2/2 021 UNCLASSIFIED PROCESSING DATE--20NOV70
CIRC ACCESSION NO--AT0133576
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE RESPIRATORY ACTIVITY OF ISOLATED NUCLEI OF RAT LIVER CELLS WAS TABULATED WITH AND WITHOUT ADDED CYTOCHROME C, NADH, AND ADP AS WELL AS GLUTAMATE, SUCCINATE, AND CN PRIME NEGATIVE. THE RESULTS SHOWED THAT OXIDATIVE SYSTEMS ARE PRESENT IN THE CELLS OF LIVER STRUCTURE AND SPECIFICALLY IN THE NUCLEI OF THESE CELLS SO THAT NUCLEAR OXIDATION PROCEEDS IN VARIOUS CELLS AND IS NOT LIMITED TO LYMPHOIDAL TISSUES ONLY. THE NUCLEAR MEMBRANE AND NUCLEI PER SE ACTIVELY USE NADH AS THE OXIDN. SUBSTRATE; A LESS INTENSIVE STIMULATION OF RESPIRATION BY NADPH AND A CONSIDERABLE INCREASE OF THIS EFFECT BY ADDED NAD WERE NOTED. THIS INDICATES THAT NADPH IS OXIDIZED MAINLY BY A TRANSHYDROGENASE AND SUBSEQUENT DEHYDROGENATION OF NADH. THE ABSENCE OF A PRONOUNCED EFFECT OF ADDED SUCCINATE ON O SUB2 UPTAKE AGREED WITH THE LACK OF SUCCINATE DEHYDROGENASE IN THE NUCLEAR STRUCTURES OF THESE CELLS. ADDED ADP DID NOT STIMULATE RESPIRATION. HENCE EXOGENOUS ADP EVIDENTLY DID NOT PLAY A ROLE AS PHOSPHATE ACCEPTOR IN THESE SYSTEMS. FACILITY: INST. BIOL. RAZV., MOSCOW, USSR.

USSR

UDC 533.69.048

MONAKHOV, N. M.

"On One Analytical Solution of the Problem of a Thin Airfoil Streamlined by a Hypersonic Gas Flow"

Kazan', Aviatsionnaya Tekhnika, No 4, 1972, pp 14-20

Abstract: An analytical solution has been found for the streamlining of a thin tapered airfoil moving at very high speeds in a pulsating wave, when the exponent of its equation of motion equals 3/5, and the ratio of heat capacities of the air Cp/Cv is 1.4. A differential equation for the autosimilar movement of the gas was obtained and solved by analogy with a wedge. Using the entropy function, the coefficient of pressure was calculated. The solution was subsequently used to construct mathematical models of flow around various modified airfoils.

1/1

USSR

MONAKHOV, V., Correspondent

"The Influence of Electric Fields on Marine Life"

Moscow, Izvestiya, 5 Aug 73, p 4

Translation: Near Gelendzhik, an experiment has been performed involving geophysicists, biologists, ichthyologists and chemists. Its purpose was to determine the influence of electric fields on inhabitants of the sea. The success of the experiment would determine whether the approval could be given for electrical prospecting of the sea floor.

Since evening, Vekilov had worried whether there would be fish. In the morning, he woke us before daylight and took us to the port. A light wind blew over the restless sea, but Gelendzhik Bay was empty.

"Nothing," Edward said. "The boys promised that there would be fish. The question is, alive or dead!"

"We still need some live ones," said Protasov. "Hopefully nice, fat ones, mullet, flounder or mackeral. That would suit me. How is Krylov doing? Ushina, how is she..."

It was hot over the bay: not in the fishing season. Vekilov, of course, was not worrying for nothing. All night, his boys from the Admiral Nakhimov

USSR

MONAKHOV, V., Izvestiya, 5 Aug 73, p 4

research ship had gone from one group of fishermen to another, helping them to pull in their nets -- as empty as the hole in a donut. Just before dawn, they had a little luck. Now, fish were flopping in the canvas bins on the deck. The cabin of the ship showed complete indifference: it was not intended for the ear.

Now, I believe, its time to tell you why Doctor of Biological Sciences Protasov came to Gelendzhik. On the way south in our slow AN-24 airplane, Vladimir Rustamovich told me:

"Understand, the problem of conserving the environment is not the concern of biologists alone. Representatives of all professions which contact nature in any way must also be concerned. We are flying to see geophysicists. These people will be actively interfering with the life of the seas and oceans.

"This is the problem," Protasov continued. "While we search the deeps for useful minerals, we may threaten the ichthyofauna, the fish and other animals in the sea. Like doctors studying a patient, these prospectors of the sea 'tap' on the crust of the earth with explosions. Several methods of seismic prospecting which would be fatal for marine life have had to be abandoned. Of those still used, I believe the pneumatic methods to be the least harmful to marine fauna. Its effect can be compared to the effect of

USSR

MONAKHOV, V., Izvestiya, 5 Aug 73, p 4

opening a champagne bottle: compressed air under high pressure fires out into the water and special instruments record the waves reflected from the sea floor... But can we find still safer methods for the inhabitants of the sea? Geophysicists are working together with biologists to find them. An interdepartmental commission on efficient utilization of geophysical methods for prospecting in bodies of water has been set up. It includes representatives of two union ministries -- geology and fishing -- as well as the Academy of Sciences, USSR..."

Protasov, who knows fish as well as anyone else in the country, was named to this commission. His journey to Gelendzhik was a sort of inspection. "Yuzhmorgeo" Union of the Ministry of Geology, USSR, had suggested that electric fields be used to prospect for useful minerals.

The Admiral Nakhimov sailed out into the sea. On board the ship were geophysicists, biologists, ichthyologists and biochemists -- workers from the laboratory for protection of ichthyofauna of "Yuzhmorgeo."

"I never thought I'd have to make a serious study of biology," states the laboratory leader, E. Vekilov. "I am a geophysicists by profession. But now I don't know what to call myself. Judge for yourself: my dissertation, which I am just completing, is entitled 'A Study of the Effects of Physical Fields on Fish'..."

USSR

MONAKHOV, V., Izvestiya, 5 Aug 73, p 4

Along the walls of this laboratory are rows of aquariums filled with fish and wrapped with wires. Before performing experiments at sea, the influence of electric current on fish was studied here...

"Let us begin." Protasov says.

The sailors began to trail a cable into the sea. At the end of the cable is one electrode. The second electrode is lowered overboard. The electrical pulses sent from the ship to the bottom of the sea will help the geophysicists to understand the geological structure of the crust. But for now it is important to know how the "population" of the sea acts during the experiment. Fish have been carefully placed in containers and also lowered into the water.

The current!... The pen of a strip chart recorder draws the curve. From the ship, we can see clearly that the fish jumped once, then became quiet once more.

"Bring the fish in closer," Velikov commands.

He makes rapid entries in his journal. Looking over his shoulder, I read: "In the region of action of the electrodes -- up to 2 meters -- large fish experience the influence of the electric field (Aha, it seems it was not by chance that Protasov wanted big, fat fish!)... And a pulse of direct

USSR

MONAKHOV, V., Izvestiya, 5 Aug 73, p 4

current acts on such commercial fish types of the Black Sea as mullet, anchovy and haddock within a range of 1 1/2 meters..."

"Well," Protasov says, when the experiment is completed, "you can use your method without harm to the marine life. I will report this to the commission..."

We returned to the bay in the evening, having been out to sea all day, without a swim.

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202110018-4"

USSR UDC: 517.9:532

ANTONTSEV, S. N., MONAKHOV, V. N.

"On Some Nonstationary Problems With Unknown Boundaries"

V sb. Nekotor. probl. mat. i mekh. (Some Problems of Mathematics and Mechanics--collection of works), Leningrad, "Nauka", 1970, pp 75-87 (from RZh-Matematika, No 5, May 71, Abstract No 5B492)

Translation: Proof is given of the existence of generalized solutions of a class of boundary value problems with a free boundary for a quasilinear system of differential equations consisting of a parabolic equation and an elliptical system of first-order equations. The parabolic equation describes either the temperature field of a filtering nonhomogeneous liquid or the distribution of saturation of one of the phases of a nonhomogeneous liquid in nonhomogeneous ground. In the intermediate stages of the investigation a study is made of the properties of quasiconformal mappings which depend on a real parameter, proof is given of the unique solvability of a mixed boundary value problem with four singular points for quasilinear elliptical systems of equations, and the solvability of the first boundary value problem is established for a quasilinear parabolic equation in noncylindrical regions with a non-smooth boundary. Authors' resumé.

1/1 - 4 -

AA0 044267 M UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 2/70

243046 OUTPUT VOLTAGE OF A THYRISTOR CONVERTER is continuously varied while equal load sharing by the thyristors is ensured. The phase of gating pulse for a thyristor depends not only of the reference voltage (U_{zad}) but of the load voltage as well. Consequently the relationship between the firing angle of the thyristor and the control voltage to the driver (1) is made to depend on the deviation between the reference voltage (U_{zad}) and the time integral of supply voltage for the duration of thyristor conduction (2). This solution ensures uniform load-sharing in both half cycles.

29.6.66 as 1086914/24-7. M.I. KOLKER & IU.V.MONAKHOV. ELECTROTHERMAL EQUIPMENT RES.INST.(30.9.69) Bul 16/ 5.5.69. Class 21d^2. Int.Cl. H 02m.

AUTHORS: Kolker, M. I., Monakhov, Yu. V.

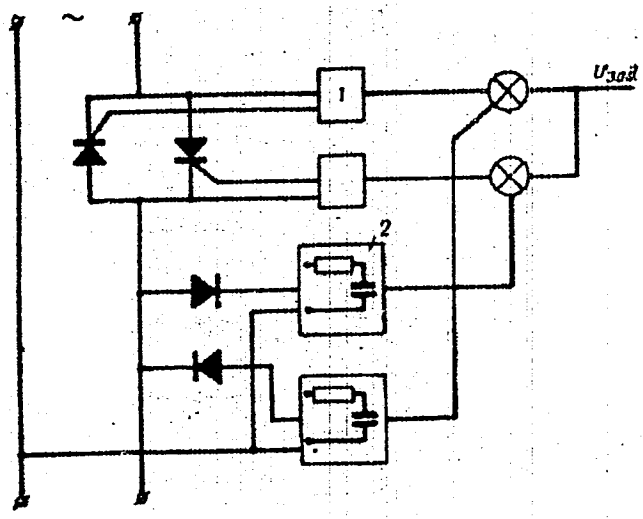
Vsesoyuznyy Nauchno-Issledovatel'skiy Institut Elektrotermicheskogo Oborudovaniya

4

1/2

19770785

AA0044267



2/2

19770786

gc

1/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

TITLE--STYRENE COPOLYMERS -U-

AUTHOR-(05)-PETROV, G.N., RAPPOPORT, L.YA., SAVINSKIY, P.A., MONAKHOVA, L.A., MOLOTKOV, R.V.

COUNTRY OF INFO--USSR

SOURCE--U.S.S.R. 263,877

REFERENCE--OTKRYTIYA, IZOBRET., PROM. OBRAZTSY, TOVARNYE ZNAKI 1970,

DATE PUBLISHED--10FEB70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--STYRENE, COPOLYMER, POLYMER CROSSLINKING, ACRYLATE, ETHYL CARBAMATE, CHEMICAL PATENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1995/1082 STEP NO--UR/0482/70/000/000/0000/0000

CIRC ACCESSION NO--AA0116548

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AA0116548

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COPOLYMERS ARE PREPD. BY COPOLYMG. STYRENE WITH A CROSSLINKING AGENT (POLYDIENE URETHANE DIACRYLATE) IN THE PRESENCE OF A HARDENER.

