

2/2 008

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0126435
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE NECESSITY OF USING STATISTICAL METHODS IN THE FIELD OF EPIDEMIOLOGICAL INVESTIGATIONS IS SUBSTANTIATED. A METHOD AND INDICATIONS TO DETERMINATION OF THE MEAN VALUES, OF ASSESSMENT CRITERIA OF THE SIGN VARIABILITY, AND METHODS AN ANALYSIS OF DISTRIBUTION OF THE DATA IN SOLVING DEFINITE EPIDEMIOLOGICAL PROBLEMS ARE EXEMPLIFIED. THE LEADING ROLE PLAYED BY ANALYZING THE MATERIAL NATURE OF THE METHODS INVESTIGATED IN ASSESSING THE RESULTS OF STATISTICAL TREATMENT OF THE MATERIAL IS EMPHASIZED. FACILITY:
TSENTRAL'NYY INSTITUT EPIDEMIOLOGII, MOSKVA.

UNCLASSIFIED

1/2 030 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ELABORATION OF RATIONAL SYSTEM OF EFFECTIVE INFORMATION ON THE
INCIDENCE OF INFECTIOUS DISEASES -U-
AUTHOR--(03)-TEPLYAKOV, B.YA., DROZDOVA, A.A., YELKIN, I.I.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII I IMMUNOBIOLOGII, 1970, NR 4, PP 141-146
DATE PUBLISHED----- 70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES, ELECTRONICS AND ELECTRICAL
ENGR.
TOPIC TAGS--INFECTIOUS DISEASE, INFORMATION STORAGE AND RETRIEVAL,
COMMUNICATION EQUIPMENT, COMPUTER APPLICATION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1988/1693 STEP NO--UR/0016/70/000/004/0141/0146
CIRC ACCESSION NO--AP0106439
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--16OCT70

2/2 030

CIRC ACCESSION NO--AP0106439

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE AUTHORS SUBSTANTIATE THE NECESSITY OF IMPROVEMENT OF EFFECTIVE INFORMATION ON THE INCIDENCE OF INFECTIOUS DISEASES WITH THE APPLICATION OF MODERN MEANS OF COMMUNICATION AND ELECTRON COMPUTERS. PRACTICAL POSSIBILITY OF COLLECTION AND TRANSMISSION OF EFFECTIVE INFORMATION BY TELETYPE WAS SHOWN.

UNCLASSIFIED

USSR

UDC 669.245.018.44(088.8)

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PANASYUK, I. O., BRUSILOVSKIY, B. S., VILKOV, V. I., VORONIN, G. M., YEGOROV, YE. YE., YELKIN, I. S., KLIMOV, L. YA., KOVROVA, YE. A., KONTSEVAYA, YE. M., LYUBINSKAYA, M. A., MILENINA, YE. G., MIKHAYLOV, I. A., RAZUVAYEV, YE. I., SIROTKIN, A. I., SOLDATCHENKO, V. A., SPILITSIN, R. I., SHAPIRO, S. M.

"Nickel-Chromium Base Alloy"

USSR Author's Certificate No 276418, Filed 2 Jun 69, Published 16 Oct 70 (from RZh-Metallurgiya, No 4, Apr 71, Abstract No 4I766P)

Translation: The heat-resistant alloy has the following composition (in %): C 0.03-0.1, Cr 30-40, W 3-5.5, Mo 2-4, Ti 0.5-1.5, Al 0.5-1.5, Nb 0.5-1.5, Ce 0.01-0.3, B 0.003-0.008, Ni, the rest. The alloy has increased heat resistance and also the following mechanical and physical-chemical properties at 1,100°: σ_B 8 kg/mm², δ 65%, σ stress-rupture 1 kg/mm², coefficient of linear expansion $15 \cdot 10^{-6}$ deg⁻¹, increase in weight after 100 hours of heating at 1,200° in the air 0.6 g/m². It is corrosion-resistant in a moist atmosphere under tropical conditions, in sea water, and in the products of combustion of highly sulfurous fuel.

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Acc. Nr: **AP0047887**

Ref. Code: **UR9115**

PRIMARY SOURCE: **Ortopediya, Travmatologiya i Protezirovaniye,**
1970, Nr 1, pp 23-27

**THE REMOTE RESULTS OF TREATMENT OF MULTIPLE (COMBINED) FRACTURES
OF THE LONG TUBULAR BONES OF THE UPPER EXTREMITIES**

Yelkin, P. A.

The experience of traumatologic clinics of the Sklifosovsky Institute in the treatment of 45 patients with multiple (combined) fractures of the upper extremity bones is set forth. The choice of one or another method of treatment was determined by the character of combination of fractures, age of the injured, character of the line of break and fragment displacement, as well as presence or absence of complications. Thirty patients were treated by conservative and 15 by operative methods. As a rule, failure of conservative treatment was an indication for operation. The remote results have been studied in all patients with follow-up from 6 months up to 7 years from the moment of trauma. Good results have been achieved in 27 (60%), satisfactory in 12 (26.7%), and were poor in 6 (13.3%) patients. The incidence of poor results was especially high in patients with diaphysary fractures of the humerus and forearm bones and in patients with multiple fractures of the elbow joint.

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Pulse Technique

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UDC A678.02:66.097 +1

ABRANYAN, Ye. A., VOROB'YEV, V. V., YEGOROV, A. A., YELKIN, V. A.,
and PONOMARENKO, A. G.

"Initiating the Discharge in a Megavolt Gas Space by an Electron Beam"

Moscow, Pribery i tekhnika eksperimenta, No. 1, January-February, 1971, pp 117-118

Abstract: This paper describes the experimental method and results in the use of an electron beam to start the discharge in a gaseous gap. The high voltage of 0.2 to 1 MV is supplied by a Tesla induction transformer, with the capacitance formed by the transformer electrode and the transformer's grounded casing playing the part of the discharge gap. This casing is filled with gas at a pressure of 12 atmospheres, with the electron beam injected, with an energy of 150 to 400 kev and a current of 10 A in the course of 5 ns, into the center of the gap, which has a length of 4 cm. The injection is made through a 1-cm diameter window of fine foil. A sketch of this equipment is provided. Photographs of the discharge are reproduced.

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USSR

UDC: 533.6.011

YEL'KIN, Yu. G.

"Unstable Univariate Flows of a Nonviscous Radiating Gas"

Uch. Zap. Tsentr. Aero-gidrodinam. In-ta [Scientific Writings of Central Institute of Aerodynamics and Hydrodynamics], 1972, 3, No 2, pp 28-38
(Translated from Referativnyy Zhurnal Mekhanika, No 12, 1972, Abstract No 12B171, by G. A. Tirskiy)

Translation: A numerical solution is presented to the problem of unstable univariate flow of a nonviscous, non-heat conducting radiating gas between a shock wave and a contact discontinuity surface. The flow of gas is considered to be in chemical equilibrium: the gasses before the propagating shock wave and beyond the contact surface are nonviscous and nonradiating; the pressure and density of radiation are negligible. To calculate the initial sector of development of flow, it is considered that the radiation is a perturbation and within the framework of this assumption as $t \rightarrow 0$, changes in the gas dynamic characteristics of the flow are estimated. The one dimensional system of radiation gas dynamics equations was solved by the method of successive approximations. Using the known distribution of flow parameters and $\text{div} q_R$ in the m th cross section ($t_m = \text{const}$) and the distribution of $\text{div} q_R$ in the $(m+1)$ th cross

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USSR

Yel'kin, Yu. G., Uch. Zap. Tsentr. Aero-gidrodinam. In-ta, 1972, 3, No 2, pp 28-38.

section, the gas dynamic functions in the $(m+1)$ th cross sections were determined by the method of characteristics. To calculate the divergence of radiant flux $\text{div}q_R$, the radiating volume was represented as an infinite flat layer and a ten-stage model was used for the coefficient of absorption of air. The gas dynamic functions are presented in graphic form at various moments in time. With shock wave velocities of over 12 km/sec, the energy transfer from the gas by radiation significantly changes the gas dynamic parameters behind the shock wave.

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USSR

UDC 539.67

POSTNIKOV, V. S., MESHKOV, S. I., KOSILOV, A. T., VEL'KIN, Yu. M., and
KOROTAYEV, Ye. A.

"On Amplitude Dependence of Internal Friction in Uniaxially Stretchable
Metals"

Sb. "Vnutrenneye treniye v metallicheskih materialakh" (Internal Friction in
Metallic Materials), Moscow, Izd-vo "Nauka," 1970, pp 76-79

Abstract: Results of a study on internal friction in aluminum are presented.
The data obtained are discussed on the basis of concepts on thermally activated
overcoming of short-range barrier by dislocations, taking into account the
supplementary periodical stresses in slip planes, produced by torsional vibra-
tions.

A relation is obtained which characterizes the amplitude dependence of
 Q^{-1} in the tensile process. The magnitude of activation volume for a proposed
mechanism is determined. The activation volume vs. elongation velocity is
plotted. 3 figures, 7 references.

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UDC 911.3:616.981.452(479.2)

USSR

YELKIN, Yu. M. and PETROV, P. A.

"The Mechanism of Circulation of the Plague Microbe at a High-Altitude Focus in Transcaucasia"

V sb. Probl. osobo opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of Works), Saratov, No 4(14), 1970, pp 105-109 (from RZh-Meditsinskaya Geografiya, No 3, Mar 71, Abstract No 3.36.114) by B. Dobrokhotov

Translation: It appears that the main plague vector at a high-altitude focus in Transcaucasia is the common vole. The predominant fleas of the focus, *Ctenophthalmus teres* and *Ct. wladimiri*, appeared incapable of forming a plug and of transmitting the agent. As a result an opinion about the alimentary mechanism of infection and about the existence of a focus due to cannibalism among common voles was advanced. This hypothesis proved to be incorrect: there are data concerning the possibility of formation of plugs in *Ceratophyllus caspius* and *C. consimilis* fleas and the transmission of plague bacteria by them to the rodents. In the Transcaucasian natural focus, the transmission mechanism of inducers is basic, whereas the alimentary mechanism is only of secondary importance.

