(N) L 8346-66

ACC NR: AP5025760 SOURCE CODE: UR/0286/65/000/018/0126/0126

AUTHORS: Kulibanov, Yu. M.; Neuymin, Ya. G.; Petrov, Yu. P.; Popov, S. A.; Ryabukhin, G. V.

ORG: none

TITLE: Speed regulator for marine diesel engine. Class 60, No. 174949

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 18, 126

TOPIC TAGS: diesel engine, speed regulator, marine diesel engine, MARINE ENGINEERING

ABSTRACT: This Author Certificate presents a marine diesel engine speed regulator (for keeping optimum fuel flow during operation in shallow waters) containing a transducer which interacts with the actuating mechanism. To increase reliability and accuracy, the drive shaft tachometer-generator serves as the transducer. A second feature is provided by using an electric drive as the actuating mechanism. This drive is connected through an amplifier to the tachometer-generator and synchro circuit (see Fig. 1). The synchro provides feedback from the moving actuator rod.

Card 1/2

UDC: 621.436—545.74

L 37927-66

ACC NR: AP6024906

more reliable and sensitive (see Fig. 1). In the regulator, increased propeller-shaft torque activates an electric motor which in turn moves the sliding support of the fuel-pump rack, in this way decreasing the diesel's rpm. The optimum rpm decrease is predetermined. Orig. art. has: 1 figure.

[GE]

SUB CODE: 13/ SUBM DATE: none/ ATD PRESS: 5048

Card 2/2

L 37927-66

ACC NR: AP6024906 SOURCE CODE: UR/0317/66/000/007/0082/0082

AUTHOR: Kulibanov, Yu. M.; Neuymin, Ya. G.; Petrov, Yu. P.; Popov, S. A.; Ryabukhin, O. V.

ORG: none

TITLE: Speed regulator for marine diesel

SOURCE: Tekhnika i vooruzheniye, no. 7, 1966, 82

TOPIC TAGS: marine equipment, speed regulator

ABSTRACT: This Author Certificate introduces a speed regulator which uses a tachometer generator instead of a sounding device as a primary transducer, making the regulator

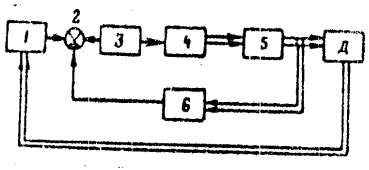
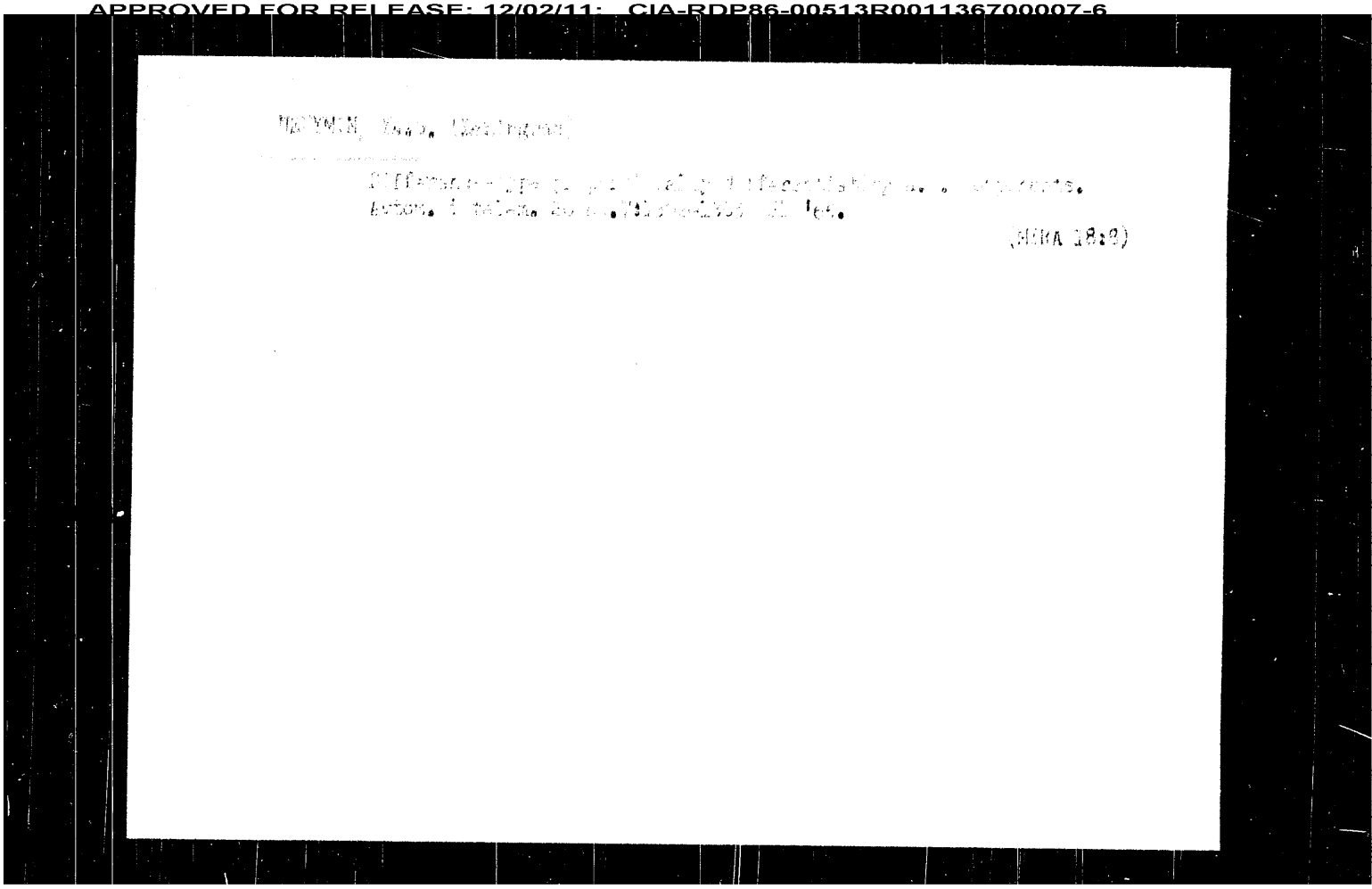


Fig. 1. Block diagram of speed regulator

1 - Tachometer generator; 2 - comparison unit; 3 - amplifier; 4 - electric motor; 5 - sliding fuel-pump-rack support; 6 - feed-back selsyn.

Card 1/2



L 1857-66
ACCESSION NR: AR5009082

permits a-c correcting actions. The MSA circuit diagram is explained. The amplifier comprises 4 inductors connected into two symmetrical arms; its output transformer and a positive-feedback circuit are common for both arms. The inductor cores are made from a square-loop material. Valves (diodes) in the working-winding circuits block the working circuit of that arm to whose control circuit the signal is applied at a given half-wave period. A reference voltage whose frequency and phase coincide with those of the MSA supply voltage ensures commutation of the inductor control circuits, by means of valves (diodes), and builds up an initial bias in the inductor windings. An a-c positive feedback ensures high gain at low signals and increases the circuit inertia. The steady-state process is illustrated by curves plotted with an assumption of the ideal inductor and valve characteristics. Difference equations and a discrete Laplace transform are used in describing the MSA dynamics. Principal data of an experimental MSA is reported. Figs. 7.

SUB CODE: EC, IE ENCL: 00

Card 2/2

L 1857-66 EWT(d)/EWP(1) IJP(c) BC
ACCESSION NR: AR5009082 UR/0271/65/000/003/A048/A048
62-52:621.375.3

31
B

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnikha. Svodnyy tom, Abs. 3A290

AUTHOR: Neuymin, Ya. G.; Kapalov, D. D. 44 44

TITLE: Magnetic servo amplifier for a-c servosystems

CITED SOURCE: Tr. Leningr. in-ta vodn. transp., vyp. 59, 1964, 22-28

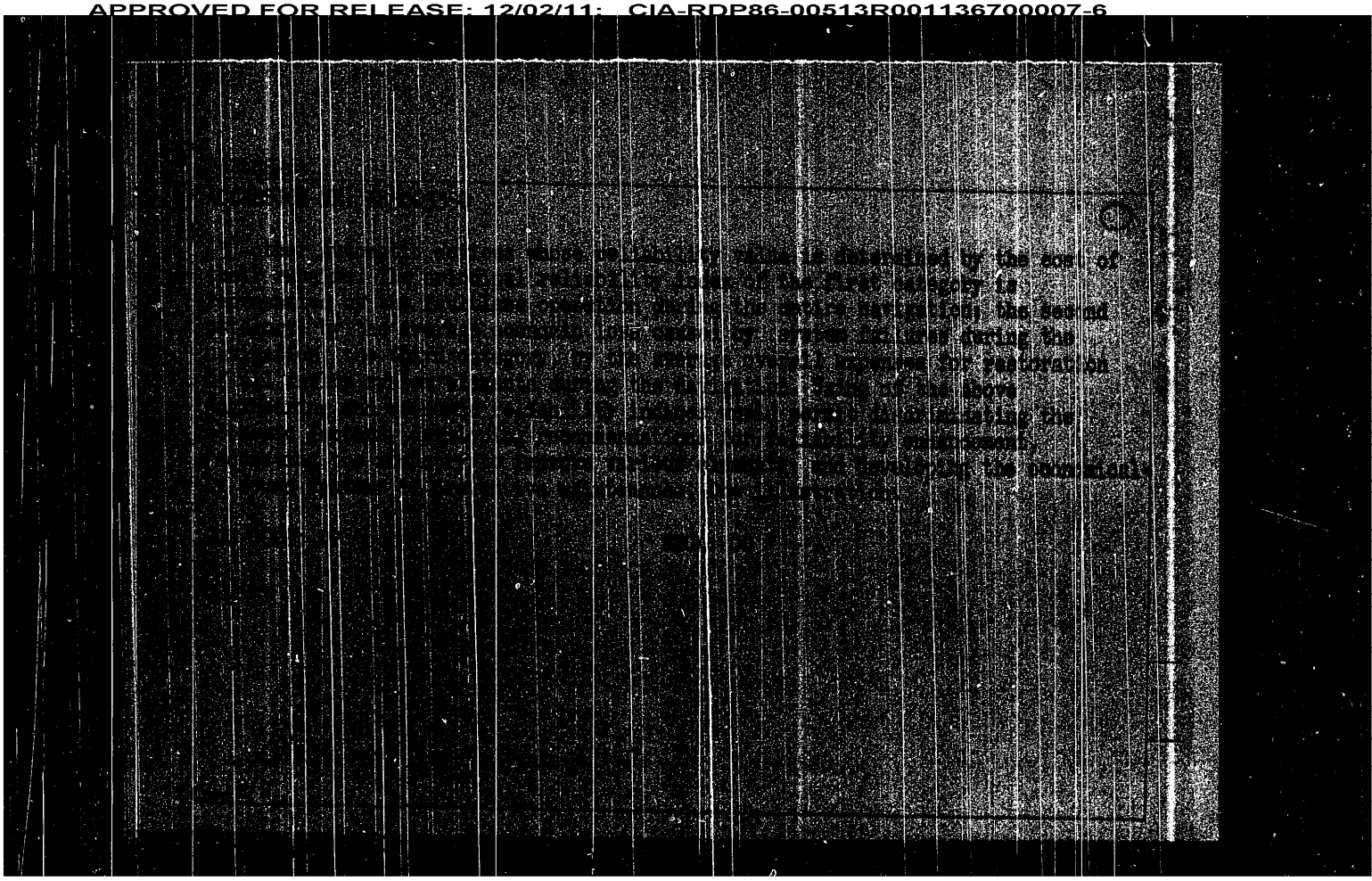
TOPIC TAGS: servo amplifier 44, servo system, magnetic amplifier

