

SATEL', Eduard Adamovich, prof., doktor tekhn.nauk, red.; LETENKO, Viktor Aleksandrovich, kand.ekon.nauk; BRYANSKIY, Georgiy Anatoliyevich, kand.ekon.nauk; SAMBORSKIY, Georgiy Ivanovich, kand.ekon.nauk; ORLOV, N.A., prof., retsenzent; FRUMIN, I.L., inzh.-ekon., retsenzent; STEL'MAKHOVICH, N.A., kand.tekhn.nauk, retsenzent; BELYAYEV, A.V., inzh.-ekon., retsenzent; SOCHINSKIY, A.R., inzh., red.; Salyanskiy, A.A., red.izd-va; EL'KIND, V.D., tekhn.red.

[Principles of the technology of production and labor organization] Osnovy tekhnicheskoi podgotovki proizvodstva i organizatsiia truda. Pod red. E.A.Satelia. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1959. 330 p. (MIRA 12:10)
(Machinery industry)

BELYAYEV, A.V.

The MP101 copying lathe with automatic loading and unloading. Biul.
tekh.-ekon.inform. no.7:19-21 '58. (MIRA 11:9)
(lathes)

L 1260-66

ACCESSION NR: AP5024392

UR/0286/65/000/015/0073/0073Q
615.372.002.2

B

AUTHOR: Arkhipov, V. V.; Filonov, Yu. A.; Nechayeva, L. A.; Khrushchev, V. G.;
Perminov, T. A.; Shevyrev, N. S.; Zolozov, I. S.; Belyayev, A. S.; Nozdachev, A.
I.; Yevglevskiy, A. A.

TITLE: A method for manufacturing tuberculin. Class 30, No. 173381

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 73

TOPIC TAGS: tuberculosis, immunology, allergen

ABSTRACT: This Author's Certificate introduces a method for manufacturing tuberculin. The method consists of growing a tubercular culture on a nutrient medium, removal of the bacterial matter and filtration. An active and specific allergen is produced and labor-consuming operations are reduced by exposing the culture to Co⁶⁰ γ -radiation.

ASSOCIATION: none

SUBMITTED: 11Jun64

NO REF SOV: 000

ENCL: 00
OTHER: 000

SUB CODE: LS

Card *1/1*

BELYAYEV, A.V.; SIDOROV, V.A.

Electrodynamic vibrographs. Inzh.-fiz.zhur. no.4:67-71 Ap '58.
(MIRA 11:7)

1.Gosudarstvennyy universitet im. M.V. Lomonosova, g.Moskva.
(Vibration--Measurement) (Electric instruments)

BELYAYEV, A.S.

Surgery for removal of the third left thoracic ganglion in the compound treatment of obliterating diseases of the arteries. *Khirurgiia* 40 no.11:129-132 N '65. (MIRA 18:7)

1. Klinika obshchey khirurgii (dir. - prof. V.A.Ivanov) II Moskovskogo gosudarstvennogo meditsinskogo instituta imeni Pirogova na baze 13-y Moskovskoy gorodskoy bol'nitsy (glavnyy vrach M.B.Shanshain).

ALEKSANDROV, Sergey Vasil'yevich, kandidat sel'skokhozyaystvennykh nauk;
BELYAYEV, Anton Semenovich; VASIL'YEV, Vasily Luk'yanovich, kandidat
sel'skokhozyaystvennykh nauk; KAZAKOVA, Antonina Alekseyevna, kandidat
sel'skokhozyaystvennykh nauk; KAMERAZ, Abram Yakovlevich, kandidat
sel'skokhozyaystvennykh nauk; SECHKAREV, Boris Ivanovich, kandidat
sel'skokhozyaystvennykh nauk; BREZHNEV, D.D., professor, doktor
sel'skokhozyaystvennykh nauk, redaktor; PETROV, N.P., redaktor;
CHUNAYEVA, Z.V., tekhnicheskiy redaktor

[Vegetable gardening]Ovoshchevodstvo. Pod red. D.D.Brezhneva. Moskva,
Gos. izd-vo selkhoz. lit-ry, 1956. 472 p. (MLRA 9:12)
(Vegetable gardening)

BEIYAYEV, Aleksandr Stepanovich [Beliaiev, O.S.]; IVANENKO, Denis
Andreyevich; LUPKO, A.Ya., red.; GULENKO, O.I. [Hulenko, O.I.],
khud.-tekh.red.

[Guidebook to the Exhibition of Achievements of the Ukrainian
National Economy] Vystavka peredovoho dosvidu v narodnomu
hospodarstvi Ukraini's'koi RSR. Putivnyk. Kyiv, Derzh.vyd-vo
sil's'kohospodars'koi lit-ry, 1960. 62 p.
(Kiev--Exhibitions) (MIRA 14:1)

VOINOV, S.I., kand. veter. nauk; KARPOVICH, M.B., mladshiy nauchnyy sotrudnik; SHEVYREV, N.S.; BELYAYEV, A.S.; YELAGINA, V.B.; KREMEN', G.Ya., veterinarnyy vrach

Results of a two-year industrial manufacture and control of the O, A. and S types of lapinized foot- and-mouth disease antigens. Veterinariia 40 no.11:69-70 N '63.

(MIRA 17:9)

1. Gosudarstvennyy nauchno-kontrol'nyy institut veterinarnykh preparatov Ministerstva sel'skogo khozyaystva SSSR (for Voinov, Karpovich). 2. Glavnyy veterinarnyy vrach Kurskoy biofabriki (for Shevyrev). 3. Nachal'nik nauchno-kontrol'noy laboratorii Kurskoy biofabriki (for Belyayev). 4. Nachal'nik tsekha tipospetsificheskikh yashchurnykh komponentov Kurskoy biofabriki (for Yelagina). 5. Kurskaya biofabrika (for Kremen').

TRUBIN, B.G., prof.; LUR'YE, A.B.; GRIGOR'YEV, S.M.; IVANOVICH, E.M.; MEL'NIKOV, S.V.; ANTIPIN, V.G., kand. tekhn. nauk, retsenzent; VOLKOV, B.G., kand. tekhn. nauk, retsenzent; MULLAYANOV, R.G., kand. tekhn.nauk, retsenzent; OVSIYUKOV, V.N., kand. tekhn. nauk, retsenzent; BELYAYEV, A.S., st. nauchnyy sotr., retsenzent; KOZLOVSKIY, Ye.V., inzh., retsenzent; TRAK, E.E., inzh., retsenzent; SIMONOVSKIY, N.Z., red.izd-va; SPERANSKAYA, O.V., tekhn. red.

[Agricultural machines; theory, design, and calculations]
Sel'skokhoziaistvennyye mashiny; teoriia, konstruksia i raschet.
Pod red. B.G.Turbina. Moskva, Mashgiz, 1963. 575 p.

(MIRA 16:5)

1. Nauchno-issledovatel'skiy institut mekhanizatsii i elektrofikatsii sel'skogo khozyaystva Severo-Zapada (for Antipin, Volkov, Mullayanov, Ovsyukov, Belyayev, Kozlovskiy, Trak).
(Agricultural machinery--Design and construction)

BELYAYEV, A.P., red.; BESSOLITSYN, Ye.F., red.; BLINNIKOV, I.I., red.; DZINKAS, Yu.K., red.; ZHARKOV, M.A., red.; KOROVIN, A.V., red.; KUR'YANOV, F.K., red.; MANDEL'BAUM, M.M., red.; NALETOV, P.I., red.; RYABENKO, V.Ye., red.; SAVINSKIY, K.A., red.; SERD, A.I., red.; SEMENYUK, V.D., red.; TUMOL'SKIY, L.M., red.; TIKHONOV, V.I., red.; TROFIMUK, F.I., red.; TOMILOVSKAYA, M.V., red.; POMIN, N.I., red. BERKIN, Yu.K., red. red.

[Recent data on the geology, petroleum potentials, and mineral resources of Irkutsk Province] Novye dannye po geologii, neftenoznosti i poleznym iskopaenym Irkutskoi oblasti. Moskva, Nedra, 1964. 278 p. (MIRA 17:8)

1. Russia (1917- R.S.F.S.R.) Glavnoye upravleniye geologii i okhrany redr. Irkutskoye geologicheskoye upravleniye.

On the prospecting of ...

S/169/63/000/002/063/127
D263/D307

lower part of the loose layer, from points along a groove; 3-5 samples are taken from depths of 10-20 m within the fundamental rocks. A systematic geological map of the underlying rock (neglecting the overlying loose cover) is prepared from the drilling data, on which are plotted the results of spectrometallometry, separately for deluvial-eluvial layers and fundamental rocks. Primary aureoles, discovered by single wells, are the object of further investigations. Application of the above method led to the finding of a pyritic polymetallic deposit, hidden under an approximately 100 m thick loose covering layer. /-Abstracter's note: Complete translation.-/

Card 2/2

S/169/63/000/002/063/127
D263/D307

AUTHOR: Belyayev, A. P.

TITLE: On the prospecting of blind deposits in covered regions

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 8, abstract 2D48 (Razvedka i okhrana nedr., 1962, no. 8, 9-11)

TEXT: In the mineral regions of Altay, where the thickness of covering layers is in excess of 40 m, the most effective prospecting methods are the hydrochemical and metallometric ones. Hydrochemical assaying of charting wells is used to determine the overall metal potential of the region. Detailed works combined with metallometry should be used in areas exhibiting hydrochemical aureoles. It is recommended that metallometric surveys of fundamental rocks should be carried out on mapping wells, bored in a 400 x 600 x 800 m network, with the aid of power-driven drilling installations. Samples for spectroscopic analysis should be collected from the

Card 1/2

BELYAYEV, A.P.

Searching for concealed deposits in closed areas. Razved. i okh.
nedr 28 no.8:9-11 Ag '62. (MIRA 15:8)

1. Zapadno-Sibirskoye geologicheskoye upravleniye.
(Altai Mountains--Ore deposits) (Geochemical prospecting)

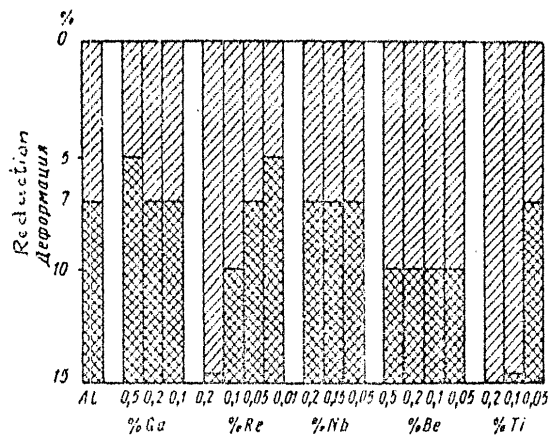
2195

Influence of Small Additions of ... S/129/61/000/007/009/016
E073/E535

only after a 15% reduction before the high temperature heating, whilst smaller additions of Re (0.05-0.01%) did not have any positive influence. There is 1 figure.