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USSR

BERLOVICH, E. Ye., BLINNIKOV, Yu. S., VAYSHNIS, P. P., VITMAN, V. D., YELKIN, Yu. V., IGNATENKO, Ye. I., PANTELEYEV, V. N., and TARASOV, V.K., B. P.
Konstantinov Nuclear Physics Institute

"Short-Lived Osmium Isotopes"

Moscow, Izvestiya Akademii Nauk SSSR -- Seriya Fizicheskaya, No 12, 1972, pp 2490-2498

Abstract: The purpose of the experiments described in this paper is to detect ¹⁷⁵Os and to obtain information concerning gamma irradiation of this and lighter osmium isotopes. The short-lived isotopes were obtained in spallation reactions by irradiating mercury with 1-GeV protons in the synchro-cyclotron of the*irradiation conditions vary, inasmuch as the proportion of the different Os isotopes in the specimens depends on the mode of proton bombardment. In the gamma irradiation, the gamma ray spectrum was measured by a Ge(Li) detector, with a resolution of 3.5 keV for a line of 662 keV, and the spectra were recorded by an electronic system including an AI-1024 analyzer, a control block with timer, and the Minsk-22 computer to measure half-lives. Isotopes

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USSR

BERLOVICH, E. Ye., Izvestiya Akademii Nauk SSSR -- Seriya Fizicheskaya,
No 12, 1972, pp 2490-2498

with half-lives of more than 2.5 minutes and less than 2.0 minutes were investigated, and tables of their gamma-radiation spectra are given. Results of the present paper are compared with those of earlier papers. An attempt was also made to find a genetic connection between short-lived osmium and rhenium isotopes, and a table for the gamma irradiation of ^{174}Re is also given.

* Leningrad Institute of Nuclear Physics;

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USSR

UDC 616.981.51-06:616.24-002]-036.21

YEL'KINA, A. V., Saratov Medical Institute

"Epidemiology of Pulmonary Anthrax"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 9, 1971,
pp 112-116

Abstract: Pulmonary anthrax (or woolsorters' disease) is now exceptionally rare in the Soviet Union, and for this reason some aspects of the epidemiology are obscure, particularly the mode of transmission from man to man. This study of archival records and an old periodical yielded detailed information on epidemics of the disease that occurred in the 1900's in several rural localities of what is now Saratov and Volgograd oblasts. A total of 89 persons contracted pulmonary anthrax, verified by pathological and bacteriological examinations. The great majority of patients had handled infected wool. The disease was apparently not very contagious because there were few cases in which more than one member of a family became infected. Some 80% of the victims were women. Outbreaks occurred mostly during the cold weather, a feature that distinguishes the pulmonary from the cutaneous form of anthrax, which appears in the summer. The disease was generally fatal, death occurring on the 3d or 4th day.

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1/2 015 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--THE MECHANISM OF IMMUNOGENESIS IN VACCINATION WITH S PRIMED MUTANTS
OF SALMONELLAE AND SHIGELLAE, REPORT II. NONSUSCEPTIBILITY OF MICE TO S. 2
AUTHOR--(OS)-SERGEYEV, V.V., FROLOVA, M.A., PROTASOVA, Q.V., YELKINA, S.I.,
SHUSTER, B.YU.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 5,
PP 126-130
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SALMONELLA, SHIGELLA, BACTERIA MUTATION, IMMUNIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/0141

STEP NO--UR/0016/70/000/005/0126/0130

CIRC ACCESSION NO--AP0114537

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0114537

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN COMPARING THE IMMUNOGENIC PROPERTIES THE AUTHORS FOUND THE VACCINE PREPARED FROM THE LIVE S PRIMED CULTURE OF S. ENTERITIDIS BACTERIA TO BE MORE EFFECTIVE IMMUNOLOGICALLY THAN THE VACCINE MADE OF KILLED BACTERIA OF A VIRULENT STRAIN. ALONG WITH INTENSE SPECIFIC IMMUNITY, ORAL IMMUNIZATION WITH S PRIMED MUTANT ALSO PRODUCED THE DEVELOPMENT OF NONSPECIFIC RESISTENCE. IMMUNOLOGICAL RECONSTRUCTION OF CELLS OF THE RETICULOENDOTHELIAL SYSTEM AND OF THE INTESTINE WAS ESTABLISHED BY THE REACTION OF CELLULAR PASSIVE SKIN ANAPHYLAXIS. FACILITY: MOSCOW INSTITUT VAKTSIN I SYVOROTOK IM. MECHNIKOVA.

UNCLASSIFIED

USSR

UDC 576.851.214 (Enterococcus).06

SHUSTER, B. YU., LIKHOED, V. G., SERGEYEV, V. V., YELKINA, S. I., and
LITAREV, V. A., Moscow Institute of Vaccines and Sera Ileni Mechnikov

"Transduction Analysis of the Virulence of Revertants of S. enteritidis
Streptomycin-Dependent Mutants"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 12, 1971,
pp 58-62

Abstract: Using the transduction method with phage P 22, the authors found that the virulence of avirulence of revertants of S. enteritidis No 921 str-d mutants varied with the nature of the reverse mutation. Virulence was restored in the true revertants while the suppressor revertants remained avirulent. In transduction of markers from the virulent str-r strain to the suppressor avirulent revertants, the str-r transductants exhibited segregation with respect to virulence. The virulence of the transductants was due to substitution of the su-str⁻ gene suppressor for the su-str⁺ gene suppressor. It would appear, therefore, that mutation in the su-str gene suppressor results in the loss of virulence.

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USSR

YELKINA, V. G., KONNOVA, N. A., and TONIYANTS, YE. G., Tashkent
Oblast Sanitary Epidemiological Laboratory

"A Six-Year Virological Study of Influenza in Tashkent Oblast"

Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 31-34

Abstract: A study of 1,222 throat smears taken from patients with acute respiratory diseases between 1962 and 1967, and from autopsy material (66 cadavers) was performed on chicken embryos. Twenty influenza virus strains were isolated, representing 1.7 percent of all flu viruses. Six strains of the A2 type were isolated during the 1962 flu epidemic, one strain of the B type was isolated in 1964; 11 strains of the A2 type in 1965; and two strains of the 2A type in 1967. In the 1963-1964 interepidemic period, the A2 types was recorded in 3.5-3.7% of all cases; the B type in 1.5-1%; and the parainfluenza D type in 0.2-0.8% of cases. The flu epidemic of February, 1965, was caused by the A 2 type, which was diagnosed in 40.4% of patients, with acute respiratory diseases. In December, 1966, and in early January, 1967, the disease was caused mainly by type B virus (55-56.2%). In January through March, the A2 type

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USSR

YELKINA, V. G., et al., Tashkent, Meditsinskiy Zhurnal Uzbekistana, No 1, 1970, pp 31-34

predominated (70.3%). Between 1963 and 1967, 4, 242 sera of healthy donors were tested for immunity level. High immunity levels were recorded against viruses of type A2 (52.2%), B (76.8%), and D (73.0%) as a result of the A2 and B flu outbreak in 1962. In 1964, the concentration of antibodies against all viruses (but especially the A2 types), was markedly reduced, indicating a new outbreak, which took place in February, 1965. After that, the titer of antibodies against the A2 type virus rose threefold and fell again a year later. The last flu wave in December, 1966, and January-February, 1967 again increased people's immunity to the A2 and B type viruses up to the level observed in 1963. Virological studies are gaining importance in medical practice and in the influenza diagnosis.

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USSR

UDC: 518.5:681.3.06

YELKINA, V. N.

"Program of Constructing the Shortest Path for the BESM-6 Computer"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 45, Novosibirsk, "Nauka", 1971, pp 41-46 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V982)

Translation: The proposed program for constructing the shortest path is designed for plotting a connected nonoriented graph without loops with a minimum sum of the edges' lengths. The matrix R of initial distances for all points of the initial set is constructed and used as a basis for plotting the required graph. The result is a spatially ordered list of the edges of the graph. A. Khamayzer.

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USSR

UDC: 51:155.001.57:681.3.06

YELKINA, V. N.

"The 'Krab' Program for the BPSM-6 Computer"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 45, Novosibirsk, "Nauka", 1971, pp 47-55 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1011)

Translation: The paper proposes a standard program for search in a given feature space for the best union L of elementary taxa among K taxa of complex form. Initial data: a list ordered by increasing numbers of the edges of a graph without loops with minimum sum of the length of the edges; the vector of "weights" of the taxa; the permissible number of segments for sorting in searching for the boundaries. The last parameter is assigned from heuristic considerations. In the program, the given number of most probable "contestants" for the boundary segment is selected, all versions of union for the selected number of "contestants" are sorted out, and a search is made for the best version with respect to criterion F . A. Khamayzer.

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USSR

UDC: 51:155.001.57:681.3.06

YELKINA, V. N.

"The 'Forel'-1' Program for the M-220 Computer"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 45, Novosibirsk, "Nauka", 1971, pp 14-18 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1013)

Translation: The paper describes a program by the "Forel'-1" algorithm for isolating taxa (regions of bunching) of points with a given degree of proximity by means of hyperspheres. The program access is given as well as the method of assigning the initial data and a control example.

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USSR

UDC: 51.155:001.57:681.3.06

YELKINA, V. N.

"The Forel'-5 A' Program for the BESM-6 Computer"

V sb. Vychisl. sistemy (Computer Systems--collection of works), vyp. 45, Novosibirsk, "Nauka", 1971, pp 23-30 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V1015)

Translation: A program is described for isolating taxa with a predetermined degree of proximity within a taxon for initial data represented by binary codes. The taxa may be isolated with respect to any set from the given number of binary tags. The initial data are retained.

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USSR

UDC 621.317.741:621.317.742

YEL'KIND, A. I., KONOPLEV, V. P.

"Calculating the Standing-Wave Ratio Nonuniformities of the Transverse and Longitudinal Slot Types in a Coaxial Line"

Tr. Sib. n.-i. in-t metrol. (Works of the Siberian Scientific Research Institute of Metrology), 1969, Vol 2, pp 62-67 (from RZh-Radiotekhnika, No 4, 1970, Abstract No 4A348)

Translation: The authors study the nonuniformity arising during the coupling of rigid coaxial measuring lines using plug contacts. This nonuniformity consists of a gap between the socket and pin which can be viewed as a short-circuited radial line with longitudinal gaps. Starting with this representation, the authors derive a formula for the standing-wave ratio of the investigated nonuniformity for an instance of radially diverging slots and for parallel diverging items. Original article: two illustrations and three bibliographic entries. N.S.

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USSR

UDC 621.317.799:537.311.3

Y
YEL'KIND, A. I.; SAZHOVA, A. N.

"Measurement of Conductivity and Dielectric Constant of Semiconductors at Micro-wave Frequencies"

Tr. Sib. n.-i. in-t metrol. (Works of the Siberian Scientific-Research Institute of Metrology), 1969, No 2, pp 115-121 (from RZh--Elektronika i yeye primeneniye, No 7, July 1970, Abstract No 7B133)

Translation: The paper considers procedures and errors of measurement of the conductivity and dielectric constant of semiconductor materials, with the help of a measuring line. A graph is presented of the numerical computations. 4 ref. Summary.

