

SOV/115-59 -2-27/38

8(2)

AUTHOR: Yugov, V.A.

TITLE: A Simple Method of Widening the Band of Working Frequencies of a Bolometer in the Centimeter High Frequency Range (Prostoy metod rasshireniya polosy rabochikh chastot plnochnogo bolometra v s.v.ch. diapozone)

PERIODICAL: Izmeritel'naya tekhnika, 1959, 20, Nr 2, p 50 (USSR)

ABSTRACT: The author states that the bolometer is being increasingly used to measure centimeter high frequency output. As the band of the working frequencies is not sufficiently wide for measuring ranges adequately, a simple method has been developed to improve this situation, using quartz tubes. Tests show that quartz tubes widen the band of working frequencies by 20-25%. Further research is now in progress on using quartz and other dielectric tubes to this end. There are 1 graph and 3 references, 2 of which are Soviet and 1 English.

Card 1/1

24(3)
AUTHORS:

D'yakov, G. P., Yegov, V. A.

307/48-23-3-34/34

TITLE:

On the Report by I. M. Puzey and B. V. Molotilov (Po dokladu I. M. Puzeya i B. V. Molotilova). "Magnetostriction of the Alloys Nickel-iron-molybdenum" (Vol 22, Nr 10, p 1244) ("Magnetostr. 1244)). Use of Thin Films as Resistance Tensiometers for Measuring Magnetostriction (Primeneniye tonkikh plenyk kachestve tenzometrov soprotivleniya dlya izmereniya magnetostr. 1244)).

PERIODICAL:

Izvestiya Akademii nauk SSSR. Seriya fizicheskaya, 1959, Vol 23, Nr 3, p 424 (USSR)

ABSTRACT:

In the report great attention was paid to the completion of the method of measuring magnetostriction. This problem is without any doubt of great importance. In this connection the results of measurement are given which were determined by means of new tensiometers of thin films. Thin films of Constantan and other substances were used as resistance tensiometers; they were applied to the sample by evaporation in vacuum. The first experiments were carried out with an oxidized nickel sample. Magnetostriction was measured at all

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On the Report by I. M. Puzey and B. V. Molotilov. SOV/48-23-3-34/34
"Magnetostriction of the Alloys Nickel-iron-molybdenum" (Vol 22, Nr 10,
p 1244). Use of Thin Films as Resistance Tensiometers for Measuring Magneto-
striction

angles possible between the direction of measurement and the applied magnetic field. The measuring results are given on the figure. Herefrom can be seen that longitudinal magnetostriction is twice as big as transversal magnetostriction. This is in agreement with the second formula for even Akulov effects. The positive results obtained with new tensiometers indicate that the latter will find a wide field of application in measuring magnetostrictive and other deformations. There 1 figure.

Card 2/2

USCOMM-DC-61,000

S/120/60/000/02/049/052
E140/E335

AUTHOR: Yugov, V.A.

TITLE: Method of Preparing Differential Photoresistances

PERIODICAL: Pribory i tekhnika eksperimenta, 1960. No 2
p 160 (USSR)

ABSTRACT: A method of modifying a Soviet photoresistance (FSK-1, 2, etc.) to obtain a balanced type is described. This is a substitute for type FSK-7 which is not yet produced in large enough quantities to satisfy demand. There are 2 figures and 1 Soviet reference.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut fiziko-tekhnicheskikh i radiotekhnicheskikh izmereniy (All-Union Scientific-Research Institute for Physics-Technical and Radio Measurements)

SUBMITTED: December 17, 1958

Card 1/1

84653

S/115/60/000/010/008/028

B021/B058

916180

AUTHORS: Yugov, V. A. and D'yakov, G. P.

TITLE: Film Tensiometers for Measuring the Magnetostriction of Ferrites 2/

PERIODICAL: Izmeritel'naya tekhnika, 1960, No. 10, pp. 31-32

TEXT: Wire-type resistance strain gauges were used for measuring magnetostriction. Layers of glue and the insulating support in the tensiometers restrict a further increase of measuring precision. The successful application by the authors of film tensiometers for measuring the magnetostriction of nickel permitted to develop this method with reference to ferrites, thus making it possible to improve somewhat and simplify the design of film tensiometers. The finished strain gauges were subjected to artificial aging, in order to stabilize the properties. Magnetostriction was measured by G. P. D'yakov's method. Data for the ferrite samples No. 7 and No. 73 are mentioned next. The film tensiometers operate stably even at comparatively great temperature fluctuations. Since the sensitive layer is applied directly to the ferrite surface

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Film Tensiometers for Measuring the
Magnetostriction of Ferrites

81653
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B021/B058

without glue and supports, errors which are observed in glued-on
tensiometers during heating do not affect the precision of measurements
It became possible to study the temperature dependence of the magneto-
striction of ferrites, as the layers of nichrome and some other alloys
show high stabilities up to 300-400°C. There are 7 references: 5 Soviet
and 1 British. X

Card 2/2

24,2200

25807
S/048/51/025/005/021/024
B117/B201

AUTHORS: Yugov, V. A., and D'yakov, G. P.

TITLE: Using thin films for measuring magnetostrictive and other deformations

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 25, no. 5, 1961, 647-650

TEXT: The present investigation was the subject of a lecture delivered at a symposium on thin ferromagnetic films (Krasnoyarsk, July 4 to 7, 1960). The authors developed a new type of strain gauge for the measurement of magnetostriction, in which the main shortcomings of earlier types were completely eliminated. The resistance strain gauges were provided by thin films of constantan and ~~other materials~~ sputtered in vacuum onto the specimens concerned. The first experiments were conducted on an oxidized nickel disk. The oxide layer is formed under the following conditions: the nickel disks are heated in an electric furnace up to 800-850°C and hold at this temperature for 30-40 minutes, whereupon they are quickly cooled in the air. The oxide layer forming in this connection exhibits

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Using thin films for measuring...

good insulating properties and is closely connected to the nickel. It was established (Ref. 5: Bryukhatov N. L., D'yakov G. P., Sb. "Primeneniya ul'traakustiki k issledovaniyu veshchestva", Izd. MOPI, vyp. 7, 111 (1958)) that the presence of such a layer does not impair the physical properties of the material. Before sputtering the film a mica form or a foil of shape or size required for the strain gauge is applied onto the desired nickel disk. Certain difficulties are met when bringing about the contact between the feed wires and the strain gauge. For this purpose, silver- or gold electrodes were additionally sputtered in vacuum onto the ends of the pick-up. For silver electrodes the contact was brought about with the aid of Wood's alloy; for gold electrodes, with the aid of a gallium alloy. The measurements of magnetostriction performed with these disks have shown that the novel strain gauge type ensures reliable results. For the measurement of magnetostriction, the strain gauges were connected to one of the arms of a d-c bridge circuit. A sensitive mirror galvanometer serves as indicator in the bridge diagonal. The bridge was compensated without a magnetic field. When the magnetic field was applied, a change occurred in the specimen dimensions and in the resistance of the strain gauge owing to magnetostriction. The bridge compensation was outbalanced thereby. Due to

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Using thin films for measuring...

the deviations of the galvanometer it is possible to calculate the magnitude of magnetostriction from formula

$$\lambda = \Delta R_E / (1 + 2\sigma) R \cdot (\alpha / \beta)$$

(ΔR_E - calibrating resistance; β - deviation of galvanometer caused by calibrating resistance; R - resistance of strain gauge; σ - Poisson's ratio of strain gauge material; α - deviation of galvanometer due to magnetostriction). The successful application of film-shaped non-glued strain gauges of nickel magnetostriction (Ref. 1: D'yakov G. P., Yugov V. A., Vestn. Mosk. un-ta, № 5, 229 (1957), and Ref. 6: D'yakov G. P., Yugov V. A., Vestn. Mosk. un-ta, № 3, 237 (1958)) permitted this method to be worked out for ferrites. Nichrome and constantan were first chosen as materials for the expansion-sensitive layer. These layers are sputtered in vacuum. In addition, a linear vaporizer is used (Ref. 7: Bochkareva V. A., Avt. svid. № 16907 ot 18 aprelya 1941 g.). To obtain a uniform layer, the diameters of thin tungsten-, nichrome-, or constantan wires (0.1-0.3 mm), wound around a thick (0.8-1.2 mm) tungsten wire, must be uniform. Sputtering must take place

