ACC NR: AT6034446 (A) SOURCE CODE: UR/0000/66/000/000/0124/0127

AUTHOR: Prokoshkin, D. A.; Vasil'yeva, Ye. V.; Chudarev, L. F.

ORG: none

TITLE: Investigation of creep in niobium alloys by the torsion method

SOURCE: AN SSSR. Institut metallurgii. Svoystva i primeneniye zharoprochnykh splavov (Properties and application of heat resistant alloys). Moscow, Izd-vo Nauka, 1966, 124-127

TOPIC TAGS: niobium base alloy, creep, titanium containing alloy, boron containing alloy, molybdenum containing alloy, torsion stress

ABSTRACT: The investigation was made on samples of niobium with 5, 8, and 10 weight percent molybdenum, alloyed with titanium (up to 10%), boron (up to 2%), and zirconium (up to 10%). A figure shows the dependence of the deformation on time for different temperatures, obtained by conventional and temperature cycle methods for a niobium alloy with 5% molybdenum and 0.5% boron. The closeness of the values of the creep rate at the same temperature, by the two methods, indicates that the temperature cycle method can be used even in the case of complex alloys. To obtain comparative values of the creep rate, the temperature interval of the experiments was varied somewhat as a function of the composition of the alloy. In particular, alloys containing 10%

Card 1/2

ACC NR: AT6034446

titanium and 10% zirconium were tested at lower temperatures. A second figure shows a semilogarithmic plot of the dependence of the deformation on temperature for a large number of different alloys. The values of the effective activation energy for creep can be determined from the slope of the straight on the plot. On the basis of the experimental results the conclusion is drawn that it is not possible to establish a correlation between the activation energy for the creep and the activation energy for autodiffusion. Orig. art. has: 3 figures.

SUB CODE: 11/ SUBM DATE: 10Jun66/ ORIG REF: 006/ OTH REF: 005

Card 2/2

SAVKINA, I.G.; YEVSTIGNEYEV, V.B.; CHUDAR, V.S.

Spectral and photochemical properties of chlorophyllides and pheophorbides. Biokhimiia 30 no.5:1071-1079 S-O '65.

(MIRA 18:10)

1. Institut biokhimii imeni A.N.Bakha AN SSSR, Moskva.

L 33357-66 EWP(e)/EWT(m)/EWP(w)/T/EWP(t)/ETI IJP(c) JD/WW/JG

ACC NR: AP6019643 SOURCE CODE: UR/0149/66/000/003/0118/0122

AUTHOR: Prokoshkin, D. A.; Vasil'yeva, Ye. V.; Chudarev, L. F.

ORG: Higher Technical School im. N. E. Bauman (Vyssheye tekhnicheskoye uchilishche)

TITLE: Investigation of some properties of niobium alloys

SOURCE: IVUZ. Tsvetnaya metallurgiya, no. 3, 1966, 118-122, and insert facing p. 122

TOPIC TAGS: niobium, niobium alloy, molybdenum containing alloy, titanium containing alloy, boron containing alloy, zirconium containing alloy, alloy property

ABSTRACT: The microstructure, room- and high-temperature hardness, oxidation and creep resistance, specific weight and electric resistance have been investigated in Nb + 5% Mo alloys additionally alloyed with 10% Ti, 2% B and 2% Zr. The alloys were melted from 99.78%-pure Nb, 99.95%-pure Mo, 99%-pure B and 99.9%-pure Ti and Zr in a nonconsumable electrode arc vacuum furnace, and homogenized in a vacuum of 10^{-4} mm Hg for 25 hr: alloys with Ti at 1400C and other alloys at 1600C. Cast and annealed Nb-Mo and Nb-Mo-Ti alloys had a single-phase microstructure without noticeable dendrite liquation. Alloying with boron brought about a clearly defined dendrite structure which remained after the addition of zirconium. Annealed alloys with boron contained segregations of a boride phase with a eutectic. Alloys with zirconium contained dispersed phases with a very complex composition. As the composition of the alloys

Card 1/3 UDC: 669.293.018

became more complex with each successive alloying, the specific weight of the alloys decreased continuously from 8.67 g/cm^3 in the initial Nb+5% Mo alloy to 7.75 g/cm^3 in Nb+5% M+10% Ti+2% B+2% Zr alloy. Simultaneously, the electric resistivity increased continuously from 18.8 to 44.0 μohm·cm, which is explained by the lattice distortion and increasing scattering of electrons. A similar continuous increase was observed in the hardness of the alloys, which increased from 156 HB in Nb+5% Mo alloy to 376 HB in the most complex Nb+5% Mo+10% Ti+2% B+2% Zr alloy, compared with 115 HB in annealed pure Nb. Hot hardness was measured in the 600—1100C range (see Fig. 1).

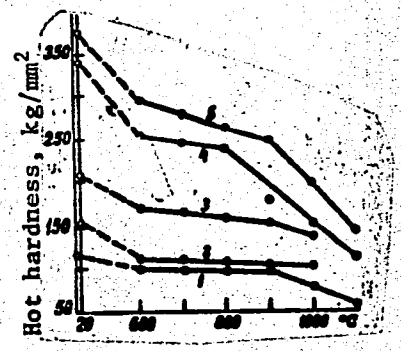


Fig. 1. Temperature dependence of the hardness of niobium and niobium alloys

1 - Nb; 2 - Nb+5% Mo; 3 - Nb+5% Mo+10% Ti; 4 - Nb+5% Mo+10% Ti+2% B; 5 - Nb+5% Mo+10% Ti+2% B+2% Zr.

L 33357-66

ACC NR: AP6019643

The rate of creep calculated from the data on hot hardness showed that boron-containing alloys had a low rate of creep, although their hot hardness increased significantly with increasing temperature. This is explained by the strengthening of the solid solution with molybdenum and by the formation of fine dispersed boride precipitates which block the shear planes. The oxidation resistance of niobium is most effectively increased by alloying with Mo and Ti, which forms $(Nb, Mo, Ti)_2O_5$ solid solution and a $5Nb_2O_5 \cdot 2TiO_2$ compound with monoclinic structures in the scale. Because diffusion of oxygen through the lattice of these phases is much slower than through the lattice of B-Nb_2O_5 scale on unalloyed niobium, the oxidation rate of the alloys with Mo and Ti is significantly lowered. Alloying with B and Zr in the amounts investigated (2% each) had no substantial effect on the oxidation resistance of the alloys. Orig. art. has: 1 figure and 2 tables. [MS]

SUB CODE: 11/ SUBM DATE: 18Jan65/ ORIG REF: 007/ OTH REF: 001/ ATD PRESS: 5026

Card 3/3 BLG

AM4007940 BOOK EXPLOITATION S/

Biryukov, Nikolay Mikhaylovich; Chudarev, Pavel Fedorovich (Docent)

Lectures on the course "Theoretical fundamentals of the manufacture and processes of aircraft parts" for students in evening classes (Lektsii po kursu "Teoreticheskiye osnovy* tekhnologii i protsessy* izgotovleniya detaley samoletov dlya studentov vechernego otdeleniya), Moscow, Oborongiz, 1963, 175 p. illus., biblio. Errata slip inserted. 1,200 copies printed. At head of title: Ministerstvo Vy*sshego i Srednego Spetsial'nogo obrazovaniya RSFSR. Moskovskiy ordena Lenina Aviatsionny*y institut im. Sergo Ordzhonikidze.

TOPIC TAGS: aircraft construction, industrial engineering, quality control, labor productivity, production cost, corrosion, aluminum alloys, magnesium alloys, sheet metal, extrusion, machining, forging, casting

PURPOSE AND COVERAGE: The author has been reading these lectures in the course "Theoretical Bases of the Technology and Processes of Aircraft Part Fabrication" at the Moscow Aviation Institute since the 1960 school year. There are 36 lecture hours. Considering the time limit and the large amount of information in the discipline, the authors have condensed the lectures and given the basic concepts and theoretical premises on the technological processes and their design, on the

Card 1/2

AM4007940

equipment and accessories used in fabrication of aircraft parts. The lecture course consists of two sections with five topics each. In the first section, "Theoretical Basis of Technology", are given the features of aircraft construction, the technological methods of improving the quality of the parts and raising the productivity of labor, and reducing production cost; a general methodology of designing the technological processes is given. The second section deals with the processes of making aircraft parts from sheet metal, extrusions, thin-walled tubes, rolled, stamped, and cast metal. The fundamentals of designing special accessories are also given. The experience of docents at MAI Candidate of Technical Sciences I. T. Belyakov, I. A. Zernov, and L. A. Konorov was used in preparing the lectures for publication.

TABLE OF CONTENTS [abridged]:

Card 2/3

VISHNYAKOV, D.Ya., doktor tekhn.nauk, prof.; SOVALOVA, A.A., kand.tekhn. nauk; CHUDAREVA, L.P., inzh.

Cementation of stainless steel. Trudy MATI no.50:17-27 '61. (MIRA 14:10)
(Steel, Stainless--Hardening) (Cementation (Metallurgy))

CHUDARS, Ya.[Cudars, J.]; SKVORTSOVA, N.; MAKSIMOV, R.

Comparison of the possibilities of determining the moisture content of building materials using neutron radiation and neutron backscattering methods. Izv. AN Latv. SSR no.10: 91-98 '62. (MIRA 16:1)

1. Institut fiziki AN Latviyskoy SSR.

(Building materials—Testing)
(Neutrons) (Moisture)

CHUDARS, Ya. [Cudars, J.]; SKVORTSOVA, N.