UNCLASSIFIED

Acc. Nr: AP0044593 Ref. Code: UR0497

PRIMARY SOURCE: Klinicheskaya Meditsina, 1970, Vol 48, Nr 1, pp 17-21

THE PRIMARY RESULTS OF CONTINUOUS (ANNUAL) BICILLIN-ASPIRIN PROPHYLAXIS OF RHEUMATISM RELAPSES IN ADULTS

I. N. Mikhaylova, M. A. Monakhova, T. A. Tarasenkova, K. V. Nikolskaya, V. S. Ponomarev

Summary

The authors commit to paper the results of continuous 2½-year-long bicillin-aspirin prophylaxis of rheumatism relapses in 180 patients who have sustained the active stage of the process. The patients were subject to intramuscular injections of the new Soviet-made antibiotic bicillin in a dose of 1,500,000 Units (110 cases) or of the Czechoslovakian antibiotic pendepon in a dose of 1,00,000 Units (70 cases) once every four weeks. In spring and autumn the patients were given per os 2 gm of aspirin daily for a period of one month. In regular prophylaxis the number of rheumatism relapses decreased by 10 times, with a sharp reduction of the incidence of tonsillitis, influenza and upper respiratory catarrh. There was noted a normalization of the astreptolysin-0 titer and a significant decline of laboratory indices of the rheumatic process activity in patients affected with a continuous-recurrent form of the disease.

1/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--POSSIBLE CULTIVATION OF FOOD YEASTS IN A MIXTURE OF HYDROLYZATE AND RESIDUAL LIQUOR FROM ALCOHOL FERMENTATION -U-

AUTHOR-(02)-MONAKHOVA, N.I., SEMUSHINA, T.N.

COUNTRY OF INFO--USSR

SOURCE--GIDROLIZ. LESOKHIM, PROM. 1970, 23(1), 3-5

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--YEAST, ALCOHOL, FERMENTATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1996/0481 STEP NO--UR/0328/70/023/001/0003/0005

CIRC ACCESSION NO--AP0117717

UNCLASSIFIED

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0117717

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN MOST HYDROLYSIS PLANTS, FEED YEASTS ARE GROWN EITHER IN OIL. HYDROLYZATE OR IN THE RESIDUAL LIQUOR FROM ALC. FERMENTATION. SOME PLANTS, (E.G. THE VOLGOGRAD PLANT), USE A MIXT. OF THE 2 SUBSTRATES AND THIS METHOD ALWAYS GIVES LOWER YIELDS OF YEAST. THE BASIC DIFFERENCE BETWEEN THE HYDROLYZATES AND RESIDUAL LIQUIR IS THEIR SUGAR COMPN.: HYDROLYZATES CONTAIN MAINLY HEXOSES (GLUCOSE, MANNOSE, AND GALACTOSE IN SOFTWOOD HYDROLYZATES), PENTOSES CONSTITUTING SIMILAR TO 25PERCENT OF THE TOTAL SUGARS. THE RESIDUAL LIQUOR CONTAINS MAINLY XYLOSE, A SMALL AMT. OF ARABINOSE, AND TRACES OR NO HEXOSES. WHEN THE 2 SUBSTRATES ARE MIXED IN A 1 TO 1 RATIO, THE RATIO OF HEXOSES TO PENTOSES IS 1 TO 0,7. CANDIDA WAS GROWN UNDER STD. CONDITIONS IN CONTINUOUS CULTURES ON A HYDROLYZATE, ON LIQUOR, AND ON MIXTS. OF THE 2 IN VARIOUS PROPORTIONS. AT EQUAL INITIAL CONC. OF SUGARS, GROWTH WAS LOWER WHEN YEAST WAS GROWN IN MIXED SUBSTRATES THAN WITH EITHER THE HYDROLYZATE OR RESIDUAL LIQUOR. IN THE MIXED SUBSTRATES, GROWTH OCCURRED IN 2 STAGES WITH A CONSIDERABLE LAG BETWEEN THE STAGES.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202110018-4"

USSR

UDC 616.9:681.142

TER-KARAPETYAN, A. Z., TEPLYAKOV, B. Ya., DROZDOVA, A. A., MONAKHOVA, S. I., and RUBANOVA, F. G., Central Scientific Research Institute of Epidemiology, Ministry of Health, USSR, and Belorussian Scientific Research Institute of Epidemiology and Microbiology

"Centralized Processing of Materials on Infectious Diseases"

Minsk, Zdravookhraneniye Belorussii, No 6, 1970, pp 66-67

Abstract: The organization of data requires centralized processing of properly classified information which may be suitable for machine processing. For this purpose, a new chart was prepared by the Central Institute of Epidemiology, designed for epidemiological studies and provided with a separate sheet containing 18 points considered essential for centralized processing. At the seminars attended by all epidemiologists, their aides, and all others working with infectious diseases, the various difficulties concerning the particular items in the new chart were resolved. Putting these new charts through the Minsk-22 computer proved accurate, reliable, and time-saving.

1/1

USSR

UDC: 574.94

MONAKHOVA, T. Ye., PROSKURNINA, N. F., TOLKACHEV, O. N., KOBANOV, V. S., PEREL'SON, M. Ye., All Union Scientific Research Institute of Medicinal Plants

"Alkaloids of Sophora Alopecuroides. 3-α-Hydroxysophoridine"

Tashkent, Khimiya Prirodnykh Soyedineniy, No 1, 1973, pp 59-64

Abstract: In a continuation of research on the alkaloids of Sophora alopecuroides, preparations were made from the aerial part of the plant in the fruit-bearing stage. The sum of the alkaloids obtained by the conventional dichloroethane method (2.5%) was divided into fractions of strong and weak bases. The following alkaloids were distinguished in the fraction of weak bases by extraction with various solvents combined with aluminum oxide chromatography: sophoridine, cytisine and three bases -- $C_{13}H_{18}N_2O_2$(III), $C_{15}H_{24}N_2O_2$ (IV), and $C_{15}H_{24}N_2O_2$ (VI). The fraction of strong bases yielded sophoridine, cytisine and baptifoline (V). This is the first time that the alkaloids cytisine and baptifoline have been isolated from this plant. Infrared and mass spectroscopy suggest the structure of 3α-hydroxysophoridine for base IV.

1/1

(1)

USSR

BOBROVNIK, I. I., GORBUNOV, K. I., KLOCHAN, V. I., MONASTYREV, V. K., POPLAVSKIY, N. N.

"Geoseismic Logging Procedure"

USSR Author's Certificate No 370567 (from Otkrytiya, Izobreteniya, Promyshlennyye obraztsy. Tovarnyye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 11, 1973, page 144)

Translation: The geoseismic logging procedure by reducing multichannel reflected wave recordings to one generalized track with utilization of mutual correlation functions, track selection by the threshold values of the similarity coefficients and summation with preliminary input of kinematic and static corrections is distinguished by the fact that in order to increase the reliability of wave correlation and determine the relations of the dynamic wave characteristics with physical-lithologic section parameters, two-halfperiod detection of the digital analog of the summogram, sliding integration with the time interval which is a multiple of the oscillation halfperiod and normalization of the recordings with respect to intensity of the excitation center and the amplification coefficients of the recording channel are used successively with subsequent conversion of the energograms by the law of formation of a sequence of partial sums of the theories.

1/1

USSR UDC 576.858.083.35:576.353

BLYUMKIN, V. N., and MONASTYREVA, L. A., Institute of Virology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences, Moscow

"Methodology for the Study of Pathological Mitoses in Cell Cultures Infected With Viruses"

Moscow, Voprosy Virusologii, No 4, Jul/Aug 71, pp 475-478

Abstract: Investigations of mitotic disorders caused by various viruses should be performed on tissue cultures with a minimum percentage of spontaneously developing abnormal mitoses, such as cultures of the RES line (1-9%), VERO line (0-6%), and diploid human cells (2-10%). To ensure thoroughness, the investigation may proceed according to the following classification: A. Pathologic Prophase: 1. premature separation of chromatin; 2. disorganization of spireme; and 3. pulverization of chromosomes. B. Pathologic Metaphase: 1. remaining of single chromosomes or chromosome fragments in metaphase; 2. formation of three groups (multigroup metaphase); 3. colchicine-like (C-) metaphase with disorderly arrangement of excessively short and thick chromosomes; 4. C-metaphase with several chromosome groups; 5. C-metaphase with chromosome adhesion; 6. pulverization of chromosomes; 7. dispersion of unchanged chromosomes; 8. multiband metaphase; 9. open metaphase; 10. monocentric metaphase; and 11. combined

1/2

USSR

BLYUMKIN, V. N., et al, Voprosy Virusologii, No 4, Jul/Aug 71, pp 475-478

disorders. C. Pathologic Anaphase: 1. remaining of viryle chromosomes in anaphase; 2. or of chromosome fragments; 3. chromosome bridges; 4. chromatin bridges; 5. irregular separation of chromosomes; 6. multiband anaphase; and 7. combined disorders. D. Pathologic Telophase: 1. irregular telophase; 2. presence of bridges; 3. multiband telophase; 4. formation of micronuclei; 5. nuclear pyknosis; and 6. combined disorders. A multiband phase in which chromosomes from a triangle, cross, or various stars but are located on one plane (equal distance from polar body) should be distinguished from a multi-group phase in which separate groups of chromosomes are located on different planes (unequal distance from polar body).

2/2

USSR UDC 616-018.15-092.9-02:576.858.75 (Sendai)

BLYUMKIN, V. N., MONASTYREVA, L. A., and BUKRINSKAYA, A. G., Institute of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR

"Mitotic Changes in RES Cultures (CLone I) Infected with Sendai Virus"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 1, 1970, pp 85-88

Abstract: RES cultures (clone I) infected with Sendai virus (strain 960) exhibited peculiar quantitative and qualitative mitotic changes. Within two hours of infection, mitotic activity increased simultaneously with intranuclear synthesis of virus-specific RNA. A wave of pathological mitoses appeared after 4-6 hours. The chromosomes, spindles, and centrioles were severely damaged and many of the cells contained micronuclei. These pathological mitoses are interpreted as an early manifestation of the cytopathic effect of Sendai virus on the cellular system under study.

1/1

M

Acc. Nr.: AP0031143 Ref. Code: UR 0219

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i Meditsiny, 1970, Vol 69, Nr 1, pp 85-88

MITOTIC CHANGES OF RES CULTURES (CLONE I) INFECTED THE SENDAI VIRUS

V. N. Blyumkin, L. A. Monastyrova, A. G. Bukrinskaya

D. I. Ivanovsky Institute of Virusology, Academy of Medical Sciences of the U.S.S.R. Moscow

RES cultures (clone I) were infected by Sendai virus, strain No. 960. In this cellular system the virus multiplied with development of cytopathic changes: symplastoformation and destruction of a cellular layer. At early stages of infection a considerable number of cells appeared containing micronuclei. Increase of mitotic activity after infection is replaced by its depression as infection develops. Increase of pathological mitoses in infected cultures is possibly one of early manifestations of a cytopathic action of Sendai virus.

MK
6

1/1

REEL/FRAME

6

USSR

UDC 678.742.2-137.46.22:66.018.86

TERTERYAN, R. A., LESHCHENKO, S. S., LIVSHITS, S. D., GOLOSOV, A. P., ITSIKSON, L. B., MONASTYRSKIY, V. N., KARPOV, V. L., SOBOLEVA, N. S., MAL'TSEVA, A. P., and ISKHAKOV, L. I.

"Radiation Stability of Ethylene and Styrene Copolymers"

Moscow, Plasticheskiye Massy, 7, 1973, pp 3-5

Abstract: A study was made of the continuous statistical copolymerization of ethylene monomers (E) with styrene (S) under conditions similar to those under which low density polyethylene is produced and also of the behavior of E + S polymers in an ionizing radiation field. The results of copolymerization studied -- grams of copolymer/hr concentration of S in the polymer, density, and others -- are given as a function of styrene concentration and pressure at 200°C. An increase in the concentration of S in the reaction mixture leads to a decrease in the copolymer yield, in its characteristic viscosity, in its melting temperature, and its crystallinity, and to an increase in the density. The presence of S monomers in the polyethylene chains and the chemical bonds between them and the methylene groups significantly increases the resistance of the material to α-radiation damage. The gases evolved during the radiation of various types of polymers were determined.

