of temperatures for the purpose of
calculating the five cold days on the basis of the data
of the monthly average temperature of the coldest month
of the year. G. N. Ustinov suggested in his paper some
principles by means of which the territory of the USSR should
be divided in regions (for the planning of living quarters).
V. N. Il'inskiy gave a survey of the requirements made of
climatic data in regard of the projecting of protective
structures. L. Ye. Anapol'skaya and L. S. Gandin reported
on the method of statistical extrapolation developed by them
for the determination of the frequency of high wind velocities.
M. P. Barshteyn proposed a method for the determination of
the gust coefficient based on the spectrum theory of turbulent
pulsations. V. A. Otstavnov gave a survey of the require-
ments made of climatic data in calculating wind and snow
loads on buildings. G. I. Chirakadze reported on the ex-
perience made in the consideration of the climate of health
resorts in the Caucasus in planning and construction.

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L. A. Chubukov proposed a method for the analysis of the
climates of health resorts based on a general climatolo-
gy. A. P. Gritsyute studied some climatic characteristics
of the Latvian health resorts from the point of view of
therapeutics. N. K. Turoverov studied the influence of
meteorological conditions on the Caucasian mineral springs.
Yu. V. Vatkovskaya reported on climatological investiga-
tions for the purpose of modernizing and streamlining living
conditions (housing, clothing). V. Yu. Milevskiy proposed
a map of actual temperatures for the European part of the
USSR. B. V. Tarnishevskiy spoke on the "Consideration of
Some Characteristics of the Radiation Climate Which In-
fluence the Operation of Solar Power Plants". N. N. Aki-
movich spoke on "The Wind Energy Reserves in the Pricher-
nomorskaya Steppe". V. S. Samoylenko submitted extensive
climatic characteristics for sea atlasses and handbooks.
A. I. Sorkina reported on the use of climatic data for in-
direct estimates of the wind and wave conditions on seas
and oceans. R. I. Ivanov gave a survey of the tasks of

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and requirements made of marine climatology for the
security of sea navigation.

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AKIMOVICH, N.N.; BOLGAROVA, Ye.S.

Moisture cycle in the atmosphere over the territory of the Ukrainian S.S.R. Trudy OGMI no.19:3-8 '59. (MIRA 13:5)

(Ukraine--Humidity)

AKIMOVICH, N.V.

21

PHASE I BOOK EXPLOITATION SOV/5729

Leningrad. Glavnaya geofizicheskaya observatoriya.

Voprosy prikladnoy klimatologii; sbornik statey (Problems in Applied Climatology; Collection of Articles) Leningrad, Gidrometeoizdat, 1960. 159 p. Errata slip inserted. 1,050 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR. Glavnaya geofizicheskaya observatoriya im. A. I. Voyeykova.

Ed. (Title page): F. F. Davitay, Doctor of Agricultural Sciences; Ed.: L. P. Zhdanova; Tech. Ed.: N. V. Volkov.

PURPOSE : This publication is intended for applied climatologists and planners in climate-dependent industries.

COVERAGE: This collection of 18 articles contains reports originally presented at the Conference on Applied Climatology in Leningrad in October 1958. The purpose of the conference was to summarize the results of research done in the field of applied

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Problems in Applied Climatology (Cont.) SOV/5729

climatology and to point the way for further investigations. Individual articles deal with general problems in applied climatology and special problems in engineering and industrial climatology, medical and health resort climatology, climatic energy resources, and marine climatology. No personalities are mentioned. References follow individual articles.

TABLE OF CONTENTS:

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JA/dwm/jw
11-13-61

AKIMOVICH, N.N.; RAYEVSKIY, A.N.

Microclimatic features of the resort of Yevpatoriya. Trudy OGMI no.28:27-31 '62. (MIRA 16:6)
(Yevpatoriya—Climate)

AKIMOVICH, N.N.

Climatic regionalization of the Black Sea-Caspian Steppe. Trudy UkrNIGMI no.45:55-57 '64. (MIRA 17:10)

AKIMOVICH O. M.

35099
S/185/62/007/001/009/014
D299/D302

26.2352

AUTHORS: Mikhaylov, H.S., Presnyakova, H.M., and Akymovych, O. M.