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in a determined temperature range (Ref. 8: Holland L., Vacuum Deposition of Thin Films, London, 1956), so as to conserve the quantitative composition of the alloy in the layer. The feed wire to the measuring device was prepared in the following manner: conductive coin-shaped silver pieces are burned into the ferrite specimen. Wires or narrow strips are soldered onto them. Experiments have shown that the electric contact between the nichrome layer and silver is not sufficiently stable. The contact resistance is sometimes higher than the layer resistance. To avoid this, it has been necessary to use additional contact layers. They are likewise sputtered in vacuum onto the expansion-sensitive layer. The finished strain gauges are subjected to artificial aging to allow their properties to stabilize: heating up of the specimens at 200-300°C within 8 to 4 hours, passage of current (10-20 ma) within 8 hours. The following data were found for two ferrite specimens: specimen no 7: ferrite MgFe_2O_4 ; $\rho > 10^9$ ohms/cm; film expansion pick-up made of nichrome, resistance of pick-ups 828 ohms; magnitude of striction $6.25 \cdot 10^{-6}$, $I_s = 85$ Gs. Specimen no. 73: ferrite NiFe_2O_4 ; $\rho > 2 \cdot 10^8$ ohms/cm; film expansion pick-up

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Using thin films for measuring...

made of nichrome; resistance of pick-ups 285 ohms; magnitude of striction $11.0 \cdot 10^{-6}$; $I_s = 240$ Gs. Film strain gauges display a stable operation even at relatively strong temperature fluctuations. Since the sensitive layer is placed directly on the ferri-type layer, no errors impair the accuracy of measurement, as usually arise with glued strain gauges during heating. Due to the high temperature stability of nichrome-, platinum-, iridium-, and other layers applied, it is possible to study the magnetostriction of ferrites (from -190° to 300°C) and the striction of piezoelectric substances depending on temperature. Data relative to these measurements will be reported separately. N. S. Akulov is mentioned. There are 2 figures and 9 references: 8 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Kafedra obshchey fiziki Fizicheskogo fakul'teta Moskovskogo gos. universiteta im. M. V. Lomonosova (Department of General Physics of the Division of Physics, Moscow State University imeni M. V. Lomonosov)

Card 5/5

YUGOV, V.A.; YUGOVA, G.A.

Film-type bolometers in heads with fixed tuning for measuring
microwave power. Radiotekh. i elektron. 7 no.11:1922-1930
N '62. (MIRA 15:11)

(Microwave measurements)

Card 1/2

Z 11860-65

ACCESSION NR AM5006615

TABLE OF CONTENTS [abridged]:

Introduction -- 3

Ch. I. Methods of obtaining thin films -- 5

Ch. II. Properties and features of thin films -- 26

Ch. III. Use of thin films in radio measurements -- 60

SUBMITTED: 028ep64

SUB CODE: 50, 51

NO REF SOV: 116

OTHER: 052

Card 2/2

YUGOV, Ye.M.

17(11)

PHASE I BOOK EXPLOITATION

SOV/1287

Bakh, Igor' Sergeevich, Oleg Georgiyevich Gorlov, Yevgeniy Mikhaylovich Yugov, and Vladimir Ivanovich Yakovlev

Chelovek v kosmose; mediko-biologicheskiye problemy kosmicheskikh poletov (Man in Space; Medical and Biological Problems of Space Flight) Moscow, Izd-vo "Znaniye," 1958. 48 p. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. Seriya VIII, 1958; vyp. I, no. 20) 45,000 copies printed.

Sponsoring Agency: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy.

Ed.: Benyumov, O.M.; Tech. Ed.: Berlov, A.P.

PURPOSE: This booklet is written for the general reader interested in the problems of space flight.

COVERAGE: The book contains a brief description of the conditions which might be encountered in space flight from medical and biological points of view. It describes the problems connected with

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Man in Space (Cont.)

SOV/1287

human performance in space travel environments: effects of acceleration, cosmic radiation, pressure, temperature, weightlessness, reentry, decelerations, etc. Brief analysis is given of human requirements for space crew personnel. It is stated in this book that the Soviet Union since 1949 has organized an extensive study of these problems and has established space medicine as an independent branch of science. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

Speeds and Their Effect Upon Man	4
State of Weightlessness	10
Radiation and its Biological Effect	20
Danger From Meteors. Lowered Barometric Pressure and Oxygen Hunger	24

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Sealed Cabins and Space Suits		32
Thermal Conditions in Flight		35
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AVAILABLE: Library of Congress		

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Card 3/3

CHINA V/A

Investigation of the final anxiety of animals during flights in Pockets Non-barometric Cabin up to 110 km

were determined by the type of the animal's nervous system. Under conditions of partial and full weightlessness, pulse frequency decreased insignificantly. A moderate reduction of breathing frequency during the period of weightlessness was observed in all dogs. On the whole, the investigations performed showed that animals during flights preserved the life of animals during the flight in a pocket non-barometric cabin up to 110 km, respawning and descending with a parachute from 75 - 95 km, while the total time of staying in the upper atmosphere layers amounted to 26 - 60 minutes. There are 10 references.

R. S. Kirillova

807/23-99-B-66C-3

0167

S/726/58/000/001/004/004
E195/E385

AUTHORS: Bugrov, B.G., Gorlov, O.G., Petrov, A.V., Serov, A.D.,
Yugov, Ye.M. and Yakovlev, V.I.

TITLE: Investigation of the vital activity of animals during
flight in a non-airtight rocket cabin to an altitude
of 110 km

SOURCE: Predvaritel'nyye itogi nauchnykh issledovaniy s
pomoshch'yu pervykh sovetskikh iskusstvennykh sputnikov
Zemli i raket; sbornik statey. no. 1. XI razdel
programmy MGG (rakety i sputniki). Moscow, Izd-vo
AN SSSR. 130 - 149

TEXT: The use was investigated of ventilation scaphanders
with oxygen masks to provide the necessary living conditions for
animals during flight in a non-airtight rocket cabin to a height of
110 km and during catapulting at great flight speed at an altitude
of 80 - 90 km, as well as the effect of specific flight factors
on the organism of animals in the upper layers of the atmosphere.
All the investigations were carried out on 12 dogs, six of which
took part in two flights. The special equipment and the method of
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E195/E385

Investigation of

investigation are described. Catapulting at an altitude of 75-85 km at 560-730 m/sec and at an altitude of 39-46 km at 1000-1100 m/sec does not significantly affect the physiological functions of an animal. Parachute systems provide safe landing and rescuing of animals with equipment that reached an altitude of 75-85 km. Animals do not experience significant changes in the function of the circulatory and respiratory systems during flight in a rocket. The changes of the arterial pressure, pulsation and breathing are quite small. In some cases these changes are accompanied by the development of the passive-defensive reactions. The animals that were subject for 3.7 min to the conditions of complete or partial weightlessness have a tendency to certain lowering of arterial pressure and to a decrease of heartbeats. No changes could be observed in the behavior or in the physiological functions of the animals, in the pigmentation of the skin or the fur, which could be considered as a result of cosmic radiation effect during the flight. The checking of animals for 6-7 months after the flight did not give any information about changes in their health or behavior.. The equipment in the rocket during the
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Investigation of

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flight provided general registration of physiological functions of the animal. Nevertheless, it is necessary to improve this equipment. There are 9 figures and 2 tables.

Card 3/3

YUCOVA, G. A.

Yugova, G. A. -- "The Use of the Method of Integral Equations for Diffraction Problems." Moscow State U imeni M. V. Lomonosov. Physics Faculty. Chair of Mathematics. Moscow, 1956. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-111.

YUGOVA, G.A.