1/1

1/2 015 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--SYNTHESIS OF ALKYLSALICYLATE ADDITIVES BASED ON P,CRESOL -U-

AUTHOR-(05)-MONASTYRSKIY, V.N., TSVETKOV, O.N., DMITRIYEVA, N.A., KAZAKOV, YE.I., KORENEV, K.D.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TEKHNOL. TOPL. MASEL 1970, 15(3), 17-19

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--SALICYLATE, ALKYLATION, CRESOL, PETROLEUM FRACTION, CHEMICAL SYNTHESIS, ANTIOXIDANT ADDITIVE, DETERGENT ADDITIVE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1992/1491 STEP NO--UR/0065/70/015/003/0017/0019

CIRC ACCESSION NO--AP0112485

UNCLASSIFIED

UNCLASSIFIED PROCESSING DATE--02OCT70

2/2 015

CIRC ACCESSION NO--AP0112485

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ADDITIVES, IMPARTING HIGH DETERGENT, ANTIOXIDANT, AND ANTISCALING PROPERTIES TO OILS, WERE PREPD. BY ALKYLATING P,CRESOL WITH AN OLEFIN FRACTION B. 240-320DEGREES, OBTAINED BY WAX CRACKING, YIELDING 63.6PERCENT ALKYL,P,CRESOL. THE LATTER WAS CARBOXYLATED TO OBTAIN THE ALKYLSALICYLIC ACID, WHICH WAS TREATED WITH CA(OH) SUB2 TO GIVE THE ADDITIVE.

UNCLASSIFIED

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202110018-4"

Acc. Nr. AP0045173 Abstracting Service: CHEMICAL ABST. 5-70 Ref. Code UR0191

90892f Continuous high-pressure copolymerization of ethylene with isobutylene. Golosov, A. P.; Tertsyan, R. A.; Larina, M. V.; Monastyrskii, V. N. (USSR). *Plast. Massy* 1970, (1), 5-7 (Russ). The copolymn. of ethylene (I) with isobutylene (II) was studied in a continuous-flow tubular reactor at 200-20° and 400-2000 kg/cm². High-mol.-wt. products were obtained when the II content was ≧15 mole %; a further increase in II content gave low-mol.-wt. copolymers, accompanied by a sudden decline in m.p. (from 100 to 0°). The tensile strength of I-II copolymers was inversely proportional to II content, declining to 0 when II content was 40 mole %. A radical copolymn. mechanism was proposed. The copolymn. involved chain transfer (via II mols.) and the termination, thus leading to the formation of low-mol.-wt. copolymers. The mol. wt. of the copolymers (500-15,500) and the copolymn. rate were proportional to the pressure. Increased pressure had a favorable effect on the d., tensile strength, elongation at break, and m.p. of the I-II copolymers. CKJR

REEL/FRAME 19780073

UNCLASSIFIED PROCESSING DATE--13NOV70

1/3 028

TITLE--THE STATE OF THE CARDIOVASCULAR SYSTEM IN CHRONIC CARBON DISULFIDE POISONING -U-

AUTHOR-(02)-MONAYENKOVA, A.M., GLOTOVA, K.V.

COUNTRY OF INFO--USSR

SOURCE--KLINICHESKAYA MEDITSINA, 1970, VOL 48, NR 3, PP 60-64

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--CARBON DISULFIDE, POISON, CARDIOVASCULAR SYSTEM, BLOOD PRESSURE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED STEP NO--UR/0497/70/048/003/0060/0064

PROXY REEL/FRAME--3001/0584

CIRC ACCESSION NO--AP0126322

UNCLASSIFIED

2/3 028 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0126322

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE ARTICLE DEALS WITH A DETAILED CLINICAL EXAMINATION OF 91 PATIENTS INVOLVING THE USE OF TACHO OSCILLOGRAPHY, ELECTROCARDIOGRAPHY AND POLYCARDIOGRAPHY. THE CLINICAL MANIFESTATIONS IN THE MAJORITY OF PATIENTS WITH CARBON DISULFIDE POISONING WERE CHARACTERIZED BY FUNCTIONAL CHANGES OF THE NERVOUS SYSTEM, IN THE FORM OF VEGETATIVE AND VASCULAR DYSFUNCTION, THE ASTHENOVEGETATIVE SYNDROME, WHEREBY IN A NUMBER OF CASES THERE WERE SEEN ORGANIC CHANGES IN THE FORM OF ENCEPHALOPOLYNEURITIS. AMONG THE PATIENTS, DEPENDING UPON THE STATE OF HIGHER VEGETATIVE REGIONS OF THE NERVOUS SYSTEM, THE AUTHORS SINGLED OUT PERSONS WITH INVOLVEMENT OF THE HYPOTHALAMIC DIENCEPHALIC REGION. TACHO OSCILLOGRAPHIC REGISTRATION OF THE ARTERIAL PRESSURE DISCLOSED AN INCREASE OF THE MAXIMAL BY 33PERCENT, TRUE LATERAL BY 45PERCENT, MEDIAN DYNAMIC BY 42PERCENT AND MINIMAL PRESSURE BY 38PERCENT OF CASES. REPEATED MEASUREMENTS REVEALED AN INSTABILITY OF THE ARTERIAL PRESSURE WITH A TENDENCY TO HYPOTENSIVE (23PERCENT) OR HYPERTENSIVE (48PERCENT) REACTIONS. CHANGES OF THE HEART ARE PREDOMINANTLY OF DIFFUSE DYSTROPHIC AND RARELY CORONARY SPASTIC CHARACTER WITH AN INSIGNIFICANT REDUCTION OF THE MYOCARDIAL CONTRACTILE FUNCTION. IN VIEW OF THE FACT THE HYPERTENSIVE FORM OF NEUROCIRCULATORY DYSTONIA AND CHANGES OF THE MYOCARDIUM, AS A RULE, WERE OBSERVED IN PATIENTS WITH SIGNS OF DIENCEPHALIC PATHOLOGY, ONE COULD THINK OF THE RELATION OF THESE SHIFTS WITH FUNCTIONAL DISTURBANCE OF THE HYPOTHALAMUS.

UNCLASSIFIED

3/3. 028 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0126322

ABSTRACT/EXTRACT--THE ABOVE MENTIONED INVESTIGATIONS HAVE SHOWN THAT IN CHRONIC CARBON DISULFIDE POISONING, ALONG WITH ALTERATIONS OF THE NERVOUS SYSTEM, A NOT LESS CHARACTERISTIC CLINICAL PECULARITY IS THE GREAT LABILITY OF THE ARTERIAL PRESSURE WITH A PREVALENCE OF HYPERTENSIVE REACTIONS. THE DEVELOPMENT OF NEUROCIRCULATORY DYSTONIA AND HYPERTENSIVE VASCULAR DISEASE AGAINST THE BACKGROUND OF OTHER SYMPTOMS OF POISONING IS, APPARENTLY, ASSOCIATED WITH THE EFFECT OF CARBON DISULFIDE. THE REFERRED TO CHANGES OF THE HEART DO NOT LEAD TO CARDIAC DECOMPENSATION OR PERSISTENT CORONARY INSUFFICIENCY, HOWEVER IN A NUMBER OF CASES THEY ARE ONE OF THE CAUSES OF DECREASE OF THE WORKING CAPACITY IN PATIENTS. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANIY, AMN SSSR, MOSKVA.

UNCLASSIFIED

1/2 026 UNCLASSIFIED PROCESSING DATE--16OCT70
TITLE--ON THE INITIAL FORMS OF CHRONIC CARBON DISULFIDE POISONING -U-

AUTHOR-(05)-MILKOV, L.YE., MONAYENKOVA, A.M., BYALKO, N.K., GLOTOVA, K.V., VERETINSKAYA, A.G.
COUNTRY OF INFO--USSR

SOURCE--GIGIYENA TRUDA I PROFESSIONAL'NYYE ZABOLEVANIYA, 1970, NR 5, PP 28-32
DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--POISON, CARBON DISULFIDE, INDUSTRIAL HYGIENE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1995/0450 STEP NO--UR/0391/70/000/005/0028/0032

CIRC ACCESSION NO--AP0116116
UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0116116

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN EXAMINATION OF WORKERS EXPOSED TO THE EFFECT OF CARBON DISULFIDE IN CONCENTRATIONS OF 30-60 MG-M PRIME3 DISCLOSED THE PRESENCE OF THE INITIAL FORMS OF CHRONIC CARBON DISULFIDE POISONING IN THE SHAPE OF VEGETATIVE VASCULAR DYSFUNCTION (NOT INFREQUENTLY WITH HYPERTENSIVE REACTIONS) AND OF THE ASTHENO VEGETATIVE SYNDROME, OFTEN APPEARING IN CONJUNCTION WITH SIGNS OF MILDLY PRONOUNCED VEGETATIVE SENSITIVE POLYNEURITIS, COMMONLY DEVELOPING IN PERSONS WITH LONG SERVICE RECORDS. IN THE INITIAL FORMS OF POISONING A NUMBER OF NONSPECIFIC CHANGES IN INDIVIDUAL BIOCHEMICAL BLOOD AND URINE INDEXES WERE ELICITED, WHEREBY IN CASES OF VEGETATIVE VASCULAR DYSFUNCTION OF A DECLINE OF THE PSEUDO CHOLINESTERASE ACTIVITY AND A FALL OF THE BLOOD CHLORIDE CONCENTRATION, ALONG WITH AN ELEVATED CATECHOLAMINES EXCRETION (WITH NORPINEPHRINE BEING COMMONLY RESPONSIBLE FOR IT) OCCURRED MUCH MORE OFTEN THAN IN THE ASTHENIC FORM OF POISONING. PERSONS EXPOSED TO CARBON DISULFIDE CONCENTRATION NOT SURPASSING THE MAXIMUM PERMISSIBLE LEVEL (10 MG-M PRIME3) ALSO DEMONSTRATE INITIAL FORMS OF CHRONIC CARBON DISULFIDE POISONING, ALTHOUGH IN FEWER CASES. THIS MAKES IT NECESSARY TO LOWER THE FIXED MAXIMUM PERMISSIBLE CONCENTRATION LEVEL OF CARBON DISULFIDE IN CONSIDERATION OF THE INHALATION AND CUTANEOUS ROUTS OF ITS INGRESS INTO THE ORGANISM. FACILITY: INSTITUT GIGIYENY TRUDA I PROFZABOLEVANIY AMN SSSR.

UNCLASSIFIED

Acc. Nr: AP0049027 Ref. Code: UR 360

PRIMARY SOURCE: Vestnik Otorinolaringologii, 1970, Nr 1, pp 18-24

NASAL POLYPOSIS AS AN AUTOIMMUNE DISEASE

G. N. Popova, A. M. Monayenkov, N. N. Tarasevich (Moscow)

Summary

The authors studied nasal polyposis from the viewpoint of the possibility of referring it to autoimmune diseases. In the patient's serum the content of autoantibodies to specially prepared polyp antigen was investigated. The following techniques were employed: latex-agglutination, passive hemagglutination and the immunofluorescent method. In serological reactions the authors used the principle of consecutive employment of antigens -- at the first stage the serum was exhausted by normal tissue antigen and then the reaction with polyp antigen occurred. The reactions of latex-agglutination and passive hemagglutination demonstrated the presence of autoantibodies to polyp antigen in all patients with nasal polyposis in different dilutions (reaction of latex-agglutination in dilution of 1:8—1:64, reaction of passive hemagglutination — 1:50—1:1000). In control sera autoantibodies were practically absent.

AP0049027

Apart from the blood serum the polyp fluid was also subjected to serological analysis. Autoantibodies to polyp antigen were revealed in titers of 1:50—1:800. In 2 out of 10 patients the autoantibody titer in the polyp fluid markedly surpassed the titer of antibodies in the blood serum.

By means of the immunofluorescent method in the polyp tissue an antigen-antibody complex was revealed.

The dynamics of autoantibody accumulation was studied at diverse periods of the disease — during relapse of polyposis and during the period free of polyps. There was noted a definite relation between the antibody titers and stage of the disease — intensification during relapses of polyposis and decline of autoantibody titers during the period free of polyps. The data derived make it possible to state that autoimmune reactions play a definite role in the pathogenesis of nasal polyposis.

2/2

19800809

USSR

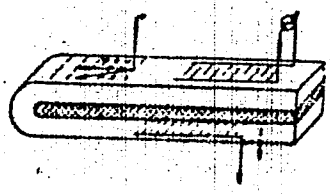
UDC 621.374.5

KARINSKIY, S. S., KOMAROV, V. G., MONDIKOV, V. D., GOLIKOV, M. I., ROMANOV, L. N., KOMAROVA, I. S., KRISTININA, L. I.