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1/2 033

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--DETERMINATION OF THE TUNGSTEN CONTENT IN THE BINDING PHASE OF HARD
SINTERED ALLOYS -U-

AUTHOR--(05)-TUMANOV, V.I., SHCHETILINA, YE.A., CHEREDINOV, A.A.,
YELMAKOVA, S.M., SEREBROVA, O.I.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 262,483

REFERENCE--OTKRYTIYA, IZDBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970, 47(6)

DATE PUBLISHED--26JAN70

SUBJECT AREAS--MATERIALS, CHEMISTRY

TOPIC TAGS--METAL CHEMICAL ANALYSIS, HARD ALLOY, TUNGSTEN CONTAINING
ALLOY, MAGNETIC PERMEABILITY, CURIE TEMPERATURE, METALLURGIC RESEARCH
FACILITY, FERROMAGNETISM, PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3001/1463

STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0126994

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

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CIRC ACCESSION NO--AA0126994

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE W CONTENT IS DETD. BY HEATING THE SAMPLE, MEASURING WITH A MAGNETOMETRIC APP. THE CHANGE OF THE MAGNETIC PERMEABILITY OF THE ALLOY, AND DETG. THE CURIE TEMP. ACCORDING TO THE LOSS OF FERROMAGNETIC PROPERTIES.

FACILITY: VSESOUZNYI

NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT TVERDYKH SPLAVOV.

UNCLASSIFIED

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--REACTIONS IN THE RHENIUM TRIOXIDE RHENIUM PENTACHLORIDE SYSTEM -I-
AUTHOR--(03)-GLUKHOV, I.A., YELISEYEV, S.S., YELMANDVA, N.A.
COUNTRY OF INFO--USSR
SOURCE--ZH. NEGRG. KHIM. 1970, 15(3), 814-16
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHASE TRANSITION, RHENIUM COMPOUND, RHENIUM CHLORIDE, OXIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1994/194 STEP NO--UR/0078/70/015/003/0814/0816
CIRC ACCESSION NO--AP0115751
UNCLASSIFIED

2/2 013

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115751

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. REOCL SUB4 AND RECL SUB3 FORMED AS FINAL PRODUCTS WHEN A MIXT. OF REOCL SUB3 AND RECL SUB5 WAS HEATED TO 185DEGREES. A SUBSEQUENT HEATING, IS SMALLER THAN OR EQUAL TO 350DEGREES, DID NOT REVEAL ANY PHASE TRANSITIONS. FACILITY: INST. KHIM., DUSHANBE, USSR.

UNCLASSIFIED

USSR

UDC 546.3-19'821'78

TUMANOV, V. I., MOZZHUKHIN, YE. I., and YELMANOVA, S. M.

"Effect of Temperature on the Physical Properties of Two-Phase and Three-Phase Titanium-Tungsten Solid Alloys"

Moscow, Neorganicheskiye Materialy, Vol 6, No 1, Jan 70, pp 15-19

Abstract: Expansion of the region of application of solid alloys gives rise to the necessity for investigating their physical properties at various temperatures. The relations obtained in doing this are useful in studying problems connected with the structural peculiarities of solid alloys. Heretofore, with the exception of data on the Young's modulus, there have been no published data on the physical properties of titanium-tungsten alloys at increased temperatures. This article contains an investigation of the temperature dependence of thermal expansion, electrical resistance, and young's modulus of two-phase and three-phase titanium-tungsten solid alloys in the 20-800°C temperature range. It was found that the variation of the physical properties as a function of Co content is not additive. The composition-property curves have extremal values which correspond to 6 volumetric percent Co for two-phase alloys and 12 volumetric percent Co for three-phase alloys.

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USSR

TUMANOV, V. I., et al, Neorganicheskiye Materialy, Vol 6, No 1, Jan 70, pp 15-19

Investigation of the theoretical relationship between the coercive force and volumetric content (to the $2/3$ power) of nonmagnetic inclusions (the carbide component) also demonstrated the presence of an inflection point for a concentration of the binding phase of 6 and 11 volumetric percent, respectively, for two-phase and three-phase alloys. Alloys with a high Co content (more than 6 volumetric percent in two-phase alloys and more than 12 volumetric percent in three-phase alloys) have structures in the form of a cobalt matrix with included isolated carbide grains. In alloys with a lower Co content the binding phase has a continuous structure -- individual sections of the cobalt solid solution are isolated by the carbide phase. Graphs are presented illustrating these various relations.

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1/2 042

UNCLASSIFIED

PROCESSING DATE--18SEP70

TITLE--EFFECT OF TEMPERATURE ON THE PHYSICAL PROPERTIES OF TWO AND THREE
PHASE TITANIUM AND TUNGSTEN SOLID ALLOYS -U-

AUTHOR--(03)-TUMANOV, V.I., MOZZHUKHIN, YE.I., YELMANOVA, S.M.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 5(1), 15-19

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--TITANIUM ALLOY, TUNGSTEN ALLOY, COBALT CONTAINING ALLOY,
CARBIDE, THERMAL EFFECT, PHYSICAL PROPERTY, ELASTIC MODULUS, NONMETALLIC
INCLUSION, ELECTRIC RESISTIVITY, MAGNETIC COERCIVE FORCE, TERNARY ALLOY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAE--1984/0152

STEP NO--UR/0363/70/006/001/0015/0019

CIRC ACCESSION NO--AP0054948

UNCLASSIFIED

2/2 042

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054948
 ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TEMP. DEPENDENCE OF THERMAL
 EXPANSION, ELEC. RESISTIVITY, AND ELASTICITY MODULUS OF 2 AND 3 PHASE Ti
 W SOLID ALLOYS IN THE TEMP. RANGE 20-800DEGREES WAS INVESTIGATED. THE
 CHANGE IN THE PHYS. PROPERTIES AS DEPENDENT ON THE CO CONTENT DOES NOT
 TURN OUT TO BE ADDITIVE. THE COMPN. PROPERTY CURVES HAVE EXTREME
 VALUES, WHICH CORRESPOND TO 6 VOL. PERCENT CO FOR ALLOYS OF THE 2 PHASE
 COMPN. AND TO EQUIVALENT TO 12 VOL. PERCENT CO FOR 3 PHASE
 ALLOYS. EXAMN. OF THE THEORETICAL DEPENDENCE BETWEEN THE COERCIVE FORCE
 AND THE TWO THIRDS POWER OF THE VOL. CONTENT OF NONMAGNETIC INCLUSIONS
 (CARBIDE COMPONENT) ALSO SHOWED THE PRESENCE OF AN INFLECTION AT THE
 CONCN. OF THE BINDING PHASE OF 6 AND 11 VOL. PERCENT, RESP., FOR THE 2
 AND THE 3 PHASE ALLOYS. ALLOYS WITH A HIGH CO CONTENT (GREATER THAN 6
 VOL. PERCENT IN 2 PHASE ALLOYS AND GREATER THAN 12 VOL. PERCENT IN 3
 PHASE ALLOYS) HAVE A STRUCTURE IN THE FORM OF A CO MATRIX CONTG.
 INCLUSIONS IN THE FORM OF ISOLATED CARBIDE GRAINS.

UNCLASSIFIED

USSR

UDC 577.1:615.7/9

YEL'NICHNYKH, L. N.

"Histochemical Characteristics of Lipids in Subcutaneous Nodules Caused by Injection of Quartz-Containing Dust, Asbestos, Anthracite, and Carbolen [Charcoal, Sucrose, Starch, NaCl]"

V sb. Vopr. Gigiyeny truda i prof. patol. v metallurgii (Problems of Industrial Hygiene and Occupational Diseases in Metallurgy--Collection of Works), Moscow, 1972, pp 268-274 (from RZh-Biologicheskaya Khimiya, No 17, Sep 73, Abstract No 17 F1927)

Translation: The formation of nodules (N) in subcutaneous tissue was found to be similar to that in the lungs. After subcutaneous injection of quartz dust or SiO₂ condensate, a larger quantity of lipid-containing macrophages (LM) was found in the N along with a greater proliferation of connective tissue than after injection of chamotte dust. Asbestos, anthracite, and carbolen did not significantly affect these processes. LM were detected mainly in portions with dust accumulations, an indication of degenerative changes in the macrophages. Phosphatids predominated in the macrophages in the early stages of nodule formation while neutral fats were more

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USSR

YEL'NICHNYKH, L. N., Vopr. gigiyeny truda i prof. patol. v metallurgii,
Moscow, 1972, pp 268-274

abundant during the development of sclerosis. It is conjectured that the
neutral fats in the macrophages were not completely identical to the neutral
fats found in the subcutaneous tissue.

2/2

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Public Health, Hygiene and Sanitation

USSR

UDC 616.24-003.667.6-092-008.939.15

BELOBRAGINA, G. V., and YEL'NICHNYKH, L. N., Institute of Labor Hygiene and Occupational Diseases, Sverdlovsk

"Localization of Lipids in the Lungs During Experimental Asbestosis"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 9, 1972, pp 55-57

Abstract: The process of node formation and invasion by lipid-containing macrophages in the lungs of white rats exposed to chrysotile asbestos dust was studied microscopically over a 1-year period and compared to processes occurring during silicosis. As in silicosis, lipid-containing macrophages accumulated in perivascular and peribronchial tissues, in interalveolar septase, and under the pleura, appearing on the periphery of dust nodes consisting of macrophages, plasma cells, histiocytes, fibroblasts, and fibrocytes in 30 days. In contrast to silicosis, however, the nodes were not subsequently invaded by lipid-containing macrophages, and sclerotization did not occur. This suggests a pathogenic involvement of lipid-containing macrophages in the development of pneumosclerosis.

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USSR

UDC 547.26'118 + 547.292.6

GAZIZOV, M. B., SULTANOVA, D. B., RAZUMOV, A. I., YELNIKOVA, G. N., and
OSTANINA, L. P., Kazan' Chemical-Technological Institute Imeni S. M. Kirov

"Reaction of Aryldichlorophosphines With Acetic Acid Acylals"

Leningrad, Zhurnal Obshchey Khimii, Vol 42 (104), No 9, Sep 72, pp 2112-2113

Abstract: Aryldichlorophosphines react with equimolar quantities of acetic acid acylals at 50° yielding α -alkoxyethylarylophosphinic acid chlorides. The yields of these products can be improved by using excess chlorophosphine or running the reaction in presence of an equimolar quantity of α -chloroether.

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- 03 -

USSR

UDC 681.2.083.8(088.8)

YELOKHIN, A. P.

"Random Number Generator"

USSR Author's Certificate No. 279168, Filed 19/06/69, Published 16/11/70. (Translated from Referativnyy Zhurnal Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No. 5, 1971, Abstract No. 5B233P).

Translation: A random number generator is suggested consisting of a random voltage generator and a random number former. In order to simplify the device and increase accuracy and speed, it contains a dynamic voltage limiter, the input of which is connected to the output of the random voltage generator, while the output is connected to the input of the random number former. 1 fig.

1/1

Devices

USSR

UDC: 681.2.083.8

YELOKHIN, A. P., All-Union Scientific Research Institute of Heat Engineering imeni
F. E. Dzerzhinskiy

"A Random Number Generator"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obratzsy, Tovarnyye Znaki, No 26,
1970, Soviet Patent No 279168, Class 42, filed 19 Jun 69, p 132

Abstract: This Author's Certificate introduces a random number generator which consists of a random voltage oscillator and a circuit for shaping random numbers. As a distinguishing feature of the patent, the device is simplified, precision is improved and speed is increased by incorporating a dynamic voltage limiter whose input is connected to the output of the random voltage oscillator while the output is connected to the input of the circuit for shaping random numbers.