[Abstractor's Note: This is a complete translation.]

Figure



Card 5/5

Influence of Small Additions of

S/129/61/000/007/003/016
P073/F535

pure aluminium for 0.1% Re for reductions of 10 and 15% and for 0.2% Re only for reductions of the order of 15%. A graph is included which shows the range of reductions for which the aluminium structure will be coarse grained across hatched sections of columns, the vertical scale gives the reduction in % The following conclusions are arrived at:

1. As a result of recrystallization at 500 C a coarse grain structure is detected in sheet aluminium after preliminary reduction by 7 to 15%.
2. Addition of 0.2% Fe prevents entirely formation of a coarse grain structure in aluminium annealed at 500 C, even after reductions of up to 15%. Aluminium containing 0.1% Ti will have a coarse grain structure if the material was subjected to a reduction of 15% and in the case of 0.05% Ti if the reduction was 7%.
3. Addition of 0.05-0.5% Nb, 0.05-0.2% Nb or 0.1-0.5% Ga did not show any appreciable influence on the grain size in the case of preliminary reductions of 1.5-15%.
4. Aluminium containing 0.2% Re showed a coarse grain structure

and 4/5

SECRET

Influence of Small Additions of ... 3/129/61/000/007/009/016
E073/E535

the aluminium was 0.1%, the coarse grain structure occurred only after preliminary reduction of the order of 15%. A content of 0.05, 0.1, 0.2 and 0.5% beryllium showed no appreciable influence on the macrostructure of the recrystallized sheet material; a coarse grain structure (1.5 to 10 grains per cm^2) was observed for all the beryllium containing specimens after preliminary deformation of at least 10%. Additions of 0.05, 0.15 and 0.2% Nb had no influence on the macrostructure of aluminium, although the grain was finer than for pure aluminium for reductions of 7-15%. Gallium in quantities of 0.05, 0.1 and 0.2% showed no influence on the macrostructure of the recrystallized aluminium for reductions of the order of 1.5-15%. In the case of a 0.5% Ga content, a coarse grain structure was observed even after a 5% reduction. The influence of rhenium was as follows: for contents of about 0.01% a coarse grain structure was detected even after reductions of 5-15%. In the case of a content of 0.05% Re, a coarse grain structure was observed for reductions of 7 and 15% in the same way as for pure aluminium. For higher Re contents a coarse grain structure was detected from higher degrees of reduction than for

(end 1/5)

Influence of small additions of titanium
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 0073/P538

gallium was introduced in the pure form. The ingots were rolled in five passes from 17 to 4 mm at 420°C on a two-high laboratory stand, roll diameter 200 mm. After annealing at 350°C, the material was cold rolled from 4 to 1 mm in four passes. From the 1 mm thick strip, specimens for tensile tests were produced which were annealed at 350°C for 4 hours. The specimens were deformed by stretching on a Mohr-Federat 6-ton machine with reductions of 1.5, 2.5, 5, 10 and 15%. After deformation, the specimens were heated in a saltpetre bath at 500°C for two hours. For revealing the macrostructure of the metal, an etching agent was used containing 100 ml HF, 15 ml HCl, 15 ml HNO₃, and 250 ml H₂O. Aluminium 200 without special additions had a coarse grain structure (6-10 grains per cm²) after heating at 500°C and preliminary deformation of 7-15%. Titanium had a positive influence on the refining of the grain of the recrystallized aluminium. At a content of 0.01% a definite crystalline structure is retained, regardless of the degree of preliminary deformation (1.5-15%). Addition of 0.05% Ti produced hardly any changes in the macrostructure of the aluminium after a reduction by 7-15%; there were about 10 grains per cm². At the titanium content in card 2/3

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AUTHOR: BEZVYUKH, A. P., Candidate of Technical Sciences and
Sov. Assoc. R. M., Engineer

TITLE: Influence of Small Additions of Titanium, Beryllium,
Gallium, Rubidium and Strontium on the Grain Size of
Aluminum After Heating and Deformation

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov,
1961, No. 7, pp. 37-36

TEXT: Aluminum sheet clad with pure aluminum is
frequently subjected to high temperature heating during a second
quenching after slight deformations, whereby in some cases a
coarse grain structure forms as a result of which the manufac-
tured parts have to be scrapped. The authors studied the influence
on the macrostructure of recrystallized aluminum of the following
small additions: 0.005, 0.01, 0.015 Sn; 0.05, 0.10, 0.200 Be;
0.06, 0.14, 0.23 Ga; 0.008, 0.05, 0.084 Fe; 0.029, 0.1, 0.15
Rb; 0.08 Sr. The alloys were produced from aluminum A00 (99.14% Fe,
0.0003% Si, 0.0035% Cu), whereby aluminum was alloyed with
Al-Sn (4.07% Sn), Al-Be (1.77% Be), Al-Be (2.0% Nb), Al-Be (2.17% Re),
and 1/3

66000

SOV/81-59-8-27801

The Resistance of High-Purity Magnesium Alloys Against Total Corrosion and Corrosion Under Stress

did not show a noticeable effect. CR of ML6 alloy is ~ 20 times less than that of the same alloy of commercial purity at a Fe content of < 0.005 . Under the conditions of alternate immersion into water the samples in the form of forks prepared from MA2 and MA5 alloys of usual purity showed a higher tendency to corrosion cracking than in the case of high purity alloys.

Ye.Z.

Card 2/2

66050

SOV/81-59-8-27801

18.1245
18.8300

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 8, p 324 (USSR)

AUTHORS: Belyayev, A.P., Gol'shteyn, R.M.TITLE: The Resistance of High-Purity Magnesium Alloys Against Total Corrosion¹⁵ and Corrosion Under Stress

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta, 1957, Nr 40, pp 358 - 364

ABSTRACT: The results of corrosion tests of commercial Mg in a 3%-solution of NaCl have shown that the Cu and Ni content in Soviet electrolytic Mg does usually not exceed the admissible limits. Fe, the content of which in Mg is 0.005 - 0.018%, is the most harmful impurity. The corrosion rate (CR) of Mg-Mn-alloys increases noticeably at a Ni and Cu content of 0.006% and 0.15%, respectively. The presence of Fe in the Mg-Mn-alloy in the amount of up to 0.04% did not produce a noticeable effect on CR. Three-year tests in the atmosphere of Leningrad detected no difference in the corrosion behavior of Mg alloys with 1.48% Mn containing 0.042 and 0.004 Fe. The CR of a deformed MA5 alloy containing < 0.005% Fe in a 3%-solution of NaCl is ~ twice as low as that of commercial Mg. The presence of Cu in MA5 and ML5¹⁶ alloys in the quantity of up to 0.3% ✓

Card 1/2

SOV/137-58-10-20721

Production of High-purity Magnesium and Alloys Based Thereon

crystals concreted into nodules. The yield of high-purity Mg is ~180 kg after 20 hours of sublimation. The sublimate is melted into bars in vacuum. The resultant Mg is of the following % composition: Fe 0.001-0.0025, Si 0.0002-0.0004, Cu+Ni 0.0001-0.0003, Al < 0.001. Owing to its low Fe contents it is considerably more corrosion resistant than electrolytic Mg.

Ye.Z.

1. Magnesium--Production
2. Magnesium alloys---Production
3. Electrolytes
- Performance
4. Vacuum furnaces---Operation

Card 2/2 .

SOV/137-58-10-20721

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 10, p 54 (USSR)

AUTHORS: Gus'kov, V.M., Belyayev, A.P.

TITLE: Production of High-purity Magnesium and Alloys Based Thereon (Polucheniye magniya vysokoy chistoty i splavov na yego osnove)

PERIODICAL: V sb.: Legkiye metally. Nr 4. Leningrad, 1957, pp 95-99

ABSTRACT: A procedure is developed for sublimation of electrolytic Mg in vacuum and the production of high-purity metal. The process is run in vertical steel retorts (R) with a capacity of 250 kg Mg in a vacuum furnace with Ni-Cr heaters. The Mg pigs are roasted at 350-400°C to remove paraffin and wrapping paper, the surfaces are cleaned, and they are placed in the crucible of the R which is placed in the zone of sublimation. After the R and furnace are sealed, the air is evacuated from them to a pressure of 0.2-mm Hg in the R and 2-3-mm Hg in the furnace. The furnace temperature is then raised to 700°, and the pressure in the R to 0.05-0.09 mm Hg. The sublimation of the Mg proceeds at a rate of ~9 kg/hr. The Mg is sublimated in the upper portion of the R in the form of large

Card 1/2

SOV/137-58-9-18742

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 85 (USSR)

AUTHORS: Belyayev, A.P., Gokhshteyn, M.B., Tsenter, Ya.A.

TITLE: ~~Improvements in the Procedure for Cleaning Raw Aluminum~~
and for Processing it to Commercial Semimanufactures at
Aluminum Plants (Usovershenstvovaniye tekhnologii ochistki
alyuminiya-syrtsa i pererabotki yego na tovarnyye polufab-
rikaty na alyuminiyevykh zavodakh)

PERIODICAL: V sb.: Legkiye metally. Nr 4, Leningrad, 1957, pp 61-65

ABSTRACT: A review is presented of measures carried out in the USSR and introduced into production to improve the procedures for cleaning raw Al and for casting it into ingots. It is noted that raw Al is now cleaned by chlorination in the ladle for 10-15 minutes, ~0.5 kg Cl₂/t Al being used, followed by settling for up to 1.5 hour in ladles or mixers. Semicontinuous casting of Al has been introduced. Ideas are presented on the further improvement of raw Al refining and casting procedures and on the advisability of organizing the production of Al alloys at new aluminum plants. 1. Aluminum--Processing 2. Aluminum--Casting
3. Aluminum--Chlorination

Card 1/1

Ye.7.

