BUDAVEY, V.Yu., kand.ekonom.nauk

Efficiency indices of the utilization of capital assets. Kozh.-obuv. prom 4 no.11:4-8 N '62. (MIRA 15:11)
(Shoe industry--Finance)

BIRICH, T.V., prof.; GOROVAYA, Kh.G., assistent; BUDAY, A.R., klinicheskiy ordinator

Surgery in retinal detachment. Zdrav.Belor. 5 no.7:36-39 Jl '59. (MIRA 12:9)

1. Iz glaznoy kliniki Minskogo meditsinskogo instituta.
(RETINA--SURGERY)

HORVATH, J.; BUDAY, F.

On the effect of Streptomyces aureofaciens cultures on antibiotic-producing capacity of various Streptomyces species. Acta microb. hung. 6 no.3:227-232 1959.

1. Institut fur Mikrobiologie der Agrarwissenschaftlichen Universität, Godollo.

(STREPTOMYCES)

HORVATH, J.; BUDAY, F.

The effect of DNA of various origin on the changes of antibiotic production of Streptomyces. Biol kozl 8 no.1:19-23 '60.

1. Agrartudomanyi Egyetem Mikrobiologiai Tanszeke, Godollo. Tanszekvezeto:dr.Horvath Janos egyetemi tanar.

BUDAY, Ferdinand; GALGOCZY, Bela

Effect of various organic nitrogen sources on the antibiotic production of Streptomyces globisporus. Biol kozl 11 no.2:99-105 '64.

1. Chair of Microbiology, University of Agriculture, Godollo. Head of the Chair: University Professor Dr. Janos Horvath.

L 28700-65

ACCESSION NR: AP5007634 H/0021/64/000/004/0210/0218

AUTHOR: Buday, I. (Budai, I.)(Doctor); Kopari, J. (Kopari, Y.)(Doctor) 5 B

TITLE: X-ray morphology of pulmonary changes caused by influenza

SOURCE: Magyar radiologia, no. 4, 1964, 210-218

TOPIC TAGS: respiratory system disease, morphology, x ray, virus disease, radiology

Abstract: [Authors' English summary modified] On the basis of 630 cases, the factors are discussed which may play a role in the onset and course of the pulmonary changes caused by influenza. The interstitial and dystelectatic forms which are characteristic of these changes are analyzed in detail. The statistics include pneumonia cases caused by secondary infection. It is pointed out that such pulmonary changes are altered rapidly, the rate of their regression is also greatly varied, they are often visible for several months as fibrous clusters. In general, the morphological characteristics are similar to those seen in pulmonary changes caused by other virus diseases and their differentiation is possible only by means of laboratory, serological and clinical examinations. The recognition of the different forms of appearance is of therapeutic importance especially in sporadic cases. Orig. art. has 11 figures and 2 tables.

Card 1/2

L 28700-65

ACCESSION NR: AP5007634

ASSOCIATION: Borsod-megyei Semmelweis Korhaz Kozponti Rontgen Intezetenek (Semmelweis Hospital of Borsod Megye Central Institute of Radiology)

SUBMITTED: 00 ENCL: 00 SUB CODE: LS, NP

NO REF SOV: 000 OTHER: 015 JPRS

Card 2/2

ACC NR: AP6001843 SOURCE CODE: HU/0021/65/000/001/0032/0033

AUTHOR: Buday, Istvan--[illegible] (Doctor)

ORG: Central Institute of Radiology, Semmelweis Hospital of Miskolc, Miskolc (Miskolci Semmelweis korhaz)

TITLE: Teratoma at an unusual location

SOURCE: Magyar Radiologia, no. 1, 1965, 32-33

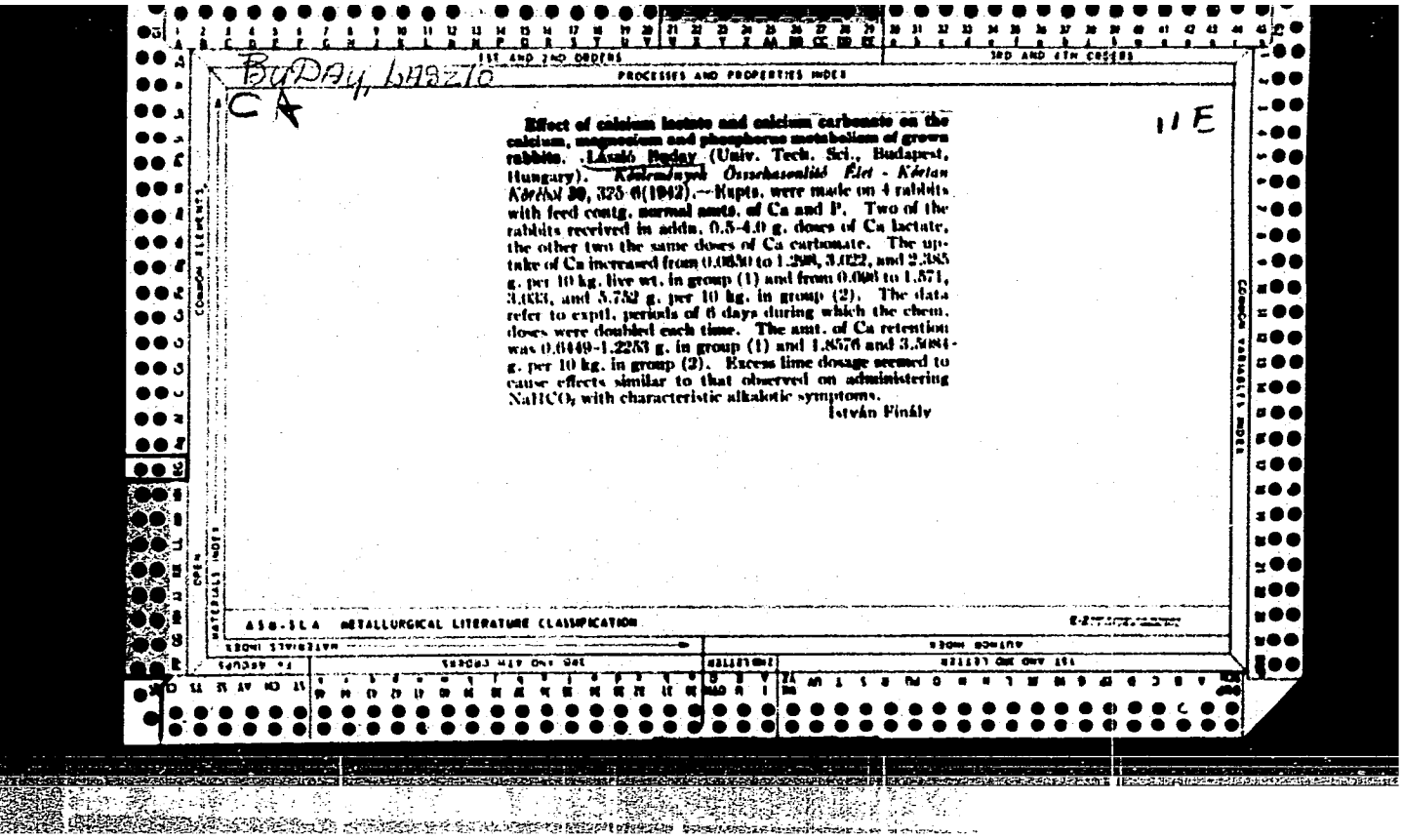
TOPIC TAGS: tumor, radiology, surgery, histology, pathology

ABSTRACT: A case of teratoma is described which developed on the left leg, and was made up exclusively of dental germs and teeth with fully developed pulp. The radiological diagnosis was verified by surgery and by histological examination. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 06 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 004

jw

Card 1/1



BUDAY, László

CA

11 E

PROCESSES AND PROPERTIES INDEX

Effect of calcium lactate and calcium carbonate on the calcium, magnesium and phosphorus metabolism of grown rabbits. László Buday (Univ. Tech. Sci., Budapest, Hungary). *Kísérletügyi Összehasonlító Élet - Kórtan Kórtan* **30**, 325-6(1942).—Expts. were made on 4 rabbits with feed contg. normal amts. of Ca and P. Two of the rabbits received in addn. 0.5-4.0 g. doses of Ca lactate, the other two the same doses of Ca carbonate. The uptake of Ca increased from 0.0830 to 1.298, 3.022, and 2.385 g. per 10 kg. live wt. in group (1) and from 0.698 to 1.571, 3.033, and 5.752 g. per 10 kg. in group (2). The data refer to expti. periods of 6 days during which the chem. doses were doubled each time. The amt. of Ca retention was 0.6449-1.2253 g. in group (1) and 1.8576 and 3.5084 g. per 10 kg. in group (2). Excess lime dosage seemed to cause effects similar to that observed on administering $NaHCO_3$ with characteristic alkalotic symptoms.

István Pinály

A58-51A METALLURGICAL LITERATURE CLASSIFICATION

YESMNOV, S.. Ye.; VEDERNIKOV, N.N.; BUDAY, M.M.

Methods of prospecting for asbestos deposits. Razved. i okh. nedr. 30 no.3:10-13 Mr '64 (MIRA 18:1)

1. Ministerstvo geologii i okhrany nedr Kazakhskoy SSR.

KOSA, Gyorgy, dr.; BUDAY, Pal, dr.

Hemangioma multiplex. Magy. sebeszet 14 no.3:168-171 Je '61.

1. A Budapesti Orvostudomanyi Egyetem II. sz. Sebeszeti Klinikajanak kozlemenye.

(HEMANGIOMA case reports)
(INTESTINES neoplasms)

HORANYI, Janos, dr.; BUDAY, Pal, dr.

A malignant tumor developing on heterotopic adenomyosis of an old gastrointestinal anastomosis. Magy. sebesz. 15 no.3:162-166 Je '62.

1. A Budapesti Orvostudomanyi Egyetem II sz. Sebeszeti Klinika Kozlemenye (Megbizott vezeto: Stefanics Janos dr.)

(STOMACH NEOPLASMS case reports)
(GASTRECTOMY compl)
(ENDOMETRYOSIS pathol)

GORGENYI-GOTTCHE, Oszkar, dr.; HOFFMAN, Ida, dr.; statisztikai munkatars: BUDAY, Rezso

A sanatorium for adolescents with tuberculosis. Orv. hetil. 104 no.7:315-316 17 F '63.

1. Szabadsaghegyi Allami Gyermekszanatorium.
(TUBERCULOSIS)

BUDAY, T.; CICHA, I.

New opinion on the stratigraphy of the Lower and Middle Miocene in the Lower Morava Valley and the Vah River Valley. p.5.
GEOLOGICKE PRACE, No. 43, 1956, Bratislava, Czechoslovakia.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 12, December 1957. Incl.

BUDAY, T.

"Principal tasks and problems of the microgiostratigraphy of the Neocene in Czechoslovakia."

p. 382 (Vestnik, Vol. 32, no. 6, 1957, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

BUDAY, T.; CICHA, I.; SENES, J.

"Relation between the lower Miocene of the Austrian and Bavarian Molasse southeastern Moravia, and the intra-Carpathian beds."

VESTNIK, Praha, Czechoslovakia, Vol. 33, No. 6, 1958

Monthly list of EAST EUROPEAN ACCESSIONS (EEAI), LC, Vol. 8, No. 7, July 1959, Unclas

BUDAY, T.: SPICKA, V.

Geologic development of the Slovak part of the Vienna basin in the light of detailed investigation of the Laksar elevation. p. 3.

Praha, Czechoslovakia. Vol. 69. no. 9, 1959.

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

Uncl.

BUDAY, T. (Chekhoslovakiya); SHVAGROVSKIY, I. [Svagrovsky, I.] (Chekhoslovakiya)

Development of the Neogene in the Western Carpathians of Czechoslovakia. Mat.Karp.-Balk.assots. no.3:119-139 '60. (MIRA 14:12)
(Carpathian Mountains--Geology)

BUDAY, T. /author/
SURNAME (in caps); Given Names

Country: Czechoslovakia

Academic Degrees: /not given/

Affiliation: /not given/

Source: Bratislava, Geologicky Sbornik, Vol XII, No 1, 1961, pages 129-137.