TITLE: Ultrahigh vacuum obtained by means of chromium, pulverized by electron bombardment

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 1, 1962, 73 - 74

TEXT: In an earlier investigation by the authors (Ref. 1: Ukr. Fiz. Zhurn., v. 6, no. 3, 1961, 412-413) it was shown that chromium pulverized in a high vacuum ($p \sim 10^{-4} - 5 \cdot 10^{-8}$ mm Hg), acts like a sorbent (getter), almost as powerful as titanium. In the present investigation, the sorbent properties of chromium in an ultrahigh vacuum ($p \leq 5 \cdot 10^{-8}$ mm Hg) are studied. The results of Ref. 1 (Op. cit.) cannot be directly extrapolated to such low pressures. The experimental apparatus (lamp and oil pump MM-40 (MM-40)) was very similar to that described in Ref. 1 (Op.cit.). The experimental lamp was heated for 3 hours before taking the measurements; during that time, the pressure was reduced to $\sim 10^{-6}$ mm Hg. Then the chro-

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mium was pulverized by electron bombardment at V_a ~ 300 v and I_a ~ 100 milliamp. It was found that by pulverization of the chromium, a pressure as low as 2 - $5 \cdot 10^{-9}$ mm Hg could be easily obtained. This shows the fairly high rate of evacuation which the chromium develops during the pulverization process. It was estimated that chromium evacuates approximately $5 \cdot 10^2$ liters of air per second, at a pressure of $2 \cdot 10^{-9}$ mm Hg. The experimental lamps were either soldered to the vacuum pump or connected to it by a valve. In the soldered lamps, the pressure could be further reduced, to $\sim 5 \cdot 10^{-10}$ mm Hg, by additional pulverization of chromium. As in Ref. 1 (Op.cit.) the growth of Cr_2O_3 crystals was observed during the experiments; these crystals were not destroyed by the electron bombardment and the high temperature. The oxygen content of the chromium was $1 \cdot 10^{-3}$ weight percent. In conclusion, the observed "self-purification" effect of chromium, indicates the feasibility of using ordinary chromium with oxygen impurities, for producing an ultrahigh vacuum ($p \sim 5 \cdot 10^{-10}$ mm Hg) by electron bombardment of the chromium. There are 1 figure and 2 references: 1 Soviet-bloc and 1 non-Soviet-bloc.

Card 2/3

Ultrahigh vacuum obtained by means ... S/185/62/007/001/009/01 D299/D302

ASSOCIATION: Instytut radiofizyky ta elektrotekhniky AN URSR (Institute of Radiophysics and Electrotechnics of the AS UkrRSR), Kharkiv

SUBMITTED: July 17, 1961

Card 3/3

X

AKIMOVICH, O.M.

9,4250 (1003, 1140, 1385

2329

S/185/61/006/003/006/010
D208/D302

AUTHORS: Mykhaylov, G.S., Pronina, I.G., Akymovych, O.M. and Presnyakova, G.M.

TITLE: Pumping action of metallic chromium and a special feature of its vaporization in a vacuum by electron bombardment

PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 6, no. 3, 1961, 412-414

TEXT: In modern sorption pumps, chemically very active metals (so-called "getters") are used as sorption agents, especially titanium. The use of other metals, like iron, nickel, cobalt, and chromium, as sorbents would be advantageous. The author experimented with iron, chromium and cobalt. The experiments with iron and cobalt did not lead to conclusive results, whereas in the case of chromium, an intensive pumping action of the chromium vapor was established as well as regularly condensed surfaces. The main results of the experiments with chromium are given in this article.

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Pumping action...

The distance cathode-specimen was approximately 1.5 mm. The high vacuum ($\sim 10^{-6}$ mm Hg) was produced by an oil pump of type MM - 40. During the pumping the lamps were always heated at 400°C for an hour. For purification, the metal electrodes were heated to very high temperatures by a current or by electron bombardment. The chromium specimen was heated by electron bombardment to near melting point ($\sim$1800°C). At $V_a \sim 300$ v and $I_a \sim 100$ mA the specimen attained temperatures of 50 to 100°C below melting point. At that time intensive chromium-vaporization took place, accompanied by an increase in the vacuum from 10^{-6} mm Hg to $5 \cdot 2 \cdot 10^{-7}$ mm Hg (in both the lamp and the pump). During the experiment, the formation of crystals of Cr_2O_3 was observed on the surface of the chromium specimen; these crystals were not destroyed by the electron bombardment and constitute a special feature of the process. The growth of these crystals on the pulverized surface shows that the oxygen, present in chromium as an impurity, remains (during the vaporization) on the specimen in the form of an oxide. This is apparently the reason for the pumping effect of the chromium used (with approximately 10^{-3} weight percent oxygen). The crystal growth on the chromium specimens show

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Pumping action...

that it is possible to purify chromium from oxygen traces by vacuum distillation at a very high vacuum. The intensive pumping effect of chromium is not only important for using chromium instead of titanium in sorption pumps, but also as an indication that chromium cannot be refined in a vacuum of the order of 10^{-5} to 10^{-6} mm Hg. [Abstracter's note: The same conclusion was reached with respect to chromium and aluminum, by Amonenko et al., as reported in this journal, pp 390-393] Corresponding member AS UkrSSR, O. Ya. Usykov is thanked for his interest in the above work. There are 4 figures and 6 Soviet-bloc references.