137-52-6-12884

Resistance to Ordinary (cont.)

alloys (ML2 and MA1). In these alloys up to 0.04% Fe, up to 0.15% Cu, and up to 0.006% of Ni are permissible. In the alloys of the groups Mg-Al-Mn and Mg-Al-Zn-Mn (MA5, ML5, and ML6), Fe and Ni produce a greater harmful effect than Cu. In these alloys the harmful effect of Ni, Cu, and Fe becomes more pronounced as the content of Al in the alloy increases. Technically pure Mg-Al-Mn and Mg-Al-Zn-Mn alloys are susceptible to corrosion cracking under stress. High-purity alloys proved not to be susceptible to corrosion cracking. The practical possibilities of producing high-purity alloys (using sublimated Mg as charge material for the production of alloys, smelting of Mg and its alloys under vacuum without the use of fluxes, etc.) are pointed out.

G.Sh.

1. Magnesium alloys--Corrosion 2. Corrosion--Test results 3. Alloys--Corrosive effects

Card 2/2

137-58-6-12884

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 243 (USSR)

AUTHORS Belyayev, A.P., Gol'shteyn, R.Zh.

TITLE: Resistance to Ordinary Corrosion and Corrosion Under Stress of High-purity Magnesium Alloys (Soprotivlyayemost' obshchey korrozii i korrozii pod napryazheniyem magniyevykh splavov vysokoy chistoty)

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta, 1957, Nr 40, pp 358-364

ABSTRACT: It is shown that the most harmful impurity in Mg, which lowers its corrosion resistance under atmospheric conditions and in a 3% NaCl solution, is Fe, the content of which in domestic electrolytical Mg is $> 0.005-0.018\%$. The corrosion resistance of Mg refined by sublimation is considerably higher. It contains impurities (in %) in amounts less than 0.005 Fe, 0.007 Cu, 0.0001 Ni, 0.001 Si, etc. It is remarked that admixtures of Fe, Ni, and Cu are harmful to Mg alloys, also, but their effect varies depending on the character of the alloy and the content of basic components in it. Ni has a more harmful effect than Fe and Cu upon the corrosion of Mg-Mn alloys

Card 1/2

137-58-6-11897

Metallic Impurities in Aluminum

Cu 0.0008-0.0022, Zn 0.0002-0.0008, Ti 0.0004-0.0008, Mg 0.001-0.0040,
Mn 0.001-0.002, Na 0.002-0.005, Sb 0.000014-0.000016, As 0.0001,
Cd 0.000001, Ga 0.00006, Bi 0.000005-0.000009, S 0.0002-0.0004, Al_2O_3
0.0005-0.0016.

I.G.

1. Aluminum--Impurities
2. Aluminum--Processing
3. Metals--Separation
4. Electrolysis--Effectiveness

Card 2/2

137-58-6-11897

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 101 (USSR)

AUTHORS: Belyaev, A.P., Gol'shteyn, R.M.

TITLE: Metallic Impurities in Aluminum (Metallicheskiye primesi v alyumini)

PERIODICAL: Tr. Vses. alyumin.-magn. in-ta, 1957, Nr 39, pp 387-390

ABSTRACT: Raw aluminum obtained by the electrolysis of cryolite-alumina melts contains a number of metallic and nonmetallic impurities. To remove the nonmetallic and part of the metallic impurities (Na, Ca, Pb, Zn, and As), the liquid raw material is blown with Cl_2 and then permitted to stand in our plants. Analysis of chlorinated Al of various aluminum plants demonstrates the following percentage content of impurities, depending upon the grade of product (A00, A0, A1, and A2): Fe 0.09-0.38, Si 0.07-0.34, Cu 0.003-0.019, Zn 0.0024-0.022, Ti 0.002-0.017, Mg 0.0004-0.0028, Mn 0.002-0.004, Na 0.001-0.01, Sb 0.000015-0.000017, As 0.0001, Cd 0.000001, Ga 0.002-0.0085, Bi 0.000004-0.000006, S 0.0004-0.007, Al_2O_3 0.0003-0.007. After electrolytic refining of Al (AB000) its impurities contents are as follows, in %: Fe 0.0017-0.003, Si 0.002-0.004,

Card 1/2

ILLEGIBLE

Electrical conductivity of aluminium. (Cont.) 136-5-12/14
series in descending order: Cr - V - Ti - Cu - Si - Fe. The
impurities found in the commercial grades of aluminium were
not sufficient to bring their resistivities outside the speci-
fication.

There are 3 tables and 1 non-Slavic reference.

ASSOCIATION: All-Union Aluminium-magnesium Institute. (VAMI)

AVAILABLE:

Card 2/2

BELYAYEV, A.P.

AUTHOR: Belyaev, A.P., Candidate of Technical Sciences, and
Gol'shteyn, R.M., Engineer. 136-5-12/14

TITLE: Electrical conductivity of aluminium. (Elektroprovodnost
alyuminiya.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No.5,
pp. 74 - 78 (U.S.S.R.)

ABSTRACT: Determinations are reported and results are tabulated of the effect of impurities on the resistivity, conductivity, tensile strength and relative elongation of annealed aluminium wire. The following impurities in the indicated concentrations were studied: iron (0.0017 - 1.0 %); silicon (0.0025 - 0.50%); copper (0.002-0.50%); titanium (0.0004-0.10%); vanadium (<0.0001 - 0.20%); chromium (approx. 0.00016-0.27%). The results are examined in the light of the requirements of GOCT 6132-52 and 3549-55, and of tabulated results of determinations of copper, titanium, vanadium and chromium in commercial aluminium of quality from ABOOO to A2. The electrical and mechanical properties of these commercial aluminums are also tabulated. The investigation has shown the electrical conductivity of high-purity electrolytically refined aluminium (ABOOO) to be equal to $37.9 \text{ m}/\Omega\text{mm}^2$, the harmful effect on the conductivity of impurities being represented by the following

Card 1/2

Improvement in the quality of aluminium over the 25-years existence of the aluminium industry. (Cont.) 136-5-4/14

been a characteristic of the industry and this is embodied in the latest standard specification (ГОСТ 3549 - 55) which, unlike the international standard includes four types of aluminium with a purity exceeding 99.8% Al (already mentioned). The new standard includes a specification $Si:Fe \leq 1$ for semi-continuous and continuous casting. The new standard specification also requires the oxide and gas contents of pig aluminium to be determined. Determinations by the All-Union Aluminium-magnesium Institute and by works staff have shown that gas contents are in fact insignificant (0.05 - 0.25 cm³/100 g for types A00, A0, A1 and A2 and 0.35 cm³/100 g for AB000 type aluminium). In 1956 analyses were carried out by the Institute of most types of Soviet aluminium for accompanying impurities, and the results are tabulated in the present article. Although a high quality has been attained further improvements in quality, leading ultimately to the production of 99.9999-%Al is recommended, together with increased mechanisation and automation of production processes.

Card 2/2

There are 4 Slavic references.

ASSOCIATION: All-Union Aluminium-magnesium Institute. (VAMI)
AVAILABLE;

BELYAYEV, A.P.

AUTHOR: Belyaev A.P., and Gokshteyn, M.B., Candidates of Technical Sciences. 136-5-4/14

TITLE: Improvement in the quality of aluminium over the 25-years existence of the aluminium industry. (Uluchshenie kachestva alyuminiya za 25 let sushchestvovaniya alyuminevoy promyshlennosti.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, No. 5, pp. 24 - 29 (U.S.S.R.)

ABSTRACT: After brief notes on the improvements which have occurred in the last 25 years in the production technology of aluminium, the purity of the product is considered in more detail. From the original manual methods for the removal from the electrolyzer of metal, the industry has by now passed to the use of vacuum-ladles. Refining from non-metallic impurities is carried out by chlorination, electrolytic refining producing the following grades: ABO - 99.93%; ABOO - 99.97%; AB000 - 99.99% and AB0000 - 99.996%. Metal is now cast on to casting machines sometimes first passing through the mixer. Mixers are used for casting ingots for wire, a semi-continuous method being used which has appreciably reduced production costs. For wire, ingots of type AO and A1 are used according to ГОСТ 4004 - 53. The production of high-purity aluminium has always

Card 1/2

BELIAYEV, A.P., kandidat tekhnicheskikh nauk; GOL'SHTEYN, R.M., inzhener.

Hydrogen content in primary aluminum ingots. TSvet.met. 29 no.5:
61-63 Ny '56. (MLRA 9:8)
(Aluminum--Metallurgy) (Gases in metals)

БЕЛЫЙ, А. П.
ALEKSEYEV, N.S.; BELYAYEV, A.P.; BUGAREV, L.A.; BUTOMO, D.G.; VASIL'YEV, Z.V.;
VERIGIN, V.N.; VOROB'YEV, G.M.; GAYLIT, A.A.; GOL'SHTEYN, P.M.;
GOKHSHTEYN, M.B.; ZHOLOBOV, V.V.; ZEDIN, N.N.; IVANOV-SKOBLIKOV, N.I.;
KUTEPOV, Ya.V.; LANDIKHOV, A.D.; MARAYEV, S.Ye.; MILLER, L.Ye.;
OL'KHOV, N.P.; PERLIN, I.L.; POSTNIKOV, N.N.; ROZOV, M.N.; CHERNYAK, S.N.;
CHUPRAKOV, V.Ya.; TSENER, Ya.A.

Vladimir Oskarovich Gagen-Torn; obituary. TSvet.met. 27 no.5:67-68
S-O '54. (MIRA 10:10)

(Gagen-Torn, Vladimir Oskarovich, 1888-1954)

Свойства

PROCESSES AND PROPERTIES INDEX

The Refining of Aluminium Ore in the Mixer by Means of Chlorine and Various Fluxes. V. A. Bobrov and A. P. Belyaev (*Trudy Vsesoyuz. Akad. Nauk. Inst.*, 1930, (19), 234-240). (In Russian). The required degree of purification of the liquid ore in the mixer can be attained both by chlorine treatment and by allowing the ore to stand at a high temp. under a layer of flux or cryolite. —N. A.

ASAC 514 METALLURGICAL LITERATURE CLASSIFICATION

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L 45720-66

ACC NR: AP6025698

ance of the liquid phase, indicating that the reactions in these systems cannot be classified as solid-phase reactions. It was found that the equilibrium in the system $3\text{ZnTiO}_3 + \text{Pb}_3(\text{PO}_4)_2 \rightleftharpoons 3\text{PbTiO}_3 + \text{Zn}_3(\text{PO}_4)_2$ at low temperatures is displaced toward the formation of zinc titanate and lead phosphate, and at 800 °C to the side of lead titanate and zinc phosphate. Orig. art. has: 4 figures and 2 tables.