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USSR

UDC 547.739.3'362'385.1

NAKHMANOVICH, A. S., YELOKHINA, V. N., and KARNAUKHOVA, R. V., Institute of Organic Chemistry, Siberian Branch, Acad. Sc., USSR, Irkutsk

"Acetylene Derivatives of Selenophene. I. Synthesis and Some Reactions of Selenienylacetylene Alcohols and Ketones"

Riga, Khimiya Geterotsiklicheskikh Soyedineniy, No 7, Jul 71, pp 920-923

Abstract: 2-Selenophenealdehydes react with alkylacetylene and acetylenemagnesium bromide under the Iotsich reaction conditions and with sodium acetylenide in liquid ammonia yields new selenienylacetylene alcohols which can be easily converted to respective ketones by oxidation with MnO_2 in ether. Selenienylacetylene ketones upon reaction with hydrazine and hydroxylamine in aqueous ethanol undergo intramolecular cyclization forming respective selenienyl substituted pyrazoles and isoxazoles.

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USSR

BYKOV, V. P.; YELOV, V. V. (Moscow)

"Acoustical Vibrations in an Ellipsoidal Cavity"

Moscow, Akusticheskiy Zhurnal; July-September, 1970; pp 372-82

ABSTRACT: Acoustical vibrations in an ellipsoidal cavity are studied. Asymptotic solutions of the Helmholtz equations are obtained which lead, in the given case, to the three-wave equations of Lamé. These solutions take into account the symmetry of an ellipsoid and do not require a joining of the solutions for different regions of variation of the independent variable.

In addition, phase conditions discussed by Bykov in an earlier work ("Geometric Optics of Three-Dimensional Oscillations in Open Resonators", from the collection "Electronics of Large Powers", 1965, 4, 66-91) are determined more accurately.

The article includes 84 equations. There are 6 bibliographic references.

1/1

USSR

UDC: 621.373:530.145.6

YELOV, V. V., IL'YASOV, R. Sh., MOROZOV, V. P., ORLOV, B. V., POL'SKIY,
Yu. Ye.

"A Transistorized Oscillator for Excitation of a Ring-Type Gas Laser"

Tr. Kazan. aviats. in-ta (Works of the Kazan' Aviation Institute), 1970,
vyp. 104, pp 116-122 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No
12D199)

Translation: High-frequency pumping oscillators which operate in the 3-100
MHz frequency range are most frequently used for activating a gas laser.
As a rule, these oscillators are based on vacuum tubes. With the develop-
ment of Soviet high-frequency power transistors, it has become possible to
make a miniaturized economic pumping oscillator. This paper describes a
transistorized oscillator designed for excitation of three gas-discharge
tubes on a frequency of 5 MHz with relative frequency instability of 2×10^{-4}
with an output power of 50×3 W, the time for reaching the working mode
being no more than 50 msec. The gas laser emission level is stabilized by
using negative feedback with respect to the emission of the laser. The power
level for excitation of the gas-discharge tubes in a ring laser is continu-
ously variable from P_{\max} to $0.3 P_{\max}$.

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1/2 007 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--BRONCHOSCOPY IN DIAGNOSING CHRONIC DUST INDUCED BRONCHITIS -U-
AUTHOR--(05)-YELOVA, M.YA., MALTSEVA, L.M., SOROKIN, V.M., GENINA, O.D.,
FINKELBERG, E.I.
COUNTRY OF INFO--USSR
SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYYE ZABOLEVANIYA, 1970, NR 4, PP
56-58
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--RESPIRATORY SYSTEM DISEASE, DIAGNOSTIC METHODS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/1227

STEP NO--UR/0391/70/000/004/0056/0058

CIRC ACCESSION NO--AP0054122

UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0054122

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE PAPER CARRIES DATA OF CLINICO
 ROENTGENOLOGICAL, ENDOSCOPIC AND FUNCTIONAL EXAMINATIONS OF 97 PATIENTS
 PRESENTING DUST INDUCED PATHOLOGY. OF THESE 62 HAD CHRONIC BRONCHITIS,
 12, PNEUMONCONIOSIS AND 23 WERE SUSPECTED OF SUFFERING FROM THE LATTER.
 AN ANALYSIS OF THESE FINDINGS IS SUGGESTIVE THAT BOTH IN CHRONIC
 BRONCHITIS AND IN PNEUMONCONIOSIS, AS WELL AS IN SUSPECTED
 PNEUMOCONIOSIS THERE APPEAR MANIFESTATIONS OF ENDOBRONCHITIS, MOSTLY OF
 SUB AND ATROPHIC NATURE AND LESS OFTEN OF HYPERTROPHIC ONE.
 CHARACTERISTIC SIGNS OF ENDOBRONCHITIS ARE DISCERNABLE EARLIER AND MORE
 FREQUENTLY THAN ROENTGENOLOGICAL MANIFESTATIONS OF THE DISEASE. THERE
 WERE INSTANCES WHEN ENDOSCOPIC CHANGES BECAME APPARENT IN THE ABSENCE OF
 BRONCHOGRAPHIC ONES. THUS, IN CASES GIVING GROUND TO SUSPECT CHRONIC
 DUST INDUCED BRONCHITIS OR PNEUMOCONIOSIS BRONCHOSCOPY OS TO BE REGARDED
 A VALUABLE PROCEDURE CONDUCIVE TO AN EARLY IDENTIFICATION OF THE
 AFFECTION.

UNCLASSIFIED

USSR

UDC 621.165.620.193.1

SHKOL'NIK, G. T., LUZHNOV, M. I., YELOVIKOV, A. S., and ZELENSKIY, V. G.

"Ways of Preventing the Erosion of Blade Apparatus of Power Plant Turbines"

Chelyabinsk, V sb. "Osvoeniye blokov moshchnost'yu 300 Mvt na Ekibastuzsk. ugle" (Collection of Works-Assimilation of 300Mw Power Units Burning the Ekibastuz Region Coal), 1972, pp 105-115 (from Referativnyy Zhurnal-Teploenergetika, No 6, June 72, Abstract No 6C39)

Abstract: Scale appears to be the main source of abrasive particles which form on pipe inner surfaces made of perlitic steels, due to inadequacy of their actual temperature conditions to heat resistant characteristics of materials used. The admissible temperature of the superheater pipe wall outside surface appears to be 575°C for the 12Kh1MF steel and 585°C for the 12Kh2MFSR and EI531 steels. It is necessary to ensure an optimal fresh steam temperature control on units with direct flow boilers with the purpose of reducing not only the exit temperature but also the intermediates along the circuit. It is necessary to broaden the use of superheater packets made of scale proof steels in boilers, where the wall temperature

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USSR

SHKOL'NIK, G. T., et al., Osvoeniye blokov moshchnost'yu 300 MWt na Ekibastuzsk.ugle", 1972, pp 105-115

is more than 575-585°C. Until elimination of scale formation, it is advisable to carry out periodically (once in 2-3 years) a chemical removal of scale from perlitic section of steam superheater. Loading of turbines of the Troitskoy Hydroelectric Power Station at the start from a cold and non-cooled state, as well as operation at partial loads should be conducted at slipping pressures with fully opened control valves. 5 figures, 5 references.

2/2

USSR

UDC 536.46 + 662.222.2

1.

KSANDOPULO, G. I., KOLESNIKOV, B. Ya., ZAVADSKIY, V. A., ODNOROG, D. S.,
YELGVSKAYA, T. P., Alma-Ata

"Mechanism of Inhibition of Combustion of Hydrocarbon-Air Mixtures by Finely Dispersed Particles"

Fizika Goreniya i Vzryva, No 1, Mar 71, pp 92-99.

ABSTRACT: Inhibited atmospheric propane flames were studied by the method of sampling from the flame using a quartz microtube to take samples for mass-spectrometer analysis. The reaction was quenched in the samples taken in less than 50 μ sec by the adiabatic expansion of the stream of sampled gases moving through the capillary into the sample chamber. Analysis of the concentration profiles formed in the reaction zone of the flame indicate that the first summary process is that of fractionation of the initial fuel molecules. As the concentration of propane decreases, the concentration of its fragments increases. The process of inhibition by solid particles is reduced on the one hand to accelerated formation of formaldehyde and on the other hand to inhibition of its loss by recombination of the OH radical on the surface of the solid particles. The change in the effectiveness of inhibition is in proportion to the total surface area of particles and depends on their nature. This proves the heterogeneous mechanism of inhibition of combustion.

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USSR

UDC 539.3

YASIL'EV, V. V. and YELPAT'EVSKIY, A. N.

"Optimum Shape of the Shell of Revolution Made of Glass Filament Plastic by the Continuous Winding Method"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 220-228

Abstract: The paper analyzes the shells of revolution generated by continuous winding of glass filament tape and subject to internal pressure.

The differential equation (12) gives the meridional shape of the shell for a given equatorial pitch angle of the tape and neglecting the strength of the bonding plastic. Integration of this equation results in equations (14). The meridional shape for the equatorial pitch angle of 33° is shown on fig. 3.

If the shell has a hole at the axis reinforced by a ring then the meridional shape of this ring is given by equation (22).
1/2

USSR.

VASIL'EV, V. V. and YELPAT'EVSKIY, A. N., Prochnost' i Ustoychivost'
Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 220-228

The constant of integration is determined from the condition
at the outer boundary of the reinforcing ring.

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- 95 -

1/2 045

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--FEATURES OF THE DEFORMATION OF AN ORTHOTROPIC FIBERGLASS PLASTIC DURING STRETCHING -U-

AUTHOR--(03)-VASILEV, V.V., DUDCHENKO, A.A., YELPATEVSKIY, A.N.

COUNTRY OF INFO--USSR

SOURCE--MEKHANIKA POLIMEROV, VOL. 6, JAN.-FEB. 1970, P. 144-147

DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS, PHYSICS

TOPIC TAGS--FIBERGLASS, REINFORCED PLASTIC, MATERIAL DEFORMATION, POLYMER BINDER, COMPOSITE MATERIAL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1890

STEP NU--UR/0374/70/006/000/0144/0147

CIRC ACCESSION NO--AP0112870

UNCLASSIFIED

2/2 045

GIRC ACCESSION NO--AP0112870

UNCLASSIFIED

PROCESSING DATE--09OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXAMINATION OF THE DEFORMATION OF AN ORTHOTROPIC FIBERGLASS REINFORCED PLASTIC WITH ALLOWANCE FOR THE BREAKDOWN OF THE BINDER IN THE TRANSVERSE LAYER. ANALYSIS IS MADE OF THE DEFORMATION OF A THREE LAYER COMPOSITE SUBJECTED TO TENSION. A NUMERICAL EXAMPLE IS PRESENTED FOR ILLUSTRATING THE METHOD USED. FACILITY: MOSKOVSKII AVIATIONNIY INSTITUT, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 539.3

YELPAT'EVSKIY, A. N. and DUDCHENKO, A. A.