ASSOCIATION: Instytut radiofizyky ta elektroniky AN USSR (Institute of Radiophysics and Electronics AS UkrSSR), Khar'kov

SUBMITTED: December 23, 1960

Card 3/3

MIKHAYLOV, G.S. [Mykhailov, H.S.]; PRONINA, I.G. [Pronina, I.H.]
AKIMOVICH, O.N. [Akymovych, O.M.]; PRESNYAKOVA, G.N.
[Presniakova, H.M.]

Exhausting effect and evaporation characteristics of metallic chromium under electron bombardment in a vacuum. Ukr. fiz. zhur. 6 no.3:412-414 My-Je '61. (MIRA 14:8)

1. Institut radiofiziki i elektroniki AN USSR, g. Khar'kov.
(Chromium)
(Vacuum apparatus)
(Sorption)

AKIMOVICH, T.I.

Fall-out conditions of steady precipitation. Trudy Ukr.NIGMI no.3: 79-85 '55. (MLRA 9:10)

1. Odesskiy gidrometeorologicheskiy institut.
(Precipitation (Meteorology))

AKIMOVICH, T.I.

32. Height of Tropopause Over Southwestern USSR

"Height of the Tropopause Over the South European Territory of the USSR During the Summer Season," by T. I. Akimovich, Tr. Odessk. gidrometeorol. in-ta, Issue 7, 1955, pp 3-14 (from Referativnyy Zhurnal -- Geofizika, No 1, Jan 57, Abstract No 246)

"The problem concerning the connection between variations in the height of the tropopause and advective and dynamic factors is analyzed on the basis of radiosonde data. It is shown that the popular conception of the connection between the height of the tropopause and its temperature and the temperature of the troposphere is strictly confirmed only in the deep funnels of the tropopause which arise with intensive cyclogenesis. A distinct connection between the height of the tropopause and the average temperature of the lower troposphere is not confirmed. A more or less distinct connection is disclosed between the height of the tropopause and high-altitude barometric formations. Unusually high (or low) values for the height of the tropopause usually coincide with the peripheral ramifications of the high values (of reduced low pressure areas) of structure contours on maps of 500 mb surface. On the basis of the analysis of the separate cases it is pointed out that considerable changes of the altitude of the tropopause are continuously connected with dynamic pressure changes." (U)

SUM IN 1429

AKIMOVICH, I. I.

USSR/Physics of the Atmosphere - Synoptic Meteorology and Climatology, M-3

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36129

Author: Akimovich, T. I.

Institution: None

Title: Inversions in Anticyclones

Original Periodical: Tr. Odessk. gidrometeorol. in-ta, 1955, No 7, 15-22

Abstract: Using observation data for a single point, an analysis was made of inversions in anticyclones in the winter of 1948/49. Inversions were observed in 46 out of 52 cases with anticyclone situations, with 18 cases being surface inversions and isothermals, and [illegible] being altitude inversions. The majority of the surface inversions were of radiation origin, but there were also advective inversions due to advection of heat or due to a shift in the wind in the [illegible] layer, caused by friction against the underlying surface. Altitude inversions in the cases analyzed have an advective origin, the downward motion have secondary value in their formation.

Card 1/2

14-57-7-14728

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 76 (USSR)

AUTHOR: Akimovich, T. I.

TITLE: Determination of Frontal Zone (K voprosu opredeleniya frontal'noy zony)

PERIODICAL: Tr. Odessk. gidrometeorol. in-ta, 1956, Nr 8, pp 145-150

ABSTRACT: The author recommends that determinations of a frontal zone be based on hydrodynamic (and not on the thermal) features of the horizontal streams in the middle and upper troposphere. For this reason, a frontal zone should be determined from the degree of density of the isohyetic lines. Since the frontal zones represent high altitude phenomena, the introduction of the word "altitudinal" into the determination is unnecessary. The author is opposed to the introduction of the

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concept of a complex altitudinal frontal zone (altitudinal frontal zone of the second order) because he considers it as being diametrically opposite to the concept of an ordinary frontal zone. The phenomenon of a complex altitudinal frontal zone probably represents a combination of ordinary frontal zones. The article includes a bibliography of 21 titles.

Card 2/2

L. K.

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 7, p 76 (USSR) 14-57-7-14729

AUTHOR: Akimovich, T. I.