Physical basis for the determination of the moisture of peat by the neutron method. Izv. AN Latv. SSR no.5:75-83 '62.
(MIRA 16:7)

(Peat--Analysis) (Neutrons) (Moisture)

CHUDAR', Ya. E., SKOVORTSOVA, N. I.

"On the Possibility of Determining the Moisture of Peat by the Meutron Method"

paper presented at the All-Union Seminar on the Application of Radioactive Isotopes in Measurements and Instrument Building, Frunze (Kirgiz SSR), June 1961)

So: Atomnaya Energiya, Vol 11, No 5, Nov 61,pp 468-470

S/798/61/000/000/010/012

AUTHORS: Taure, I. Ya., Chudars, Ya. E.

TITLE: The method of multiple time coincidences.

SOURCE: Radioaktivnyye izlucheniya i metody ikh issledovaniya. Inst. fiz. AN LatvSSR. Riga, Izd-vo AN LatvSSR, 1961, 109-122.

TEXT: This paper reports an experimental investigation of radioactive-decay processes by means of the multiple-time-coincidence method, wherein the multiplicity of the time coincidence is carried to 4. Scintillation counters were used as detectors. A block diagram represents the equipment employed. The preparation S is surrounded by a cross-shaped pattern of 4 crystals. If cascade transitions occur in the S, the γ-quanta reach the counters simultaneously, and their pulses are brought to the coincidence circuit from which a signal is obtained that opens the gating circuit. Thus, only that γ-spectrum is analyzed, the lines of which correspond to cascade transitions. The problem of random coincidences is discussed separately. The multiple-time-coincidence method permits the investigation of γ-lines that are so weak that their investigation on a background of strong lines is impossible. It is also proposed that this method be used for the investigation of γ-spectra with due consideration of the time coincidence with β-particles (γβ coincidences) and also simultaneously with β-rays and with γ-quanta (γβγ and γβγγ coincidences). If these γ-spectra are observed with various thicknesses of an

Card 1/3

absorber layer placed in front of a crystal that registers basically β-particles only, then one may track down how the appearance of γ-lines in the spectra depends on the hardness of the β-rays and one may thereby assess the cascade transitions below that level at which a β transition with a specified energy comes to an end. The method of multiple coincidence applies to the investigation of complex β-spectra, if an anthracene crystal plate is placed before the photoelectric multiplier of the analyzing channel for the registration of β-rays alone. If in the other channels coincidences of γ-quanta with β-particles occur, the analyzing channel can yield the β-spectra βγ, βγγ, and βγγγ. With this method the relative intensities of the components of the complex β-spectrum will be altered and the weak β-components become susceptible to investigation. Also, such an experiment permits a quasi "partition" of a complex β-spectrum into its components which in certain cases (for example, for the maximum energy of the β-components) yields a more accurate result than is obtained from the summary β-spectrum. To investigate the background of random coincidences and to make measurements on delayed coincidences (0.1 to 5 μsec), delay lines are placed in the channels. When the coincidence of the channels is electronically not attained, the equipment will determine the random coincidence, the number of which is proportional to the value of the activity to the mth power, where m is the multiplicity of the coincidence. If quadruple random coincidences are registered, their number decreases extremely rapidly with the

degradation of the radioactive preparation as compared with the relative change as established by the ordinary method. If a channel load of 2,000* pulses/sec is assumed and the resolving time is $\tau = 10^{-6}$ sec, then over a time $t = 0.2T$ the load will decrease to 17,400 pulses/sec (i.e., 13%) by the ordinary method, but from 0.64 to 0.365 pulses/sec (i.e., by 43%) by the quadruple time-coincidence method. Therefore, the multiple-coincidence method is eminently suitable for the determination of the halflife of ling-lived isotopes. Details are provided on the overall circuitry, the photoelectric multipliers and scintillators, preamplifiers and discriminators, delay lines, coincidence and gating circuits, amplitude analyzers, and the pulse registration. The elaboration of the results, including the separation of the spectral background with its random and so-called "truly random" coincidence, is explained. There are 6 figures and 13 references (9 Russian-language Soviet and 4 English-language references, including Alan Mitchel, G.G., Rev.Mod.Phys., v. 20, no.3, 1954, 296; Langer, L.M., Starner, J.W., Phys.Rev., v.93, no.1, 1954, 253; Earnshow, J.B., Electronic Engrg., v.28, no.335, 1956, 26; Elmore, W., Sands, M., Electronics of nuclear physics (Russian translation). For. Lit. Publ. House. Moscow, 1953).

* (Footnote re line 2) Abstracter's note: Channel load more likely 20,000 p/sec.

ASSOCIATION: None given.

S/798/61/000/000/011/012

AUTHORS: Saulite, U.A., Chudars, Ya.E.

TITLE: A scintillation beta-spectrometer.

SOURCE: Radioaktivnyye izlucheniya i metody ikh issledovaniya. Inst. fiz. AN LatvSSR. Riga, Izd-vo AN LatvSSR, 1961, 123-134.

TEXT: This paper describes a scintillation β-spectrometer with a twin CsI(Tl) crystal and expounds a method for the calculation of the γ-ray background. There is also a description of several changes in the single-channel analyzer employed to achieve increased resolution; a discussion of the effect of the random summation of impulses in β-spectra. The new spectrometer consists of the crystal, an ФЭУ-29 (FEU-29) photoelectronic multiplier (PhM), a no-overload linear amplifier, a single-channel analyzer or an АИ-100-1 (AI-100-1) multichannel analyzer, a counter and a mechanical adder. Three CsI(Tl) laminae 19x9x2 mm were prepared; the 2-mm thickness is sufficient to register β-particles with maximum energies up to 4 mev. In the observation of β-spectra two such plates were used; the β-source was contained in a round pouch made out of 50-μ thick polystyrene. The third plate served as a β-particle absorber in observations of the γ-ray background. The PhM employed had a voltage-divider resistance of 7.115 Mohm and was equipped with a ferroresonance voltage stabilizer. Details of the single-channel amplitude analyzer are described. The spectrometer was calibrated with the aid of the Co^{60},

Card 1/2

A scintillation beta-spectrometer. S/798/61/000/000/011/012

Cs^{137}, and Hg^{203} isotopes for a NaI(Tl) crystal and for the twin CsI(Tl) crystal. The scale is linear. The resolution of the spectrometer for the Cs^{137} with a NaI(Tl) crystal is 12%, with a twin CsI(Tl) more than 20%. In the latter case the Compton distribution is intense. The separation of the noise and cosmic-ray spectrum F_1 from the spectrum F_2 of the electromagnetic radiation of the given β-preparation by means of the β-ray-absorbing third plate is described, and the number of absorbed rays is analytically estimated. Experimentally obtained F_1 and F_2 curves are also shown. The β-spectra of P^{32} and C^{45} are plotted in terms of the number of pulses registered in 30 sec, N, versus the energy E, and also as a Fermi graph. The Ca^{45} spectrum is correlated with the theoretical curve. The deviations at the high-energy end are attributed to the inadequate resolution of the spectrometer and to the random summation of the pulse amplitudes; those at the low-energy end are attributed to absorption in the foil. The experimental β-spectrum of a combined $Ca^{45} + P^{32}$ preparation is depicted in both the N-versus-E and the Fermi-graph form. The random summation of the amplitudes of the pulses in a β-spectrometer and their effect on the shape of the β-spectrum is analyzed, and it is shown that a correction for twofold and even threefold random summations should be calculated in certain cases. There are 11 figures, 2 tabulated calculation schemes, and 4 references (2 Russian-language Soviet papers and 2 Russian-language translations of English-language books: Beta and gamma-spectroscopy (Author's name not given). Fizmatgiz, Moscow, 1959; Elmore, E., Sands, M. Electronics in nuclear physics. For. Lit. Publ. House, Moscow, 1953).

Card 2/2

CHUDARS, Ya. Ye.

20695. Chudars, Ya. Ye. Perlodichnost koefitsiyenta prokhodimosti elektronnoy emissii. Isvestiya Akad. nauk Latv. SSR, 1949, No. 6, s. 149-62. -- Rezyume na latysh. yaz. - Bibliogr: s. 160-61

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

CHUDARS, Ya. E.

CHUDARS, Ya. E. -- "Effective Cross Section of Electrons Outside the substance in Relation to Electron Beams." Latvian State U, 1949 (Dissertation for the Degree of Candidate of Physicomathematical Sciences)

SO: Izvestiya Ak. Nauk Latviyskoy SSR, No. 9. Sept., 1955

CHUDARS, Ya. E. and TAURE I. Ya.

"Photomultiplier Voltage and Resolving Power of Scintillation Spectrometer," From thee book-(Physics and Techniques of Use of Radioisotopes), works of the Institute of Physics, Vol 9, edited by Ya. E. Chudars, Candidate of Physicomathematical Sciences; I. M. Taksar, Candidate of Physicomathematical Sciences; and L. L. Pelekis, Riga, Publishing House of the Academy of Sciences Latvian SSR, 1956, 165 pp

Sum in 1467

CHUDARS, Ya. E.

"Toward the Problem of the Attenuation of Monoenergetic Electron Beams with energies in the Range up to 3 Mev," from the book-(Physics and Techniques of Use of Radioisotopes), works of the Institute of Physics, Vol 9, edited by Ya. E. Chudars, Candidate of Physicomathematical Sciences; I. M. Taksar, Candidate of Physicomathematical Sciences; and L. L. Pelekis, Riga, Publishing House of the Academy of Sciences Latvian SSR, 1956, 165 pp

Sum in 1467

CHUDARS Ya. E. and TAURE, I. Ya.

