"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--DIALKYLHYDRAZONES OF ALPHA,ALKYL,BETA,CHLOROACROLEINS AND THEIR CONVERSION TO DIALKYLAMINOACRYLONITRILES -U-

AUTHOR-(03)-ZELENIN, K.N., IOFFE, B.V., ZELENINA, N.L.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(6), 1354-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDRAZONE, ORGANIC NITRILE COMPOUND, CHLORINATED ORGANIC COMPOUND, NMR SPECTRUM, AMINE, INTRAMOLECULAR MECHANICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1090 STEP NO--UR/0020/70/190/006/1354/1357

CIRC ACCESSION NO--AT0124747

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CLCR PRIME2:CR PRIME1 CHO AND AN EQUIMOLAR AMT. H SUB2 NNR SUB2 .HCL (OR ACOH) CONDENSED IN MEOH OVERNIGHT GAVE (FORMULAS SHOWN ON MICROFICHE). THE REARRANGMENT REQUIRED USUALLY 10-24 HR. NMR SPECTRAL DATA WERE GIVEN.

FACILITY: VOENNO-MED. AKAD. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UNCLASSIFIED PROCESSING DATE--17JUL70

TITLE--N,N,DIALKYLDIAZENIUM BROMIDES IN DIENE SYNTHESIS -U-

AUTHOR--ZELENIN, K.N., BEZHAN, I.P.

COUNTRY OF INFO--USSR

SOURCE--KHIM. GETEROTSIKL. SOEDIN. 1970, (1), 93-4

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IR SPECTRUM, ELECTRON PARAMAGNETIC RESONANCE, CHEMICAL SYNTHESIS, MOLECULAR STRUCTURE, SPECTROSCOPIC ANALYSIS, HETEROCYCLIC NITROGEN COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/1783 STEP NO--UR/0409/70/000/001/0093/0094

CIRC ACCESSION NO--AP0100363

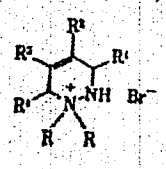
UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr: AP0100363 Abstracting Service: CHEMICAL ABST. 5/10 Ref. Code: UR0409

111400m N,N-Dialkyldiazenium bromides in diene synthesis. Zelenin, K. N.; Bezhan, I. P. (Voenno-Med. Akad. im. Kirova, Leningrad, USSR). *Khim. Geterotsikl. Soedin.* 1970, (1), 93–4 (Russ). $R_2^+N{:}NH.Br^-$ (0.2 mole) reacted with 0.21 mole $CHR^1{:}CR^2CR^3{:}CHR^4$ 4 hr at −5° and worked up gave I [R, R^1, R^2, R^3, R^4, m.p. (2:1 AcOEt-Me_2CHOH), and % yield given): Me, H, H, H, H, 188–90°, 82; Me, H, Me, Me, H, 181–3°, 72; Me, Me, H, H, Me, 180°, 95; Et, H, H, H, H,



(I)

162–3°, 85; Et, Me, H, H, Me, 124–5°, 80. Ir and EPR spectra are given.

J. Panchartek

REEL/FRAME 19841783

7

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 542.61:546.791

PUSHLENKOV, M. F., KUZNETSOV, G. I., SHCHEPETIL'NIKOV, N. N., POPKOV, G. P., and ZELENTS, L. I.

"Study of the Extraction Rates in Systems Containing Tributyl Phosphate. IV. Extraction of $UO_2(NO_3)_2$ While Mixing it in a Centrifugal Field"

Leningrad, Radiokhimiya, Vol 14, No 2, 1972, pp 235-241

Abstract: A study was carried out on the extraction rate of uranium in the system $UO_2(NO_3)_2$-HNO_3-H_2O-tributyl phosphate-solvent in a centrifugal field. It has been shown that under these conditions the kinetics of mass transfer depends to a great extent on the rotation rate. With a 4000 rpm rate the extraction process is practically completed in 0.8 sec. The effectiveness of the extraction is about 1.3 times greater when carbon tetrachloride is used as a solvent instead of the usual mixture of saturated hydrocarbons boiling in the range 110-270°C. Hydrodynamic properties of the centrifugal extraction apparatus have been studied; formulas were developed for the calculations in layer separation chamber. It has been established that the completeness of phase separation is determined by the velocity of phase flows, rotation rate of the apparatus, and the difference in phase densities.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: 669.11.24.71:538

KOTOV, A. P., ZELENIN, L. P., BRONFIN, B. M., SIDORENKO, F. A., GEL'D, P. V., Ural Polytechnic Institute imeni S. M. Kirov

"Structure and Magnetic Properties of Mutual Solid Solutions of Iron and Nickel Monoaluminides"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 33, No 3, Mar 72, pp 602-606

Abstract: The lattice period, density, and temperature dependence of susceptibility of solid solutions of $Fe_{1-x}Ni_xAl$ ($0 \leq x \leq 1$) are measured, and their energy spectrum is discussed. The curve for the lattice period as a function of composition shows anomalous behavior: the lattice period decreases linearly with increasing x from approximately 291 pm for iron monoaluminide to 288.7 pm for 50 mol.% NiAl, remaining constant above x = 0.5. The temperature-dependent part of susceptibility in the intermetallic compounds is attributed to iron atoms. The concentration dependence of the properties of mutual solid solutions of iron and nickel monoaluminides is explained in terms of redistribution of electron densities.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 669.24:538.27

ZELENIN, L. P., BASHKATOV, A. N., SIDORENKO, F. A., and GEL'D, P. V., Ural Polytechnical Institute imeni S. M. Kirov

"Magnetic Susceptibility of the β-Phase of the Ni-Al System"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 30, No 4, Oct 70, pp 740-745

Abstract: Measurements were made of β-phase specimens of the Ni-Al system to determine the magnetic susceptibility at 20-600° K and the electrical resistance at room temperature. X-ray-metallographic investigations and density measurements substantiated the results. A specific point on the composition-property diagrams is attained at 50 at. % Al. The magnetic susceptibility of β-phase specimens is related to the Pauli type. The density estimate of electronic states for the NiAl equiatomic alloy is ~0.49 1/ev·molecul.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 639.16.07.669:65.011.56

SMOLYAK, V. A., UZLYUK, V. N., Candidates of Technical Sciences,
VASILENKO, V. I., ZELENIN, V. M., YASHIN, YU. F., Engineers

"Gamma-Relay Level Gage for Automatic Dosage Control"

Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 5, 1970, pp 38-39

Translation: Volume dosage was applied to a rebuilt furnace of a metallurgical plant since, under the prevalent technical conditions, it was impossible to use a complex of typical equipment and mechanisms for assembling and dosing the coke in mass. Based on a GR-7 radioisotope gamma relay, a system for automatic regulation of coke volume dosage controlling a roller disc screen for sifting coke particles and a main skip hoist (see drawing) was developed.

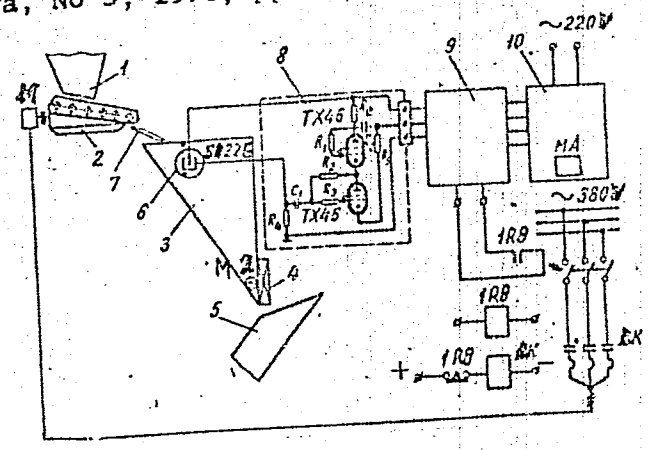
1/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

SMOLYAK, V. A., et al., Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 5, 1970, pp 38-39



Automatic Radioisotope Control System for Coke Dosage and Disc Screen Regulation:

2/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

SMOLYAK, V. A., et al., Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 5, 1970, pp 38-39

1) coke bunker; 2) disc screen; 3) coke hopper;
4) gate; 5) skip; 6) radiation detector;
7) nozzle for adjusting input coke mass; 8) sensor;
9) electronic relay block; 10) control block

The radiation source is in a cast iron collimator container outside the weight hopper 3. at its side wall. The container provides safety from radiation and forms a gamma radintion beam directed toward the detector 6, which uses a SI22G counter in a protective tube 200 mm in diameter and with a wall thickness of two mm in the upper part of the interior of the hopper 3. The placement of the detector inside the object measured, where the radiation by 30-40% the activity of the source and thus reduces the danger of radiation to personnel operating the loading mechanism.

To prevent false operation of the gamma relay and to improve the coke dosage automatic control system, a radiometric pair

3/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

SMOLYAK, V. A., etal, Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 5, 1970, pp 38-39

(source and detector) was placed so that the gamma beam, perpendicular to the longitudinal axis of the screen, is not interrupted by the flow until the moment the hopper is filled with a specified amount of coke and its top is hit by the gamma beam.

To adjust the system -- i.e., to change the specified mass within the limits of 100-200 kg -- the pouring nozzle 7 is shifted by 200-300 mm and pulls the top away from the gamma beam to the screen opposite the wall of the hopper, so that the latter is filled with a large quantity of the coke before the screen is switched off. And, conversely, the sideward approach of the top to the vertical plane passing through the gamma beam leads to an earlier intersection of the latter by the top of the coke mass. Consequently, the control of the coke mass within the technical range depends on which of the following interrupts the gamma beam: the top of the poured coke mass or the side slope ascending to the top. In the latter case, the top is higher than the level at which the gamma beam is permitted to pass.

4/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

SMOLYAK, V. A., Et al., Moscow, Mekhanizatsiya i Avtomatizatsiya Proizvodstva, No 5, 1970, pp 38-39

This control system also contains a sensor, an electronic relay block, and a control block, as well as a low-current control for the electric-feed network of the disc screen.

The control signal from the sensor is applied to the relay of the electron relay block operating in the positive (triggered) position. When the hopper is filled with the specified amount of coke, the gamma beam intensity is weakened to one-third its former level, and contacts IRB of the switch are opened. The coil of IRB is deenergized, the closed contacts IRB in the coil of the linear contactor LK open, and the motor M of the disc screen is switched off. The screen is once more switched on after the gate 4 is opened (motor M2) and the coke is poured from the hopper into the skip 5.

The radioisotope automatic coke dosage regulation systems are based on both coke-loading mechanisms. The annual saving to the economy amounts to 42 thousand rubles.

5/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 012

UNCLASSIFIED

TITLE--DIALKYLHYDRAZONES OF ALPHA,ALKYL,BETA,CHLOROACROLEINS AND THEIR CONVERSION TO DIALKYLAMINOACRYLONITRILES -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-ZELENIN, K.N., IOFFE, B.V., ZELENINA, N.I.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 190(6), 1354-7

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDRAZONE, ORGANIC NITRILE COMPOUND, CHLORINATED ORGANIC COMPOUND, NMR SPECTRUM, AMINE, INTRAMOLECULAR MECHANICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1090

STEP NO--UR/0020/70/190/006/1354/1357

CIRC ACCESSION NO--AT0124747

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124747

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. CLCR PRIME2:CR PRIME1 CHO AND AN EQUIMOLAR AMT. H SUB2 NNR SUB2 .HCL (OR ACOH) CONDENSED IN MEOH OVERNIGHT GAVE (FORMULAS SHOWN ON MICROFICHE). THE REARRANGMENT REQUIRED USUALLY 10-24 HR. NMR SPECTRAL DATA WERE GIVEN.