TITLE: Frontal Wind (O frontal'nom vetre)

PERIODICAL: Tr. Odessk. gidrometeorol. in-ta, 1956, Nr 8, pp 187-196

ABSTRACT: In an effort to explain a frontal wind the author investigates gradientless fields of temperature and pressure in warm and cold air masses and also a transitional zone with the distribution and contrast of temperature remaining constant in time and space. One of the isobaric surfaces (the datum) lies at the same altitude in both masses. This surface may lie at the earth's surface, above it or below it, depending on the relation of the near-earth pressures in both masses. The author investigates two types of

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Frontal Wind (Cont.)

fronts: 1) a wedge of cold air lies below the dividing surface; 2) cold air lies above this surface. By the frontal wind the author understands a thermal wind caused by an abrupt temperature change at the front. He derives a formula for the frontal winds at a warm front (C_{wf}) and at a cold front (C_{cf}) of the first type:

$$C_{wf} = -\frac{g(T_T - T_x)_t\, g\alpha_f}{2\omega \sin\phi\, T_x}\ ; \qquad C_{cf} = \frac{g(T_T - T_x)_t g\alpha_f}{2\omega \sin\phi\, T_T}\ ,$$

where T_T and T_x are the actual temperatures in the warm and in the cold air masses, α_f is the angle of inclination of dividing surface during a calm period in both masses, ω is the angular velocity of earth's rotation, ϕ is the latitude and g the acceleration of gravity. In the case of the fronts of second type, the signs preceding the fractions are reversed. Fronts of the first type are related to the

Frontal Wind (Cont.)

troughs, fronts of the second type to the crests. A dividing surface may exist between the two masses even when these are at rest. Its stationary state is maintained by the frontal wind. In principle, such a surface may attain any degree of steepness, but an infinite velocity would be necessary to maintain the angle of 90°. According to the formulas shown above, the greatest angle possible for a stationary dividing surface at a velocity of 100 m/sec would be $\alpha = 1.5^{\circ}$ at $\phi = 45^{\circ}$, $T_x = 250^{\circ}$ and $T_T - T_x = 10^{\circ}$. The author discusses the structure of a high frontal zone in the light of what has been said above and explains the formation of fronts in the warm centers of cyclones and a number of other processes.

Card 3/3

A. B.

SOV/124-57-9-10596

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 9, p 106 (USSR)

AUTHOR: Akimovich, T. I.

TITLE: A New Method for the Calculation of Steady Precipitations (Novyy metod rascheta oblozhnykh osadkov)

PERIODICAL: Tr. Odessk. gidrometeorol. in-ta, 1956, Nr 8, pp 197-213

ABSTRACT: The author presents a method for the calculation of vertical motions, using for this purpose the pressure-tendency equation. Various aspects connected with the practical application of the tendency equation (approximate integration with respect to altitude, selection of boundary conditions, etc.) are discussed in detail. For the calculation of the vertical displacements only two factors are used in the tendency equation, such factors allowing for the horizontal divergence of the isohypses and for the change in their curvature.

V. P. Sadokov

Card 1/1

AKINOVICH, T.I.

Some methodological problems arising in teaching a course of dynamic meteorology. Trudy OGMI no.17:49-62 '58. (MIRA 12:7)
(Meteorology--Study and teaching)
(Dialectical materialism)

AKIMOVICH, V. V.

USSR/Medicine - Paratyphoid Nov 53

"Experimental Reproduction of Septic Paratyphoid B Infection in White Mice," V. V. Akimovich, S. M. Rassudov, Chair of Microbiol, Saratov Med Inst

Zhur Mikro, Epid, i Immun, No 11, pp 46-51

In order to bring about a lethal septic paratyphoid B infection in white mice, which normally are not susceptible to this disease, huge doses of bacteria are required. These doses can be considerably reduced by using bacteria which are in the lag-phase (phase of delayed multiplication) or by administering at the same time agents which induce inflammation in the animals.

271T42

USSR/Medicine - Immunology Dec 53

"Significance of the Nervous System in Inflammation Reactions of Infectious, Toxic, and Allergic Nature; Role of the Nervous System in Allergic Reactions in Experimental Tuberculosis," V. V. Akimovich, Chair of Microbiol, Saratov Med Inst

Zhur Mikro Epid i Immun, No 12, pp 28-32

Guinea pigs infected with human tuberculosis and kept in a state of prolonged sleep by injections of urethane did not react to tuberculin injected intracutaneously in doses which normally produce a reaction. On the other hand, urethane sensitized

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tuberculous guinea pigs to tuberculin injected intramuscularly. Tuberculin applied to denervated skin flaps grafted onto guinea pigs did not produce a reaction.

Translation
M-719, 24 Aug 53

AKIMOVICH, V.V.; SAMOYLOVA, L.V.