"Variation of Parallel Beta-beam on Passage through Layers of Aluminum," from the book-(Physics and Techniques of Use of Radioisotopes), works of the Institute of Physics, Vol 9, edited by Ya. E. Chudars, Candidate of Physicomathematical Sciences; I. M. Taksar, Candidate of Physicomathematical Sciences; and Li. 1. Pelekis, Riga, Publishing House of the Academy of Sciences Latvian SSR, 1956, 165 pp

Sum in 1467

CHUDARS, Ya. E.

"Theory of Multiple Coincidences in Radioactive Decay Schemes;" from the book-(Physics and Techniques of Use of Radioisotopes), works of the Institute of Physics, Vol 9, edited by Ya. E. Chudars, Candidate of Physicomathematical Sciences; I. M. Taksar, Candidate of Physicomathematical Sciences; and L. L. Pelekis, Riga, Publishing House of the Academy of Sciences Latvian SSR, 1956, 165 pp

Sum in 1467

TSCHUDARS Ya.

AUTHOR: TSCHUDARS, Ja. PA - 2780

TITLE: Computation of the Attenuation of a Monoenergetic Electron Bundle in a Substance Layer. (Russian)

PERIODICAL: Latvijas PSR Zinatnu Akad. Westis, 1957, Vol 1, Nr 3 (116) pp 111 - 121 (U.S.S.R.)
Received: 5 / 1957 Reviewed: 6 / 1957

ABSTRACT: The results of the discussed approximation method for the computation of the attenuation of a monoenergetic electron bundle agree with the results found experimentally by G.G.SEELIGER (see table and curve 1, fig. 1 - 11).

Electrons with energy (MeV)	range mg/sm^D		
	Seeliger's Value	Formula by Kaz and Penfold Constant: 1,265	Formula by Kaz and Penfold Constant: 1,24
0,96	395	390,3	391
0,336	95	92,7	95,5
0,256	63	59,3	61,7
0,159	30,7	29,3	30,2

Card 1/3

Computation of the Attenuation of a Monoenergetic Electron Bundle in a Substance Layer. PA - 2780

The best agreement with experimental results is obtained by a modification of the constant of 1,265 to 1,24 in the formula found by Kaz and Penfold (see table). This approximation method was developed with a view of correcting the computed curves: in the first part by taking account of the theory of a single scattering, in the second part by taking account of the repeated reversed diffusion of the electron after deviation of the electron from the bundle. The probability of the penetration of the electron is $P(E_{o,x})_{corr} = P(E_{o,x}) - P'(E_{o,x}) + P''(E_{o,x})$, where $P(E_{o,x})$ denotes the approximated probability of the penetration of the electron without correction (curve 2, fig. 1 - 11), $P'(E_{o,x})$ - the correction factor for the single deviation and $P''(E_{o,x})$ - reversed deviation.

Conclusions:
The probability of the penetration of the monoenergetic electron into the interspace of up to 3 MeV through the substance layer is computed by the formula (1)

$$P(E_{o,x}) = 1 - e^{-\frac{Q^2}{\chi^2}} \qquad (1)$$

Card 2/3

Computation of the Attenuation of a Monoenergetic Electron PA - 2780
Bundle in a Substance Layer.

This formula answers the questions:
1) In what way is the monoenergetic parallel electron bundle attenuated in dependence on the thickness of the matter?
2) In what way does the intensity of the bundle at a certain layer of matter change on the occasion of a modification of the energy of the electrons? The computed values agree with experimentally values found by SEELIGER for aluminum, silver and lead.
In the case of the correction of $P''(E_{o,x})$ the formula (10) results for the correction of the coefficient for the reflection of monoenergetic rays of the substance layer.
(11 diagrams and 6 citations from publications)

ASSOCIATION: Institute for Physics of the Academy of Science of the U.S.S.R.
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress.

Card 3/3

CHUDARS, YA. E.

INOPIN, Ye. V.

AUTHOR: Varshalovich, D. SOV/53-65-4-7/13

TITLE: The VIII Annual Congress of Nuclear Spectroscopy (VIII yezhegodnoye soveshchaniye po yadernoy spektroskopii). I

PERIODICAL: Uspekhi fizicheskikh nauk, 1958, Vol. 65, Nr 4, pp. 721 - 722 (USSR)

ABSTRACT: The 8th Congress of Nuclear Spectroscopy took place in Leningrad from January 27 to February 3, 1958. It was attended by 300 scientists from the USSR, further by scientists from China, France, Poland, Czechoslovakia, Hungary, Eastern Germany, Yugoslavia, and the Mongol Democratic Republic. 4 main lectures and about 90 reports were heard. The main lectures dealt with problems concerning nuclear models, the α- and β-decay, γ-radiation, internal conversion, and nuclear isomerism. B.S.Dzhelepov, Corresponding Member, Academy of Sciences, USSR, opened the conference. Lectures were held by: V.Yu. Gonchar, Ye. V. Inopin, S.P.Tsytko (FTI,AS UkrSSR) on light nuclei and generalized nuclei models; L.K. Peker (BAN SSSR-Library AS USSR); Yu.M.Shirokov (MGU-Moscow State University), L.A.Sliv (LFTI-Leningrad Physical-Technical Institute) et al. on levels in Mg^{24}, Mg^{25} and Al^{25}; D.G.

Alkhasov, A.P.Grinberg, G.M.Gusinskiy, K.I.Yerokhina and I.Kh.Lemberg (LFTI) on having found no rotational levels at E(1 MeV in Cr, In, and Mn nuclei. The same research workers also reported on the discovery of vibrational γ-levels in W^{182}, W^{184}, W^{186}- nuclei by means of the method of the Coulomb (Kulon) excitation at $E_{exc} \sim 1$ MeV. L.K.Peker

(BAN SSSR) gave a survey report: "Concerning Some Particulars in Vibrational Levels of Deformed Nuclei". Lectures were held also by: D.F.Zaretskiy (AN SSSR - ASUSSR) on radiation transitions in deformed nuclei with the spin = 1/2; V.S. Shpinel' 2 NIFI MGU (2nd Scientific Research Institute of Physics, Moscow State University) on the level displacement and the probability of corresponding β - and γ - transitions in odd nuclei; D.F.Zaretskiy (AN SSSR - AS USSR) on the influence of the spin-orbital coupling upon the magnetic moments of the nuclei, A.I.Baz' (AN SSSR -AS USSR) on the existence of light nuclei with high neutron or proton excess; V.A.Kravtsov (LPI-Leningrad Polytechnic Institute) on the formation of nucleon pairs in nuclei; L.L. Gol'din, A. D. Piliya, G.N.Novikova, K.A.Ter-Martirosyan (TTL AN SSSR)

on alpha decay on rotational levels of odd nuclei; V.G. Nosov (AN SSSR - AS USSR) on alpha decay of nonspherical nuclei (survey); A.I.Alikhanov, G.P.Yeliseyev, V.A.Lyubimov, V.V.Erehler (TTL AN SSSR) on polarization measurements at electrons emitted in the β-decay of Tm^{170}, Lu^{177}, Ag^{198}, Sm^{153}, Re^{186} (ΔI= 0,1, π= -1) as well as in that of Sr^{90} and Y^{90} (ΔI= 2, π= -1); V.P.Rudakov (AN SSSR - AS USSR) on measurements of the (β-γ) angular correlations in Ba^{139}-decay; N.A.Burgov and Yu.V.Terekhov (TTL AN SSSR) on investigations of the electron-neutron correlations and the resonance scattering of γ-radiation; B.K.Kerimov and I.M.Nadzhafov (MGU-Moscow State University) on the bremsstrahlung of longitudinally polarized electrons; A.I.Mukhtarov and Yu.S. Perov (MGU) on the effective cross section of the scattering of polarized electrons and positrons at polarized electrons; Ya.E.Chudars and I.Ya.Taure (Riga) on the determination of the intensity of the components of the complex β-spectrum according to the Fermi diagram; I.M.Band, L.H.Zyryanova, and Yu.P.Suslov, LGU (Leningrad State University) on the computation of the probability of the permitted and of the forbidden capture of electrons by a nucleus.

CHUDARS, Ya. [Cudars, J.] (Riga); TAURE, I. (Riga); MEDNIS, I. (Riga); VEVERIS, O. (Riga)

Determination of boron concentration in the gaseous mixtures by the help of neutron beams. In Russian. Vestis Latv ak no.3:57-64 '60. (KEAI 10:7)

1. Akademiya nauk Latviyskoy SSR, Institut fiziki.
(Boron) (Gases) (Neutrons)

CUDARS, Jazeps; ZUMBERGA, M., red.; LEMBERGA, A., tekhn. red.

[Elementary particles] Elementardalinas. Riga, Latvijas PSR Zinatnu akademijas izdevnieciba, 1961. 86 p. (MIRA 15:3)
(Particles, Elementary)

PELEKIS, L.L., kand. fiz.-mat. nauk, otv. red.; PROKOF'YEV, P.T., kand. tekhn. nauk, red.; CHUDAR, Ya.E., kand. fiz.-mat. nauk, red.; YANUSHKOVSKIY, V.A., red.; TEYTEL'BAUM, A.[Teitelbaum, A.], red.; BOKMAN, R., tekhn. red.

[Methods for studying radioactive radiation] Radioaktivnye izlucheniia i metody ikh issledovaniia. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1961. 141 p. (MIRA 15:4)

1. Latvijas Padomju Socialistiskas Republikas Zinatnu Akademija. Fizikas instituts.
(Radioactivity)

9.6150

40506
S/263/62/000/013/013/015
I007/1207

AUTHOR: Saulite, U. A., Chudars, Ya. E.