SUB CODE: 07/ SUBM DATE: 30Jul65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 ULR

L 35720-66 EWC(m)/T/EWP(1)/HTI 1/PR(1)
 ACC NR: AP6025698 SOURCE CODE: UR/0078/66/011/005/1183/1188

AUTHOR: Bolyayev, I. N.; Aver'yanova, L. N.; Bolyayeva, I. I.

ORG: none

TITLE: Solid-phase reactions of divalent metal titanates

SOURCE: Zhurnal neorganicheskoy khimii, v. 11, no. 5, 1966, 1183-1188

TOPIC TAGS: titanate, sulfate, phosphate

ABSTRACT: X-ray diffraction analysis was used to study the solid-phase reactions in the systems $MeTiO_3-PbSO_4$ and $MeTiO_3-Pb_3(PO_4)_2$, constituting diagonal sections of the ternary reciprocal systems $Me, Pb // TiO_3, SO_4(PO_4)$, where $Me = Mg, Ca, Sr, Ba, Zn, Cd$, in the 600-1000 °C range. It was found that in these ternary systems, where $Me = Ca, Sr, Ba$, and also in the $Mg, Pb // TiO_3, PO_4$ system at 700-1000 °C, in the course of 20 hr, a substantial displacement of the equilibrium $MeTiO_3 + PbSO_4(PO_4) \rightleftharpoons PbTiO_3 + MeSO_4(PO_4)$ takes place to the right, i. e., to the side of a pair of salts in which a cation with an 18+2 electron shell (Pb) combines with an anion containing an atom with an unfilled d subshell (Ti). Thus, all the indicated reactions are irreversible and reciprocal with stable salt pairs $PbTiO_3 + MeSO_4(PO_4)$. Because of the presence of the exchange product (lead titanate) and original titanate ($MeTiO_3$) in the calcined samples, the systems $Zn, Pb // TiO_3, SO_4$, $Cd, Pb // TiO_3$, and also $Mg, Pb // TiO_3, SO_4$ are irreversible and reciprocal. The appearance of the exchange product in them coincides with the appear-

Card 1/2

UDC: 546.824:541.124-16

L 27245-66

ACC NR: AP6009884

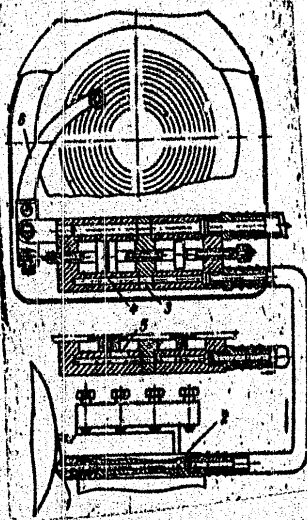


Fig. 1. 1 - nozzle; 2 - tool holder; 3 - transducer; 4 - piston; 5 - throttling slit; 6 - recording stylus.

the equilibrium position of the piston which interacts with the writing stylus of the recorder. Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 23Mar64

Machining

Card 2/2

CC

18

L 27245-66 EWP(k)/EWT(d)/EWT(m)/EWP(h)/EWP(l)/EWP(v)/EWP(t) IJP(c) JD

ACC NR: AP6009884

SOURCE CODE: UR/0413/66/000/004/0075/0076

AUTHOR: Belyayev, A. N.

ORG: none

26
25
B

TITLE: Device for controlling the cutting edge of a cutter during the cutting process. Class 42, No. 179006

SOURCE: Izobreteniya, promyshlennyye obratzysy, tovarnyye znaki, no. 4, 1966, 75-76

TOPIC TAGS: metal cutting machine tool, metalworking

ABSTRACT: This Author Certificate presents a device for controlling the cutting edge of a cutter during the cutting process, for example, on large lathes or boring machines. The device has a nozzle for measuring the air (fluid) flow rate in the clearance between the nozzle and the working surface, recording equipment, and a transducer for changing the pressure in the clearance into signals, connected to the recording equipment. To permit remote control of the cutting edge and the diameter of the working piece, the nozzle is rigidly connected to the cutting tool holder (see Fig. 1). The transducer consists of a cylinder separated into two chambers by a piston. One of the chambers (pressurized from the air supply) is connected to the nozzle, and the other one is vented to the atmosphere through a throttling slit partially covered by the piston. This assures self-adjustment to

Card 1/2

UDC: 53.087.621.941.1.025.004.62

2

BEIYAYEV, A.N.

Boring bar with a precise fitting of the cutting tool. Stan.
i instr. 36 no. 7s37-38 J1 '65. (MIRA 18:8)

BELYAYEV, A.N.

Adjustable boring bar. Mashinostreitel' no.7:27 J1 '65.
(MIRA 18:7)

BELYAYEV, A.N.

[Technological equipment for the production of cultured milk beverages with the tank method; textbook] Tekhnologicheskoe oborudovanie dlia proizvodstva kislomolochnykh napitkov rezervuarnym sposobom; uchebnoe posobie. Moskva, Vses. zaachnyi tekhnikum miasnoi i molochnoi promyshl., 1964. 78 p. (MIRA 17:12)

The use of induction heating ...

S/137/62/000/003/009/191
A006/A101

description is made of the advantages of using induction heating for a number of chemical processes, such as interoperational etching and parkerizing, parkerizing of steel articles prior to varnishing, high-frequency oxidizing, etc.

V. Oparysheva

[Abstracter's note: Complete translation]

Card 2/2

S/137/62/000/002/009/191
A006/A101

AUTHOR: Belyayev, A. N.

TITLE: The use of induction heating to intensify chemical processes

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1962, 6. abstract 3E51
(V sb. "Prom. primeneniye tokov vysokoy chastoty v elektrottermii",
Moscow-Leningrad, Mashgiz, 1961, 34-39)

TEXT: It is of substantial importance to reduce the labor consumption in chemical processes, forming in various industrial branches a considerable part of the general technological process. It is not always possible to raise the rate of chemical processing by higher concentration and temperature of the operational solution; a rise of the work piece temperature entails on the other hand a sharp decrease of the chemical processing time. It is recommended to employ processes in which the work piece temperature may exceed that of the medium. These processes are brought about by combining the chemical processing of the work in a liquid medium with their simultaneous heating by high or raised frequency current. A scheme of such a combination is presented and a

Card 1/2

BELYAYEV, A. A.

PHASE I BOOK EXPLOITATION 304/AS96

Moskovskiy dom nauchno-tekhnicheskoy propagandy izdati
P. B. Dzerzhinskogo
Avtomatizatsiya rotornyye lini - spetsialno kompleksoy avtomatizatsii
rotornyykh mashin (Specialized Complex Automation of Rotary
Machines for Production) Moscow, Khabarovsk, 1960. 221 p. 10,000
copies printed.

Ed. L. M. Koskima; Ed. of Publishing House: I. Vasil'yev; Techn.
Ed.: O. V. Smirnova; Managing Ed. for Literature on Machine-
Tool Building: V. I. Milin, Engineer.
PURPOSE: The book is intended for technical personnel in the machin-
ery industry.

COVERAGE: This collection of articles explains the principles of full
automation of rotary transfer machines in plastic
industry. The rotary operations of transfer machines in plastic
processing are discussed, and also the special power equipment and
accessories for these machines and (production) lines. No personalities are
mentioned. There are no references.

Topic: 1. V. Basic Problems in the Full Automation of
Product Manufacture

REGIMENOV, I. A. Installation and Working Principle of
Motors for Inspection Operations 62

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Rotary Transfer Machine Lines 85

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PART II. SPECIAL POWER EQUIPMENT AND DEVICES FOR ROTARY
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Chapin, V. P. Assembly Line for 38 mm Pitch Roller
Transfer for Combines 196

Sokolov, V. S. Automatic Rotary-Transfer Machine Line for
the Manufacture of Welding Electrodes 209

AVAILABLE: Library of Congress (T11189, 96)
Card 1/4

AK/dmw/qs
4/24/61

Investigation of the elastic after-effects in the case of
a linear stress state (Cont.) 24-4-10/34

is smaller than that of the direct after effect. Fig.4 shows the development of the after effect deformation as a function of time for various stress values; it was found that the individual curves can be described by the relations expressed by eq.(3). Repeated loading reduces appreciably the direct after effect and as an example Fig.5 shows the dependence of the degree of reduction of the direct after effect on the number of repeated loadings for a specific load of 3.9 kg/mm^2 . The relative direct and reversible after effects are proportional to the stress applied to the specimen. Repeated loading without intermediate annealing leads to a decrease of the direct after effect but no appreciable influence was observed on the reversible after effect. This is attributed to the occurrence of residual orientated micro-stresses caused by the process of micro-plastic deformations during the direct after effect. This relation begins to manifest itself at load values which are not too low, e.g. above 3 kg/mm^2 in the case of aluminium. Preliminary plastic deformation increases appreciably the reverse elastic after effect. There are 5 figures, 8 references, 5 of which are Russian.

Card 2/2

SUBMITTED: November 16, 1956.

AVAILABLE:

BELYAYEV, A-N.

AUTHOR: Belyaev, A. N. (Leningrad).

24-4-10/34

TITLE: Investigation of the elastic after-effects in the case of a linear stress state. (Issledovaniye uprogogo posledeystviya pri lineynom napryazhennom sostoyanii).

PERIODICAL: "Izv. Ak. Nauk, Otd. Tekh. Nauk" (Bulletin of the Ac. Sc., Technical Sciences Section), 1957, No.4, pp.70-74 (USSR).