Diffraction of waves on system of particles. Vest Mosk. un. Ser.
mat., mekh., astron., fiz., khim. 14 no.2:121-134 '59 (MIRA 13:3)

1. Kafedra matematiki Moskovskogo gosuniversiteta.
(Sound waves) (Electromagnetic waves)
(Diffraction)

YUGOVA, G.A.

Use of a thin film filter for the suppression of the E_{01} field in
a limit attenuator. Radiotekhn. i elektron. 7 no.2:345-347 1962
(Film 101)

(Attenuators (Electronics)) (Wave guides)

YUGOV, V.A.; YUGOVA, G.A.

Film-type bolometers in heads with fixed tuning for measuring
microwave power. Radiotekh. i elektron. 7 no.11:1922-1930
N 162. (MIRA 15:11)

(Microwave measurements)

L 9575-86 EWT(1)/EWT(m)/ETC/EIF(n)-2/EWG(m)/T/ENP(1) ENP(1)

ACC NR: APS027444 SOURCE CODE: UR/010165A

AUTHOR: Mil'vidskiy, M. G.; Osvenskiy, V. B.; Rashevskaya, Ye. I.

ORG: State Design and Planning Scientific Research Institute of Industry, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy tsentr kometallicheskoj promyshlennosti)

TITLE: Investigation of the infrared absorption spectrum of gallium arsenide

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, pp. 3448-3450

TOPIC TAGS: gallium arsenide, IR spectrum, semiconductor

ABSTRACT: GaAs is doped with tellurium to study the infrared absorption and reflection and data are obtained on the effective mass of electrons. Curves are given for the coefficient of reflection as a function of wavelength at room temperature for various concentrations. These curves show the following common characteristics: 1) a decrease in the coefficient of absorption with a reduction in wavelength and 1.5 μ, 2) a smooth increase in absorption with wavelength between 1.5 and 4 μ. Theoretical explanations are given. The Ritz-Fur method was used to calculate the masses of electrons in the reflection band on the basis of the data.

Word 1/2

1. 1971-1972
A/C NR AP5027444

Units are tabulated. The effective rate increased 10%
ent. has: 2 figures, 1 tables, 1 formula.

SUB CODE: 20/ SUBM DATE: 08May67/ OPTIC REF: 001

1 9660-66 EWT(1)/EWT(m)/T/EWP(t)/EWP(b)/EWA(c) LIT.C
ACC NO APSC27447 SOURCE CODE: UR

AUTHOR: Mil'vidskiy, M. G.; Osvenskiy, V. B.; Yezova, N.
State Design and Planning Scientific Research Institute for
Industry, Moscow (Gosudarstvennyy nauchno-issledovatel'skiy
institut promyshlennosti)

TITLE: Decoration of dislocations in gallium arsenide

SOURCE: Fizika tverdogo tela, v. 7, no. 11, 1965, 1965

TOPIC: Gallium arsenide, single crystal

ABSTRACT: A method is developed for decorating dislocations in
gallium arsenide single crystal grown from melt. The
method involves etching of 10⁻⁴M KMnO₄ and
K₂Cr₂O₇ solution. The decorating agent is
K₂Cr₂O₇ solution. The method is applied to
etching of GaAs plates 0.5 mm thick. The
etching time is 10 hours at 20°C. Various
dislocations were observed under microscope.
The effect of heat treatment on the
distribution of dislocations in the specimen
and the method to produce a permanent

L 9660-66

APR 1966

... precipitated as dislocations...
... dislocations are decorated only...
... temperature range...
... decorated dislocations are...
... cooling to 200°C with subsequent quench...
... figure 1 table.

FORM CODE 207 TURN DATE: 15 1966

Card 2/2

ACCESSION NR: AT4037664

S/2981/64/000/003/0227/0236

AUTHOR: Zakharov, Ye. D.; Yugova, V. V.; Kuznetsova, K. N.; Sadovnikova, L. N.

TITLE: Volume changes in semifinished products of alloy V 95 heat treatment

SOURCE: Alyminiyevy*ye splavy*, no. 3, 1964. Deformiruyemy*ye splavy* (Malleable alloys), 227-236

TOPIC TAGS: aluminum, aluminum alloy, alloy V 95, aluminum alloy heat treatment, aluminum alloy aging, aluminum alloy quenching, magnesium admixture, zinc admixture

ABSTRACT: Residual stresses in the material are the basic cause of distortion during machining. These stresses can be produced either by rapid cooling during quenching or by separation of phases from solid solution during aging, and can be alleviated in various ways, e.g., by a light pressing operation in the final die, by subjecting the part to a series of small plastic deformations alternating in sign, or by the method of thermal cycling. In technical aluminum alloys of complex composition, in which intermetallic phases precipitate during artificial aging, the change in specific volume has a complex character. In the present paper, the authors report on the volume changes in alloy V 95 during the process of aging as well as during repeated quenching. Since the lattice constant of Al

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ACCESSION NR: AT4037664

depends on the amount and kind of admittures, the chemical composition was varied slightly (1.8 or 2.8% Mg, 5.0 or 7.0% Zn, 0 or 1.4% Cu, 0 or 0.35% Mn and 0 or 0.15% Cr). Graphs are presented showing the relative elongation of tested strips versus aging time from 1 to 120 hours at 140 or 160 C (for example, see Fig. 1 of the Enclosure). In tests with specimens containing 7.0% zinc, shrinkage was observed at both 140 and 160 C. The maximal strengthening of the alloy due to aging coincided with the time of maximal shrinkage, after which the length of the specimen practically returned to its initial value. Particularly large shrinkage (0.1%) was exhibited by alloys with Cr, Cu and 7.0% Zn. For parts in which distortion during the aging process is particularly undesirable, V95 alloy with 5.0% Zn is therefore recommended, the volume changes of which are considerably lower and of a monotonous character. With regard to the influence of repeated quenching, tests were conducted with two groups of specimens. Tests with the first group, which was annealed at 450 C for 48 hrs., showed that a slight elongation occurs after the first quenching. During subsequent aging, however, shrinkage takes place, and beginning with the second cycle, the length of the specimens decreases monotonously. Tests with the second group showed that during 13 repeated quenching procedures without consecutive aging, the dimensions of the specimens decreased uniformly in all directions after each quenching. The resultant shrinkage after 13 quenchings was 1.0 - 1.3%. The character of the observed

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ACCESSION NR: AT4037664

shrinkage showed that this phenomenon is not related to processes of phase transformation. The authors recommend that repeated heat-treatment (if such is technologically required) be applied only to rough-machined details. "I. N. Sudzilovskaya, A. I. Dzevoyed and L. P. Tigina also took part in the experimental work." Orig. art. has: 9 figures.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 04Jun64

ENCL: 01

SUB CODE: MM

NO REF SOV: 001

OTHER: 002

Card 3/4

Enclosure 01

SESSION NR: AT4037864

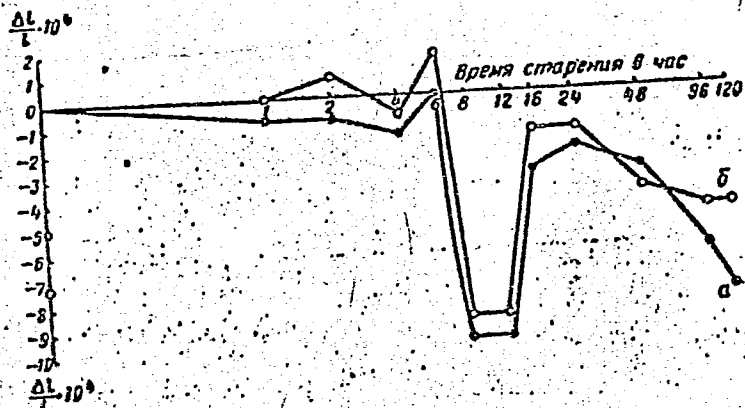


Fig. 1. Change in length of a pressed strip during aging at 140 C.
a - alloy 2V (Al + 1.4% Cu, 2.8% Mg, 0.35% Mn, 7.0% Zn and 0.15% Cr).
b - alloy 4V (Al + 1.4% Cu, 1.8% Mg, 0.35% Mn, 7.0% Zn and 0.15% Cr).

