

SIMONENKO, M.V.; BELOUSOV, N.N.; STAROSTIN, Ye.A.; TAV'YEVA, S.M.

Aluminum alloys instead of bronze in gas plug cocks. Gaz. prom.
6 no. 1:27-31 '61. (MIRA 14:1)

(Gas distribution)

BELOUSOV, N. N.

The aluminum and magnesium alloys for fashioned casting. Analele
metalurgie 15 no.4:88-101 Q-D '61.

(Aluminum-magnesium alloys) (Founding)

S/724/61/000/000/000/020

AUTHOR: Belenev, N. N.

TITLE: Cast Aluminum-Magnesium alloys; alloys for the making of castings not requiring subsequent heat treatment.

SOURCE: Litevnyye aluminitsyevyye splavy: svoystva, tekhnologiya plavki, lit'ya i termicheskoy obrabotki. Sbornik statey, Ed. by I. N. Fridlyander and M. B. Altman. Moscow, Oborongiz, 1961, 52-65.

TEXT: The paper describes the development of a light alloy suitable for die-casting and capable of more elevated corrosion resistance than Silumin. The development procedure is described, leading up to an alloy containing 6-8% Mg, 0.5-1.0% Si, 0.25-0.50% Mn, up to 0.9% Fe, up to 0.01% Be, the remainder Al. This alloy was designated as AMc 1 A (AMc 1 L). The alloy was subjected to corrosion tests by immersion of cylindrical specimens for 1 month in a 3% aqueous solution of NaCl with the addition of 0.1% H₂O₂ every 3 days. The new alloy exhibited exceptionally low corrosion losses (0.0022 g/m²-hr). The paper also describes the development of a new alloy for casting in sand and metal molds, suitable for casting without any subsequent heat treatment. Optimal mechanical and corrosion properties were obtained with an alloy containing: 6-7% Mg, 0.05-0.1% Be,

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Cast Aluminum-Magnesium alloys:...

S/724/61/000/000/006/020

0.05-0.15% Ti, 0.05-0.3% Zr, the remainder Al, which was tentatively designated as AMg6A (AMg6L). The mechanical properties of the new alloys at temperature ranging from -194 to $+100^{\circ}\text{C}$ are tabulated. The strength characteristics of this alloy are favorably affected by the Zr and Ti additions, while the Ti, Be, and Mn additions have a favorable effect on the corrosion resistance. A direct comparison of the mechanical properties of AMg6L specimens prepared with Al of different degree of initial purity against AL6 and AL6 alloys is given in a full-page table. The new series of heat-treatable Al-Mg alloys with additions of Be, Zr, Ti, and Mn, based on the employment of AL600 and AL6000 (AL6000), proposed here, exceeds the structural strength and the corrosion resistance of the existing alloy, AL6 substantially. The effect of the various additions, separately and jointly, is discussed in detail, and the high-temperature properties of the AMg6L against those of the AL600 and AL6000 alloys are graphically depicted. There are 4 figures, 5 tables, and 2 Russian-language Soviet references.

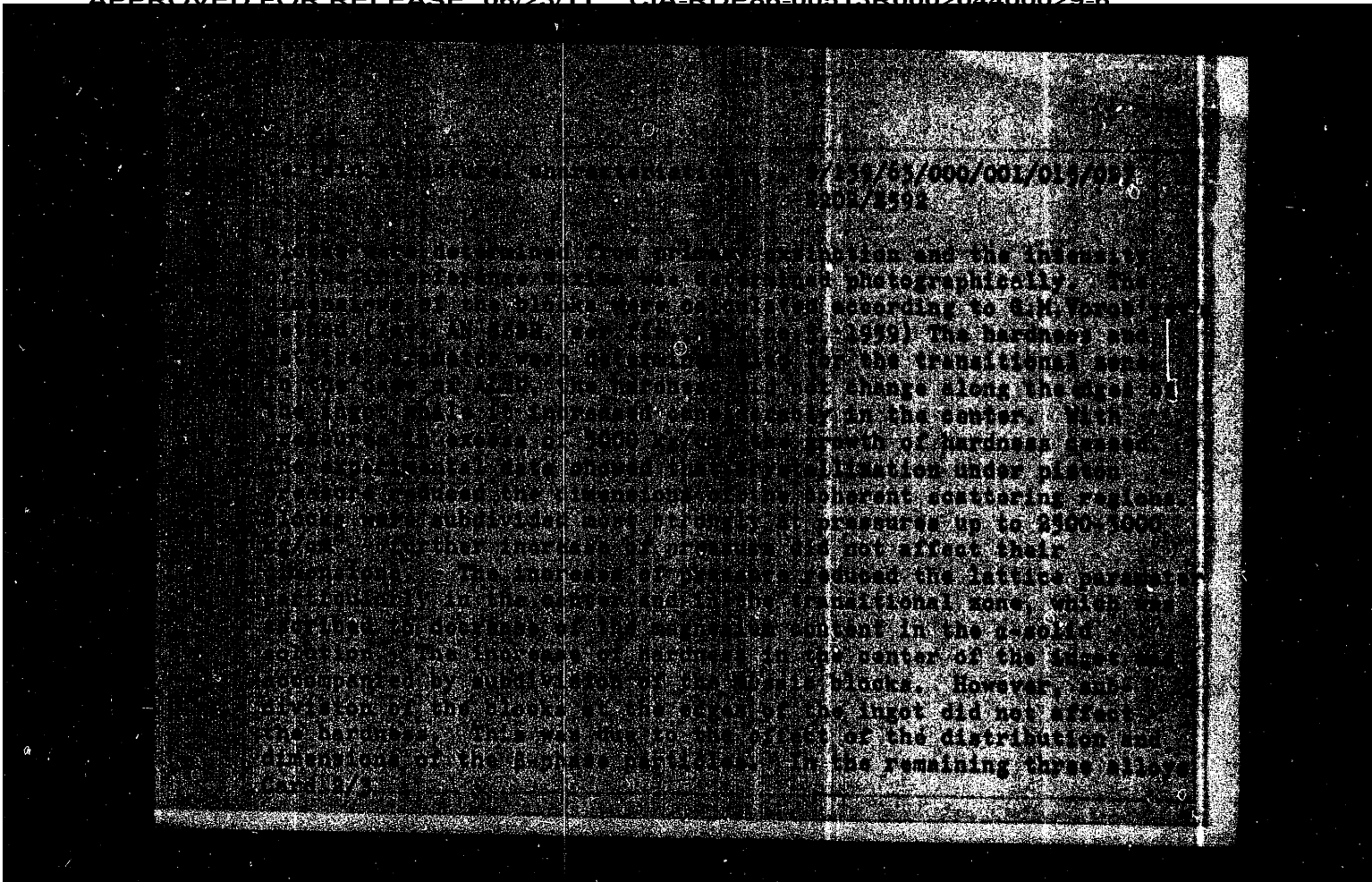
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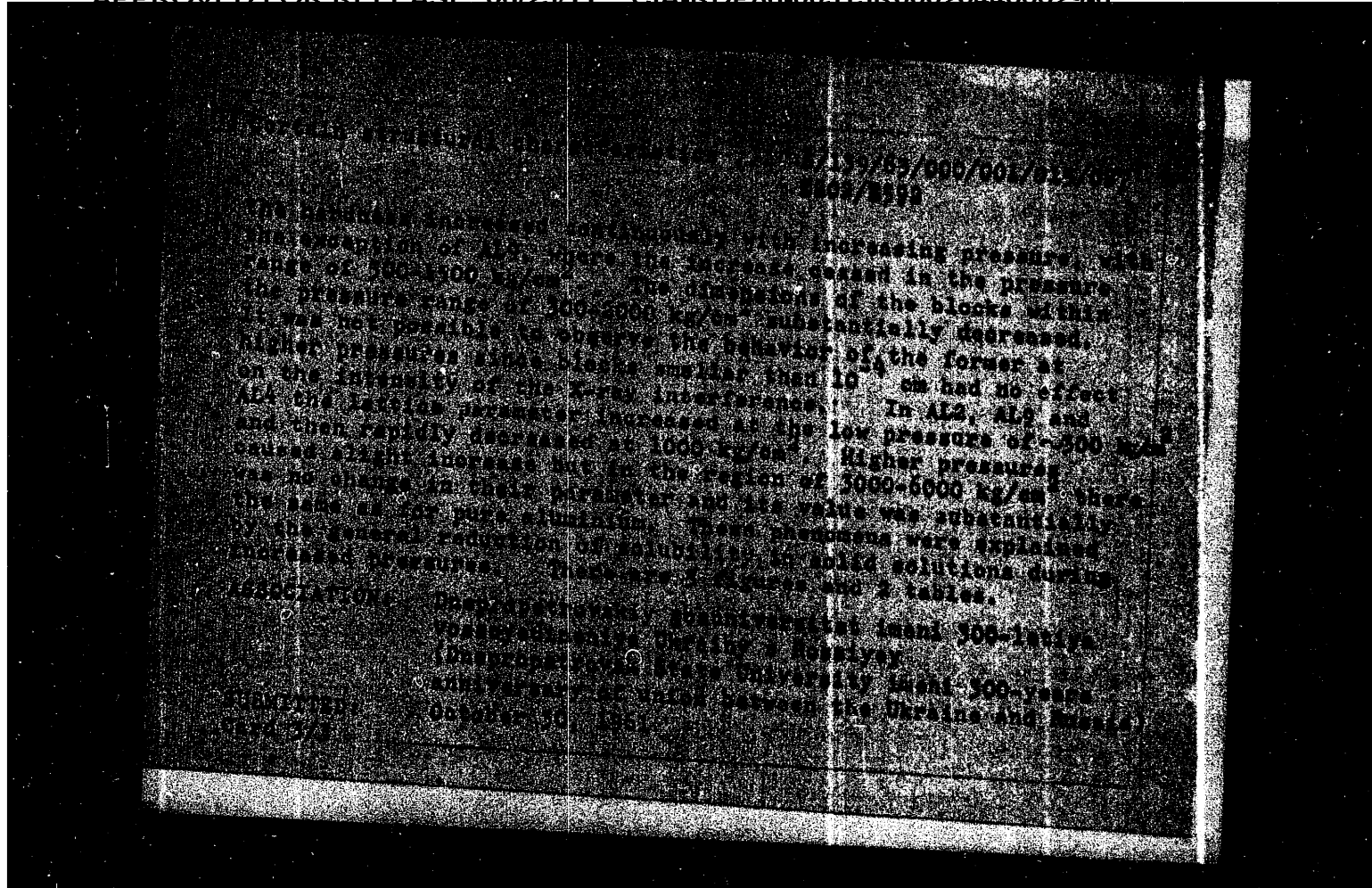
KHRUSHCHOV, M.M.; SEMENOV, A.P.; MATVEYENSKIY, R.V.; LAVOZHENKA, L.V.;
BELOUSOV, N.N.; KOLENIKOVA, V.I.