Identification of the plague virus by the initial study of its growth on a culture medium. Zhur.mikrobiol.,epid.i immun. 30 no.12:125 D '59. (MIRA 13:5)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta mikrobiologii i epidemiologii Yugo-Vostoka SSSR.
(PLAGUE)

AKIMOVICH, V. V. Doc Med Sci -- "Role of the nervous system in inflammations of an infectious, toxic, and allergic nature." Saratov, 1960. (Min of Health USSR. All-Union Sci Res Inst "Mikrob"). (KL, 1-61, 204)

AKIMOVICH, V.V.

Role of the nervous system in inflammation of an infectious, toxic and allergic nature. Report No. 5: Influence of adrenaline on the inflammatory reaction of the skin in rabbits caused by staphylococci and diphtheria bacteria. Izv. Irk. gos. nauch.-issl. protivochum. inst. 21:246-255 '59. (MIRA 14:1)

(ADRENALINE) (SKIN--INFLAMMATION)
(STAPHYLOCOCCUS) (DIPHTHERIA)

AKIMOVICH, V.V.

Role of the nervous system in inflammation of an infectious, toxic, and allergic nature. Report No.6: Influence of adrenaline, acetylcholine, and histamine on the inflammatory reactivity of denervated skin in rabbits. Izv. Irk. gos. nauch.-issl. protivochum. inst. 21:256-264 '59. (MIRA 14:1)
(ADRENALINE) (CHOLINE)
(HISTAMINE) (SKIN--INFLAMMATION)

L 54952-65 EWT(1)/EWA(j)/EWA(b)-2 BW/JK

ACCESSION NR: AP5014289 UR/0016/65/000/006/0064/0068
576.851.45.0[illegible]:[illegible].095.58:616.981.452.095.371

21
20
B

AUTHOR: Akimovich, V. V.; Nikolayev, N. I.; Zykin, L. F.; Ponomarev, N. G.; Popov, [illegible] S.

TITLE: In vitro selection of virulent P. pestis [illegible] with vaccinal properties

SOURCE: Zhurnal mikrobiologii, epidemiologii i immunobiologii, no. 6, 1965, 64-68

TOPIC TAGS: plague vaccination, plague, Pasteurella pestis

ABSTRACT: The first step in obtaining subcultures of *Pasteurella pestis* with vaccinal properties is to select variants with [illegible] on the basis of their ability to form non-pigmented [illegible] Jackson-[illegible]. This [illegible] indica[illegible] [illegible] the degree of virulence nee[illegible] [illegible]. Additional signs for selection of variants are: [illegible] magnesium-oxalate agar they form third-order colonies, which consist of bacteria dependent at 37° on calcium and characterized by a "latent" virulence like that of bacteria of the highly immunogenic vaccinal EB strain; they exhibit no tendency to the loss of latent

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L 54952-65
ACCESSION NR: AP5014289

virulence; they are avirulent to mice (in a dose of 1×10^7) but their virulence must increase when administered with iron salts (without restoration of their capacity for pigment formation and without restoration of virulence). In a dose of 5×10^3 these bacteria should produce immunity in 80-90% of white mice and in guinea pigs infected with a massive dose (200 Dcl) of virulent plague bacteria. Orig. art. has: 1 table.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy protivochumnyy institut "Mikrob," Saratov ("Microbe" All-Union Plague Scientific Research Institute)