"An Integrated Ultrasonic Single-Crystal Delay Line"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 15, May 71, Author's Certificate No 302808, Division H, filed 22 Sep 69, published 28 Apr 71

Translation: This Author's Certificate introduces an integrated ultrasonic single-crystal delay line for surface waves. The device contains a piezoelectric single-crystal acoustic line with a slot on one end which is filled with an absorber. The device also contains lattice-type two-phase receiving and transmitting converters. As a distinguishing feature of the patent, the delay time is increased by locating the converters on the upper and lower surfaces of the acoustic line, and by rounding the other end of the line with a radius of at least ten ultrasonic resonance wavelengths.



1/1

1/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--SELECTION OF THE TYPE OF HARDENING FURNACE FOR FERRITIZATION OF BARIUM FERRITE POWDERS -U-

AUTHOR--MONDIN, L.YA..

COUNTRY OF INFO--USSR

SOURCE--POROSH. MET. 1970, 10(2), 98-103

DATE PUBLISHED-------70

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

TOPIC TAGS--FERRITE, BARIUM COMPOUND, SINTERING FURNACE, MAGNETIC PROPERTY, CERAMIC TECHNOLOGY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1999/1097 STEP NO--UR/0226/70/010/002/0098/0103

CIRC ACCESSION NO--AP0123089

UNCLASSIFIED

2/2 020 UNCLASSIFIED PROCESSING DATE--13NOV70
CIRC ACCESSION NO--AP0123089
ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE POSSIBILITY OF USING A ROTARY FURNACE FOR FERRITIZATION OF BA FERRITE POWDERS WAS INVESTIGATED, AS WELL AS THE EFFECT OF THE TEMP. AND THE TIME OF FERRITIZATION ON THEIR MAGNETIC PROPERTIES. THE FOLLOWING PARAMETERS WERE INVESTIGATED: RESIDUAL INDUCTION, COERCIVE FORCE RELATIVE TO INDUCTION, MAX. MAGNETIC ENERGY, AND SATN. MAGNETIZATION. INVESTIGATED WERE POWDERS PREPD. FROM CONVENTIONAL CERAMIC TECHNOLOGY AS WELL AS BY THE COPPTN. METHOD, WITH A MOLE RATIO OF BAO:FE SUB2 O SUB3 EQUALS 1:5.6. THE MAGNETIC PROPERTIES OF BA FERRITE POWDERS FERRITIZED IN THE ROTARY FURNACE DO NOT DIFFER FROM THE PARAMETERS OF POWDERS FERRITIZED IN THE TUNNEL KILN ANNEALING FURNACE. HOWEVER, THE POWDER FROM THE ROTARY FURNACE IS MORE HOMOGENEOUS, BECAUSE IN THE PROCESS OF THERMAL TREATMENT IT IS WELL MIXED. THE CONSUMPTION OF ELEC. ENERGY PER UNIT OF PRODUCTION FOR THE ROTARY FURNACE IS APPROX. ONE HALF THAT FOR THE TUNNEL ANNEALING FURNACE. FACILITY: VSES. NAUCH.-ISSLED. INST. REAKTIV. KHIM. CHIST. MATER. DLYA ELEKTRON. TEKH., USSR.

UNCLASSIFIED

Acc. Nr: AP0049303 Abstracting Service: CHEMICAL ABST. 5/70 Ref. Code: GR 0226

94654c **Effect of thermal treatment on the magnetic properties of barium ferrite powders. II. Effects of heating and cooling rates, temperature, and time of ferritization on the magnetic properties of barium ferrite powders.** Mondin, L. Ya. (Vses. Nauch.-Issled. Inst. Reaktiv Khim. Chistykh Metter. Elektron. Tekh., Donetsk, USSR). *Porosh. Met.* 1970, 10(1), 83–8 (Russ). Rapid cooling of the powder significantly improves its magnetic properties. However, the ferritization temp. in this case should be 30–40° higher as compared with the powder cooled with the furnace. During multiple cycles of the ferritization, the residual induction, the coercive induction force, and the max. magnetic energy 1st increase, and then after the 4th cycle decrease. The magnetization coercive force decreases monotonically with increasing cycles of ferritization. In the case of ferritization of the powder in the thin layer, 2 hr is sufficient holding time at the given temp. Increasing the holding time during ferritization to 4 hr decreases the ferritization temp. by 30–40°. S. A. Mersol

1/1

REEL/FRAME
19801120

USSR

KONDIN, L. YA., All Union Scientific Research Institute of Reagents and Ultrapure Chemical Substances for Electronic Technology, Donetsk

"Effect of Thermal Treatment of the Magnetic Properties of Barium Ferrite Powders"

Kiev, Academy of Sciences Ukr SSR, Poroshkovaya Metallurgiya, No 1, Jan 70, pp 83-88

Abstract: A study was made of the effect of heating and cooling rates, temperature, ferritization time, and repeated ferritization on the magnetic properties of barium ferrite powders. Barium ferrite powders, obtained by the technique of joint precipitation in the form of carbonates with a molar ratio $BaO/Fe_2O_3 = 1/5.6$, were used in the investigation. The ferritization was conducted at 1220°C in a KO-10-type furnace with a 300 degree/hour temperature rise rate over 3 hours. The cooling was done in the furnace. The results of measurements of magnetic parameters, with respect to heating and cooling rate, are presented in a table. Four ferritization cycles were conducted under the same conditions in order to evaluate the effect of repeated ferritization on magnetic properties. In order to determine the effect of temperature and time of

1/2

USSR

MONDIN, L. YA., Poroshkovaya Metallurgiya, No 1, Jan 70, pp 83-88

ferritization, the latter was conducted in a thin layer 25-30 mm high with and without air quenching. Air quenching significantly improved the magnetic properties of the powders. To obtain the optimal magnetic parameters, a higher ferritization temperature (30 to 40°C more) is necessary than with cooling done in the furnace. With repeated ferritization cycles, the residual induction B_r, the coercive force at intuction $_B H_c$, and the maximum magnetic energy $(BH)_{max}$ at first increased and then decreased after the fourth cycle. The coercive force at magnetization $_i H_c$ decreased monotonically with an increasing number of ferritizations. Two hours was shown to be sufficient for ferritization in a thin layer. Orig. art. has: 5 figures, 3 tables, and 10 references.

2/2

USSR

A.F

UDC 629.12:532

GULIYEV, YU. M., MONEYM, AKHMED FARUK

"Disturbing Forces During Pitching of a Ship on a Sandbar"

Sudostr. i sudoremont. Nauch.-tekhn. sb. (Shipbuilding and Ship Repair. Scientific and Technical Collection), 1970, vyp. 3, pp 129-142 (from RZh-Mekhanika, No 11, Nov 71, Abstract No 11B390)

Translation: An approximate procedure is presented for calculating the disturbing forces during pitching of ships in a liquid of finite depth. The procedure was obtained on the basis of solving the hydrodynamic problem of forces acting on a stationary triaxial ellipsoid floating on the surface of an ideal liquid of finite depth. When solving this problem, the velocity potential is represented by the sum of the oncoming wave potential and the potential of the disturbed (diffracted) movement of the liquid. When calculating the disturbing forces, the Haskind conclusion was used that there is no need to solve the diffraction problem but it is sufficient to determine the velocity potential of the disturbed movement of the liquid for forced oscillations of the body on quiet water. The calculation was performed on a digital computer for 24 ellipsoids with different halfaxis ratios by the approximate formulas obtained for the dimensionless coefficients of the disturbing force and the disturbing moment. Examples of the graphical dependence of these coefficients on the

1/2

USSR

GULIYEV, YU. M., et al., Sudostr. i sudoremont. Nauch.-tekhn. sb., 1970, vyp. 3, pp 129-142

relative wavelength and the relative draft are presented. The possibility of practical utilization of the results of the theoretical study was checked by comparing the results of the calculations by the formulas obtained with the data obtained experimentally on 9 models of series 60 ships with different ratios of the primary dimensions. The experimental studies demonstrated that for ordinary maritime transport ships the geometric characteristics of the hull and the depth of the water have no significant effect on the dimensionless coefficients of the disturbing forces. This fact permits application of the approximate formulas obtained to the practical calculations of disturbing forces. Comparison of the calculation results by these formulas with the experimental data demonstrates entirely satisfactory coincidence.

2/2

AA0043411 M UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent, 2/70

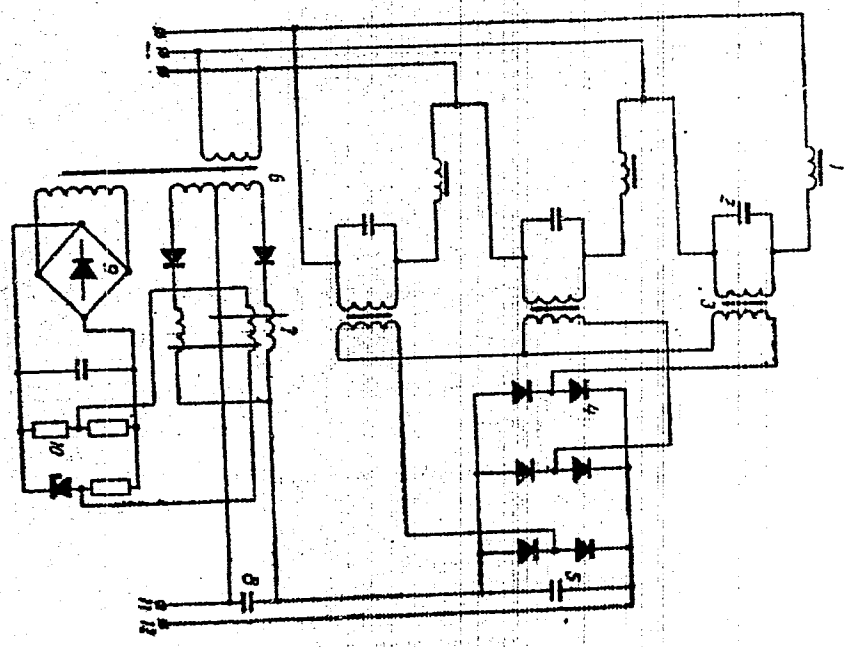
241509 STABILIZED D.C. SUPPLY where each phase is supplied to the rectifier bridge (4) through a choke (1) and a saturable transformer (3) with a tuned (2) primary winding. A boosting circuit consisting of a transformer (6) and a magnetic amplifier (7) contributes to the D.C. output. The amount of boost is determined by a measuring bridge (9) connected across the control coil of the amplifier. A stabilitron is one arm of a non-linear bridge (10) acts as a component of comparison.

S.U.68. as 1215203/24-7. E.M.MONGAYIT (19.9.69) Bul 14/18.4.69. Class 21c, 21d2. Int.Cl.: 05f, H 02 j.

1/2 4

19761709

AA0043411



2/2

19761710

Acc. Nr: AP0048823 Abstracting Service: CHEMICAL ABST. 1970 Ref. Code: UR 0366

902 12r New method for synthesizing cyanines based on glutaconaldehyde acetals. Makin, S. M.; Monich, N. V.; Shavrygina, O. A.; Berezhnaya, M. I.; Kheifets, S. A.; Glosk. Inst. Tonkoi Khim. Tekhnol. im. Lomonosova, Moscow, USSR. *Zh. Org. Khim.* 1970, 6(1), 107-12 (Russ). The condensation of 2,6-(RO-substituted)-Δ^3-dihydropyrans with ROH (R is Me or Et in both cases) gave $(RO)_2CHCH_2CH:CHCH(OR)_2$ (I). The condensation of I with $R^1CH:CHOR$ in the presence of $ZnCl_2$ gave $(RO)_2CHCH_2CH:CHCH(OR)CHR^1CH(OR)_2$ (II). Similarly, I reacted with $CHR^1:CR^2CR^3:CHOR$ to give $(RO)_2CHCH_2CH:CHCH(OR)CHR^1CR^2:CR^3CH(OR)_2$ (III). The hydrolysis of II with HCl in the presence of amines gave the following $XCH:CHCH:CHCH:CR^1CH:X^+Cl^-$ (R^1 and X given): H, PhNH; H, 1,2,3,4-tetrahydroquinolino; Me, PhNH; H, PhNMe. Similarly III with HCl gave $XCH:CHCH:CHCH:CR^1CR^2:CR^3CH:X^+Cl^-$ (R^1, R^2, R^3, and X given): H, H, H, PhNH; H, H, H, 1,2,3,4-tetrahydroquinolino; H, H, H, PhNMe; H, H, H, *p*-ClC_6H_4NH; H, H, H, *m*-$F_3CC_6H_4NH$; H, H, H, *p*-MeC_6H_4NH; H, H, H, PhNEt; H, H, Me, PhNH; Me, H, H, 1,2,3,4-tetrahydroquinolino; H, H, Me, 1,2,3,4-tetrahydroquinolino.