Investigating lubricated and nonlubricated friction of anti-
friction bronzes and brasses. Tren. i izn. v mash. no. 17:30-
70 '62. (MIRA 17:10)

NEVEROV, Leonid Ivanovich; BELONSOV, Nikolay Nikolayevich;
SLITSKAYA, I.M., red.; TELYASHOV, R.Kh., red. izd-va;
BELOGUROVA, I.A., tekhn. red.

[Using vacuum in die casting and in liquid metal drop forging] Primenenie vakuuma pri lit'e pod davleniem i shtampovke zhidkogo metalla; stenogramma lektsii. Leningrad, Leningr. dom nauchno-tekhn. propagandy, 1863. 50 p. (MIRA 16:7)
(Die casting) (Forging)





ACCESSION NR: AT4017178

S/0000/63/000/000/0234/0243

AUTHOR: Belousov, N. N. (Leningrad-Dnepropetrovsk); Varich, N. I. (Leningrad-Dnepropetrovsk); Shcherbakov, G. I. (Leningrad-Dnepropetrovsk)

TITLE: Investigation of the influence of the thermal conditions of hardening of castings under plunger pressure on the submicrostructure of aluminum

SOURCE: AN BSSR. Fiz.-tekhn. Institut. Teplofizika v liteynom proizvodstve (Thermal physics in the foundry industry). Minsk, 1963, 234-243

TOPIC TAGS: plunger pressure, roentgenography, aluminum structure, high melting element, aluminum alloy, crystal structure, cast hardening

ABSTRACT: Deep shrinkage cavities, porosity, and heterogeneity are often observed in large-size aluminum castings. The present investigation considered the influence of small additions of some elements on the properties, structure, and submicrostructure of grade AL8 alloy crystallized under atmospheric pressure and a plunger pressure of 4,000 kg/sq cm. Roentgenographic and metallographic analysis as well as hardness and micro-hardness tests were used in the investigation. It was found that the properties of the alloy improved for pressures up to 2,000 kg/sq. cm. A further increase in pressure did not lead to significant improvement in metal quality. For aluminum alloys containing 10-11% Mg and small additions of

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ACCESSION NR: AT4017178

the high-melting elements Be, Zr, Ti, and Mn, application of plunger pressure during crystallization decreased the differences in the permanent crystal lattice parameters and hardness at the center and edges of the ingot. Orig. art. has: 4 figures and 6 tables.

ASSOCIATION: Fiz.-tekhn. Institut, AN BSSR. (Institute of Physics and Technology, AN BSSR).

SUBMITTED: 19Apr63

DATE ACQ: 06Mar64

ENCL: 01

SUB CODE: MM

NO REF SOV: 004

OTHER: 000

Card 2/8

ACCESSION NR: AT4017184

8/0000/63/000/000/0499/0507

AUTHOR: Belousov, N.N. (Leningrad); Kashevnik, L.Ya. (Leningrad)

TITLE: Influence of cooling rate during crystallization on the structure of some non-ferrous alloys of the solid solution type

SOURCE: AN BSSR. Fiz-tekhn. institut. *Teplofizika v litseynom proizvodstve* (Thermal physics in the foundry industry), Minsk, 499-507

TOPIC TAGS: crystallization, metal crystallization, cooling rate, non-ferrous alloy, solid solution, alloy structure, alloy crystallization

ABSTRACT: In a publication by A.I. Veynik it was noted that there is a spectral heat of crystallization at each stage of hardening of an alloy. The results of the present investigation showed that the cooling rate of solid solution alloys during hardening has a marked influence on the microstructure. Increasing the alloy cooling rate from a temperature much higher than the liquidus to a temperature in the hardening interval alters the ratio of solid and liquid phases at different times of crystallization. (See Fig. 1 of the Enclosure). These results show the possibility of significant variation in crystallization of alloys with a wide temperature interval by regulating the temperature of alloy heating

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ACCESSION NR: AT4017184

prior to pouring, combined with different cooling rates when the cast hardens. Overheating of aluminum-magnesium alloys allows one to obtain dense alloy castings with a fine-grain structure and high mechanical properties. Orig. art. has: 4 figures and 2 tables.

ASSOCIATION: Fiz-tekh. institut AN BSSR. (Institute of Physics and Technology, AN BSSR)

SUBMITTED: 19Apr63

DATE ACQ: 06Mar64

ENCL: 01

SUB CODE: MM

NO REF SOV: 006

OTHER: 000

Card 2/3

ACCESSION NR: AT4017184

ENCLOSURE: 01

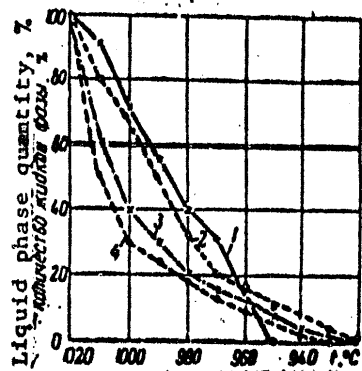


Fig. 1 Variation of the quantity of the liquid phase of Mg alloy for different cooling rates

- 1 - theoretical curve;
- 2 - 0.5 deg/min;
- 3 - 10 deg/min;
- 4 - 125 deg/min

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BELOUSOV, Nikolay Nikolayevich, kand. tekhn. nauk; MIKHEYEVA,
Yekaterina Nikolayevna, inzh.; SARAFANOVA, Mariya
Nikolayevna, inzh.; NAUMOVA, Ye.A., red.