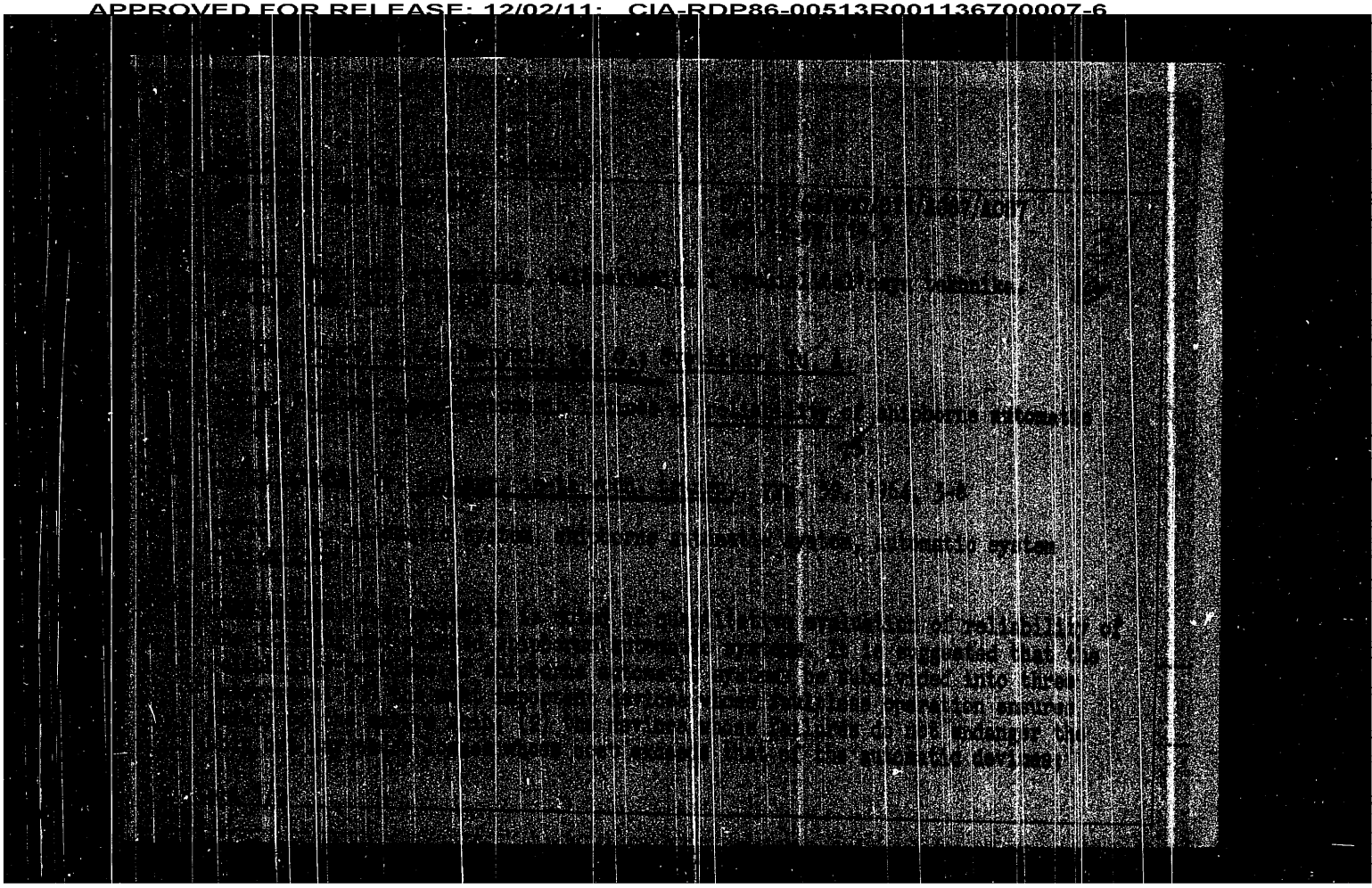
TRANSLATION: A new magnetic a-c servo amplifier (MSA) intended for contactless servosystems controlling main ship diesel engines has certain advantages over other amplifiers of this type. The MSA is controlled directly by the supply-frequency current and has a first-harmonic-reversible input-output characteristic. Within the linear part of the characteristic, the amplifier has a high gain; with large error angles, it has maximum speed of operation. The MSA ensures a low and invariant-to-quadrature-signal component zero-point drift and

Card 1/2

PETROV, Yuriy Petrovich; NEUYMIN, Ya.G., nauchn. red.; PARKHOMENKO, L.M., red.

[Variational methods in the theory of optimal control] Variatsionnye metody teorii optimal'nogo upravleniia. Moskva, Energiia, 1965. 219 p. (MIRA 18:5)





KEUTMIN, Ya.G., insh.

Parallel operation with a ships' electric system of an unexcited synchronous generator. Sudostroenie 24 no.8:37-41 Ag '58.
(MIRA 11:10)

(Electricity on ships) (Electric generators)

NEUYMIN, I.V.

Effect of DDT and benzene hexachloride on housefly (Musca domestica L.) larvae. Med.paraz.i paraz. bol. 30 no.2:214-218 Mr-Ap '61. (MIRA 14:4)
(FLIES) (DDT) (BENZENE HEXACHLORIDE)

NEUYMIN, I.V.

Reaction of houseflies (Misca domestica L.) to hexachloran.
Med.paraz.i paraz.bol. 29 no.6:731-733 '60. (MIRA 14:2)
(FLIES) (BENZENE HEXACHLORIDE)

NEUYMIN, I.V.

Variability of the body temperature of the tick Ornithodorus papillipes during the bloodsucking process. Zool.zhur. 33 no.2:356-360 Mr-Ap '54. (MLRA 7:5)

1. Kafedra obshchey biologii i parazitologii im. akademika Ye.N.Pavlovskogo (nachal'nik - general-leytenant meditsinskoy slushby akademik Ye.N.Pavlovskiy) Voyenno-Meditsinskoy akademii im. S.M.Kirova.
(Ticks as carriers of disease)

NEUYMIN, I.V.

Apparatus for measuring body temperatures of insects and ticks.
Mat.obos. 33:360-362 '53. (MLRA 7:5)

1. Kafedra obshchey biologii i parazitologii im. akad. Ye.N.Pavlovskogo Voyenno-meditsinskoy Akademii im. S.M.Kirova, Leningrad.
(Insects) (Temperature, Animal and human) (Ticks)

ACC NR: AT6023558

Shokal'skiy and Gorizont in 1963-64. The MAP-63 measures brightness values and degree of polarization (at depths up to 100 meters) in several parts of the visible spectrum with simultaneous registration of the level of total illumination at the surface. The construction of the instrument, methods employed in taking measurements and in processing data acquired, as well as measurement errors, are discussed. The suggested method of polarization research is recommended for studying light fields not only in the sea, but also in natural and artificial media on land. Orig. art. has: 15 formulas and 5 figures.

SUB CODE: 08,20/SUBM DATE: None/ORIG REF: 006

Card 2/2

ACC NR: AT6023558 (N) SOURCE CODE: UR/3095/66/036/000/0066/0080

AUTHOR: Kaygorodov, M. N.; Neuymin, G. G.

ORG: None

TITLE: Maritime polarimeter and brightness meter

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 66-80

TOPIC TAGS: oceanographic equipment, oceanographic instrument, oceanographic ship, oceanography, polarimeter, underwater light, light polarization, polarized luminescence / MAP-63 POLARIMETER

ABSTRACT: Study of spatial distribution of light polarization under natural conditions was first begun by the Maritime Hydrophysical Institute of the Academy of Sciences of the Ukranian SSR in 1961, with the ninth Black Sea cruise of Mikhail Lomonosov. Polarization measurements were made with a maritime photoelectric polarimeter, the MP-1, developed in the Black Sea Division of the Institute. A new, automatic, polarimeter-brightness meter, the MAP-63, was developed to update polarization research methods and improve the quality of experimental materials, and was used off the Crimean coast and in the western Black Sea by the expeditionary ships Yuliy

Card 1/2

ACC NR: AT6023557

of the light source, changes in the sensitivity of the photo-receiver and amplification circuit, instability of the power inputs, etc. Test results are described. Orig. art. has: 3 figures.

SUB CODE: 08,20/SUBM DATE: None/ORIG REF: 004

Card 2/2

ACC NR: AT6023557 (N) SOURCE CODE: UR/3095/66/036/000/0051/0057

AUTHOR: Neuymin, G. G.; Agafonov, Ye. A.; Kakaush, S. V.

ORG: None

TITLE: Multiple pass photometer transparency meter

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 51-57

TOPIC TAGS: oceanographic equipment, oceanographic instrument, oceanographic ship, oceanography, underwater optics, photometer, optic spectrum

ABSTRACT: The instrument described, developed in the Seas and Oceans Optics Laboratory of the Maritime Hydrophysical Institute of the Academy of Sciences of the Ukranian SSR permits direct measurement of the transparency of sea water to white light, as well as to certain narrow spectral fields, at depths of up to 300 meters. The proposed instrument, an optical diagram of which is shown and discussed, is based on the theoretical consideration that the accuracy of transparency measurement is optimized with light passing twice through the medium under study. It compares the beam under study with a supporting beam on a single photo-receiver. The system is said to eliminate the influence of such factors as fluctuations in the intensity

Card 1/2

ACC NR: AT6023556

measuring element concludes with the fact that the most favorable types for a photometer-transparency meter are those operating on the principle of simultaneous comparison of two light streams. The bulk of the discussion is devoted to the acoustic transmission of the measured information, which is still in the experimental stage, as well as to the receiver (and amplifiers) required for registration and recording of the data. The basic technical characteristics for transmission of transparency meter data via hydroacoustic channels are cited. Orig. art. has: 5 figures.

SUB CODE: 08,20/SUBM DATE: None/ORIG REF: 009

Card 2/2

ACC NR: AT6023556 (N) SOURCE CODE: UR/3095/66/036/000/0037/0050

AUTHOR: Paramonov, A. N.; Neuymin, G. G.; Man'kovskiy, V. I.; Prokhorenko, Yu. A.

ORG: None

TITLE: Hydroacoustic telemetry system for sea water transparency

SOURCE: AN UkrSSR. Morskoy gidrofizicheskiy institut. Trudy, v. 36, 1966. Metody i pribory dlya issledovaniya fizicheskikh protsessov v okeane (Methods and instruments for studying physical processes in the ocean), 37-50

TOPIC TAGS: oceanographic equipment, oceanographic instrument, ~~oceanographic ship~~, oceanography, electronic equipment, acoustic equipment, ~~acoustic signal~~, ocean acoustics, underwater acoustics, hydrography, photometer, TELEMETRY SYSTEM, underwater optics

ABSTRACT: The results of work conducted for some years in the Maritime Hydrophysical Institute of the Academy of Sciences of the Ukranian SSR in designing equipment for deepwater optical measurements is the basis for this description of the fourth model of a marine pulse photometer-transparency meter with acoustic communication between the submerged sensor measuring transparency and the expeditionary ship. A block schematic shows the major components of the system, and the general requirements which the system was designed to meet are enumerated. Specific parameters to be met by the optical system itself are also listed. The optical system is discussed in detail. The discussion devoted to test connections of the submerged transparency

Card 1/2

L 7785-66 EWT(1)/EWP(m)/EWA(d)/ETC(m)/EWA(1) WW
ACC NR: AP5028049 SOURCE CODE: UR/0046/65/011/004/0453/0457

AUTHOR: Il'ichev, V.I.; Neuymin, G.G.
44,55 44,55

ORG: Institute of Acoustics, AN SSSR, Moscow (Akusticheskiy institut AN SSSR)
44,55

TITLE: The distribution pattern of the dimensions of gas bubbles in a turbulent fluid flow

SOURCE: Akusticheskiy zhurnal, v. 11, no. 4, 1965, 453-457

TOPIC TAGS: cavitation, fluid flow, turbulent flow, gas flow
1,44,55

ABSTRACT: The authors investigate the dimensions of gas bubbles in a turbulent fluid flow generated by a rotating screw. It is established that the general character of the function of distribution of the bubble dimensions is always constant, although the absolute content of the bubbles, and sometimes their absolute dimensions, may vary depending on the experimental conditions. The method of measurement consists of trapping a quantity of water containing gas bubbles by means of a device placed some distance from the screw which generates the cavitation turbulent flow. The trapped water is then separated from the mechanic effect of the flow and maintained at pressure and temperature conditions identical to that in the flow for a period of time sufficient for the bubbles to rise and settle on the surface of the upper glass tube of the device. The bubbles are then photographed. The experimental data obtained show that the bubble dimension distribution observed is close to the normal logarithmic distribution, which is attributed to the structure of the relationship of the forces of surface tension with the dimension of the gas bubble. Orig. art. has: 2 figures and 8 formulas.

SUB CODE: ME / SUBM DATE: 29Mar63 / ORIG REF: 005 / OTH REF: 001
Card 1/1 UDC: 534.529

L 20763-66 EWT(1) GW

ACC NR: AP5028358 (N) SOURCE CODE: UR/0362/65/001/011/1190/1195

AUTHOR: Neuymin, G. G.; Paramonov, A. N.

ORG: Marine Institute of Hydrophysics (Morskoy gidrofizicheskiy institut)

TITLE: The distribution of suspended matter in the deep-water part of the Black Sea

SOURCE: AN SSSR. Izvestkya. Fizika atmosfery i okeana, v. 1, no. 11, 1965, 1190-1195

TOPIC TAGS: hydrology, hydrodynamics, ocean dynamics

ABSTRACT: The results of the instrumental measurements "in situ" of the vertical distribution of suspended matter in the deep-water part of the Black Sea during the summer season are presented. The suspended matter distribution with depth is shown to have a similar character for the central parts of the sea. Distribution of suspended matter reflects the hydrological structure of water in many respects. On the basis of correlation between results obtained and hydrological and hydrodynamic characteristics a conclusion is drawn about the three layer dynamic structure of abyssal regions of the Black Sea. Orig. art. has: 3 figures. [Based on author's abstract.]