CPJR

REEL/FRAME
19800586

1/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EXTRACTION AND PHOTOMETRIC DETERMINATION OF THALLIUM USING VICTORIA BLUE 4R -U-
AUTHOR-(02)-KISH, P.P., MONICH, YE.YE.

COUNTRY OF INFO--USSR

SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 272-6

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CHEMICAL ANALYSIS, THALLIUM, PHOTOMETRIC ANALYSIS, ALKALI METAL/(U)4R BLUE VICTORA CHEMICAL REAGENT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1920 STEP NO--UR/0075/70/025/002/0272/0276

CIRC ACCESSION NO--AP0115734
UNCLASSIFIED

2/2 019 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0115734

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TLCL SUB4 PRIME NEGATIVE FORMS A COLORED 1:1 COMPD. WITH VICTORIA BLUE 4R WHICH IS WELL EXTD. BY C SUB6 H SUB6 AND ITS HOMOLOGS, BY CHCL SUB3, PHBR, ANISOLE, AND PROPYL BENZOATE FROM H SUB2 SO SUB4 SOLNS.; 95-98PERCENT OF THE COMPLEX IS EXTD. BY A SINGLE EXTN. THE MOLAR ABSORPTIVITY OF THE TERNARY COMPLEX (C SUB6 H SUB6) IS 6.2 TIMES 10 PRIME4 AND 8.5 TIMES 10 PRIME4 AT 556 AND 608 NM, RESP. THE EFFECT OF THE AQ. PHASE ACIDITY, NACL CONCN., REAGENT CONCN., RATIO OF PHASE VOL., AND CONTACT TIME ON THE EXTN. OF THE TL COMPLEX WAS STUDIED. MAX. ABSORBANCE IS OBTAINED IN 6-9N H SUB2 SO SUB4, 10 PRIME NEGATIVE4 MU REAGENT CONCN. WITH 40 SEC CONTACT TIME. BEER'S LAW IS OBEYED IN THE RANGE 0.1-10 MUG TL-ML. THE REAGENT WAS USED TO DET. TL IN METALLIC CD, CDS, AND CDSO SUB4. LARGE AMTS. OF ALK. EARTHS, ALKALI METALS, MG(II), ZN(II), DC(II), CU(II), CO(II), MN(II), NI(II), AL(III), CR(III), FE(III), BI(III), PD(II), RH(III), W(VI), PB(II), 150 FOLD AMTS OF SN(IV), 140 FOLD AMTS. GA(III), 75 FOLD AS(III), 50 FOLD IN(III), 25 FOLD SB(III), MO(V), AND V(V) DO NOT INTERFERE IN THE DETN. OF 20 MUG TL; AU(III), SB(V), HG(II), IR(III), PT(IV), I PRIME NEGATIVE, SCN PRIME NEGATIVE DO. THE SENSITIVITY OF THE DETN. IS 0.1 MUG TL-ML, AND THE ERROR IS PLUS OR MINUS 6.2PERCENT. FACILITY: UZHGOROD STATE UNIV., UZHGOROD, USSR.

UNCLASSIFIED

USSR

UDC 621.771.23:621.892.8

MONID, A. G., GRINBERG, D. L., SOBOLENKO, V. P., PIRSOV, P. A., and [illegible] I. A., Cherepovets Metallurgical Plant; Vologda State Pedagogical Institute

"Anticorrosion Protection of Steel Sheets"

Moscow, Metallurg, No 9, Sep 70, pp 33-34

Abstract: A study was made of the effectiveness of the anticorrosion protection of sheet steel using inhibitor oils. The study was prompted by the multitude of complaints lodged by consumers and plants. The latter have been shipped both cold- and hot-rolled steel sheets with corrosion defects. The project called for the development of an anticorrosion protection for hot-rolled, cold-rolled, and galvanized steel using inhibitor oils. Industrial oil-20 was mixed with NG-203 and NG-204 and lubricants PP95/5 in concentrations of 10, 20, and 30%. Samples of 08 kp steel treated with oil containing additives of NG and PP95/5 inhibitors in concentrations of 10-30% passed 15 days of open-air testing. The treated metals were also subjected to accelerated tests which consisted of dipping in water for 8 hours at 40°C followed by holding in air for 16 hours. The cycle was repeated 5 times. Use was made of a point system to assess anticorrosion protection. The outcome of the study was a standardization of anticorrosion lubricants comprising oil-20 with additives of NG-203 and 204

1/2

USSR

MONID, A. G., et al, Metallurg, No 9, Sep 70, pp 33-34

inhibitors, construction of mixer equipment, and development of a coating technology.

2/2

1/2 021 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--THE ATMOSPHERIC BOUNDARY LAYER -U-

AUTHOR--MONIN, A.S.

COUNTRY OF INFO--USSR

SOURCE--IN: ANNUAL REVIEW OF FLUID MECHANICS. VOLUME 2. (ATO 34661 17-12)
PALO ALTO, CALIF., ANNUAI REVIEWS, INC., 1970, P. 225-250. 89 REFS
DATE PUBLISHED-------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--ATMOSPHERIC BOUNDARY LAYER, ATMOSPHERIC MODEL, SURFACE BOUNDARY LAYER, OCEAN SURFACE TEMPERATURE, AIR SEA INTERFACE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3009/0217 STEP NO--US/0000/70/000/000/0225/0250

CIRC ACCESSION NO--AT0139073
UNCLASSIFIED

2/2 021 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AT0139073

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. DEVELOPMENT OF A MODEL OF THE ATMOSPHERIC BOUNDARY LAYER, AND DISCUSSION OF THE STRUCTURE OF THIS LAYER. THE AIR SURFACE INTERACTION IN THE DYNAMIC SUBLAYER OF THE SURFACE LAYER IS CONSIDERED, NOTING THE SPECIFIC CHARACTER OF THE SEA SURFACE AND THE HEAT AND HUMIDITY EXCHANGE. SIMILARITY THEORY IS APPLIED TO AN ANALYSIS OF THE WIND, TEMPERATURE, AND HUMIDITY PROFILES OF THE SURFACE LAYER AND TO AN ANALYSIS OF THE STATISTICAL PARAMETERS OF TURBULENT FLUCTUATIONS OF VELOCITY, TEMPERATURE, AND HUMIDITY IN THE SURFACE LAYER. A SIMILARITY THEORY IS DEVELOPED FOR ANALYZING THE DYNAMICS OF THE ENTIRE ATMOSPHERIC BOUNDARY LAYER. FACILITY: AKADEMIIA NAUK SSSR, INSTITUT OKEANOLOGII, MOSCOW, USSR.

UNCLASSIFIED

1/2 018 UNCLASSIFIED PROCESSING DATE--02OCT70

TITLE--BASIC FEATURES OF THE SEA TURBULENCE -U-

AUTHOR--MONIN, A.S.

COUNTRY OF INFO--USSR

SOURCE--OKEANOLOGIYA, 1970, VOL 10, NR 2, PP 240-248

DATE PUBLISHED--------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--OCEAN DYNAMICS, TURBULENT FLOW

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1990/1284 STEP NO--UR/0213/70/010/002/0240/0248

CIRC ACCESSION NO--AP0109368

UNCLASSIFIED

2/2 018 UNCLASSIFIED PROCESSING DATE--02OCT70

CIRC ACCESSION NO--AP0109368

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A REVIEW OF THE MODERN STATE OF KNOWLEDGE OF THE SEA TURBULENCE IS GIVEN. A NUMBER OF PROBLEMS AWAITING THEIR SOLUTION ARE DETERMINED. GENERATING MECHANISMS OF THE ENERGY SOURCE AND THE PROPERTIES OF SYMMETRY OF THE SMALL SCALE TURBULENCE ARE SYSTEMIZED. THE ROLE OF WAVE MOTIONS IN THE OCEAN DYNAMICS IS DISCUSSED AND METHODS ARE SHOWN FOR SEPARATING WAVE AND TURBULENT MOTIONS. A THREE LAYER STRUCTURE OF THE OCEAN (MIXED INTERNAL AND BOTTOM LAYERS) IS SUGGESTED, THE TURBULENCE REGIME BEING DIFFERENT IN EACH OF THE LAYERS. INTERMITTENCE IS AN IMPORTANT FEATURE OF TURBULENCE IN THE INTERNAL LAYER. THE ROLE OF DENSITY STRATIFICATION IN THE OCEAN AND ITS DYNAMIC EFFECT ON TURBULENCE ARE ANALYZED IN DETAIL. A JOINT ACTION OF THE TURBULENT AND MOLECULAR PROCESSES RESULTS IN THE FORMATION OF A FINE STRUCTURE OF THE OCEANIC FIELDS. FACILITY: INSTITUT OKEANOLOGII IM. P. P. SHIRSHOVA AN SSSR.

UNCLASSIFIED

UNCLASSIFIED

1/2 013 PROCESSING DATE--20NOV70

TITLE--CN CORRELATION OF CLOUDINESS WITH TEMPERATURE AND HUMIDITY -U-

AUTHOR-(03)-VOYOVA, K.V., KOLESNIKOVA, V.N., MONIN, A.S.

COUNTRY OF INFO--USSR

SOURCE--METEOROLOGIYA I GIDROLOGIYA, 1970, NR 5, PP 53-58

DATE PUBLISHED--------70

SUBJECT AREAS--ATMOSPHERIC SCIENCES

TOPIC TAGS--CLIMATE, ATMOSPHERIC TEMPERATURE, ATMOSPHERIC HUMIDITY, ATMOSPHERIC CLOUD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3005/0090 STEP NO--UR/0050/70/000/005/0053/0058

CIRC ACCESSION NO--AP0132383

UNCLASSIFIED

2/2 013

CIRC ACCESSION NO--AP0132383

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IMPORTANCE OF STUDYING CLIMATE CORRELATIONS IS EXPLAINED. INFORMATION ON CORRELATION OF CLOUDINESS WITH TEMPERATURE AND HUMIDITY FOR DIFFERENT CLIMATIC REGIONS OF THE SOVIET UNION IS GIVEN. THE CONCLUSION IS MADE ON THE NECESSITY OF ACCOUNTING SUCH CORRELATIONS WHEN COMPUTING NON LINEAR CLIMATE CHARACTERISTICS. FACILITY: INSTITUT OKEANOLOGII AN SSSR.

APPROVED FOR RELEASE: 07/20/2001 CIA-RDP86-00513R002202110018-4"

1/3 010 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--DENSITY STRATIFICATION IN THE OCEAN -U-

AUTHOR-(03)-MONIN, A.S., NEYMAN, V.G., FILYUSHKIN, B.N.