[Heat treatment of new foundry aluminum alloys] Termi-
cheskaia obrabotka novykh liteinykh aluminievykh spila-
vov. Leningrad, 1964. 34 p. (MIRA 18:1)

BELOUSOV, N.N., kand. tekhn. nauk; ZASLAVSKIY, M.L.

Alloys for casting in metal molds. Biul. tekhn.-ekon. inform.
Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.4 84-85
Ap '64. (MIRA 17:6)

BELOUSOV, Nikolay Nikolayevich, kand. tekhn.nauk; NIKHEYEVA,
Yekaterina Nikolayevna, inzh.; SARAFANOVA, Mariya
Nikolayevna, inzh.; NAUMOVA, Ye.A., red.

[New aluminum foundry alloys] Novye liteinye alluminiyevye
splavy. Leningrad, 1964. 35 p. (MIRA 18:3)

ACC NR: AP6036384

SOURCE CODE: UR/0128/66/000/011/0003/0007

AUTHOR: Belousov, N. N. (Candidate of technical sciences); Dodonov, A. A. (Engineer)

ORG: none

TITLE: The effect of chemical composition and melting, casting and solidification conditions on the mechanical properties of new aluminum-magnesium alloys

SOURCE: Liteynoye proizvodstvo, no. 11, 1966, 3-7

TOPIC TAGS: aluminum magnesium alloy, zirconium containing alloy, beryllium containing alloy, titanium containing alloy, silicon containing alloy, iron containing alloy, aluminum cast alloy, alloy property/AL27-1 alloy, AL27 alloy, AL23-1 alloy, AL23 alloy, AL2 alloy, AL4 alloy, AL8 alloy, AL9 alloy

ABSTRACT: The effect of alloying and processing conditions on the quality and mechanical properties of parts cast from new AL27-1, AL27, AL23-1, and AL23 aluminum-magnesium alloys containing 3--11% magnesium and additionally alloyed with beryllium, titanium, zirconium, silicon or iron has been investigated. It was found that alloying with up to 0.2--0.25% zirconium, 0.3% beryllium, or 0.2--0.3% titanium improves all the mechanical properties, but higher alloying lowers the properties except for hardness. Alloying with silicon and iron also reduced the mechanical properties of alloys. Prior to pouring, the metal should be held at 700--730C for

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UDC: 621.745.55:669.715

ACC NR: AP6036384

2.5—3.0 hr, but pouring should be done at 640—680C. Higher pouring temperatures caused a gas porosity and reduced the mechanical properties. The mechanical properties dropped with increasing wall thickness of the castings. The strength of AL27 and AL27-1 alloys exceeds that of standard AL8 or AL4 alloys by 25—33% regardless of wall thickness, and the elongation of new alloys is 50—100% higher than that of AL2, AL4, AL8, or AL9 alloys. The optimum combination of properties (tensile strength 35—40 kg/m²; elongation 12—22%; impact strength 3.5—4.7 kg·m/cm²) were obtained in parts cast into metallic molds with 40 mm wall thickness preheated to 60—80C. Orig. art. has: 17 figures.

SUB CODE: 11, 13/ SUBM DATE: none/ ATD PRESS: 5107

Card 2/2

ACC NR: AP7001411

(A)

SOURCE CODE: UR/0413/66/000/021/0112/0112

INVENTOR: Belousov, N. N.; Dodonov, A. A.; Ivankin, A. A.; Yegorova, V. A.

ORG: none

TITLE: Cast aluminum-base alloy. Class 40, No. 188012

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 21, 1966, 112

TOPIC TAGS: aluminum, magnesium, beryllium alloy, titanium containing alloy, zirconium containing alloy, cast aluminum alloy

ABSTRACT: This Author Certificate introduces a cast aluminum-base alloy containing magnesium, beryllium, titanium, and zirconium. To improve its mechanical properties and ensure satisfactory corrosion resistance and formability, the alloy composition is set as follows: 10—11.5% magnesium, 0.05—0.12% beryllium, 0.03—0.1% titanium, 0.03—0.1% zirconium, 0.01—0.15% boron and 0.07—0.2% manganese, with impurities such as iron, silicon, copper and zinc, each not exceeding 0.05%. [ND]

SUB CODE: 11/ SUBM DATE: 04Dec65/ ATD PRESS: 5110

Card 1/1

UDC: 669.71.5'721' '725'295'296'74'781

ACC NR: AP7002741 SOURCE CODE: UR/0126/66/022/006/0904/0908

AUTHOR: Belousov, N.N.; Miheyeva, Ye.N.; Pavlov, V.A.; Filippov, Yu.I.; Frizen, S.A.

ORG: Institute of the Physics of Metals, AN SSSR (Institut fiziki metallov AN SSSR)

TITLE: Effect of plastic deformation and aging on mechanical properties of Al-Mg alloys

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 6, 1966, 904-908

TOPIC TAGS: ^{metal aging} ~~aluminum~~ magnesium alloy, ^{containing plastic deformation} ~~thermomechanical~~ ^{but} treatment, aluminum alloy, mechanical property, ~~aluminum alloy~~ corrosion resistance/AMg11 alloy

ABSTRACT: A series of specimens of AMg11 aluminum-magnesium alloy (10.7% magnesium) was solution annealed at 460C for 2 hr, water quenched and subjected to thermomechanical treatment, rolled with a reduction of 20% in one pass or 40% in two passes with reheating at 20, 100, 200, 300 or 400C, and then aged at 175-200C for 1-10 hr. The best combination of mechanical properties was shown by specimens rolled with 40% reduction at 200C,

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UDC: 669.715:539.37

ACC NR: AP7002741

which had a tensile strength of 56.2 or 55.5, and a yield strength of 41.5 or 33.0 kg/mm², and an elongation of 10% in the as-rolled or aged (1 hr at 200C) condition. Corresponding figures for the specimens rolled at 200C and aged at the same temperature for 1 hr were 51.5 kg/mm², 31.0 kg/mm², and 10%. As a rule, aging lowered the yield strength without affecting the elongation. The increase in deformation temperature slightly lowered the hardness. Aging at 100—200C at first lowers the hardness but subsequently raises it, but not over the level attained by deformation. In stress-corrosion tests, specimens rolled at 200C with 20% reduction, as-rolled or aged at 200C for 1, 5 or 10 hr, withstood 90 day tests without cracking but showed some signs of intergranular corrosion. Specimens rolled with a reduction of 40% showed a susceptibility to exfoliation.

[ND]

SUB CODE: 11, 13/ SUBM DATE: 13Jun66/ ORIG REF: 005/ OTH REF: 006
ATD PRESS: 5114

Card 2/2

USSR

ACCESSION NR: AP4011282

S/0286/64/000/002/0077/0077

AUTHOR: Zelenov, B. A.; Dodonov, A. A.; Belousov, N. N.; Ivashkin, A. A.;
Shenderov, B. A.

TITLE: A method for hot aluminizing of articles made of titanium and its alloys.
Class 48, No. 160068

SOURCE: Byul. izobret i tovarn. znakov, no. 2, 1964, 77

TOPIC TAGS: aluminizing, hot aluminizing, titanium protection, aluminized
titanium, aluminized titanium alloys, metal coating, plating, aluminum, titanium,
sulfuric acid, hydrochloric acid, pickling

TRANSLATION: A method for hot aluminizing of articles made of titanium and its
alloys with preliminary pickling, notable for the fact that with the aim of
improving the coupling and obtaining a stable aluminum coating the articles are
subjected to pickling by solutions of sulfuric (35-65%) or hydrochloric (30-37%)
acid at a temperature of 50-70°C for a duration of 30-40 minutes, at room

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ACCESSION NR: AP4011282

temperature for 2-3 hours with the attainment of a hydride film on them, after which the articles are submerged in melted aluminum at a temperature of 800-850°C.