Data: "Critical Analysis of the Works by a Collective of Authors (T. BUDAY, O. KODYM sen., M. MAHEL, A. MATEJKA, J. SVOBODA, V. ZOUBEK) Edited by M. MASKA, A. MATEJKA, and V. ZOUBEK under the Title "Tectonics Development of Czechoslovakia." (The book is presumably in English)

BUDAY, Tibor

Problems of the geology of bitumens in the Danube Valley.
Geol pruzkum 5 no.8:253 Ag '63.

BUDAY, Tibor

Thermal aging of perlite concrete. Epitoanyag 15 no.10: 383-390 O '63.

1. Epitestudomanyi Intezet.

BUDAY, T.

"Origin of the gas deposits in the Thuringian Basin" by A. Snarsky. Reviewed by T. Buday. Vest Ust geol 39 no.6:458 N '64.

BUDAY, Tibor

Thermal consolidation of concrete of light additives. Epitoanyag 14 no.10:373-377 O '62.

1. Epitestudomanyi Intezetben vegzett kutatas alapjan.

BUDAY, Tibor

Tectogenesis of the Neocene basins in the Western Carpathians and their development. Geol prace 63:163-167 '62.

1. Ustredni ustav geologicky, Praha.

BUDAY, Tibor

Some remarks about the new concrete specifications in preparation. Magy ep ipar 12 no.3:136-140 '63.

BUDAY, V.T.

Experimental determination of the natural vibration frequencies of a cantilever rotor suitable for vane pumps. Vop. gidrotekh. no.15:39-44 '63. (MIRA 18:2)

Budayev, A

AID P - 3797

Subject : USSR/Aeronautics

Card 1/1 Pub. 58 - 10/25

Author : Budayev, A.

Title : Inter-city glider competitions

Periodical : Kryl. rod., 12, 8, D 1955

Abstract : A report on a regional glider competition in Krasnodonsk.

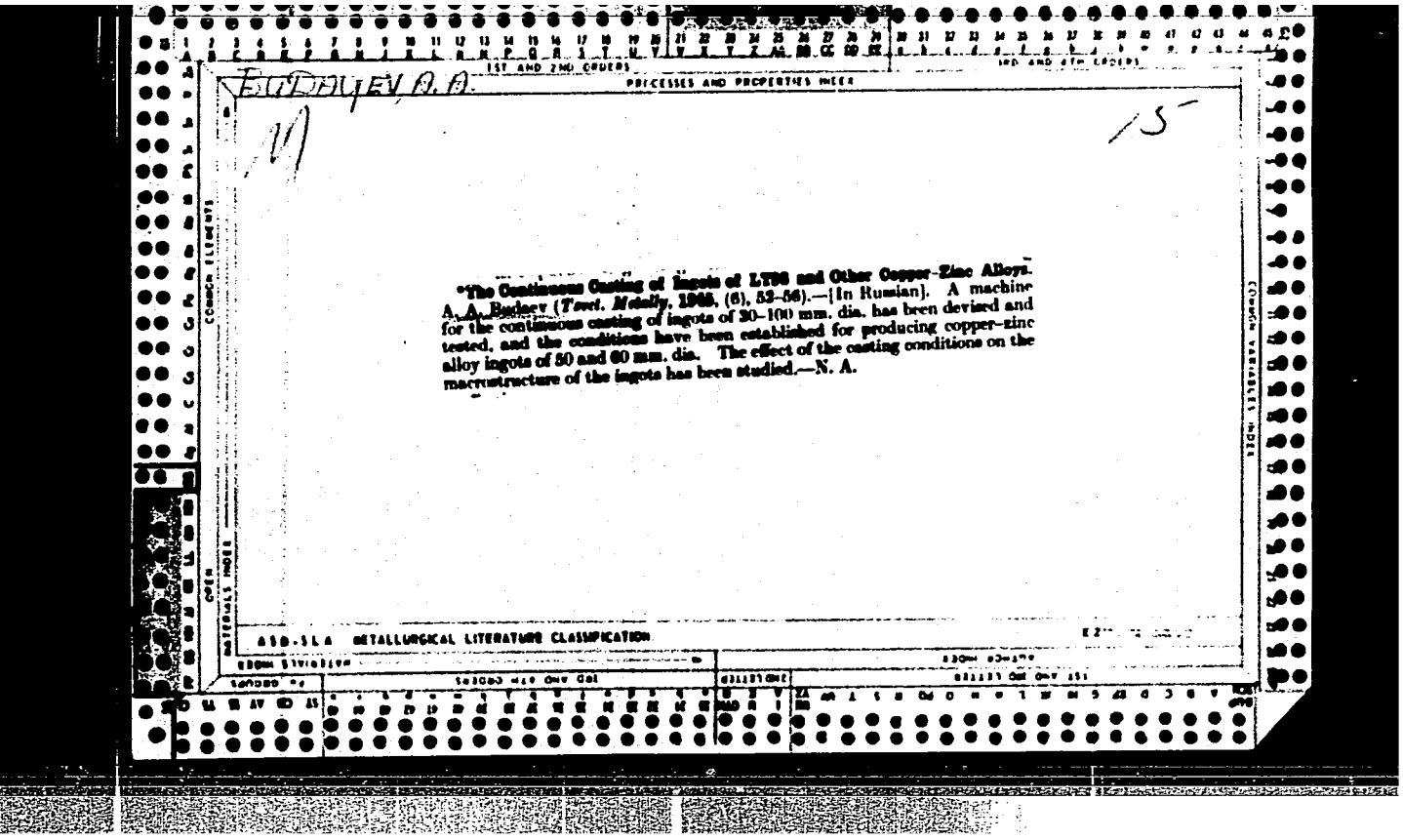
Institution : None

Submitted : No date

BUDAYEV, A., inzh.

Starting with the roof in house building? Tekh.mol. 28 no.4: 3-4 '60. (MIRA 13:11)

(Building)



FAIDILEV, A.A.

PROCESSES AND PROPERTIES INDEX

"The Continuous Casting of Ingots of LTS6 and Other Copper-Zinc Alloys. A. A. Baulaev (*Tsvet. Metally*, 1965, (6), 52–56).—[In Russian]. A machine for the continuous casting of ingots of 30–100 mm. dia. has been devised and tested, and the conditions have been established for producing copper–zinc alloy ingots of 50 and 60 mm. dia. The effect of the casting conditions on the macrostructure of the ingots has been studied.—N. A.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

BUDAYEV, A.S.

BUDAYEV, A. S.

6567 BUDAYEV, A. S. SEBESTOIMOST' STROITEL'STVA I BOR'BA ZA YEYE SNIZHENIYE. YEREVAN, AYLETRAT, 1954 102S S ILL. 20 SM.(V POMOSHCH' EKON. OBRAZOVANIYU RABOCHIKH - STROITELEY) 2.000EKZ. 1 R 30K. **NA ARM YAZ.--
(55-1506) 69.0031 plus 338.58:69

SO: IZHARYA LETOPIS' No. 6, 1955

BUDAYEV, A.S., redaktor

[Innovators in the building industry; a collection of articles] Novatory stroitel'noi industrii; sbornik statei. Moskva, Gosstroiizdat, 1956. 93 p. (MLRA 10:1)
(Construction industry)

BUDAYEV, Andrey Stepanovich; USPENSKIY, V.V., nauchnyy redaktor; KRYUGER, Yu.V., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiy redaktor

[Building your own appartment houses without a contractor] Stroitel'stvo zhilykh domov svoimi silami. Moskva, Gos.izd-vo lit-ry po stroit. i arkhit., 1957. 90 p. (MLRA 10:7)
(Apartment houses)

KOSORUKOV, I.I., prof., zasluzhennyy stroitel' RSFSR; BUDAYEV, A.S., inzh.

Section of the book "Technology of Building." Transp. stroi. 14 no.10:57-58 O '64. (MIRA 18:3)

BUDAYEV, D.B.

Two excursions as part of the fifth grade course in geography.
Geog.v shkole 20 no.4:58-59 Jl-Ag '57. (MLRA 10:7)

1. Zagustayskaya srednyaya shkola Buryat-Mongol'skoy ASSR.
(Physical geography--Study and teaching) (School excursions)

BUDAYEV, D.I.

AVDUSIN, D.A.; BELOGORTSEV, I.D.; BUDAYEV, D.I.; MINKIN, A.Ye.; RYABKOV, G.T.; KHENKIN, A.M., IVANOV, I.P.; KROLIK, I.D.; ANDREYEV, N.V.; VALIKOVA, K., red.; FILIPPENKOVA, M., tekhn.red.

[Smolensk; a guidebook] Smolensk; spravochnik-putevoditel'. [Smolensk] Smolenskoe knizhnoe izd-vo, 1957. 217 p. (MIRA 11:1)
(Smolensk--Description)

VASIL'YEV, V.G., kand. geogr. nauk, otv. red.; POGULYAYEV, D.I., doktor geol.-miner. nauk, red.; PERLIN, B.N., kand. geogr. nauk, red.; OMEL'CHENKO, T.M., kand. sel'khoz. nauk, red.; BUDAYEV, D.I., kand. ist. nauk, red.

[Atlas of Smolensk Province; dedicated to the 1100th anniversary of Smolensk] Atlas Smolenskoi oblasti; posviashchaetsia 1100-letiiu Smolenska. Moskva, 1964. 31 p. (MIRA 18:3)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye geodezii i kartografii.

SAMANDUYEV, A.Ya.; IVANOV, V.I.; BUDAYEV, E.S.

Designing and operating automated compressor stations. Mash. i neft. obor. no.1:32-36 '65. (MIRA 18:4)

1. Groznenskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i proyektno-konstruktorskogo instituta kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlennosti i Giprogrozneft'.