"Calculations of Glass-Filament Plastic Cylindrical Shells Taking Into Account Internal Cracks"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 234-249

Abstract: The paper analyzes a cylindrical pressure vessel formed by prestressed glass filament. The prestressing is achieved by winding the filament under tension around a mandrel. After the plastic is set the mandrel is removed resulting in precompressing the plastic binder. This precompression increases the internal pressure which causes the tension in the plastic binder to reach the value at which cracks originate.

The analysis is conducted in two steps. First the case of no cracks is analyzed. Then the effect of cracks is analyzed by the strain energy method.

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USSR

ELPAT'EVSKIY, A. N., and DUDCHENKO, A. A., Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 234-249

A numerical example is given. The relation between strain and internal pressure is shown on fig. 2.

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USSR

UDC 539.3

VASIL'EV, V. V., DUDCHENKO, A. A. and YELPAT'EVSKIY, A. N.

"Bending of Cylindrical Shell Made of Nonlinearly-Elastic Glass-Plastic"

Moscow, Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 228-234

Abstract: The subject cylindrical shell is produced by winding of a glass filament tape. The stress-strain diagram of the material is shown on fig. 1. The diagram is a straight line until a certain stress is reached causing cracks in the plastic between the filaments. Then the slope of the diagram changes corresponding to a lower modulus of elasticity.

The cylindrical shell is subject to a bending moment. Cylindrical coordinates are used. The section is divided into two zones having different modules of elasticity.

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USSR

VASIL'EV, V. V., et al., Prochnost' i Ustoychivost' Tonkostennykh Aviatsionnykh Konstruktsiy, 1971, pp 228-234

Theoretical and experimental values of strain at various points of the shell section closely agree as shown on fig. 2.

Fig. 3 shows moments and shears versus the angle between the neutral axis and the boundary between the two zones.

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USSR

UDC 621.396.67:621.317.743

KONONOV, V. M., KURYANOV, A. V., YELSAKOV, N. G.

"Test Unit for Recording the Phase Characteristics of Antennas"

Obmen opytom v radioprom-sti (Exchange of Experience in Radio Industry),
vyp. 5, Moscow, 1970, pp 62-63 (from RZh-Radiotekhnika, No 9, Sep 70, Ab-
stract No 9B93)

Translation: This article contains a description of a laboratory test unit for measuring and recording the amplitude and phase characteristics in the near zone of antennas basically made of standard superhigh frequency devices and elements. There is one illustration and a two-entry bibliography.

1/1

UNCLASSIFIED

PROCESSING DATE--17JUL70.

TITLE--THE EMPLOYMENT OF CYCLOPROPANE CONTAINING MIXTURES FOR ANESTHESIA

AUTHOR--SHABANOV, A.A., YELSHANSKIY, V.I., YERIVANTSEV, N.A., TRETYAKOVA, V.I.

COUNTRY OF INFO--LSSR

SOURCE--KHIPURGIYA, 1970, NR 1, PP 74-79

DATE PUBLISHED--70

22
3
27

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ANESTHESIA, CYCLOPROPANE, OXYGEN, HYPERTENSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PRECY REEL/FRAE--1977/1710

STEP NO--UR/C531/70/OC0/001/OC74/0079

CIRC ACCESSION NO--APCC44855

UNCLASSIFIED

Acc. Nr: AP 0044855

Ref. Code: UR 0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 74-79

THE EMPLOYMENT OF CYCLOPROPANE-CONTAINING MIXTURES FOR ANESTHESIA

Shabanov, A. N.; Yelshanskiy, V. I.; Yerivantsev, N. A.; Tretyakova, V. I.

The authors carried out 184 anesthetics with cyclopropane-oxygen and nitrous-oxide-cyclopropane-oxygen (in different proportions) mixtures in aged and senile patients during operations on abdominal organs and on the extremities. Before, during and after anesthesia the authors studied the function of the cardiovascular system, the state of respiration and gas exchange, function of the liver and kidneys, and glucocorticoid metabolism. Clinical observations and the results of investigations made it possible to arrive at the following conclusions: 1) there were no absolute contraindications to the use of modern cyclopropane anesthesia in the referred to patients; 2) high arterial hypertension and renal insufficiency are relative contraindications; 3) combined nitrous-oxide-cyclopropane-oxygen anesthesia is the most rational technique.

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REEL/FRAME
19771710

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USSR

UDC 669.71.472

ORLOV, A. I., KOPYTOV, YE. A., YELSHIN, V. V., ZEL'BERG, B. I.

"Study of the Possibility of Continuous Measurements of the Alumina Concentration in Cryolite-Alumina Melts by the Conductometric Method"

Obogashch. i metallurgiya polezh. iskopavemykh -- V sb (Beneficiation and Metallurgy of Minerals -- collection of works), Irkutsk, 1970, pp 109-110 (from RZn-Metallurgy, No 4, Apr 71, Abstract No 4G160)

Translation: The basis for the conductometric procedure is the principle of measuring the specific resistance of the cryolite-alumina melt by the magnitude of the voltage drop in the electrode-melt-electrode section with a defined value of the alternating current. The specific resistance varies significantly as a function of the physico-chemical state of the melt. For melts with a cryolite ratio of 1.7, a dependence of the variation of the specific resistance as a function of the Al_2O_3 concentration is observed for frequencies of 250-3,000 hertz. With an increase in the melt temperature, the extremum shifts toward the low-concentration side. With an increase in alternating current frequency from 250 to 3,000 hertz, the specific resistance decreases under other equal conditions. With an increase in the cryolite ratio from 1.7 to 2.85, the conductivity of the melt increases.

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1/2 040

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--THE SECONDARY STEADY STATE FLOW OF A VISCOUS INCOMPRESSIBLE FLUID
PRODUCED BY A ROTATING SPHEROID -U-

AUTHOR--YELSHIN, V.YU.

COUNTRY OF INFO--USSR

SOURCE--MOSKOVSKII UNIVERSITET, VESTNIK, SERIIA I-MATEMATIKA, MEKHANIKA,
VOL. 25, JAN-FEB 1970, P. 108-112

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--STEADY FLOW, VISCOUS FLUID, ROTATION, SPHERIC SHELL STRUCTURE,
DIFFERENTIAL EQUATION SOLUTION, ACCELERATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/1626

STEP NO--UR/0055/70/025/000/0108/0112

CIRC ACCESSION NO--AP0054472

UNCLASSIFIED

2/2 040

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0054472

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE SOLUTION OF STOKES' LINEAR EQUATIONS IS IMPROVED BY PARTLY TAKING INTO ACCOUNT THE TERMS DUE TO ACCELERATION FOR THE PROBLEM OF A SPHEROID ROTATING IN A VISCOUS FLUID.

UNCLASSIFIED

Stress Analysis and Stability Studies

USSR

UDC 539.4:624

MIKHAYLOV, A. A., YEL'SUKOV, V. A., CHERNYSHOV, S. I.

"Actual Work of Masonry Walls Subjected to Seismic Effects"

V sb. Materialy 2-y Nauch.-tekhn. konferentsii Dal'morniproyekta (Materials of the Second Scientific and Technical Conference of Dal'morniprojekt), Vladivostok, 1971, pp 47-60 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10V632)

Translation: The article is devoted to experimental studies of the carrying capacity and deformations when compressed and unccmpressed masonry courses of 40 x 120 mm blocks in grade 10 mortar are subjected to a horizontal load. Single-story models were made in the form of two walls measuring 300 x 300 x 40 mm with an inside spacing of 320 mm. Reinforced concrete plates served as floor and roof. Horizontal displacements of the floor plate were prevented by fastening it to a special metal frame. Vertical compression of the masonry was created by tension on rods 3 and 5 mm in diameter arranged in pairs outside of the masonry and on the inside surface of the walls. The tension was checked by strain gauges

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USSR

MIKHAYLOV, A. A. et al., Materialy 2-y Nauch.-tekhn. konferentsii Dal'-morniproyekta, Vladivostok, 1971, pp 47-60

with a 50 mm base cemented to the rods. Horizontal forces in the models were applied at the roof plate level both in the plane of the walls and perpendicular to them. It was found that vertical compression has an appreciable effect on the carrying capacity of the models. In the case of the 3 mm tension rods, no cracks appeared in the masonry until the model was destroyed. In the case of 5 mm tension rods, the structure was destroyed abliquely along the masonry joints. At the time of fracture, an increase was observed in horizontal deformations of models with tension rods by a factor of 9, and in the carrying capacity by a factor of 5.5 as compared with an uncompressed model. It is concluded that vertical compression of masonry walls has an overall positive effect on their carrying capacity. A. V. Cherkashin.

2/2

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USSR

UDC: 681.3.06:51

MALININ, S., NEMIROVSKAYA, V., RYABEN'KIY, S., YELTARENKO, Ye., RUMYAN-TSEV, V., SUMAROKOV, L.

"Deterministic Model of Evaluating Variants for Construction of Systems of Scientific-Information Servicing With Respect to Time and Cost Criteria"

V sb. Vopr. modelir. i optimiz. sistem inform. obsluzh. (Problems of Modeling and Optimizing Information Servicing Systems--collection of works), vyp. 2, Moscow, 1970, pp 39-71 (from RZh-Kibernetika, No 7, Jul 71, Abstract No TV716)

Translation: In constructing the model, primary attention is given to selecting the functional structures of systems of scientific-information servicing. Two methods of data processing are taken into consideration: centralized and decentralized.

The process of functioning of the systems is represented in the model by a set of linear expressions of the form

$$\lambda_{out} = \lambda_{in} X.$$

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MALININ, S. et al., Vopr. modelir. i optimiz. sistem inform. obsluzh.,
vyp. 2, Moscow, 1970, pp 39-71

where λ_{in} is the line vector ($1 \times m$) which maps the intensity of the flow of documents at the input of the process; X is a matrix which maps conversion of the flow at the input into the flow at the output; λ_{out} is the line vector ($1 \times n$) which maps the intensity of the flow of documents at the output of the process. The time criterion is defined as the two-dimensional vector $\bar{t} = \{\bar{t}(t); \bar{t}(c)\}$, where $\bar{t}(t)$ is the average time for distribution of information counted from the moment when it appears in the medium external to the system; $\bar{t}(c)$ is the average time of response to demands as reckoned from the instant the system receives the demand from the user to the instant the user receives the response from the system.

The cost criterion is understood to mean the intensity of expenditures of materials, labor, equipment and monetary means necessary for normal functioning of the system.

The proposed model is illustrated by an example of a system of scientific-information servicing in electrical engineering.