ABSTRACT: The results are described of investigations of the elastic after effects in commercially pure aluminium in the case of simple tension. The dependence was investigated of the direct and the reversible elastic after effects on the instantaneous elastic deformation, repeated loading to a stress below the yield point and of preliminary plastic deformation. Simple tensile loading was selected so as to eliminate the influence of non-uniform stress distribution, which is quite considerable in combined stress states. However, this complicated considerably the measurements since the magnitude of the after-effect deformations is considerably lower in the case of pure tension than it is in the case of torsion or bending. The deformations were measured by means of a Martens type mirror strain meter on a standard test specimen. The dependence of the relative direct and reversible after effects on the stresses is plotted in Fig.3, from which it can be seen that the effect of the reversible after effect

Card 1/2

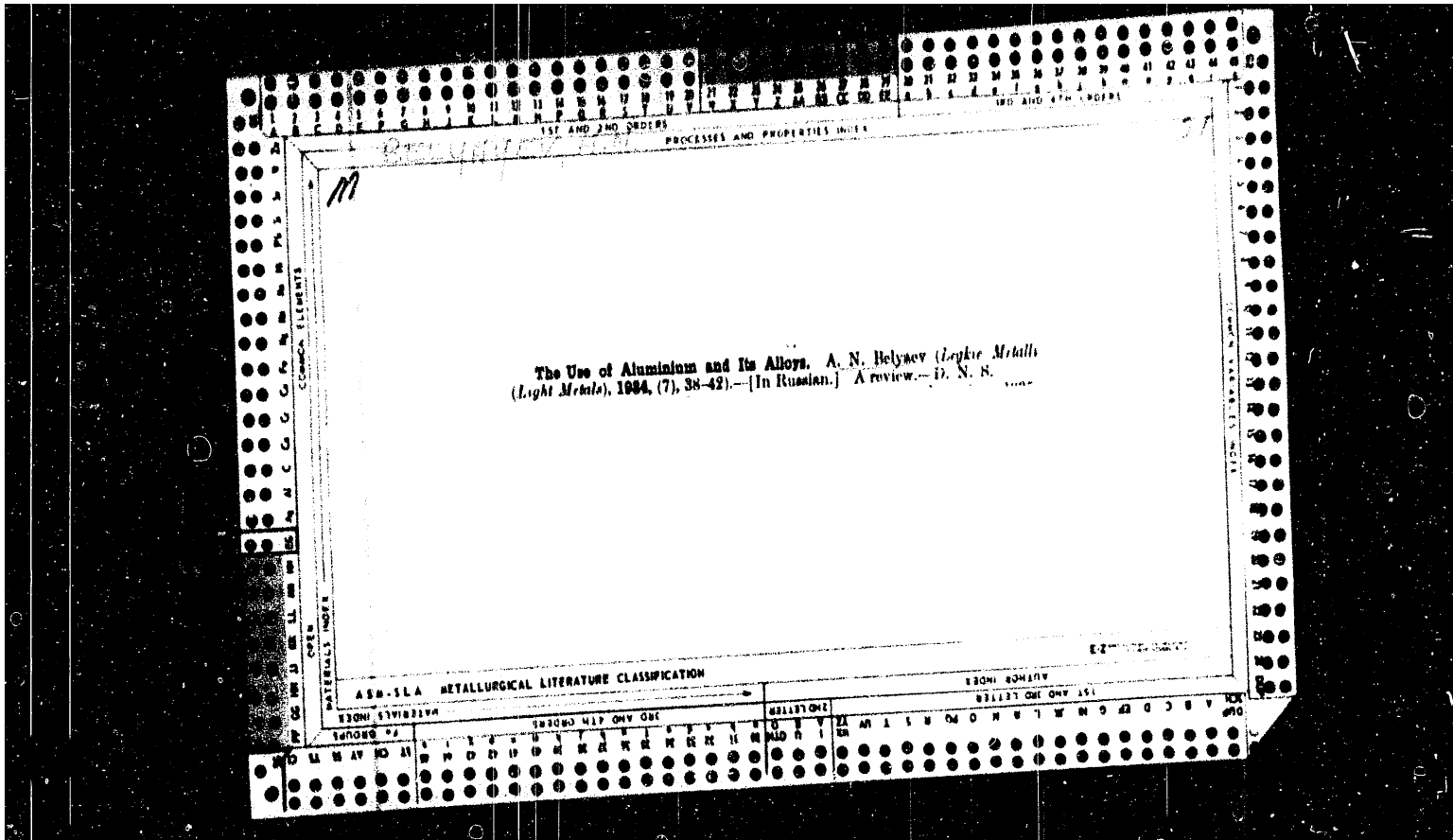
BELYAYEV, A.N., inzhener.

Direct-current drying of current transformers. *Energetik* 3 no.12:
21 D '55. (MLRA 9:2)
(Electric transformers)

BELYAYEV, A. N.

"An Investigation of Fatigue During the Linear Stress State." Cand
Phys-Math Sci, Inst of Mechanics, Acad Sci USSR, 30 Dec 54. (VM, 22 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR
Higher Educational Institutions (12)
SO: Sum. No. 556 24 Jun 55



D 12251-65

ACCESSION NR: AP50063-3

an appreciable peak at 530--580C, probably caused by the interface between two crystals. The shear modulus decreased quite sharply with increasing temperature. Orig. art. has: 5 figures and 1 table. [R]

ASSOCIATION: Voronezhskiy politekhnicheskiy institut (Voronezh Polytechnic Institute)

SUBMITTED: 28Feb64

ENCL: 00

SUB CODE: 60, MM

NO REF SOV: 012

OTHER: 007

ATT PRESS: 32A

Card 2/2

L 22253-65 EWT(h)/EWP(w)/EWA(s)/E/BWP(t)/EWP(s) LJP(c) JU

ACCESSION NR. AP500633

S/0126/65/019/002/0268/0273

AUTHOR: Foshtikov, V. S.; Anbar, E. A.; Polyayev, A. M.

TITLE: Internal friction, shear modulus, and strength of copper whiskers

SOURCE: Fizika metallov i metallovedeniye, v. 19, no. 2, 1965, 268-273

TOPIC TAGS: copper whisker, whisker internal friction, whisker shear modulus, whisker strength, temperature dependence

ABSTRACT: The temperature dependence of the internal friction and shear modulus of copper whiskers 6-10 mm long, 3-10 μ in diameter, and with a 23-150- μ^2 cross section has been investigated by means of a low-frequency torsion micro-pendulum in a vacuum of $2-5 \cdot 10^{-3}$ mm Hg at temperatures ranging from 20 to 800C. The room temperature tensile strength of the whiskers varied from 17 to 121 kg/mm² depending on the cross section. The internal friction was practically independent of temperature in the 40-400C range and was comparable in magnitude to that of ordinary copper single crystals, but sharply increased in the 600-650C range. A small peak was observed at 430C; 2-hr annealing at 550C had no effect on its magnitude or position, and its nature was not determined. The twin-whiskers had

Card 1/2

ACCESSION NR: AR4044013

this temperature region there occurs a sharp increase of internal friction and there is observed a significant amplitude dependence of internal friction. At temperatures higher than 150° C there is observed a noticeable decrease of the level of internal friction with a decrease in length of the sample. To a temperature of ~300° C the weight of the torsional system does not influence the magnitude of internal friction; however at higher temperatures an increase in weight from 30 to 150 g leads to a sharp increase of internal friction. An increase of the frequency of oscillations of the pendulum from 1 to 51 cps leads to a gradual lowering of the peak of internal friction and to displacement of it toward higher temperatures. The presence of impurities in the metal suppresses the grain-boundary peak of internal friction. The magnitude of the peak and its position depend essentially on the degree of preceding deformation.

SUB CODE: AS, IC

ENCL: 00

Card 2/2

ACCESSION NR: AR4044013

S/0058/64/000/006/E088/E088

SOURCE: Ref. zh. Fizika, Abs. 6E669

AUTHOR: Postnikov, V. S.; Belyayev, A. M.

TITLE: The influence of various factors on the nature of the temperature dependence of the internal friction of aluminum

CITED SOURCE: Sb. Relaksats. yavleniya v met. i splavakh. M., Metallurgizdat, 1963, 159-164

TOPIC TAGS: internal friction, aluminum

TRANSLATION: Research is conducted using a torsional pendulum on wire samples of 99.98% pure Al. Analysis of the influence of various factors on the nature of the temperature dependence of internal friction shows that with a decrease of the diameter of the samples from 5 to 1.5 mm the level of internal friction is lowered, and the internal-friction peak in the region of temperatures $\sim 350^{\circ}$ C shifts toward lower temperatures. To temperatures of $\sim 150^{\circ}$ C a change in length of the samples from 200 to 50 mm (with a constant diameter of 1 mm) does not influence the magnitude of internal friction. For samples with length 20-30 mm in

Card 1/2

BELYAYEV, A.M.; IOFFE, E.I.; PERVOZVANSKIY, A.I.; NAVASARDYAN, Ye.N.;
BLIOKH, S.S.; REVAZASHVILI, B.I.; PROTOPOPOV, M.M.; RAKHMATULLIN,
K.Kh.; SEMENOV, V.I.; KRIVOSHEIN, S.S.; SHVETSOV, A.P.; MAKAROV, M.F.;
OTROZHDENNOV, A.I.; ZHUKOV, D.D.; BELYAYEV, A.M.

Speeches. Trudy Mekhanobr. no.93:122-173 '56. (MIRA 11:6)
(Ore dressing--Equipment and supplies) (Waste products)

BEIYAYEV, A.M., kandidat biologicheskikh nauk.

Susliks of Kazakhstan. Trudy Resp.sta.zashch.rast.2:3-102 '55.
(Kazakhstan--Susliks) (MLRA 10:1)

BELYAYEV, A.M.
AFANAS'YEV, A.V.; BELYAYEV, A.M.

Brief survey of the rodents of Pavlodar Province. Trudy Inst.zool.
AN Kazakh.SSR 2:31-40 '53. (MLRA 10:2)
(Pavlodar Province--Rodentia)

MINI, A. I.

Sedimentation ponds of ore washing plants.
Gov. order no. 5, 1950

KRYUCHKOV, V.V., starshiy master; BELYAYEV, A.L., master

Carbon mix for lining cast iron and slag runners. Metallurg 10
no.5:11-13 My '65. (MIRA 18:6)

1. Nizhne-Tagil'skiy metallurgicheskiy kombinat.

GRAYEVSKAYA, N.A.; ROMANOVA, L.N.; BELYAYEV, A.L.

Comparative study of methods for producing type-specific and polyvalent diagnostic poliomyelitis sera. Vop. virus. 6 no.5:620-623 S-0 '61. (MIRA 15:1)

1. Institut poliomyelita i virusnykh entsefalitov AMN SSSR, Moskva. (POLIOMYELITIS immunol.)

BELYAYEV, A.K. [Biliaiev, A.K.], inzh.

The "SGG-2" gas analyzer for automatic regulation and control of micelle distillation. Khar.prom. no.4:23-25 O-D '62. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut maslozhirovoy promyshlennosti.