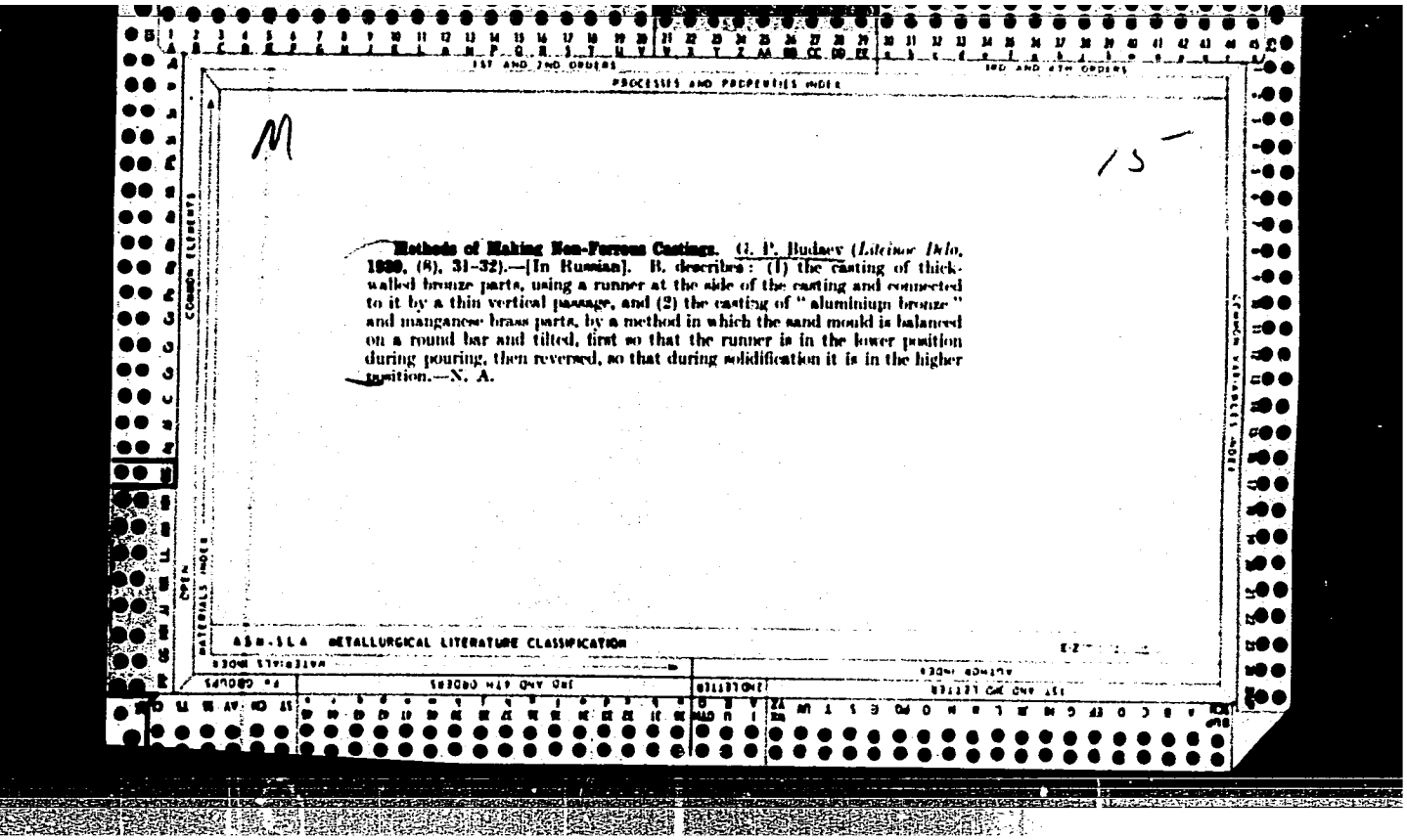
SAMANDUYEV, A.Ya., inzh.; IVANOV, V.I., inzh.; BUDAYEV, E.S., inzh.

Automation of water-pumping stations of petroleum refineries.
Vod. i san. tekh. no.11:4-6 N '65. (MIRA 18:12)

SEVER'YANOV, Nikolay Nikolayevich, AGALINA, Mariya Samoylovna, RUDAYEV, E.V., otv.red.; SAVIN, M.M., red.; KOROVENKOVA, Z.A., tekhn.red.

[Manual on engineering surveys for construction] Spravochnik po inzhenernym izyskaniiam dlia stroitel'stva. Moskva, Ugletekhizdat, 1958. 360 p. (MIRA 11:9)

(Civil engineering)



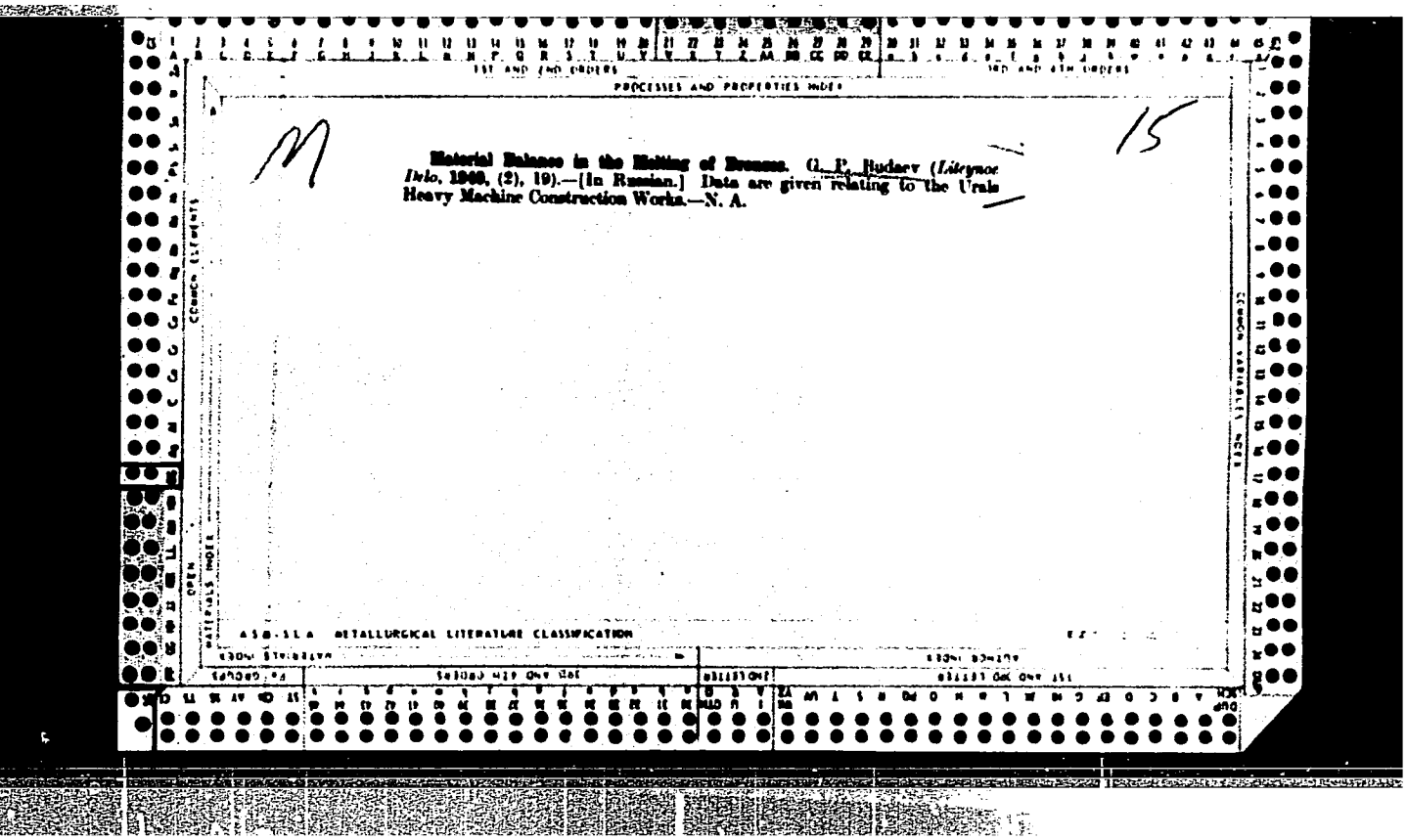
PROCESSES AND PROPERTIES INDEX

M

15

Methods of Making Non-Ferrous Castings. G. P. Budaev (*Liteinoe Delo*, 1939, (8), 31–32).—[In Russian]. B. describes: (1) the casting of thick-walled bronze parts, using a runner at the side of the casting and connected to it by a thin vertical passage, and (2) the casting of "aluminium bronze" and manganese brass parts, by a method in which the sand mould is balanced on a round bar and tilted, first so that the runner is in the lower position during pouring, then reversed, so that during solidification it is in the higher position.—N. A.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



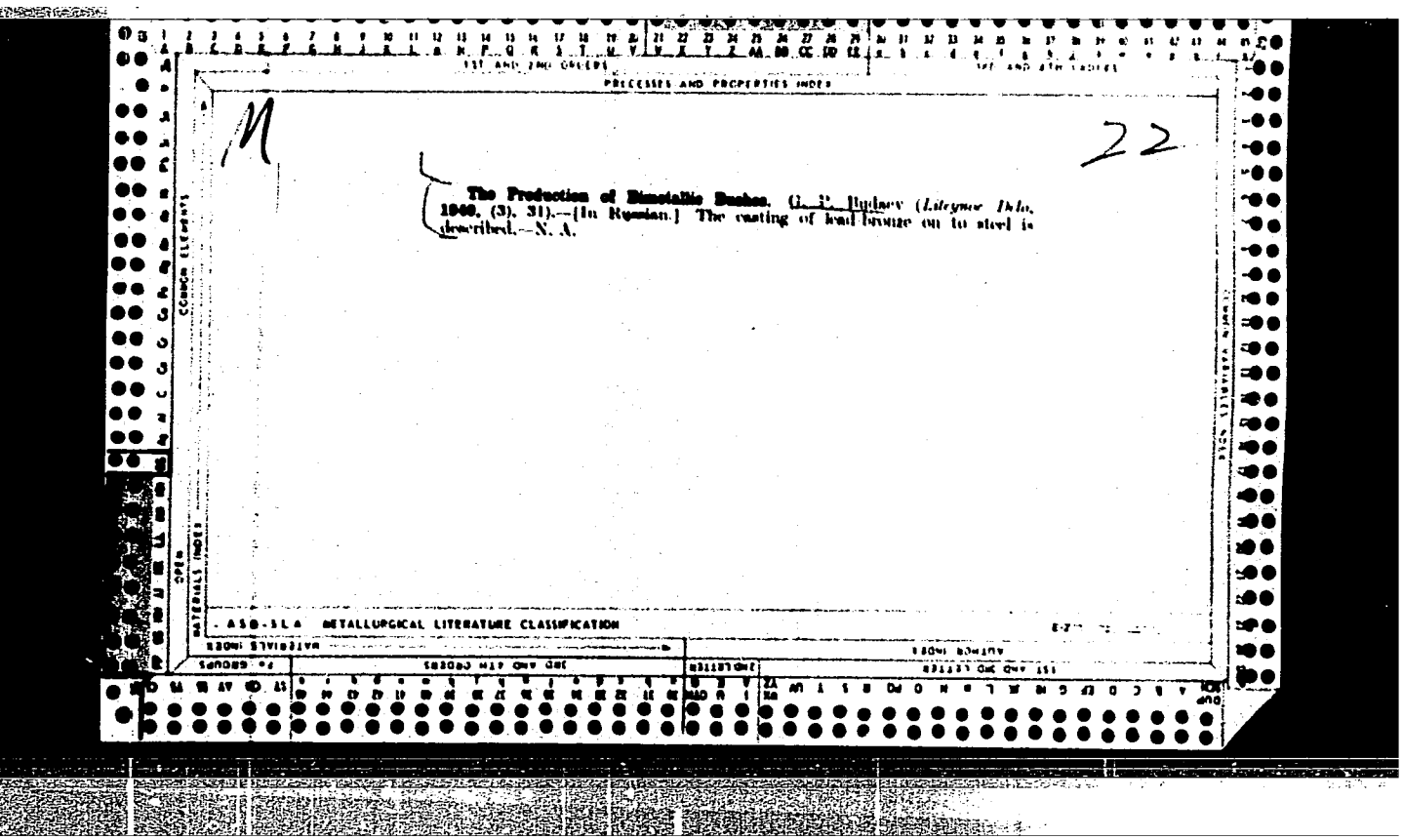
PROCESSES AND PROPERTIES INDEX

M

15

Material Balance in the Melting of Bronzes. G. P. Rudaev (*Liteynoe Delo*, 1960, (2), 19).—[In Russian.] Data are given relating to the Ural Heavy Machine Construction Works.—N. A.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