COUNTRY OF INFO--USSR, PACIFIC OCEAN

SOURCE--MOSCOW, DOKLADY AKADEMII NAUK SSSR, VOL 191, NO 6, 1970, PP 1277-1279

DATE PUBLISHED-------70

SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--OCEAN DEPTH, FLUID DENSITY MEASUREMENT, OCEAN TEMPERATURE, OCEAN BOTTOM, SALINITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/1158 STEP NO--UR/0020/70/191/006/1277/1279

CIRC ACCESSION NO--AT0133181

UNCLASSIFIED

2/3 010 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0133181

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN ANALYSIS OF N(Z) STRATIFICATION CURVES WAS MADE (N IS THE FREQUENCY OF INERTIAL OSCILLATIONS, Z IS DEPTH) USING DATA FROM 40 HYDROLOGICAL STATIONS IN THE NORTHERN HALF OF THE PACIFIC OCEAN. THE N(Z) CURVES FOR THE UPPER LAYER OF THE OCEAN HAVE A COMPLEX AND VARIED SHAPE, OFTEN WITH SEVERAL EXTREMA, BUT IN THE INTERNAL LAYERS OF THE OCENA, AT DEPTHS OF 500-5,000 M, THEY ARE WELL DESCRIBED BY A SIMPLE LAY OF DISTANCE FROM THE SURFACE N(Z) EQUALS W EQUALS CONST, (3) THAT IS, THE FREQUENCY N IS INVERSELY PROPORTIONAL TO DEPTH Z. THE LAW GIVEN ABOVE IS UNIVERSAL IN THE SENCE THAT THE CONSTANT W IS APPROXIMATELY THE SAME FOR DIFFERENT STATIONS (IT IS W CONGRUENT M-SEC). FIGURE 2 IN THE TEXT SHOWS N(Z) VALUES FOR THE 40 STATIONS. IN THE NEAR BOTTOM LAYER OF THE OCEAN BELOW THE REGION OF APPLICABILITY OF THE ABOVE LAW THE N(Z) CURVES LOSE THEIR UNIVERSAL SHAPE. SOMETIMES N DECREASES THERE WITH DEPTH MORE RAPIDLY THAN INDICATED BY THE LAW (FOR EXAMPLE, IN STAGNANT BASINS WITH BOTTOM CONVECTION CREATED BY A GEOTHERMAL HEAT FLUX) OR SOMETIMES MORE SLOWLY (FOR EXAMPLE, WHEN THERE ARE COLD WATERS OF ANTARCTIC ORGIN IN THE NEAR BOTTOM LAYER). INSTEAD THE DEPTH Z ONE CAN USE HEIGHT ABOVE THE BOTTOM H EQUALS H-Z (H IS TOTAL OCEAN DEPTH). IN THE CASE OF STABLE STRATIFICATION FOR LARGE H TYPICAL SCALES OF TURBULENT INHOMOGENEITIES ARE OF THE ORDER OF L EQUALS U PRIME3 (GM-P) PRIME NEGATIVE1, WHERE M EQUALS BAR P PRIME W PRIME IS THE VERTICAL TURBULENT FLUX OF MASS (W IS THE VERTICAL VELOCITY, THE PRIME DENOTES FLUCTUATIONS, THE LINE DENOTES STATISTICAL AVERAGING).

UNCLASSIFIED

3/3 010 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AT0133181

ABSTRACT/EXTRACT--THE VELOCITY GRADIENT SINULET U-SINULET H FOR LARGE H ASYMPTOTICALLY APPROACHES THE ORDER OF U-L FOR LARGE H, BUT THE TEMPERATURE AND SALINITY GRADIENTS (DETERMINING THE DENSITY GRADIENT) MUST INCREASE WITH HEIGHT AS 1-ALPHA (H), WHERE ALPHS IS THE RATIO OF THE EXCHANGE COEFFICIENTS FOR HEAT (AND SALT) AND FOR MOMENTUM. THE TRANSPORT OF INHOMOGENEITIES OF THE DIMENSION L WITH THE VELOCITY H SINULET U-SINULET H CREATES A LOCAL FREQUENCY H SINULET U-SINULET H-L. THE RESONANCE CONDITION, ACCORDING TO LONG, IS N EQUALS H SINULET U-SINULET H OVER L (EQUALS AH; A EQUALS 1 OVER L SINULTE U OVER SINULET H SIMILAR TO U OVER L PRIME2), ENSURING THE PROPAGATION OF INTERNAL WAVES IN THE ENTIRE THICKNESS OF THE OCEAN (THIS CONDITION CORRESPONDS TO D (H) SIMILAR TO H PRIME NEGATIVE2). CHECKING OF THE LAW OF DISTANCE FROM THE BOTTOM N EQUALS AH REVEALED THAT IT IS SATISFACTORILY SATISFIED FOR MOST OF THE MENTIONED HYDROLOGICAL STATIONS AT DEPTHS BELOW 1-2 KM. THE RESONANCE CONDITION IS NOT UNIVERSAL: THE CONSTANT A FOR DIFFERENT STATIONS IS DIFFERENT (IT VARIES IN THE RANGE (1-9) TIMES 10 PRIME NEGATIVE7 M PRIME NEGATIVE1 TIMES SEC PRIME NEGATIVE1). BY COMBINING LAWS (3) AND (5) ONE OBTAINS A EQUALS W-Z(H-Z). THIS VALUE IS ALMOST CONSTANT (THERE IS LITTLE DEPENDENCE ON Z) IN THE LAYER NEAR THE MAXIMUM OF THE FUNCTION Z(H-Z). THUS, IN THE MIDDLE LAYERS OF OCEAN BOTH (3) AND (5) MAY BE APPLICABLE. FACILITY: INSTITUTE OF OCEANOLOGY.

UNCLASSIFIED

MONIN, Yu. G.

50: JPRS 59985
7 SEP 73

USC 621.396.628:523.164

PARAMETERS OF THE RT-22 KRAO RADIOTELESCOPE ANTENNA AT WAVELENGTHS OF 3 AND 1.35 CENTIMETERS

[Article by [illegible] M.I. Grigor'yeva, V.A. Efanov, L.R. Kogan, V.I. Kostenko, Yu.I. Matveyenko, I.S. Nikolayev, and Yu.G. Monin, of the Institute of Space Research of the USSR Academy of Sciences; Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy - Radiofizika, Russian, Vol 16, No 5, 1973, submitted 3 July 1972, pp 675-679]

A two-reflector antenna system in the 3-centimeter wave band was developed in 1960 in order to improve the KRAO [Crimean Astrophysical Observatory] RT-22 radiotelescope[1] and, to provide maximum sensitivity, it was tuned and its basic electrical parameters at 3.34 centimeters were determined. In developing the illuminating system of the KrAO's RT-22, the operating experience of the FIAN[2] [Physics Institute imeni P. N. Lebedev of the USSR Academy of Sciences] RT-22 was considered and certain changes in its system parameters were introduced: the diameter of the secondary reflector 2a = 1,500 millimeters, and the system's secondary focus was chosen as 200 millimeters from the vertex of the paraboloid with a view to insuring minimal losses in the millimeter waveband. These circumstances limited the longitudinal dimension of the irradiator in the 3-centimeter wave band. The two-reflector irradiator has a comparatively small longitudinal dimension, which is why it was chosen. Its scheme was tried out on an analogical antenna, the FIAN RT-22[2], and gave satisfactory results.

The radiation patterns of the two-reflector irradiator in the E and H planes and the cross-polarization characteristic at the 3.34 centimeter wavelength are shown in figure 1. The irradiator's dispersion coefficient, computed per the radiation pattern, does not exceed $\beta = 0.2$.

Preliminary tuning of the antenna was done on the sun, final tuning on radio sources of small angular size. A radiometer with a parametric amplifier was used in tuning at the

USSR UDC 669.295.5.018.29:669.018.2

NEYMARK, B. YE., KORYTINA, S. F., MONINA, E. F., and MERKUL'EV, A. N.

"Experimental Study of the Physical Properties of Alloys Based on Type VT-5 and VF8 Titanium"

V. sb. Teplofiz. Svoystva tverd. veshchestv. M. Nauka (Thermophysical Properties of Solid Materials -- Collection of Works), Moscow, "Nauka," 1971, pp 71-80 (from Referatinvyy Zhurnal -- Metallurgiya, No 6, Jun 71, Abstract No 61663)

Translation of Abstract: Experimental studies were carried out on the physical properties of two Ti alloys: VT-5 and VT-8. The properties studied were: normal modulus of elasticity (by dynamic method), internal friction by attenuation of free vibrations of the samples, heat conductivity, electrical resistance, Lorentz Number (by the method of Jaeger-Delsael horst), linear coefficient of expansion (in a vacuum dilatometer), density and heat capacity in the temperature range of 20-800°. (Two illustrations, one table, 5 bibliographic entries).

USSR UDC [621.357.035.4:621.79.027]:669.14(088.8)

ZUBATOVA, L. S., MOROZ, I. I., and MONINA, M. A., Experimental Scientific Research Institute of Metal-Cutting Machines

"Electrolyte for Electro-Abrasive Grinding of Steels, Heat-Resistant, and Magnetic Alloys"

USSR Author's Certificate No 329246, Filed 2 Mar 70, Published 20 Mar 72 (from Referativnyy Zhurnal -- Khimiya, Svodnyy Tom, No 23(II), 1972, Abstract No 23L236P by A. D. Davydov)

Translation: The Na_2CO_3electrolyte for electro-abrasive frinding of steels, heat-resistant, and magnetic alloys differs from other electrolyte by the presence of ammonium bifluoride. The presence of the latter inhibits the formation of sludge in the electrolyte and increases the finishing quality of the treated surface. The electrolyte components are taken in the following amounts (%); Na_2CO_3 12-14, $NH_4F \cdot HF$ 0.5-1.0, and water.

1/1

USSR

UDC: 621.9.047

VOLKOV, Yu. S., MONINA, M. A., MOROZ, I. I., Moscow

"Concerning the Question of Titanium Machinability"

Kishinev, Elektronnaya Obrabotka Materialov, No 3(45), 1972, pp 11-14

Abstract: Some particulars in the electrochemical machining of titanium were studied by a comprehensive method including theoretical analysis of the physical and mechanical properties of metal and solution and experimental verification of the theoretical results. The theoretical studies showed that the fluorine anion F^- has the greatest activating capacity of the halogens, followed by I^-, Br^-, and Cl^-, the most promising being I^- and Br^-. It is concluded from the results of the experimental studies that with respect to productivity, stability of electrochemical machining, and surface quality of finished parts, the investigated ions can be arranged in the following conditional series: $ClO_4^- > Br^- > I^- > F^- > Cl^-$.

1/1

UDC 539.4.42

USSR

KAKHOVSKIY, N. I., YUSHCHENKO, K. A., MON'KO, G. G., SOLOKHA, A. M., and KVASNEVSKIY, O. G., Kiev, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences UkrSSR

"Fundamentals of Alloying Steel and Weld Metal for Structures Operating Continuously at Low Temperatures"

Kiev, Problemy Prochnosti, No 8, Aug 70, pp 119-125

Abstract: Results are presented of a series of investigations for determining the mechanical properties of Cr-Ni-N and Cr-Ni-Mn-N steels for the purpose of establishing optimal quantities of alloying elements for obtaining austenite-stable steels under conditions of long-duration operation at low temperatures (to - 100°C). The results show that a 15% Ni content in Cr-Ni-N and Cr-Ni-Mn-N steels is sufficient for complete austenite stability. The effect of alloying metals on the mechanical properties of steels and weld metals is shown in graphs.

1/1

USSR

UDC 539.4.015

YUSHCHENKO, K. A., STARTSEV, V. I., IL'ICHEV, V. Ya., MON'KO, G. G., LIVSHITS, L. A., KAPLAN, L. I., STEPANOV, G. A., and GRUDZINSKIY, B. V., Kiev, Institute of Electric Welding imeni Ye. O. Paton, Academy of Sciences, UkrSSR

"Low-Temperature Properties of Austenitic Steels"

Kiev, Problemy Prochnosti, No 10, Oct 70, pp 113-115

Abstract: A study was made of the mechanical properties of some steels of industrial melts destined for use at temperatures down to -269°C. A low carbon content was characteristic for the investigated steels, and some were also alloyed with nitrogen. The 21-16-8-N type stable-austenitic steel had the best strength properties and smallest reduction in plasticity and toughness at reduced temperatures.

USSR UDC 539.411.5

YUSHCHENKO, K. A., KAKHOVSKIY, N. I., KVASNEVSKIY, O. G., MON'KO, G. G., SOLOKHA, A. M., (Kiev), Institute of Electric Welding imeni Ye. O. Paton

"The Influence of Second-Phase Separations on the Embrittlement of High-Alloy Austenitic Steels at Low Temperatures"

Kiev, Problemy Prochnosti, No 8, 1970, pp 99-103

Abstract: In the article are presented results of research carried out with the aim of ascertaining the influence of nitrogen alloying upon the tendency of some austenitic steels, used in cryogenics, toward brittle destruction. 7 figures, 1 table, 7 bibliographic entries.