TITLE: Scintillation β-spectrometer

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 13, 1962, 70, abstract 32.13.508. (Radioakt. izlucheniya i metody ikh issled. Riga, AS Lat SSR, 1961, 123–134)

TEXT: A scintillation β-spectrometer is described. It contains a double CsZ (Tl) crystal in the shape of a 19 × 9 × 2 mm lamella, a ΦEY-29 (FEU-29) photo-multiplier, a non-overloaded linear amplifier, a single-channel (or multi-channel) analyzer, a scaler, and a mechanical summing device. β-spectra were obtained by means of two lamellas and a β-source in the form of a round envelope of polystyrene foil (50 microns thick), placed between them. For measuring the background, the third CsI (Tl) lamella was used as a β-particle absorber. The spectrometer has a linear scale, a 12% resolution for Cs^{137} lines with a NaI (Tl) crystal and over 20% with a double CsI (Tl) crystal. It was calibrated by means of radioactive Co^{60}, Cs^{137}, and Hg^{203} isotopes. A description is given of the method for computing the background composed of noise spectra, cosmic radiation spectra, and electromagnetic radiations of the β-specimen itself. The influence of random summation of pulses in the β-spectra is analyzed and β-spectra for P^{32} and Ca^{45} are shown. There are 11 figures and 4 references.

[Abstracter's note: Complete translation.]

Card 1/1

SKVORTSOVA, N.I.; CHUDARS, Ya.E. [Cudars, J.]

Feasibility of determining the humidity of peat by the neutron method. Inzh.-fiz.zhur. 5 no.4:58-63 Ap '62. (MIRA 15:4)

1. Institut fiziki AN Latviyskoy SSR, Riga.
(Peat--Testing) (Neutrons)

S/058/62/000/008/008/134
A061/A101

AUTHORS: Taure, I. Ya., Chudars, Ya. E.

TITLE: The multiple time coincidence method

PERIODICAL: Referativnyy zhurnal, Fizika, no. 8, 1962, 14, abstract 8B83 (In collection: "Radioakt. izlucheniya i metody ikh issled.", Riga, AN LatvSSR, 1961, 109 - 122)

TEXT: An apparatus for taking γ-spectra with $\beta\gamma$, $\gamma\beta\gamma$, and $\gamma\beta\gamma\gamma$ coincidences is described. This apparatus permits the study of successive transitions and complex β-spectra. It features four coincidence channels and a linear transmission channel controllable by the coincidence signal. The coincidence circuit is provided by the standard device "Yablonya" with the best resolution of $\sim 10^{-7}$ sec. Formulas allowing for accidental coincidence corrections are given.

L. Landsberg

[Abstracter's note: Complete translation]

Card 1/1

SKVORTSOV, Aleksandr Aleksandrovich. Prinimali uchastiye: BUNIN, V.S., mladshiy nauchnyy sotrudnik; CHUDAYEV, M.G., starshiy tekhnik. MOROZOV, G.N., red.; LARIONOV, G.Ye., tekhn.red.

[Compensating devices of heat piping systems] Kompensatsionnye ustroistva teplofikatsionnykh truboprovodov. Moskva, Gos.energ. izd-vo, 1961. 143 p. (MIRA 15:5)
(Heating from central stations)
(Steampipes)

CHUDAYEV, N.

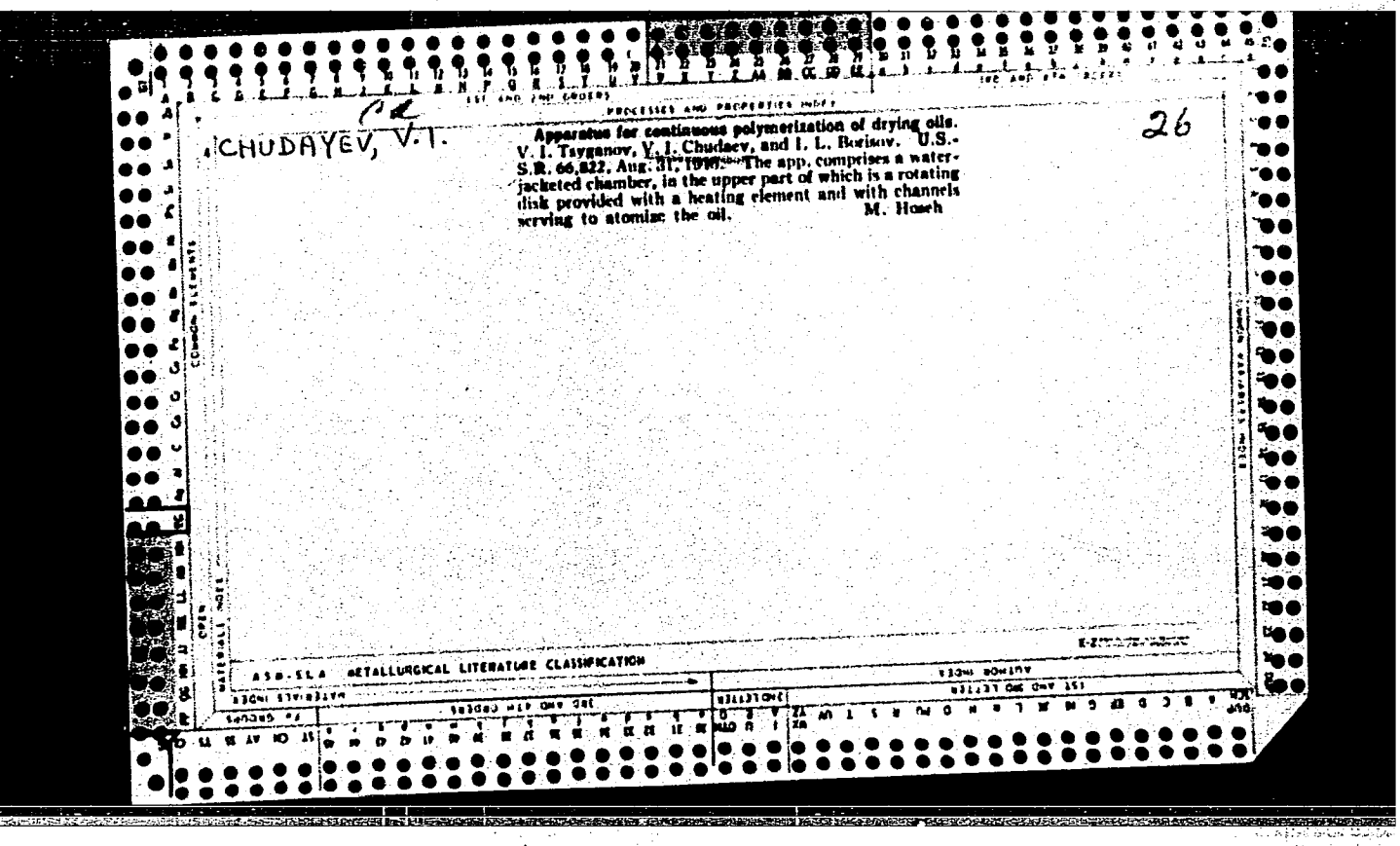
Locksmith's drill for rough grinding. Prom.koop. no.11:33 N '55.
(MLRA 9:5)

(Drilling and boring machinery)

CHUDAYEV, V.

36108 Proverka i graduirovka izmeritel' nykh priborov. Radio, 1949, No. 11, S. 46.

SO: Letopis' Zhurnal' nykh Statey, No. 49, 1949



CHUDAYEV, V.I.

26

Apparatus for continuous polymerization of drying oils. V. I. Tayganov, V. I. Chudaev, and I. L. Rozinov. U.S.S.R. 66,822, Aug. 31, 1946. The app. comprises a water-jacketed chamber, in the upper part of which is a rotating disk provided with a heating element and with channels serving to atomize the oil. M. Hoseh

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

CHUDAYEV, Ya.F., dotsent, kandidat tekhnicheskikh nauk (Stalinsk)

Approximation method of investigating torsion of a prismatic shaft. Issledovaniia po teorii sooruzhenii. Sbornik statei no.6: 319-327 '54. (MLRA 7:11)
(Structures, Theory of) (Strains and stresses) (Elastic plates and shells)

DANILOV, P.M.; KONOVALOV, K.N.; TEDER, L.I.; CHUDAYEVICH, M.G.

Improvements in the technology of smelting and pouring transformer steels. Fiz.met.i metalloved. 1 no.1:139-142 '55. (MLRA 9:3)

1. Kuznetskiy metallurgicheskiy kombinat imeni Stalina.
(Sheet steel--Metallurgy)

CHUDAYEVICH M. G.

TOLSTOGUZOV, N. V., KONOVALOV, K. N., GLAZOV, A. N., TEDER, L. I., DANILVO, P. M. SHIRINKIN, E. N. and CHUDAYEVICH, M. G.

CHUDAYEVICH M.G.

"Vacuum Treatment of the MX 15-Steel and Commercial Experience of the Vacuum Transformer Steel Treatment."

paper presented at Second Symposium on the Application of Vacuum Metallury.

Moscow 1-6 July 1958

CHULDAYEVICH, N.G.

PHASE I BOOK EXPLOITATION SOV/4548

Akademiya nauk SSSR. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali

Primeneniye vakuuma v metallurgii (Use of Vacuum in Metallurgy) Moscow, Izd-vo AN SSSR, 1960. 334 p. Errata slip inserted. 4,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali.

Resp. Ed.: A.M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: G.M. Makovskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steelmaking practice and equipment.

COVERAGE: The book contains information on steel melting in vacuum induction furnaces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of steel and alloys. The functioning of apparatus and equipment, especially vacuum furnaces and vacuum booster pumps is also analyzed. Personalities are mentioned in connection with some of the articles and will appear in the Table of Contents. Three articles have been translated from English. Some of the

45

CHUDAYKIN, A.V.