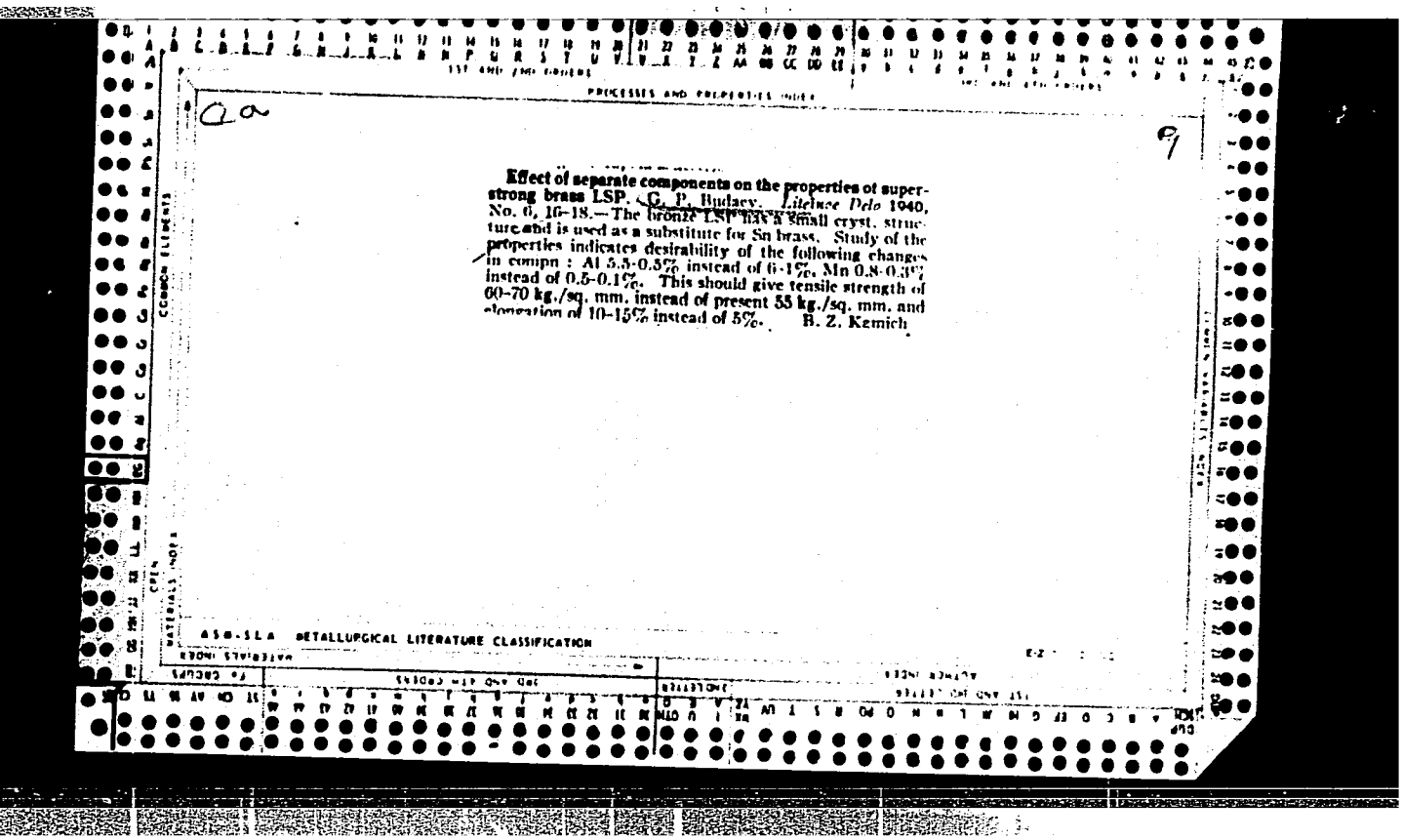


M

22

The Production of Bimetallic Bushes. G. P. Rybkov (*Liteynoe Delo*, 1960, (3), 31).—[In Russian.] The casting of lead bronze on to steel is described.—N. A.

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

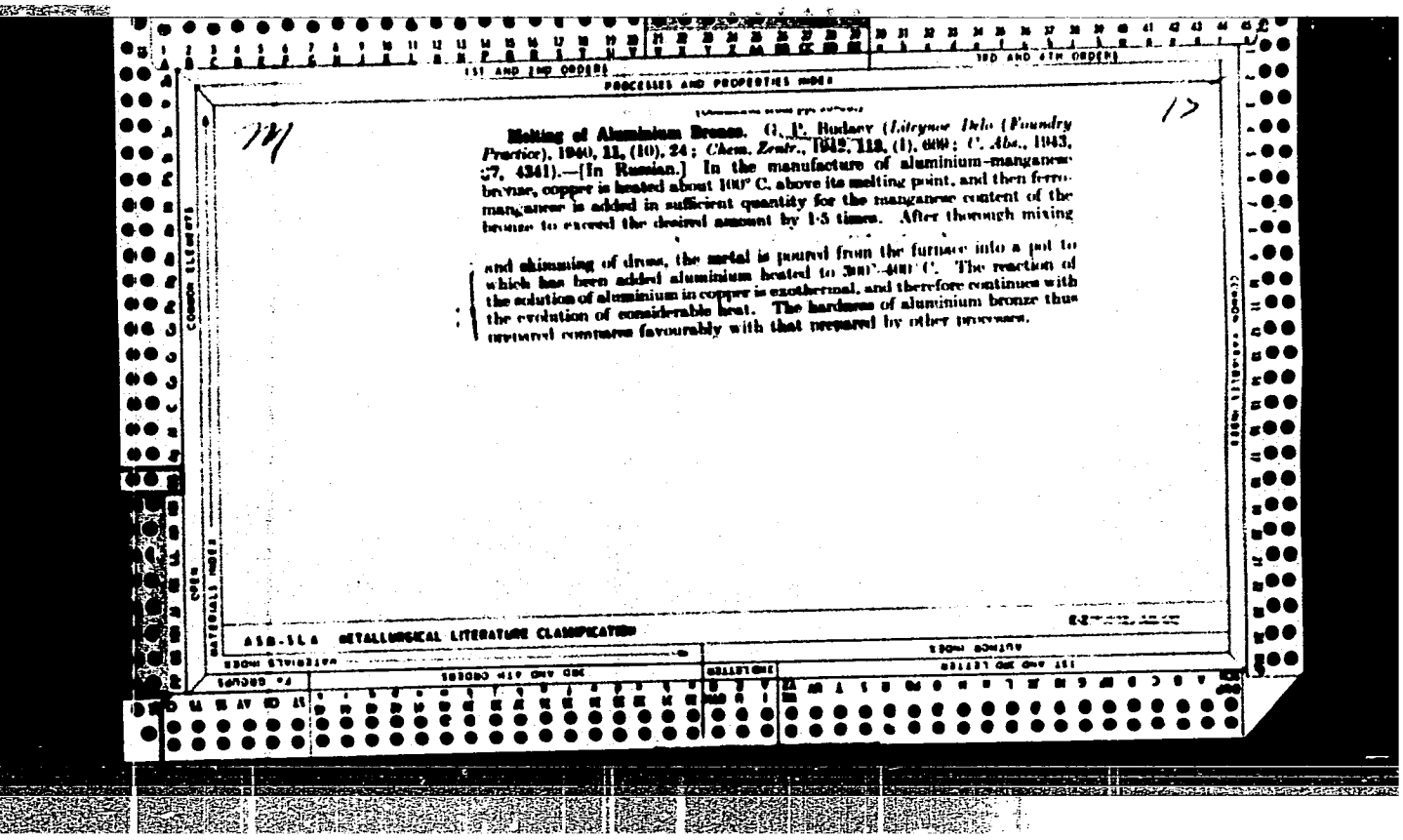


Qa

9

Effect of separate components on the properties of super-strong brass LSP. C. P. Rudaev. *Liteinoe Delo* 1940, No. 6, 16–18.—The bronze LSP has a fine cryst. structure and is used as a substitute for Sn brass. Study of the properties indicates desirability of the following changes in compn: Al 5.5–0.5% instead of 6–1%, Mn 0.8–0.3% instead of 0.5–0.1%. This should give tensile strength of 60–70 kg./sq. mm. instead of present 55 kg./sq. mm. and elongation of 10–15% instead of 5%. B. Z. Kemich

A S M - S L A METALLURGICAL LITERATURE CLASSIFICATION

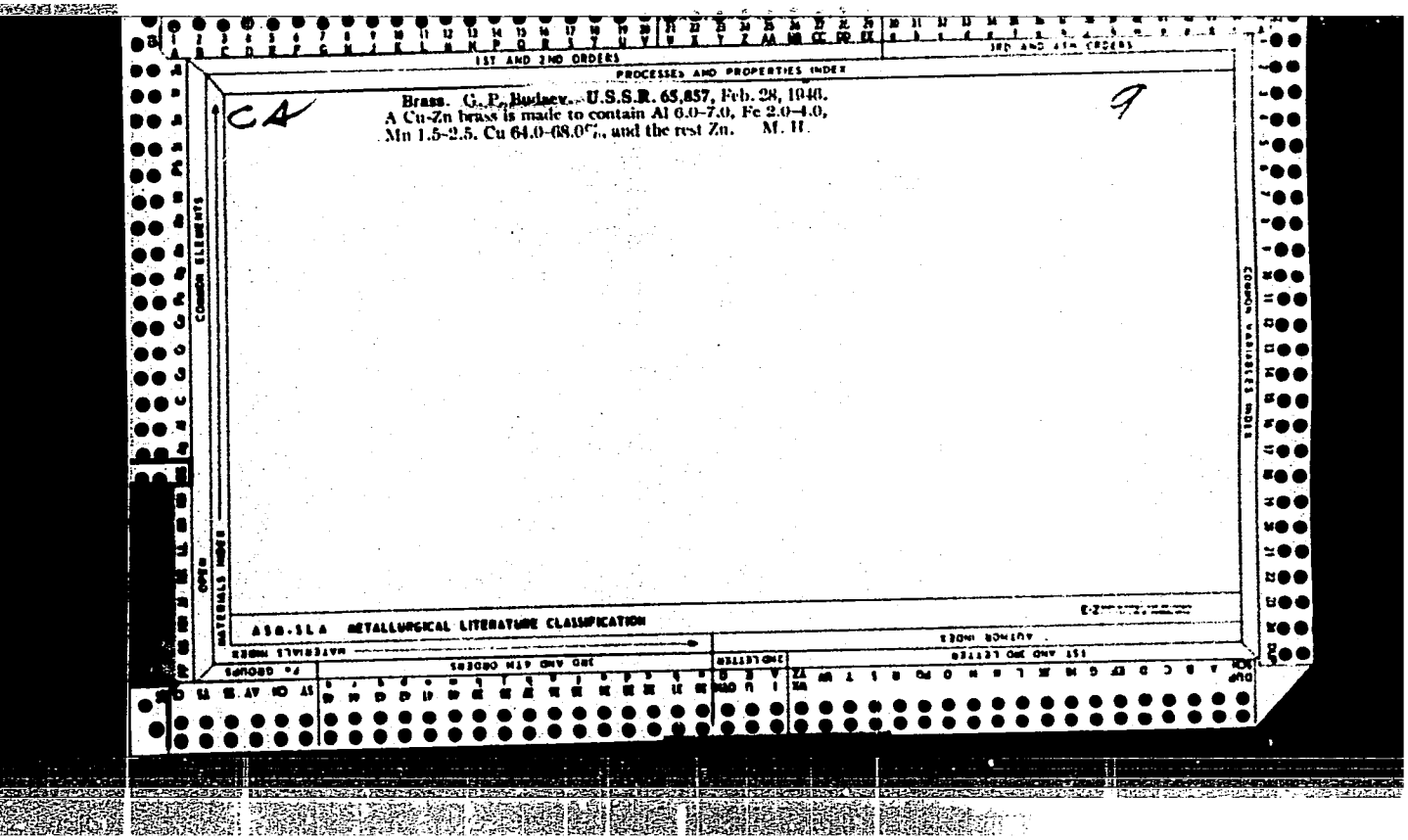


Melting of Aluminium Bronze. G. P. Rudzey (*Liteynoe Delo* (*Foundry Practice*), 1940, **11**, (10), 24; *Chem. Zentr.*, 1942, **113**, (1), 600; *C. Abs.*, 1943, **37**, 4341).—[In Russian.] In the manufacture of aluminium–manganese bronze, copper is heated about 100° C. above its melting point, and then ferro-manganese is added in sufficient quantity for the manganese content of the bronze to exceed the desired amount by 1·5 times. After thorough mixing and skimming of dross, the metal is poured from the furnace into a pot to which has been added aluminium heated to 300°–400° C. The reaction of the solution of aluminium in copper is exothermal, and therefore continues with the evolution of considerable heat. The hardness of aluminium bronze thus prepared continues favourably with that prepared by other processes.

m.9. 13.