SUBMITTED: 29May64 ENCL: 00 SUB CODE: LS

NO REF SOV: 001 OTHER: 007

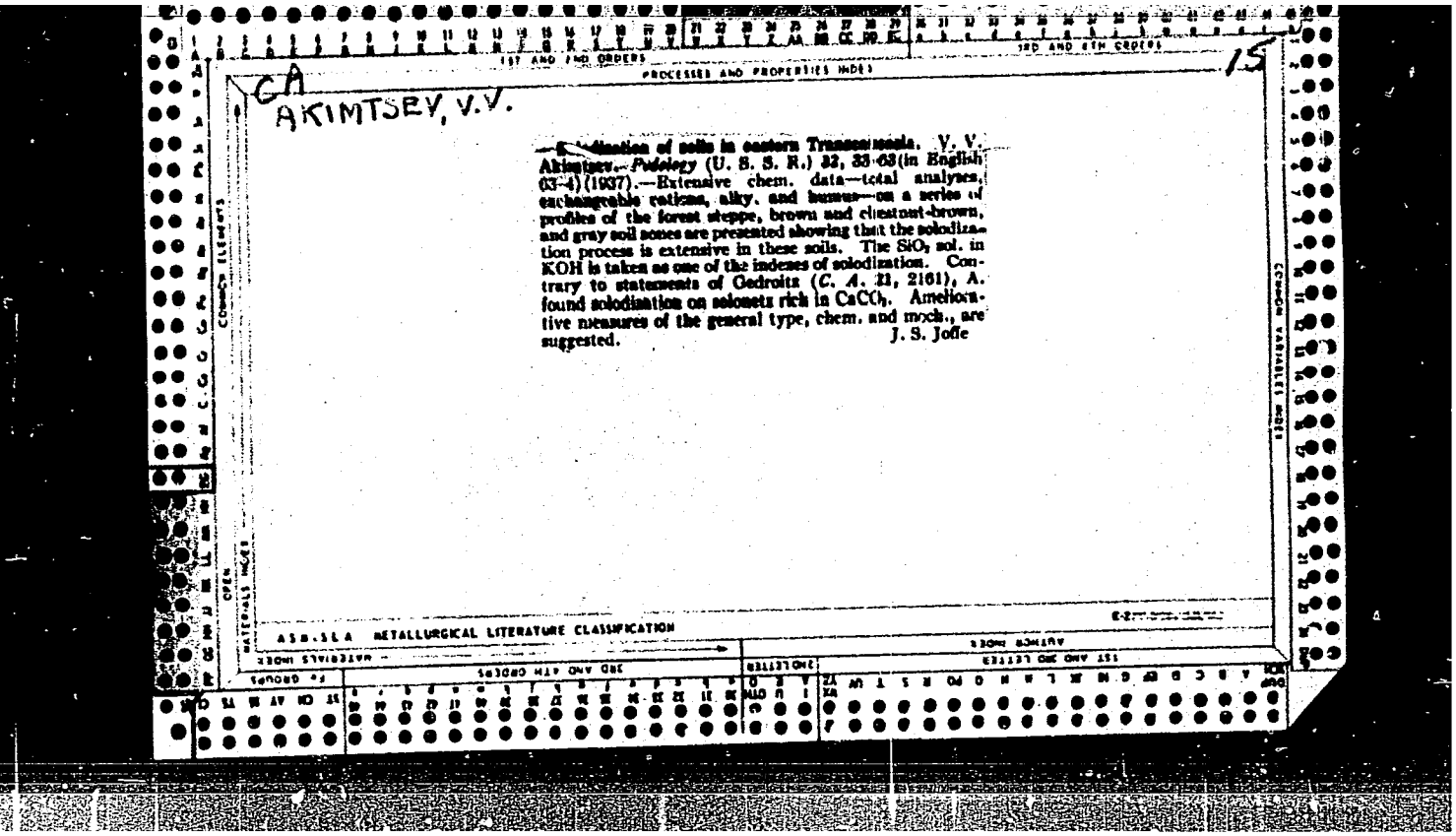
Card 2/2

AKIMOV-Peretts, D.D.; SNITKO, N.K. (Leningrad)

Experimental studies of impact deformations and stresses in beams. Stroi.mekh.i rasch.soor. 2 no.3:30-34 '60. (MIRA 13:6)
(Strains and stresses) (Girders)

BUDARIN, Sergey Petrovich, dots., kand. tekhn.nauk; AKIMOV-PERETS, D.D., kand. tekhn. nauk, dots., retsenzent; IZRAYELIT, A.B., assistent, retsenzent; KUZNETSOVA, L.Ya., red.; URITSKAYA, A.D., tekhn. red.

[Stress condition theory; lecture in the "Strength of Materials" course for students of all departments]Teoriia napriazhennogo sostoianiia; lektsiia po kursu "Soprotivlenie materialov" dlia studentov vsekh fakul'tetov. Leningrad, Vses. zaochnyi lesotekhn. in-t, 1961. 50 p. (MIRA 15:11)
(Strains and stresses)