SUB CODE: 08/ SUBM DATE: 10Jun65/ ORIG REF: 012/ OTH REF: 003/

Card 1/1

UDC: 551.463.8

L 8000-66

ACC NR: AP5026541

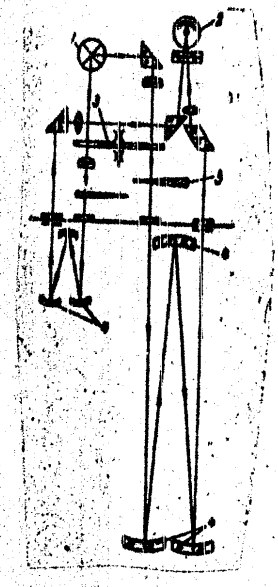


Fig. 1. 1- radiation source; 2- radiation receiver; 3- modulator; 4- spherical mirrors; 5- photometric wedge

Orig. art. has: 1 figure.

SUB CODE: OP/ SUBM DATE: 24Feb64

Card 2/2

L 8000-66 EWT(1) (W

ACC NR: AP5026541 SOURCE CODE: UR/0286/65/000/019/0084/0085

AUTHORS: Neuymin, G. G.; Agaforov, Ye. A.; Anikin, Yu. A.; Karaush, S. V.

ORG: none

TITLE: Double-channel compensational photometer. Class 42, No. 175271

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 19, 1965, 84-85

TOPIC TAGS: photometer, photometry, underwater light, data recording, water depth meter, sea water

ABSTRACT: This Author Certificate describes a double-channel compensational photometer containing one source and one receiver of radiation, a modulator, spherical mirrors, a photometric wedge, and a device for automatic data recording (see Fig. 1). To increase the measuring range and to insure selection of optimum measuring conditions, the spherical mirrors in each channel have identical focal lengths. To determine the coefficient of transparency of sea water as a function of depth, a pressure transducer (depth meter) is attached to the submerged part of the photometer.

Card 1/2

UDC: 535.242.2

NEUYMIN, G.G.

Possibility of using the Dantli method for measuring sea water transparency in the sea. Okeanologiia 4 no.2:321-325 '64. (MIRA 17:5)

1. Chernomorskoye otdeleniye Morskogo gidrofizicheskogo instituta AN UkrSSR.

NEUYMIN, G.G.; SOROKINA, N.A.

Optical dispersing layers in the sea. Okeanologiia 4 no.1:51-54 '64. (MIRA 17:4)

1. Chernomorskoye otdeleniye Morskogo gidrofizicheskogo instituta AN UkrSSR.

N[illegible]YKIN, G.G.; SOROKINA, N.A.; [illegible]MONOV, A.N.; [illegible]CHIN, V.N.

Some results of optical investigations in the northern part of the Atlantic Ocean. Trudy Mor. gidrofiz. inst. AN SSSR 29:64-75 '64. (MIRA 17:[illegible])

APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700007-6

Study of sound scattering on bubbles ...

the active losses in the bubble, R_1, R_2 are the critical bubble radii at which the function $\gamma(R)$ reaches a minimum. The authors thank Yu. M. Sukharevskiy for advice and discussions. There are 6 figures and 6 references: 4 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: E. Corstensen, L. Foldy. J. Acoust. Soc. America, 1947, 19, 3, 481-501.

ASSOCIATION: Akusticheskiy institut AN SSSR Moskva (Acoustics Institute AS USSR Moscow)

SUBMITTED: March 8, 1961

Card 3/3

Study of sound scattering on bubbles ...

scattering in the test basin consisted of an electric pulse generator, amplifier, oscilloscope, and barium titanate transducers with a damping factor of approximately 0.5 - 1. A steel ball suspended from a perlon thread in the water was used as standard reflector. The measurements were made at fixed frequencies of 20, 30, 40, 50, 60, 85, and 100 kc/sec. The bubble catcher, a tube perpendicularly suspended in the water, 90 mm in diameter and 600 mm long, with magnetically sealed lids, at the same time took pictures of the bubbles at 1.5 m depth. The upper lid had a glass window through which the pictures could be taken. The caught bubbles collected below the upper lid. The measurements clearly showed a relation between the frequency dependence of sound scattering and the size distribution of bubbles. If acoustic interaction of the bubbles and sound absorption are neglected, $\bar{\alpha}(n,f) = n \int_{R_1}^{R_2} \sigma(R,f,\delta) \psi(R)\, dR$ (2)

is obtained, where $\bar{\alpha}(n,f)$ is the statistically averaged scattering coefficient dependent on the bubble concentration n and sound frequency f; $\sigma(R,f,\delta)$ is the scattering cross section of one individual bubble, δ are

30047
S/046/61/007/004/002/014
B139/B102

6.8000(1031,1063,1169)

AUTHORS: Glotov, V. P., Kolobayev, P. A., Neuymin, G. G.

TITLE: Study of sound scattering on bubbles produced in sea water by artificial wind, and their statistical size distribution

PERIODICAL: Akusticheskiy zhurnal, v. 7, no. 4, 1961, 421-427

TEXT: Sound scattering on air bubbles of various sizes formed in sea water by wind has not yet been studied in detail. The first investigations were conducted at the Chernomorskoye otdeleniye Morskogo gidrofizicheskogo instituta AN SSSR (Black Sea Department of the Marine Hydrophysics Institute (ChOMGI) of the AS USSR). Various wind velocities were produced with blasts, and sound scattering was measured on a small area in the middle of the experimental basin by a pulse method. Besides acoustic measurements, G. G. Neuymin simultaneously conducted measurements of concentration and statistical size distribution of the bubbles by a "bubble catcher" produced by the ChOMGI. The measurements show the relation between the frequency dependence of sound scattering and the size distribution of bubbles. The unit used for measuring the sound

Card 1/3

photoelectric photometer for ... S/169/62/000/003/044/055
D228/D307

a standard electric potentiometer of the type ЭПП-09 (EPP-09) or ПС-01 (PS-01). The device's operation and its operating control are centralized at a control desk situated by the recorder. The measurement procedure, the instrument's calibration, and the processing of the observational results are stated, and some results are also given for the device's employment in marine environments. The authors cite curves of the relative illuminance variation, constructed from the measurement data, for different spectral regions; measurements at one of the hydrologic stations; and graphs of the dependence of the relative illuminance on the depth with a blue light-filter for different regions of the Atlantic. The cited graphs show that the photometer gives a satisfactory precision for measuring the underwater illuminance. It is concluded that the device ensures the procurement of sufficiently complete data about the spectral composition and the light regime in the depths of the sea. [Abstracter's note: Complete translation.]

Card 2/2

S/169/62/000/005/064/093
D228/D307

AUTHORS: Menymin, G. G. and Paramonov, A. N.

TITLE: Photoelectric photometer for measuring underwater illuminance

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1962, 9, abstract 5V62 (Okeanologiya, 1, no. 5, 1961, 904-910)

TEXT: A photoelectric photometer for measuring underwater illuminance, developed and produced at the Chernomorskoye otdeleniye Morskogo gidrofizicheskogo in-ta (Black Sea Division, Marine hydrophysical Institute), is thoroughly described. The device was successfully employed on several expeditions aboard the electric vessel "M. Lomonosov". The instrument was mainly assembled from standard parts and was fitted with an electric pressure pickup, which ensures the measurement of the immersion depth with a precision of 2 - 3 m. The device's maximum immersion depth is 300 - 350 m. The accuracy of the underwater illuminance measurement equals 5 - 10% of the measured value. All readings are recorded on

Card 1/2

NEUYMIN, G.G.; PARAMONOV, A.N.

Detecting the place of cable core breaks. Prib. i tekh.eksp. 6 no.6:133-134 N-D '61. (MIRA 14:11)

1. Morskoy gidrofizicheskiy institut AN SSSR.
(Electric cables--Testing)

NEUYMIN, G. G.

USSR/ Physical Chemistry - Molecule. Chemical bond B-4

Abs Jour : Referat Zhur - Khimiya No 4, 1957, 10843

Author : Neuymin G.G.
Title : Detection of Products of Thermal Dissociation of Polyatomic Molecule Vapor from Fluorescence Spectrum

Orig Pub : Optika i spektroskopiya, 1956, 1, No 4, 463-468

Abstract : To study the question concerning the presence of thermal decomposition products in vapors of salts, use is made of their fluorescence spectra. In comparison with known procedure of detecting free radicals from absorption spectra, this method is found to be much more sensitive: presence of BiCl radical in vapor over $BiCl_3$ is revealed already at 500°. Fluorescence spectrum consists of bands in 4300-5700 A region. Nature of observed BiCl spectrum was ascertained by comparison with known absorption spectrum, and also with BiCl emission spectrum in carbon-arc flame. From comparison of heat of formation of $BiCl_3$ (90.6) and sublimation heat values $S_{Bi}(48)$, $S_{BiCl_3}(14)$ and $D_{BiCl}(75)$ are derived the following evaluations of bond cleavage energy: $D_{Bi+Cl+Cl+Cl} = 210$; $D_{Bi+Cl+Cl_2} = 153$; $D_{BiCl+Cl+Cl} = 135$ and $D_{BiCl+Cl_2} = 78$ kcal/mole.

Card 1/1

Meuymin, G. G.

USSR/Physics

Card 1/1 Pub. 43 - 8/62

Authors : Meuymin, G. G., and Chernyshevskiy, O. I.

Title : The problem of the optical-acoustic effect in the microradiowave zone

Periodical : Izv. AN SSSR. Ser. fiz. 18/6, 663-664, Nov-Dec 1954

Abstract : A method for the study of the optical-acoustic effect in the range of micro-radiowaves is briefly outlined. It is underlined that the method can be successfully used only at very-low ammonia pressures or at a very-high modulation frequency. Other difficulties in utilizing this method are described. Four references: 3 USSR and 1 USA (1938-1953).

Institution : .....

Submitted : .....

USSR/Physics - Absorption Spectra 11 Sep 49
Chemistry - Aerogels

"Infrared Absorption Spectra of Vapors Adsorbed by Silica Aerogels," L. N. Kurbatov, G. G. Neuymin, 4 pp

Tek Ak Nauk SSSR, Vol LXVIII, No 2

Found that aerogel absorption band at 1.37 microns is a very sensitive indicator of presence of adsorbed molecules. It is considerably more sensitive than absorption bands of adsorbed substances themselves. Gives absorption spectra for an aerogel gradually absorbing (1) chloroform, (2) phenol, (3) acetone,

3/50T82

USSR/Physics - Absorption Spectra (Contd) 11 Sep 49

and (4) water. Submitted by Acad A. N. Terenin, 15 Jul 49.

3/50T82

NEUYMIN, G. G.

NEUYMIN, G. G.

Mbr. State Optical Inst. Leningrad, -1940-42-. "Preliminary Results of an Analysis of Hydrocarbons with the Help of Absorption Spectra in the Infra-Red Region," Iz. Ak. Nauk SSSR. Ser. Fiz., 4, No. 1, 1940; "Infra-Red Emission of the Discharge in Molecular Gases and Its Importance for Chemical Kinetics," ibid., No. 5, 1942; "Infra-Red Adsorption Spectra of Vapors Adsorbed by Silica Aerogels," Dok. AN. 68, No. 2, 1949.

BESSONOV, A.F.; STRELKALOVSKIY, V.N.; [illegible]

Uranium dioxide extraction studied by the [illegible] electric conductivity, X-ray diffraction, and [illegible] Zhur.fiz.khim. 39 no.[illegible] [illegible].

(MIRA 18:8)

OVCHINNIKOV, Yu.M.; KARPACHEV, S.V.; PAL'GUYEV, S.F.; ZHDANOVA, G.M.; NEUYMIN, A.D.

Kinetics of the reduction by carbon monoxide of solid solutions based on cerium dioxide. Elektrokhimiia 1 no.10:1196-1201 O '65. (MIRA 18:10)

1. Institut elektrokhimii Ural'skogo filiala AN SSSR.

L 4982-66

ACC NR: AP5025351

The ceramics tested proved to be practically impenetrable to carbon monoxide, and oxygen diffused directly through the ceramic body and not through the pores. This work was based on the experiments of Kingery W. D., Pappis J., Doty M. E., Hill D. C. Journ. Amer. Cer. Soc., 1959, v. 42, no. 8, p. 393. Orig. art. has: 3 figures and 1 table.

SUB CODE: MT, GC SUBM DATE: 00/ NR REF SOV: 001/ OTHER: 002

GC

Card 2/2

L 49112-65 EWP(e)/EPA(s)-2/EWT(m)/EPF(c)/EWP(i)/EPF(n)-2/EPA(w)-2/EWP(t)/EWP(b) IJP(c) JD/WW/JG/WH

ACC NR: AP5025351 SOURCE CODE: UR/0131/65/000/010/0040/0042

AUTHOR: Ovchinnikov, Yu. M.; Karpachev, S. V.; Neuymin, A. D.; Pal'guyev, S. F.