The Production of the Bronze OCS-30. G. P. Budaev (*Liteinoe Delo i Peredovaya Praktika*), 1941, **12**, (2), 29; (*Chem. Zentr.*, 1942, **113**, (I), 799; *C. A.*, 1943, **37**, 2315).—[In Russian.] The bronze is composed of 3–5% tin, 30–32% lead, 2–4% nickel, rest copper, and has a tensile strength of 21,000 lb. per sq. in., an elongation of 8% and a Brinell hardness of 45. In production, the molten copper is first deoxidized with 0·3% copper containing phosphorus. After heating the melt up to 1200° C., tin is added; then the temperature is increased to 1230°–1250° C. About 0·1–0·2% copper containing phosphorus is again added, and then lead is finally added with constant stirring. Before tapping, the slag has to be removed. The temperatures for tapping are 1080–1070° C. for thin walls (up to 15 mm.) or long articles (irrespective of length with wall thicknesses up to 40 mm.), 1035–1050° C. for thick walls (40 mm. and over), and 1030–1050° C. for test samples for [illegible]

1943



BUDAYEV, G. P. PA 228T95

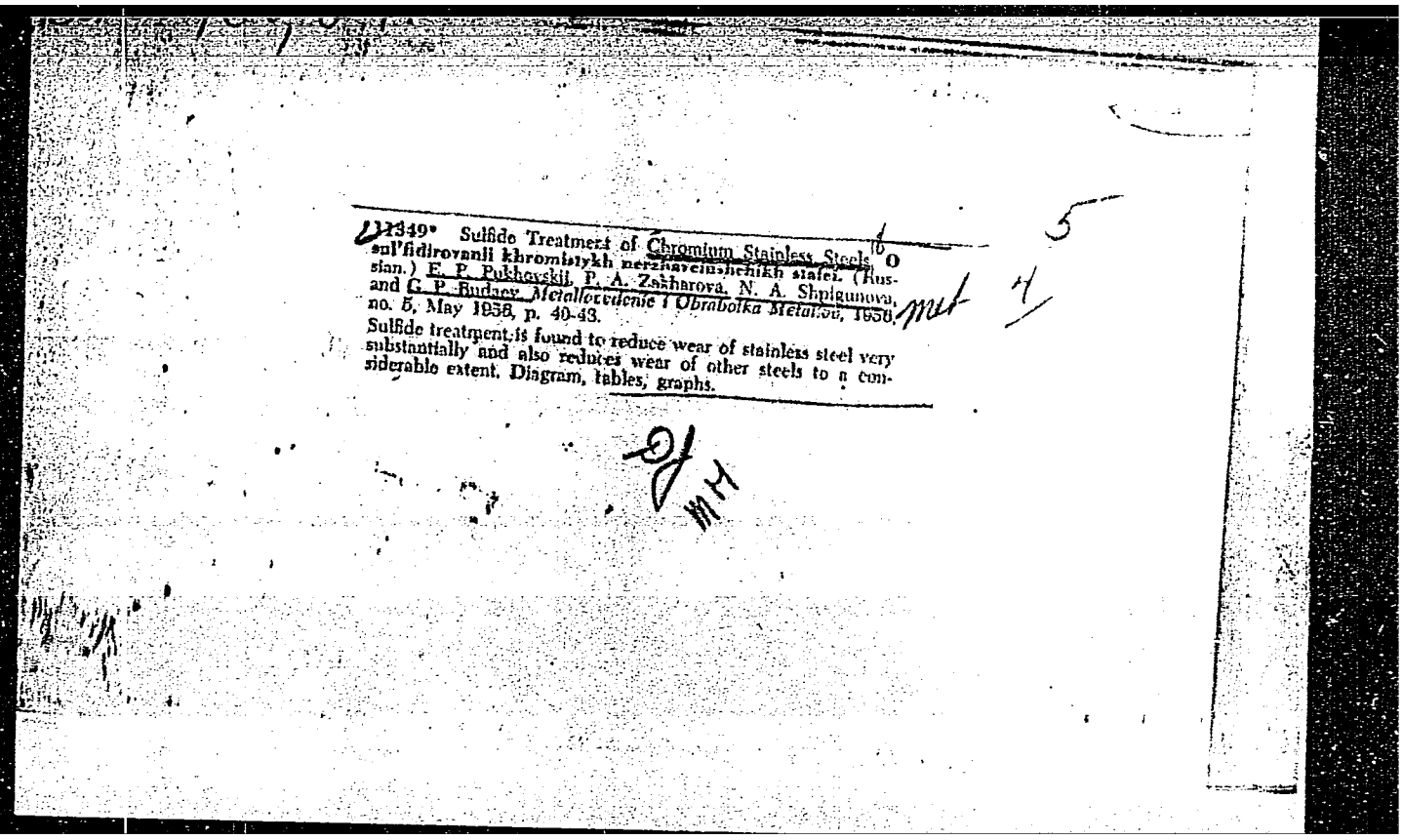
USSR/Metallurgy - Cast Iron, Castings May 52

"Alloy for Correction of Defects on Castings by Welding," G. P. Budayev, Engr

"Litey Proizvod" No 5, p 26

Suggests alloy composed of 68-70% Cu, 20-24%, and 7-10% Mg. States alloy is easily welded with cast iron, inexpensive, simple to produce, and prossesses good fluidity, considerably exceeding fluidity of Monel metal.

228T95



12349* Sulfide Treatment of Chromium Stainless Steels (O sul'fidirovanii khromistykh nerzhaveiushchikh stalei. (Russian.) E. P. Pukhovskii, P. A. Zakharova, N. A. Shpigunova, and G. P. Budaev. *Metallovedenie i Obrabotka Metallov*, 1958, no. 5, May 1958, p. 40-43.

Sulfide treatment is found to reduce wear of stainless steel very substantially and also reduces wear of other steels to a considerable extent. Diagram, tables, graphs.

BUDAYEV, I. V. (and A. N. Volskiy)

"INVESTIGATIONS OF URANIUM DIOXIDE AND PLUTONIUM DIOXIDE CHLORINATION WITH CARBON TETRACHLORIDE".

By I. V. Budayev and A. N. Volskiy.

Report presented at 2nd UN Atoms-for-Peace Conference, Geneva, 9-13 Sept. 1958.

BUDAYEV, I.V.

21(4) PHASE I BOOK EXPLOITATION SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryucheye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series: Its: Trudy, vol. 3. 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Pereverzev and G.M. Pchelintseva; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy; for professors and students of schools of higher technical education where the subject is taught; and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 6-volume set of reports on atomic energy, presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by G.L. Zverev, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2081 for the titles of the other volumes of the set.

Budayev, I.V., and A.V. Vol'skiy. Investigating the Reactions of Uranium Dioxide and Plutonium Dioxide Chlorination by Carbon Tetrachloride (Report No. 2195) 285

Voronov, N.M., Ye.A. Voytekhova, and A.S. Danilin. Phase Diagrams for the UO_2 - ZrO_2 and the ThO_2 - ZrO_2 Systems (Report No. 2490) 315

Budnikov, P.P., S.G. Tresvyatskiy, and V.I. Kushakovskiy. Binary Phase Diagrams for UO_2 - Al_2O_3; UO_2 - BeO; and UO_2 -MgO (Report No. 2193) 322

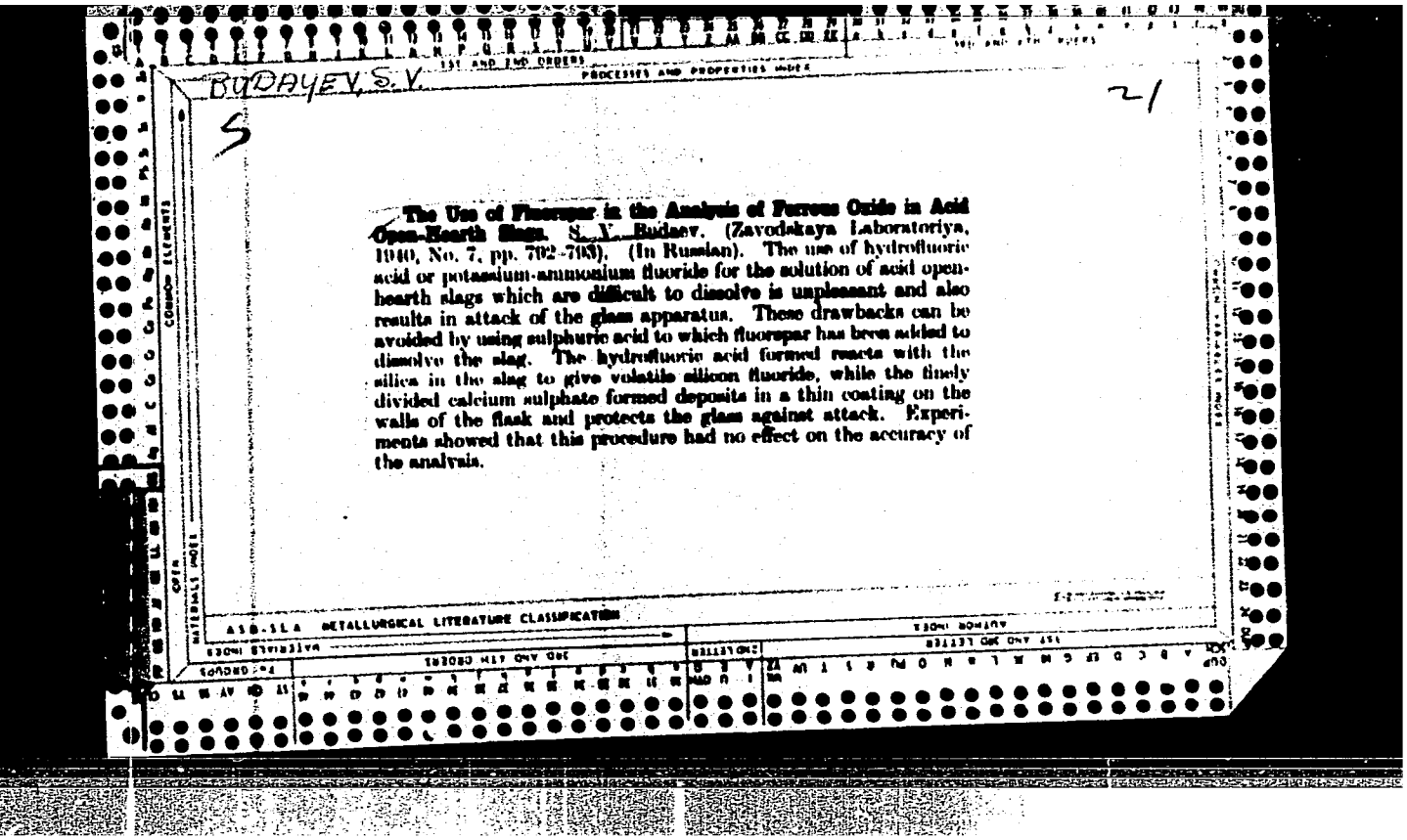
Sergeyev, G.Ya., V.V. Titova, Z.P. Nikolayeva, A.M. Kaptal'tsev, and L.I. Kolobneva. The Influence of Fabrication Methods on the Structure and Properties of Uranium (Report No. 2307) 333

Ivanov, O.S., and I.A. Badayeva. Phase Diagrams of Certain Ternary Systems of Uranium and Thorium (Report No. 2043) 347

Card 6/11

ROZMAKHOV, I.G.; Prinimali uchastiye: SEROVA, P.P.; YURKINA, S.I.; BUDAYEV, Kh., student; SHCHERBAKOV, S., student

Effect of forest on the microcomplexity of soils. Pochvovedenie no.12: 19-26 D '63. (MIRA 17:11)



BUDAYEV, S.V.