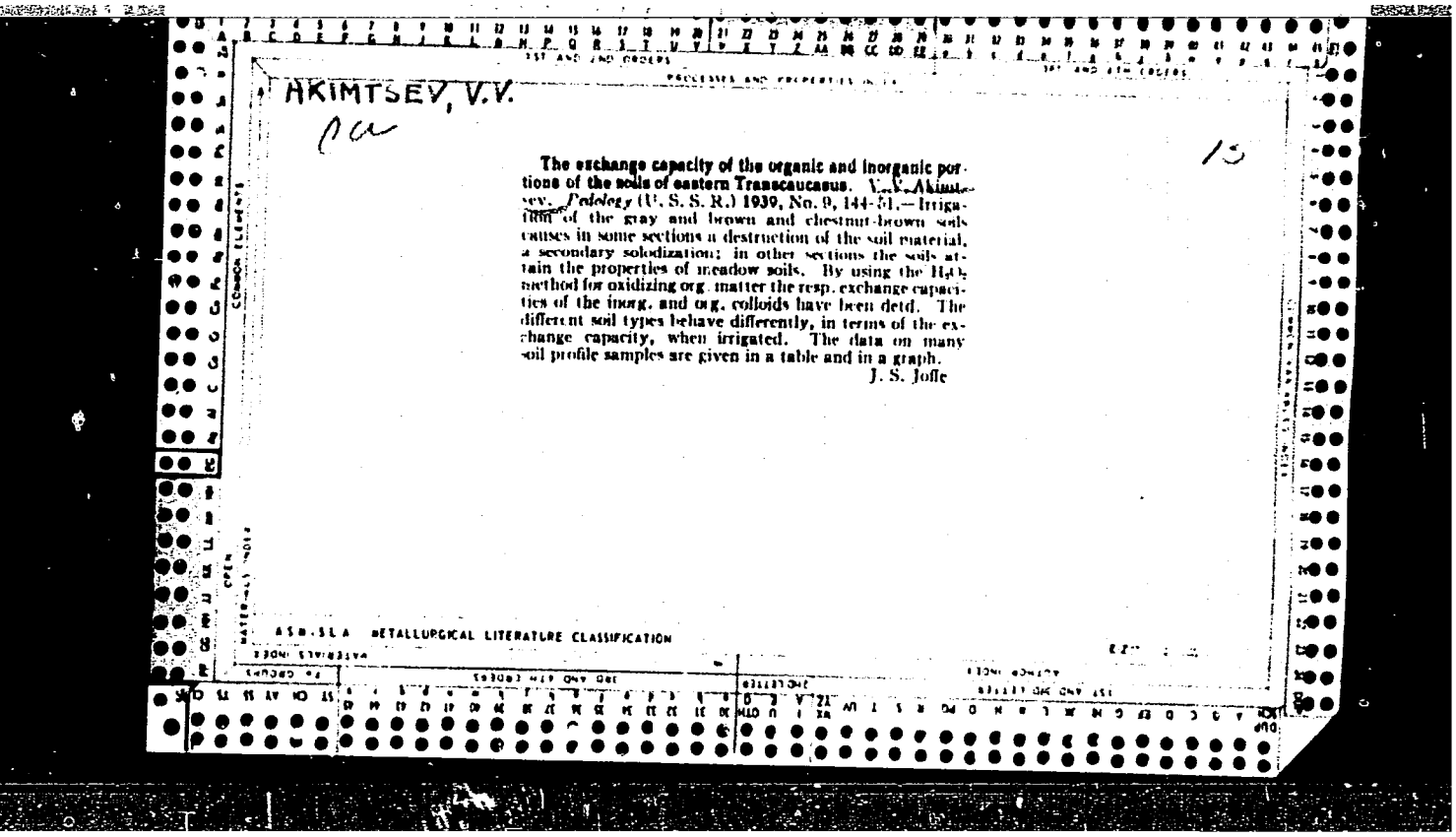
CA

AKIMTSEV, V.V.

15

[illegible]ination of soils in eastern Transcaucasia. V. V. Akimtsev. *Pedology* (U. S. S. R.) 32, 33-63 (in English 63-4) (1937).—Extensive chem. data—total analyses, exchangeable cations, alky. and humus—on a series of profiles of the forest steppe, brown and chestnut-brown, and gray soil zones are presented showing that the solodization process is extensive in these soils. The SiO_2 sol. in KOH is taken as one of the indexes of solodization. Contrary to statements of Gedroitz (*C. A.* 21, 2161), A. found solodization on solonetz rich in $CaCO_3$. Ameliorative measures of the general type, chem. and mech., are suggested.

J. S. Joffe



AKIMTSEV, V.V.

Pa

15

The exchange capacity of the organic and inorganic portions of the soils of eastern Transcaucasus. V. V. Akimtsev. *Pedology* (U. S. S. R.) 1939, No. 9, 144-51.—Irrigation of the gray and brown and chestnut-brown soils causes in some sections a destruction of the soil material, a secondary solodization; in other sections the soils attain the properties of meadow soils. By using the H_2O_2 method for oxidizing org. matter the resp. exchange capacities of the inorg. and org. colloids have been detd. The different soil types behave differently, in terms of the exchange capacity, when irrigated. The data on many soil profile samples are given in a table and in a graph.