Cord 4/4

YUGOVA, YE. D.

137-58-5-8758

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 5 (USSR)

AUTHOR: Yugova, Ye. D.

TITLE: Concentration Tests Performed on Galimyy Ore Deposits for Purposes of Exhaustive Extraction of Useful Components (Issledovaniye na obogatimost' rudy mestorozhdeniya Galimogo s tsel'yu kompleksnogo izvlecheniya poleznykh komponentov)

PERIODICAL: Tr. Vses. Magadansk. n.-i. in-ta za 1956 g. Magadan, 1957, pp 91-95

ABSTRACT: Secondary minerals of lead-bearing ore are primarily composed of sulfide compounds of In, Bi, Co, Au, Ag, Ge, and Cu. For the plant Nr 14-II system may be recommended whereby a Cu bulk concentrate containing maximum amounts of extracted Zn, Pb, In, Au, and Ag is obtained. Selective flotation must be employed for sulfides, obtained through crushing of raw gravitational Sn concentrate, as well as for the collective sulfide concentrate in the form of slurries which can be obtained by means of collective flotation of all thickened slurries.

Card 1/1

1. Sulfide compounds--Processing 2. Lead ores

A Sh

YUGRAKH, A.K.

Diagnosis and treatment of actinomyosis. Zdravookhraneniya
no.3:32-35 My-Je '60.

1. Iz protivotuberkuleznogo dispansera g. Bendery (glavnyy vrach
U.F. Belotina).

(ACTINOMYCOSIS)

YUGRAKH, A.K.

of aseptic necrosis of the corpus vertebrae. Vest. per. 1964
no. 4: 1-72 J1-Ag '64.

1. Kostno-tuberkuleznyy sanatoriy "Dermenzhi", Moldavskaya SSR.

~~YUKHAS, Adam~~ [Yuhass, Adam]

Improving the technology of alumina production. *TSvet. est.* 33
no.9:58-61 S '60. (MIRA 13:10)

1. Glinozemnyy zavod Almashfyuzite, Vengriya.
(Hungary--Alumina)

YUK, V.S.

Reconditioning caterpillar links of peat-spreading machines. Torf.
prom. 35 no.8:31 '58. (MIRA 11:12)

1. Torfopredpriyatiya Chapalevskaya bago, Brestskaya oblast'.
(Peat machinery--Maintenance and repair)

YUKALOV, I.N.; BIDULYA, P.N., zasl. deyatel' nauki i tekhniki
KSPER, doktor tekhn. nauk, prof., retsenzent;

[Castings of chemically stable alloys] Otlivki iz khimiche-
ski stoikikh splavov. Moskva, Mashinostroenie, 1964. 230 p.
(MIRA 17:11)

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YUKALOV, I.N.

③ met

Journal of the Iron and Steel Institute
Vol. 176 Part 3
Mar. 1954
Foundry Practice

Casting Cylinders and Cylinder Blocks. A. I. Budynev, N. I. Belyukov, and I. N. Inkalov. (Litsinov Proizvodstva, 1953, 3, (2-4). [In Russian]. Details are given of some mould pouring arrangements for the production of high quality cylinders and cylinder blocks at a Russian factory.

Influence of the overheating temperature and
molten iron before casting on mechanical properties
graphite content of the metal. I. N. Yukelov. *Litinskiy*
Prizhivnik 1953, No. 10, 21-9. --Very Discrepant

YURALOV, I. N.

(2)
Продолжение документа № 1
с указанием на параграфы

SMIRNOV, A.A., inzhener; YUKALOV, I.N., inzhener; FANBULOV, A.K., kandidat
tekhnicheskikh nauk.

Compressor and instrument parts casting in shell molds. Lit.proisv.
no.7:8-10 JI '56. (MLRA 9:9)
(Shell molding (Founding))

SMIRNOV, A.A., inzh.; YUKALOV, I.N., inzh.; FANBULOV, A.K., kand.
tekh.nauk

Shell molding of compressor and apparatus parts. Sbor.st.
NIKHIMMASH no.23:38-46 '57. (MIRA 12:5)
(Shell molding (Founding))

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 2, p 322 (USSR) SOV/137-59-2-4592

AUTHOR: Yukalov, I. N.

TITLE: Causes of Formation of Blisters Beneath the Crust of Cast Iron and Their Effect on the Quality of Enamel (Prichiny obrazovaniya podkorkovykh rakovin v chugune i ikh vliyaniye na kachestvo emali)

PERIODICAL: Sb. statey. Vses. n.-i. i konstrukt. in-t khim. mashinostr., 1957 Vol 23, pp 59-66

ABSTRACT: As a result of experimental verification of the effect of S and Mn content of cast iron and also of the temperature of overheating and casting of iron on the formation of subsurface blisters, it was found that blisters are formed beneath the crust whenever a certain critical value for the product of $[\% \text{Mn}] \cdot [\% \text{S}]$ is exceeded. The Mn content in cast iron which is to be enameled should not be much higher than the ratio required for combining with S. To forestall the formation of blisters underneath the crust it is necessary to raise the casting temperature of the metal. The author proposes a hypothesis that the formation of the flaw is associated with the reaction (at low temperatures) $\text{MnS} + \text{slag} + \text{graphite}$.
Ts. G.

Card 1/1

YUKALOV, I.N., Cand Tech Sci—(diss) "Study of the effect of the composition and structure of ^{pig}~~cast~~ iron ^{up} on the quality of ^{the} enamel covering of the chemical apparatus casts." Mos, 1958. 19 pp (Min of Higher Education USSR. Mos Inst of Chem Machin^{Building}~~Engineering~~), 110 copies (KL, 22-58, 110)

-121-

18(4,7)

AUTHOR:

Yukalov, I.N., Engineer

SOV/128-59-7-17/25

TITLE:

Corrosion Resistant Nickel-Silicon Alloys

PERIODICAL:

Miteynoye Proizvodstvo, 1959, Nr 7, pp 39-42 (USSR)

ABSTRACT:

The progressive development of the chemical and oil industry is closely related to the learning of new technological processes. The lack of new types of alloys has hampered up to now the propagation of new technologies. The first problem is the existence of materials able to regenerate acid. For example, the oil and chemical industry uses sulphuric acid for the production of gasoline, lubricants, and synthetic rubber. Regeneration of the used acid can be done in an open manner or process causing the loss of large quantities of acid. Far more economic is regeneration by means of vacuum installations. The recommended equipment is not propagated as there is a lack of the necessary materials and technologies. Abroad alloys from tantalum, Ni, and molybdenum are used. Studies of the

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SOV/128-59-7-17/2

Corrosion Resistant Nickel-Silicon Alloys

literature and of the analysis revealed that this material is too complicated and far too expensive. Presently now abroad the nickel-silicon alloy which meets all the requirements is widely used. (Hastalloy, Hayco, Stellite Co., 1940 : "Petroleum Refiner", Vol 34, 1955, Nr 10: Robald, E., "Werkstoffe und Korrosion", Bd 7, 1956, Nrs 8, 9 thru 11). The properties revealed by these authors have been confirmed by the experiments made by the author. There follows a description of the English production method according to "Foundry Trade Journal", Vol 86, 1949, Nr 1,683, together with some instructions for welding of nickel-silicon alloys (Academy of Science, thesis 12, 1958, Nr 12-13, Kazenkov, and Nosov). There are 4 diagrams, 2 photographs, 2 photographs and 12 references, which are English, 3 German and 3 Soviet

Card 2/2

YUKALOV, I.N.

Corrosion-resistant iron-nickel-molybdenum alloy castings. Lit.
proizv. no.2:9-10 F '60. (MIRA 13:5)
(Corrosion-resistant alloys)
(Founding)

18.1250

1416, 1496, 1454

21304
S/128/60/000/002/001/002
A133/A133

AUTHOR: Yukalov, I. N.