S

21

The Use of Fluorspar in the Analysis of Ferrous Oxide in Acid Open-Hearth Slags. S. V. Budaev. (Zavodskaya Laboratoriya, 1940, No. 7, pp. 702-703). (In Russian). The use of hydrofluoric acid or potassium-ammonium fluoride for the solution of acid open-hearth slags which are difficult to dissolve is unpleasant and also results in attack of the glass apparatus. These drawbacks can be avoided by using sulphuric acid to which fluorspar has been added to dissolve the slag. The hydrofluoric acid formed reacts with the silica in the slag to give volatile silicon fluoride, while the finely divided calcium sulphate formed deposits in a thin coating on the walls of the flask and protects the glass against attack. Experiments showed that this procedure had no effect on the accuracy of the analysis.

BUDAYEVA, V.A.

Industrial structures in industrial building. Za indus.Riaz. no.2: 32 D '61. (MIRA 16:10)

1. Starshiy inzh. proyektnoy gruppy stroitel'nogo tresta No.11, Ryazan'.

L 05012-67 EWT(m) IJP(c)

ACC NR: AR6031250 SOURCE CODE: UR/0081/66/000/011/D043/D043

AUTHOR: Ivanov, G. N.; Budayeva, V. A.; Lopatinskiy, V. P. 21 B

TITLE: Determination of the molecular weight of organic compounds by electrical measuring circuits

SOURCE: Ref. zh. Khimiya, Part I, Abs. 11D75

REF SOURCE: Izv. Tomskogo politekhn. in-ta, no. 136, 1965, 106-109

TOPIC TAGS: molecular weight, organic compound, electric measurement

ABSTRACT: A simple and convenient diagram has been developed for determining the molecular weights of organic compounds with the use of thermistors as the thermosensitive elements. The method is characterized by high reproducibility, by rapid determination (15—20 min), by freedom from constant manual operations, and by high accuracy (1—3% relative error). One of the diagrams developed permits automation of the process for determining the molecular weight. Authors' summary. [Translation of abstract]

SUB CODE: 20/

Card 1/1 LC

BUDAVEY, V.Yu., kand.ekon.nauk, starshiy nauchnyy sotrudnik

Utilization indices of the capital assets in the textile industry. Tekst.prom. 22 no.8:17-21 Ag '62. (MIRA 15:8)

1. Nauchno-issledovatel'skiy ekonomicheskiy institut Gosudarstvennogo nauchno-ekonomicheskogo soveta Soveta Ministrov SSSR.
(Textile industry--Accounting)

MEDINETS, B.M.; GNIDKO, K.P.; KUDRYAVTSEV, V.I., spetsredaktor; BUDAYEVA, V.K., redaktor; KISINA, Ye.I., tekhnicheskiy redaktor

[Opical instruments and their use in the food industry] Opticheskie pribory i ikh ispol'sovanie v pishchevoi promyshlennosti. Moskva, Pishchepromizdat, 1956. 62 p. (MLRA 10:2)
(Optical instruments)

SANNIKOV, I., inzh.; BUDAYLI, M.

The best interfarm organization in Tatarstan. Sel'. stroi. 15 no. 2:15 F '61. (MIRA 14:5)

1. Menzelinskiy raymezhkolkhozstroy (for Sannikov). 2. Korrespondent gazety "Znamya Lenina" (for Budayli).
(Tatar A.S.S.R.—Construction industry)
(Collective farms—Interfarm cooperation)

COUTURE-SPICER, A.; BUDBERG, A.

Documentation in the enterprise. Akt probl inf dok 7 no.4:39-47 Jl-Ag '62.

SELEZNEVA, A.A.; GALAKHAR', N.L.; BUDAZHAPOVA, N.A.

Hemagglutination inhibition reaction with serums f people and domestic animals from the Tomsk focus of tick-borne encephalitis. Trudy TomNIIVS 14:22-23 '63. (MIRA 17:7)

1. Kafedra mikrobiologii Tomskogo meditsinskogo instituta i Tomskiy nauchno-issledovatel'skiy institut vaktsin i syvorotok.

BUDBERG, A.

Short survey of atuomatic reference information service in several countries. Akt probl inf dok 7 no.5:47-51 S-O '62.

BUDBERG, Anatol

Propagation of technical information in the production enterprises of the U.S.S.R. Akt probl inf dok 7 no.6:42-47 N-D '62.

BUDBERG, P. B.

Dissertation: "Investigation of the Alloys of a Tertiary System of Nickel-Chromium-Wolfram." Cand Chem Sci, Inst of General and Inorganic Chemistry, Acad Sci USSR, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 4, Feb 54)

SO: SUM 243, 19 Oct 1954

BUDBERG, P. B.

USSR/ Chemistry - Metallurgy

Card 1/1 Pub. 22 - 19/50

Authors : Kornilov, I. I., and Budberg, P. B.

Title : Composition diagram - heat resistance of binary Ni-W alloys

Periodical : Dok. AN SSSR 100/1, 73-75, Jan 1, 1955

Abstract : The heat resistance of binary Ni-W alloys was investigated by the centrifugal method at a temperature of 800° and initial stress of 6.4 kg/mm². The most objective heat resistance criterion of the alloys tested was found to be the time when the samples reach a certain maximum bending point during their deformation under the effect of the centrifugal forces. An isothermal composition diagram was prepared for the system tested and the heat resistance is considered as a property of the metals at high temperatures. The results of this investigation serve as proof of the correctness of the physico-chemical theory regarding the heat resistance of solid metal solutions. Eight references: 6 USSR, 1 USA and 1 German (1908-1953). Graphs.

Institution : Acad. of Sc., USSR., The A.A.Baykov Metallurgical Institute

Presented by: Academician G. G. Urazov, June 3, 1954

3871

CHEMICAL INTERACTIONS OF TITANIUM WITH OTHER ELEMENTS. I. I. Kornilov and P. B. Budberg. Uspekhi Khim. 25, 1474-1501 (1956) Dec. (In Russian)

Constitution diagrams of binary Ti alloys were reviewed to establish a scientific method of determining the optimum content for titanium alloys. To reveal the true character of various element interactions with Ti, the analysis was carried out by groups of elements according to their position in the Mendeleev periodic system in relation to Ti. (R.V.J.)

BUDBERG, P.B.

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical Chemical Analysis, Phase Transitions. B-8

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7155.

Author : I.I. Kornilov, P.B. Budberg.
Inst :
Title : State Graphs of Ternary System Ni - Cr - W.

Orig Pub: Zh. neorgan. khimii, 1957, 2, No 4, 860-867.

Abstract: Alloys of the ternary system Ni - Cr - W containing up to 50% of Cr and up to 30% of W were studied by the thermal method and the methods of the roentgenostructural and microstructural analyses. A rise of the Cr content in the ternary system decreases the temperature of the crystallization start, and alloys containing more than 40% of Cr crystallize at 1350° as eutectic mixtures. These alloys consist of a mixture of two phases, $\gamma + \alpha$, where α_1 is a solid solution on Cr base. The solubility of Cr in the solid solution of Ni containing 10% of W drops with the tempe-

Card : 1/2 -28-

USSR/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria, Physical Chemical Analysis, Phase Transitions. B-8

Abs Jour: Referat. Zhurnal Khimiya, No 3, 1958, 7155.

rature drop. The solubility od Cr in the solid solution of Ni containing 30% of W is considerably less than in alloys of the section with 10% of W at all temperatures. A rise of the W content in a Ni solid solution (at a constant amount of Cr) produces a greater increase of its crystalline lattice parameter than a similar rise of the Cr content at a constant amount of W. The state diagram of the investigated part of the system was plotted.

Card : 2/2 -29-

BUDBERG, P.B.

137-58-1-1575

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 1, p 212 (USSR)

AUTHORS: Kornilov, I.I., Budberg, P.B.

TITLE: Phase Diagram of the Ternary Ni-Cr-W System (Diagramma sostoyaniya troynoy sistemy Ni-Cr-W)

PERIODICAL: Tr. In-ta metallurgii AN SSSR, 1957, Nr 1, pp 132-141

ABSTRACT: An investigation of the alloys of the Ni-Cr-W system containing up to 50 percent Cr and up to 30 percent W. Sections with constant W contents of 2.5, 5, 6, 10, 15, 20, 25 and 30 percent were studied. The alloys were subjected to stepwise heat treatment in vacuum, including annealing at 1200°C for 24 hours, subsequent hardening or cooling to 1000° and holding for 100 hours, followed by hardening or annealing at 800° for 100 hours, and then hardening or cooling to room temperature during 24 hours. The investigation was conducted by the methods of micro- and x-ray structural analysis. The heat resistance of alloys was also measured by the centrifugal method; measurements of the resistivity were also made. A phase diagram of the Ni-Cr-W ternary system in the interval of percentage compositions studied was plotted. Fusibility diagrams were plotted for two pseudo-binary sections having constant W content (10 and 30 percent) and variable Cr contents.

Card 1/2

137-58-1-1575

Phase Diagram of the Ternary Ni-Cr-W

The crystallization temperature interval varied from 1475-1463° for 10% W and 0% Cr to 1355-1350° for 10% W and 40% Cr. For 30% W the corresponding figures are 1508-1505° for 0% Cr and 1437-1420° for 15% Cr. Polythermic sections of the system at 10 and 30% W and isothermic sections for 1200°, 1000° and 800° were plotted. The boundaries of the phase domain were determined by the microstructural method. X-ray investigations of the structures of the alloys resulted in determining the existence of a change in the period of the crystal lattice of the solid solution with Ni as base, depending on the Cr and W content. In ternary alloys containing over 40% Cr and 5.10% W, a compound with a σ phase structure was found.

L. M.

1. Nickel--Chromium--Tungsten--Alloys 2. Alloys--Annealing 3. Alloys--Hardening 4. Alloys--Heat treating methods

Card 2/2 . . .

BUDBERG, P.B.

18(2) PHASE I BOOK EXPLOITATION SOV/1200

Akademiya nauk SSSR. Institut metallurgii

Titan i yego splavy; metallurgiya i metallovedeniye (Titanium and Its Alloys; Metallurgy and Physical Metallurgy) Moscow, Izd-vo AN SSSR, 1958. 209 p. 4,000 copies printed.

Resp. Ed.: Ageyev, N.V., Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Rzheznikov, V.S.; Tech. Ed.: Kiseleva, A.A.

PURPOSE: This book is intended for metallurgists, machine designers, and scientific and industrial personnel working on the development of titanium as an industrial metal.

COVERAGE: The book deals with the following: methods of welding and soldering commercial titanium; mechanical properties of titanium weldments; crystal growth and structural changes occuring during welding; recrystallization diagrams of titanium and its alloys; a metallographic method of determining the degree of contamination of titanium and its alloys by oxygen and nitrogen; plasticity of titanium alloys; industrial methods of rolling titanium and

Card 1/6

titanium-alloy sheets and strips; forming of titanium and its alloys; diffusion saturation of titanium; oxidation of titanium and its alloys at elevated temperatures. No personalities are mentioned.