FACILITY: VOENNO-MED. AKAD. IM. KIROVA, LENINGRAD, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 532.5:532.135

ZELENKIN, V. A., SHAKIROV, N. V.

"Application of the Laplace Transformation to the Solution of Certain Flow Problems"

Sb. nauch. tr. Perm. politekhn. in-t (Collection of Scientific Works of Perm' Polytechnical Institute), 1971, No. 98, pp 44-47 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3B984)

Translation: A homogeneous incompressible medium with the following defining equation is considered:

$$\sigma_{ij} = -p\delta_{ij} + 2\bar{\mu}\varepsilon_{ij} \quad (i, j = 1, 2, 3)$$

where σ_{ij} and ε_{ij} are components of the stress and deformation temperature, respectively; δ_{ij} is the Kronecker delta; p is the average pressure and

$$\bar{\mu}f = \mu f + \mu \int_0^t fR(t-\tau)\,d\tau$$

where μ is the viscosity, $R(t)$ is a descending function of time. The problem of

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENKIN, V. A., SHAKIROV, N. V., Sb. nauch. tr. Perm. politekhn. in-t, 1971, No. 98, pp 44-47

the flow between parallel walls, one of which is fixed and the other begins to move with a constant velocity is solved. $R(t) = A\lambda e^{-\lambda t}$. The problem is solved by the application of the Laplace-Carson transformation. The solution is given in the form of a series. S. A. Leybovich.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 576.858.095.38:576.895.771

LEBEDEVA, O. P., and ZELENKO, A. P., Kiev University imeni T.G. Shevchenko, Kiev

"Detection of Virus-Related Formations in Larvae of Aedes and Culex Mosquitoes"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 41, No 4, Jul-Aug 72, pp 490-492

Abstract: Larvae of Aedes aegypti L. and Culex pipiens molestus Forsk. mosquitoes bred in the laboratory developed an infectious disease in the 4th instar and the stage of pupa formation that could be ascribed to a virus. The disease caused death of up to 30% of the larvae. In the cytoplasm of the fatty bodies of infected larvae inclusions were found that were similar to those that are caused by Vagoiavirus and are present in larvae of some Culex species from natural bodies of water. In addition to formations due to Vagoiavirus, the infected larvae of the laboratory cultures and those of Culex mosquitoes from natural bodies of water also had cell nuclei that exhibited hypertrophy and were structurally analogous to those found in densonucleosis of Galleria mellonella. Evidently the larvae were infected with a combination of two entomopathogenic viruses.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 620.179.15

GERSHBERG, M. V., ZELENKOV, A. L., ILYUSHIN, S. V., PERVITSKIY, Yu. D., RUDAKOV, V. N.

"The RT-68 Radiation Defectoscope"

Defektoskopiya, No 4, 1971, pp 115-121.

Abstract: A description is presented of the RT-68 commercial radiation defectoscope, designed for testing of glass reenforced plastic pipe and other types of pipe of similar dimensions. The defectoscope operates by the principle of mechanical scanning of the probe device, producing a visual picture of the distribution of defects. The device consists of the probe device with its lines, intermediate frequency amplifiers and power supply, the scanning mechanism of the probe device and the defect recording system, consisting of the visualization unit and beam scanning sensors. A block diagram and photograph of the device are presented.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 669.245'71':620.17

ZELENKOV, I. A.

"Effect of Alloying on the Hardness of Ni_3Al Alloys"

Metallofizika. Resp. mezhved. sb. (The Physics of Metals. Republic Interdepartmental Collection of Works), 1971, vyp. 33, pp 120-122 (from RZh-Metallurgiya, No 1, Jan 72, Abstract No 1I781 by author)

Translation of Abstract: A study was made of the effect of Cr, Ti, W on the hardness of Ni_3Al alloys. Alloying in all cases resulted in an increase of hardness. The maximum increase in hardness was observed in two-phase Ni_3Al alloys containing beta phase based on another metallic compound -- NiAl. For pure Ni_3Al and its chromium-doped alloys a study was made of the temperature-dependence of hardness during heating in the 20-900° range. When single-phase alloys containing Ni_3Al-base γ' phase were heated, alloying resulted in strengthening of the alloy at elevated temperatures. When two-phase alloys ($\gamma'+\beta$) were heated, a complex character of the variation of alloy hardness with temperature was observed. It should, however, be noted that at high temperatures (800-900°) this hardness of single-phase alloys is higher than that of two-phase alloys, whereas at room temperature the opposite picture was observed. One illustration. One table. Bibliography with four titles.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENKOV, O. S.

"Interaction of Incompletely Expanded Stream with Oppositely Directed Supersonic Reference Stream"

Leningrad, Uchenyye Zapiski Leningradskogo Gosudarstvennogo Universiteta, No 357, SER. MAT. NAUK., No 46, 1970, pp 81-91

Abstract: This work presents the results of an experimental and approximation theoretical study of the interaction of two oppositely directed supersonic streams, one of which is incompletely expanded, while the other is a reference stream. The experimental results present the distances from the nozzle of the incompletely expanded stream to the various compression jumps as it meets the reference stream as functions of the degree of difference of the characteristics of the two streams and the mach numbers of the streams. The incompletely expanded stream, moving against the supersonic stream, retains its typical barrel shape and characteristic form of shock waves. However, the central compression jump moves upstream toward the cross-section of the conical nozzle

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENKOV, O. S., Uchenyye Zapiski Leningradskogo Gosudarstvennogo Universiteta, No 357, SER. MAT. NAUK., No 46, 1970, pp 81-91

by a distance dependent on the parameters of the reference stream. The portion of the stream located between the cross-section of the nozzle and the central compression jump is independent of the opposite flow and remains the same as in a free, individual under-expanded stream. A central compression jump is also formed on the side of the reference stream. Between these compression jumps there is a contact surface, separating the mass of gas of one stream from the other. Parameters of the streams and masses are calculated.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr: AP0051975 Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 3, pp 113-116

SOME MORPHOLOGICAL CRITERIA OF AFFERENT SPINAL CORD INNERVATION OF THE INTERNAL ORGANS

G. V. Stovichek, V. M. Nikulin, R. I. Zelenkov

Yaroslav Medical Institute

Visceral branches of sympathetic nodes leading to the internal organs were investigated to determine the presence in them of intervertebral sensory ganglia neuron dendrites. Afferent spinal conductors have always been demonstrable in the nerves of the esophagus, lungs, heart, small intestine, liver and kidneys of men and dogs, but there is a great difference in the number of these fibers in the nerves of various organs. Thus, the absolute number of sensory conductors is the highest in the esophageal nerves and diminishes in the following order: esophagus→lungs→heart→liver→small intestine→kidneys. Viscerosensory functions of certain organs, especially of the small intestine, kidneys and liver are provided with a relatively small number of neuron elements coming from intervertebral nodes. It is obvious that many internal organs possess local neuro-reflectory mechanisms and have no need in a greater scope of afferent spinal cord innervation for the implementation of specific functions.

REEL/FRAME

19820462

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: 681.2.087.92-932

VYZHELEVSKIY, B. V., POMYKAYEV, I. T., VLASOV, Ye. N., UVAKIN, V. F., GOL'DENBERG, F. M., KARCHEVSKIY, A. A., ZELENKOV, S. V.

"A Sine-Cosine Converter"

USSR Author's Certificate No 316110, filed 24 Apr 70, published 9 Nov 71 (from RZh-Avtomatika, Telemekhanika i Vychislitel'naya Tekhnika, No 7, Jul 72, Abstract No 7A111 P)

Translation: A patent has been granted for a sine-cosine converter distinguished by the fact that one end of each output winding of the rotor is connected to the input of an auxiliary phase-sensitive rectifier, while the other end is connected through a resistor to the input and output of the same rectifier. Laid around the perimeter of the back edge of the rotor is an excitation winding which is connected to a source of alternating current. The device acts as a vector plotter and coordinate transformer with DC and AC input signals. Either DC or AC output signals may be obtained as desired. The device can serve two servosystems simultaneously, one working on AC and the other on DC. Two illustrations. O. S.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UDC 621.384.664

USSR

GALYAYEV, N. A., GOLOVINA, N. I., GRACHEV, M. I., GRIDASOV, V. I., GUBRIYENKO, K. I., YEREMENKO, Ye. V., ZAPOL'SKIY, V. N., ZELENOV, N. A., KOTOV, V. I., KUZNETSOV, V. S., MERKER, E. A., MYZNIKOV, K. P., PUCHUGIN, V. A., PRILEPIN, A. A., SELEZNEV, V. S., SEREBRYAKOV, B. A., KHODYREV, Yu. S., and CHEPEGIN, V. N.

"Proton Beam With an Impulse of Up to 70 Gev/s Elastically Dispersed Inside a Target"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

Abstract: This paper discusses the operation of a channel built into the French liquid-hydrogen Mirabelle chamber for the accelerator of the Institute of High-Energy Physics (IFVE). The function of the channel is to form pure beams of pi and k mesons, and antiprotons, in a broad range of impulse magnitudes under the action of a high-frequency separator. The secondary particles are generated on the inside of a target placed in the path of a proton beam diverted from the accelerator with an energy of 70 Gev. By using a fast system for aiming the proton beam at the target, together with a kicker magnet in the channel, the required number of particles passing through the chamber can be provided. The optical system of the channel is described with the

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

GALYAYEV, N. A., et al., Zhurnal Tekhnicheskoy Fiziki, Vol 42, No 7, 1972, pp 1437-1445

aid of diagrams of two possible variants; the beam aiming system and the particle dosage for the bubble chamber are also explained. The authors thank R. M. Sulyayev, P. F. Yermolov, A. M. Moiseyev, M. I. Solov'yev, I. A. Danil'chenko, Ye. A. Parshin, V. M. Kolesnik, A. N. Alayev, V. D. Rudko, and V. M. Gorshkov for their assistance.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

JPRS 58291
22 Feb 73
Transl. on Access

Welding

UDC 621.791:539.375.3.037

VACUUM-DIFFUSION WELDING UNIT

[Article by Candidate of Engineering Sciences G. V. Konyushkov and Engineers A. A. Myagkov and G. F. Zelenov, Saratov Polytechnical Institute; Moscow, Svarochnoye Proizvodstvo, Russian, No 12, 1972, pp 55-56]

Production of units UDS-2 and A.306.20 has been mastered for the diffusion welding of parts made of similar and dissimilar metals and alloys (steel-steel, copper-copper, steel-copper, steel-aluminum, steel-iron, steel-titanium, etc.) as well as nonmetals (copper-ceramic, kovar-glass, steel-graphite, etc.). They make it possible to produce weld joints of 400 different compositions which are identical to their initial state for all the basic characteristics (strength, ductility, thermal stability and electrical conductivity). On these units it is possible to weld parts without restriction of thickness correspondence on plane, conical, cylindrical and relief surfaces.

These units make it possible to combine the process of joining parts and assemblies with their vacuum or hydrogen annealing, vacuation of electrovacuum instruments, sintering of powders, etc.

A distinguishing feature of unit A.306.20 is the possibility of switching it to a hydrogen system which expands the technological possibilites of the unit.

Unit UDS-2 (see Fig. 1) is easier to operate than the A.306.20. This was achieved by a more practical positioning of the control elements and panel. Productivity of the unit was increased by means of improving the system of shielding and cooling the bottom of the housing and welding chamber support.