(Distillation apparatus) (Automatic control)

ACC NR: AR6035274

amplitudes, with corrections for nonlinear distortions. Sensitivity control of all channels is carried out by equalizing the amplifiers from the GN-4 generator signals registered on seismograms to the level of the moment of explosion. Constancy of the explosion spectrum is controlled with the help of a shunted control seismograph installed at the explosion site. The parameters of the amplifier corresponding to it do not change during the entire cycle of observations. It is recommended to make weekly readings of the calibrated curves of the electronic volume control. During field observations, it is likewise recommended to use several frequency ranges to reduce the pitch of the seismograph as compared to the commonly accepted one and to devote more attention to the selection of the best conditions of excitation. Diagrams of amplitude to profile ratios developed under the recommended conditions at one of the petroleum deposits of the Volga-Ural geological sink have been presented as an example of the possibilities of dynamic analysis. Comparison with a geological cross section shows an agreement between the position of the zone of reduction of the absorption and reflection coefficient for selected reflecting horizons and the zone of variation in porosity or jointing of the rocks and the fluid, which saturates the pores. T. Ionas. [Translation of abstract]

SUB CODE: 08, 11, 10/

[GC]

Card 2/2

ACC NR: AR6035274

SOURCE CODE: UR/0169/66/000/009/D014/D014

AUTHOR: Belyayev, A. K.; Rogoza, O. I.

TITLE: Method of field observations with an SS-30-60 seismologic station during qualitative analysis of the dynamics of reflected waves

SOURCE: Ref. zh. Geofizika, Abs. 9D88

REF SOURCE: Sb. Geofiz. issled. v Bashkirii i sopredel'n. r-nakh. Ufa, 1965, 141-147

TOPIC TAGS: seismologic station, seismologic instrument, seismograph, seismologic prospecting, petroleum, geology, generator/SS 33 60 seismic station, GN4 generator

ABSTRACT: In order to obtain seismograms that can be analyzed qualitatively, it is proposed to vary the automatic volume control of the SS-30-60 station seismic amplifier when it registers for more than 0.4—0.5 sec. The automatic volume control and the electronic volume control must work separately, and the electronic volume control must be calibrated in time. This provides a treatment of

Card 1/2

UDC: 550.834.5

IL'INA, N.V., kand.tekhn.nauk; BELYAYEV, A.K., inzh.; ZAKHARENKOV, V.K.,
inzh.; SKOBLO, L.I., inzh.

Testing refractory concrete on molten glass in large-diameter
kiln. Tsement 30 no. 2:12-13 Mr-Ap '64. (MIRA 17:5)

1. Vsesoyuznyy gosudarstvennyy nauchno-issledovatel'skiy i
proyektnyy institut tsementnoy promyshlennosti.

BELYAYEV, A.K.

The cement industry's need for refractories. TSement 27
no.6:5-7 N-D '61. (MIRA 15:3)
(Cement industries) (Refractory materials)

BELYAYEV, A.K.; DZHANSIS, V.D.

Improvement of the strength of rotary-kiln linings is an important factor in the increase of cement production.
Ogneupory 25 no.9:418-422 '60. (MIRA 13:8)

1. Giprotsement.

(Kilns, Rotary) (Cement industries)

15(6)

807/101-59-4-7/10

AUTHOR: Belyayev, A.K.

TITLE: A Possibility of Applying Fire-Resistant Concrete
in Cement Calcinating Kilns.

PERIODICAL: Tsement, 1959, Nr 4, pp 25-28 (USSR)

ABSTRACT: The author states that in view of the high quality of
of fire-resistant concrete, its low price, and an
ample supply of it, this material ought to be used
on a large scale for lining kilns. The author
quotes which sections of the rotary kilns are most
exposed to the action of high temperature, or sud-
den changes in temperature. Past experience has
shown that ready parts of concrete lining ought to
be supplied to the plants for further installation
in the kilns. The author concludes, that qualities
of concretes for lining must suit conditions of
various working regions of the rotary kiln through-
out its length. There are 2 tables.

Card 1/1

AUTHORS: Belyayev, A.K.; Il'ina, N.V. SOV-101-58-4-3/12

TITLE: The Mechanization of Brick-Lining Work in the Cement Industry
(Mekhanizatsiya futerovochnykh robot v tsementnoy promyshlennosti)

PERIODICAL: Tsement, 1958, Nr 4, pp 10-15 (USSR)

ABSTRACT: The authors tell of the necessity to mechanize brick lining work. They describe the methods of work and recommend suitable equipment. They give instructions for the treatment of material, its transportation in plant area, storage facilities and devices for bracing the erected lining. They mention the plant "Pnevmatika" of Leningrad as a producer of pneumatic hammers and "Elektroinstrument", Khar'kov, as a producer of electric hammers. Mortar mixers of type C-50 are manufactured by the Novosibirsk and movable concrete mixers of type C-187, as well as type C-227, by the Tyumen' plant. Type C-99 mixers are produced by the Slavyansk plant. There are 7 diagrams, 1 table, and 1 Soviet reference.

1. Cement industry--Equipment
2. Materials--Handling
3. Industrial plants--Equipment

Card 1/1

CA Belogayev, H. K.

19

Resistance of rotary kiln linings. A. K. Belogayev.
Tzement 17, No. 3, 6-9 (1951).—Most resistant were green
chrome-magnesite beds in iron frames, and magnesite bonded
with spinel mortar. M. Hosh

1952

1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
1ST AND 2ND ORDERS

C

Packed linings for rotary kilns. A. K. BELYAN, *Trudy Vsesoyuz. Sovetskoiyu Zavod. Tsvement. Prom.*, 3, 175 (1948).-- Details of the pouring of packed linings for rotary kilns are given. The use of such linings in the Soviet Union started about 10 years ago. They are used chiefly in the sintering zone of the kiln. B. Z. K.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

480000 47

4800 47

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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ILLEGIBLE

ACC NR: AP6020676

SOURCE CODE: UR/0016/66/000/006/0018/0023

AUTHOR: Lyuksemburg, K. I.; Chernokhvostova, Ye. V.; Rozentalene, L. V.; Belyayeva, A. I.

ORG: Institute of Epidemiology, Microbiology, and Hygiene, Ministry of Health LitSSR (Institut epidemiologii, mikrobiologii i gigiyeny Ministerstva zdravoo-khraneniya Litovskoy SSR); Moscow Institute of Epidemiology and Microbiology (Moskovskiy institut epidemiologii i mikrobiologii)

TITLE: Identifying typhoid carriers by quantitative determination of TS antibodies

SOURCE: Zh mikrobiol, epidemiol i immunobiol, no. 6, 1966, 18-23

TOPIC TAGS: carrier, carrier state, typhoid, antibody, disease diagnosis, *DISEASE CONTROL, BACTERIAL DISEASE*

ABSTRACT:

The authors present a method of identifying suspected carriers among people who have had typhoid, based on differences in antibody content in the sera of carriers and healthy persons who have had typhoid. In carriers, TS, O-, Vi-, and H- antibody titers were higher than in healthy people who had once had the disease. Orig. art. has: 2 figures and 1 table.

[W.A. 50; CBR No. 10]

SUB CODE: 06/ SUBM DATE: 11Sep65/ ORIG REF: 009/ OTH REF: 007

Card 1/1

UDC: 616.927-008.97 078.7

SOKOLOVSKIY, V.D., Marshal Sovetskogo Soyuz; BELYAYEV, A.I., polkovnik;
GASTILOVICH, A.I., doktor voyennykh nauk, prof. general-
polkovnik; DENISENKO, V.K., polkovnik; ZAV'YALOV, I.G.,
general-mayor; KOLECHITSKIY, V.V., general-mayor; LARIONOV,
V.V., kand. voyennykh nauk polkovnik; NYRKOV, G.M., polkov-
nik; PAROT'KIN, I.V., kand. voyennykh nauk polkovnik;
PROKHOROV, A.A., general-mayor; POPOV, A.S., polkovnik;
SAL'NIKOV, K.I., polkovnik; SHIMANSKIY, A.N., polkovnik;
CHEREDNICHENKO, M.I., general-mayor; SHCHEGOLEV, A.I., pol-
kovnik; MOROZOV, B.N., polkovnik, red.; KONOVALOVA, Ye.K.,
tekhn. red.

[Military strategy] Voennaya strategiya; Izd.2., ispr. i dop.
Moskva, Voenizdat, 1963. 503 p. (MIRA 16:10)
(Strategy)

SOKOLOVSKIY, V.D., Marshal Sovetskogo Soyuza; BELAYEV, A.I., polkovnik;
GASTILOVICH, A.I., doktor voyennykh nauk, prof. general-polkovnik;
DENISENKO, V.K., polkovnik; ZAV'YALOV, I.G., general-mayor;
KOLECHITSKIY, V.V., general-mayor; LARIONOV, V.V., kand. voyennykh
nauk, polkovnik; MYRKOV, G.M., polkovnik; PAROT'KIN, I.V., kand.
voyennykh nauk, polkovnik; PROKHOROV, A.A., general-mayor; POPOV, A.S.,
polkovnik; SAL'NIKOV, K.I., polkovnik; SHIMANSKIY, A.M., polkovnik;
CHEREDNICHENKO, M.I., general-mayor; SHCHEGOLEV, A.I., polkovnik;
MOROZOV, B.N., polkovnik, red.; KONOVALOVA, Ye.K., tekhn. red.

[Military strategy] Voennaya strategiya. Moskva, Voenizdat, 1962.
457 p. (MIRA 15:7)

(Strategy)

L 06592-67
ACC NR: AP6029854

P_{Se} is given as a function of temperature, P_{Se} being determined by measuring the counting rate for different condensate and/or vapor temperatures during heating and cooling. In the presence of a condensate, the counting rate depended exponentially on the condensate temperature, while after full vaporization, the counting rate was directly proportional to the average absolute temperature of the vapor phase. Thermodynamic equations were given for the dissociation process $Se_6 \rightleftharpoons 3Se_2$ and the free energy was related to the Se_2 concentration, the vapor pressure, and the cross section area and length of the ampoule. By extrapolating the rate constant for saturated selenium vapors to 933°K, the minimum temperature of the lower zone of the calibration curve, P_{Se_2} was calculated to be 95% P . For unsaturated vapors a new equilibrium condition was established with even greater quantities of diatomic molecules. The heat of vaporization of selenium was calculated to be 25.6 Kcal/mol. The above method may be used for determining the molecular composition of vapors. Orig. art. has: 2 figures, 2 formulas.