TITLE: The casting of parts of corrosion-resistant
ferronickel-molybdenum alloys

PERIODICAL: Liteynoye proizvodstvo, no. 2, 1960, 9-10

TEXT: The article contains the results of investigations carried out by the author, engineer A. I. Budyayev and Candidate of Technical Sciences G. I. Shvarts, to study the utilization of the ЭИ461Л (EI461L) ferronickel-molybdenum alloy for castings of complex configuration, particularly of machine parts of various type for chemical machinery. The author points out that, although high-strength nickel-molybdenum alloys have been used for some time (in the Soviet Union, the grades ЭИ460 (EI460) and ННМЦ (NIMO) abroad, the grades Hastalloy B, Bergite and others have found the most widespread utilization) no data on the casting properties, casting and pouring conditions and on the technology

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The casting of ...

of mold and core fabrication are available in the technical literature. In a number of sources the chemical composition of the EI461L alloys is indicated as follows (in %): 24-32 Mo, Fe - 3-5, Cr \leq 1; Si \leq 1; Mn \leq 1; C \leq 0.12, traces of sulfur and phosphorus, the rest being nickel. Tests carried out by the authors proved that a F content in the cast alloy, exceeding 6%, lowers the corrosion resistance in 29% hydrochloric acid at 70°C and in 21% HCl at boiling temperature. An Mo content of less than 30% considerably reduces the corrosion resistance of the alloy in 21% HCl. In the cast state the structure of the ferronickel-molybdenum alloy consists of a solid Mo and Fe solution in nickel, with a microhardness of 916-805 kg/mm² (fig. 1). Heat treatment increases the corrosion resistance of the alloy causing the intermediate compounds to solve in the solid solution and changing their composition, location and microhardness (650 kg/mm²) (fig. 2). The EI461L alloy has the following mechanical properties: $\sigma_b = 50$ kg/mm² (after annealing), $\sigma_k = 1.5-2.2$ kg/cm², HB 190-270. The ...

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and annealed material has a strength of $\sigma_b \approx 90 \text{ kg/mm}^2$. Complete annealing is effected at $1,150-1,180^\circ\text{C}$ with 20-90 minutes holding, depending on the component dimensions, and rapid cooling in air (large size parts are cooled in water). Stabilizing annealing is taking place at $1,050-1,065^\circ\text{C}$, with 2-4 hours holding and cooling in air, which increases the anti-corrosion properties of the alloy. To increase the hardness, the components are annealed at $745-760^\circ\text{C}$ with 169 hours holding and cooling in air, which makes the hardness increase to RC 50 and improves the abrasion resistance, while the corrosion resistance is lowered. The tests showed that the machinability by cutting of the alloy corresponds to that of stainless steel. The author points out that the most effective way of welding the alloy is by the oxygen-acetylene process, since it permits the preheating of the welding zone and thus prevents the formation of stresses and cracks in the components. Moreover, he recommends the alloy to be smelted in induction furnaces with basic lining, using preferably no waste charge materials. The alloy should be reduced with Mn and Si prior to adding pure Mo, while

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A133/A133

the final reduction should be effected with aluminum during the tapping or in the ladle. The shrinkage coefficient of the alloy amounts to 2%, and it tends to form shrinkage cavities and pores. Therefore, it is necessary to avoid abrupt changes in the wall thickness of the casting and metal accumulation in individual assemblies. To avoid blowholes in the casting, the molding sand should have a sufficient surface strength and should contain a sufficient amount of binder. There are 2 figures and 15 references: 3 Soviet-bloc and 12 non-Soviet-bloc. Four most recent English-language publications: 1. "Journal of Metals", vol. 8, No. 10, 1956. 2. Hastalloy, Trade Mark, May, 1957. 3. "Steel Metal-Working Weekly", vo. 39, No. 14, 1956. 4. "Petroleum Refiner" vo. 34, No. 10, 1955.

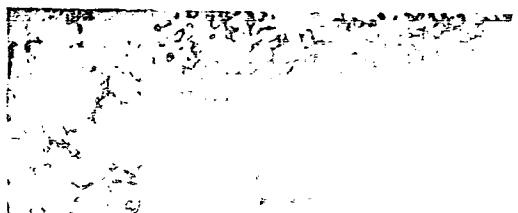
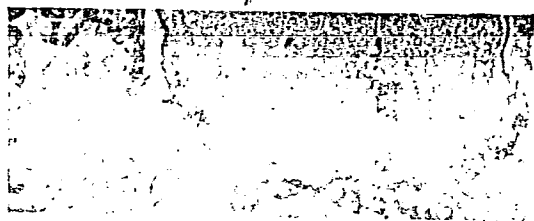
Card 4/5

The casting of ...

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A.33/A.33



Card 5/5

18.1250

82096
9/184/60/000/03/06/11

AUTHORS: Yukalov, I.N., Candidate of Technical Sciences, Shumratova, G.N.,
Engineer

TITLE: Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

PERIODICAL: Khimicheskoye mashinostroyeniye, 1960, No. 3, pp. 28 - 31

TEXT: New technological processes in the chemical industry, e.g. the evaporation of acids in a vacuum, require special equipment made of alloys with specific physical-chemical properties. For manufacturing this equipment certain nickel-molybdenum - silicon and nickel-chromium-molybdenum alloys can be used. Nickel-molybdenum alloys NI460 (EI460) and NI461 (EI461) (corresponding to TU No. 1044), Hastelloy A, B and C have a high corrosion resistance in a number of aggressive media. Their mechanical properties are close to those of high-grade steels. The manufacturing of seamless pipes of these alloys is not mastered; electrically welded, thin-walled pipes can be used. The EI460 alloy (about 20% Mo-content) has a high corrosion resistance in hydrochloric and sulfuric acids of any concentration and in their salts at 20°C. In sulfuric acid it maintains its resistance up to 50°C and at 100°C it is resistant when the concentration does not exceed 30-50%. In hydrochloric acid

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S/184/60/000/03/06/010

Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

of all concentration the rate of corrosion is low up to 50°C. In moist chlorine and nitric acid the alloy is not corrosion resisting. Its peculiar property is its resistance in organic acids as well as in alkalis, ammonium chloride, sea and fresh water. In phosphoric acid the rate of corrosion is low either at concentrations up to 10% (at temperatures up to the boiling point) or at any concentrations but at low temperatures. The EI460 alloy is used in mixers, reactors, heat-exchangers, condensers, fittings etc. The EI461 alloy (27-30% Mo-content) is especially suitable for service in HCl of high concentrations at temperatures close to the boiling point. Its corrosion-resistance in HCl can be compared with that of tantalum and some noble metals. The highest corrosion-resistance is achieved at a certain Mo and Fe content in the alloy. According to NIIOKhIMMASH in 29% HCl at 70°C and in boiling 21% HCl the rate of corrosion of the cast alloy increases sharply when the Fe-content exceeds 6%. The same is observed in boiling 21% HCl at a Mo-content below 30%. EI461 is corrosion-resisting in sulfuric acid of all concentrations at temperatures up to 50°C. When the temperature increases up to 100°C, satisfactory results can be obtained at concentrations of up to 50% only. In 75% and 98% of H₂SO₄, the corrosion resistance deteriorates slightly. The alloy can be used for service in CO, CO₂ and hydrocarbons at temperatures up to 800°C. In other media its corrosion-resistance is about the

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Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