1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--PRODUCTION OF NEW BRANDS OF VERY FINE TRANSFORMER STEEL -1-
AUTHOR--(05)--AFANASYEV, S.V., BARYATINSKIY, V.P., GORBACHEV, V.N., YELTSIN
YU.V., KOVALEV, P.M.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, SER. FIZ. 1970, 34(2), 272-5
DATE PUBLISHED-----70
SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR, MATERIALS
TOPIC TAGS--TRANSFORMER STEEL, METAL ROLLING, ELECTRICAL PROPERTY, STEEL
MANUFACTURE PROCESS, STEEL SHEET, ANNEALING
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1936 STEP NO--UR/0048/70/034/002/0272/0275
CIRC ACCESSION NO--AP0115745
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115745

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TECHNOLOGY USED IN MANUFG. VERY FINE, ORIENTED TRANSFORMER STEEL SHEET (0.05-0.15 MM THICK) FOR INSTRUMENTS AND APP. UTILIZING A WIDE RANGE OF FREQUENCIES IS GREATER THAN OR EQUAL TO 400 HZ DIFFERS IN MANY ASPECTS FROM THE CONVENTIONAL TECHNOLOGY USED FOR HEAVIER GAGE SHEET (0.2-0.5 MM), AS THE FINE SHEET IS MADE GENERALLY FROM HEAVIER GAGE, COLD ROLLED SHEET OF AN ORIENTED TEXTURE RATHER THAN FROM NONORIENTED MATERIAL. IN THE COURSE OF MANUFG. THE FINE SHEET, THE (110) (001) TEXTURE OF THE THICKER TRANSFORMER SHEET IS TRANSFORMED BY COLD ROLLING INTO A DEFORMATION TEXTURE (111) MEAN VALUE OF 112 WHICH AGAIN IS CHANGED TO IKO MEAN VALUE OF 001 BY SUBSEQUENT ANNEALING, K DEPENDING ON THE DEFORMATION RATIO AND THE TEMP. OF THE ISOTHERMAL ANNEAL. THUS, THE FINAL TEXTURE IS THAT FORMED BY PRIMARY RECRYSTN.; ITS DEGREE OF PERFECTION (WHICH DETS. THE MAGNETIC PROPERTIES OF THE MATERIAL) DEPENDS ON THE INITIAL TEXTURE AND GRAIN SIZE (BEFORE ROLLING), THE DEFORMATION RATIO APPLIED, AND THE TEMP. AND DURATION OF FINISH ANNEALING. SECONDARY RECRYSTN. IS SUPPRESSED SINCE IT WOULD BRING ABOUT TEXTURE DETERIORATION. ANNEALING AT 950-1000DEGREES FOR A PERIOD OF TIME NOT EXCEEDING THE INCUBATION PERIOD OF SECONDARY RECRYSTN. (20 SEC) OR CONTROLLED ANNEALING PERMITTING LONGER EXPOSURES TO HIGH TEMPS. IS RECOMMENDED; THE FORMER TREATMENT MAY NOT BE FOLLOWED BY A SECONDARY ANNEAL. THE TECHNOLOGICAL GUIDELINES GIVEN PERMIT THE MANUF. OF FINE SHEET EXHIBITING SP. CORE LOSSES OF SIMILIAR TO 12W-KG. FACILITY: TSNICHM IM BARDINA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.375.132

YEL'TSOV, A. K. and KOSTAREV, V. Ye.

"Active RC Filters and Their Structure"

Sb. tr. Nauchno-tekhn. konferentsii prof.-prepodavat. sostava, Vses. zaohn. elektrotekhn. in-ta svyazi. Vyp. 5 (Transactions of the Scientific-Technical Conference of the Professorial-Instructor Staff of the All-Union Correspondence Electrical Engineering Communications Institute, No. 5) Moscow, 1970, pp 69-74 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3D31)

Translation: A classification is given of RC filters depending on the type of active element. A filter circuit is considered in the form of an emitter follower with selective feedback through an RC circuit. Filters in the form of miniature structures are shown. Bibliography of three. N. S.

1/1

USSR

UDC 615.849.1.015.25

ALEKSEYEVA, G. N., YEL'TSOV, A. V., KOLESOVA, M. B., MAKSIMOVA, L. I.,
RUSANOV, A. M., Leningrad Chemical-Pharmaceutical Institute

"Radioprotective Properties of 1,2-Dithiolium Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, No 7, 1972, pp 23-27

Abstract: Study of 6 1,2-dithiolium salts and products of their reduction with dithiomalonylamides, which release sulfur on hydrolysis, showed that only those containing amino groups in positions 3 and 5 have significant radioprotective action in mice irradiated with 700 r. Methylation of the amino group decreased toxicity while slightly intensifying the protective effect. However, the compounds were all less efficacious than aminethylthiuronium (AET) which served as the control. The minimum effective dose was 300 mg/kg. Boosting the dose enhanced the radioprotective effect but increased the toxicity at the same time, causing convulsions and some deaths.

1/1

1/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--3,5 DIAMINO,1,2,DITHIOLIUM SALTS -U-
AUTHOR--(03)-KOLESOVA, N.B., MAKSIMOVA, L.I., YELTSOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3) 610-14
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY, BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--AMINE DERIVATIVE, THIOL, PERCHLORATE, MORPHOLINE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REFL/FRAME--1292/1326 STEP NO--UR/0366/70/005/003/0610/0614
CIRC ACCESSION NO--AP0112420
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112420

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REACTION OF

3,5-DIAMINO,1,2-DITHIOLIUM PERCHLORATE (I) WITH

1,3-DIMETHYLBENZIMIDAZOLINE (II) GAVE H SUB2 NC(:S)CH SUB2 C (:S)N4 SUB2

AND 1,3-DIMETHYLBENZIMIDAZOLINIUM PERCHLORATE (III). SIMILARLY, THE

REACTIONS OF I DERIVS. WITH II GAVE III AND RC(:S) CH SUB2 C (:S)R PRIME1

(VI) (R, R PRIME1 GIVEN): NH SUB2, NHME, NHME; MORPHOLINO, MORPHOLINO;

MORPHOLINO, NME SUB2. THE ELECTROPHILIC PROPERTIES OF I ARE CLOSE TO

THOSE OF TROPYLIUM; E.G. THE REACTION OF IV (R EQUALS R PRIME1 EQUALS

MORPHOLINO) WITH TROPYLIUM PERCHLORATE GAVE THE 3,5-DIMORPHOLINO ANALOG

OF I.

UNCLASSIFIED

172 014 UNCLASSIFIED PROCESSING DATE--02OCT70
TITLE--PHOTOLYSIS OF AROMATIC NITRO COMPOUNDS IN A WATER ALCOHOL SOLUTION
OF SODIUM NITRITE (PHOTODENITRATION) -U-
AUTHOR--(02)--FRGLOV, A.N., YELTSOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970 6(3) 637
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--PHOTOLYSIS, ORGANIC NITRO COMPOUND, DENITRATION, SODIUM NITRITE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1540 STEP NO--UR/0366/70/006/003/0637/0637
CIRC ACCESSION NO--AP0112534
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112534

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PHOTOLYSIS OF 0.56M NANO SUB2 IN 1:1 MEQH-H SUB2 O GAVE NH SUB3 AND INCREASED THE PH FROM 7 TO 13. THE PHOTOLYSIS OF 4-CL-C SUB6 H SUB4 NO SUB2 IN THE ABOVE NANO SUB2 SOLN. GAVE C SUB6 H SUB6, PHCL, PHNO SUB2, PHOME, 4-MEDC SUB6 H SUB4 OME, AND 4-HOC SUB6 H SUB4 NO SUB2. THE FORMATION OF C SUB6 H SUB6 IS THE 1ST OBSD. INSTANCE OF PHOTODENITRATION. THE FORMATION OF C SUB6 H SUB6 DOES NOT PROCEED THROUGH PHNO SUB2, SINCE THE PHOTOLYSIS OF PHNO SUB2 OR 3-O SUB2 NC SUB6 H SUB4 NO SUB2 DID NOT GIVE C SUB6 H SUB6. ALSO THE PHOTOLYSIS OF 4-BRC SUB6 H SUB4 NH SUB2 FAILED TO GIVE C SUB6 H SUB6 AND THEREFORE THE AMINE IS NOT AN INTERMEDIATE IN PHOTODENITRATION.

UNCLASSIFIED

172 015 UNCLASSIFIED PROCESSING DATE--090CT70
TITLE--IONIC HYDROGENATION OF A NITRO GROUP BY ORGANIC HYDRIDE DONORS -U-
AUTHOR--(02)--GIRSHOVICH, M.Z., YELTSOV, A.V.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3), 636-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDROGENATION, HYDRIDE, ORGANIC COMPLEX COMPOUND, CHLORIDE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1989/1185 STEP NO--UR/0366/70/006/003/0636/0637
CIRC ACCESSION NO--AP0107661
UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--090CT70

CIRC ACCESSION NO--AP0107661

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. IN CONCD. HCL SOLN. AT 20DEGREES
1,3,DIMETHYL,5, NITROBENZIMIDAZOLINE IS CONVERTED, AFTER 48 HR, TO A
MIXT. OF 1,3,DIMETHYL,5,NITROBENZIMIDAZOLIUM HYDROCHLORIDE AND
1,3,DIMETHYL,5, AMINO,6,CHLOROBENZIMIDAZOLIUM CHLORIDE (I). THE
FORMATION OF I INVOLVES A NEUCLEOPHILIC REARRANGEMENT WITH
1,3,DIMETHYL,5, HYDROXYLAMINO BENZIMIDAZOLIUM CHLORIDE AS THE
INTERMEDIATE.

FACILITY: LENINGRAD. KHIM.-FARM. INST.,

LENINGRAD, USSR.

UNCLASSIFIED

1/2 012 .
UNCLASSIFIED
PROCESSING DATE--09OCT70
TITLE--PHOTOLYSIS OF THIO DERIVATIVES OF BENZIMIDAZOLE -U-
AUTHOR--(02)--YELTSOV, A.V., KRIVOTHEYKO, K.M.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3), 635-6
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--UV IRRADIATION, PHOTOLYSIS, BENZIMIDAZOLE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1989/1256
STEP NO--UR/0366/70/006/003/0635/0636
CIRC ACCESSION NO--AP0107732
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 012

CIRC ACCESSION NO--AP0107732

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IRRADN. OF THE ALC. HCL SOLNS.
OF 1,3-DIMETHYLBENZIMIDAZOLE, 2,THIONE, 1,METHYLBENZIMIDAZOLE,2,THIONE,
OR 1,METHYL,2,METHYLTHIOBENZIMIDAZOLE WITH UV LIGHT GAVE, RESP.,
1,3-DIMETHYLBENZIMIDAZOLIUM CHLORIDE, 1,METHYLBENZIMIDAZOLIUM CHLORIDE,
AND 1,METHYLBENZIMIDAZOLE WITHOUT REARRANGEMENT. FACILITY:
LENINGRAD, KHIM.-FARM. INST., LENGRAD, USSR.