ORG: Institute of Electrochemistry, Urals Branch, AN SSSR (Institut elektrokhimii UFAN SSSR)

TITLE: Penetration of oxygen in ceramics having a zirconium dioxide base

SOURCE: Ogneupory, no. 10, 1965, 40-42

TOPIC TAGS: ceramic product, gas diffusion, oxygen, carbon monoxide, argon, titanium

ABSTRACT: The authors describe an experiment of oxygen diffusion through ceramics having a composition of 0.85+ZrO_2 0.15 CaO, in the temperature range of 600-900°C. The flow of oxygen that diffused through the walls of the test tubes was measured with argon and titanium. A test was also carried out to determine the penetration of carbon monoxide at a temperature of 900°C. It was less than $4 \cdot 10^{-9}$ cm/sec.

Card 1/2

UDC: 661.883

0901 0262

NEUYMIN, A.D.; PAL GUYEV, S.F.

Electric conductivity of solid oxides. Part 10: Electric conductivity and its nature in the systems ZrO_2 - V_2O_3, ZrO_2 - La_2O_3, ZrO_2 - Nd_2O_3. Trudy Inst. elektrokhim. UFAN SSSR no.5: 145-151 '64. (MIRA 18:2)

MEDYMEN, A.D.; YUSHINA, L.D.; OVCHINNIKOV, Yu.M.; PAL'GUYEV, S.F.

Nature of the conductance of solid solutions Al_2O_3 – SrO.
Trudy Inst. elektrokhim. UFAN SSSR no. 4:111-115 '63.
(MIRA 17:6)

ACCESSION NR: AT4008737

Enclosure). Conductivity was measured in an atmosphere of 66%CO·34%CO_2. It was established that isotherms for reduction depth--composition, $CeO_{1.5}$ concentration--composition and conductivity--composition peak in the area of 15 to 20 mol% $LaO_{1.5}$ (see Figs. 2 and 3 in the Enclosure and the table of total, ion and electron conductivity in the original. Reducibility and electron conductivity increase exponentially in relation to temperature (see Figs. 4, 6 and 7 in the Enclosure). Their temperature coefficients decrease as the content of $LaO_{1.5}$ increases to about 20 mol%, then they increase when such content increases beyond that level (see Fig. 8 in the Enclosure). This pattern governs the presence of peaks on these isotherms. The authors demonstrated that the coulombic interaction of structural defects in a crystal provides an adequate quantitative explanation of the decrease in temperature coefficients of reducibility and conductivity as the concentration of admixture increases. Activation energy of electrons was determined and their mobility evaluated. Reducibility and electron conductivity of the studied solid solutions decrease as partial oxygen pressure in the gaseous phase increases (see Fig. 5 in the Enclosure). Orig. art. has: 34 formulas, 9 graphs, 2 tables.

ASSOCIATION: Institut Elektrokhimii, Ural'skiy filial AN SSSR (Institute of Electrochemistry, Ural branch AN SSSR)

Card 2/[illegible]

BR

ACCESSION NR: AT4008737 S/2631/63/000/004/0097/0110

AUTHOR: Neuymin, A. D.; Pal'guyev, S. F.; Chebotin, V. N.

TITLE: Reduction of cerium dioxide in the CeO_2- La_2O_3 mixture and electrical conductivity of the mixtures

SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy*, no. 4, 1963. Elektrokhimiya rasplavlennyo*kh solevy*kh i tverdy*kh elektrolitov, 97-110

TOPIC TAGS: refractory oxide, high temperature ceramic, cerium oxides, cerium dioxide, Ce 0 sub 2, Ce 0 sub 1.5, lanthanum oxides, La sub 2 0 sub 3, La 0 sub 1.5, Ce 0 sub 2 - La sub 2 0 sub 3 system, Ce 0 sub 2 - La sub 2 0 sub 3 crystals, rare earth oxides

ABSTRACT: Reducibility and electron conductivity of the system CeO_2-La_2O_3 was studied in relation to temperature, content of La_2O_3 and the composition of the gaseous phase with which the crystals in question were in a state of thermodynamic equilibrium. A mixture of gaseous CO and CO_2 was used as the reducing agent. The study emphasized temperatures above 700C and reduction of solid solutions with anionic vacancies (i.e. mixtures containing up to 60 mol% $LaO_{1.5}$) and related, broadly speaking, to use of cerium dioxide based ceramics at very high temperatures. Reducibility was studied by means of equipment shown (see Fig. 1 in the

Card 1/2

ACCESSION NR: AT4008735 S/2631/63/000/004/0083/0090

AUTHOR: Neuymin, A. D.; Pal'guyev, S. F.; Strekalovskiy, V. N.; Burov, G. V.

TITLE: Investigation of the structural components and electrical conductivity and its nature in the systems ZrO_2-CaO-NiO and ZrO_2-CaO-Fe_2O_3

SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii, Trudy*, no. 4, 1963. Elektrokhimiya rasplavlenny*kh solevy*kh i tverdy*kh elektrolitov, 83-90

TOPIC TAGS: refractory oxide, electric ceramic, zirconium dioxide, calcium oxide, nickel oxides, NiO, iron oxides, Fe sub 2 O sub 3, ternary oxide mixture, ZrO sub 2-CaO-NiO system, ZrO sub 2-CaO-Fe sub 2 O sub 3 system, metal oxide system, electrolytic cell, solid electrolyte

ABSTRACT: Maintaining the relation Zr_2O:CaO = 85:15, the structure and electrical conductivity have been studied in a series of oxide mixtures of the above systems. X-ray examinations combined with phase chemical analysis were applied in the study of the structure and a "Ural 1" computer was used to calculate the interplane distances and lattice parameters. The conductivity was measured with an alternating current bridge at a frequency of 3000 cps. Its nature was studied by the emf method. The procedures are given in detail in Trudy* Instituta Elektrokhimii UFAN SSSR, no. 1, 1960, 111; no 2, 1961;

Card 1/2

ACCESSION NR: AT3007157

CeO_2-MgO, CeO_2-CaO, CeO_2-SrO, and CeO_2-BaO. The e.m.f. method employed a Pt/O/specimen/air/Pt cell. From a comparison of the experimental magnitude of the e.m.f. with the thermodynamically calculated value the following pertinent conclusions on the character of the conductivity of the specimens were made: It is shown that in the systems CeO_2-CaO and CeO_2-SrO the specimens of the compositions investigated (solid solutions with a lattice of the fluorite type) are endowed with significant O-ionic conductivity, whereas the specimens with like composition of the system CeO_2-BeO, CeO_2-MgO, and CeO_2-BaO exhibit a substantially smaller ionic conductivity. A comparison of the absolute magnitudes of EC found with data obtained from a study of its character shows that BeO, MgO, and BaO undergo a measure of dissolution on CeO_2. In this process, O-ionic vacancies form in the crystalline lattice of the mixed oxides, just as they do in the system CeO_2-CaO and CeO_2-SrO, but in a considerable smaller measure. Orig. art. has 2 figures and 2 tables.

ASSOCIATION: Institut elektrokhimii Ural'skiy filial AN SSSR (Institute of Electrochemistry, Ural Branch, AN SSSR)

SUBMITTED: 00 DATE ACQ: 12Jul63 ENCL: 00

SUB CODE: CH, PH, EL NO REF SOV: 012 OTHER: 000

Card 2/2

ACCESSION NR: AT3007157 S/2631/63/000/003/0141/0147

AUTHORS: Neuymin, A.D.; Pal'guyev, S.F.

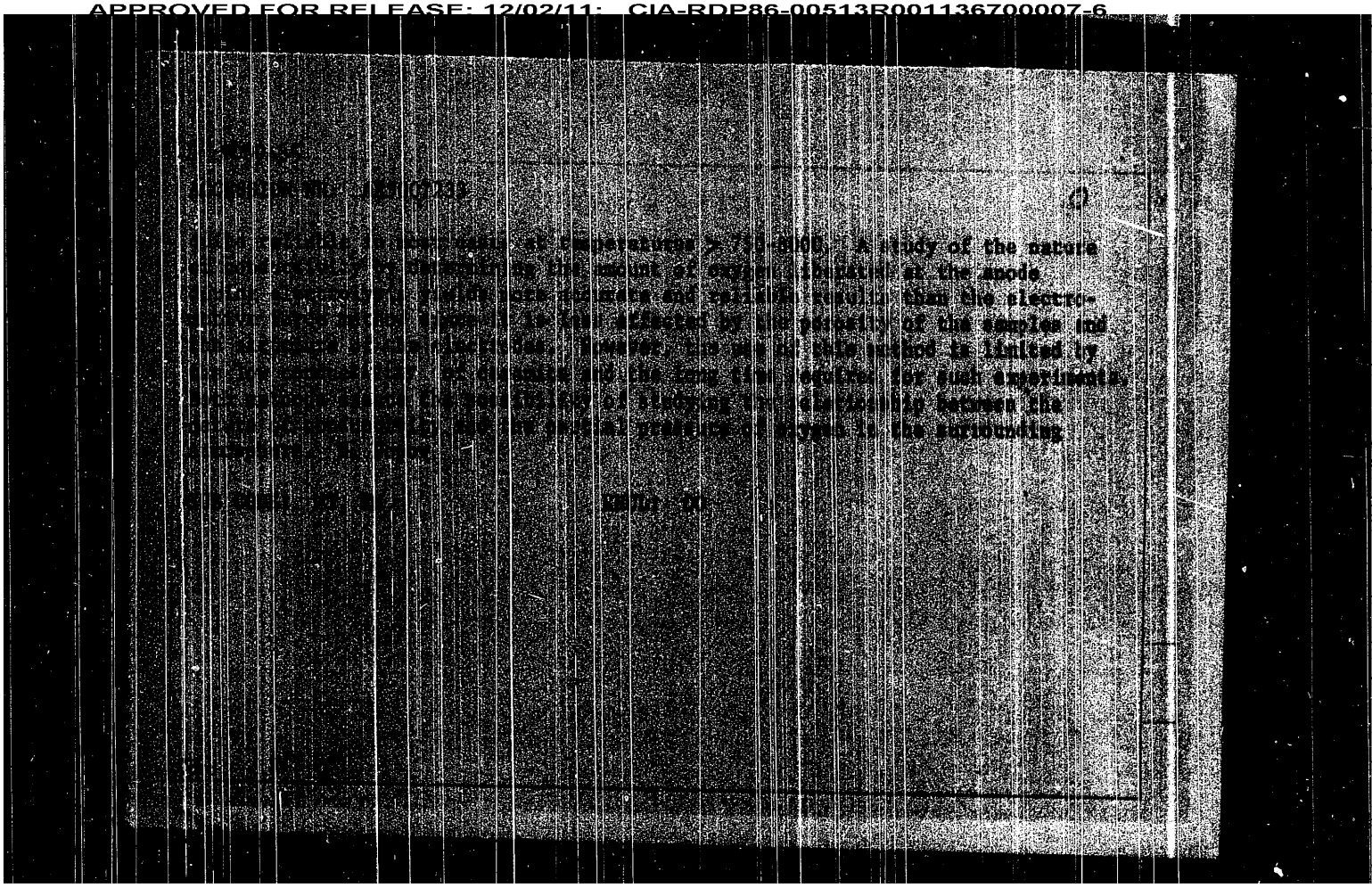
TITLE: On the electric conductivity and its character in the systems CeO-sub-2-BeO, CeO-sub-2-MgO, CeO-sub-2-CaO, CeO-sub-2-SrO, and CeO-sub-2-BaO