1/1

USSR UDC 621.774:539.4.014.3

MONOSHKOV, A. N., LUPIN, V. A., KUTEPOVA, V. I., NIKULIN, Yu. N., Urals Scientific Research Institute for the Pipe Industry, Chelyabinsk

"Estimation of Limiting Pressure in Wrapped Pipes with Axial Loads"

Moscow, Stroitel'stvo Truboprovodov, No 2, Feb. 1973, pp 10-12.

Abstract: Wrapping of large diameter pipes significantly increases their resistance to large ruptures and in many cases allows a reduction in metal consumption. This article presents a method for estimation of the maximum pressure in wrapped pipes loaded with both internal pressure and axial forces which change in direct proportion to the pressure. Calculations are performed for thin wall pipes, the wrapping of which accepts only circumferential forces. The axes of the primary stresses and deformations are assumed to coincide with the geometric axes of the pipe. Analysis shows that as the axial compressive forces increase, the effectiveness of wrapping increases significantly.

USSR

UDC 621.791.053:620.172.24:620.172.25

BAKSH, O. A., MONOSHKOV, A. N., and ANISIMOV, Yu. I., Chelyabinsk, Chelyabinsk Polytechnical Institute

"Low-Temperature Effect on the Efficiency of Welded Joints Under Static Tension"

Kiev, Problemy Prochnosti, No 8, Aug 70, pp 74-79

Abstract: An outline is given for a procedure for the theoretical evaluation of the ductility and brittleness of welded joints of compact cross section with a smooth interlayer, which are subjected to static tension. Mechanical inhomogeneity and temperature (up to 78° K) are taken into account. The plastic properties and type of failure, in relation to service temperature, were investigated under certain assumptions. Tests samples were made of 45Kh and St10 steels, welded by friction. Tests were conducted on an UMM-5 test machine at temperatures of -20, -78, -100, -150, -170, and -196°C, with a deformation rate of 1.1×10^{-3} sec. The results show that with decreasing T and with a reduction in the relative thickness of the interlayer X, the yield point and short-time strength increase.

1/2

USSR

BAKSH, O. A., et al, Problemy Prochnosti, No 8, Aug 70, pp 74-79

A transfer of fracture from the soft interlayer toward the hard metal was observed in the entire temperature range and at sufficiently small values of χ. The range of interlayers with brittle fracture widened with decreasing temperature, attaining $\chi = 0.9$ at 78° K. The test procedure is described briefly.

1/1

USSR

UDC 620.178.2

BAKSHI, O. A., KUKIN, A. G., and MONOSHKOV, A. N., Chelyabinsk, Chelyabinsk Polytechnical Institute

"A Method of Evaluating the Reliability of Materials and Welded Joints, Operating at Low Temperatures"

Kiev, Problemy Prochnosti, No 8, Aug 70, pp 70-73

Abstract: A method for evaluating the resistance of materials and welded joints to brittle fracture is presented. The method is based on tensometric recording of the process of impact flexure of samples, with subsequent processing of the stress-time oscillogram, for determining the energy of crack formation and propagation, the average speed of crack development, the impact strength, and the breaking point of a sample. A specially designed sample with three notches was used for comparative evaluation of the properties of characteristic sections of materials and welded joints. A procedure is outlined for determining the elastic energy of a sample-machine system for any time instant of sample deformation, right up to the formation of a critical crack in it. Oscillograms of impact flexure of standard and notched samples with a soft interlayer are presented.

1/1

USSR

UDC 620.178.2

BAKSHI, O. A., KUKIN, A. G., and MONOSHKOV, A. N., Chelyabinsk Polytechnical Institute

"Effect of the Mechanical Inhomogeneity of Welded Joints on Their Resistivity to Brittle Failures Under Low-Temperature Conditions"

Kiev, Problemy Prochnosti, No 10, Oct 70, pp 106-108

Abstract: The effect of the mechanical inhomogeneity of welded joints at low temperatures on the indices of the specific energy of crack formation and propagation, impact toughness, and breaking force was investigated. It is demonstrated that a mechanical inhomogeneity significantly affects the breaking parameters to be determined. The incorrectness of estimating mechanical inhomogeneities of joints from results of impact bending tests of standard specimens is substantiated.

1/2 027 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--METHOD OF DETERMINING BRINELL HARDNESS NUMBERS BY SHOCK LOADING -U-

AUTHOR-(02)-MONOSHKOV, A.N., VLASOV, R.A.

COUNTRY OF INFO--USSR

SOURCE--ZAVOD. LAB., 1970, 36, (2), 225-227

DATE PUBLISHED-------70

SUBJECT AREAS--MATERIALS, METHODS AND EQUIPMENT

TOPIC TAGS--HARDNESS, IMPACT STRESS, METALLURGIC TESTING MACHINE, CARBON STEEL

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/0304 STEP NO--UR/0032/70/036/002/0225/0227

CIRC ACCESSION NO--AP0129536

UNCLASSIFIED

UNCLASSIFIED

2/2 027 PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129536

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN IMPROVED METHOD OF DETERMINING THE BRINELL HARDNESS NUMBERS OF METALS AND OTHER MATERIALS IN A SHOCK LOADING PROCESS IS DESCRIBED. THIS METHOD IS BASED ON THE DROZD TECHNIQUE (NON DESTRUCTIVE DETERMINATION OF THE PROPERTIES OF METALS, 'METALLURGIYA', 1965) AND RELIES ON THE RELATIONSHIP BETWEEN THE DEPTH AND DIA. OF THE IMPRESSION MADE IN THE HARDNESS TESTER. EXAMPLES ARE GIVEN FOR SEVERAL C AND ALLOY STEELS.

UNCLASSIFIED

USSR

MONOSOV, Ya. A., ZUBKOV, V. I., Institute of Radio Engineering and Electronics, Academy of Sciences of the USSR, Moscow

"On the Mechanism of Limitation of the Amplitude of Spin Waves in a Strongly Energized Ferromagnetic"

Leningrad, Fizika Tverdogo Tela, Vol 13, No 9, Sep 71, pp 2773-2775

Abstract: The authors take issue with some of the basic assumptions of a previous paper -- "New Mechanism of Limitation of the Amplitude of Spin Waves in the Case of Parallel Pumping", V. Ye. Zakharov et al., Fizika Tverdogo Tela, Vol 11, 1969, p 2047. In particular, the authors contend that the stability of a spin wave group was erroneously defined. Specifically, the error consisted in appending the hypothesis of "external" stability to the Lyapunov stability condition. This assumption is refuted, thus negating the validity of the proposed mechanism in the steady state. The action of this mechanism of spin wave amplitude limitation in the case of unstable nonlinear resonance has been previously studied. One figure, bibliography of eight titles.

1/1

USSR

UDC: 621.384.639

ABROSIMOV, N. K., ALKHAZOV, D. G., DMITRIYEV, S. P., YELISEYEV, V. A., KAMINKER, D. M., KULIKOV, A. V., MIRONOV, Yu. T., MIKHEYEV, G. F., RYABOV, G. A., CHERNOV, N. N., SHALMANOV, V. I., KOMAR, Ye. G., MALYSHEV, I. F., MONOSZON, I. A., PEREGUD, V. I., ROZHDESTVENSKIY, B. V., ROYFE, I. M., SEREDENKO, Ye. V., Physicotechnical Institute imeni A. F. Ioffe, Academy of Sciences of the USSR, Leningrad, Scientific Research Institute of Electrophysical Equipment imeni D. V. Yefremov, Leningrad

"The Leningrad Synchrocyclotron for a Proton Energy of 1 GeV"

Leningrad, Zhurnal Tekhnicheskoy Fiziki, Vol 41, No 9, Sep 71, pp 1769-1775

Abstract: The paper describes the synchrocyclotron at the Physicotechnical Institute imeni A. F. Ioffe of the Academy of Sciences of the USSR for a proton energy of 1 GeV. Proton beam parameters as well as the characteristics of the main systems of the accelerator are presented. The beam channels are described, and the layout of the accelerator building is given. The installation has been in successful operation since 1970. Three tables, two figures, bibliography of twelve titles.

1/1

M

13

UDC 621.039.623

USSR

ALEKSIN, V. F., BIRYUKOV, O. V., GEORGIYEVSKIY, A. V., KIVAYEVSKIY, L. KH., KOMAR, YE. G., LOGINOV, A. S., MALYSHEV, I. F., MONOSZON, N. A., POPKOVICH, A. V., ROZHDESTVENSKIY, B. V., SAKSAGANSKIY, G. L., SINEL'NIKOV, the late K. D., SOKOLOV, YU. A., SUPRUNENKO, V. A., TOLOK, V. T., CHURAKOV, G. F., and SHABEL'NIKOV, L. A.

"The Experimental Thermonuclear Device 'Uragan'"

Moscow, Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 22-28

Abstract: An urgent task of stellarator research is a definitive elucidation of the reasons for anomalous diffusion in a stellarator, as well as the effect of the shear and magnetic well on the confinement of a hot and dense plasma. These questions will be studied on the "Uragan" stellarator. Construction of the "Uragan" stellarator was begun at the suggestion of I. V. KURCHATOV and completed in 1967. The physical substantiation and technical assignment of developing and constructing the complex were developed at the Physicotechnical

1/3

USSR

ALEKSIN, V. F., et al., Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 22-28

Institute of the Academy of Sciences Ukrainian SSR under the direction of K. D. SINEL'NIKOV, who took an active part in the solution of theoretical and technical questions. Organizations taking part in the development of the project and the construction of the complex included the Scientific Research Institute of Electrophysical Equipment imeni D. V. Yefremov, the Elektrosila Electrical Engineering Combine, the Khar'kov Polytechnic Institute imeni V. I. Lenin, the Electromechanical Plant and NIIElektroapparat [Scientific Research Institute of Electrical Equipment] in Khar'kov. A considerable amount of work on the development, manufacture, and adjustment of the systems and components of the "Uragan" was done at the Physicotechnical Institute of the Academy of Sciences Ukrainian SSR.

The principal feature of the "Uragan" is high shear (of the order of 0.02 and 0.1) at a high level of magnetic field strength

2/3

USSR

ALEKSIN, V. F., et al., Atomnaya Energiya, Vol 28, No 1, Jan 70, pp 22-28

H_o (35 and 10 koe respectively). The stellarator is in the shape of a racetrack and uses a high-shear triplex helical field. The vacuum chamber of the trap consists of two semi-tori with an average radius R = 1100 mm and two rectilinear sectors, each 1725 mm long. The internal diameter of the chamber is 200 mm. On the outside of the chamber on the toroidal sectors are two helical windings and longitudinal magnetic field coils, distributed evenly along the device. The maximum strength of the magnetic field is 10 koe under steady-state conditions and 35 koe under pulsed conditions. Three windings are used; viz., longitudinal magnetic field, helical, and transverse magnetic field. All metallic elements are made of low-magnet steel 1Kh18N9T. The toroidal sectors of the vacuum chamber and part of the rectilinear sectors are made of stainless nonmagnetic alloy EP-125. The article gives a detailed description of the windings, cooling system, electric power supply system, vacuum system, and plasma diagnostic and heating system.

3/3

M

24

USSR

ADO, YU. M., ZHURAVLEV, A. A., LOGUNOV, A. A., MYAE, E. A., NAUMOV, A. A., PISAREVSKIY, V. YE., ROGOZINSKIY, V. G., TUSHASKRAMISHVILI, K. Z., SHUKEYLO, I. A., BOYKO, S. N., KOMAR, YE. G., MALYSHEV, I. F., MOZIN, I. V., MONOSZON, N. A., MOZALEVSKIY, I. A., SPEVAKOVA, F. M., STOLOV, A. M., TITOV, V. A., VODOP'YANOV, F. A., KUZ'MIN, A. A., KUZ'MIN, V. F., MINTS, A. L., RUBCHINSKIY, S. M., UVAROV, V. A., GUTNER, B. M., ZALMANZON, V. B., PROKOP'YEV, A. I., and TEMKIN, A. S.