ASSOCIATION: None

SUBMITTED: 30Mar62

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: ML, EL

NO REF SOV: 000

OTHER: 000

Card 2/2

BELOUSOV, N.N., kand. tekhn. nauk; ZASLAVSKIY, M.L.

Using vacuum in die-casting machines. Biol. tekhn.-ekon. inform.
Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.2:87-89
'64. (MIRA 17:6)

I 395/0556 (S) (U) (A) (I) GP
ACC NR: AP6000518 SOURCE CODE: UR/0142/05/009/005/0530/0537

AUTHOR: Belousov, N. N.; Zakharov, Yu. S.

ORG: none

TITLE: Noise rejection by a signal detector based on the method of counting zeros

SOURCE: IVUZ. Radiotekhnika, v. 8, no. 5, 1969, pp. 11-17

TOPIC TAGS: signal detector, signal noise separation

ABSTRACT: Noise rejection by a weak-signal detector based on the counting-zeros method (x-axis crossings by the incoming signal-noise mixture) is analyzed. The probabilities of false alarm and correct detection are estimated. It is found that: (1) The noise rejection depends on the frequency response of the filters used; by appropriate selection of the filters, the noise rejection of the counting-zeros detector can be made higher than that of the optimal amplitude detector; (2) The counting-zeros detector has these advantages over the optimal detector; (3) its threshold is independent of the gain of the linear part of the detector; (4) clipping permits wider dynamic range of input-signal amplitudes; (5) the numerical form of

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UDC: 621.391.8

ACC NR: AP6600518

the threshold is stable; (d) the counting integrator permits setting for a detection time which is important in detecting weak signals; (e) The counting system described has these disadvantages: (a) noise rejection is affected when the signal frequency or filter center frequency is unstable; (b) the dependence of detection on the signal frequency results in a lower noise rejection when the exact signal frequency is unknown. Orig. art. has: 3 figures and 24 formulas.

SUB CODE: 09 / SUBM DATE: 11Mar64 / ORIG REF: 001

Card 2/2

BELOUSOV, N.P.; STRAKHOV, G.N.; KUZNETSOV, V.A.

Studying variations in pipe wall thickness in the extrusion of
heavy nonferrous metal alloys on horizontal 1500 T. presses.
Trudy LPI no.243:141-145 '65. (MIRA 18:6)

PHASE I BOOK EXPLOITATION

SOV/3226

Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya na temu:
"Sovremennyye dostizheniya prokatnogo proizvodstva."

Trudy...(Transactions of the Intercollegiate Scientific and Technical Conference on Recent Achievements in the Rolling Industry)
Leningrad, 1958. 251 p. 1,000 copies printed.

Sponsoring Agencies: Leningradskiy politekhnicheskii institut im.
M.I. Kalinina, Nauchno-tekhnicheskoye obshchestvo mashinostroyeniya,
Leningradskoye otdeleniye, and Nauchno-tekhnicheskoye obshchestvo metallurgov, Leningradskoye otdeleniye.

Resp. Ed.: V.S. Smirnov, Doctor of Technical Sciences, Professor;
Ed.: N.N. Pavlov.

PURPOSE: These proceedings of the conference are intended for
specialists in the rolling industry.

COVERAGE: The articles of this collection cover various theoretical
and practical problems of rolling, such as: pressure, spread,
efficiency of rolls, determination of deformation, forces required,
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Transactions of the Intercollegiate (Cont.)

SOV/3226

pass design, optimum conditions for rolling, experiences of various plants, modernization of equipment, aluminum-clad steel, and rolling of nonferrous metals. No personalities are mentioned. References appear after each article.

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- Zholobov, V.V. [Vsesoyuznyy alyuminiyevy-magniyevyy institut (All-Union Aluminum-magnesium Institute)] Rolling and Extrusion of Titanium and Its Alloys 240
- Smirnov, V.V. [Moskovskoye vyssheye tekhnicheskoye uchilishche im. Baumana (Moscow Higher Technical School im. Bauman)] Remarks on Rolling Technique in the KNR (Chinese People's Republic) 245
- AVAILABLE: Library of Congress (TS340.m42)

BELOUSOV, N.P.

201/3546

RUSSIAN BOOK EXPLOITATION

Leningrad. Politehnicheskii Institut
Ocherka metallor daveniyam (Metal Forming) Moscow, Mashgt. 1999. 175 p.
(Series: IZh; Trudy, No. 20) Strips slip inserted. 3,200 copies printed.
Sponsoring Agency: RSPB. Ministerstvo vyzhago i srednego spetsial'nogo obrazovaniya.
Besp. Ed.: V.G. Podurnin, Candidate of Technical Sciences, Docent; Ed.: V.S. Svirnov, Doctor of Technical Sciences, Professor; Tech. Ed.: L.V. Kochetkina; Managing Ed. for Russian Edition: F.I. Fetilov, Engineer, Machines (Leningrad Division, Mashgt.); F.I. Fetilov, Engineer.

PURPOSE: This book is intended for students taking advanced engineering courses in machine design, and personnel at technical schools of higher technical education and scientific research establishments studying rolling and other metal-forming processes. It reviews the results of scientific investigations conducted by the metal-forming department of Politehnicheskii Institut imeni M.I. Kalinina (Leningrad) and includes problems in the theory and practice of rolling, the theory of extrusion and making of compound dies. The first paper describes the work of S.I. Isailov and Ye. P. Dikarov; the second paper describes the work of S.I. Isailov and Ye. P. Dikarov.

4. Svirnov, V.S., and P. S. Svirnov. The Role of Bite in Rolling As Determined by the Curves of Surface Roughness of Roll and Strip and Coefficient of Friction in Rolling on the Surface of Work and Rolls was Investigated. 38
5. Durnev, I.D. Longitudinal Rolling of Periodic Shapes of Variable Cross Section in Two Grooves 49
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9. Svirnov, V.S., and Chang Shun-Tien. State of Strains in Cross and Helical Rolling of Discs 89
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13. Bogoyavlenskii, K.M. Analytical Solution of the Problem of Determining the Increase of Work Hardening in Bent Shapes 120
14. Bogoyavlenskii, K.M. Determining Bending Moments Taking into Account Work Hardening in the Rolling of Strips in Structural Mills. The above two articles are devoted to the investigation of a state of stress and deformation in drawing. 128
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16. Belousov, N.P. Stability of a Pipe During Reduction by Drawing. The above two articles are devoted to the investigation of a state of stress and deformation in drawing. 142
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19. Fetilov, F.I. Determining Mechanical Properties of a Steel Weld in Relation to the Degree of Work Hardening. See Bibliography for Information Beyond the Scope of This Report. 161

BELOUSOV, N. P., Cand Tech Sci (diss) -- "Investigation of the process of drawing tubing in connection with a method of computing routes". Leningrad, 1960. 17 pp (Min Higher and Inter Spec Educ RSFSR, Leningrad Polytech Inst in M. I. Kalinin), 150 copies (KL, No 11, 1960, 132)

TORLINA, L.I.; ANISHCHENKO, V.P.; PUSHKAREV, V.D.; TORLIN, F.I.; BELOUSOV,
N.P.; BELOUSOV, G.Ye.

Redesigning of the components of a glass furnace. Prom.energ.
17 no.7:6-7 J1 '62. (MIRA 15:7)
(Glass furnaces)

SMIRNOV, V.S.; BELOUSOV, N.P.; SHEYDIN, N.A.; MAL'TSEVSKAYA, R.M.

Making use of rolled wood pulp in the manufacture of laminated
wood plastics. Trudy LPI no.222:79-88 '63. (MIRA 16:7)
(Laminated plastics) (Veneers and veneering)

BELOUSOV, N.V., kand.tekhn.nauk; ZASLAVSKIY, M.L., inzh.

Pouring metal for die casting. Mekh. i avtom.proizv. 17 no.10:48-51
0 '63. (MIRA 17:1)

BELUSOV, N.Z., inzhener (Khar'kov)

Prolong the life of railroad ties; example of the Sumy division.
Put' i put. khos. no.3:30-32 Mr '57. (MLRA 10:5)
(Railroads--Ties)

BELOUSOV, N.Z.; BUNAKOV, Yu.I.