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same as that of the EI460, but its wear-resistance is higher and its coefficient of friction lower. These properties make it suitable for use in acidproof pumps and fittings. A chromium-nickel-molybdenum alloy (Hastelloy C) is both an acid-proof and a heatproof material. It is recommended for the use in structures operated under changing temperature conditions or at temperatures up to 980°C. Hastelloy C can be used in H₂SO₄ of all concentrations at 20°C and in 75% H₂SO₄ at 100°C; in HCl of all concentrations at temperatures up to 50°C. In HNO₃ this alloy is inferior to less complex and cheaper steels like 1X18N9T (1Kh18N9T), X18H15 (Kh18N11B), X25T (Kh25T) and other. It is also less suitable than steels X25T (Kh25T), 0X23H28N3DT (0Kh23N28M3DT), 0X23H27M2T (0Kh23N27M2T) for H₃PO₄ solutions. It is stable in moist chlorine (at 20°C) in organic acids, sea and fresh water. The alloy is used in cast parts and also in chemical equipment made of rolled material. The properties of the above-mentioned alloys can be to some extent controlled by heat treatment. By full annealing (heating to 1,150-1,220°C, molding 0.5-3.0 hours, water or air cooling) residual stresses in cast and welded pieces are removed and the machinability is improved. By stabilizing annealing (temperature of heating is about 100°C lower than for full annealing, molding not less than 2 hours, air cooling) better plastic properties and a somewhat better corrosion-resistance can be achieved. Pieces exposed to an intensive corrosion-erosion wear are annealed at 740-760°C (Ni-Mo alloy)

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Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

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or 860-870°C (Cr-Ni-Mo alloy) for 8-168 hours. By this a hardness of 40-50 Rc is achieved but the corrosion characteristics deteriorate due to the formation of intermetallic compounds. On account of their increased strength, all alloys listed above yield with difficulty to deformation. Cold bending, milling and drawing can be done successfully as long as the thickness of the metal is small, otherwise the material must be heated to 1,180-1,040°C, avoiding carbonization and formation of sulfurous compounds. Presently argon-arc welding is used for Ni-Mo and Cr-Ni-Mo alloys, while gas welding is rarely performed. For welding EI460, EI 461 alloys, fillers made of EI461 are used with not less than 30% Mo, up to 0.03% C and up to 0.02% S and P. For welding the Cr-Ni-Mo alloy Cr-Ni-Mo wire is used but with a lower percentage of S and P. Recently it has been found that a considerable intercrystalline corrosion develops predominantly in the parent metal near the seam in EI460 and EI461 castings and welded connections exposed to non-acidifying media. This depends directly on the concentration of the solution, its temperature, motion of the media and aeration. For instance in H₂SO₄ are the most dangerous the low and medium concentrations while no intercrystalline corrosion is observed in 90% H₂SO₄. This corrosion can be eliminated by the following methods: by reducing the percentage of carbon to 0.005% (keeping the concentration of other elements unchanged) or to 0.03% by introducing stabilizers like niobium into the alloy; by increasing the per-

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Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

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centage of molybdenum; by a complex alloying with niobium and vanadium reducing at the same time the percentage of Fe and Si to 2-2.2% and 0.4%, respectively; by a heat treatment of welded connections. Nickel-silicon alloys (Hastelloy D, "eyzenit 85") have a high corrosion resistance in sulfuric acid of all concentrations at 180-190°C. These alloys are superior to all other materials in respect to corrosion-resistance in sulfuric acid containing hydrocarbons. In hydrochloric and phosphoric acids within 10-85% concentration at indoor temperature their resistance is high, while the resistance is low near at boiling point. Nickel-silicon alloys are used in cast and cast-welded products only. The chemical composition of the Soviet nickel-silicon alloy is: 11-12% Si, 4-4.5% Cu, up to 0.5% Fe, up to 0.1% C, up to 1.0% Mn, up to 0.1% Al, basic metal Ni. The experiments made by NIKHIMASH showed that the strength of an alloy increases with a Si content below 11%, while its corrosion-resistance decreases. The opposite is the case if the Si content is higher than 13%. Mechanical properties of the nickel-silicon alloy are: $\sigma_b = 25-30 \text{ kg/mm}^2$, $\delta = 0.2\%$, hardness 48-55 Rc. Because of their hardness and brittleness, nickel-silicon alloys are hardly machinable. To reduce hardness, alloys must be annealed at 1,050-1,065°C during 2-4 hours. The corrosion-resistance does not decrease and hardness decreases by about 10Rc.

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Nickel-Molybdenum and Nickel-Silicon Acidproof Alloys

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The expensive Ni-Mo, Cr-Ni-Mo and Ni-Si alloys should be used only in case simpler alloys and steels or non-metal materials are not suitable. The great future importance of two-layer materials with coatings of the aforementioned alloys is stressed. There are 2 tables and 22 references. 8 Soviet, 9 English and 5 German.

LT

Card 6/6

YUKALOV, Ivan Nikanorovich; IVANOV, D.P., red.; ULANOVSKAYA, I.A.,
red. izd-ya; KLEYMAN, M.R., tekhn. red.

[Steel and cast iron for enameling] Stali i chuguny dlia
emalirovaniia. Moskva, Gos.nauchno-tekhn. izd-vo lit-ry
po chernoi i tsvetnoi metallurgii, 1961. 118 p. (MIRA 14:5)

(Enamel and enameling) (Steel) (Cast iron)

BOGACHEV, I.N.; DUBININ, N.P.; YEGORENKOV, I.P.; ZHUKOV, A.A.; IVANOV, I.I.;
IVANOV, D.P.; MARIYENBAKH, L.M., doktor tekhn. nauk, prof.; KIBAL'DIN,
I.M.; ROZENFEL'D, S.Ye.; SIDEL'NIKOV, S.V.; SOBOTNIKOV, I.I.;
I.L.; YUDIN, S.B.; RUBTSOV, K.N., doktor tekhn. nauk, prof.;
CHERNYAK, O.V., inzh., red. izd-va; MODEL', B.I., tekhn. red.

[Founding handbook; iron founding] Spravochnik liteishchika: chuzhaya
lit'e. Pod obshchei red. N.N. Rubtsova. Moskva, Mashgiz, 1961. 112 s.
(MLIA 1111)

(Iron founding)

22695

S/128/61/000/003/003/008
A054/A127

11500 also 1160

AUTHOR: Yukalov, I. N.

TITLE: Producing shell mold castings from high alloys

PERIODICAL: Liteynoye proizvodstvo, no. 3, 1961, 9 - 10

TEXT: Machine parts used in chemical equipment must be corrosion- and heat-resistant. Therefore they are made of Ni-Si, Cr-Ni and Ni-Mo alloys. These alloys, however, are very brittle and are not easy to machine, which makes it difficult to obtain precision finishing. Their crystallization heat range is limited and therefore the production of high-quality, thin-walled machine parts from these alloys is a rather complicated matter. Under these circumstances the construction of the mold and the gating system are of great importance. In producing pipes with a wall-thickness of 3 mm and 250 - 400 mm in length, the best solution was found to be the application of shell molds and slot-type gating system, yielding a high-quality casting. In applying the slot-type gating system, the liquid metal reaches the crystallization zone by the shortest possible way, because the gating system moves along with the rising surface of the casting and uncooled metal

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Producing shell mold castings from high alloys

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is continuously poured onto the surface of the casting. Experimentally the best results were obtained with a feeder thickness of 2 mm. In order to economize metal, the stand pipe should have an elongated rhomboid shape, the acute angles serving as feeders. As only that part of the feeder which moves along with the metal level in the mold takes part in pouring, there are no slag and other inclusions in the casting; they move upwards through the stand pipe. The feeder is constricted at 1 mm from the body of the casting and it is broken off at this place, whereupon the remainder is removed by machining. In this way none of the very brittle and hard casting will break away from the body. In applying the slot-type gating system it was not difficult to produce the shells. Bakelite powder, amounting to 5 - 6% was used as binding material in the molding mixture, for the core mixture: 4%. The mixture should be homogeneous, thoroughly mixed, free of lumps and pitch inclusions, which otherwise would cause gas concentrations and flaws during pouring. Shells (7 - 10 mm thick) of the required strength are held in a furnace at 350°C, for 25 - 30 sec. In order to avoid any stress formation, the shell mold should crack at 800°C, i. e. when the temperature of the solidifying casting is reduced. If the shell does not start

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Producing shell mold castings from high alloys

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A054/A127

cracking at 850°C, it has to be broken. The heating and cracking of the mold depends on the thickness of the shell. By applying shell molds and slot-type gating systems, castings with a smooth surface and accurate dimensions are obtained. The tolerance is on an average 0.12 mm for 3 x 400 mm castings.