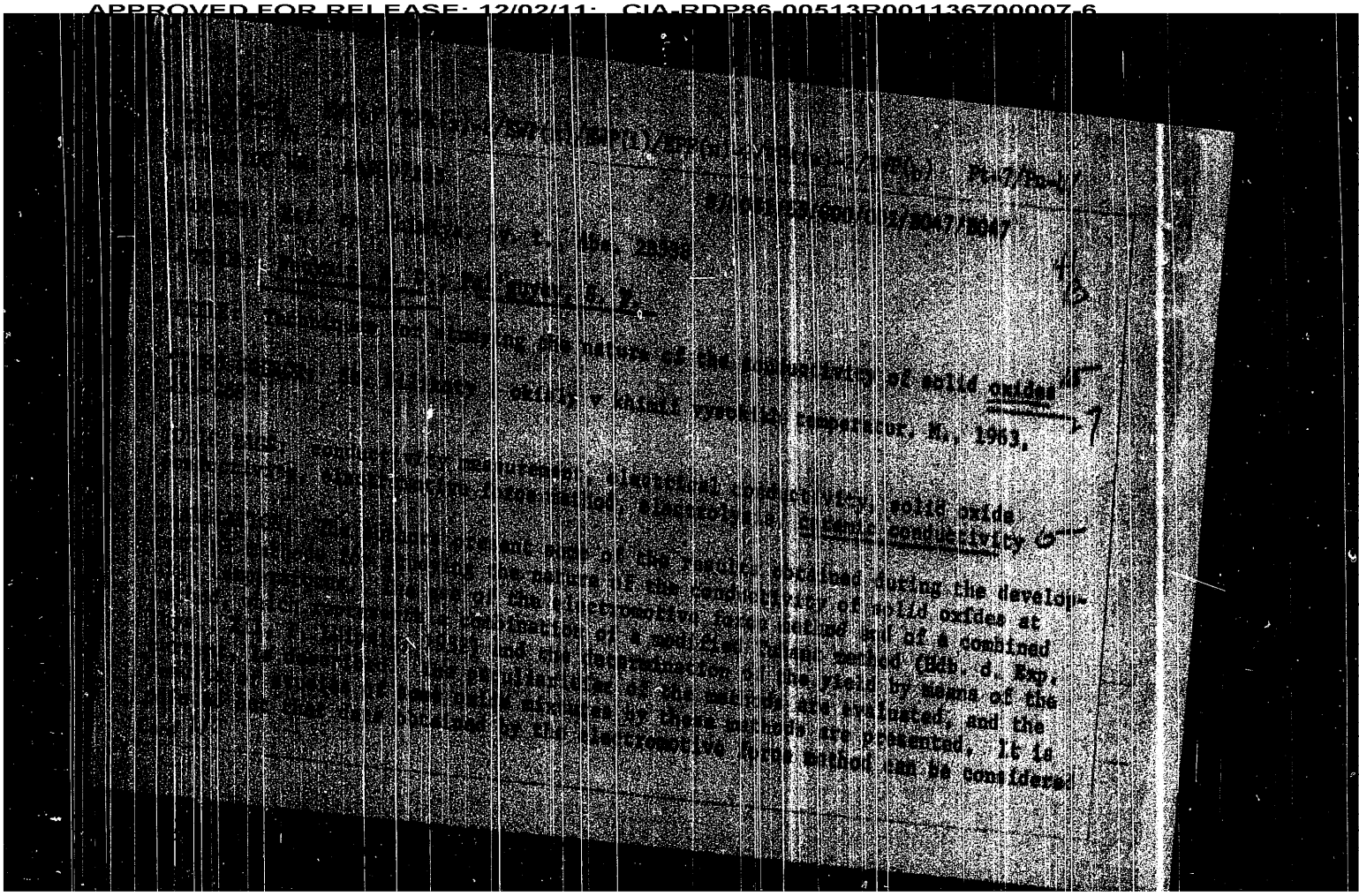
SOURCE: AN SSSR. Ural'skiy filial. Institut elektrokhimii. Trudy*, no. 3, 1963, 141-147

TOPIC TAGS: conductivity, electric conductivity, character of conductivity, oxygen-ionic conductivity, O-ionic conductivity, vacancy, defect, mixed oxide, oxide, oxygen-ionic vacancy, O-ionic vacancy, Ce, Be, Mg, Ca, Sr, Ba

ABSTRACT: Issuing from the premise that the presence of a significant number of O-ionic vacancies in the lattice of mixed oxides must express itself in a growth of O-ionic conductivity, also from the hypothesis that a comparison of the results of electrical-conductivity (EC) measurements and the study of the character of the conductivity of specimens of such mixtures must provide a basis for conclusions relative to the defectivity of their structures, this paper reports the results of an experimental investigation in which the electromotive-force method, in combination with conductivity measurements, served to study the nature of the conductivity of oxide mixtures of a number of various compositions of the systems CeO_2-BeO,

Card 1/2





S/020/62/143/006/021/024
B152/B102

Study of transference numbers in ...

were made at 1000 to 1100°C, and the current passing through the tablets varied from 3 to 100 ma at voltages ≤ 2 v. The transference number of the oxygen ions was determined from the amount of oxygen separated at the anode during electrolysis, and found to be ≈ 1. It is thus concluded that conductivity is almost entirely caused by the oxygen ions. There are 1 figure and 2 tables.

ASSOCIATION: Institut elektrokhimii Ural'skogo filiala Akademii nauk SSSR (Institute of Electrochemistry of the Ural Branch of the Academy of Sciences USSR)

PRESENTED: January 11, 1962, by A. N. Frumkin, Academician

SUBMITTED: January 10, 1962

Card 2/2

S/020/62/143/006/021/024
B152/B102

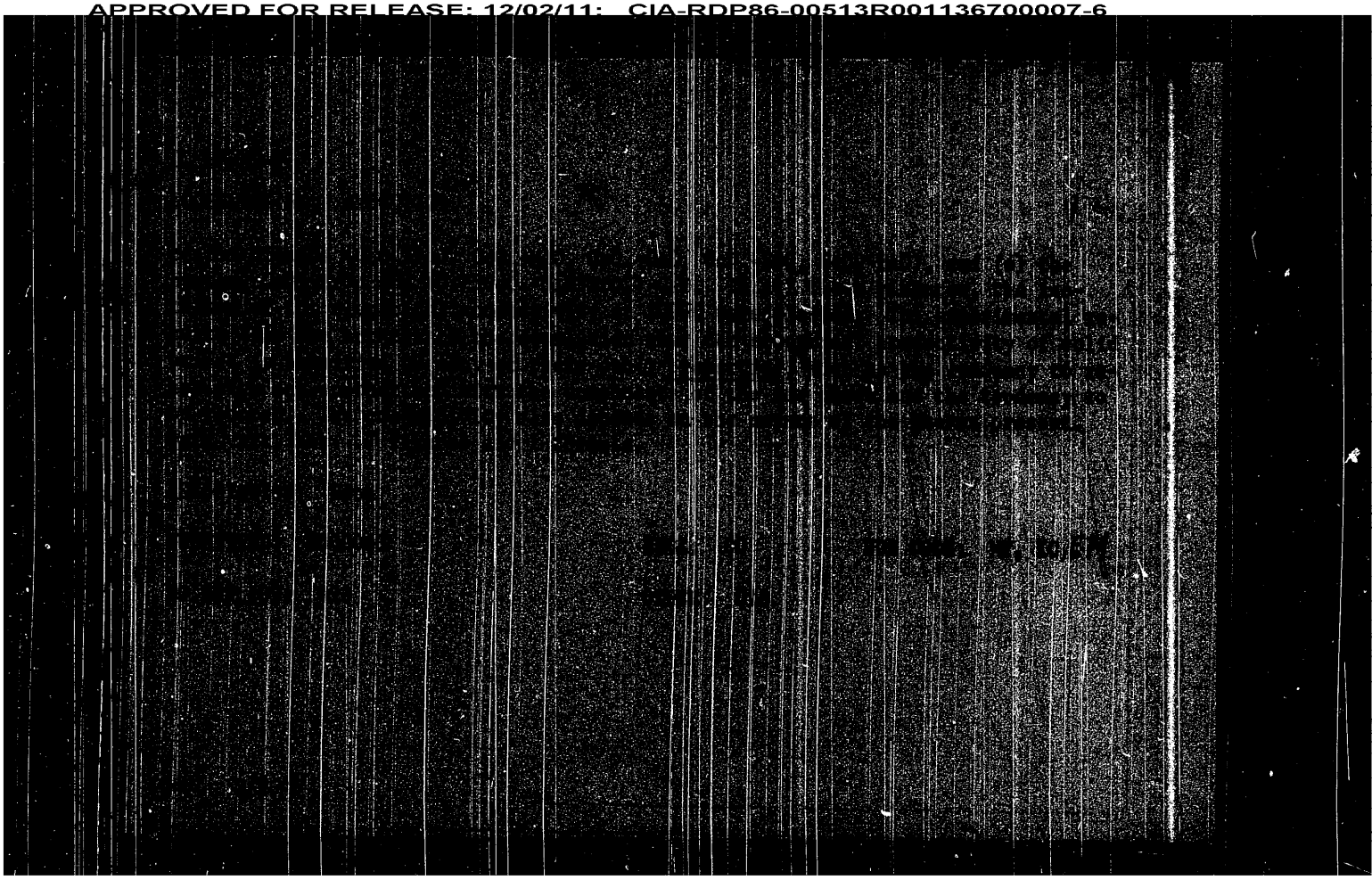
AUTHORS: Neuymin, A. D., and Pal'guyev, S. F.

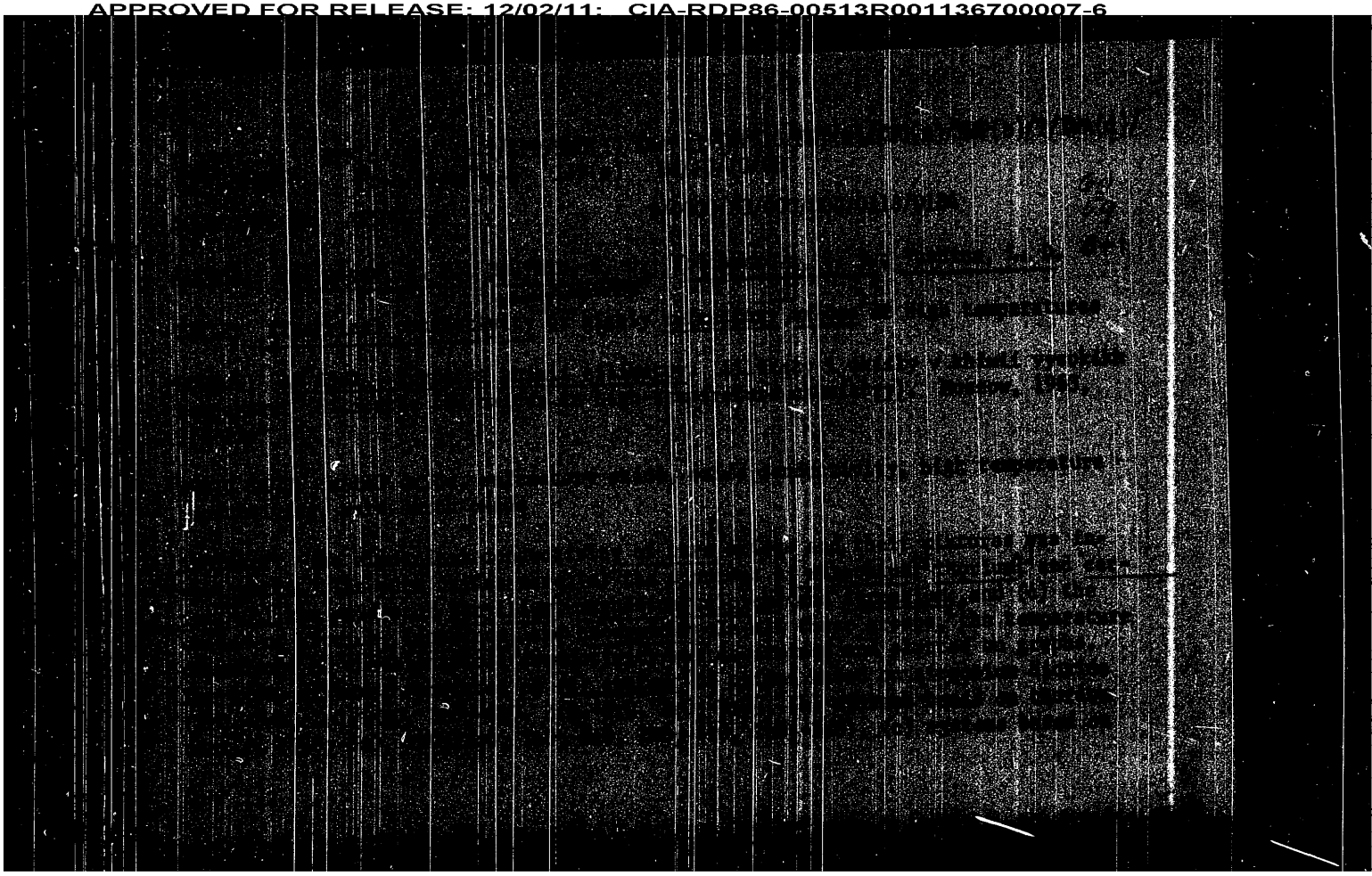
TITLE: Study of transference numbers in solid oxides