The control apparatus and panel of the unit makes it

ZELENOV, G. F.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

possible to perform smooth adjustment and regulation (control of welding temperature is automatic) of the welding mode parameters which provides the capability of welding an assembly according to specified conditions.

Inquiries may be sent to the following address: Moscow, Zh-29, Problem Laboratory of Vacuum Diffusion Welding.

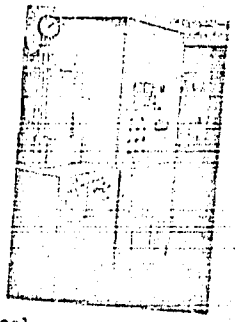


Fig. 1. Overall view of UDS-2.

Technical specifications for UDS-2 and A.306.20 Units.

	UDS-2	A.306.20
Maximum dimensions of welded parts, mm:		
height	180	150
diameter	80	60
Dimensions of working vacuum chamber, mm:		
diameter	350	490
height	440	480
Productivity, parts/hour	2-3	1-2
Type of heater	Induction	
Maximum heating temperature, oC.	1100	
Welding pressure, kgf	50-1000	
Chamber vacuum, mm Hg	1000-10000	
Type rough exhaust pump	10^{-5}	
Type high vacuum pump	VN-2M0	VN-1M1
Type high frequency generator	N5-S-M1	N-2T
Operating frequency range, Khz	I0.60008.3	A.624.25
Maximum power, Kv	440-880	300-500
Supply voltage (three-phase, 50 Hz), v	25	60
Water consumption, l/min	380/220	
	10	40

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 020 UNCLASSIFIED

TITLE--AUTOMATIC DIFFERENTIAL MICROCALORIMETERS -U- PROCESSING DATE--27NOV70

AUTHOR-(03)-GALPERIN, L.N., KOLESOV, YU.R., ZELENOV, N.A.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 525-7

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, PHYSICS

TOPIC TAGS--CALORIMETER, HEAT LOSS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2249 STEP NO--UR/0076/70/044/002/0525/0527

CIRC ACCESSION NO--AP0125827

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 020

UNCLASSIFIED

CIRC ACCESSION NO--AP0125827 PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE DIVICES ARE OPERATED ON THE BASIS OF CONST. RECORDING OF THE HEAT EVOLVED AS WELL AS OF THE RATE OF ITS EVOLUTION. THE MAX. RATES OF THE LIBERATED HEAT WERE 1, 5, 10, AND 50 CAL-HR. THE DETN. ERROR OF THE HEAT LIBERATED (5 CAL-HR) IS 4-2.5PERCENT. THE TIME CONST. IS 35-55 SEC. FACILITY: FILIAL INST. KHIM. FIZ., CHERNOGOLOVKA, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 620.187

ZELENOVA, V. D., SHERMAZAN, I. V.

"Electron Microscope Method of Quantitative Determination of the Viscous Component in a Fracture"

Moscow, Zavodskaya Laboratoriya, No 12, 1972, pp 1477-1479.

Abstract: It is suggested that the percentage of the viscous component in a fracture be determined by statistical processing of the data from electron microscope studies. The confidence interval of the deviation from the arithmetic mean value of the percentage of the viscous component for three specimens with a reliability of 0.95 was found to be ±5.2%.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Conferences

USSR

ZELENOVA, V. D.

"All-Union Scientific and Technical Conference on 'Advanced Methods of Heat Treating Metals and Alloys' "

Moscow, Metallovedeniye i termicheskaya obrabotka metallov, Sept 71, no 9, pp 76-78

Abstract: The article discusses the All-Union Scientific Research Conference on Advanced Methods of Heat Treating Metals and Alloys, held in June 1971 in Rostov-na-Donu. It was attended by about 270 participants representing 58 industrial enterprises and scientific-research and educational institutions of the USSR. Some 35 reports were delivered dealing with the theory and practices of physical metallurgy and heat treating of steels, advanced experimentation and structural strength problems of machine parts subjected to heavy stresses. In his opening address, Yu. M. Lakhtin (Chairman of Physical Metallurgy and Heat Treating Section, NTO Mashprom) spoke of current problems and of the final results of the 1970 conference held in Voronezh. The first report by N. N. Kidin, V. I. Lizunov, and V. M. Belyanskaya dealt with high-speed electric heating combined with austenite

1/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENOVA, V. D., Metallovedeniye i termicheskaya obrabotka metallov, Sept 71, no 9, pp 76-78

deformation to produce natural-fiber construction materials. I. N. Bogachev discussed a new approach to problems of increasing the contact strength of metallic materials where failure may occur due to fatigue, corrosion, or brittleness. A paper on increasing the structural strength of heavily stressed machine parts was read by V. D. Kal'ner, V. F. Nikonov, and S. A. Yurasov. The central topics of this report concerned combined techniques of the thermal hardening of parts including grain-size control, nitriding, etc. K. Z. Shepelyavskiy et al. reported on a new method of surface hardening with deep heating and the use of steels of standardized hardenability for bearings for tractor applications. The topics discussed in the subsequent reports stressed practical utilization of thermomechanical treatment to increase the strength of constructional steels, theoretical and applied problems of chemical heat treatment of metals in melts, protective nitride coatings on refractory metals, heat-resistant coatings for nickel-base alloys, improvements in the machinability of lead-containing steels, optimal heat-

2/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENOVA, V. D., Metallovedeniye i termicheskaya obrabotka metallov, ept 71, no 9, pp 76-78

treating conditions for various machine parts, including heavy shafts and turbine rotors, new data on brittleness thresholds, and fracture types, critical deformation rates, optimum compositions of rail steels, structural changes with martensitic transformations due to plastic deformation, and programmed loading and tempering under stress. To summarize the views of the participants, the conference adopted a resolution on the importance of experimental and theoretical research in physical metallurgy and heat treatment of materials as a means of meeting the paramount tasks of the Ninth Five-Year plan set forth by the 24th Congress of the Party on increasing the service life and reliability of critical machine parts.

3/3

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UNCLASSIFIED

TITLE--FLOTATION OF GOLD ORES BY A FROTH SEPARATION PROCESS -U-

PROCESSING DATE--02OCT70

AUTHOR-(05)-ZELENOV, V.I., UVAROV, YU.P., GUREVICH, R.I., GORELOVA, A.V., KALASHNIKOVA, T.M.

COUNTRY OF INFO--USSR

SOURCE--TSVET. METAL. 1970, 43(1), 88-9

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--GOLD, ORE, QUARTZ, CHEMICAL SEPERATION, FLOTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/0745

STEP NO--UR/0136/70/043/001/0088/0089

CIRC ACCESSION NO--AP0107287

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 010

UNCLASSIFIED

CIRC ACCESSION NO--AP0107287 PROCESSING DATE--02OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PURPOSE FO THE PRESENT WORK CONSISTED IN DETG. WHETHER THE FROTH SEPN. TECHNIQUE CAN BE USED FOR THE SEPN. OF AU ORES. THE SEPN. WAS DONE ON A LAB. APP. MIXTS. OF AU AND QUARTZ POWDERS WERE SUBJECTED TO SEPN. WITH THE RESULTS OBTAINED BY MECH. PROCESSES. FLOTATION BY FROTH SEPN. IS BOTH FASTER AND MORE THOROUGH THAN MECH. FLOTATION. ALSO, EXTN. OF AU IS HIGHER BY THE FORMER PROCESS.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr: AP0047503 Abstracting Service: NUCLEAR SCI. ABST. 4-70 Ref. Code: UR0089

14093 TWO CLASSES OF REDUCING GEOCHEMICAL BARRIERS IN EXOGENIC URANIFEROUS DEPOSITS. Zelenova, O. I.; Viselkina, M. A.; Perel'man, A. I. At. Energ. (USSR) 28: 3-9(Jan 1970). (In Russian).

The formation of uranium and selenium ores takes place at the reducing barriers of hydrogen sulfide and gley deposits of stratum oxidation. The deposition of uranium, selenium, iron sulfides and sulfides of chalcophylic elements is a characteristic feature for hydrogen sulfides reducing barrier. At the gley barrier uranium and selenium are deposited, but sulfides of iron and chalcophylic elements are not concentrated there. (auth)

1/1

REEL/FRAME 19791062

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 669.15'295-194:620.178.2

LAKHTIN, Yu. M., ZELENOVA, V. D., GLADOVA, G. V., and KNOROZOVA, T. B.,
Moscow Automobile and Road Institute

"The Tendency Toward Brittle Failure of Titanium-Containing Steels"

Moscow, Metallovedeniye i Termicheskaya Obrabotka Metallov, No 11, 1972, pp 60-61

Abstract: A study was made of the tendency toward brittle failure of 30KhT2 and 30KhT2N3Yu steels containing 2.1% Ti, in order to determine regions of their applicability. Specimens with and without nitrated layer, the latter with notches, were subjected to impact tests. Their impact strength and cold brittleness threshold were determined and the macro- and micro-structures of fractures after tests at different temperatures were analyzed. According to test results and electron-microscopy investigations, the lower cold brittleness thresholds of 30KhT2 and 30KhT2N3Yu steels are at 10°C and 40°C, respectively. Because of the high temperature of the lower threshold of cold brittleness, the 30KhT2 and 30Kht2N3Yu steels are not recommended for parts working under conditions of significant impact loads. Two figures, one table, three bibliographic references.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UNCLASSIFIED

TITLE--EFFECT OF AUSTENITIC GRAIN SIZE AND TEMPERING TEMPERATURES ON THE COLD BRITTLENESS OF STEEL -U-

PROCESSING DATE--30OCT70

AUTHOR-(03)-SHERMAZAN, I.V., ZELENOVA, V.D., GULYAYEV, A.P.

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL. 1970, (3), 23-7

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--GRAIN SIZE, METAL BRITTLENESS, ALLOY DESIGNATION, ELECTRON MICROSCOPY, ALLOY COMPOSITION, IMPACT STRENGTH, MATERIAL FRACTURE, AUSTENITE, STEEL TEMPERING, LOW TEMPERATURE METAL, LOW TEMPERATURE EFFECT/(U)40KH CHROMIUM STEEL, (U)25KHGT CHROMIUM STEEL, (U)12KH2N4 CHROMIUM NICKEL STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0014

STEP NO--UR/0129/70/000/003/0023/0027

CIRC ACCESSION NO--AP0119010

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 045

UNCLASSIFIED

CIRC ACCESSION NO--AP0119010 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE STUDY WAS CARRIED OUT BY MEANS OF THE ELECTRON MICROSCOPE METHOD DESCRIBED BY G., ET AL. (1966). STEELS 12KH2N4, 25KHGT, AND 40KH (C 0.13, 0.25, 0.33; MN 0.60, 0.94, 0.58; SI 0.20, 0.22, 0.30; CR 1.46, 1.0, 0.98; NI 3.60, -, -, S 0.014, 0.014, 0.019; AND P 0.026, 0.026, 0.025 WT. PERCENT) WERE GIVEN VARIOUS KINDS OF TREATMENTS: (1) QUENCHED FROM 850DEGREES, (2) QUENCHED FROM 1200DEGREES, (3) TEMPERED AT 180DEGREES, (4) TEMPERED AT 500DEGREES. THEREAFTER IMPACT STRENGTH WAS DETD. AND FRACTURES WERE STUDIED UNDER ELECTRON MICROSCOPE AND THE ULTIMATE COLD BRITTLENESS WAS DETD. FOR LOW TEMP. TEMPERED STEELS BY OBSERVING THE APPEARANCE OF BRITTLE COMPONENT IN THE FRACTURE. WITH HIGH TEMP. TEMPERED STEELS THE ULTIMATE COLD BRITTLENESS WAS DETD. BY THE AMT. OF FIBERS IN THE FRACTURE. FRAGMENTATION OF GRAINS LOWERED THE COLD BRITTLENESS, WHILE THE TEMP. OF TEMPERING HAD NO EFFECT.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UNCLASSIFIED

TITLE--COLD BRITTLENESS OF STEELS USED FOR AUTOMOBILE CHASIS -U- PROCESSING DATE--11SEP70

AUTHOR--CHECHEKIN, YU.F., ZELENOVA, V.D., NABATOVA, K.A., SHERMAZAN, I.V.