Greater attention should be given to drainage. Put' i put.khos.
4 no. 5:15-16 My '60. (MIRA 13:11)

1. Glavnyy inzhener sluzhby puti, Khar'kov (for Belousov).
2. Starshiy inzhener po zemlyanomu polotnu, Khar'kov (for Burakov).
(Drainage) (Railroads--Maintenance and repair)

LOSEV, A.G.; BELOUSOV, N.Z. (Khar'kov); GOLYSHEV, V.G. (Khar'kov)

Book on continuous tracks. Put' i put.khoz. 8 no.3:43 '64.
(MIRA 17:3)

1. Nachal'nik tekhnicheskogo otdela sluzhby puti, Moskovskaya doroga, Moskva (for Losev).

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

Abs Jour: Referat. Zhurnal Khimii, No 3, 1958, 7164.

Author : A.P. Palkin, O.K. Belousov.

Inst :

Title : Reaction of Salts with Metals in Melted State. Interaction
in System $3\text{ZnCl}_2 + 2\text{Al} \rightarrow 2\text{AlCl}_3 + 3\text{Zn}$.

Orig Pub: Zh. neorgan. khimii, 1957, 2, No 7, 1620-1628.

Abstract: The reaction $3\text{ZnCl}_2 + 2\text{Al} \rightarrow 2\text{AlCl}_3 + 3\text{Zn}$ was studied by the
methods of thermography, microstructure and spectral analysis.
The reaction proceeds to the end in the direction of Zn and
 AlCl_3 formation. Zn obtained from mixtures $\text{ZnCl}_2 + \text{Al}$ with
15, 25 and 35 equ. % of Al does not contain Al.

Card : 1/1

-37-

188100 1413, 1418, 2808 25510

S/078/61/006/008/009/018
B127/B220

AUTHORS: Mikheyev, V. S., Belousov, O. K.

TITLE: Melting-point diagram of the system titanium-zirconium-niobium

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 8, 1961, 1905-1908

TEXT: Since, according to the literature mentioned, the fusibility of the systems titanium-zirconium and titanium-niobium has already been studied, the system titanium-zirconium-niobium was investigated by the authors. The surface of the solidus was studied by using the contact method and an optical pyrometer. The alloy was prepared from 99.34% titanium and 99.5% zirconium and niobium iodide in an electric-arc furnace in argon atmosphere. Based on data in the literature, the melting temperatures were supposed to be 1660°C for titanium, 1845°C for zirconium, and 2410°C for niobium. The results obtained by thermal analysis of the alloys are shown in a table. Particularly titanium and zirconium showed a marked effect on the melting point of the alloy. The ternary alloy Ti-Zr-Nb containing more than 30% of niobium melts at higher temperatures than a binary system of the same niobium content, since this part of
Card 1/5

Melting-point diagram...

25510

S/078/61/006/008/C09'018
B127/B220

the solidus shows a bend the maximum of which is shifted in the direction of the system titanium-niobium. The latter system also has a steeper rise of the melting temperature with varying composition than the system zirconium-niobium. Fig. 1 shows the isotherms on the surface of the solidus of Ti-Zr-Nb. A steric representation of the diagram of the solidus of Ti-Zr-Nb is shown in Fig. 6. There are 6 figures, 1 table, and 13 references: 7 Soviet-bloc and 6 non-Soviet-bloc. The three most important references to English-language publications read as follows: B. A. Rogers, D. F. Atkins, J. Metals, 7, No. 9, 1034 (1955). R. F. Domogala, D. I. McPherson, J. Metals, 2, 619 (1956). P. Duvez J. Inst. Metals, 80, 525 (1952).

Table: Results obtained by thermal analysis of the alloy Ti-Zr-Nb.

Legend: (1) % by weight; (2) melting temperature, °C; (3) section.

Card 2/5

3 8686

S/598/62/000/007/016/040
D290/D307

18 1285

AUTHORS: Kornilov, I. I., Mikheyev, V. S. and Belousov, O. K.

TITLE: The main properties of solid solutions with an α -titanium base at -196°C

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Titan i yego splavy. no. 7, Moscow, 1962. Metallokhimiya i novyye splavy, 120-126

TEXT: Properties of alloys derived from three ternary systems with an α -Ti base were studied in continuation of earlier studies of ternary Ti systems by one of the authors, and was motivated by the lack of systematic information about Ti alloys at low temperatures. The authors studied Ti-Zr-Mo, Ti-Zr-V, and Ti-Zr-Nb systems containing 1.3 atomic percent of Zr and variable amounts (up to 5 atomic percent) of the third component. Phase diagrams in the region of the polymorphous transformation were constructed using microstructural and thermal analyses and electrical resistance measurements. Mechanical properties of the α -solid solutions were studied; the

Card 1/2

The main properties ...

S/598/62/000/007/016/040
D290/D307

optimum compositions of alloys with high impact strengths at -196°C were found (20 kg/cm^2). The results were used to develop an alloy AT2 (AT2) that has a high impact strength at -196°C and reasonable strength ($60 - 80 \text{ kg/mm}^2$) at room temperature. Previous results for the ternary α -solid solutions of the systems Ti-V-Mo, Ti-Nb-V, and Ti-Nb-Mo were used to synthesize alloys with high impact strengths at -196°C . ($8 - 14 \text{ kg/cm}^2$). There are 6 figures.

Card 2/2

40186
S/020/62/145/005/019/020
B101/B144

AUTHORS: Belousov, O. K., Kornilov, I. I., and Mikheyev, V. S.
TITLE: Examination of α -titanium solid solutions highly ductile at
-196°C

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 5, 1962, 1102-1105

TEXT: Alloys based on solid α -solutions of the ternary systems Ti-Zr-Mo, Ti-Zr-V, and Ti-Zr-Nb were melted in an electric vacuum furnace to increase the durability of titanium without making it less ductile. The resulting solid α -solutions showed a satisfactory ultimate strength σ_B and impact strength a_k at room temperature and also at -196°C. Alloys with heterogeneous $\alpha + \beta$ structure, however, showed low ductility at -196°C. The alloys with optimum properties were designated AT-2 (AT-2); data for three of these are compared below with the data for other constructional metals, the best being the AT-2-4 which contains Nb:

Card 1/3

5/070/62/145/005/019/020
B101/B144

Examination of α -titanium...

| Alloy | Data at 20°C | | | | Data at -196°C | | | |
|----------------------|----------------------------------|--------------|------------|------------------------------|----------------------------------|--------------|------------|------------------------------|
| | σ_B kg/mm ² | $\delta, \%$ | $\psi, \%$ | a_k kgm/cm ² | σ_B kg/mm ² | $\delta, \%$ | $\psi, \%$ | a_k kgm/cm ² |
| Pure Ti-00(TG-00) Ti | 35 | 50 | 80 | 25-50 | 60 | 32 | 65 | 25 |
| AT-2-1 | 80.0 | 20.9 | 65.5 | 17.8 | 119.5 | 13.8 | 37.6 | 11.2 |
| AT-2-2 | 75.6 | 23.9 | 69.4 | 19.2 | 116.0 | 12.5 | 44.6 | 15.8 |
| AT-2-4 | 65.5 | 25.0 | 71.2 | 24.1 | 98.6 | 19.4 | 69.8 | 20.3 |
| Duraluminum | 40.0 | - | - | 4.2 | 50.0 | - | - | 3.24 |
| Armco iron | 32.0 | - | - | 24.07 | 78.5 | - | - | 0.13 |
| X-3-N (Kh-3-N) steel | 99.7 | - | - | 11.77 | - | - | - | 4.05 |
| Y-4 (U-4) steel | 95.0 | - | - | 12.15 | - | - | - | 0.68 |

The alloys produced on industrial scale confirmed the results of laboratory experiments. Solid α -solutions of the systems Ti-Zr-Ta, Ti-Mo-Ta, and Ti-V-Ta are likewise assumed to have a high impact strength at -196°C. There are 3 figures and 1 table.

ASSOCIATION: Institut metallurgii im. A. A. Baykova (Institute of Metallurgy imeni A. A. Baykov)
Card 2/3

Examination of α -titanium...