SUB CODE: 20,18/ SUBM DATE: none/ ORIG REF: 001/ OTH REF: 004

Card 2/2 *NS*

L 06592-67 EWT(m)/EWP(t)/ETI IJP(c) JD/WW/JW/JG
 ACC NR: AP6029854 (A,N) SOURCE CODE: UR/0032/66/032/008/0968/0970

AUTHOR: Pelevin, O. V.; Mil'vidskiy, M. G.; Belyayev, A. I.; Khotin, B. A.;
Shulepnikov, M. N.; Voronkov, V. V. 63
 B

ORG: State Scientific Research and Planning Institute of the Rare Metal Industry
 (Gosudarstvennyy nauchno-issledovatel'skiy i proektniy institut redkometallicheskoj
 promyshlennosti)

TITLE: Determination of the vapor pressure of volatile substances

SOURCE: Zavodskaya laboratoriya. v. 32, no. 8, 1966, 968-970

TOPIC TAGS: vapor pressure, selenium, radioactive isotope, temperature dependence,
 diatomic molecule, thermodynamic analysis

ABSTRACT: A static method was developed for determining the vapor pressure from the radioactivity of the vapor, based on a proportional dependence of radioactivity to the quantity of material in the measured volume. In the proposed technique only the molecular composition of the vapor need be known. A schematic diagram of the experimental apparatus shows 13 components. The saturated vapor pressure of selenium was determined at temperatures ranging from 300 to 580°C. Quartz ampoules with weighed portions of Se^{75} were evacuated to a pressure of $1-3 \cdot 10^{-6}$ mm Hg and placed in the apparatus. Calibration curves were obtained by a series of experiments using different weights. Log

UDC: 541.12.034.6

Card 1/2

L 43105-66

ACC NR: AP6014110

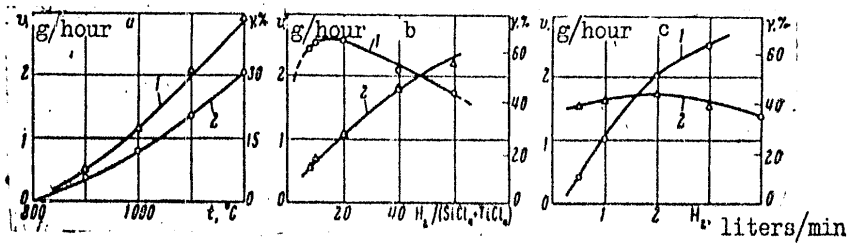


Fig. 1. Dependence of the rate of precipitation (curve 1) and yield (curve 2) of titanium disilicide on the experimental temperature (a), molar ratio (H₂: (TiCl₄ + SiCl₄)) (b), and hydrogen flow rate (c).

Orig. art. has: 3 tables, 4 figures, and 1 equation.

SUB CODE: 11/ SUBM DATE: 14Oct64/ ORIG REF: 004

07/

Card 2/2 MLP

L 43105-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6014110

(N)

SOURCE CODE: UR/0370/65/000/006/0052/0057

AUTHORS: Petrusevich, I. V. (Moscow); Nisel'son, L. A. (Moscow); Belyayev, A. I. (Corresponding member AN SSSR) (Moscow) 5/B

ORG: none

TITLE: Synthesis of titanium silicides by simultaneous hydrogen reduction of titanium and silicon tetrachlorides

SOURCE: AN SSSR. Izvestiya. Metally, no. 6, 1965, 52-57

TOPIC TAGS: titanium compound, silicon compound, silicide, hydrogen, chemical reduction

ABSTRACT: The simultaneous hydrogen reduction of titanium and silicon tetrachlorides was investigated, and the effect of temperature and the ratio of initial reactants on the nature of the reaction products were studied. The reaction was carried out in the gaseous phase (a schematic of the experimental apparatus is presented). The experimental results are summarized in graphs and tables (see Fig. 1). It is concluded that it is possible in principle to obtain titanium silicides by simultaneous reduction of titanium and silicon tetrachlorides with gaseous hydrogen.

Card 1/2

UDC: 669.295.782

IVANOV, V.N., prof., doktor tekhn.nauk; BELYAVSKIY, Yu.I., inzh.; BELYAYEV,
A.I., inzh.

lengthening the life of motor-axle bearings. Zhel.dor.transp.
46 no.6:79-81 Je '64. (MIRA 18:1)

IVANOV, V.N., prof.; BELYAYEV, A.I., inza.

Analyzing the work of an axial reducing gear taking the clearances between the pinion teeth into account. Trudy MFT no.184:72-82 '66.

Selecting the parameters of the elastic elements of diesel locomotive axial transmission. Ibid.:82-93

Horizontal dynamics of locomotives with a supporting axial suspension of electric traction motors. Ibid.:94-110

(MIRA 17:19)

BELYAYEV, A.I., inzh.

Nature of the wear of the lining of motor axle bearings. Trudy
MIIT no.169:161-165 (MIRA 17:6)

BELYAYEV, A.I., inzh.

Analyzing the work of the motor-axle bearings of TE-3 diesel locomotives. Trudy MIIT no.173:51-66 '63. (MIRA 17:9)

IVANOV, V.M., prof.; IL'IN, A.I., inzh.; BELYAYEV, A.I., inzh.

Norms for the supplying of diesel locomotives with plunger pairs.
Elek. i tepl.tiaga 6 no.8:37-38 Ag '62. (MIRA 17:3)

KATSAY, A.L.; BELYAYEV, A.I., inzh.

Improving the hydromechanical reduction gear of the TE3 diesel locomotive. Elek.i tepl.tiaga 6 no.2:5-6 F '62. (MIRA 15:2)

1. Nachal'nik depo Petropavlovsk Yuzhno-Ural'skoy dorogi (for Katsay).
(Diesel locomotives--Design and construction)

BELYAYEV, A.I., inzh. (Petropavlovsk)

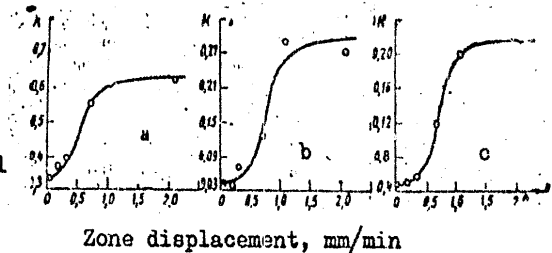
How damage to the diesel locomotive and request for its
replacement could have been prevented. Elek.i tepl.tiaga
6 no.4:23-24 Ap '62. (MIRA 15:5)
(Diesel locomotives)

ACC NR: AP7002862

$$\lg \left(\frac{1}{\kappa_{Si} - 1} \right) = 0,977 f + 1,457,$$

$$\lg \left(\frac{1}{\kappa_{Cu} - 1} \right) = 0,801 f + 1,403.$$

Fig. 1. Dependence of effective distribution coefficients of Al (a), Si (b), and Cu (c) impurities in Mg on the zone displacement rate. The three points shown in the graph correspond to the experimental data of A. S. Yue and I. B. Clark (Trans AIME, v. 211, No. 6, 881, 1958)



The concentration dependence of the effective distribution coefficients of Al, Cu, and Si impurities was studied in the concentration range of 10^{-1} to $10^{-3}\%$, and the experimental results are tabulated. The rate of corrosion of zone-refined Mg was compared with that of distilled Mg. It was found that zone-refined Mg was identical in its corrosion behavior, with respect to HCl and KCl solutions, with that of fractionally distilled Mg. The experimental results are shown graphically. On the basis of the experimental results and literature data, a scheme is proposed for the classification of the effect of impurities on the purity of zone-refined Mg. Orig. art. has: 2 tables, 6 graphs, and 5 equations.

Card 2/2 SUB CODE: 11/ SUBM DATE: 08Oct65/ ORIG REF: 005/ OTH REF: 002

ACC NR: AP7002862

SOURCE CODE: UR/0149/66/000/006/0079/0085

AUTHORS: Kazakov, A. P.; Belyayev, A. I.; Vigdorovich, V. N.

ORG: Moscow Institute for Steel and Alloys, Department of Manufacture of Pure Metals and Semiconductor Materials (Moskovskiy institut stali i splavov. Kafedra proizvodstva chistyykh metallov i poluprovodnikovyykh materialov)

TITLE: Investigation of conditions for zone recrystallization of magnesium

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 6, 1966, 79-85

TOPIC TAGS: magnesium, copper, aluminum, silicon, metal recrystallization, metal purification, metal zone refining

ABSTRACT: The conditions for zone recrystallization of magnesium were studied, supplementing the results of A. P. Kazakov, A. I. Belyayev, and V. N. Vigdorovich (Izv. AN SSSR, Metally, No. 4, 92, 1965). The experimental procedure followed is described by V. Dzh. Pfann (Zonnaya plavka. Metallurgizdat, 1960). The dependence of the effective distribution coefficients of Al, Cu, and Si impurities in zone-refined Mg was studied as a function of the recrystallization rate. The experimental results are presented in graphs and tables (see Fig. 1). The following relationship between the effective distribution coefficient K and the crystallization rate f was observed

$$\lg\left(\frac{1}{K_{Al}-1}\right) = 0,61f + 0,363,$$

Card 1/2

UDC: 669.724

L 11279-67

ACC NR: AP6031726

TiSi₂ was 8% which is lower than the yield in a tubular reactor by a factor of 5.5. The resultant precipitation rate in a filament reactor corresponds satisfactorily with the maximum differential precipitation rate in a tubular reactor. The results indicate that the precipitation rate is limited by the diffusion resistance of the layer adjacent to the heated precipitation surface. It is experimentally shown that the heated surface has a considerable effect on hydrogen reduction of volatile halides from the gaseous phase. Analysis showed that the precipitate had a single-phase microstructure throughout the entire length of the specimen. The silicide showed a uniform microhardness of 780 kg/mm² indicating a homogeneous alloy in the principal region of the precipitation zone. These data were confirmed by x-ray structural analysis. Extensive changes in the composition of the initial halide mixture result in considerably smaller variations in the composition of the precipitated alloy. Orig. art. has: 3 figures, 3 tables.