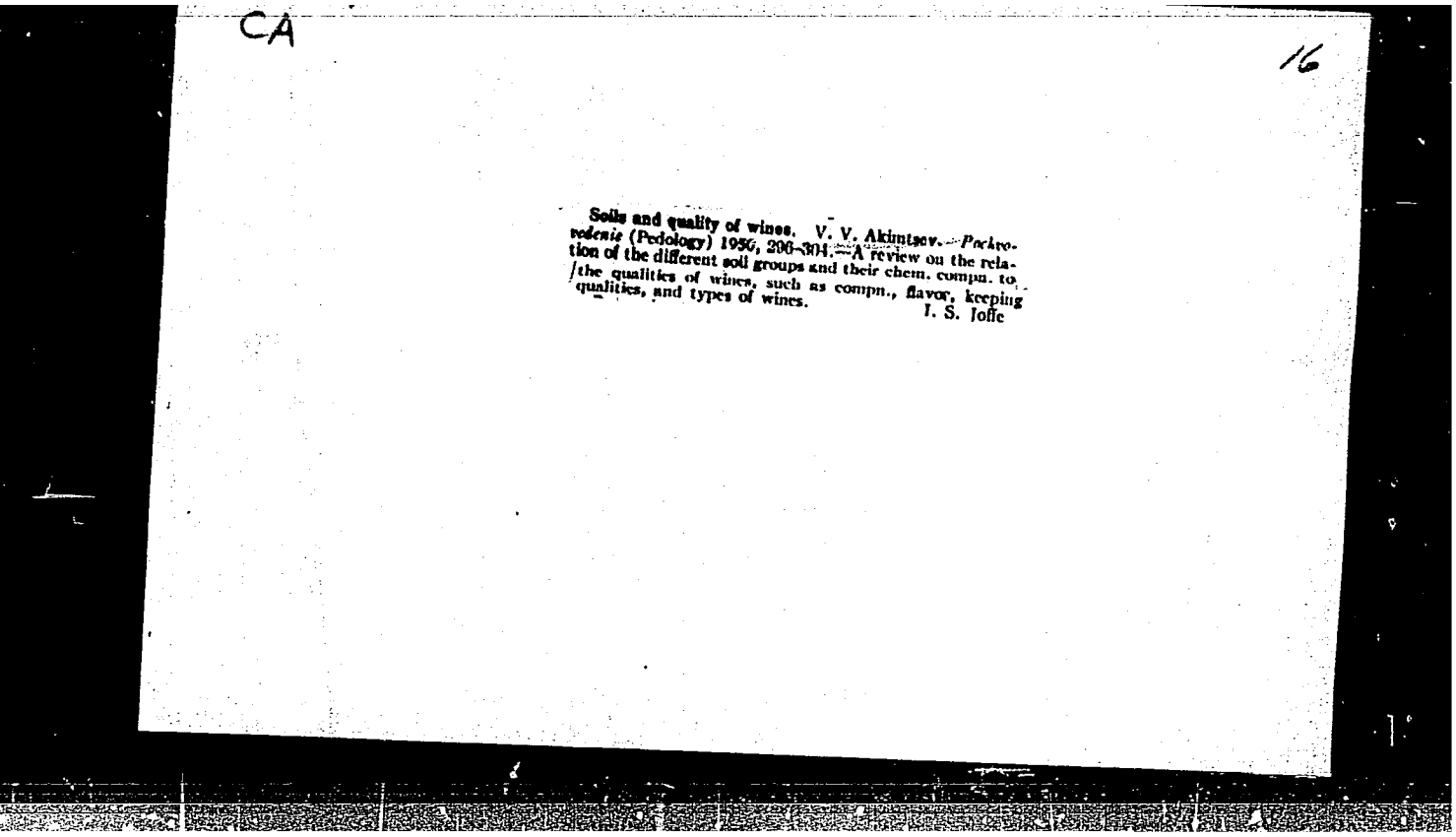
J. S. Joffe

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AKIMTSEV,V.V.

24986 AKIMTSEV, V.V. Ob Ispol'zovanii Glubinnogo Plodorodiya Pochv V Tselyakh Radikal'hogo Povysheniya Urozhayhosti Sel'skoxozyaystvennykh Rasteniy. Trudy Yubileynoy sessii, Posvyashch. Stoletiyu so dnya Rozhdeniya Dokuchayeva, M.-L., 1949, S. 326-27.

So: Setopis 'No 33, 1949



CA

16

Soils and quality of wines. V. V. Akimtsev. *Pochvovedenie* (Pedology) 1956, 296-304.—A review on the relation of the different soil groups and their chem. compn. to the qualities of wines, such as compn., flavor, keeping qualities, and types of wines.
I. S. Joffe

AKIMTSEV, V. V.

Agronomy

Dissertation: "Soils of the Near-Caspian Lowlands of the Caucasus." Dr Agr Sci, Georgian Agricultural Inst, 16 Mar 54. (Zarya Vostoka, Tbilisi, 4 Mar 54)

SO: SUM 213, 20 Sept 1954