S/020/62/145/005/019/020
B101/B144

PRESENTED: April 9, 1962, by A. A. Blagonravov, Academician

SUBMITTED: March 8, 1962

J

Card 3/3

1969/06/000/000/000/000

Authors: Belikov, S. I. (Moscow); Kozlov, I. I. (Moscow); Mikhlin, V. S. (Moscow)

TITLE: Mechanical properties of solid solutions of Alpha-titanium at -196°C

SOURCE: AF 6848, Tr. Vses. Nauch. Inst. Metallogiya i gornyye delo, no. 2, 1969, 130-133

TOPIC TAGS: ternary Ti-base alloy, Ti-Zr-Mo alloy, Ti-Zr-V alloy, Ti-Zr-Nb alloy, cryogenic effect, Al-2 alloy, cryogenic alloy

ABSTRACT: Three series of ternary Ti-base alloys, Ti-Zr-Mo, Ti-Zr-V, and Ti-Zr-Nb, have been studied in a search for a material for service at cryogenic temperatures. All alloys (six in each series) had the same Zr content, approximately 2.5%. The Mo, V, and Nb contents varied from 0.34 to 4.88, 0.19 to 4.61, and 0.32 to 3.16%, respectively. The solubility of V, Nb, and Mo in Ti-2.5% Zr alloy at 850°C was found to be 0.3, 1.0, and 0.3-0.45 for alloys made with iodine titanium and 0.3 to 0.10, 1.3, and 0.3% for alloys made with 70-00 titanium sponge. With decreasing temperature the solubility of V, Nb, and Mo increases. The alloys designed to have an α or $\alpha + \beta$ structure were melted in a vacuum-arc consumable-electrode furnace from 70-00 titanium sponge (99.8% pure

Card 1/1

UNCLASSIFIED (S) 1050000

(Alloys of 99.50% pure Ti (99.80% Ti, 0.20% Fe), and 99.85% pure V), forged at
 +20 to +1000, annealed at 700 for 20 min, and furnace cooled. Mechanical tests
 showed that with increasing Ti, V, or Nb content the tensile and yield strengths
 increase and ductility decreases at both +20 and -196C. The notch toughness
 composition curves show a maximum at 0.75% Nb, 0.50% V, and 1.00% Nb for +196C
 and at 1.60% Nb, 2.70% V, and 1.00% Nb for +20. Ti-Nb alloys with 0.25 to 1.80%
 Nb have the highest notch toughness - 2.15-21.4 kg/cm² and 20.0-19.5 kg/cm²
 at +20 and -196C, respectively. A sharp drop in impact toughness occurs in all
 systems with the appearance of the β -phase in the alloy structure. On the basis
 of these experiments a new series of alloys, designated AT-2, has been developed.
 These alloys have an average tensile strength of 40-50 kg/mm² at +20C, which is
 slightly lower than that of other Ti alloys, but their notch toughness at both
 +20 and -196C is much higher. Similar high-ductility alloys may exist in other
 systems of Ti with the alloys of the Hf and zirconium close to Ti in the periodic
 system. The assumption has been verified experimentally with regard to Ti-V-Nb,
 Ti-V-Ni, and Ti-Nb-Ni systems and is expected to be true with regard to Ti-Nb-Ta,
 Ti-Nb-Ta, Ti-V-Ta, and other analogous ternary and more complex systems. Orig.
 contains 2 tables and 3 figures.

ASSOCIATION: none

Card 2/12

11711-11 17(1)/17(1)/10 1970/197 11/30
ADVISORY NO. 454-0007 1/0000/15/150/001/0001/0000 40
AUTHOR: Palmer, A. G.; Silvers, G. E. 73

TITLE: Elastic properties of titanium-niobium, titanium-vanadium, and titanium-nickel alloys

SOURCE: AN ENR. Digest, v. 150, no. 1, 1965, 77-80

TOPIC TAGS: modulus of elasticity, modulus of rigidity, "Elastomat" type apparatus, commercial titanium Ti-6Al alloys, I sub 2, G sub 2, H sub 2, Si, Mo, Nb, V

ABSTRACT: Authors investigate the elasticity constants (modulus of elasticity E and modulus of rigidity G) of titanium alloys in Alpha, Beta and Alpha + Beta solutions by resonance method in "Elastomat" type apparatus (F. Forster, Leit-schrift Metallkunde 40, 109, 1967) at room temperature. Study was made on commercial titanium (Ti-6Al) alloys containing 0.02% I sub 2, 0.02% G sub 2, 0.04% H sub 2 and 0.05% Si. Alloying elements had the following purity (in %): 99.9 for Mo, 99.5 for Nb (0.2 Si), and 99.51 for V (0.5 of G sub 2 and 0.1 of O). Forged test samples were hardened at 900 and tempered at 600. Authors discovered that Beta phase and an increase of alloying elements lower the elasticity constants. A niobium content of 2%, vanadium content of 10% and nickel content of 15 to 17% in alloys hardened at 900 lower E and G. Martensite phase (Gega) in-

Crd 1/2

ASSOCIATION No. 2700007

changes in E and ν , but these are always lower than those in the Alpha phase. A similar character of changes in the elasticity constants was obtained for all three alloys, and a great effect of the metastable phase on the elasticity constants in the Beta phase hardened alloys was found. Authors conclude by stating that it is possible to measure the concentration of metastable phases in titanium alloys hardened in beta solution through a measurement of the elasticity constants. Orig. art. has: 1 figure and 3 tables.

ASSOCIATION: Institut metallurgii im. A. A. Baikova (Institute of Metallurgy)

SUBMITTED: 12Dec62

DATE REC: 10Jan65

ENCL: 00

SUB CODE: PR, XL

NO REF 997: 011

OTHER: 006

Card 2/2

BELOUSOV, O.K., (Moskva); KORNILOV, I.I. (Moskva); MIKHEYEV, V.S. (Moskva)

Mechanical properties of solid solutions on the basis of alpha-titanium at temperatures of -196° . Izv. AN SSSR. Otd. tekhn. nauk. Met. i gor. delo no.2:130-135 Mr-Ap '63. (MIRA 16:10)

ACCESSION NR: AT4007024

S/2598/63/000/010/0027/0036

AUTHOR: Belousov, O. K.; Kornilov, I. I.; Mikheyev, V. S.

TITLE: Phase diagram of the titanium-vanadium-niobium-molybdenum system

SOURCE: AN SSSR. Institut metallurgii. Titan i yego splavy*, no. 10, 1963.
Issledovaniya titanovy*kh splavov, 27-36

TOPIC TAGS: titanium molybdenum niobium alloy, titanium quaternary alloy, titanium alloy, phase diagram, titanium alloy structure, component solubility, alloy component solubility, vanadium containing alloy

ABSTRACT: In a study of the Ti-V-Nb-Mo system, isothermic cross sections were constructed from microstructure analysis and measurements of hardness and electrical resistivity at 600, 700 and 800C. Solubilities of the 3 admixtures in α -Ti are given in Table 1 of the Enclosure. Of special interest is a sharp phase boundary change occurring during the α -Ti + β -Ti \rightarrow δ -Ti transformation, which was observed by measurement of electrical resistivity while slowly heating (1-2C/min.) the specimen from 0 to 1000C. Upon quenching the alloy system from the β -phase, marked changes appeared that correspond to occurrence of metastable phases. The phase diagram of the Ti-V-Cb-Mb

Card 1/4

ACCESSION NR: AT4007024

alloy system is shown in Figure 1 of the Enclosure. Orig. art. has: 6 metallographic sections, 2 tables, 3 graphs, and 8 phase diagrams.