SUB CODE: 11/ SUBM DATE: 24May65/ ORIG REF: 004

07/

Card 2/2 jb

L 112(Y-0) EWI(M)/ENP(T)/EII JF(C) 00

ACC NR: AP6031726

SOURCE CODE: UR/0370/66/000/005/0169/0176

AUTHOR: Petrusevich, I. V. (Moscow); Nisel'son, L. A. (Moscow); Belyayev, A. I. (Moscow); Gurevich, M. A. (Moscow) 36

ORG: None

TITLE: On the problem of producing titanium silicides by simultaneous hydrogen reduction of titanium and silicon tetrachlorides

SOURCE: AN SSSR. Izvestiya. Metally, no. 5, 1966, 169-176

TOPIC TAGS: silicide, chemical reduction, titanium compound, chloride, silica compound, metal purification

ABSTRACT: The article is a continuation of a previous paper on production of titanium silicides by simultaneous hydrogen reduction of titanium and silicon tetrachlorides (Petrusevich, I. V., Nisel'son, L. A., Belyayev, A. I., "On the Production of Titanium Silicides by Simultaneous Hydrogen Reduction of Titanium and Silicon Tetrachlorides", Izv. AN SSSR, Metally, 1965, No 5, 55-57). $TiSi_2$ was deposited on a heated Ta filament 0.7 mm in diameter under the following conditions: $SiCl_4:TiCl_4$ ratio in the initial vapor-gas mixture--2:1; hydrogen excess--2200%; rate of hydrogen flow--0.3 l/min and filament temperature--1190-1200°C. A dense silicide deposit was formed with a uniform diameter at a rate of 0.15 g/cm²·hr or 0.3 mm/hr for radial growth rate. The yield of

Card 1/2

UDC: 669.295.311

L 33488-66

ACC NR: AP6012732

by treating the alloys with cryolite, and it also is applicable to high-Zn deformable Al alloys of the V95 type as well as to Al alloys containing $>1\%$ Si which normally cannot be refined by the Mg method. Orig. art. has: 1 figure, 1 table

SUB CODE: 11, 13/ SUBM DATE: none/ ORIG REF: 004/ OTH REF: 002

Card

4/4

92

3

L 33488-66

ACC NR: AP6012732

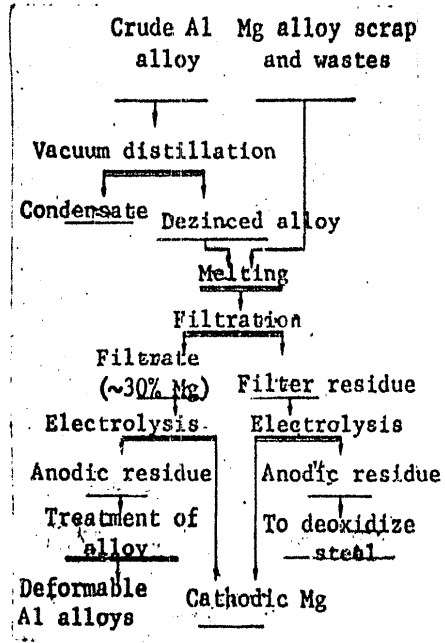


Fig. 1. Flowsheet of the combined method of refining crude Al alloys

L 33488-66

ACC NR: AP6012732

electrolyte composition (in wt.%): 10-18 $MgCl_2$, 35-50 KCl, 35-40 NaCl, 10-20 $BaCl_2$ and 1-2 CaF_2 ; electrolysis temperature 700-720°C; cathode and anode current density 1 a/cm². During the electrolysis a nearly total (up to 99.95%) recovery of Mg from the anodic alloy is possible. The possibility of the electrolytic separation of Mg from the filter-residues of magnesium refining is also established. The complete cycle of refining reduces the impurity content as follows (in %): Fe, from 1.0-2.5 to 0.05-0.3; Si, from 0.9-1.0 to 0.15-0.25; Ni, from 0.5 to 0.25-0.40; Mn, from 0.4 to 0.15-0.20; the content of Cu and Zn remains the same. The Mg separated at the cathode is retreatable (Fig. 1). The advantages of the liquation-electrolysis method compared with the conventional refining by means of Mg are as follows: 1) the electrolyzers operate continuously, by contrast with vacuum furnaces, thus assuring a higher productivity and hence also lower capital investments and lower manpower and overhead expenditures; 2) consumption of hydrogen is eliminated; the electrolyzers can be tended without any risk of explosion; 3) by contrast with the Mg condensate of vacuum furnaces, cathodic Mg may, after treatment, be utilized as a Mg alloy (MGS5) or metal. Economic calculations show that the production cost of the deformable Al alloys produced by this method from low-grade secondary raw materials is 55% lower than the production of the same alloys melted from primary Al. The electrolytic separation of Mg from the alloys is more economical than the currently practiced elimination of Mg

Card 2/4

L 33488-66 EWT(m)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6012732

SOURCE CODE: UR/0136/66/000/004/0084/0086

AUTHOR: Belyayev, A. I.; Fisher, A. Ya.; Nikitin, A. G.

ORG: none

TITLE: Liquation-electrolytic method of refining aluminum alloys

SOURCE: Tsvetnyye metally, no 4, 1966, pp 84-86

TOPIC TAGS: aluminum alloy, magnesium alloy, electrolytic refining, filtration/V95
aluminum alloy, MGS5 magnesium alloy

ABSTRACT: The Al alloys melted from scrap and wastes usually contain a high Fe content which must be reduced to (for most of the deformable alloys) 0.3-0.5% before they can be fit for use. This is usually accomplished by the magnesium method of refining, which, however, has inherent technical limitations. In this connection, the authors discuss a modification of this method, which they first had patented in 1964 (A. I. Belyayev, A. Ya. Fisher, A. G. Nikitin, Byull. izobr. 1964, no 9, avt. svid. 162323), based on the electrolytic separation of Mg on the principle that the electrode potential of Mg is more electronegative than that of Al and other components of the alloy. The following optimal process parameters have been experimentally determined:

Card 1/4

UDC: 669.715.47

L 26455-66 EWT(1)/EWT(m)/T/EWP(t) IJP(c) GG/JD
ACC NR: AP6017367 SOURCE CODE: UR/0363/66/002/003/0409/0412

AUTHOR: Pelevin, O. V.; Voronkov, V. V.; Mil'vidskiy, M. G.; Belyayev, A. I. 37

ORG: Giredmet B

TITLE: Distribution of volatile impurities in growing crystals by oriented crystallization

SOURCE: AN SSSR. Izvestiya. Neorganicheskiye materialy, v. 2, no. 3, 1966, 409-412

TOPIC TAGS: crystal growing, semiconducting material, crystallization, single crystal, impurity level

ABSTRACT: Inasmuch as alloying of crystals of decomposed semiconductor compounds are usually conducted with volatile impurities, and many impurities form stable compounds with one of the basic components, it was of interest to examine the distribution of volatile impurities in crystals grown by oriented crystallization in the presence of the condensed phase of such a compound. The conditions necessary for obtaining alloyed single crystals with equal distribution of the impurity are analyzed. Orig. art. has: 14 formulas. [JPRS]

SUB CODE: 20 / SUBM DATE: 19Aug65 / OTH REF: 001

Card 1/1 PB

UDC: 548.55 2

DELIMARSKIY, Yuriy Konstantinovich; MARKOV, Boris Fedorovich; BELYAYEV,
A.I., red.; MIKIND, L.M., red.izd-va; MIKHAYLOVA, V.V., tekhn.red.

[Electrochemistry of fused salts] Elektrokhimia rasplavlennykh
solei. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po chernoi i
tsvetnoi metallurgii, 1960. 325 p. (MIRA 14:1)
(Salts) (Electrochemistry)

VOL'BERG, A.A. (Moskva); ADLER, Yu.P. (Moskva); BELYAYEV, A.I. (Moskva);
Prinimali uchastiye: IVANOV, M.A.; SLESAREN, Yu.S., tekhnolog.

Electroconductivity of an electrolyte in respect to its composition
and method of feeding with alumina in industrial aluminum baths. Izv.
AN SSSR. Met. no.3:26-33 My-Je '65. (MIRA 19:7)

1. Nachal'nik vtorogo uchastka elektroliznogo tsentra Ural'skogo
aluminiumovogo zavoda (for Ivanov).

L 01797-66

ACCESSION NR: AP5021496

ENCLOSURE: 02

TABLE 1

Effect of the rate of motion of the melted zone on the distribution of Al, Si and Cu impurities in magnesium after zone refining with various numbers of passes

f, mm/min	n	Impurity content $\times 10^4$ in various sections along the magnesium sample in mm.														
		Al					Si					Cu				
		10	45	80	115	150	10	45	80	115	150	10	45	80	115	150
0.22	2	25	25	30	35	51	<8	<8	<8	<8	10	2.0	4.8	6	7	110
	3	25	22	22	27	58	<8	<8	<8	9	10	<0.8	1.5	1.5	2.5	0.97
0.35	2	20	30	30	34	40	<8	<8	<8	24	100	2	5	9	21	132
	3	25	23	25	26	48	<8	<8	<8	8	84	<0.8	1.0	2	9	170
0.70	2	36	41	38	38	49	<8	10	19	22	64	15	35	33	50	110
	3	32	34	35	38	58	<8	<8	9	14	92	9	10	10	25	110
1.05	4	30	34	31	38	60	<8	<8	8	11	87	1.8	2	4	9.1	150
	3	37	34	37	40	46	10	21	30	39	120	5	29	32	71	110
	4	33	34	34	37	45	8	10	19	28	145	2	8	19	60	170

Card 4/4

L 01797-66

ACCESSION NR: AP5021496

ENCLOSURE: 01

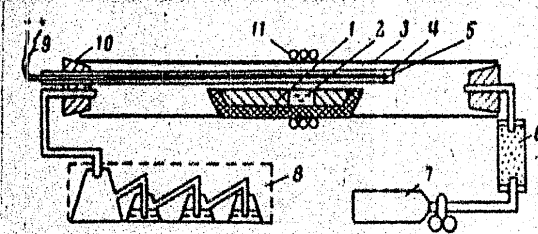


Fig. 1. Diagram of the experimental setup for zone refining of magnesium:
1--ingot; 2--melted zone; 3--quartz tube; 4--protective cover for the thermocouple;
5--thermocouple; 6--drier with silicagel; 7--tank with sulfur dioxide; 8--filter
system; 9--thermocouple; 10--stopper; 11--heater

Card 3/4

L 01797-66

ACCESSION NR: AP5021496

numbers of passes (n). The results of this study are given in table 1 of the Enclosure. Orig. art. has: 5 figures, 2 tables.

ASSOCIATION: none

SUBMITTED: 01Dec64

ENCL: 02

SUB CODE: MM

NO REF SOV: 002

OTHER: 010

Card 2/4