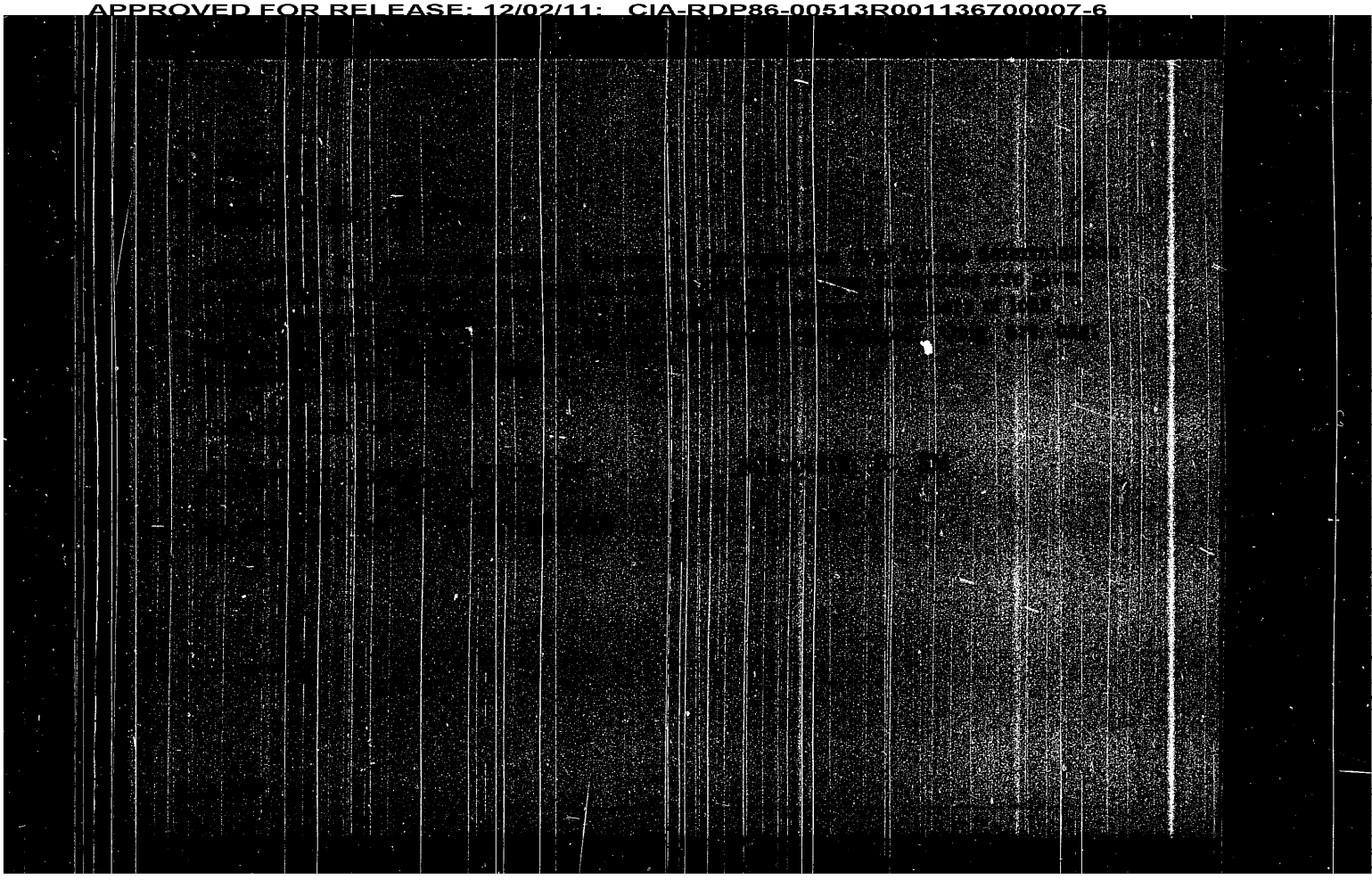
PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 6, 1962, 1388-1391

TEXT: In continuation of an earlier paper (Tr. Inst. elektrokhimii UF AN SSSR, no. 3 (1962)), an attempt is made to find out what ions cause electrical conductivity in the systems CeO_2-La_2O_3, CeO_2-Nd_2O_3, and CeO_2-Y_2O_3. Cerium dioxide, lanthanum oxide, neodymium oxide, and yttrium oxide were used as initial materials, from which tablets were pressed and tempered at 1600°C. The contribution of electrons to conductivity was determined by the emf method. The transference number of the cations was calculated from the changes in weight of two tablets serving as an electrode, between which a third tablet was pressed. For the Ce^{4+} ion, the transference number was < 0.004. The experiments