Automatic impactor for investigating aerosols with a solid disperse phase in the free atmosphere. Trudy Vysokogor. geofiz. inst. AN SSSR 2:79-82 '61. (MIRA 14:12)

(Cloud physics)
(Meteorological instruments)

STAROSTINA, R.F.; CHUDAYKIN, A.V.

Cloud droplet traps used in the Elbrus Expedition. Trudy Vysokogor. geofiz. inst. AN SSSR 2:72-78 '61. (MIRA 14:12)
(Cloud physics)
(Meteorological instruments)

36237
S/169/62/000/003/046/098
D228/D301

3,5800

AUTHOR: Chudaykin, A. V.

TITLE: Method of investigating the microstructure of thick cumulus and thunderclouds

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 3, 1962, 23-24, abstract 3B186 (V sb. Fiz. oblakov i osadkov, v. 2 (5), M., AN SSSR, 1961, 199-204)

TEXT: The author describes a "discardable snare" (DS), which rises on a sounding-balloon shell and is automatically uncoupled at a set height by means of a pressure-box system. The DS is convenient for observations in difficultly-accessible thick cumulus and thunderclouds. The rate of the fall of the DS through a cloud equals 50 m/sec. 16-mm cinefilm, on which a layer of carbon black coated with a 5 - 6 μ layer of magnesium oxide has been applied, serves as the reception part. The film goes past a slot, 1.5 mm in width, at a rate of 7 - 8 mm/sec. Drops with a diameter of more than 6 μ left a clear imprint on the film. The film length of 10 - 12 m ensures the

Card 1/2

Method of investigating ...

probing of a cloud with a thickness of 4 - 5 km. A parachute which opens automatically before landing, and the placing of the device on shock absorbers in a special wire framework ensures preservation of the instrument on landing. Automatic signalling by a light rocket at the moment of the parachute's opening and application of radar and a miniature radio-transmitter for the simplest direction-finding facilitate the search for the DS after it has landed. The apparatus for applying the layer of carbon black and magnesia onto the film and the contrivance for microphotographing the film after the collection of a sample are briefly described. The results of observations in thick cumulus cloud are quoted for an example. The aircraft version of the snare is described. [Abstracter's note: Complete translation.]

Card 2/2

L 15594-63 EWT(1)/EPF(n)-2/BDS AFFTC/ASD/ESD-3/SSD Pu-4 68
ACCESSION NR: AT3006861 S/2560/63/000/015/0071/0080 64

AUTHOR: Kazachevskaya, T. V.; Arkhangel'skaya, V. A.; Ivanov-Kholodnyy, G. S.; Medvedev, V. S.; Razumova, T. K.; Chudaykin, A. V.

TITLE: Measurement of x- and ultraviolet radiation with thermoluminescent phosphorus $CaSO_4$ (Mn)

SOURCE: AN SSSR. Iskusst. sputniki Zemli, no. 15, 1963, 71-80

TOPIC TAGS: rocket investigation, solar ultraviolet radiation, solar radiation, thermoluminescent phosphorus, solar eclipse investigation, ionospheric penetrating radiation

ABSTRACT: A device based on the principle of recording short-wave radiation with $CaSO_4$ (Mn) thermoluminescent phosphorus has been developed by the Institut prikladnoy geofiziki (Institute of Applied Geophysics) to measure solar ultraviolet and x-radiation. The phosphorus stores up energy during irradiation and then reemits it in the visible region of the spectrum when heated. The brightness of the emission, as well as the total energy (light total), is proportional within broad limits to the energy of irradiation. It has been established that $CaSO_4$ (Mn) phosphorus is sensitive only to emission with wavelengths from 1 to 1300 Å and

Card 1/2

L 15594-63

ACCESSION NR: AT3006861 2

does not become saturated during irradiation intensity changes of even five orders. The phosphorus was used on a rocket to measure the intensity of penetrating radiation in the lower part of the ionosphere during the solar eclipse of 15 February 1961. Unlike the use of thermoluminescent phosphorus in rocket measurements in the U. S. A., where the phosphorus is reemitted in the laboratory after retrieval of the container, the phosphorus used in the test of 15 February 1961 was reemitted during the flight, thus reducing the error. Calibration measurement was performed in flight with the use of a constant-action etalon sample. The measurement error in determining the energy of UV radiation was 55%; for x-radiation it was 30%. The intensity of radiation at a height of 95 km was about 7×10^7 quanta cm^{-2} sec^{-1}, while at a height of 67 km it was 500 times lower. This radiation exceeds the theoretically computed maximal solar x-radiation by 50 to 100 times. "The authors thank S. V. Repolovskiy for help in developing the device and carrying out tests and also T. A. Krasnovaya for preparing calibrated luminescent substances." Orig. art. has: 4 tables, 3 figures, and 8 formulas.

ASSOCIATION: none

SUBMITTED: 10May62 DATE ACQ: 29Jul63 ENCL: 00

SUB CODE: AS NO REF SOV: 014 OTHER: 007

Card 2/2

CHUDAYKIN, Z.

AID - P-26

Subject : USSR/Aeronautics

Card : 1/1

Author : Chudaykin, Z., Lt. Col.

Title : Officer Kompaniychenko, S. N., Skillfully Teaches Pilots Air Gunnery

Periodical : Vest. vozd. flota, 2, 28 - 32, February 1954

Abstract : In addition to the name of Officer Kompaniychenko, who is described as a prominent instructor in air gunnery, names of several other airmen, instructors and trainees, appear in the text. The gunnery training apparatus, STL-1, and STL-2, are also mentioned. The instruction program is described only in very general terms. Photo page 28 shows Major Kompaniychenko in uniform.

Institution : None

Submitted : No date

CHUDBIN, L., Geroy Sovetskogo Soyuza, mastor sprota

Solo flight. Kryl.rod. 11 no.6:5 Je '60. (MIRA 13:7)
(Krasnoyarsk--Flight training)

CHUDECKA, J.

"Cutting material without scraps." p. 150. (OZIEZ, Vol. 4, no. 7, July 1953, Lodz, Poland)

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

L 2h703-65 ARG/EEO-2/EWT(d)/FBD/FSF(h)/FSS-2/EWT(l)/FBO/FS(v)-3/EEC(k)-2/
[illegible]/FCS/EWG(v)/EWP(c)/PCC/EPR/EEC(t)/EWP(b) [illegible]/Pa-5/
[illegible] Pg-4/Pae-2/Pi-4/Pk-4/Pw-4/Pl-4 IJP(c) [illegible]

AUTHOR: Chudej, I. (Engineer); Kladensky, M. (Engineer); Stefan, J.

TITLE: Experimental rockets

SOURCE: Letecky obzor, no. 11, 1964, 335

TOPIC TAGS: meteorological rocket, rocket guidance system, rocket parachute release, atmospheric research

ABSTRACT: Brief descriptions are given of two Czechoslovak meteorological rockets: the STA 3 which was lofted on Oct. 3, 1962 and the SUP-1 which was lofted on Dec. [illegible] 1963. The first weighed 6.45 kg with fuel, was 1050 mm long and climbed to [illegible] m at a maximum speed of 170 m/sec. The second weighed 18.1 kg with fuel, [illegible] cm long, developed 260 kp thrust and a maximum speed of [illegible] m/sec. in vertical flight. Diagrams in the article show the relative positon of the parachute release timer, parachute locker, electronic apparatus, rocket motor, stabilizer fins, antennae, casing, reserve timer for the parachute, accelerometer and recorder, guidance system recorder, gyroscopes and electronic amplifier, servomotor, guidance fins, and batteries in the SUP-1. Orig. art. has: 2 photographs.

Card 1/2

L 24703-65

ACCESSION NR: AP4049875

ASSOCIATION: none

SUBMITTED: 00	ENCL: 00	SUB CODE: ES, SV
NO REF SOV: 000	OTHER: 000	

Form 2/2

CHUDEK, Miroslaw, mgr.,inz.

Combined lining of vertical excavations. Przegl gorn 17 no.12: 631-637 '61.

CHUDEK, Miroslaw, mgr., inz.; MAKOWSKI, Jerzy, mgr.

Modern methods for testing rocks, brick lining and determining the water inflow into mine works. Przegl gorn 18 no.4:205-213 Ap '62.

CHUDEK, Miroslaw, mgr inz.

Water premeability of shaft brick lining. Przegl gorn 19 no.3:128-136 Mr '63.

CHUDEK, Miroslav; PODKORSKI, Kazimierz

Rising headings of more than the standard size diameter of the pits. Gornictwo Gliwice no.3:81-103 '61.

CHUDEK, Miroslaw

Deformations and state of stresses of water-permeable walling of shafts. Gornictwo Gliwice no.5:99-122 '63.

CHUDEK, Miroslaw

Calculation of the thickness and resolution of stresses in a tubing concrete lining of which the rings are bound by the natural cohesion of materials. Gornictwo Gliwice no.6:59-76 '63.

CHUDEK, Miroslaw

Contribution to the problem of cooperation between concrete tubbing and rocks. Archiw gorn 8 no. 2:153-165 '63.

CHUDEK, Miroslaw

Problem of thickness and state of stresses of a circular concrete lining of a pit shaft and the pressure of water flowing through it in laminary motion. Archiw gorn 9 no.1:43-83 '64.

CHUDEK, Miroslaw, dr. inz.

Some problems of design and calculation of the pliable metal lining of dog headings. Przegl gorn 20 no.3:105-113 Mr '64.