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

SUBMITTED: 00

DATE ACQ: 27Dec63

ENCL: 02

SUB CODE: MM

NO REF SOV: 008

OTHER: 005

Card 2/4

ACCESSION NR: AT4007024

ENCLOSURE: 01

TABLE 1
Solubility in α - Ti

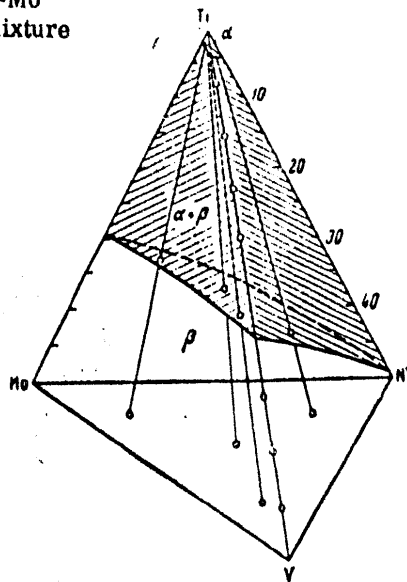
| <u>Temperature</u> | <u>°C</u> | <u>V</u> | <u>Cb</u> | <u>Mo</u> |
|--------------------|-----------|----------|-----------|-----------|
| | 600 | 2.2-2.3% | 3.6-3.8% | 1.2% |
| | 700 | 1.5% | 3.0% | 0.8-0.9% |
| | 800 | 0.9-1.0% | 1.5% | 0.5% |

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ACCESSION NR: AT4007024

ENCLOSURE: 02

Fig. 1 - Phase diagram of the Ti-V-Nb-Mo system at 600C and a total admixture concentration up to 50%.



Card 4/4

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ACCESSION NR: AP4039601

S/0126/64/017/005/0732/0736

AUTHOR: Fedotov, S. G.; Belousov, O. K.

TITLE: Elastic constants of titanium-niobium alloys

SOURCE: Fizika metallov i metallovedeniya, v. 17, no. 5, 1964, 732-736

TOPIC TAGS: titanium niobium alloy; alloy elastic constant, alloy Young modulus, shear modulus, alloy density, alloy elasticity, alloy elasticity modulus

ABSTRACT: The Young modulus (E) and shear modulus (G) were determined for titanium-niobium alloys containing up to 60% niobium. The alloys were melted in an arc furnace with a nonconsumable tungsten electrode in an argon atmosphere, annealed at 600-700C for 200-500 hr, air cooled or annealed at 900C, and water quenched. The E of the alloys annealed at 600 or 700C decreased from 11,770 kg/mm² for pure titanium to 10,880 kg/mm² for the alloy with 4 wt % niobium; G decreased correspondingly from 4450 kg/mm² to 4070 kg/mm². The further increase of niobium content up to 50% was accompanied by a linear or almost linear decrease of both moduli to

Card

1/4

ACCESSION NR: AP4039601

7990 kg/mm² for E and to 2700 kg/mm² for G, after which both increased somewhat when niobium content reached 60%. In alloys water-quenched from 900C, E drops sharply to 6760 kg/mm² at a niobium content of 15-17%, increases to 9590 kg/mm² at 30% niobium, drops again to 6920 kg/mm² at 40% niobium, and then increases again (see Fig. 1 of the Enclosure). Such behavior is explained by the formation of metastable phases α' , α'' and ω and an unstable phase β . Curves of the temperature dependence of E, plotted for alloys which had the highest and lowest values of E at room temperature (see Fig. 2), differ greatly from one another. It is concluded that niobium sharply decreases E and G in the region of transformation. Orig. art. has: 2 figures and 1 formula.

ASSOCIATION: Institut metallurgii im. A. A. Baykova AN SSSR (Institute of Metallurgy, AN SSSR)

SUBMITTED: 04Mar63

ATD PRESS: 3053

ENCL: 02

SUB CODE: MM, ME

NO REF SOV: 007

OTHER: 004

2/4
Card

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

ILLEGIBLE

L 36529-66 EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/GD

ACC NR: AT6012396

SOURCE CODE: UR/0000/65/000/000/0238/0242

AUTHORS: Kornilov, I. I. (Doctor of chemical sciences, Professor); Livanov, V. A.;
Belousov, O. K.; Faynbron, S. M.; Mikheyev, V. S.; Ivanova, S. Ye.; Ryabova, R. M.

ORG: none

TITLE: The effect of thermal processing on the mechanical properties of type AT2 alloys

SOURCE: Soveshchaniye po metallokhimii, metallovedeniyu i primeneniyu titana i yego splayov. 6th. Novyye issledovaniya titanovykh splayov (New research on titanium alloys); trudy soveshchaniya. Moscow, Izd-vo Nauka, 1965, 238-242

TOPIC TAGS: titanium, titanium alloy, tempering, thermal treatment / AT2 titanium alloy

ABSTRACT: The results are given for studies of the effect of thermal processing on the mechanical properties of type AT2 alloys. Several compositions were investigated, which displayed high plastic and shock-resistance properties at room and at low (-196 and -253C) temperatures. These alloys were given the designations AT2-1, AT2-2, and AT2-3, and were produced in sheets in industrial conditions. Measurements were made of the dependence of the resistivity of these compositions on the testing temperature (see Fig. 1). Thermal processing was bounded in the temperature range 500--1000C. The thermal process included: 1) heating at the prescribed temperature for 30 minutes; 2) 60-minute air-cooling, and 3) 60-minute oven cooling. The mechanical properties of the

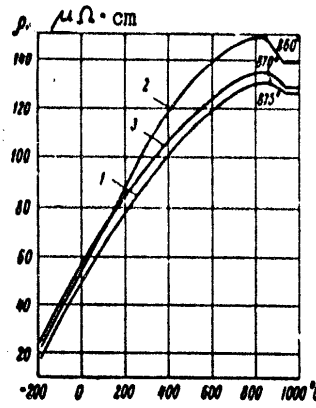
Card 1/2

UDC: 669.295.001.5

L 36529-66

ACC NR: AT6012396

Fig. 1. The dependence of the resistivity on the testing temperature of alloys AT2. 1 - AT2-1; 2 - AT2-2; 3 - AT2-3.



alloys are related to the observed changes in the alloy microstructure occurring with varied thermal processing. Recommendations are: 30- to 60-minute thermal treatment at 500 to 600C with subsequent air cooling for alloy AT2-1; 600C processing for alloy AT2-2; and 500--600C processing for AT2-3. The optimal mechanical properties obtained with the recommended processing are summarized. Orig. art. has: 5 figures.

SUB CODE: 11/ SUBM DATE: 02Dec65/ ORIG REF: 008

Card 2/2 MLP

BELOUSOV, G.V. [Belousov, G.V.]; KARBYŠEV, G. I. [Karbyšev, H.S.]

Machine for the processing of wastes from scutchers. Len. prom. no.3:

51 JI-S '64.

(MIRA 17:10)

TORLINA, L.I.; ANISHCHENKO, V.P.; PUSHKAREV, V.D.; TORLIN, F.I.; BELOUSOV,
N.P.; BELOUSOV, G.Ye.

Redesigning of the components of a glass furnace. Prom.energ.
17 no.7:6-7 JI '62. (MIRA 15:7)
(Glass furnaces)

USSR/Cultivated Plants - Commercial. Oil-Bearing. Sugar-
Bearing. M-5

Abs Jour : Ref Zhur - Biol., No 20, 1958, 91750

Author : Chegodayev, Ye., Belousov, P.

Inst : -

Title : From the Practice of Square-Pocket Cotton Planting in
Azerbaijan.

Orig Pub : Khlopkovodstvo, 1958, No 4, 27-30.

Abstract : No abstract.

Card 1/1

BELOUSOV, P., podpolkovnik

Our objections and proposals. Voen. vest. 41 no.2:39-40 F
'62. (MIRA 15:3)
(Attack and defense (Military science))

1. BELOUSOV, P.G.; POKONOV, N.Z.
2. USSR (600)
4. Electric Power Plants
7. Model PES-15A mobile electric power station with model GAE-MK internal combustion engine, P.G. Belousov, N.Z. Pokonov, *Energ. biul.*, no. 4, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

Belousov P. G.

AID P - 3875

Subject : USSR/Engineering

Card 1/2 Pub. 28 - 3/7

Author : Belousov, P. G.