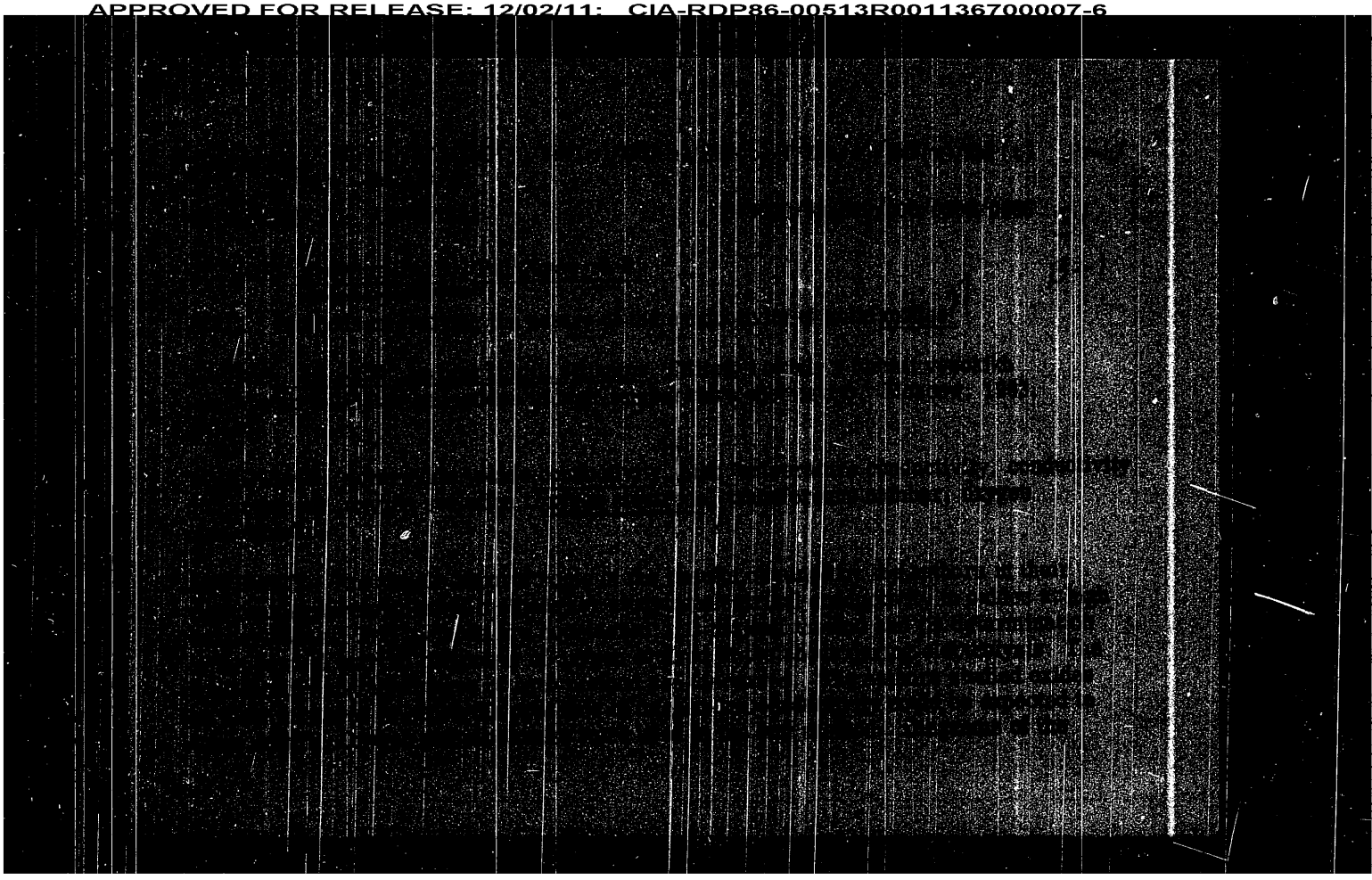
Card 1/2

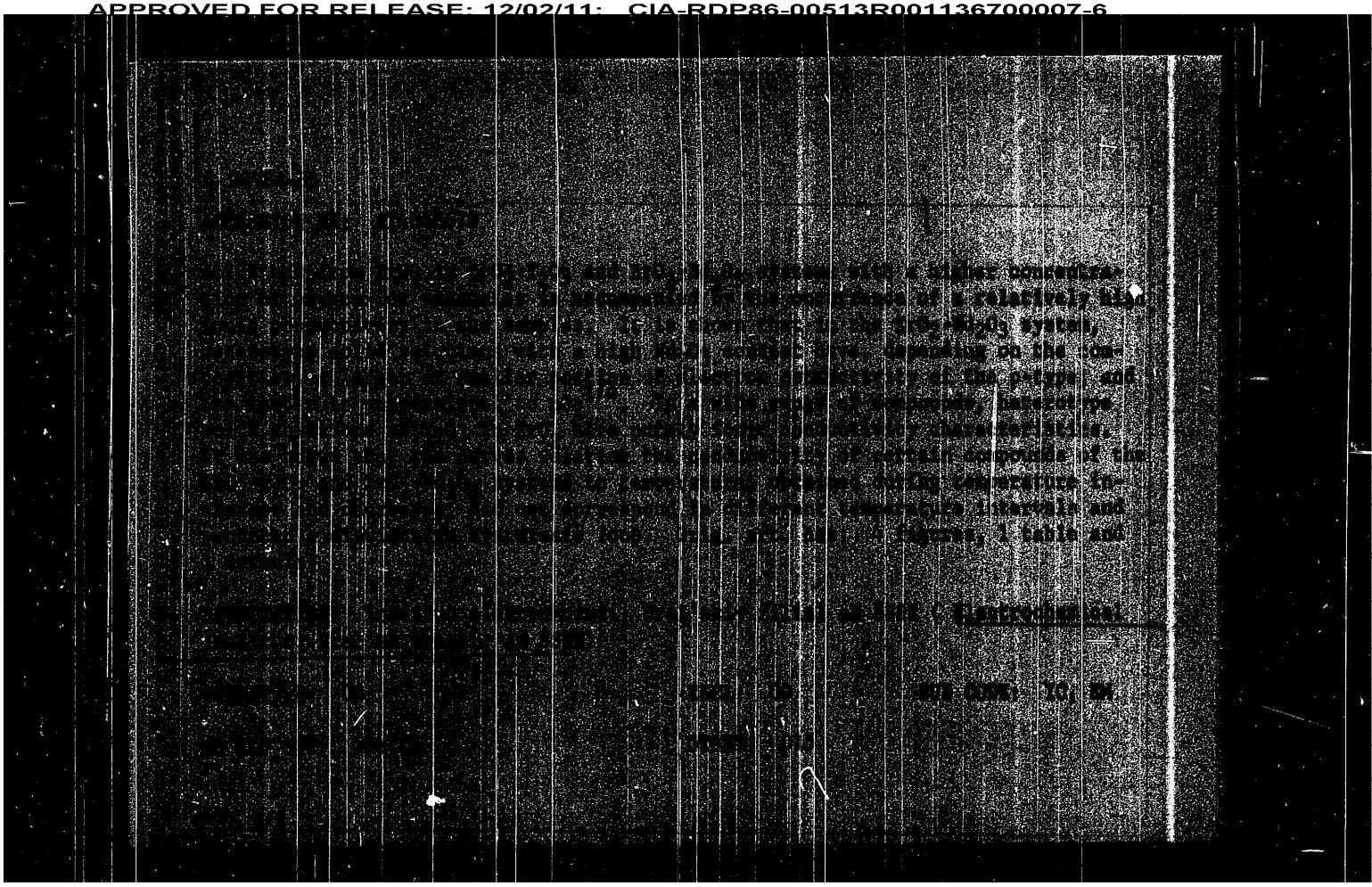


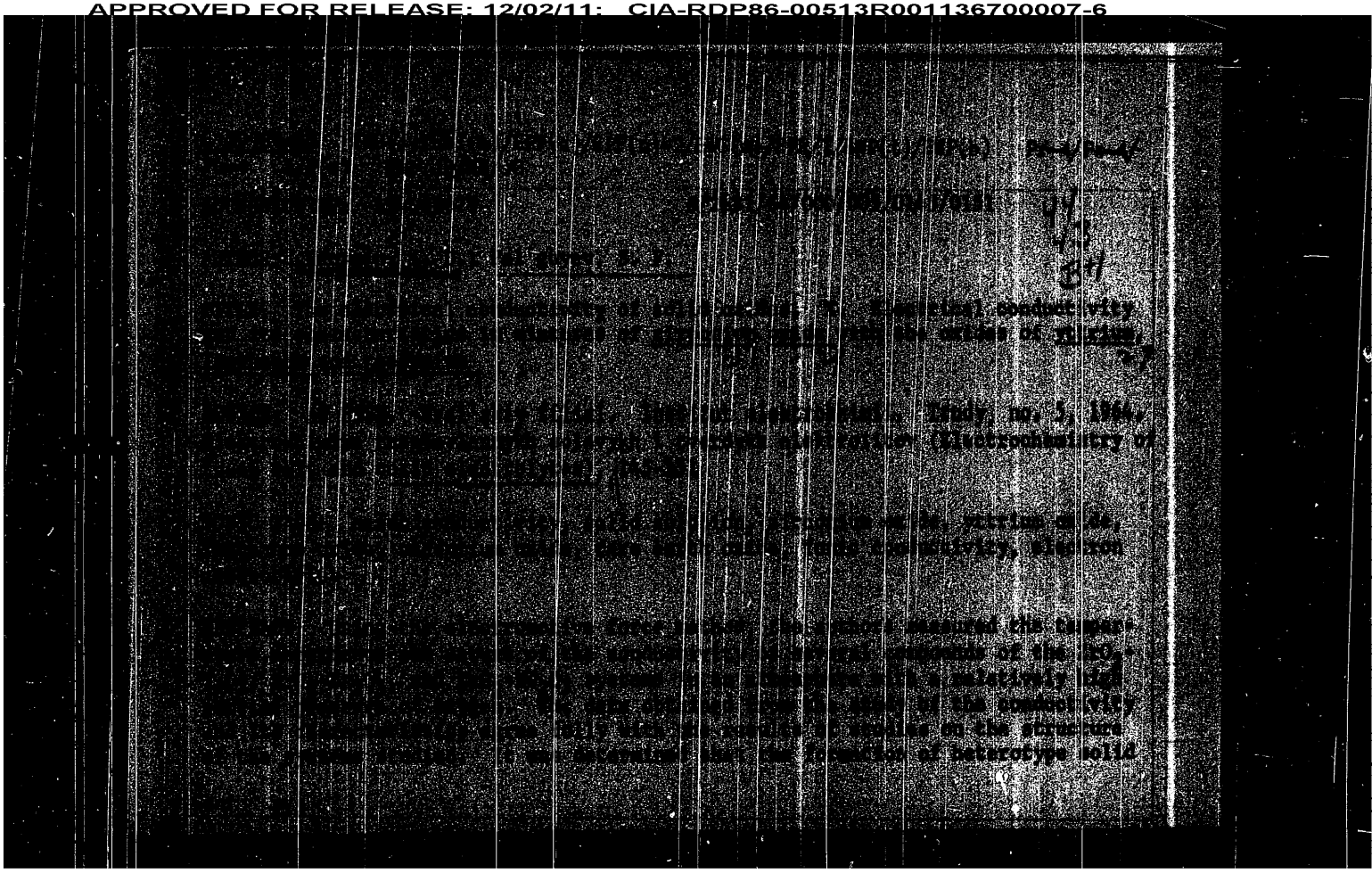




APPROVED FOR RELEASE: 12/02/11: CIA-RDP86-00513R001136700007-6







STREKALOVSKIY, V.N.; NEUYMIN, A.D.; BENSONOV, A.F.

Electric conductivity of higher uranium oxides in a hydrogen stream. Zhur. fiz. khim. 36 no.6:1355-1358 Je'62 (MIRA 17:8)

1. Institut elektrokhimii Ural'skogo filiala AN SSSR.

$E = E_0(1 - (\bar{t}_e - \bar{t}_o))$. $\bar{t}_e$ and $\bar{t}_o$ are the mean electrolytic transfer numbers of electrons and holes, respectively. The quantity E/E_0 characterizes the contribution of ionic conductivity. The nature of conductivity depends on the partial pressure of oxygen in the gas phase. This dependence becomes closer from oxide to oxide in the sequence BeO - MgO - CaO - SrO. In the temperature and oxygen-pressure ranges examined, all these oxides have prevalently ionic conductivity. Professor S. V. Karpachev, Doctor of Chemistry, is thanked for discussions. There are 3 tables and 13 references: 5 Soviet and 8 non-Soviet. The four most recent references to English-language publications read as follows: E. Yamaka, K. Sawamoto. J. Phys. Soc. (Japan), 10 , 176, 1955; S. P. Mitoff. J. Chem. Phys., 31, 1261, 1959; H. J. Schmalzried. J. Chem. Phys., 33, 940, 1960; R. Mansfield. Proc. Phys. Soc. (London), B66, 612, 1953.

ASSOCIATION: Institut elektrokhimii Ural'skogo filiala AN SSSR, Sverdlovsk (Institute of Electrochemistry of the Ural Branch of the AS USSR, Sverdlovsk)

SUBMITTED: October 16, 1961

Card 2/2

S/181/62/004/004/004/042
B108/B102

34770

AUTHORS: Pal'guyev, S. F., and Neuymin, A. D.

TITLE: Nature of the high-temperature electrical conductivity of beryllium, magnesium, calcium, and strontium oxides

PERIODICAL: Fizika tverdogo tela, v. 4, no. 4, 1962, 855 - 860

TEXT: In order to obtain new and more accurate data, the authors studied the conduction mechanism in the above oxides. The emf was measured in the temperature range of 900 - 1300°C. The electrical conductivity of BeO, MgO, CaO, and SrO was measured in gaseous media with partial oxygen pressures ranging from pure oxygen to a mixture of 66% by volume of CO plus 34% by volume of CO_2. The emf of a cell $Pt\left|{}^{O_2}_{(p_1)}\right|oxide\left|{}^{O_2}_{(p_2)}\right|Pt$, as used by the authors, is given by $E_o = \frac{RT}{4F} \ln \frac{p_2}{p_1}$ (p_1, p_2 = partial pressures of oxygen). If the solid electrolyte has both ionic and electronic conductivity (n- or p-type), the emf of the cell will decrease to

Card 1/2

STREKALOVSKIY, V.N.; BESSONOV, A.F.; ZHUKOVSKIY, V.M.; NEUYMIN, A.D.

Electric properties of uranium oxides. Trudy Inst. elektrokhim. UFAN SSSR no.3:155-159 '62. (MIRA 16:6)

(Uranium oxides—Electric properties)

NEUYMIN, A.D.; PAL'GUYEV, S.F.

Problem of electric conductance and its character in the systems CeO_2 - BeO, CeO_2 - MgO, CeO_2 - CaO, CeO_2 - SrO, CeO_2 - BaO. Trudy Inst. elektrokhim. UFAN SSSR no.3:141-147 '62. (MIRA 16:6)

(Cerium oxides--Electric properties)
(Metallic oxides)

NEUYMIN, A.D.; PAL'GUYEV, S.F.

Nature of the conductance of solid oxides. Part 2: Systems $CeO_2 - La_2O_3$, $CeO_2 - Nd_2O_3$, $CeO_2 - Y_2O_3$. Trudy Inst. elektrokhim. UFAN SSSR no.3:133-140 '62. (MIRA 16:6)

(Rare earths--Electric properties)

CHEBOTIN, V.N.; NEUYMIN, A.D.; PAL'GUYEV, S.F.

Electron conduction of ionic crystals in equilibrium with a gaseous phase. Part 2: Solid solution with anti-Frenkel' defects. Trudy Inst. elektrokhim. UFAN SSSR no.3:125-132 '62. (MIRA 16:6)

(Ionic crystals) (Electrons)

30706
S/020/61/141/002/020/027
B101/B147

Polarization of some gas ...

are 2 figures, 1 table, and 7 references: 3 Soviet and 4 non-Soviet. The two most recent references to English-language publications read as follows: K. Kuikkola, C. Wagner, J. Electrochem. Soc., 104, 379 (1959); W. D. Kingery, J. Pappis, M. E. Doty, D. C. Hill, J. Am. Ceram. Soc., 42, 393 (1959).

ASSOCIATION: Institut elektrokhimii Ural'skogo filiala Akademii nauk SSSR (Institute of Electrochemistry of the Ural Branch of Academy of Sciences USSR)

PRESENTED: June 24, 1961, by A. N. Frumkin, Academician

SUBMITTED: April 19, 1961

Card 4/4

Polarization of some gas ...

of the CO electrode, $b = 2.3RT/2F\alpha$ is written. For a, b, α the following values are given:

	900°C	1000°C	1100°C
b	0.258	0.250	0.260
α	0.45	0.51	0.52
a	1.068	0.953	0.866

At low amperages, the measurement values deviated considerably from linearity. This was ascribed to the polarization countercurrent. The following equations are written:

$\vec{i} = K \exp(\eta F/RT)$ (3); $\overleftarrow{i} = K \exp(-\eta F/RT)$ (4); $\vec{i} = i + \overleftarrow{i}$ (5).

At high overvoltage, $\vec{i} \approx i$, at low overvoltage Eq. (5) is valid. i is the current measured. By using Eq. (4), $\overleftarrow{i}$ was calculated for the measuring points deviating from linearity at low overvoltage, and, by taking $\overleftarrow{i}$ into account, complete linearity could be achieved also for these measuring points. At the CO electrode, a considerable overvoltage ($\eta = 0.6$ v) occurred. Thus, the electrodic reaction is inhibited in spite of the high temperature. Further studies are necessary to explain this effect. There

Card 3/4

Polarization of some gas ...

which could become constant (measurement with a Pt-PtRh thermocouple). The resistance of the electrolyte was measured with an a-c bridge (3000 cps). At the experimental temperatures 900, 1000, and 1100°C, it was 23.90, 7.93, and 3.80 ohms, respectively. A linear relationship was found between current density and the voltage measured at the electrodes. The resistances of the electrolyte calculated from the slope of the straight line showed only slight divergences from the values measured directly. Accordingly, no overvoltage occurred at the O_2 electrode. Then, a Pt,O_2 electrode was exchanged for a Pt, CO + CO_2 electrode (cell II) which produced a noticeable emf, so that no external current source was necessary. Amperage was changed by means of a resistance box. The anodic polarization of the CO electrode around which a flow of 66 vol% of CO + 34 vol% of CO_2 streamed, was then measured. Pure oxygen streamed around the O_2 electrode. The anodic overvoltage was determined from $\eta = E_0 - Ir - IR$ (1). η = absolute value of anodic overvoltage; E_0 = equilibrium value of emf; I = amperage; r = resistance of electrolyte; IR = potential drop in the external circuit. For all of the three temperatures, the linear function $\eta = a + b \log i$ (2) was found (i - pressed in a/cm^2). Since two electrons participate in the anodic p...

Card 2/4

30706

S/020/61/141/002/020/027
B101/B147

36.7513

AUTHORS: Neuymin, A. D., Karpachev, S. V., and Pal'guyev, S. F.

TITLE: Polarization of some gas electrodes which are in contact with solid electrolytes

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 141, no. 2, 1961, 403-405

TEXT: The problem mentioned in the title is said to be completely unexplored. The authors examined platinum - gas electrodes which were applied to a solid solution of 85 mole% of ZrO_2 + 15 mole% of CaO. The production of electrolytes has already been described (Tr. Inst. elektrokhimii Ural'sk. fil. AN SSSR, no. 1, 111 (1960)). To both sides of the electrolyte a suspension of Pt powder in benzene solution of rubber was applied as an electrode, and the binding agent was removed by heat treatment. The electrochemical chain examined first was:
Pt, O_2 | 85 mole% of ZrO_2 + 15 mole% of CaO | O_2, Pt (I). Both platinum electrodes were placed in air; direct current passed through the cell. The potential difference between the electrodes was measured for any amperage. The cell was located in an electric furnace, the temperature of

Card 1/4

84832

Transition From Electron to Ion Conductivity as a Function of the Composition of Solid Solutions of Oxides

S/020/60/134/005/020/023
B004/B064

ASSOCIATION: Institut elektrokhimii Ural'skogo filiala Akademii nauk SSSR
(Institute of Electrochemistry of the Ural Branch of the Academy of Sciences USSR)

PRESENTED: June 6, 1960, by A. N. Frumkin, Academician

SUBMITTED: June 6, 1960

Card 4/4

84832

Transition From Electron to Ion Conductivity as a Function of the Composition of Solid Solutions of Oxides

S/020/60/134/003/030/033
B004/B064

transference numbers of electrons and holes, respectively. E_0 the thermodynamic value of the emf: $E_0 = (RT/4F) \cdot \ln(p_2/p_1)$. Table 1 lists the experimental data. Fig. 2 shows conductivity and ΔE at 1000°C as a function of the CaO content. With rising CaO content in the system $CeO_2 - ZrO_2 - CaO$, the authors found a steady transition from electron to ion conductivity. This effect was not observed in the systems $CeO_2 - CaO$ and $ZrO_2 - CaO$. The authors give the following explanations: As a result of partial reduction of Ce^{4+} to Ce^{3+}, first an intense electron conductivity occurs in the system $CeO_2 \cdot ZrO_2$. Increasing addition of CaO inhibits this reduction more and more, and the ion conductivity caused by oxygen ions takes the place of electron conductivity. A decrease of conductivity in samples containing over 40 mole% CaO is attributed to the accumulation of free CaO not converted into a solid solution. There are 1 figure, 2 tables, and 9 references: 5 Soviet, 3 US, and 1 German.