CHUDEK, Miroslaw

Contribution to the determination of proper cooperation of a walled shaft lining with water-bearing strata. Gornictwo Gliwice no.7:65-98 '63.

CHUDEK, Miroslaw

Influence of the equipment and ventilation indicator on the size of the transverse cross section of the pit shaft. Gornictwo Gliwice no.6:177-125 '63.

CHUDEK, Miroslaw

Analysis of causes for falling rocks in working headings. Gornictwo Gliwice no.9:69-108 '64.

CHUDEK, Miroslaw, dr inz.

Behavior of LP lining in wall-adjoining galleries in the Z mine. Wiadom gorn 15 no.10:308-313 0'64

CHUDEK, Miroslaw, doc. dr inz.

Controlling the pit shaft linings while mining their protection pillars. Wiadom gorn 16 no.1:14-19 Ja '65.

CHUDEK, Miroslaw, dr inz. (Gliwice)

Problem of water flow through wall pipes constructed for mining purposes. Archiw hydrotech 10 no. 4: 565-585 '63.

CHUDEK, Miroslaw, dr inz.

Distribution of stresses in circular masonry lining of rising headings. Przegl gorn 20 no. 2: 60-67 F '64.

CHUDENKOV, V.

In the bureaus of industrial design; Leningrad. Tekh. est. 2 no.7:36 Jl '65. (MIRA 18:8)

DUSHINA, O.P.; MITROFANOVA, L.I.; CHUDENTSOVA, Ye.N.; SAVCHENKO, N.T.

Case of isolation of atypical Brucella from murine rodents in the Chechen - Ingush Autonomic Republic. Zhur. mikrobiol., epid. i immun. 41 no.3:143-144 Mr. '64. (MIRA 17:11)

1. Checheno-Ingushskaya respublikanskaya sanitarno-epidemiologicheskaya stantsiya.

GINDIN, Ye.Z.; LEYKIN, G.A.; LOZINSKIY, A.M.; MASEVICH, A.G.; AL'PERT, Ya.L.; CHUDESENKO, M.F.; SHAPIRO, B.S.; GAIKIN, A.M.; GORLOV, O.G.; KOTOVA, A.P.; KOSOV, I.I.; PETROV, A.V.; SEDOV, A.D.; CHERNOV, V.N.; YAKOVLEV, V.I.; MIKHAYLOV, A.A., otvetstvennyy red.; BEN'KOVA, N.P., doktor fiz.-mat. nauk, otvetstvennyy red.; SILKIN, B.I., red.; PODOL'SKIY, A.D., red.; PEUSAKOVA, T.A., tekhn. red.

[Preliminary results of the scientific research on the first Soviet artificial earth satellites and rockets; collection of articles in the 11th section of the IGY program (rockets and satellites)] Predvaritel'nye itogi nauchnyykh issledovanii s pomoshch'iu pervykh sovetskikh iskusstvennykh sputnikov zemli i raket; sbornik statei (XI razdel programmy MGG - rakety i sputniki). Moskva, Izd-vo Akad. nauk SSSR. No.1. 1958. 148 p. (MIRA 11:10)

1. Russia (1923- U.S.S.R.) Mezhduvedomstvennyy komitet po provedeniyu Mezhdunarodnogo geofizicheskogo goda. 2. Chlen-korrespondent AN SSSR (for Mikhaylov).

(Atmosphere, Upper—Rocket observations)
(Artificial satellites)

AUTHORS: Al'pert, Ya. L., Dobryakova, F. F., Chudesenko, E. F., Shapiro, B. S. SOV/53-65-2-1/14

TITLE: On Some Results Obtained When Determining the Electron Concentration of the Exterior Domains of the Ionosphere by the Observation of Radiosignals Emitted by the First Earth Satellite (O nekotorykh rezul'tatakh opredeleniya elektronnoy kontsentratsii vneshney oblasti ionosfery po nablyudeniyam za radiosignalami pervogo sputnika Zemli)

PERIODICAL: Uspekhi fizicheskikh nauk, 1958, Vol. 65, Nr 2, pp. 161-174 (USSR)

ABSTRACT: The first Sputnik was equipped with an automatic radio transmitter which operated on frequencies of 20 and 40 megacycles. The low degree of absorption of these radiowaves in the ionosphere made it possible to draw important conclusions on the strength of these radiosignals with respect to the properties of the ionosphere.
The authors of this paper discuss one of the possible methods of utilizing the radiosignals emitted by the Sputnik; this method is based upon the determination of the "radio-rising" and "radio-setting" of the Sputnik, which takes place earlier and

Card 1/5

On Some Results Obtained When Determining the Electron Concentration of the Exterior Domains of the Ionosphere by the Observation of Radiosignals Emitted by the First Earth Satellite

later respectively than optical rising and setting. These observations made it possible to determine an electron concentration (which is at about 320 km), of the concentration of neutral particles, as well as of the "boundary", where the atmosphere of the earth comes into contact with the interplanetary gas. It is not claimed that these first data obtained about the outer ionosphere are accurate; they merely serve as a first means of orientation with respect to prevailing conditions. The authors carried out their investigation on the basis of radio observations of the Sputnik which were made on the 5. June and 7. October 1957; among the available material which comprised about 600 statements of time of the beginning and end of radio signals there were from 60 to 70 cases which could be utilized in practice for the determination of

$$\frac{\omega_c}{\omega} < \frac{\omega_c}{\omega_\vartheta} \quad \text{and} \quad \frac{\omega_c}{\omega} \gtrsim \frac{\omega_c}{\omega_\vartheta}$$ respectively.

On Some Results Obtained When Determining the Electron Concentration of the Exterior Domains of the Ionosphere by the Observation of Radiosignals Emitted by the First Earth Satellite

SOV/53-65-2-1/14

(ω = transmitting frequency of the Sputnik, ω_g = the boundary values of frequency, $\omega_c = 3,18.10^9 N_M$, N_M = maximum of electron concentration). For electron concentrations higher than in the case of the maximum concentration the authors obtained the following formula:

$$N = 1,8.10^6 e^{-3,5.10^{-3}(z-320)}$$ (z = height in km)

The region above an altitude of about 600 km is called "exosphere" by the authors. It was found that at altitudes of several 1000 km the state of the earth's gas shell approaches the state of the interplanetary gas. The authors obtained the following values for the electron density and the density of neutral particles:

altitude in km	200	320	400	1150	1800	2460	3120	
electrons	$\sim 10^5$	$1,8.10^6$	$1,4.10^6$	$\sim 10^5$	10^4	10^3	10^2	/cm^3
neutral particles	5.10^9	$\sim 2.10^8$	$\sim 10^8$ (6.10^8)	5.10^4 (2.10^5)	$\sim 10^2$ (2.10^3)	<1 (20)	- (<1)	/cm^3 /cm^3

Card 3/5

The following values were obtained for the electron recombination coefficient α and the solar radiation S:

$z_M \sim 320$ km S_M 0,2 erg/cm^{2}sec $\alpha_M \sim 10^{-10}$ cm^3/sec

$z_M \sim 400$ km S_M 0,3 erg/cm^{2}sec $\alpha_M \sim 10^{-11}$ cm^3/sec (Table 1)

$z \gtrsim 1000$ km S_∞ 0,6 erg/cm^{2}sec $\alpha_\infty \sim 10^{-12}$ cm^3/sec

(The index M denotes the maximum electron density in the respective region). The following values were obtained for the life of the electrons τ_e and the time between ionization acts τ_H:

z (km)	τ_H	τ_e
≈320	$\sim 5.10^7$	$\sim 5.10^3$
~400	$\sim 3.10^7$	$\sim 7.10^4$

Card 4/5 (26)

On Some Results Obtained When Determining the Electron Concentration of the Exterior Domains of the Ionosphere by the Observation of Radiosignals Emitted by the First Earth Satellite

SOV/53-65-2-1/14

z(km)	τ_H	τ_e
≃1150	$\sim 2.10^7$	$\sim 10^7$
≃1800	$\sim 2.10^7$	$\sim 10^8$
≃2450	$\sim 2.10^7$	$\sim 10^9$

with $\tau_e \simeq 1/\alpha N$ and $\tau_H \simeq \frac{1}{\sigma S l_{tl}}$

For the quasi-steady ratio $n/N \sim \tau_H/\tau_e$ with (26) the values given in brackets in table 1 are found for the concentration of the neutral particles. There are 9 figures, 1 table, and 9 references, 5 of which are Soviet.

1. Satellite vehicles 2. Radio transmitters--Performance
3. Electrons--Determination 4. Ionosphere--Properties
5. Radio waves--Absorption

Card 5/5

SOV/20-120-4-15/67

AUTHORS: Al'pert, Ya. L., Dobryakova, F. F., Chudesenko, E. F., Shapiro, B. S.