TABLE OF CONTENTS:

PART I. PHYSICAL METALLURGY

Ageyev, N.V., and Petrova, L.A. (Institute of Metallurgy, USSR Academy of Sciences). Stability of the Beta Phase in Titanium Alloys Containing Molybdenum 3

Ageyev, N.V., and Smirnova, Z.M. (Institute of Metallurgy, USSR Academy of Sciences). Stability of the Beta Phase in Titanium Alloys Containing Manganese 17

Kornilov, I.I., Budberg, P.B., Volkova, M.A., Prokhanov, V.F., and Pylayeva, Ye.N. (Institute of Metallurgy, USSR Academy of Sciences). Development of a Method of Hot Pressing of Titanium and Titanium-Alloy Powders 25

Savitskiy, Ye.M., Tylkina, M.A., and Turanskaya A.N. (Institute of Metallurgy, USSR Academy of Sciences). Recrystallization Diagrams of Titanium and Its Alloys 33

Savitskiy, Ye.M., Tylkina, M.A., and Turanskaya A.N. (Institute of Metallurgy, USSR Academy of Sciences). Mechanical Properties of Titanium of Various Degrees of Impurity 68

Arzhanyy, P.M. Oxidation of Titanium and Its Alloys at High Temperatures 82

Gorbunov, N.S. (Institute of Physical Chemistry, USSR Academy of Sciences). Titanium Diffusion Coatings on Iron 87

Neugodova, V.N. (Ministry of the Aircraft Industry of the USSR) Metallographic Method of Determining the Degree of Contamination of Titanium and Its Alloys with Oxygen and Nitrogen 91

Glazunov, S.G. (Ministry of the Aircraft Industry of the USSR) Effect of Heat Treatment on the Structure and Properties of VT2 Alloy 99

Stroyev, A.S., and Novikova, Ye.N. (Ministry of the Aircraft Industry of the USSR). Increasing the Surface Hardness and Wear Resistance of Titanium Alloys by Means of Thermodiffusion Saturation 107

Gudtsov, N.T. (Deceased), and Panchenko, I.P. (Institute of Metallurgy, USSR Academy of Sciences). Investigation of Titanium Alloys Containing Tungsten, Aluminum, Beryllium, and Boron 114

PART II. FORMING OF TITANIUM AND TITANIUM-BASE ALLOYS

Pavlov, I.M. (Institute of Metallurgy, USSR Academy of Sciences). General Conditions for Forming Titanium and Its Alloys 124

Danil'chenko, A.N. (Institute of Metallurgy, USSR Academy of Sciences). Plasticity of IMP-1 and IMP-2 Alloys 134

Kleymenov, V.Ya., and Sazonova, T.N. (Ministry of the Aircraft Industry of the USSR). Plasticity of VT-2 Alloy Under Manufacturing Conditions 145

Kalugin, V.F., Popov, B.N., and Dmitriyev, A.A. (Ministry of the Aircraft Industry of the USSR). Development and Mastering of Methods for Rolling Sheets and Strips of Titanium and Its Alloys 152

Sokolnikov, K.I., and Moiseyev, V.N. (Ministry of the Aircraft Industry of the USSR). Hot Rolling of Commercial Titanium and Several of Its Alloys 162

PART III. Welding of Titanium

Shorshorov, M.Kh., Amfiteatrova, T.A., and Nazarov, G.V. (Institute of Metallurgy, USSR Academy of Sciences) Weldability of IMP-1 Titanium 180

Poplavko, M.V., Manuylov, N.N., and Gruzdeva, L.A. (Ministry of the Aircraft Industry of the USSR). Some Problems in the Welding and Soldering of Commercial Titanium 194

Gurevich, S.M. (Institute of Electric Welding, Ukrainian Academy of Sciences). The Effect of Aluminum on the Structure and Properties of Titanium Welded Joints 205

AVAILABLE: Library of Congress

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2-21-59

KORNILOV, I.I.; BUDBERG, P.B.; VOLKOVA, M.A.; PROKHANOV, V.F.; PYLAYEVA, Ye.N.

Developing a method of hot pressing of titanium and titanium alloy powders. Titan i ego splavy no. 1:25-32 '58. (MIRA 14:5)

1. Institut metallurgii AN SSSR.
(Titanium—Metallurgy) (Powder metallurgy)

78-3-3-27/47

AUTHOR: Budberg, P. B.

TITLE: An Investigation of the Alloys of the Ternary System Nickel--Aluminum-Tungsten (Issledovaniye splavov troynoy sistemy nikel'-alyuminiy-vol'fram)

PERIODICAL: Zhurnal Neorganicheskoy Khimii, 1958, Vol. 3, Nr 3, pp. 694-698 (USSR)

ABSTRACT: The alloys of the ternary system nickel-aluminum-tungsten with an aluminum content up to 30 % and a tungsten content up to 60 % were investigated. The possibility was shown to determine the ternary system Ni-Al-W by the triangulation system Ni-Al-W and the section NiAl-W. The section NiAl-W was investigated by thermal analyses and by the microstructure analysis. From the diagram is evident that the quasibinary section NiAl-W represents a binary system with an eutectic at 1600°C. In the eutectic point the tungsten-content amounts to 40 %. The solubility of tungsten in the NiAl-compound is at the eutectic temperature higher than 30 %. At 1200°C the solubility of tungsten in the compound Ni_3Al does not amount to less than

Card 1/2

78-3 3-27/47

An Investigation of the Alloys of the Ternary System Nickel-Aluminum-Tungaten

7 %. The limits of the phase regions in connection with temperature were investigated by the microstructure determination. Isothermal sections of the system were constructed at 1200, 1000 and 800°C. At 970°C the compound Ni_4W forms in the binary system Ni-W. The entrance of the compound Ni_4W renders the investigation of the phase considerably difficult. The increase of the aluminum content in the ternary system Ni-Al-W on a reduction of temperature leads to the formation of the compound Ni_4W. There are 6 figures, 2 tables, and 6 references, 3 of which are Soviet.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Metallurgical Institute imeni A. A. Baykov, AS USSR)

SUBMITTED: June 25, 1957

Card 2/2

AUTHORS: Kornilov, I. I., Budberg, P. B. 20-119-5-28/59

TITLE: Types of Phase Diagrams of Ternary Systems Based on Titanium (Tipy diagramm sostoyaniya troynykh sistem na osnove titana)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, No 5, pp. 942-944 (USSR)

ABSTRACT: The chemical nature of the elements entering into the reaction in connection with a simultaneous interaction of titanium with 2 or more components, their position in the periodic system, the correlation of the atomic radii and the type of the crystal lattice are reflected in the diagrams of double systems (references 1,2). The same factors which determine the nature of interaction of titanium in binary metallic systems should no doubt also determine the type of phase diagram of the ternary systems based on titanium. On the basis of these theories the authors prove the formation of the following diagram types of ternary systems based on titanium; the phase diagrams of double systems are taken into account:

Card 1/4 Phase diagrams: 1. of the system with continuous solid

Types of Phase Diagrams of Ternary Systems Based on [illegible] Titanium

solutions of the α- and β-titanium-modifications in connection with a simultaneous interaction of zirconium and hafnium with titanium (figure 1); 2. of the system with solutions, as under 1, of β-titanium with limited solid α-titanium solutions (figure 2). 3. Phase diagram with an eutectoid transformation of alloys rich in titanium with elements that reduce the temperature of its polymorphous transformations and cause an eutectoid decomposition of the β-phase (figure 3). 4. A phase diagram with a peritectic and peritectoid type of the transformations of alloys rich in titanium is produced in the interaction with elements which increase the melting temperature and that of the polymorphous transformation of titanium (C,N,O) and with elements which diminish the former, but increase the latter (Al,B,Sc,Sn) (figure 4). 5. This type corresponds to the case in which one of the components forms a continuous series of solid solutions with α- and β-titanium, whereas the second one only forms these solutions with α-titanium.

Card 2/4

6. This type is produced due to a combination of the double diagrams of types 1 and 3, that means one component forms continuous solid solutions with α- and β-titanium, whereas the second one reduces the temperature of the polymorphous transformation of titanium and causes an eutectoid decomposition of the β-phase. 7. One component behaves as in case 6, while the second one increases the temperature of the polymorphous transformation, thereafter follows a peritectic or peritectoid reaction (combination of types 3 and 4). 8. This type is produced by a combination of types 2 and 3. 9. Type 9 = types 2 and 4. 10. Type 10 = types 3 and 4. Experimental investigations of some of these systems (references 4-6) confirm the correctness of the above-mentioned classification. These types of diagrams make it possible to obtain concrete compositions of ternary titanium alloys with a certain structure. There are 4 figures and 6 references, 5 of which are Soviet.

Types of Phase Diagrams of Ternary Systems Based on [illegible]
Titanium

ASSOCIATION: Institut metallurgii im. A. A. Baykova [illegible] USSR
(Institute for Metallurgy imeni A. A. Baykov, [illegible] USSR
Academy of Sciences

PRESENTED: October 11, 1957, by I. I. Chernyayev, Member, [illegible] of Sciences, USSR

SUBMITTED: October 1, 1957

Card 4/4

BUDBERG, P.B.

P.2

18(4,7);25(1) PHASE I BOOK EXPLOITATION SOV/2568

Akademiya nauk SSSR. Institut nauchno-tekhnicheskoy informatsii

Metallurgiya i metallovedeniye; khimiya, metallovedeniye i obrabotka titana (Metallurgy and Metallography; Chemistry, Metallography, and Treatment of Titanium) Moscow, Izd-vo AN SSSR, 1959. 383 p. (Series: Itogi nauki; tekhnicheskiye nauki, 2) Errata slip inserted. 2,700 copies printed.

Ed.: N. V. Ageyev, Corresponding Member, Academy of Sciences, USSR; Ed. of Publishing House: V. S. Rzheznikov; Tech. Ed.: Yu. V. Rylina.

PURPOSE: This collection of articles is intended for metallurgists working with titanium and titanium alloys.

COVERAGE: The articles in this collection deal with the chemistry, metallurgy, and machining of titanium and titanium alloys. The articles are based on abstracts appearing in the Referativnyy zhurnaly for chemistry and metallurgy, from 1953 to 1955. For the most part the articles are based on non-Soviet material. No personalities are mentioned. References follow each article.

Card 1/6

TABLE OF CONTENTS:

Ageyev, N. V. Crystal Chemistry of Titanium and Titanium Alloys and Compounds 5

This is a review of studies in the crystallography of metallic titanium and a number of its compounds. Intermetallic compounds covered are those of titanium with metals of Groups I, III, V, VI, and VII. Data on compounds of titanium with nonmetals and metalloids of Groups III, IV, V, VI, and VII are also presented.

Kornilov, I. I., and P. B. Budberg. Constitution Diagrams of Titanium-base Systems 31

Binary and ternary titanium-base systems are studied. It is shown that in binary systems, the nature of the chemical reaction between titanium and the given element is determined by the position of that element in the periodic table. Formation or nonformation of a solid solution is dependent on the degree of similarity between the two elements. Data on the solubility of various chemical elements in titanium are given in a number of tables

arranged according to chemical groups. A set of 18 constitution diagrams of ternary titanium-alloy systems is included. It is stated that these diagrams represent virtually all known data on these systems published up to 1955.

Savitskiy, Ye. M., and M. A. Tylkina. Properties of Titanium and Titanium Alloys 103

This is a survey of the physical and mechanical properties of titanium and titanium alloys. Data are given on the effect of oxygen, nitrogen, hydrogen, and carbon on the mechanical properties of titanium.

Gudtsov, N. T., and L. D. Mashtakova. Heat Treatment of Titanium and Titanium Alloys 163

The authors discuss work hardening, annealing, grain refining, and other heat-treating methods for titanium and titanium alloys. Also discussed are the effect of alloying elements on heat-treating characteristics, mechanical properties after heat treating, and structural changes at heat treating.

Arzhanyy, P. M. Thermochemical Treatment [Diffusion Coating] of Titanium 187

This article deals with the nitriding, boronizing, and siliconizing of titanium.

Shelest, A. Ye., A. N. Danil'chenko, and I. M. Pavlov. Forming of Titanium and Titanium Alloys 195

The authors discuss the special features of plastic deformation, general characteristics of cold and hot working, individual forming operations, preparatory and finishing operations, organization of production, and storage and utilization of waste.

Savitskiy, Ye. M., and M. A. Tylkina. Recrystallization of Titanium Alloys 226

Recrystallization of magnesium-reduced and iodide titanium is discussed in reference to its occurrence after cold working, hot forging, annealing, tempering, and hardening. Data are also

given on the effect of the annealing temperature on the properties of titanium and the effect of alloying additions on the recrystallization temperature.