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YUKALOV, I.N., kand.tekhn.nauk; SHUMRATOVA, G.N., inzh.

Nickel-molybdenum and nickel-silicon acid-resistant alloys. Khim.
mash. no. 3:28-31 My-Je '60. (MIRA 14:5)
(Nickel-molybdenum alloys) (Nickel-silicon alloys)

L 3719-3
ACORN SIGN NR: AR3001636

anti-corrosion^A and mechanical properties. It consists of a solid solution of Mo and Fe in Ni with a maximum intermetallic compounds of the Fe₃Mo and NiMo₃ type at 500 kg/cm². Inter-crystalline corrosion is eliminated if the content of the alloy (to 0.005%) or Fe (to 2.0%), and the parent materials which makes production of the alloy ductile. A high Mo content increases the stability of the alloy. When Fe content is greater than 6.0%, the alloy is reduced considerably. Basic lining material, particularly magnesite, must be used since the number of gas bubbles and non-metallic inclusions is high. In addition to Mo and Si, a small amount of Al is used as a deoxidizing agent. The loss of weight in a high-frequency furnace amounts to 10-15% and the melting process is slow.

3.3 3.3.3

L 42700-66 FMT(m)/FMD(w)/T/FMD(F)/FTT TID(-) 20/9/44
ACC NR: AR6014357 (A,N) SOURCE CODE: UR/0277/65/000/011/0018/0018

AUTHORS: Fedorov, V. K.; Shipilov, V. D.; Yukalov, I. N.; Loganov, D. T. 65

TITLE: Properties of tantalum and niobium 8

SOURCE: Ref. zh. Mashinostroitel'nyye materialy, konstruktsii i raschet detaley mashin. Gidropriyud, Abs. 11.48.155 27 27

REF SOURCE: Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr., vyp. 47, 1964, 39-49

TOPIC TAGS: tantalum, niobium, physical chemistry property, corrosion resistance, metal physical property, mechanical property

ABSTRACT: Literature data on the physical and corrosional properties of Ta and Nb and on the utilization of these materials in the chemical industry are discussed. Results from an investigation of Nb and Ta mechanical properties at temperatures from -70 to +300C are presented, as are data on the influence of technical operations (bending, rolling, tube expanding, stamping, and welding) on the corrosional properties on Ta of brand TN3 and on Nb. 3 illustrations, 5 tables. (Translation of abstract)

SUB CODE: 11

Card 1/1 26

UIC: 669.294+669.293

L 29008-66 EWI(m)/EWP(t)/ETI JD

ACC NR: A-601871

SOURCE CODE: 110001

AUTHOR: Gulyayev, A.P.; Yukalov, I.M.; Fedorov, V.K.; Landa, A.F.

ORG: none

TITLE: Nonmagnetic iron. Class 4, No 180353

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki

TOPIC TAGS: cast iron, nickel containing alloy

ABSTRACT: A new nonmagnetic cast iron is proposed which has a low carbon content. This iron has the following chemical composition:

Carbon	0.02
Silicon	0.01
Manganese	0.01
Sulfur	0.001
Phosphorus	0.001
Chromium	0.01
Nickel	0.01
Copper	0.01
Magnesium	0.01

SUB CODE: 11 / SUBM DATE: 21Aug64

Card 1/1

BORISOGLEBSKIY, B.N., kand. tekhn. nauk, red.; VINOGRADOV, Yu.M.,
kand. tekhn. nauk, red.; GALITSKIY, B.A., red.;
GORYAINOVA, A.V., kand. tekhn. nauk, red.; ZHEREBTSOV,
A.N., red.; KORETSKIY, I.M., red.; MAKAROVA, N.S., red.;
MORDOVSKIY, S.I., kand. tekhn. nauk; SALAMATOV, I.I.,
doktor tekhn. nauk; SHVARTS, G.L., kand. tekhn. nauk,
red.; YUKALOV, I.N., kand. tekhn. nauk, red.; YUSOVA, G.M.,
kand. tekhn. nauk, red.; VASIL'YEVA, G.N., red.

[Manufacture of filters in the U.S.S.R.; collection of reports at the united session of the scientific and technical councils of the All-Union Scientific Research Institute of Chemical Machinery, the Ukrainian Scientific Research Institute of Chemical Machinery and the technical council of the Ural Chemical Machinery Plant] Fil'trostroenie v SSSR; sbornik dokladov na ob"edinennoi sessii nauchno-tekhnicheskikh sovetov Niikhimasha, Ukrniikhimasha i tekhnicheskogo soveta zavoda "Uralkhimash." Moskva, Otdel nauchno-tekhn. informatsii, 1963. 107 p. (MIRA 17:12)

1. Nauchno-issledovatel'skiy institut khimicheskogo mashinostroyeniya (for Borisoglebskiy, Mordovski).

YUKALOV, I.N.

More high-quality castings for the manufacture of chemical
machinery. Lit. proizv. 5:2 My '64. (MIRA 18:3)

YUKELIS, I. I., VAYNSHTEYN, A. B.

Skin - Tuberculosis

Expanded scientific session of the Institute of Cutaneous Tuberculosis. Vest. ven. i
derm. no. 2, 1952.

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

YUKELIS, I.I.

Results of the treatment of lupus erythematosus with PAS. Vest. vener.,
Moskva no. 3:28-29 May-June 1952. (CLML 22:4)

1. Of the Institute of Skin Tuberculosis (Director -- Prof. F. V.
Shebanov).

1. YUKELIS, YU. I.
2. USSR (600)
4. Lupus
7. Role of the lymphatic system in pathogenesis of lupus erythematosus. Probl.tub
No. 6 1952.

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

YUKELIS, I.I.

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1952. (GIML 22:4)

1. Of the Institute for Skin Tuberculosis (Director -- Prof. P. V.
Shebanov), Ministry of Public Health RSFSR.

YUKELIS, I.I.

AGAPKIN, I.N., kandidat meditsinskikh nauk; YUKELIS, I.I., kandidat meditsinskikh nauk.

Phthivazide therapy in tuberculosis of the skin. Vest.ven.i dermat. (MIRA 7:2)
no.1:6-10 Ja-F '54.

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta kozhnogo tuberkuleza (direktor - kandidat meditsinskikh nauk I.N.Agapkin, nauchnyy rukovoditel' - professor N.L.Rossiyskiy).
(Skin--Tuberculosis) (Nicotinic acid isomers)

YUKELIS, I.I.

AGAPKIN, I.N., kandidat meditsinskikh nauk; YUKELIS, I.I., kandidat meditsinskikh nauk

Phthivazid therapy of cutaneous tuberculosis. Probl. tub. no.4:
20-24 J1-Ag '54. (MIRA 7:11)

1. Iz Gosudarstvennogo nauchno-issledovatel'skogo instituta
kozhnogo tuberkuleza (dir. kandidat meditsinskikh nauk I.N.
Agapkin)

(TUBERCULOSIS, CUTANEOUS, therapy,
isoniazid)

(NICOTINIC ACID ISOMERS, therapeutic use,
isoniazid in cutaneous tuberc.)

YUKELIS, L. I.

Roentgenologic picture of extrapleural pneumothorax [with summary
in French]. Probl.tub. 36 no.2:44-49 '58 (MIRA 11:5)

1. Iz sanatoriya No.14 Vsesoyznogo tsentral'nogo soveta
profsoyuzov "Baldino" (glavnyy vrach N.I. Gusak)
(PNEUMOTHORAX, ARTIFICIAL, radiography
(Rus))

AL'TSHULER, N.S.; LITOVCHENKO, O.V.; YUKELIS, I.I.; DUBOVSKOY, P.A.;
PLETITSYNA, T.G.; BAGNOVA, M.D.; KOZEL'SKAYA, I.A.

Dynamics of tuberculosis of the skin in children in 1921-1961.
Vest.derm.i ven. 33 no.6323-29 N-D '59. (MIRA 134)

(SKIN--TUBERCULOSIS)

PGMEL'TSOV, K. V.; YUKELIS, L. I.