COUNTRY OF INFO--USSR

SOURCE--METALLOVED. TERM. OBRAB. METAL 1970, (2), 5-8

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--IMPACT STRENGTH, CRACK PROPAGATION, METAL BRITTLENESS, HOT ROLLING, MANGANESE STEEL/(U)10G2B MANGANESE STEEL, (U)15GYUT LOW ALLOY STEEL, (U)12G2AF LOW ALLOY STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1988/1308 STEP NO--UR/0129/70/000/002/0005/0008

CIRC ACCESSION NO--AP0106085

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 032 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0106085

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STEELS 12G2AF, 15GYUT, 10G2B, AND 30T WERE STUDIED UNDER 2 STRUCTURAL CONDITIONS: (1) FOLLOWING NORMALIZING AT 910DEGREES, GRAIN SIZE MARK 10-11; (2) IN THE HOT ROLLED STATE, TEMP. OF FINAL ROLLING 880-910DEGREES, GRAIN SIZE MARK 8, SIGMA EQUALS 53-6 KG-MM PRIME2. OVERALL IMPACT FUNCTIONS, TAKEN FROM THE COMPONENTS ONSET AND CRACK PROPAGATION FUNCTIONS, WERE INDEXED FOR ALL OF THE STEELS. A METHOD OF INDEXING BASED ON DETG. THE VALUE OF IMPACT STRENGTH AT TEMP. BELOW THE THRESHHOLD OF COLD BRITTLENESS WAS APPLIED. THE HIGHEST ONSET AND CRACK PROPAGATION FUNCTIONS WERE OBSD. IN STEELS 12G2AF AND 15GYUT. ELECTRON MICROSCOPIC ANAL. DETD. NOT ONLY THE COLD BRITTLENESS THRESHOLD BUT ALSO THE PECULIAR FINE STRUCTURE OF THE FRACTURE. A MICROFRACTOGRAPH OF THE VISCOUS FRACTURE OF STEEL 12G2AF IN THE HOT ROLLED AND IN THE NORMALIZED STATES IS SHOWN. IN THE AREA OF DUCTILE FRACTURE, A DIFFERENT DISPERSION OF THE CUP SHAPED STRUCTURE WITH DEPENDENCE ON HEAT TREATMENT WAS OBSD. STEELS IN THE NORMALIZED STATE DISPLAYED MORE DISPERSION OF THE CUP SHAPE STRUCTURE THAN IN THE HOT ROLLED AND ANNEALED STATE.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr. AP0036760 Abstracting Service: CHEMICAL ABST. 4-70 Ref. Code UR 0068

69977j Determination of coal-tar naphthalene impurities by using gas-liquid chromatography. Marnich, L. I.; Agur'eva, O. A.; Zelenskaya, E. A. (USSR). Koks Khim. 1970, (11), 29-33 (Russ). The stationary phase was Inzensk brick INZ-600 (0.25-0.50 mm grains) contg. 11-25% poly(ethylene adipate) used in 4-6 mm × 2-4 m columns at 120-190°, depending on carrier gas and make of chromatograph. Acetophenone was the internal standard. A chromatogram with 17 peaks is presented, and an anal. with 33 compds. Indole was detd. sep. with the same column at a higher temp. (190-225°) with acenaphthene as standard. By extrapolation of the m.ps. of impure naphthalenes, the m.p. of the pure compd. was found to be 80.4°.

Olaf Thomsen

REF FRAME

7 d.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PRODUCTS OF THE PHOTOCHEMICAL NITROSATION OF CHLOROCYCLOHEXANE -U-

AUTHOR-(05)-SEMINA, G.N., ZELENSKAYA, L.G., LEVASHOVA, L.A., KUZNETSOVA, K.YE., STRELTSOVA, A.A.

COUNTRY OF INFO--USSR

SOURCE--NEFTEKHIMIYA 1970, 10(1), 103-9

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ORGANIC OXIME COMPOUND, CHLORINATED ORGANIC COMPOUND, CYCLOHEXANE, PHOTOCHEMISTRY, NITROSYL CHLORIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/0904 STEP NO--UR/0204/70/010/001/0103/0109

CIRC ACCESSION NO--AP0124565

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124565

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. NOCL AND HCL, 0.3 AND 0.6 L.-MIN, RESP., WERE BUBBLED INTO 1700 ML CHLOROCYCLOHEXANE AT 25DEGREES USING A 750 W LIGHT; AFTER 8 HR, 240 G HEAVY OIL SEPD., CONTG. 11.6PERCENT CHLOROCYCLOHEXANE, 29.4 HCL, AND 55.9 ISOMERIC CHLOROCYCLOHEXANONE OXIMES. HYDROLYSIS OF AN ALIQUOT WITH 20PERCENT H SUB2 SO SUB4 FOR 30 MIN GAVE 1.9PERCENT CHLOROCYCLOHEXANE, 2.8 CYCLOHEXANONE, 65.0 CHLOROCYCLOHEXANONE, 4.0 CYCLOHEXANONE OXIME, AND 23.4 TAR. THE SOLN. AFTER 10 HR CONTAINED 3.0PERCENT 1,2 TRANS, 2.0 MIXED 1,3 AND 1,4 TRANS, 0.9 1,2 AND 1,4 CIS, 0.5 1,3 CIS, AND 0.3 1,1,DICHLOROCYCLOHEXANES, AND 0.5 TRICHLOROCYCLOHEXANE. IN THE NITROSATION OF CYCLOHEXANE ADDING CHLOROCYCLOHEXANE INCREASED THE CONTENT OF CHLOROCYCLOHEXANONE OXIME IN THE OIL FROM 0.6PERCENT (AT 0.7PERCENT ADDED) TO 4PERCENT (AT 12PERCENT ADDED). FACILITY: GOS. NAUCH.-ISSLED. PROEKT. INST. AZOT. PROM. PROD. ORG. SIN., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--NATURAL GAS POTENTIALS IN DEVONIAN FORMATIONS IN THE SOUTHWESTERN PART OF THE DNIEPER DONETS SYNCLINE -U-

AUTHOR-(03)-VYSOCHANSKIY, I.V., ZELENSKAYA, P.I., SHEVCHENKO, I.M.

COUNTRY OF INFO--USSR

SOURCE--GEOL. ZH. (UKR. ED.) 1970, 30(1), 120-1

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY, MATERIALS

TOPIC TAGS--NATURAL GAS, CHEMICAL COMPOSITION, METHANE, ETHANE, PROPANE, BUTANE, PENTANE, NITROGEN, CARBON DIOXIDE, PETROLEUM DEPOSIT, GEOGRAPHIC LOCATION, SODIUM CHLORIDE, CALCIUM CHLORIDE, EXPLORATORY DRILLING, SULFATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/1547 STEP NO--UR/0008/70/030/001/0120/0121

CIRC ACCESSION NO--AP0118530

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 016 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118530

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVONIAN FORMATIONS IN THE LEVENTSOVSK AREA ARE OPENED BY 4 DRILL HOLES AT DEPTHS OF 2400-3000 M. THEY CONSIST OF ARENACEOUS AND ARGILLACEOUS ROCKS, 230-430 M THICK, WITH INTERLAYERS OF CARBONATITES AND ANHYDRITES. TWO OF THE HOLES HAD GAS FLOWS OF SMALLER THAN OR EQUAL TO 3800 M PRIME3-DAY. THE FREE GAS CONTAINED CH SUB4 91.72, C SUB2 H SUB6 3.74 C SUB3 H SUB8 1.54, C SUB4 H SUB10 0.66, C SUB5 H SUB12 0.22, N PLUS RARE GASES 1.87, AND CO SUB2 0.25PERCENT. THE FORMATION WATERS, OBTAINED FROM THESE DRILL HOLES HAD A HIGH TOTAL MINERAL CONTENT (207.2-243.72 G-L.), WERE OF CL-CA TYPE AT NA PRIMEPOSITIVE-CL PRIMENEGATIVE 0.77-0.78 AND SO SUB4 PRIME2 NEGATIVE-CL PRIMENEGATIVE 0.018-0.028, AND CONTAINED I 18.5-25.6, BR 106.6-132.7, AND B 30.15-42.55 MG-L. FACILITY: TREST KHARKIVNAFTAGAZROZVIDKA, KHARKOV, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr: AP0052305 Ref. Code: UR0238

PRIMARY SOURCE: Fiziologichniy Zhurnal, 1970, Vol 16, Nr 1, pp 24-28

CHANGE IN GONADOTROPIC FUNCTION OF HYPOPHYSIS IN YOUNG AND OLD RAT MALES UNDER CONDITIONS OF ADMINISTRATING DIFFERENT DOSES OF ANTITESTICULAR CYTOTOXIC SERUM

Yu. O. Spasokukotskiy, T. M. Zelenska, O. V. Nishchimenko

Department of Experimental Therapy, the A. A. Bogomoletz Institute of Physiology, Academy of Sciences, Ukrainian SSR, Kiev

Summary

In 142 young and 122 old rat males gonadotropic function of hypophysis was studied in norm and with administration of different doses of antitesticular cytotoxic serum (ATCS). The animals of the same age without serum injection were taken as control. The results obtained testify to the fact that the content of gonadotropins in hypophyses of old rat males with age hypofunction of testicles is higher than that in young animals, that coincides with literary data. When administrating the young males

1/2

REEL/FRAME
19820874

2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

high (inhibitory) doses of ATCS, an increase is observed in the gonadotropins content in hypophysis of rats. When administrating the old males with age hypofunction of testicles small (reactivating) doses of ATCS, the initial rise in the gonadotropin content is found with a subsequent considerable drop. Thus ATCS small doses, affecting the specialized cellular elements of testicles, can cause normalization of hormonic status of an organism by "feedbacks" and support homeostasis.

2/2

19820875

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 633.11"324":632.4(477)

ZELENSKIY, Prof. M. A., GUBERNATOR, F. F., Candidate of Agricultural Sciences, and MOVA, N. S., Agronomist

"Evaluation of Types of Winter Wheat With Respect to Resistance to Powdery Mildew"

Moscow, Selektsiya i Seminovodstvo, Vol 36, No 6, Nov/Dec 71, pp 33-34

Abstract: Winter wheat in the Ukraine is damaged by powdery mildew to a considerable extent. The principal reason is planting of varieties that are not resistant to this disease. The Chair of Selection and Seed Growing, Ukrainian Academy of Agriculture, conducted field tests in which the resistance of 150 varieties of winter wheat to powdery mildew was determined. Methods recommended by the State Commission for the Testing of Varieties of Agricultural Crops were applied to evaluating the resistance of the varieties tested. The number of pustules on various parts of the plants, the yield, and the fullness of the grain were used as criteria in evaluating resistance. Twelve varieties were found to be highly resistant. Among them were varieties selected in the USSR, including Mironovskaya 808 and Rannyaya 12, local varieties from Latvia and L'vovskaya Oblast', and varieties introduced from foreign countries in which the disease occurs frequently (Korea, France, Italy, etc.). Varieties

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENSKIY, M. A., et al., Selektsiya i Seminovodstvo, Vol 36, No 6, Nov/Dec 71, pp 33-34

that were promising with respect to immunity to powdery mildew resulted from hybridization. Good results were obtained by repeated crossing of highly immune hybrids with cold-resistant varieties of the forest-steppe ecological type. It was established that in repeated crossing the best results with respect to development of resistant varieties were obtained by using a pollen recipient (maternal variety) that was more resistant to powdery mildew than the pollen donor (paternal variety).