Card 3/4

Transition From Electron to Ion Conductivity as a Function of the Composition of Solid Solutions of Oxides

S/020/60/134/005/020/023
B004/B064

ture, reaching a maximum at 750°C. Only electron conductivity is found in the system CeO_2 - ZrO_2; the addition of CaO diminishes the total conductivity with a minimum at approximately 6 mole% CaO; the maximum is reached at 40 mole% CaO, when the conductivity is nearly 100% ionic and approximately equal to the electron conductivity of the CeO_2 - ZrO_2 system. The experiments were carried out with two electrolytic chains. a) $(Pt)O_{2\,p_1}$ | solid electrolyte | $O_{2\,p_2}(Pt)$. The cell of this chain is schematically shown in Fig. 1. The sample placed in a quartz tube between platinum electrodes was at both ends in contact with oxygen of different pressures (p_1 = 1.0, p_2 = 0.2 atm). b) Me', Me'(O) | solid electrolyte | Me"(O), Me". This cell operated in vacuum without addition of gaseous oxygen. The partial pressure of O was determined from the dissociation pressure of the oxides (mixtures of Fe and FeO Cu and Cu_2O) and ranged from 10^{-7} to 10^{-25} atm. The electron and ion conductivities were determined from $E = \left[\ldots (\bar{t}_e + \bar{t}_o)\right] E_c$. E is the measured emf; $\bar{t}_e$, $\bar{t}_o$ the average

Card 2/4

84832

S/020/60/134/005/020/023
B004/B064

24.7700 1143, 1138, 1395

AUTHORS: Pal'guyev, S. F., Karpachev, S. V., Neuymin, A. D., and Volchenkova, Z. S.

TITLE: Transition From Electron to Ion Conductivity as a Function of the Composition of Solid Solutions of Oxides

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No. 5, pp. 1138-1141

TEXT: The authors wanted to study the influence of calcium oxide upon the electrical conductivity of solid solutions of cerium and zirconium oxides. Since the solid solution $0.75CeO_2 \cdot 0.25ZrO_2$ has the highest conductivity (Ref. 1), it was used as initial substance. CaO was added in varying amounts; addition of CaO of up to 40 mole% resulted in the formation of solid solutions. The preparation of the samples was already described in Ref. 1. The relative electron and ion conductivities were determined by the solid electrolyte emf method at temperatures ranging from 500° to 1000°C, and herefrom the activation energy was computed. It was found that ion conductivity increases with an increase in tempera-

Card 1/4

PAL'GUYEV, S.F.; NEUYMIN, A.D.

Electromotive force method of studying the conductivity characteristics of solid oxides. Trudy Inst.elektrokhim. UFAN SSSR no.1:111-118 '60. (MIRA 15:2)
(Metallic oxides--Electric properties)

PAL'GUYEV, S.F.; KARPACHEV, S.V.; NEUYMIN, A.D.; VOLCHENKOVA, Z.S.

Transition of electronic conduction into ionic conduction as a function of the composition of solid solutions of oxides. Dokl. AN SSSR 134 no.5:1138-1141 O '60. (MIRA 13:10)

1. Institut elektrokhimii Ural'skogo Akademii nauk SSSR. Predstavleno akademikom A.N.Frumkinym.
(Oxides) (Solutions, Solid--Electric properties)

29415
S/081/61/000/017/015/166
B102/B138

24.2130 (1142, 1160, 1482)

AUTHORS: Pal'guyev, S. F., Neuymin, A. D.

TITLE: Investigation of the nature of conductivity in solid oxides by the emf method

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1961, 68, abstract 17B497 (Tr. In-ta elektrokhimii. Ural'skiy fil. AN SSSR, no. 1, 1960, 111-118)

TEXT: In order to estimate the proportion of ion conductivity in solid electrolytes, the emf was measured at 600-1000°C in two types of circuits: M',M'(O)/solid electrolyte/M",M"(O) (1) and (Pt)$P_1(O_2)$/solid electrolyte/$P_2(O_2)$(Pt) (2). Experimental emf values were compared with those calculated thermodynamically. In (1)-type circuits, M'-Fe was together with wustite, and M"-Cu together with Cu_2O. In both types of cells, the following oxide mixtures were used as electrolyte: ZrO_2-CaO (I), ThO_2-CaO (II), CeO_2-MgO (III), CeO_2-ZrO_2, CeO_2-ZrO_2-CaO. For solutions

Card 1/2

[illegible]N, Ivan Yakovlevich; [illegible]NA, N.K., otv. red.

[illegible] stories on the solution of problems [illegible]
zadach. 2, perer. i dop. izd. Izd-vo "Nauka i tekhnika,"
1964. 150 p. [illegible]

NEUWITH, K., Prof. Dr.

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(BIOGRAPHIES,
Henner, Kamil)

Hematology

CZECHOSLOVAKIA UDC 616.61-008.64-036.12:616.155.194

NEUWIRTOVA, R.; VALEK, A.; TOMASEK, R.; BROULIK, P.; 2nd Internal Clinic, Faculty of General Medicine, Charles University (II. Interni Klinika Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr F. HERLES; Institute of Experimental Pathology Fac. of Gen. Med. Charles University (Ustav Experimentalni Patologie Fak. Vseob. Lek. KU), Prague, Chief (Prednosta) Prof Dr T. TRAVNICEK.

"Red Cell Formation in Patients after Prolonged Dialysis in Chronic Renal Insufficiency."

Prague, Casopis Lekaru Ceskych, Vol 105, No 51, 16 Dec 66, pp 1393 - 1397

Abstract [Authors' English summary modified]: Prolonged dialysis helps the formation of red blood cells in patients suffering from renal insufficiency. The reduction in the retention of break-down products of nitrogen metabolism improves erythropoiesis, but the hemolytic effect of erythrocytes is not eliminated. Regeneration of the bone marrow is not intensive enough to improve anemia. When the dialysis with the artificial kidney is satisfactory, hemoglobin can be maintained above 9g%. 1 Figure, 5 Tables, 14 Western, 6 Czech, 2 Russian references.

1/1

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Glutathione in the erythrocyte in acute and chronic uremia.
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Clinical picture of respiratory insufficiency in patients with chronic bronchitis. Cas.lek.cesk. 103 no.7:169-174 14 F'64.

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1. II. interni klinika fakulty vseobecneho lekarstvi University Karlovy v Praze, prednosta prof.dr. Fr.Herles; Kardiovaskularni laborator fakulty vseobecneho lekarstvi University Karlovy v Praze, reditel prof.dr. B.Prusik; Ustav hematologie a krevni transfuze v Praze, reditel prof.dr. J.Horejsi.
(ARTERIOSCLEROSIS blood)
(PHOSPHOLIPIDS blood)
(ERYTHROCYTES chem)

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3 cases of arsine poisoning with amuria treated by the artificial kidney. Pracovni. lek. 12 no.3:144-152 Ap '60.

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(WEIL'S DISEASE, compl.
acute renal failure, artif. kidney ther.)
(ACUTE RENAL FAILURE, etiol. & pathogen.
Weil's dis., artif. kidney ther.)
(KIDNEYS, artificial,
ther. of acute renal failure in Weil's dis.)

EXCERPTA MEDICA Sec. 6 Vol. 11/10 Oct. 57

NEUWIRTOVÁ R.

6522. NEUWIRTOVÁ R., ZWETSCHKE O. and ZAHRÁDKA L. Interní Odd. OÚNZ a Neurol. Odd. OÚNZ, Plzeň. *Pokus o sebevraždu Largactilem a barbiturany. An attempt at suicide with largactil and barbiturates ČAS. LÉK. ČES. 1956, 95/49 (1361-1364)

A case of attempted suicide by means of 5 g. largactil, 1.9 g. Na amytal and 2.5 g. medinal is presented. The patient became comatose and remained thus for nearly 24 hr., and completely recovered. This case gives evidence for the low toxicity of largactil and its large therapeutic range, and suggests a revision of the idea of contraindication of largactil in barbiturate intoxication.

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1. Z interniho odd. Okresni nemocnice v Plazni (primar MUDr Otokar Zwetsche)

(REFLEX, CONDITIONED, *ther. of asthma)

(ASTHMA, therapy, *reflex, conditioned)

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On proteins. [illegible] Col Cz [illegible]

1, Institute of Organic Chemistry and Biochemistry of the Czechoslovak Academy of Sciences, Prague and [illegible], Prague. Submitted June [illegible], 1964 [illegible] Advisory Board Chairman, "Collection of Czechoslovak Chemical Communications" (for Sorm)

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(TRYPSIN,
*prep. & use of crystalline trypsin & chymotrypsin)

LASZLO, Imre; NEUWIRTH, Miklos; BIRO, Laszlo

Determination of the antibiotic content of impregnated paper disks.
Kiserletes orvostud 9 no.5-6:658-660 Oct-Dec 58.

1. Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete es Mikrobiologiai Intezete.
(ANTIBIOTICS, determ.
in antibiograms (Hun))

Neuwirth, M.

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Evaluation of studies on antibiotics resistance performed by paper disk method. Kiserletes orvostud 9 no.5-6:645-654 Oct-Dec 58.

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(ANTIBIOTICS, eff.
on bact., value of determ. of resist. by antibiograms (Hun))
(BACTERIA, eff. of drugs on
antibiotics, value of determ. of resist. by antibiograms (Hun))

NEUWIRTH M

JENEY, E.; BIRO, L.; NEUWIRTH, M.

Stability of antibiotic resistance. Kiserletes orvostud 9 no.5-6: 481-488 Oct-Dec 57.

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(ANTIBIOTICS, eff.
on bact., stability of resist. (Hun))
(BACTERIA, eff. of drugs on
antibiotics, stability of resist. (Hun))

NEUWIRTH-MIKLOS

LASZLO, Imre, dr.; BIRO, Laszlo, dr.; NEUWIRTH, Miklos, dr.

Testing of bacterial antibiotic sensitivity by impregnated paper disc method. Orv. hetil. 98 no.22:595-597 2 June 57.

1. A Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete (Igazgato: Valyi Nagy, Tibor, dr. egyet. tanar, az orvostudomanyok kandidatusa) es a Mikrobiologiai Intezet (igazgato: Valyi Nagy, Tibor, dr. egyet. tanar, az orvostudomanyok kandidatusa) es a Mikrobiologiai Intezet (igazgato: Jeney, Endre, dr. egyet. tanar, az orvostudomanyok doktora) kozlemenye.

(ANTIBIOTICS
bact. sensitivity determ. using impregnated paper discs (Hun))

NEUWIRTH, MIKLOS

BIRO, Laszlo; SOKA, Imre.; NEUWIRTH, Miklos

Evaluation of antibiotic sensitivity tests in dermatological patients. Borgyogy. vener. szemle 11 no.2-3:81-86 Apr-June 57.

1. Debreceni Orvostudomanyi Egyetem Mikrobiologiai Intezete (igazgato: Jeney Endre dr. egyetemi tanar, az Orvostudomanyok doktora) es Bor- es Nemikortani Intezete (Igazgato: Szodoray Lajos dr. egyetemi tanar, az Orvostudomanyok doktora).

(ANTIBIOTICS, ther. use
fungus dis. of skin, prether. sensitivity tests by impregnated paper disc method (Hun))
(FUNGUS DISEASES, ther.
skin, prether. antibiotic sensitivity tests by impregnated paper disc method (Hun))
(SKIN DISEASES, ther.
fungus dis., prether. antibiotic sensitivity tests by

NEUWIRTH, M.

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Preparation of antibiotic-containing paper discs by impregnation method. Kiserletes orvostud. 9 no.3:316-319 July 57.

1. Debreceni Orvostudomanyi Egyetem Gyogyszertani Intezete es Mikrobiologiai Intezete.

(ANTIBIOTICS
antibiogram prep. for testing bact. sensitivity (Hun))

LASZLO, Imre; NEUWIRTH, Mihaly

Simple method for the determination of bacterial antibiotic sensitivity on plexiglass. Kiserletes orvostud. 9 no.2:211-220 Apr 57.

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(ANTIBIOTICS
bact. sensitivity determ. by simple method on plexiglass (Hun))

JENEY, Endre, dr.; BIRO, Laszlo, dr.; CSOKA, Endre, dr.; NEUWIRTH, Miklos, dr.

Can Treponema pallidum be cultivated? Borgyogy. vener. szemle. 10 no.5:212-217 Sept 56.

1. A Debreceni Orvostudomany Egyetem Mikrobiologiai Intezete (igazgato: Jeney, Endre, dr. egyetemi tanar, az orvostudomanyok doktora) es a Debreceni Orvostudomany Egyetem Bor. es Nemiklinika (igazgato: Szodoray, Lajos, dr. egyetemi tanar, az orvostudomanyok doktor) kozlemenye.

(TREPONEMA, culture
pallidum, exper. on cultivation with various culture media (Hun))
(CULTURE MEDIA
for Treponema pallidum, exper. on cultivation (Hun))