Vascular changes simulating pulmonary tuberculosis. Probl. tub.
(MIRA 15:7)
40 no.5:29-34 '62.

1. Iz Tsentral'nogo instituta tuberkuleza (dir. - deystvitel'nyy
chlen AMN SSSR prof. N. A. Shmelev) Ministerstva zdravookhraneniya
SSSR.

(TUBERCULOSIS) (LUNGS—BLOOD SUPPLY)

YUKELIS, L.I.

Roentgenogram of the thorax in oblique projection at a 30°
angle. Vest. rent. 1 rad. 38 no.5:66-67 S-0'63 (MIRA 16:12)

1. Iz rentgenovskogo otdeleniya (zav. - prof. K.V. Pomel'tsov)
Instituta tuberkuleza (dir. - deystvitel'nyy chlen AN SSSR
prof. N.A. Shmelev) Ministerstva zdravookhraneniya SSSR.

YUKELIS, L.I.

Roentgenological investigation in oblique projections in the diagnosis of diseases of the lungs, organs of the mediastinum and pleura. Probl. tub. no.7:32-36 '63. (MIRA 18:1)

1. Iz rentgenofskogo otdeleniya (zav. - prof. K.V. Pomel'tsev) i dispansernogo sektora (zav. - prof. M.I. Oyfepakh) Tsentral'nogo instituta tuberkuleza (direktor - deystvitel'nyy chlen AMN SSSR prof. N.A. Shmelev) Ministerstva zdravookhraneniya SSSR.

YUR'YE, I.I.

BOGOSLOVSKIY, B.M.; ZMIY, P.N.; ZYKOV, D.D., dotsent; PIK, I.Sh.; STRA-
PIKHEYEV, A.A.; YUKEL'SON, I.I.; AVRAMOVA, N.S., redaktor; IUR'YE,
N.S., tekhnicheskij redaktor.

[General chemical technology of organic substances] Obshchaia khimi-
cheskaia tekhnologiya organicheskikh veshchestv. Pod red. D.D.Zyko-
va. Moskva, Gos. nauchno-tekhn.izd-vo khim. lit-ry, 1955. 463 p.
(Chemistry, Technical) (MIRA 8:4)

YUKEL'SON, I. I. + ...

YUKEL'SON, Il'ya Isaayevich; AVRAMOVA, N.S., red.; LUR'YE, M.S., tekhn.red.

[Technology of the basic organic synthesis] Tekhnologiya osnovnogo organicheskogo sinteza. Moskva, Gos. nauchno-tekhn.izd-vo khim. lit-ry, 1958. 528 p. (MIRA 11:3)

(Chemistry, Organic--Synthesis)

(Chemistry, Technical)

KORSHAK, V.V.; ZANYATINA, V.A.; YUKEL'SON, I.I.; BEXASOVA, N.I.

Polycondensation in a thin layer. Khim.nauka i prom. 4 no.4:
546-547 '59. (MIRA 13:8)

1. Institut elementoorganicheskikh soedineniy Akademii nauk SSSR.
(Condensation products (Chemistry))

YUKEL'SON, I.I.; SLUKIN, A.D.; KORBANOVA, Z.N.; SHESTAKOVA, O.G.; FELOTOVA, L.V.

Investigating polyarylene alkyls as ingredients of a rubber
compund. Kauch. i rez. 22 no.9:2-4 S '63. (MIRA 16:11)

1. Voronezhskiy shinnyy zavod i Voronezhskiy tekhnologicheskiky
institut.

KOZYREVA, Ye.F.; YUKEL'SON, I.I.; NUZHINA, Yu.A.

Optical properties of arylenealkyl polymers. Part 1: Electron absorption spectra. Vysokom. soobd. 5 no.9:1360-1366 S '63. (MIRA 17:1)

1. Voronezhskiy tekhnologicheskii institut.

L. 11/6/61 EWP()/EWI()/EDS AFFR ASD 10 11
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... of all arylenealkyl polymers, with the exception of the chloro-derivatives, was far superior to that of the other polymers.

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L 13663-63

ACCESSION NR: AP3001429

difference. Rubbers SFI-3 and SMO-30 AKI showed the best results. polyethylphenyleneethyl of molecular weight 1100 and polyethyl of molecular weight 1800, while natural rubber was polyphenyleneethyl of molecular weight 1680. G. D. Aleksandrov the determination of the decomposition temperatures of the was: 1 formula, 2 charts, and 1 table.

ASSOCIATION: Voronezhskiy tekhnologicheskii institut (Voronezh Institute)

SUBMITTED: 00

DATE ACQ: 30 May 63

REF CODE: 00

NO REP GOV: 005

YUKEL'SON, I.I.; BCGUSLAVSKIY, E.A.

Oxidative dehydrogenation of n-butenes to divinyl in the presence of oxygen. Izv. vys. ucheb. zav.; neft' i gaz 8 no.1:18 '65.

(MIRA 18:2)

1. Voronezhskiy tekhnologicheskii institut.

L 11156-65 EWT(m)/EWP(j)/T Po-1: SSD/AFWL/ASD(m)
ACCESSION NR: AP4041673 ESD(gs)/ESD(t) RNS/0303/64/001

AUTHOR: Yurel'son, I. I. , Glukhovskoy, V. S.

TITLE: Chemically stable coatings based on polyarylene

SOURCE: Lakokrasochnyye materialy* i ikh primeneniye

TOPIC TAGS: polyarylene alkyl, lacquer, cross-linked polymer, thermosetting polymer, paramagnetic resonance spectrum

ABSTRACT: The author investigated the reaction of alkyls with sulfur, forming thermosetting materials. A polymer (d = 1.0916, average mol. weight = 1200) was used. The mechanism of cross-linking of polyethyl-phenyl was interpreted by chemical equations. Infrared and infrared absorption spectra of the cross-linked polymer and the reaction the macromolecule increases in size of the chains. The sulfur bridges and C-C bonds are in the alkyl part of the macromolecules. The results are

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ACCESSION NR: AR5001013

others with PHF will is higher than that
polyethylmerylene ethyl; in proportion to
content, the strength of vulcanizate will
strength with polyethylmerylene ethyl. It
also increases the elasticity and the dynamic pro
vulcanizers. I. Krylova.

54961-55 BWT(m)/EPP(e)/EWP(j)/T Pc-4/Fr-4 RM
ACCESSION NR: AP5014165 UR/0080/05 1-541.5165

AUTHOR: Yakel'son, I. I.; Kozyreva, Ye. P.; Gacshvili, G. I.

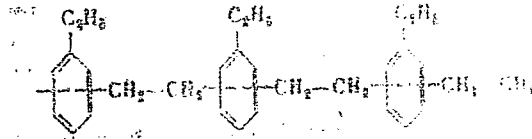
TITLE: Synthesis and optical properties of polyethyl acrylate.

SOURCE: Journal of Physical Chemistry, v. 38, no. 5, 1964

TOPIC TAGS: polycondensation, dichloroethane, polymerization

ABSTRACT: Polyethyl acrylate was prepared by the reaction of ethyl acrylate with ethyl alcohol in benzene under conditions typical for Friedel-Crafts alkylation. It was found that a constant rate of polymerization and an increase in the catalyst (AlCl₃) concentration up to a certain level is accompanied by an increased molecular weight of the product polymer. The average molecular weight of the polymer increases with an increase in the molar ratio of ethylbenzene to dichloroethane. In the

average molecular weight of the polymer increases with increasing molar ratio of ethylbenzene to dichloroethane. In the case of ethylbenzene the polycondensation reaction is linear and the polymer is highly cross-linked within the polymer.



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54961-65
ACCESSION NO: AF5014155

Maximum of the average molecular weight of the polymer is observed at a molar ratio of ethylbenzene to dichloroethane of 1:1. The ethylbenzene polymerizes with extensive cross-linking within the polymer. As the molar ratio of ethylbenzene to dichloroethane from 1:1 to 0.7:1 the polymer is highly cross-linked.