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC: 621.397

ZELENSKIY, V. A., MERKADER, L. P., DVORKIN, S. A.

"Interference in a Television Channel due to Nonlinear Distortions of the Television Signal Subcarrier"

Sb. Nauchn. tr. TsNII svyazi (Collection of Scientific Works of the Central Scientific Research Institute of Communications), 1970, vyp. 1, pp 44-49 (from RZh-Radiotekhnika, No 11, Nov 70, Abstract No 11G68)

Translation: It is shown that the magnitude of nonlinear interference in the form of the second and third harmonics of the carrier frequency depends to a considerable extent on the brightness of individual sections of the TV image. The corresponding relationships are given in the form of equations and graphs. Some recommendations are given on evaluating the given type of interference.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 621.039.543.4:621.039.544.57

VOLOSHCHUK, A. I., GAYDAMACHENKO, G. S., GOLOVCHENKO, YU. M., ZELENSKIY, V. F., IVANOV, V. YE., and KONOTOP, YU. F.

"Uranium Hardened With Beryllium Oxide Particles"

Moscow, Atomnaya Energiya, Vol 29, No 3, Sep 70, pp 178-183

Abstract: The article describes results of a study of uranium hardened with beryllium oxide particles. Compositions were prepared by mixing uranium hydride and beryllium oxide powders. Several types of beryllium oxide powder were used, viz. ordinary commercial BeO and BeO obtained from beryllium acetate by the Funston method. The results indicate that the strengthening of uranium with dispersed beryllium oxide particles significantly increases its heat resistance. The creep rate declines with a drop in the annealing temperature of beryllium oxide during its preparation. The creep rate is highly sensitive to load. At 600° C the creep rate of precipitation-hardened uranium is the same as or below that of unalloyed uranium at 500° C and under the same stresses. The creep activation energies calculated

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

VOLOSHCHUK, A. I., et al., Atomnaya Energiya, Vol 29, No 3, Sep 70, pp 178-183

from the slope of the curves $\ln \dot{\varepsilon} = f(\frac{1}{T})$ for the most heat-resistant compositions are considerably less than the self-diffusion activation energy and the creep activation energy of unalloyed commercial uranium. High-temperature softening in precipitation-hardened uranium is delayed 50-100° C as compared to unalloyed commercial uranium. Preliminary radiation test results indicate the high radiation resistance of precipitation-hardened uranium.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Nuclear Science and Technology

USSR

UDC 620.197.5.539.17

SKAKUN, N. A., KLYUCHAREV, A. P., KHAR'KOV, O. N., ZELENSKIY, V. F., and KULAKOV, V. S.

"Using the Nuclear Reaction O^{18} (p, α)N^{15} to Study Oxidation of Metals"

Moscow, Atomnaya Energiya, Vol 30, No 5, May 71, pp 456-458

Abstract: In recent times data on nuclear reactions have been employed to study the processes taking place in the surface layers during oxidation of metals and alloys. Registering the reaction products of the material irradiated by charged particles makes it possible to determine the amount of the test element without ruining the sample and at the same time localizing it by depth. One of the methods suggested in this article involves registering and analyzing the energy spectrum of alpha-particles from the reaction O^{18} (p, α)N^{15} by bombarding a sample containing the isotope O^{18} with a beam of monoenergetic protons.

The excitation function of the reaction O^{18}(p, α)N^{15} was measured experimentally in the range of proton energies of 500-730 keV. Using the procedures discussed in the article, the authors find the distribution profile of oxygen in oxidized samples of zirconium. They also examine the possibility of making similar investigations using the narrow resonance of the reaction

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

SKAKUN, N. A., et al., Atomnaya Energiya, Vol 30, No 5, May 71, pp 456-458

O^{18} (p, α)N^{15} when E_p = 629 keV. They also mention the possibility of using this resonance to study the thick surface layers of metals. All the investigations are supported by illustrations in the form of graphs.

The methods employed made it possible to investigate the interaction of oxygen with various solids, especially with the majority of metals and alloys used in the design of reactors.

This article contains 4 figures, 2 equations, and a bibliography of 5 titles.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 620.193.5

ZELENSKIY, V. F., PETEL'GUZOV, I. A., and FULIMOV, N. A., Academy of Sciences UKrSSR, Khar'kov Physico Technical Institute

"Oxidation of Magnesium and Metal Ceramic Mg-Be Alloys in Carbon Dioxide at 60 atm"

Moscow, Zashchita Metallov, Vol 7, No 2, Mar-Apr 71, pp 132-136

Abstract: The oxidation resistance of magnesium and its metal ceramic alloys with beryllium (0.5-5% Be) is studied in carbon dioxide gas with varying moisture content at 60 atm pressure and 470-580° temperature. In carbon dioxide gas containing over 0.5-1.0% H_2O, the magnesium and Mg-Be alloys are damaged by intercrystalline and intracrystalline oxidation and an increase in size resulting from penetration of hydrogen into the structure of the metal or alloy. Sublayers of metals which absorb hydrogen intensively increase the oxidation resistance of magnesium and Mg-Be alloys in moist CO_2. Type MG-1 magnesium is oxidation resistant up to 580° for over 1,000 hours in carbon dioxide gas with moisture content 0.001-0.01% at pressures of up to 60 atm. Increasing the moisture content over 0.2% causes intercrystalline

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENSKIY, V. F., et al., Zashchita Metallov, Vol 7, No 2, Mar-Apr 71, pp 132-136

and intracrystalline oxidation. Mg-Be alloys resist oxidation for crystalline and intracrystalline oxidation. Mg-Be alloys resist oxidation for over 10,000 hours in carbon dioxide containing 0.1-0.2% H_2O under the same conditions. Moisture contents of 2% and more cause the formation of a rough, flaking scale on the alloys.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR UDC 621.165:620.193.1

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

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

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

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

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

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

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

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZAYTSEV, N. G., ZELENSKIY, V. S.

"Representation and Coding of Data with Verbal Significance"

Kibernet. i Vychsil. Tekhn. Resp. Mezhved. Sb. [Cybernetics and Computer Technology. Republic Interdepartmental Collection], 1971, No 12, pp 97-100 (Translated from Referativnyy Zhurnal Kibernetika, No 4, 1973, Abstract No 4V654, by the authors).

Translation: Methodological statements are developed on the representation and coding of data with verbal significance for use in data processing systems.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: 519.2

ZELENTSOV, B. P.

"Matrix Analysis of Complex Systems"

Novosibirsk, Matrichnyy analiz slozhnykh sistem (cf. English above), "Nauka", 1972, 146 pp, ill. 54 k. (from RZh-Kibernetika, No 5, May 73, abstract No 5V351 K [annotation])

Translation: The book discusses matrix analysis of systems described by a simple homogeneous Markov chain. The matrix method enables determination of the time, frequency and probability characteristics of a system in transient and steady--state conditions.

The method is used for analyzing the reliability of complex systems and studying the uniformity and reliability of measurement facilities being used.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--FORMATION OF STATES IN A STUDY OF THE RELIABILITY OF COMPLEX SYSTEMS -U-

AUTHOR--ZELENTSOV, B.P.

COUNTRY OF INFO--USSR

SOURCE--AKADEMIIA NAUK SSSR, SIBIRSKOE OTDELENIE, IZVESTIIA, SERIIA TEKHNICHESKIKH NAUK, FEB. 1970, P. 83-88

DATE PUBLISHED----FEB70

SUBJECT AREAS--MATHEMATICAL SCIENCES, METHODS AND EQUIPMENT

TOPIC TAGS--SYSTEM RELIABILITY, SET THEORY, ALGORITHM, EQUATION OF STATE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1274 STEP NO--UR/0288/70/000/000/0083/0088

CIRC ACCESSION NO--AP0124925

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 020 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0124925

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. OUTLINE OF A METHOD OF DETERMINING THE STATES OF A COMPLEX SYSTEM BY CONSIDERING ALL POSSIBLE TRANSITIONS BETWEEN THEM. THE STATES OF THE SYSTEM ARE ORDERED IN SUBSETS, THUS MAKING IT POSSIBLE TO AVOID HAVING TO CONSIDER ZERO COUPLINGS, I.E., MAKING IT POSSIBLE TO DECREASE THE REDUNDANCY WHEN INVESTIGATING THE SYSTEM. THE EFFICIENCY, LOADING, AND RESTORATION CONDITIONS ARE GIVEN EITHER IN THE FORM OF FUNCTIONS OF LOGIC ALGEBRA OR IN THE FORM OF FORMAL PROCEDURES. THE ALGORITH FOR DETERMINING THE COUPLING MATRICES AND THE TRANSITIONS BETWEEN THE SUBSETS, AND FOR FORMING THE SUBSETS THEMSELVES, IS WELL FORMALIZED AND CAN BE REALIZED ON A COMPUTER.

FACILITY: SIBIRSKII GOSUDARSTVENNYI NAUCHNO-ISSLEDOVATEL'SKII INSTITUT METROLOGII, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 621.3.038.6

ZABORONOK, G. F., ZELENTSOV, T. I., RONZHIN, A. S., SOKOLOV, B. G.

"Electronic Melting of Metals"

Moscow, Elektronnaya plavka metallov (cf. English above), Revised edition, Metallurgiya, 1972, 348 pp (from Elektronnaya plavka metallov, pp 2-4)

Translation: The experience of Soviet and foreign researchers with respect to the development of the equipment and the technological process for melting metals by the method of electron bombardment is generalized in this book, and the work experience of the authors themselves is used. A study is made of the problems of the electron optical system, the electric power supply and the vacuum equipment of electron melting furnaces. Numerous data are presented on the studies of metals and alloys made by the method of electron bombardment and subjected to zonal purification. Some calculations are presented for the equipment to melt metals by electron bombardment, and variations in the chemical composition of metals and alloys during the melting process are illustrated. Some new prospects in the area of the application of the electron bombardment technique are investigated.

The book is intended for a broad class of engineering and technical workers of the research institutes, the design organizations and the nonferrous and ferrous metallurgical plants. It can be useful to students of the metallurgical and power engineering institutions of higher learning. There are 173 illustrations, 59 tables and a 199 entry bibliography.