UNCLASSIFIED

1/2 009

UNCLASSIFIED

PROCESSING DATE--30OCT70

TITLE--PHOTOCHEMICAL DESULFURIZATION OF AROMATIC SULFONIC ACIDS -U-

AUTHOR--(05)-VELTSOV, A.V., STUDZINSKIY, O.P., KULBITSKAYA, O.V.,
OGOLTSOVA, N.V., EFROS, L.S.

COUNTRY OF INFO--USSR

SOURCE--ZH. ORG. KHIM. 1970, 6(3), 638-9

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--NAPHTHALENE, AMINE DERIVATIVE, QUINONE, SULFONIC ACID, ORGANIC
SULFUR COMPOUND, DESULFURIZATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRA--1992/1657

STEP NO--UR/0366/70/006/003/0638/0639

CIRC ACCESSION NO--AP0112651

UNCLASSIFIED

2/2 009

CIRC ACCESSION NO--AP0112651

UNCLASSIFIED

PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IRRADN. OF NA
 1,NAPHTHALENESULFONATE IN AQ. SOLN. AT PH 1-13 GAVE NAPHTHALENE.
 SIMILARLY, ALPHA AMINO NAPHTHALENE WAS OBTAINED BY THE PHOTOLYTIC
 DESULFONATION OF NA 4,AMINO,1,NAPHTHALENESULFONATE IN THE 7-13 PH RANGE.
 THE DESULFONATION OF ALPHA ANTHAQUINONESULFONIC ACID IN WATER GAVE
 ANTHRAQUINONE, BUT IN DIL. AMMONIA SOLN. ALPHA AMINONANTHRAQUINONE WAS
 FORMED. THE DESULFONATION OF O, P, OR M, H SUB2 NC SUB6 H SUB4 SO SUB3 H
 GAVE, RESP., TRACES, 7, AND 40-50PERCENT PHNH SUB2. FACILITY:
 LENINGRAD. TEKHNOL. INST. IM. LENSOVETA, LENINGRAD, USSR.

UNCLASSIFIED

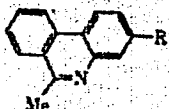
AP0053750

INDEXING SERVICE:
CHEMICAL ABST.

3/26

ref. Code:
UR0366

111266x Photochemical dehydrocyclization of acetophenone
anils. ~~Yel'tsov, A. V.; Studzinski, O. P.; Ogol'tsova, N. V.~~
(Leningrad. Tekhnol. Inst. im. Lensovet, Leningrad, USSR).
~~Zh. Org. Khim. 1970, 6(2), 405-8 (Russ).~~ The irradi. with Hg
light of PhCMe:NC₆H₄R-3 (R is H or Me) soln. in concd. H₂SO₄



(1)

gave 10.8% or 8.2% of the corresponding substituted 6-methyl-
phenanthridines (1), resp. CPJR

REEL/FRA
19830812

7

USSR

UDC 621.396.625.1

YELITSOV STEPIKOV A. V., Active Member of the Scientific and Technical Society of Radio Engineering, Electronics and Communications imeni A. S. Popov

"Two-Signal Selectivity of a Short-Wave Frequency-Telegraphy Radio Receiver"

Moscow, Radiotekhnika, Vol 26, No 8, Aug 71, pp 65-70

Abstract: The author considers two-signal selectivity of frequency-telegraphy radio receivers in the short-wave band with and without fading. Interaction between the useful signal and harmonic interference outside the band is analyzed for a receiver with linear radio channel. In addition to the fading factor, the influence of the parameters of the frequency detector and the keying filter is considered. It is found that signal fading must be taken into consideration both in theoretical studies and in measurements since two-signal selectivity decreases sharply when fading is present. The reduction amounts to approximately 30 dB when isolated tank circuits are used in frequency detectors. The two-signal selectivity where fading of both signal and interference is present shows almost no difference from selectivity with fading of the signal alone (by 1 dB); therefore fading of the interference may be disregarded in the first approximation. The keying filter has an $1/2$

USSR

YEL'TSOV-STRELKOV, A. V., Radiotekhnika, Vol 26, No 8, Aug 71, pp 65-70

appreciable effect on two-signal selectivity. In the case of isolated tank circuits in the frequency detector, the resultant gain is approximately 6 dB. Complete compensation of harmonic interference is possible with a keying filter; in principle, this compensation is impossible without the filter, the degree of compensation being dependent on the form of the frequency responses of the filters in the frequency detector. In conclusion, the author thanks V. M. Sidorov for his interest in the work and a number of contributing comments.

2/2

- 130 -

USSR

UDC: 621.384.2

YELUSHKOVSKIY, M. Ye.

"A Device for Registering Distributions of Pulse Signals"

Moscow, Otkrytiya, Izobreneniya, Promyshlennyye Obraztsy, Tovarnyye Znaki,
No 9, Mar 72, Author's Certificate No 331349, Division G, filed 6 Oct 69,
published 7 Mar 72, p 142

Translation: This Author's Certificate introduces a device for registering pulse signal distributions (amplitude, time, etc.). The device contains two pickups whose outputs are connected to a series circuit made up of an adder, a converter and a registration unit. As a distinguishing feature of the patent, the effect which pulse pile-up has on the registration of distributions is eliminated by simultaneous connection of the outputs of the pickups to a coincidence circuit with a resolving time equal to the maximum displacements of the pulses during pile-ups. The output of the coincidence circuit is connected to the controlling input of the registration unit.

1/1

1/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

TITLE--D. I. MENDELEEV'S PERIODIC LAW, SPECTRA, AND STRUCTURE OF THE ATOM,
HISTORY OF THE PHYSICAL INTERPRETATION OF THE PERIODIC SYSTEM -U-

AUTHOR--YELVASHEVICH, M.A.

COUNTRY OF INFO--USSR

SOURCE--USP. FIZ. NAUK 1970, 100, 1, 5-43

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHYSICAL CHEMISTRY, X RAY ANALYSIS, PERIODIC SYSTEM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1383

STEP NO--UR/0053/70/100/001/0005/0043

CIRC ACCESSION NO--AP0107856

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0107856

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ROLE OF THE PERIODIC LAW OF MENDELEEV IN THE DEVELOPMENT OF CHEMISTRY AND PHYSICS IS DESCRIBED. AFTER THE ORIGINAL STATEMENT OF THE PERIODIC LAW, THE DISCOVERY OF THE ELECTRON, X RAYS, RADIOACTIVITY, AND THE QUANTUM PROPERTIES OF LIGHT ENABLED PHYSICISTS TO FURTHER EXPAND THE PERIODICITY OF THE ELEMENTS. THE ENORMOUS AMT. OF SPECTRAL DATA, WHICH PLAYED AN IMPORTANT ROLE IN THE DEVELOPMENT OF THE STRUCTURE OF THE ATOM, WAS SYSTEMATIZED WITH THE AID OF THE PERIODIC LAW. ITS ROLE IN THE CREATION OF THE QUANTUM THEORY OF ATOMS AND MOLS. MAKES THE PERIODIC LAW ONE OF THE FIRM FOUNDATIONS OF THE GROWTH OF CONTEMPORARY PHYSICS AND CHEMISTRY. FACILITY: BELORUSS, GOS. UNIV. IM. LENINA, MINSK, USSR.

UNCLASSIFIED

1/2 022 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--DISTRIBUTION OF LAMINARINASES IN MARINE INVERTEBRATES -U-
AUTHOR--(03)-SOVA, V.V., YELYAKOVA, L.A., VASKOVSKI, V.E. Y
COUNTRY OF INFO--USSR ~~B~~
SOURCE--COMP. BIOCHEM. PHYSIOL. 1970, 32(3), 459-64
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--MARINE BIOLOGY, DIGESTIVE SYSTEM, ENZYME ACTIVITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1983/0725 STEP NO--UK/0000/70/032/003/0459/0464
CIRC ACCESSION NO--AP0053666
UNCLASSIFIED

2/2 022

UNCLASSIFIED

PROCESSING DATE--18SEP70

GIRC ACCESSION NO--AP0053666

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FIFTY SPECIES OF MARINE INVERTEBRATES OF DIFFERENT SYSTEMATIC AND ECOL. POSITIONS WERE TESTED FOR QUANT. LAMINARINASE ACTIVITY IN THEIR DIGESTIVE SYSTEMS. LAMINARINASE ACTIVITY ESTD. BY THE INCREASE OF REDUCING SUGARS IN AN INCUBATED MIXT. WAS FOUND WITH THE MAJORITY OF THE ANIMALS STUDIED. THE CRYST. STYLES OF BIVALVIA, SUCH AS SPISULA SACHALINENSIS AND MACTRA SULCATARIA, AS WELL AS DIGESTIVE TRACTS OF SOME CRUSTACEA, SHOWED THE HIGHEST ENZYME ACTIVITY. LAMINARINASE ACTIVITY IS APPARENTLY MORE DEPENDENT UPON THE SYSTEMATIC POSITION OF THE INVERTEBRATES, THOUGH OTHER FACTORS LIKEWISE PLAY A NOTABLE ROLE.

UNCLASSIFIED

Acc. Nr:

AP0044915

Abstracting Service:

CHEMICAL ABST.

Ref. Code:

4-70 US0000

83049h Comparison of hypernetted chain equation and Monte Carlo results for a system of charged hard spheres. Vorontsov-Vel'yaminov, P. N.; Vel'yashevich, A. M.; Rasaili, I. C.; Friedman, H. L. (Inst. Phys. Leningrad State Univ., Leningrad, USSR). J. Chem. Phys. 1970, 52(2), 1013-14 (Eng). The title 2 methods of calcul. of observable properties was applied to a model system in which the N -body potential is a sum of a pair contributions. This is the primitive model for an electrolyte soln. in a solvent of dielec. const. ϵ , a system of charged hard spheres in a dielec. medium. Both methods are accurate over the range of model parameters corresponding to 1:1 electrolytes in H_2O at 25° : $\epsilon = 80$, and $e_+ = -e_- = 1$ electronic charge.

BGJN

led

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REEL/FRAME
19771773

21

1/2 021 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--USE OF FIBRINOGEN IN THE COMPLEX TREATMENT OF PATIENTS WITH
THROMBOCYTOPENIA -U-
AUTHOR--(02)-LADUBA, T.L., YELYASHKEVICH, E.S.
COUNTRY OF INFO--USSR
SOURCE--VRACHEBNOYE DELO, 1970, NR 6, PP 40-42
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--THROMBOCYTOPENIA, FIBRINOGEN, SYNDROME, HEMORRHAGE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--3002/1751 STEP NO--UR/0475/70/000/006/0040/0042
CIRC ACCESSION NO--AP0129119
UNCLASSIFIED

2/2 021

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0129119

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OBSERVATIONS ON 40 PATIENTS WITH THROMBOCYTOPENIA AT THE PERIOD OF DEVELOPMENT OF HEMORRHAGIC SYNDROME AND AFTER TRANSFUSION OF FIBRINOGEN COMBINED WITH OTHER HEMOSTATIC SUBSTANCES (BLOOD, PLASMA, THROMBOCYTIC SUSPENSION, ADMINISTRATION OF VITAMINS P, C, K, RUTINUM) INDICATE THAT SUCH TREATMENT RESULTED IN REGULAR SHORTENING OF THE BLEEDING TIME AND IN CONTROL OR REDUCTION OF THE BLEEDING. FACILITY: NAUCHNO-ISSLEDOVATEL'SKIY INSTITUT GEMATOLOGII I PERELIVANIYA KROVI.