Babareko, A. A. Deformation and Recrystallization Textures of Titanium and Titanium Alloys 247

The article deals with textures assumed by titanium and titanium alloys after different forming operations.

Shorshorov, M. Kh., and G. V. Nazarov. Welding and Soldering of Titanium and Titanium Alloys 252

Welding characteristics of titanium are discussed. Data are given on welding and soldering methods.

Melent'yev, B. N., and A. I. Ponomarev. Methods for [Chemical] Analysis of Titanium and Titanium Products 285

Data are furnished on qualitative, volumetric, polarographic, and colorimetric methods of analysis. Phase analysis is also

discussed.

Romanov, K. F. Theory and Practice of Machining Titanium Alloys 311

The following topics are discussed: determination of machinability; causes of poor machinability; effect of coolants, lubricants, and other factors on machinability; materials for machining titanium alloys; machining recommendations; comparative machinability of Soviet titanium alloys; correction factors for cutting speed; electroerosion cutting and its effect on the mechanical properties of titanium alloys; and industrial practices in machining titanium-alloy compressor disks and blades.

AVAILABLE: Library of Congress

1-14-60
GO/ec

KORNILOV, I.I.; BUDBERG, P.B.

Constitutional diagrams of titanium-base systems. Itogi nauki: no.2:31-102 '59. (MIRA 12:9)
(Titanium alloys) (Phase rule and equilibrium)

68234

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S/078/60/005/02/028/045
B004/B006

AUTHORS: Budberg, P. B., Shakhova, K. I.

TITLE: Properties of the Alloys of the Ternary System Nickel - Chromium - Tungsten

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol 5, Nr 2, pp 415-420 (USSR)

ABSTRACT: The authors investigated the electrical resistivity, hardness, and heat hardness after various heat treatments, of 32 alloys of the system Ni - Cr - W containing 5, 10, 20, and 30% W and 2, 5, 10, 15, 20, 25, 30, and 35% Cr. The alloys were smelted in a high-frequency furnace under a layer of basic slag. Thus, an oxidizing loss of Cr and W was avoided, as is shown by the analyses (Table 1). The test samples were partly annealed for 24 hr. at 1200°, and partly for 100 hr. at 1000°. Then the one series was hardened, and the other annealed another 100 hr. at 800°. The specific electric resistivity and its temperature coefficient were measured at 20 and 100° (Table 2, Figs 1-3). The resistivity in hardened alloys has its peak value at 5% W and 35% Cr. In annealed alloys this peak is shifted to lower Cr contents. These data confirm the changing

Card 1/2

Properties of the Alloys of the Ternary System Nickel - Chromium - Tungsten

S/078/60/005/02/028/045
B004/B006

solubility of Cr and W in the ternary solid Ni-solution. The hardness of the alloys was determined by means of an apparatus type TP (Table 3). An increasing Cr-content in the solid Ni solution leads to a continuous increase in hardness. Alloys with varying Cr- and Ni-contents are compared in table 4. An increasing W-content causes a sharper increase in the hariness of the alloys than an equal increase of the Cr-content. Heat hardness was measured between 100 and 1000° at intervals of 100° by means of the VIM-1 apparatus (designer M. G. Lozinskiy) (Table 5, Fig 4). At constant W-contents and increasing Cr-contents hardness decreases with increasing temperature. Table 6 shows the change in heat hardness of an alloy containing 25% Cr and varying W-content. Under these conditions the alloys are more strengthened by W than by Cr. There are 4 figures, 6 tables, and 1 Soviet reference.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences, USSR)

SUBMITTED: October 9, 1958

Card 2/2

KORNILOV, I.I.; BUDBERG, P.B.; SOKOLOVA, N.V., tekhn. red.

[Phase diagrams of two- and three-component systems of titanium] Diagrammy sostoianiia dvoinykh i troinykh sistem titana. Moskva, Vses. in-t nauchnoi i tekhn. informatsii, 1961. 172 p. (MIRA 14:6)

(Titanium alloys) (Systems (Chemistry))

28869
S/180/61/000/004/007/020
E111/E380

18 1285

AUTHORS: Shakhova, K.I. and Budberg, P.B. (Moscow)

TITLE: Investigation of alloys of titanium-niobium system

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo. no. 4, 1961, pp. 56 - 58

TEXT: The present work forms part of an investigation of the ternary Ti-Nb-Cr system and had the object of improving the accuracy of the phase diagram of the Ti-Nb system in the range of 40 - 90% Nb. Alloys were arc-melted in a cooled copper mould, with a non-consumable tungsten electrode, under an argon atmosphere. Grade TT-00 (TG-00) 99.52% pure electrothermic titanium (impurities 0.15% Fe, 0.05 Si, 0.05 C, 0.06 Mg, 0.10 O_2, 0.01 H_2, 0.03 N_2, 0.03 Ni) and 99.27% pure niobium (impurities 0.5% Ta, 0.09 Ti, 0.05 Fe, 0.09 Si, 0.05 C, B $< 5 \times 10^{-5}$) were used. Alloys were annealed in double quartz capsules at 1 500 °C for 6 hours at a pressure of 10^{-4} mm Hg. Two parallel batches of alloys were then annealed

Card 1/2

Investigation of ....

at 1 100 °C for 50 hours and at 1 000 °C for 100 hours. One batch was water-quenched, the other slowly cooled to room temperature. The eight alloys prepared had the following Ti contents (weight %): 1.0, 2.18, 24.8, 25.8, 26.8, 33.0, 33.0 and 60.0. Microstructures, hardness and X-ray patterns (copper electrode, nickel filter) were studied. All the alloys were solid solutions. No metallic compound of the type TiNb was found, the second phase previously reported (Ref. 3 - V.P. Yelyutin, M.I. Berinshteyn and Yu.A. Pavlov - Dokl. Ak. nauk, SSSR, 1955, v. 104, no. 4) being, as shown by special experiments with Ti-Nb alloys containing up to 0.9% C, a solid solution of titanium and niobium carbides.
There are 2 figures, 2 tables and 4 Soviet-bloc references.

SUBMITTED: November 23, 1960

Card 2/2

29534
S/078/61/006/011/012/013
B101/B147

18.1200

AUTHORS: Alisova, S. P., Budberg, P. B., Shakhova, K. I.

TITLE: Phase diagram of the quaternary system nickel - chromium - tungsten - aluminum at 1100°C

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 11, 1961, 2607-2609

TEXT: Part of the system Ni - Cr - W - Al (up to 40 % of Cr and 30 % of W + Al), and the properties of these alloys were studied in the present paper. Three tetrahedral sections of the system were examined. Ratios: W : Al = 3 : 1 (I); 1 : 1 (II); and 1 : 3 (III). The alloys were molten from electrolytic Ni, Cr, W, and A-000 (A-000) aluminum. Al was introduced into the melt as NiAl (29 % of Al). The alloys were subjected to various kinds of heat treatment. For 50 hr they were kept at 1100°C, then the first sample was chilled whereas the others were kept at 1000°C for another 100 hr. Then, the second sample was chilled, samples 3 and 4 were kept at 800°C for 250 hr. Sample 3 was chilled and sample 4 cooled down to room temperature within 24 hr. Since homogeneity was not attained homogenizing annealing followed at 1300-1350°C in a TBB-2M (TVV-2M)

Card 1/1 2

Phase diagram of the quaternary...

furnace. The diagrams of Fig. 2 were plotted for the three sections on the basis of their microstructures and powder patterns. An X-ray analysis of the quaternary solid nickel solution of section I showed that an increase of the Cr content from 10 to 40 % increased the lattice constants of the solid solution from 3.55 to 3.62 kX; an increase of the total W + Al content from 10 to 40 % at a constant Cr content changed the lattice constant from 3.55 to 3.56 - 3.57 kX. The thermal resistivity of the alloys was tested by a method involving centrifuging at 850-900°C and 10-15 kg/mm^2. At 900°C and under a load of 10 kg/mm^2, the alloy with 10 % of Cr, 22.5 % of W and 7.5 % of Al showed a 4 mm deformation after 160 hr. The alloy containing 10 % of Cr, 15 % of W and 5 % of Al underwent 6 mm deformation under the same conditions. The thermal resistivity was tested at 1100°C. Considerable softening of all alloys occurred between 700 and 800°C. With increased Al content it was shifted toward higher temperatures. There are 2 figures, 1 table, and 3 references: 2 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: A. Taylor, R. W. Floyd. J. Inst. Metals, 81, 451 (1952/53).

SUBMITTED: March 20, 1961

Card 2/12

S/598/62/000/007/009/040
D267/D307

AUTHORS: Shakhova, K. I. and Budberg, P. B.

TITLE: Investigating alloys of the system titanium-niobium

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i yego splavy. no. 7, Moscow, 1962. Metallokhimiya i novyye splavy, 78-80

TEXT: This research was carried out for the purpose of obtaining a more exact phase diagram of the system Ti-Nb in the concentration interval between 40 and 90% nb. The alloys were melted in an arc furnace with W electrodes, in an argon atmosphere, with subsequent heat treatment. Regardless of the kind of heat treatment all alloys were homogeneous solid solutions. The curve of the lattice period variation for the ß-solid solutions of the system Ti-Nb has negative deviations from Vegard's law. No intermetallic compound of the TiNb type could be observed. There are 4 figures and 1 table.

Card 1/1

S/659/62/008/000/010/028
I048/I248

AUTHORS: Alisova, S.P., Budberg, P.B., and Shakhova, K.I.

TITLE: Investigation of alloys of the quaternary system nickel-chromium-tungsten-aluminium

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam. v.8. 1962. 74-78

TEXT: Isothermal sections (1100°C) representing Ni-Cr-W-Al alloys with fixed W:Al wt. ratios (3:1, 1:1, 1:3) were prepared on the basis of x-ray, microstructural, and chemical analyses of the quaternary alloys containing up to 50% Cr and up to 50% W+Al. The γ'-phase (Ni-based solid solution) is predominant in the alloys with a 3:1 W:Al ration; a three-phase region ($\gamma + \beta + \alpha_2$) exists in the alloys containing over 40% W+Al, β being a NiAl-based and α_2 a W-based solid solution. The alloys with a 1:1 W:Al ratio are characterized by a narrower γ region and by three 3-phase regions: $\gamma + \beta + \alpha_2$, $\gamma + \gamma' + \alpha$, and $\gamma + \gamma' + \beta$, α being a Cr-based and γ' a Ni_3Al-based solid solution. Alloys with a 1:3 W:Al ratio are

Card 1/2

S/659/62/008/000/010/028
I048/I248

Investigation of alloys...

characterized by an even narrower γ -region and by the appearance of homogenous γ' and ζ regions. The lattice parameter of the γ -phase in the 3:1 W:Al alloys increases with the Cr content, from 3.55 kX at 10% Cr to 3.62 kX at 40%Cr; variations in the W+Al content have a negligible effect on this parameter. The solubility of W+Al in the γ -phase is 35, 15, and 10% in the 3:1, 1:1, and 1:3 W:Al alloys respectively. Many alloys within the systems studied exhibited fair refractory properties when subjected to centrifugal tests at 850-900°C; alloys with increased Al content retain their hardness at even higher temperatures. There are 4 figures and 1 table.

Card 2/2

SHAKHOVA, K. I. (Moskva); BUDBERG, P. B. (Moskva)

Constitutional diagram of the system titanium-niobium-chromium.
Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:137-141
N-D '62. (MIRA 16:1)

(Titanium-niobium-chromium alloys--Metallography)
(Phase rule and equilibrium)

ALISOVA, S.P.; BUDBERG, P.B.; SHAKHOVA, K.I.

Investigating alloys in the quaternary system nickel - chromium - tungsten - aluminum. Issl.po zharopr.splav. 8:74-78 '62.
(MIRA 16:6)
(Nickel-chromium-tungsten-aluminum alloys--Metallography)
(Phase rule and equilibrium)