1/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZABORONOK, G. F., et al., Elektronnaya plavka metallov, Revised edition, Metallurgiya, 1972, 348 pp

Contents

Foreword 5

Chapter I
Evaluating Various Vacuum Melting Techniques

Chapter II
Physical Principles of Electronic Heating and Melting of a Metal

1. Principle of Electronic Heating and Melting of a Metal 13
2. Basic Elements of An Electronic Melting Furnace 15
3. Electron Gun Parameters 18
4. Formation of the Electron Beam 19
5. Determination of the Shape of the Gun Electrodes by the Simulation Method 33
6. Focusing the Electron Beam 39
   Focusing a Beam in an Electrostatic Field 40
   Focusing a Beam in a Magnetic Field 41
   Ion or Gas Focusing 43
7. Deflection of the Electron Beam 48

Chapter III
Structural Designs of Electronic Melting Units

1. Classification of the Devices 51

2/5

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--ANOMALOUS MAGNETIC BEHAVIOR OF IRON, III, CHELATES WITH THIOSEMICARBAZONES OF SALICYLALDEHYDE AND PYRORACEMIC ACID -U-

AUTHOR-(04)-IVANOV, E.V., ZELENTSOV, V.V., GERBELEU, N.V., ABLOV, A.V.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(4), 827-30

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--IRON COMPOUND, CHELATE COMPOUND, MAGNETIC PROPERTY, AMMONIUM COMPOUND, ELECTRON ENERGY LEVEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0222 STEP NO--UR/0020/70/191/004/0827/0830

CIRC ACCESSION NO--AT0132494

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 019 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0132494

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MAGNETIC BEHAVIOR WAS STUDIED FOR THE CHELATES OF FE(III) WITH THE THIOSEMICARBAZONE OF SALICYLALDEHYDE (H SUB2 THAS) AND OF PYRORACEMIC ACID (H SUB2 THPU). THE CHELATES NH SUB4(FE(THSA) SUB2) AND NH SUB4(FE(THPU) SUB2) WERE STUDIED AT 80-393DEGREESK, AND THEY WERE FOUND TO HAVE A LOW SPIN. HOWEVER, THE MIXED COMPLEX NH SUB4(FE(THSA)(THPU)).1.5H SUB2 O EXHIBITED ANOMALOUS MAGNETIC BEHAVIOR. THIS IS EXPLAINED BY THE THERMAL EQUIL. BETWEEN THE GROUND AND 1ST EXCITED ELECTRON LEVELS. THE LIMITING, LOW TEMP. VALUE OF MU SUB3FF DOES NOT REACH THE LOW SPIN VALUE.

FACILITY: MOSK. FIZ.-TEKH. INST., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 023 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ELECTRONIC AND INFRARED SPECTRA OF NICKEL,II AND COPPER,II CHELATES WITH SULFUR CONTAINING SCHIFF BASES -U-

AUTHOR-(02)-ZELENTSOV, V.V., SUVOROVA, K.M.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3), 678-86

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--ELECTRON SPECTRUM, IR SPECTRUM, NICKEL COMPLEX, COPPER COMPLEX, SCHIFF BASE, MAGNETIC MOMENT, HETEROCYCLIC BASE COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3002/1213 STEP NO--UR/0078/70/015/003/0678/0686

CIRC ACCESSION NO--AP0128631

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 023 UNCLASSIFIED

CIRC ACCESSION NO--AP0123631 PROCESSING DATE--13NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE IR ABSORPTION AND REFLECTION SPECTRA WERE OBTAINED OF 11 NI(II) CHELATES OF THE TYPES I AND II WHERE R EQUALS ME, ET, 2,THIENYL, PH; R PRIME1 EQUALS ME, AND X EQUALS 5,CL, 5,PR, 4,ME. THE SPECTRA AND MAGNETIC MOMENT DETMS. IMPLY THAT THE BROWN DIAMAGNETIC COMPLEXES ARE SQUARE PLANAR AND THAT THE BRIGHT GREEN COMPLEXES HAVE A DISTORTED OCTAHEDRON STRUCTURE. THE EXPT. CONFIRMS SCHIFF'S BASE FORMATION AND CHELATION VIA S, O, AND N. ACCORDING TO VISIBLE RANGE SPECTRA, CU(II) CHELATES HAVE TETRAGONAL OR LOWER SYMMETRY. FACILITY: MOSK. FIZ.-TEKH. INST., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--SCANDIUM AND ALKALI ELEMENT HEXAFLUOROACETYLACETONATES -U-

AUTHOR-(03)-GUREVICH, M.Z., STEPIN, B.D., ZELENTSOV, V.V.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3) 890-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--SCANDIUM COMPOUND, ALKALI METAL COMPOUND, ACETYLACETONATE, CHEMICAL SYNTHESIS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1495 STEP NO--UR/0075/70/015/003/0890/0892

CIRC ACCESSION NO--AP0112489

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 007 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0112489

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. M(SC(HFACAC) SUB4), WHERE M EQUALS K, RB, OR CS AND HFACAC EQUALS HEXAFLUOROACETYLACETONATE, WERE PREPD. IN AQ.,ALC, SOLNS. THE COMPDS. M. 227, 231, AND 240DEGREES FOR M EQUALS K, RB, AND CS, RESP., AND SUBLIMED AT 145-250DEGREES.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 014 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--ANOMALIES OF MAGNETIC PROPERTIES OF VANADYL (VO PRIME2POSITIVE) MONO AND DICARBOXYLATES -U-

AUTHOR-(04)-KALINNIKOV, V.T., ZELENTSOV, V.V., KUZMICHEVA, O.N., AMINOV, T.G.

COUNTRY OF INFO--USSR

SOURCE--ZH. NEORG. KHIM. 1970, 15(3) 661-5

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--MAGNETIC SUSCEPTIBILITY, TEMPERATURE DEPENDENCE, CARBOXYLIC ACID, VANADIUM COMPLEX, PARAMAGNETIC ION, EXCHANGE REACTION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1987/0776 STEP NO--UR/0078/70/015/003/0661/0665

CIRC ACCESSION NO--AP0104222

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 014

UNCLASSIFIED

CIRC ACCESSION NO--AP0104222 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AMONG 26 STUDIED VO PRIME2POSITIVE MONO AND DICARBOXYLIC ACID COMPLEXES, ONLY THE MAGNETIC SUSCEPTIBILITY (CHI M) OF VO PRIME2POSITIVE FORMATE HYDRATES AND VO PRIME2POSITIVE MALONATE HAD CURIE WEISS TEMP. DEPENDENCES WITH POS. WEISS CONSTS. THE REMAINING VO PRIME2POSITIVE COMPLEXES OF ALKYL OR ARYLCARBOXYLATES HAD TEMP. INDEPENDENT CHI M. AT ROOM TEMP., THEY HAD LOW MU SUBEFF, WHICH DECREASED GRADUALLY WITH TEMP. THIS PHENOMENON IS EXPLAINED BY AN ISOTOPE INTERACTION IN THE LINEAR CHAIN OF PARAMAGNETIC V (IV) IONS WITH A LARGE (N IS LARGER THAN OR EQUAL TO 10) EVEN NO. OF NUCLEI. THE EXCHANGE INTEGRALS OF THESE COMPDS. ARE 170-290 CM PRIME NEGATIVE1.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 613.646

SHLEYFMAN, F. M., ZHIRNOVA, G. Ye., ZELENTSOVA, S. P., MARCHENKO, TASHKER, I. D. and MOKROTOVAROVA, G. N., Kiev Institute of Industrial Hygiene and Occupational Diseases

"Hygienic Assessment of the Effects of Exposure to Heat"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 3, 1973, pp 12-15

Abstract: Rabbits and rats exposed to infrared radiation at the rate of kcal/m^2 /hour for varying lengths of time exhibited changes in body weight, behavior, immunological reactivity (decrease in antibody titers and phagocytic activity of leukocytes), hormonal activity, tissue respiration in the liver and skeletal muscles, oxidative phosphorylation, etc. The magnitude of the changes varied with the duration and nature of the exposure (continuous or intermittent), intensity of radiation, relationship between time of irradiation and rest periods, etc. Infrared radiation also brought about changes in humans. The heart rate, blood pressure, body temperature, etc. were affected, the degree varying mainly with the intensity and duration of exposure, and the length of the interval between exposures.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr.: AP0029500

Ref. Code: UR 0391

PRIMARY SOURCE: Gigiyena Truda i Professional'nyye Zabolevaniya, 1970, Nr 1, pp 22-26

EFFECT OF INTERMITTENT INFRARED RADIATION ON THE NATURAL IMMUNOLOGICAL REACTIVITY OF WORKERS

S. P. Zelentsov

Summary

The paper deals with the study of some indices characterizing natural immunological reactivity of the workers' organism, and also with the disease incidence of so-called "bad cold forms" occurring consequent to different modalities of infrared irradiation with equivalent summary dosage of the received heat. A long-term exposure of workers to the effects of infrared radiation with intensity of 1 to 3 cal/cm²/min in combination with high intermittance exercise adverse effect on the state of immunological reactivity, increasing the incidence rate of "bad sold forms" among workers. Intermittent infrared irradiation of low intensity (0.5—0.7 cal/cm²/min) acts stimulatingly and increases protective forces of the organism against unfavourable environmental factors.

1/1

REEL/FRAME

19681101

mh

2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 576.75.008:612.012.44

SHLEYFMAN, F. M., and ZELENTSOVA, S. P., Kiev Scientific Research Institute of Labor Hygiene and Occupational Diseases, Kiev

"Effect of Infrarad Radiation on the State of the Organism During Physical Work"

Kiev, Vrachebnoye Delo, No 12, Dec 72, pp 109-112

Abstract: The effects on the state of the organism of IR irradiation during physical work involving muscular effort were studied. Continuous irradiation with 300 kcal/m^2 hr at an intensity of 0.5 cal/cm^2 min during an hour or intermittent irradiation with the same amount of radiation per hour, but at intensities of 1.0 and 3.0 cal/cm^2 min for 30 and 10 min during the hour, respectively, was applied. The skin and body temperature of the subjects was increased. Under the effect of intermittent irradiation, the frequency of cardiac contractions increased in direct relation to the frequency with which periods of irradiation alternated with periods between them. Muscular strength, coordination, and the tolerance to the maximum static strain decreased under the effect of irradiation, with the indexes of muscular effort being affected to a greater extent at increasing frequencies of irradiation. The tolerance to the maximum static strain deteriorated to the greatest extent.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 613.645/.646:612.017.1

ZELENTSOVA, S. P., Kiev Institute of Labor Hygiene and Occupational Diseases

"The Effect of Intermittent Infrared Radiation on the Natural Immunological Reactivity in Workers"

Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 1, 1970, pp 22-26

Abstract: Immunological reactivity was studied in 100 workers in a glass plant by exposing them to infrared radiation of different durations and intensitites. The reaction to the radiation was evaluated from the phagocytic activity of WBC, bactericidal properties of the saliva, and bactericidal properties of the skin. Intermittent irradiation at high intensities (1-3 cal/cm^2 /min) was found to have an unfavorable effect on phagocytosis and the barrier function of the skin (the results of the saliva tests were unclear). On the other hand, chronic infrared irradiation at a low intensity (0.5-0.7 cal/cm^2/min stimulated immunological reactivity in workers and increased their resistance to injurious enviromental factors.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Acc. Nr: AP0037232 Ref. Code: UR 0391

PRIMARY SOURCE: Gigiyena, Truda i Professional'nyye Zabolevaniya, 1970, Nr 2, pp 37-40

PROBLEMS OF INDUSTRIAL HYGIENE IN THE PRODUCTION OF HIGH-GRADE COMMERCIAL GLASS

Suponitskiy, M. Ya.; Shelyfman, F. M.; Zelentsova, S. P.; Faktorov, I. Ye.; Tupchiy, Ye. P.; Voloshina, E.I.; Levin, M. V.

Summary

Pollution of atmospheric environment with arsenous acid anhydride, lead, manganic oxide and other substances is possible in production of high-grade commercial glass. Workers engaged in the latter are, at the same time, exposed to the effect of infrared radiation, elevated air temperature, noise, vibration. They demonstrate physiological shifts of thermoregulation and and the incidence of affections implicating cardiovascular system, digestive organs, etc is elevated among them. The authors suggested a number of measures aimed at improving hygienic conditions of work, some of which had been implemented.