Title : Conversion of the V2-300 Diesel into a Gas Engine

Periodical : Energ. byul., 11, 18-22, N 1955

Abstract : The author describes the history and results of conversion of the V2-300 diesel (260 HP at 1,500 rpm), into a natural-gas engine. The Ukrainian Petroleum Association (Ukrneft') has been experimenting with this problem since 1949 with tests beginning in 1952. In addition, experiments were carried on by the All-Union Central Scientific Research Institute of the Ministry of Railways (TsNII MPS). Laboratory tests of an adapted engine were conducted by the Power Institute im. I. G. Yes'man at the Academy of Sciences of the Azerbaydzhanskaya SSR. Now the Barnaul plant is manufacturing the V2-300 GD engine, which operates on liquid fuel and natural gas simultaneously.

Energ. byul., 11, 18-22, N 1955

AID P - 3875

Card 2/2 Pub. 28 - 3/7

One drawing, graph and table.

Institution : As mentioned.

Submitted : No date

BELOUSOV, P.G.

Changing diesel engines over to gaseous fuel (in the Technical
Council of the Ministry of the Petroleum Industry). *Energ. biul.*
no.2:29-32 F '57. (MLRA 10:3)
(Diesel electric power plants)

Peterson, P. G.
RAVKIND, A.A.; BELOUSOV, P.G.

Testing type V2-300 GD gas diesels. Energ.biul. no.12:21-26 D '57.
(MIRA 10:12)

(Diesel engines--Testing)

AUTHORS: Belousov, P.G., Ravkind, A.A. SOV/86-51-12-3/1

TITLE: Tests of the V2-300GD Gas Diesels in Prospecting Drilling
(Ispytaniye gazodizeley V2-300GD v usloviyakh bureniya)

PERIODICAL: Energeticheskiy byulleten', 1958, Nr 12, pp 23-30 (USSR)

ABSTRACT: This is a description of the V2-300 GD gas diesel tests in prospecting drilling. The 5D Uralmash prospecting drill was used for this experiment. The results of lifting and lowering prospecting drill operations are given in Table 3. The gas-air mixture regulating devices are shown. Conclusions drawn: the working of gas diesels was normal; about 75 % of liquid fuel was saved; lifting operations were to some extent accelerated; the heat consumption during lowering of prospecting drill was to a certain degree lessened. In spite of this, cost savings were achieved. The use of serially produced diesel regulators is recommended for combined gas and liquid fuel. Wide use of V2-300 GD gas diesel for prospecting drilling is possible. Development of a spark ignition diesel, on the base of the V2 diesel is recommended. There are 4 diagrams, 3 tables, 2 graphs and 3 Soviet references.

Card 1/1

BELUSOV, P.I.

Apparatus for developing weight-bearing in the amputation stump.
Khirurgia, Moskva no.8:83-84 Aug 1953. (CIML 25:4)

1. Candidate Medical Sciences. 2. Of Leningrad Scientific-Research
Institute of Prosthesis (Director -- Prof. P. A. Kopylov).

BELOUSOV, P.I., kandidat meditsinskikh nauk; KOPYLOV, F.A., professor, direktor.

Apparatus for exercises following splitting of the forearm stump. Vest.khir.
73 no.5:46-48 S-0 '53. (MLRA 6:11)

1. Leningradskiy nauchno-issledovatel'skiy institut protezirovaniya.
(Amputations of arm) (Medical instruments and apparatus)

BELOU SOV P. I.

BELOU SOV, P. I., kandidat meditsinskikh nauk

Surgical hook-bracelet. Khirurgia no.7:82 J1 '54. (MLRA 7:10)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta prote-
sirovaniya (dir. prof. F.A.Kopylov)
(SURGERY, apparatus and instruments,
hook-bracelet)

BELOUSOV, P.I.

Instrument for determining the supporting capacity of leg stumps
in dynamics; dynamograph. *Fiziol.shur.*40 no.1:96-98 Ja-F '54.
(MLRA 7:2)

1. Otdeleniye lechebnoy fizicheskoy kul'tury Leningradskogo
nauchno-issledovatel'skogo instituta protesirovaniya.
(Amputation stump)

BELOUSOV, P.I. starshiy nauchnyy sotrudnik

Appratus for measuring the force of individual dynamic stumps following kinesthetic surgery of the forearm. Ortop.travm.protez. Moskva no.1:73-74 Ja-F '55. (MLRA 8:10)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta protseirovaniya (dir.-prof. F.A. Kopylov)
(AMPUTATION STUMP,
appar. for measurement force of kinematic stumps
after kinesthetic surg. of forearm.)

Country : USSR
Category: Human and Animal Physiology. Circulation.
Blood Vessels

T

Abs Jour: RZhDiol., No 19, 1958, 88863

Author : Belousov, P.I.; Stupkina, N.V.
Inst : Central Scientific Research Institute of
Prosthetics and Prosthesis Construction.
Title : Certain Vascular Reactions in the Amputated.

Orig Pub: V.sb.; 5-ya nauchn sessiya Tsentr. n.-i. in-ta
protezir. i protezostroeniya n., 1956, 97-104

Abstract: In patients with amputation, arterial oscillo-
graphy was carried out on the healthy extremity and
on the stump. Considerable disturbances of the cir-
culation were noted in the segments where amputation
was carried out and those proximal to them. Move-

Card : 1/2

Country : USSR
Category: Human and Animal Physiology. Circulation.
Blood Vessels

T

Abs Jour: RZhBiol., No 19, 1958, 88863

ment, massage and baths failed to change the character of the oscillogram. Fastening of the prosthesis by tightening of the case seldom disturbed the circulation of the preserved part of the extremity, particularly at the time of the supporting phase of the step. -- I.I. Sandalova.

Card : 2/2

T-46

BELOUSOV, P.I.; STUPKINA, N.V.

Some vascular reactions in the disabled following amputation. Ortop.,
travn. protez. 17 no.5:65-66 S-0 '56. (MLRA 10:1)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta proteziro-
vaniya (dir. - prof. F.A.Kopylov)
(AMPUTATION STUMP--BLOOD SUPPLY)

BELOUSOV, P.I., kandidat meditsinskikh nauk (Leningrad)

**Registration of curves on tracing paper by eosin. Klin.med. 34 no.7:
85-86 J1 '56. (MLRA 9:10)**

**1. Is otdeleniya lechebnoy fizicheskoy kul'tury (sav. P.I.Belousov)
Leningradskogo nauchno-issledovatel'skogo instituta protesirovaniya
(dir. - prof. F.A.Kopylov)
(EOSIN) (PHYSIOLOGICAL APPARATUS)**

EMLOUSOV, P.I.

Apparatus for measuring the strength of the upper and lower
extremities; polydynamometer. Fisiol. zh. SSSR 42 no.1:112-114
Ja 56. (MIRA 9:5)

1. Leningradskiy nauchno-issledovatel'skiy institut protezirovaniya
(PHYSIOLOGY, apparatus and instruments,
polydynamometer (Bus))

BELOUSOV, P.I.

Crutch and cane dynamometer. Ortop.travn. i protes. 19 sc.4:
50-51 J1-Ag '58 (MIRA 11:11)

(ORTHOPEDICS, appar. & instruments
dynamometer for crutches & canes (Rus))

BELOUISOV, P.I.

In Memory of V.A.Betekhtin. Vest.khir. 80 no.3:159 Mr '58.
(MIRA 11:4)

(BETEKHTIN, VLADIMIR ALEKSANDROVICH, 1876-1957)

BELOUSOV, Pavel Il'ich (Leningrad Scientific Research Institute for
Prosthetics) for Doctor of Medical Sciences on the basis of the dis-
sertation defended 23 Oct, 1959 in the Council of the Leningrad Sanitary
Hygienic Medical Institute, entitled: "Study and ^{Neurotonic} ^{Motor} Improvement of ~~Loco-~~
~~motor~~ Functions of the Amputated" (EMVISSO USSR, 2-61, 19)

Leningrad Sci. Res. Inst. Prosthetics
KL 40-59 p.105-

80
29

BELOUSOV, P.I., starshiy nauchnyy sotrudnik

Apparatus for determining the weight bearing of amputation
stumps. Ortop., travm. i protes. 20 no.5:49 My '59.
(MIRA 12:9)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta
protezirovaniya (dir. - dotsent M.V.Strukov).

(AMPUTATION STUMPS

appar. for determ. of weight bearing capacity
(Rus))