TITLE: On the Results Obtained by Determining the Electron Concentration of the External Region of the Ionosphere on the Basis of Radio Signals Emitted by the First Earth Satellite (O rezul'tatakh opredeleniya elektronnoy kontsentratsii vneshney oblasti ionosfery po nablyudeniyam za radiosignalami pervogo sputnika zemli)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol. 120, Nr 4, pp.743-746 (USSR)

ABSTRACT: The measurements mentioned in the title are based upon the determination of the time of the "radio-rising" and "radio-setting" of the satellite. In this way data were obtained concerning the distribution of the concentration N of the electrons in the ionosphere above the maximum concentration N_{max}: on these data are based hypothetical conceptions concerning the properties of the interplanetary gas. The measuring method and its utilization is described relatively

Card 1/3

On the Results Obtained by Determining the Electron Concentration of the External Region of the Ionosphere on the Basis of Radio Signals Emitted by the First Earth Satellite

in detail. The authors here investigate the results obtained from the radio signals transmitted by the satellite which were received on the 5, 6, and 7 October 1957 at 6 different points. Those cases were selected in which a pure "radio-rising" or "radio-setting" of the satellite could be observed on the frequency of 40 megacycles. For these points and for this period the most frequent altitudes of the various strata of the ionosphere are given. For N_{max} the value $1,8.10^6$ is found. In an altitude of 500-600 km (in the so-called exosphere) the temperature of the gas must not be lower than in lower altitudes . At this altitude ionization is nearly steady. In altitudes of about 2000 to 3000 km the concentration of electrons at the above mentioned conditions amounts to from 10^3 to 10^2 electrons per cm^3, and therefore this volume must contain also the same number of positive ions. In these altitudes the terrestrial atmosphere probably borders upon the interplanetary gas. Also the density of the neutral particles is probably greater in altitudes of 320-400 km than has hitherto been assumed and mentioned in published works. There are

SOV/20-120-4-15/67

On the Results Obtained by Determining the Electron Concentration of the External Region of the Ionosphere on the Basis of Radio Signals Emitted by the First Earth Satellite

4 figures, 1 table, and 5 references, 1 of which is Soviet.

PRESENTED: March 31, 1958, by V. A. Kotel'nikov, Member, Academy of Sciences, USSR

SUBMITTED: February 12, 1958

1. Electrons--Abundance 2. Ionosphere--Analysis 3. Radio signals--Applications 4. Satellite vehicles--Applications

Card 3/3

SIMAKIN, A.M.; BARABANOV, V.Ye.; BORISOV, A.M.; AFONITOSHIN, V.N.; GRIBKOV, V.M.; CHUDESOV, I.D.; VOLCHKOV, B.A.; KUZNETSOVA, M.Ya., red.

[Technology of the maintenance of ZIL-150, ZIL-164 and ZIL-585 motor vehicles in agriculture] Tekhnologiia tekhnicheskogo obsluzhivaniia avtomobilei ZIL-150, ZIL-164 i ZIL-585 v sel'skom khoziaistve. Moskva, 1963. 78 p. (MIRA 17:9)

1. Perovo. Gosudarstvennyy Vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskiy institut remonta i ekspluatatsii mashinno-traktornogo parka. 2. Laboratoriya tekhnologii remonta i tekhnicheskogo obsluzhivaniya avtomobiley i reziny Gosudarstvennogo soyuznogo nauchno-issledovatel'skogo tekhnologicheskogo instituta.

CHUDESOV, I.D.; BORISOV, A.M.; ZAYTSEVA, S.I.; DOLGOPOLOV, N.L.; KRAVTSOV, Yu.I.; VOLK, P.I.

[Technology of the repair of tires of motor vehicles, tractors and agricultural machinery] Tekhnologiia remonta shin avtomobilei, traktorov i sel'skokhoziaistvennykh mashin. Moskva, 1963. 200 p. (MIRA 18:5)

1. Perovo. Gosudarstvennyy vsesoyuznyy nauchno-issledovatel'skiy tekhnologicheskiy institut remonta i ekspluatatsii mashinno-traktornogo parka.

VLASOVA, K.N.; CHUDINA, L.I.; ZAVEL'GEL'SKIY, L.M.; GULYAYEVA, S.I.; BAKHAREVA, L.T.

Use of thermoplastic glue based on low-molecular polyamide resins in shoe manufacture. Kozh.-obuv. prom. 6 no.8:30-31 Ag '64.
(MIRA 17:10)

CHUDESOVA, L. M.

AUTHORS: Voronkov, M. G., Chudesova, L. M. 62-11-28/29

TITLE: Fission of Organosiloxanes by Halogensilanes (Rasshchepleniye organosiloksanov galogensilanami)

PERIODICAL: Izvestiya AN SSSR, Otdel.Khim.Nauk, 1957, Nr 11, pp. 1415-1415 (USSR)

ABSTRACT: This is a letter to the editor. It was ascertained by the authors, that the siloxane-bond in organosiloxanes can be separated according to the following general scheme:

$$R_3SiOSiR_3 + R'_3SiX \rightleftarrows R_3SiOSiR'_3 + R_3SiX \qquad (1)$$

X is a halogen, R and R' similar or different organic or silicon-organic radicals, H, Halogen etc., where it is valid $R \neq R'$. This reaction is caused by a simple reactification of the mixture of initial reagents, into which during the distillation the catalyst is gradually introduced and by which measure in consequence of the removal of the component with the lowest boiling point the reaction equilibrium is dislocated. Some examples are given where this new reaction could be applied.

ASSOCIATION: Institute for Silicate Chemistry of the AN USSR (Institut khimii silikatov Akademii nauk SSSR)

Card 1/2

Fission of Organosiloxanes by Halogensilanes. 62-11-28/29

SUBMITTED: June 24, 1957

AVAILABLE: Library of Congress

Card 2/2

5(3)

AUTHORS: Voronkov, M. G., Chudesova, L. M. SOV/79-29-5-28/75

TITLE: Cleavage of Siloxanes With Halogen-silanes, Reported on May 14, 1958 at the Symposium for Organosilicon Chemistry in Dresden (Rasshchepleniye siloksanov galogensilanami)
New Synthesis Method of Organosiloxanes (Novyy metod sinteza organosiloksanov)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 5, pp 1534-1541 (USSR)

ABSTRACT: The present paper is a further development of the initiated investigations (Refs 1,2,7,8,17,20-26) of the cleavage of organosiloxanes by means of electro- and nucleophilic reagents. The possibility of a cleavage of the siloxane bond by means of halogen- or organohalogen silanes according to the general scheme $(4 - n)R_3SiOSiR_3 + R'_nSiX_{4-n} \rightleftharpoons R'_nSi(OSiR_3)_{4-n} + (4 - n)R_3SiX$ is demonstrated. n = 0 - 3, X = halogen, R and R' = equal or different organic (aliphatic and aromatic) or organosilicon radicals, H, halogen, etc. This reaction which represents a rearrangement of the Si-O-Si and Si-X bonds is a new, convenient and simple method of synthesizing different organosiloxanes. By this method 14 compounds were synthesized. 6 of them were so far unknown (Table 1). This

Card 1/3

reaction is in equilibrium. The reaction mechanism of the cleavage of siloxanes with halogen silanes in the presence of ferric chloride can be illustrated by the following scheme:

$$R'_3SiX + FeX_3 \rightleftarrows R'_3Si^+ + FeX_4^-$$

$$R_3SiOSiR_3 + R'_3Si^+ \rightleftarrows (R_3Si)_2\overset{+}{O}SiR'_3 \rightleftarrows R_3SiOSiR'_3 + R_3Si^+$$

By the interaction of the R_3Si^+ ions formed in this way with FeX_4^- anion the catalyst is regenerated and a new halogen silane formed. In the course of the reaction the catalyst gradually loses its activity and must always be regenerated. The total consumption of the catalyst amounts up to 5-8 mole%. The cleavage of organosiloxanes with halogen silanes is catalyzed by electrophilic halides of the elements (L'yuis (Lewis) acids) and first of all by ferric chloride. This new reaction offers the possibility of an easy and simple synthesis of a number of various organosiloxanes (as well as of organohalogen siloxanes), among them also difficultly accessible ones. Table 2 - physical properties of the

initial compounds. All organosiloxanes synthesized were analyzed by Yu. N. Platonov. There are 2 tables and 31 references, 18 of which are Soviet.

ASSOCIATION: Institut khimii silikatov Akademii nauk SSSR
(Institute of Silicate Chemistry of the Academy of Sciences, USSR)

SUBMITTED: April 16, 1958

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S/138/62/000/006/001/008
A051/A126

15.9205

AUTHORS: Borisov, S.N., Karlin, A.V., Chudesova, L.M., Galil-Ogly, F.A., Chebysheva, L.M.

TITLE: Properties of ethylphenylsiloxane rubbers

PERIODICAL: Kauchuk i rezina, no. 6, 1962, 3 - 6

TEXT: The relation between the methylphenylsiloxane ring content in rubbers and their optimum frost resistance was determined by producing and investigating polymers containing from 2 to 10 mol % of the methylphenylsiloxane rings. Optimum frost resistance was found in rubbers based on polymers and containing 8 mol % methylphenylsiloxane rings. The substitution of the latter with diethylsiloxane rings yields elastomers with the following characteristics: a) the ability to vulcanize with lesser quantities of benzoyl peroxide and with weak vulcanizing agents, such as dicumyl peroxide; b) a higher resistance to accumulation of residual deformations after compression; c) resistance to destruction in closed systems. A study of synthesized ethylphenylsiloxane elastomers showed that they combine the advantages of both the diethylsiloxane and methylphenylsiloxane elas-

Card 1/2

Properties of....

tomers. They vulcanize with a lesser quantity of benzoyl peroxide and dicumyl peroxide, as compared to the methylphenylsiloxane rubbers. They have a higher resistance to destruction in closed systems and regeneration capacity after simultaneous action of elevated temperatures and loads. The rubbers based on the ethylphenylsiloxane polymers are equal to the methylphenylsiloxane rubbers in their thermal and frost resistance, within a temperature range of -100 to +250°C. The properties of ethylphenylsiloxane rubbers are improved by substituting the У-333 (U-333) silica gel with the more active БС-280 (BS-280). There are 2 tables and 3 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva i Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (All-Union Scientific Research Institute of Synthetic Rubber im. S.V. Lebedev and the Scientific Research Institute of the Rubber Industry)

CHUDIN, A.; SEMENOV, D.