D.n.

REEL/FRAME 19730157

2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

ZELENYAK O.P.

Atomic Power Plants

JPRS 57492
13 Nov 72

UDC 621.311.25:621.039

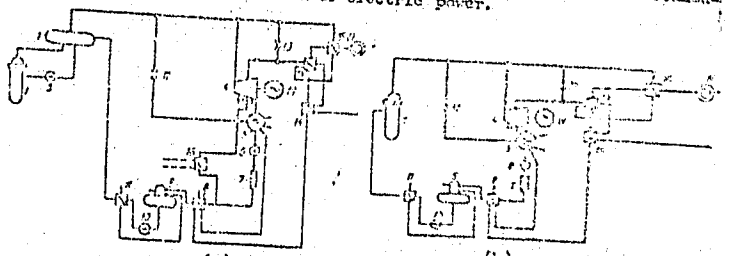
ATOMIC ELECTRIC POWER FOR HEAT SUPPLY

[Article by S. A. Zykov, doctor of technical sciences, A. Ye. Svetlov, candidate of engineering sciences, and O. P. Zelenyak and V. P. Korbylin, engineers: "Application of Atomic Electric-Power Stations for Centralized Heat Supply to Cities and Industrial Complexes"; Kiev, Energetika i Elektrifikatsiya, Russian, No 3, May-June 1972, pp 26-29]

Atomic power plants providing for heat supply to industrial complexes and cities and generation of electric power on a condensation regime for delivery of it to a power system (ATETs) have advantages over ATES (atomic-powered thermal electric-power stations). At an ATETs units of large capacity may be applied and the load factor of the reactors may be increased to the maximum, regardless of the number of hours of use of the maximum heat load during the year.

Diagrams of atomic units of such power plants are given in the figure: (a) represents an industrial heating ATETs; (b) and (c) are industrial ATETs. In the atomic blocks of (a) and (b), respectively, one condensation turbine is installed, with heat-supply and production steam takeoffs or with a production steam takeoff alone.

In block (c) with one reactor, two turbines are installed: one back-pressure turbine for distribution of industrial steam, and a second condensation turbine for the generation of electric power.



(a) (b)

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Materials

USSR

UDC 620.172.2

ZELENYUK, Ye. Ye., KRIVENYUK, V. V., SEMIROG-ORLIK, V. N., (Kiev)

"Deformation and Rupture of Molybdenum Under Creep Conditions"

Kiev, Problemy Prochnosti, No 12, Dec. 1972, pp 85-89.

Abstract: Results are presented from creep and long-term strength tests in a vacuum at temperatures of 1,000-1,800°C, using specimens of technically pure molybdenum with concentrators in the form of apertures, as well as the results of studies of the concentration of deformations in a dangerous cross section near a notch. It is established that the influence of the concentrator on the strength of the material may be qualitatively and quantitatively different, depending on the test conditions; the stress concentration and deformation concentration factors in the elastic area coincide, the latter being independent of the plastic deformation over rather broad limits of deformation.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: 620.172.2

ZELENYUK, Ye. Ye., KRIVENYUK, V. V., Kiev

"Creep and Long-Term Strength of Molybdenum At High Temperatures"

Kiev, Problemy Prochnosti, No 11, 1970, pp 86-90

Abstract: Results are presented from an investigation of creep and long-term strength of molybdenum at 1000°C over a test period of from 0.1 to 400 hours and at 1200, 1400, 1600 and 1800°C over a test period of from 0.1 to 100 hours. The characteristic temperature dependences of strength, time dependences of durability and creep rate are determined. A qualitative analysis is presented of the influence of hot brittleness of molybdenum on the regularities of creep and long-term strength.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELENYY, A. I.

"Speech Recognition Apparatus"

Moscow, Otkrytiya Izobreteniya Promyshlennyye Obraztsy Tovarnyye Znaki, No 13, 1 Mar 73, p 136 Numbers (11)372558 (21)1669065/26-9 (22) 14.06.71 (51) G 06f 3/16 (53) 621.395.664.1 (72)

Translation: A speech recognition apparatus containing a microphone, selective amplifier with automatic amplification control, and logical processing block connected in series is distinguished by the fact that the accuracy of speech recognition is improved by the insertion between the amplifier and the logical processing circuits of an additional delay line with outputs symmetrical to the center connected to the inputs of the first stage differential amplifiers, while adjacent outputs of the first stage differential amplifiers are connected to the inputs of the second stage differential amplifiers, the outputs of which are connected to the inputs of the logical processing circuits through a pulse shaper.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Phytology

Z

USSR UDC 779.934

ZELEPUKHA, S. I., and PROKOPCHUK, A. F., Institute of Microbiology and Virology, Academy of Sciences Ukrainian SSR, and Krasnodar Scientific Research Institute of Food Industry

"Antimicrobial Activity of Extracts Obtained from Plants with Liquid Carbon Dioxide"

Kiev, Mikrobiolohichny Zhurnal, No 2, Mar/Apr 70, pp 268-270

Abstract: Purified and crushed plant particles were extracted with carbon dioxide at a pressure of 60-65 atm at 20-28°C for 15-60 min. The micellae were filtered off, the gas evaporated at 30-35°C, and the anhydrous extract was collected, yielding liquid or oily residue with odors specific for various plants. Twenty spices and medicinal plants were studied and all showed some antibacterial and antifungal properties in a dilution of 1:2,500 to 1:10,000. Only the extract from hop cones exhibited activity against gram-positive bacteria at a dilution of 1:100,000 to 1:250,000, probably because of its content of soft resins and α-acids. In sub-bacteriostatic doses, these agents failed to potentiate the activity of penicillin, streptomycin, levomycetin, erythromycin, biomycin or framycin against Staphylococcus aureus No 209.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 032 UNCLASSIFIED PROCESSING DATE--30OCT70

TITLE--PECULIARITIES OF FORMATION AND PROPERTIES OF SEMICONDUCTOR FILMS DEPOSITED BY ELECTRICAL EXPLOSION -U-

AUTHOR-(05)-ALEKSANDROV, L.N., DAGMAN, E.I., ZELEVINSKAYA, V.I., PETROSYAN, V.I., SKRIPKINA, P.A.

COUNTRY OF INFO--USSR

SOURCE--THIN SOLID FILMS 1970, 5(1), 1-6

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, MATERIALS

TOPIC TAGS--THIN FILM SEMICONDUCTOR, TEMPERATURE DISTRIBUTION, CRYSTALLIZATION, INDIUM ANTIMONIDE, INDIUM ARSENIDE, ELECTRON DIFFRACTION, ELECTRON MOBILITY, CRYSTAL GROWING, ELECTRIC DISCHARGE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/1221 STEP NO--NE/0000/70/005/001/0001/0006

CIRC ACCESSION NO--AP0124875

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 032 UNCLASSIFIED

CIRC ACCESSION NO--AP0124875 PROCESSING DATE--30OCT70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A CALCN. AND EXPTL. INVESTIGATION OF THE TEMP. DISTRIBUTION IN THIN FILMS DEPOSITED BY THE ELEC. EXPLOSION METHOD WERE MADE. AS A RESULT OF RELEASING THE CONDENSATION ENERGY, CRYSTN. PROCESSES OCCUR FROM THE MELT. FILMS OF INSB AND INAS DEPOSITED ON ISOLATED NONORIENTED SUBSTRATES WERE INVESTIGATED BY ELECTRON IDFFRACTION, AND THEIR MOBILITY, CARRIER CONCN., AND COND. WERE MEASURED. THE UNUSUALLY SMALL VALUES OF MOBILITY ARE DISCUSSED IN TERMS OF THE DIMENSIONAL EFFECT IN VERY THIN FILMS. FACILITY: INST. SEMICOND. PHYS., NOVOSIBIRSK, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

UDC: 621.315.592

USSR

ZELEVINSKAYA, V. M., KACHURIN, G. A., and SMIRNOV, L. S., Institute of Semiconductor Physics, Novosibirsk

"Interaction of Impurities and Defects in GaAs Doped with Tellurium Ions"

Leningrad, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp 1385-1387

Abstract: This brief communication is the follow-up to an earlier paper (V. M. Zelevinskaya, et al, FTP, 5, 1971, p 1969) in which it was found that the behavior of impurities of atoms in the VI group used for doping GaAs is radically different from the behavior of doping atoms of the II and IV group. In that earlier paper, it was assumed that heavy selenium and tellurium ions amorphize the doped layer and that sulphur ions could not be used for doping. The purpose of the present paper is to check the validity of this assumption with an experiment involving the irradiation of the GaAs by Te ions with an energy of 40 kev and a dose of $10^{15}/cm^2$ at various target temperatures. The method of irradiation as well as of the annealing and measurement procedures that followed it is given in another earlier article in the same journal (V. M.

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELEVINSKAYA, V. M., et al, Fizika i tekhnika poluprovodnikov, No 7, 1972, pp 1385-1387

Zelevinskaya, et al, FTP, 4, 1970, p 1784). Curves are plotted for the layer concentration and mobility of electrons as functions of the irradiation temperature, and for the change in layer resistance after irradiation as a function of isochronous annealing temperatures. It is concluded that the assumption noted above is correct. The authors express their gratitude to S. I. Romanov for the electronographic work.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 042 UNCLASSIFIED PROCESSING DATE--11SEP70

TITLE--LOW RESISTIVITY FILMS OBTAINED BY ION BOMBARDMENT ON SEMIINSULATING GALLIUM ARSENIDE -U-

AUTHOR--ZELEVINSKAYA, V.M., KACHURIN, G.A., PRIDACHIN, N.B., SMIRNOV, L.S.

COUNTRY OF INFO--USSR

SOURCE--FIZIKA I TEKHNIKA POLUPROVODNIKOV, VOL. 4, FEB. 1970, P. 317-320

DATE PUBLISHED----FEB70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--POLYCRYSTALLINE FILM, ION BOMBARDMENT, GALLIUM ARSENIDE, CARRIER DENSITY, ELECTRIC CONDUCTIVITY, NEUTRON IRRADIATION, ELECTRON BOMBARDMENT, XENON, SELENIUM, KRYPTON, ZINC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1989/1346 STEP NO--UR/0449/70/004/000/0317/0320

CIRC ACCESSION NO--AP0107819

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 042 UNCLASSIFIED PROCESSING DATE--11SEP70

CIRC ACCESSION NO--AP0107819

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL STUDY IN WHICH CONDUCTING FILMS WERE SYNTHESIZED ON SEMIINSULATING GALLIUM ARSENIDE BY BOMBARDMENT WITH XENON, KRYPTON, SELENIUM, AND ZINC IONS. THE CARRIER CONCENTRATION IN THE FILM IS 5 TIMES 10 TO THE 16TH PER CU CM, THE MOBILITY IS 10 SQ CM-V SEC, AND THE THERMAL ACTIVATION ENERGY IS 0.07 EV. THE EFFECT OF THE DOSE RATE, THE ION ENERGY, AND THE SUBSTRATE TEMPERATURE ON THE FORMATION OF THE CONDUCTING FILM IS INVESTIGATED. WITH THE AID OF AN ETCHANT ACTING AT A RATE OF 5 TO 8 A-SEC, THE DISTRIBUTION OF THE FILM CONDUCTIVITY WITH DEPTH IS RECORDED. ON THE BASIS OF EXPERIMENTS ON ION BOMBARDMENT AND IRRADIATION OF SEMIINSULATING GAAS WITH REACTOR NEUTRONS AND ELECTRONS WITH AN ENERGY OF 3.5 MEV, IT IS CONCLUDED THAT AN INCREASE IN CONDUCTIVITY IS ATTRIBUTABLE MAINLY TO A MERGING OF THE BIAS PEAKS INTO A SINGLE FILM WHERE THE COMPENSATION CONDITIONS ARE NOT FULFILLED.