UNCLASSIFIED

Magnetohydrodynamics

USSR

UDC 533.9.07

YEL'YASHEVICH, H. A., Academician of the Belorussian SSR Academy of Sciences, LABUDA, A. A., MIN'KO, L. YA., NENKTRASHEVICH, I. G., NOVIK, G. M., BAKANOVICH, G. I., Belorussian State University imeni V. I. Lenin, Physics Institute of the Belorussian SSR Academy of Sciences

"Generation of High-Speed Plasma Fluxes by a Pulse Accelerator on the Basis of the Phenomenon of Electric Detonation of Conductors and Dielectric Erosion"

Minsk, Doklady Akademii Nauk BSSR, Vol XVI, No 2, 1972, pp 115-117

Abstract: A study was made of a pulse generator of a moving plasma created by electric detonation of conductors of defined form in a bounded volume. The described plasma generator can operate in two versions -- on the basis of electric detonation of conductors as a source of a metal plasma or using pulse surface discharge where the plasma is formed as a result of erosion of the walls of the discharge chamber and the electrodes. The described pulse plasma generator permits the creation of incompletely expanded supersonic erosion plasma jets at atmospheric pressure with given gas dynamic characteristics determined by the discharge conditions and parameters.

Utilization of the phenomenon of electric detonation of conductors of a defined form under conditions of operating the plasma generator with an

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USSR

YEL'YASHEVICH, M. A., et al., Doklady Akademii Nauk BSSR, Vol XVI, No 2, 1972, pp 115-117

auxiliary gap introduced into the discharge chamber permitted flows of a low-temperature metal plasma of any given chemical composition to be obtained with relatively high efficiency of utilization of the stored initial energy. The energy in the discharge gap for $V = 4$ kilovolts and $C = 200$ microfarads (mode I) was calculated from the current and voltage oscillograms as 1.3 kilojoules with an initial energy of 1.6 kilojoules. This essentially exceeds the energy contributed in the case of operating the generator with an external auxiliary gap (0.5 kilojoules). Optimization of the discharge conditions and the geometry of the discharge chamber and, consequently, the detonated conductor permitted incompletely expanded supersonic plasma jets to be obtained at atmospheric pressure with an escape velocity of $v = 25$ km/sec for a contributed energy of 1.3 kilojoules (mode I). The presence of intense continuous and linear spectra is a characteristic feature of the emission of the erosion plasma ($V = 5$ kilovolts, $C = 1,950$ microfarads (mode II) without electric detonation of the conductors) formed inside the discharge chamber. Spectroscopic measurement of the plasma temperature and concentration ($T = 6,000^\circ \text{K}$, $n_e = 5 \cdot 10^{16} \text{ cm}^{-3}$)

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USSR

YEL'YASHEVICH, M. A., et al., Doklady Akademii Nauk BSSR, Vol XVI, No 2, 1972, pp 115-117

indicates the formation of a relatively dense low-temperature plasma. When the plasma generator is operated with electric discharge of the conductors under the same discharge conditions, the plasma concentration increases appreciably.

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USSR

UDC: 621.397.62

YEL'YASHKEVICH, S. A.

"Television Sets. (Reference Materials)"

Televizory. (Spravochnyye materialy) (cf. English above), Moscow, "Energiya", 1971, 288 pp, ill. 1 r. 61 k. (from RZh-Radiotekhnika, No 6, Jun 71, Abstract No 6G200 K)

Translation: The book, which is written for TV repairmen, radio amateurs and students, contains schematic diagrams and basic information on black and white television receivers produced by the Soviet electronics industry from 1957 to 1968. In describing the circuits, principal attention is given to unified models and to television sets produced in the last 3-4 years. Bibliographic references are given at the end of the book.

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USSR

GERLIGA, V. A., YELYUKHIN, V. A., MOROZOV, I. I.

"Acoustic Instability of a Dissociating Gas Flow"

Tr. Vses. nauchno-tekhn. konferentsii po termodinamike. Leningr. tekhnol. in-t kholodiln. prom-sti (Works of the All-Union Scientific and Technical Conference on Thermodynamics. Leningrad Technological Institute of the Refrigeration Industry), Leningrad, 1970, pp 177-182 (from RZh-Mekhanika, No 11, Nov 70, Abstract No 11B475)

Translation: In this paper stability criteria are obtained in a small gas flow in a channel with heat input distributed along the length for cases of reversible (dissociation of molecular hydrogen) and irreversible (decomposition of acetylene) reactions. The pressure losses to friction, the gas acceleration and the variation of the thermophysical properties of the gas along the length of the channel are neglected, and the flow velocity is considered much less than the speed of sound. The Laplace transformation is applied to the linearized system for zero initial conditions and constant values of the pressure at both ends of the channel. The characteristic equation obtained is investigated by means of the Nyquist criterion.

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USSR

UDC 538.221+538.245

BELOV, K. P., YELYUTIN, O. P., KATAYEV, G. I., NIKITIN, S. A., PSHECHENKOVA, G. V., TARATYNOV, V. P., and SHUL'TE, L. A., Moscow State University imeni M. V. Lomonosov, Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Study of Magnetic Properties of Rare-Earth Dysprosium-Holmium-Erbium Alloys at a Temperature of 4.2° K"

Moscow, Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, Vol 36, No 6, 1972, pp 1247-1251

Abstract: The absence of systematic research on saturation magnetization for polycrystalline samples of rare-earth metals and their alloys makes it impossible to establish whether, in practice, they can be used as high-induction materials in fields up to 50 kOe at low temperatures. The purpose of the present article was to attempt to fill this gap. Pure rare-earth metals (obtained from the State Scientific Research and Planning Institute of the Rare Metals Industry) were studied, as well as dysprosium-holmium-erbium system alloys. Their magnetization curves were measured in fields up to 50 kOe at 4.2° K, values for coercive force and remanence were determined, and hysteresis loops were taken.

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USSR

UDC 669.295'292'71

YELIUTIN, O. P., KALININ, G. P., SOBOLEV, N. N., and CHEMLEVA, T. A., Moscow

"Optimum Planning of the Experiment in the Investigation of the Properties of Ti-V-Al Alloys"

Moscow, Izvestiya Akademii Nauk USSR, Metally, No 4, Jul/Aug 72, pp 234-238

Abstract: Mathematical methods of planning were used to establish diagrams of chemical composition and specific electric resistance for titanium-rich alloys of the Ti-V-Al system in the form of an improper simplex with the vertices x_1 (100% Ti), x_2 (60% Ti, 40% V), and x_3 (90% Ti, 10% Al). The use of D- and G-optimum plans made it possible to construct an adequate mathematical model of the investigated diagram by means of which the value of the specific electric resistance at any point of the system can be calculated. In applying mathematical methods to the investigation of composition and properties of multicomponent systems, computer technology can be effectively applied for processing experimental data, plotting and statistically analyzing the model of the investigated dependence, analytical calculations of the studied property, and for diagrammatic representation of modeling results. Three illustrations, one table, five formulas, seven bibliographic references.

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USSR

UDC 669.865.866.018.58 (088.8)

NIKELOV, K. P., YELYUTIN, O. P., NIKITIN, S. A., PSHECHENKOVA, G. V., SOKOLOV, V. I., TARTYNOV, V. P. [Central Scientific Research Institute for Ferrous Metallurgy imeni Bardin, Moscow University]

"A Magnetic Alloy"

USSR Author's Certificate No. 276423, Filed 21/04/69, Published 16/10/70.
(Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5, 1759P).

Translation: The alloy contains Er 20-80%, Ho 20-80%, and differs from the earlier known Fe-Co alloy (24,600 gauss) in its higher values of saturation magnetism (28,500 - 32,800 gauss) at cryogenic temperatures.

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USSR

UDC 669.861.5.864.018.58(088.8)

NIKELOV, K. P., YELYUTIN, O. P., NIKITIN, S. A., PSHECHENKOVA, G. V., SOKOLOV, V. I., TARTYNOV, V. P. [Central Scientific Research Institute for Ferrous Metallurgy imeni Bardin, Moscow University]

"A Magnetic Alloy"

USSR Author's Certificate No. 276424, Filed 21/04/59, Published 16/10/70.
(Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5, 1760P).

Translation: The alloy contains Er 40-80%, Dy 20-60% and differs from earlier known alloys in its higher values of saturation magnetism (28,500-32,800 gauss) at cryogenic temperatures.

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Rare Metals

UDC 669.018:669.017.538.23

USSR

BELOV, K. P., VELYUTIN, O. P., NIKITKIN, S. A., PSHECHENKOVA, G. V., SOKOLOV, V. I., and TARATYNOV, V. P., Moscow State University imeni M. V. Lomonosov and Central Scientific Research Institute of Ferrous Metallurgy imeni I. P. Bardin

"Magnetic Hysteresis of Rare-Earth Metals and Alloys"

Sverdlovsk, Fizika Metallov i Metallovedniye, Vol 30, No 6, Dec 70, pp 1146-1150

Abstract: A study was made of the hysteresis loops of rare-earth metals and alloys which possess a magnetic structure of the ferromagnetic spiral type (Dy-Er and Ho-Er). Ingots of rare-earth metals with a purity of 99.5% were made in a vacuum-arc zone furnace with a nonconsumable tungsten electrode and a water-cooled copper hearth. Melting was done under argon at a pressure of 300-400 mm Hg in two passes with rotation of the ingots. Samples 2.5 mm in diameter and 28 mm long were machined from the ingots and vacuum annealed for 24 hours at a pressure of 10^{-3} mm Hg. The magnetic characteristics were obtained in a superconducting solenoid (50 kilooersted) at 4.2°K. In this field the hysteresis properties of gadolinium, terbium, dysprosium, holmium,

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BELOV, K. P., et al, Fizika Metallov i Metallovedniye, Vol 30, No 6, Dec 70, pp 1146-1150

and erbium and alloys Dy-Er and Ho-Er were studied. A new type of hysteresis was observed in the alloys manifested by failure of the ferromagnetic spiral in a strong field. It was established that despite a vast magnetic anisotropy, cast samples of rare-earth metals and alloys, even under magnetization in a field of 50 kilooersted at 4.2°K, possess comparatively small values of the coercive force which does not exceed 10^3 oersted.

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