Branch conferences of chemical industry workers of the Gorkiy and Perm Economic Councils. Biul. nauch. inform.: trud i zar. plata 4 no.12:50-55 '61. (MIRA 15:1)
(Gorkiy Province--Wages--Chemical industries)
(Perm Province--Wages--Chemical industries)

CHUDIN, A. (g. Gor'kiy)

Awarding bonuses to workshop engineers and technicians. Sots. trud 7 no.4:66-68 Ap '62. (MIRA 16:1)
(Gorkiy Province—Technicians in industry)
(Bonus system)

S/123/59/000/010/016/068
A004/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 10, p. 99, # 37944

AUTHOR: Chudin, A.P.

TITLE: The Modernization of a Horizontal Milling Machine for Semi-Automatic Operation

PERIODICAL: Stalingr. prom-st' (Sovnarkhoz Stalingr. ekon. adm. r-na), 1958, No. 6, pp. 47-48

TEXT: Bibliographic entry.

Card 1/1

CHUDIN, Aleksey Prokof'yevich; PROKOPENKO, Sergey Andreyevich; PONOMAREV, S.F., red.; IZHBOLDINA, S.I., tekhn.red.

[Modernization of metal-cutting machines used in mass production] Modernizatsiia metallorezhushchikh stankov v massovom proizvodstve. Stalingrad, Stalingradskoe knizhnoe izd-vo, 1959. 31 p. (MIRA 13:5)
(Cutting machines) (Machinery in industry)

25(7) SOV/117-59-7-9/28

AUTHOR: Chudin, A.P., Engineer

TITLE: Modernization of a Plane-Milling Machine

PERIODICAL: Mashinostroitel', 1959, Nr 7, pp 19-20 (USSR)

ABSTRACT: At the Stalingradskiy traktornyy zavod imeni F.E. Dzerzhinskogo (Stalingrad Tractor Plant imeni Dzerzhinskiy) the plane-milling machine type "6B82 GZFS" has been modernized. The modernization changes were proposed by P.P. Bykov, an engineer of the plant. In the main, the manual feed control from the electric motor has been replaced by an automatic one by introducing a new electric wiring scheme with a pneumatic cylinder, which is controlled by a solenoid through an air distributor. Detailed operational information is given. There are 2 diagrams.

Card 1/1

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L 35031-65 EWT(m)/EWP(b)/EWP(t) JD

ACCESSION NR: AP5008155 B/0286/65/000/005/0034/0034

AUTHOR: Paton, B. Ye.; Dudko, D. A.; Medovar, B. I.; Latash, Yu. V.; Maksimovich, B. I.; Shevchenko, A. I.; Stupak, L. M.; Goncharenko, V. P.; Grigor'yev, L. F.; Petukhov, G. K.; Chudin, N. I.; Lubenets, I. A.; Yartsev, M. A.; Keys, N. V.; Tulin, N. A.; Kapelvitskiy, V. G.; Privalov, N. T.; Pis'mennov, V. S.; Kholodov, Yu. A.; Bystrov, S. N.; Bastrakov, N. F.; Donets, I. D.; Silayev, A. Ya.

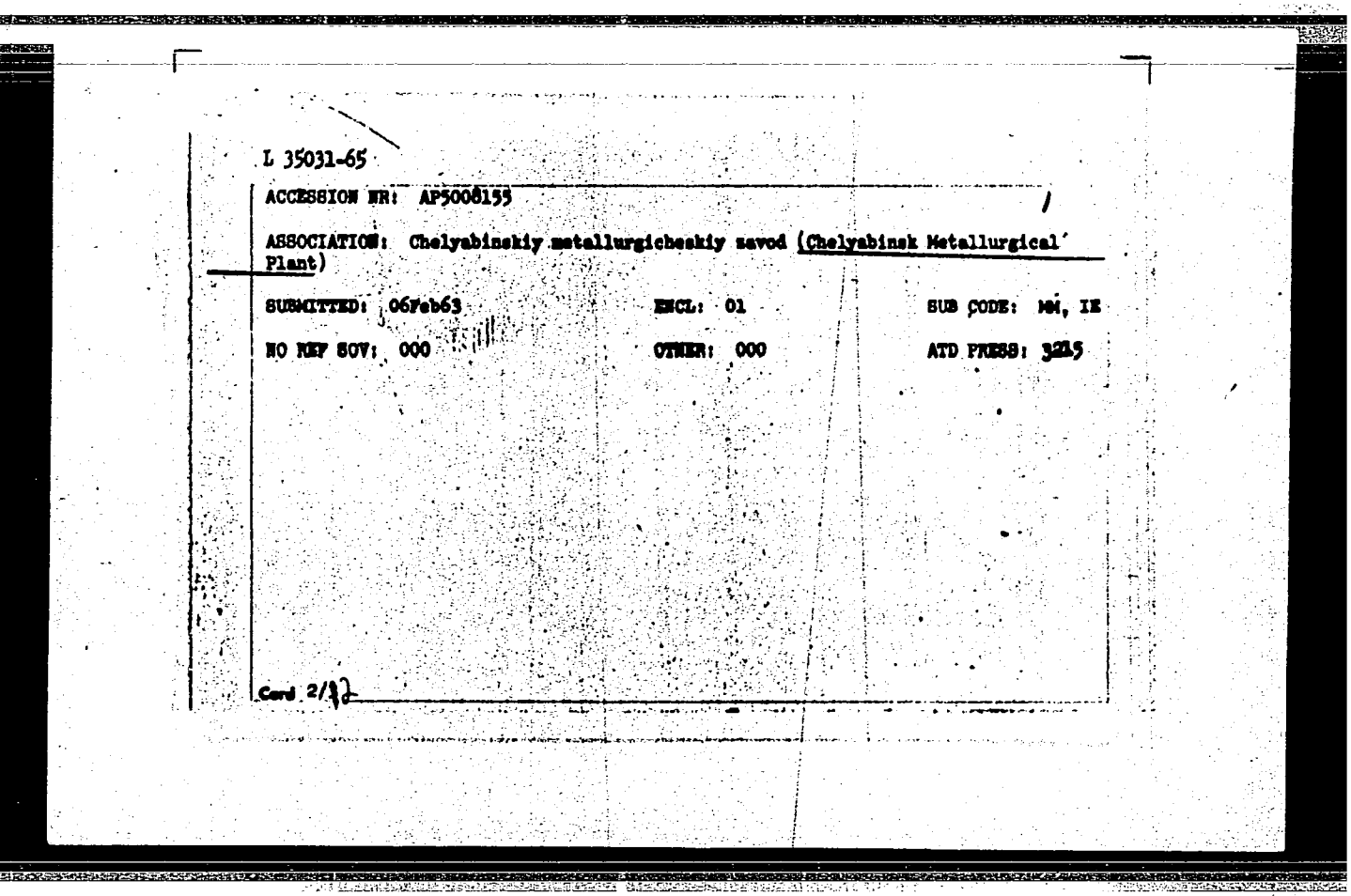
TITLE: Method of electroslag casting of ingots. Class 18, No. 168743

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 34

TOPIC TAGS: ingot casting, ingot electroslag casting, electroslag melting, steel melting, alloy melting, metal melting

ABSTRACT: This Author Certificate introduces a method of electroslag casting of ingots in an open or protective atmosphere or in vacuum, in which slag is first melted in a mold with a nonconsumable or consumable electrode arc or plasma jet. To improve the metal quality and the ingot surface and to raise the yield, the molten metal or, if needed, the slag is poured into the mold through a hollow consumable or nonconsumable electrode (see Fig. 1 of the Enclosure). Orig. art. has: 1 figure. [ND]

Card 1/3



L 35031-65

ACCESSION NR: AP5008155

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant)

SUBMITTED: 06Feb63 ENCL: 01 SUB CODE: MM, IE

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3215

Card 2/2

CHUDIN, V.F., inzh.

Differential equations of the movement of a locomotive with a gyroflywheel. Vop. rud. transp. no.6:246-251 '62. (MIRA 15:8)

1. Toretskiy mashinostroitel'nyy zavod.
(Mine railroads)

CHUDINA, A.P. (Moskva, V-311, 1-ya ulitsa Stroiteley, dom 11, korpus 1, kvartira 97).

Blood groups in stomach cancer. Vop. onk. 9 no.8:18-23 '63
(MIRA 17:4)

1. Iz kafedry patologicheskoy fiziologii (zav. kafedroy - prof. S.M. Pavlenko) 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova, Moskva.

VLASOVA, K.N.; CHUDINA, L.I.; ZACHESOV, Yu.N.

Low molecular weight polyamide resins. Plast.massy no.2:14-18 '62. (MIRA 15:2)
(Resins, Synthetic) (Polyamides)

ACCESSION NR: AP3003302 S/0191/63/000/007/0013/0016

AUTHOR: Vlasova, K. N.; Dobrokhotova, M. L.; Akutin, M. S.; Dukor, A. A.; Chudina, L. I.

TITLE: Glass-reinforced plastics based on low-molecular-weight polyamide and epoxy resins

SOURCE: Plasticheskiye massy, no. 7, 1963, 13-16

TOPIC TAGS: plastics, glass-fabric-reinforced plastics, epoxy resins, phenolic resin, organosilicon resin, glass fabric, curing agents, polyamide resins, water resistance, dielectric properties, EN-L, L-18, L-19, L-20, ENF 15/1, ENK-1 TFE-9, GVS-9.

ABSTRACT: Because low-molecular-weight polyamide resins—oligoamides—are nontoxic curing agents and plasticizers for epoxy resins, formulations based on such resins and amides were studied as binders for glass-fabric-reinforced

Card 1/3