ZZZZZZZZZZZZ UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

BELYAYEV, S. T.; ZELEVINSKIY, V. G. (Institute of Nuclear Physics, USSR Academy of Sciences)

"Nuclear Rotational Excitations in the Method of the Generalized Density Matrix"

Moscow, Yadernaya Fizika; March, 1973; pp 525-39

ABSTRACT: A method, proposed earlier by the authors, in which a single-particle density matrix is considered as an operator in the space of collective excited states was applied to the study of nuclear rotation. A microscopic transformation similar to a transition to a system of natural axes of the generalized model was found. The operator structure of the equations was studied and a regular scheme for their solution worked out. An approximation -- which in the lower order gives the results of a model of forced rotation and in subsequent orders, nonadiabatic rotation effects -- was considered in detail.

The article includes 95 equations and a table showing the relations between the operators and matrix elements. There are 13 bibliographic references.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: None

ZELEVINSKIY, V. G. and SHTOKMAN, M. I., Institute of Nuclear Physics, Siberian Department.

"Moment of Inertia in the Microscopic Theory of Nuclear Rotation"

Moscow, Izvestiya Akademii Nauk SSSR--Seriya Fizicheskaya, No 12, 1972, pp 2577-2584

Abstract: The authors use the method of an earlier paper (S. T. Belyayev, et al, Yadernaya fizika, 11, 1960, p 741) to consider quantum corrections for the cranking model, the basic method for examination of microscopic rotational excitation, thus clarifying deviations from the theory and improving agreement with experimental results. The authors find it convenient to introduce the generalized space of the states specified by the collective band characteristics--the moment of inertia, its projection on the laboratory axis and on the inner axis, and the single frequency quantum numbers. The rotational parameters are found by using the condition of moment matching, and it is noted that expressions deduced for the derivatives of the moment of inertia agree with those of earlier theoretical works. A table of the quantum corrections

1/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC: None

ZELEVINSKIY, V. G., et al, Izvestiya Akademii nauk SSSR--Seriya fizicheskaya, No 12, 1972, pp 2577-2584

is compiled. It is concluded that the theory advanced in this paper offers a complete quantitative description for the energy behavior of the lower portion in the basic band of even-even nuclei. The authors express their gratitude to S. T. Belyayev and V. B. Telitsin for their comments.

2/2

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 015 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--THE GINZBURG LANDAU EQUATION FOR NONZERO ANGULAR MOMENTUM PAIRING -U-

AUTHOR-(02)-DRIBINSKIY, B.L., ZELEVINSKIY, V.G.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EKSPERIMENTAL'NOY I TEROETICHESKOY FIZIKI, 1970, VOL 58, NR 3, PP 1057-10 1

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--SUPERCONDUCTOR, MATHEMATIC PHYSICS, ANGULAR DISTRIBUTION, ALGEBRAIC EQUATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1977/0181 STEP NO--UR/0056/70/058/003/1057/1061

CIRC ACCESSION NO--AP0043773

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 015 UNCLASSIFIED

CIRC ACCESSION NO--AP0043773 PROCESSING DATE--18SEP70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALOG OF THE GINZBURG LANDAU EQUATION IS DERIVED FOR A SUPERCONDUCTOR IN WHICH COOPER PAIRING TAKES PLACE IN STATES WITH NONZERO PAIR ANGULAR MOMENTUM L. THE EQUATION IS SIMILAR TO THE RADIAL SHROEDINGER EQUATION FOR AN L-TH PARTIAL WAVE WITH CUBIC NONLINEARITY. ITS SOLUTION IS A SPHERICAL VORTEX WHICH IS A COMPLETELY ISOTROPIC BUT SPATIALLY NONUNIFORM STATE IN WHICH COPPER PAIRS AS A WHOLE REVOLVE ABOUT THE VORTEX CENTER IN WHICH THE ORDER PARAMETER VANISHES. IT IS SHOWN THAT THE VORTEX STATE HAS A FREE ENERGY MINIMUM AS COMPARED WITH PREVIOUSLY PROPOSED SOLUTIONS.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

ZELEZINSKAYA, G. M.

SO: JPRS 53402
18 June 71

UDC: 362.11

MORE EFFICIENT USE OF AVAILABLE BEDS IN PROLONGED HOSPITALIZATION OF PATIENTS

[Article by S.N. Zorina, Department of Social Hygiene, Organization and History of Public Health (headed by G.M. Zelezinskaya, candidate of medical sciences), Kiev Scientific Research Institute of General and Municipal Hygiene imeni Academician A.N. Marzeyev; Moscow, Sovetskoye Zdravookhraneniye, Russian, No 5, 1971, submitted 10 December 1970, pp 13-17]

The purpose of the present work was to investigate the composition of patients hospitalized for more than 33 days, as well as the causes of prolonged hospitalization for the purpose of finding reserves for more efficient use of available beds. According to data in the domestic literature, the incidence of cases of prolonged hospitalization ranges from 14 to 27.7 percent of the total number of individuals hospitalized (Ye.A. Loginova, 1965; Ye.I. Tarnovskaya, 1966; S.Ya. Freydlin and A.I. Kogan, 1969).

We investigated 7,494 cases of hospitalization for periods of over 30 days in the therapeutic and surgical departments of Kiev hospitals in 1967.

Most of the patients (83.5%) treated for long periods in therapeutic departments were hospitalized for active rheumatism, myocardial infarction, essential hypertension, atherosclerotic cardiosclerosis, peptic ulcers, cholecystitis and cholelithiasis, and pneumonias. In the surgical departments, 79.6 percent of all cases of prolonged hospitalization were referable to peptic ulcers, cholecystitis and cholelithiasis, endoarteritis and vascular thrombosis of the lower extremities, malignant neoplasms, severe trauma, and accidents.

Women made up 58.3 percent of the patients hospitalized in therapeutic departments for more than 30 days, and 51.3 percent of those in the surgical departments. Senior citizens made up over half of all those treated for more than 30 days (53.7% in therapeutic departments, and 50.7% in surgical ones).

The greatest number of prolonged hospitalization cases (as well as number of bed-days) was observed in clinical hospitals which is attributable to the concentration in them of the most seriously ill, to the need of submitting them to more complex diagnostic tests and, in part, to the interests of the pedagogic process.

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

1/2 018 UNCLASSIFIED

TITLE--CONTEMPORARY CONSTRUCTION TECHNIQUES OF RIVER BOAT HULLS -U- PROCESSING DATE--13NOV70

AUTHOR--ZELICHENKO, A.YA.

COUNTRY OF INFO--USSR

SOURCE--(SOVREMENNAYA TEKHNELOGIYA POSTROYKI KURPUSOV RECHNYKH SUDOV) LENINGRAD, SUDOSTROYENIYE, 1970, 244 PP

DATE PUBLISHED--------70

SUBJECT AREAS--MECH., IND., CIVIL AND MARINE ENGR

TOPIC TAGS--SHIP HULL, INLAND VESSEL DATA, WELDING, SHIPBUILDING ENGINEERING

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0233 STEP NO--UR/0000/70/000/000/0001/0244

CIRC ACCESSION NO--AM0132503

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

2/2 018 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AM0132503

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PREFACE 3. INTRODUCTION 4. CHAPTER I GENERAL PRINCIPLES OF CONTEMPORARY TECHNOLOGY AND ORGANIZATION OF SHIP CONSTRUCTION 9. II PREPARATION OF PRODUCTION FOR SHIP BUILDING 27. III "PLAZOVYYE" OPERATIONS 42. IV PRODUCTION OF HULL PARTS 56. V ASSEMBLY AND WELDING OF UNITS AND SECTIONS OF SHIP HULLS 118. VI BUILDING BERTH ASSEMBLY AND WELDING OF SHIP HULLS 176. VII ECONOMIC EFFECTIVENESS OF INTRODUCTION OF NEW TECHNOLOGICAL PROCESSES AND MEANS OF MECHANIZATION 229. APPENDIX 232. BIBLIOGRAPHY 236. THE BOOK DEALS WITH CONTEMPORARY TECHNOLOGICAL PROCESSES IN BUILDING OF STEELHULLS OF RIVER BOATS. IT WAS WRITTEN FOR ENGINEERING TECHNICAL PERSONNEL OF SHIP BUILDING ENTERPRISES, STUDENTS OF HIGHER EDUCATIONAL INSTITUTIONS OF THE MINISTRY OF THE RIVER FLEET AND SHIP BUILDING COLLEGES.

UNCLASSIFIED

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

Miscellaneous

USSR

UDC 621.771.23

ZELICHENOK, B. Yu., VINOGRADOVA, A. I., MEDVEDEV, V. V., MUL'KO, G. N., and KATRICHENKO, K. P.

"Factors Affecting the Expenditure of Metal in Sheet Rolling"

Moscow, Stal', No 2, Feb 71, pp 139-142

Abstract: This article reports on mathematical and statistical analyses made at the Orsko-Khalilov Metallurgical Combine of the factors determining variations in sheet steel lengths. Personnel of the plant have also computed the probability of obtaining ordered sheet lengths so that they can make an optimal choice of slab weights for their type-2800 thick-sheet mill. The finished sheets of 17G1S steel are 12.5 mm thick, 1.88 meters wide, and 12.1 meters long. To suit the welding procedures at the Chelyabinsk Tube-Rolling Plant to which they are sent to be welded into tubes of 1220-mm diameter for carrying gas, however, the lengths of these sheets may be 11.9, 11.5 or 11.3 meters. The article offers formulas and statistical data for computing the proper sheet lengths and other production parameters.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

UDC 620.178.74.222:669.14.018.29-153.65

ZELICHENOK, B. Yu., Candidate of Technical Sciences; VARNAVSKIY, I. N., and VINOGRADOVA, A. I., Orsko-Khalilov Metallurgical Combine

"Shock Resistance of 17G1S Sheet Steel at Low Temperatures"

Moscow, Stal', No 2, Feb 71, pp 171-173

Abstract: This article is a continuation of an earlier article written by the same authors and published in the journal named above (No 6, 1966, pp 543-545) in which they examined the effect of the chemical composition of 17G1S steel, designed for manufacturing gas piping of large diameter, on its strength under shock at temperatures of from -40 to -60°C. Curves plotted for the frequency distribution of the metal's shock resistance show them to follow the normal law. The steel alloyed in a 400-ton furnace had a slightly lesser shock resistance than the steel manufactured in a furnace of lower capacity due, probably, to the 0.002-0.003% higher content of sulfur. The effect of this factor was investigated. Also investigated was the effect of manganese on the shock resistance of the steel; it was found that at -40°C the effect was negative, whereas at -60° it was positive.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"

"APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6

USSR

ZELIGER, A. M.

UDC: 621.391:519.27

"A Method of Designing Communication Systems"

V sb. Radioelektron. v nar. kh-ve SSSR. Ch. 2 (Radioelectronics in the National Economy of the USSR, Part 2--collection of works) Kuybyshev, 1970, pp 336-339 (from RZh-Radiotekhnika, No. 3, March 71, Abstract No. 3A27)

Translation: The concept of utility, characterizing the efficiency of use of the information obtained by the receiving agency, is introduced. Bibliography of nine. N. S.

1/1

APPROVED FOR RELEASE: 09/01/2001 CIA-RDP86-00513R002203730008-6"