"Some Results of the Overall Adjustment and Start-up of the 70-Gev Proton Synchrotron of the Institute of High-energy Physics"

Moscow, Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

Abstract: The physical part of the plan for the 70-Gev proton synchrotron was executed by the Institute of Theoretical and Experimental Physics. The electromagnet with feed system, the vacuum chamber, and the injection devices were developed at the Scientific Research Institute of Electrophysical Apparatus imeni D. V. Yefremov. The radioelectronic systems for acceleration process control and generation of

1/4

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

the accelerating field, as well as the radiotechnical measurement and beam observation systems, were developed by the Radiotechnical Institute of the Academy of Sciences USSR. "Tyazhpromelektroproyekt" [State Planning Institute for the Planning of Electrical Equipment for Heavy Industry] designed the general-purpose electrotechnical devices and cable connections. The plan for the construction complex of the accelerator was developed by the State All-Union Planning Institute. The construction of the accelerator was under the general supervision of the State Committee for the Use of Atomic Energy USSR. The adjustment of individual systems and the overall adjustment and start-up of the accelerator were carried out by the Institute of High-energy Physics and the developers of the accelerator systems. The basic beam work was done by the Institute of High-energy Physics with the participation of the Radiotechnical Institute. The construction of the accelerator was begun in 1960, and all the basic construction and assembly work was completed at the beginning of

2/4

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

1967. At the initial stage of construction, before the formation of the Institute of High-energy Physics in 1963, the work was coordinated by the Institute of Theoretical and Experimental Physics. The linear accelerator injector was started on 28 July 1967, the operation of the individual systems was adjusted by September 1967, and the physical start-up of the accelerator was accomplished on 14 October.

A description is given of the work done to adjust the annular electromagnet (including the electromagnet cooling and feed systems), the injection system (consisting of matching channel and injection device), the vacuum system, the radioelectronic system (including the accelerating field generation system, the acceleration process control system, and the radiotechnical measurement system), and the beam observation system (which provides for beam observation in the first revolution and during acceleration). In the physical start-up of the accelerator the main efforts were directed towards obtaining accelerated protons of the planned energy, and the problem of obtaining high

3/4

USSR

ADO, YU. M., et al., Atomnaya Energiya, Vol 28, No 2, Feb 70, pp 132-138

intensity of the accelerated proton was not raised.

The article gives a listing of the principal parameters of the proton synchrotron, as well as a schedule of the individual stages of the start-up of the accelerator. Photographs include a view of the part of the ring hall in the beam injection area and a general view of the hall of ignitron rectifiers.

4/4

MONOSZON, N. A.

USSR 57409

13 November 1972

SOME CALCULATED AND EXPERIMENTAL DATA CONCERNING THE DEVELOPMENT OF SYNCHROTRONS WITH A STEADY-STATE FIELD IN THE RANGE OF 25-300 GIGAELECTRON-VOLTS

[Preprint of article by N. I. Doynikov, N. A. Monoszon, B. V. Rozhdestvenskiy, Yu. P. Silkov (deceased), A. M. Stolov, and D. V. Tronchev, Scientific Research Institute of Electrophysical Apparatus imeni D. V. Yefremov. State Committee for the Use of Atomic Energy of the USSR, Leningrad, Nauchnyye i eksperimental'nyye raboty po issledovaniyu elektronnykh sinkhrotronov s postoyannym polem na energiyu 25--300 Gev, Russian, 1971]

Calculation data and considerations are given on the reconstruction of synchrotrons with rotating superconducting electromagnets with steady-state (fixed) fields, as well as the results of experimental investigations of models of the elements of the accelerators.

In reference [1, 2] the possibility of the development of proton synchrotrons on the basis of superconducting electromagnets with a steady-state field was considered, with these devices rotating synchronously relative to an equilibrium orbit. Such a system makes it possible to change the average field in the orbit when the superconducting windings are supplied by direct current. In this case it is no longer necessary to have a powerful excitation system for the magnetic field, losses of alternating current in the superconductors are excluded, the design of the windings and cryostats is simplified, heat inputs are decreased, and the capacity of the refrigerators and liquifiers is reduced. Among the number of the most important problems to be solved in the development of such synchrotrons is provision for stability of motion of the particles near the equilibrium orbits of double curvature and precise synchrotron rotation of the superconducting electromagnets.

Some problems of the dynamics of the particles are considered below, and also problems associated with the accomplishment of synchronous rotation of the electromagnets. On the basis of this consideration, two variations of the basic parameters of possible accelerators for an energy of tens or hundreds of gigaelectron-volts are given.

[I - USSR - K]

USSR

UDC 632.95

GOLYSHIN, I. M., MONOVA, V. I., KLIMKINA, I. P., IVANOVA, S. N., MEL'NIKOV, N. N., KHUSNETDINOVA, F. I., SHVETSOV-SHILOVSKIY, N. I., SAMYSHKINA, M. A., and BOLONINA, YE. I.

"An Antiseptic"

USSR Author's Certificate No 355008, Div B, filed 11 Jun 71, published 13 Nov 72 (from RZh-Khimiya, No 14, 25 Jul 73, abstract No 14N616 P by T. A. Belyayeva)

Translation: It is proposed that 4,5,6-trichlorobenzoxazolinone-2 (I) be used as an antiseptic for nonmetallic materials, and at the same time is a bactericide, which considerably extends the sphere of its action. Compound I is used in a 2-2.5% concentration to control mold, wood-rotting and wood-discoloring fungi.

1/1

USSR

UDC 632.95

6

VOLODKOVICH, S. D., ANDREYEVA, YE. I., GOLYSHIN, N. M., KONOVA, V. I., KAPLAN, G. I., PRONCHENKO, T. S., USMANOV, M. G., ABELENTSEV, V. I., DVOYCHENKOVA, E. A., and SKAZKINA, T. P.

"Bromtan"

V sb. Khim. sredstva zashchity rast. (Chemical Plant Protectants -- collection of works), vyp 1, Moscow, 1970, pp 116-129 (from RZh-Khimiya, No 13, 10 Jul 72, Abstract No 13N501 by T. A. Belyayeva)

Translation: The preparation bromtan ($BrCCl_2CHBrCH_2CH_2CH_2Cl$) (I) is being tested as a soil fungicide and antiseptic for nonmetallic materials. I is as effective as carbathion in the control of melon fusarial wilt. I in a concentration of 0.8 percent is equivalent to DNOC in an 0.6 percent concentration with respect to hibernating forms of the causative agent of apple scab and brown spot. I is active in the control of cotton root rot and wilt at a consumption rate of 100-100 kg/ha.

1/1

1/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--IONIZATION OF MOTT EXCITONS IN PARALLEL ELECTRIC AND STRONG MAGNETIC FIELDS -U-

AUTHOR-(02)-MONOZON, B.S., PEVZNER, M.B.

COUNTRY OF INFO--USSR

SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(3), 466-71

DATE PUBLISHED-------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--IONIZATION, EXCITON, ELECTRIC FIELD, STRONG MAGNETIC FIELD

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/1715 STEP NO--UR/0449/70/004/003/0466/0471

CIRC ACCESSION NO--AP0120427

UNCLASSIFIED

2/2 026 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0120427

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE IS STUDIED OF PARALLEL ELEC. AND MAGNETIC FIELDS ON THE LOWEST COULOMB STATE, N EQUALS 0. A STRONG MAGNETIC FIELD IS CONSIDERED; I.E., THE WHOLE COULOMB SERIES (INCLUDING N EQUALS 0) SHOULD BE NARROWER THAN THE INTERVAL BETWEEN NEIGHBORING LANDAU LEVELS; THE ELEC. FIELD IS LOW IN COMPARISON WITH THE COULOMB FIELD. THE WAVE FUNCTION IS CALCD. AND THE SHIFT IN THE 2ND APPROXN. OF THE PERTURBATION THEORY, AS WELL AS THE PROBABILITY OF IONIZATION OF THE COULOMB STATES (N EQUALS 0, 1, 2,) IN THE ELEC. FIELD, IS GIVEN. THE INFLUENCE IS DISCUSSED OF THE ELEC. FIELD ON THE INTENSITY, SHIFT, AND WIDTH OF EXCITON PEAKS IN THE MAGNETOOPTICAL ABSORPTION SPECTRUM. THE FORMULAS DERIVED MAKE IT POSSIBLE TO TAKE INTO ACCOUNT A WEAK SCREENING EFFECT OF IMPURITIES ON THE EXCITON LEVELS. FACILITY: LENINGRAD. GOS. UNIV. IM. ZHDANOVA, LENINGRAD, USSR.

UNCLASSIFIED

1/2 014 UNCLASSIFIED PROCESSING DATE--11DEC70

TITLE--REGIONALIZATION OF HERBICIDES WITH CONSIDERATION OF BOTANICAL COMPOSITION OF WEEDS -U-

AUTHOR--MONASTYLAYTE, YA.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, KHIMIYA V SEL'SKOM KHOZYAYSTVE, VOL 8, NR 4 (78), APR 70, PP 51-55

DATE PUBLISHED----APR70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--HERBICIDE, PLANT PHYSIOLOGY, CLIMATIC CONDITION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY FICHE NO----FD70/605014/C10 STEP NO--UR/0394/70/008/004/0051/0055

CIRC ACCESSION NO--AP0140480

UNCLASSIFIED

2/2 014 UNCLASSIFIED PROCESSING DATE--11DEC70

CIRC ACCESSION NO--AP0140480

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE AUTHOR STUDIED THE SENSITIVITY OF WEEDS TOWARD HERBICIDES UNDER DIFFERENT SOIL CLIMATE CONDITIONS IN ORDER TO DISTRIBUTE VARIOUS AGENTS BY REGIONS. IT WAS DETERMINED THAT BOTANICAL COMPOSITION OF THE WEEDS HAS TO BE TAKEN INTO CONSIDERATION WITHIN INDIVIDUAL SOIL CLIMATE REGIONS. EXAMPLES OF THE DIFFERENT RESPONSE OF WEEDS TO VARIOUS TYPES OF HERBICIDES (2,4-D, 2M-4KL, DNOK) ARE REPORTED AND RECOMMENDATIONS ARE MADE FOR THE LITHUANIAN REPUBLIC. IT WAS FOUND THAT THE HERBICIDES SHOULD BE SPRAYED EARLY IN THE SPRING. FACILITY: VASESK BRANCH OF THE LITHUANIAN SCIENTIFIC RESEARCH INSTITUTE OF AGRICULTURE.

UNCLASSIFIED

USSR

UDC: 632.954 + 632.51

MONSTVILAYTE, YA., Vakesk Branch of the Lithuanian Scientific Research Institute of Agriculture

"Regionalization of Herbicides With Consideration of Botanical Composition of Weeds"

Moscow, Khimiya v Sel'skom Khozyaystve, Vol 8, No 4 (78), Apr 70, pp 51-55

Abstract: The author studied the sensitivity of weeds towards herbicides under different soil-climate conditions in order to distribute various agents by regions. It was determined that botanical composition of the weeds has to be taken into consideration within individual soil-climate regions. Examples of the different response of weeds to various types of herbicides (2,4-D, 2M-4KL, DNOK) are reported and recommendations are made for the Lithuanian Republic. It was found that the herbicides should be sprayed early in the spring.

1/1

USSR UDC 669.71.053.4

RAYVICH, Sh. B., MONTVID, A. E.

"Algorithm for Optimization of Evaporation Battery"

Tr. Vses. N-i. i Proyektn. In-ta. Alyumin., Magn. i Elektrodn. Prom-sti [Works of All-Union Scientific Research and Planning Institute of the Aluminum, Magnesium and Electrode Industry], 1970, No. 70, pp 153-156. (Translated from Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 G148 by the authors).

Translation: A method is suggested for optimization of evaporation batteries according to a combination of characteristics. The criterion used is the cost of a unit volume of water. A general plan of the sequence of design of evaporation batteries with different characteristics is developed for optimization. 1 fig.

1/1

USSR UDC 669.712.1.05

AGRANOVSKIY, A. A., BERKH, V. I., KAVINA, V. A., LEVIN, M. V., LYAPUNOV, A. N., MONTVID, A. E., MUNITS, I. N., and CHERNIN, V. N.

"Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of Non-Ferrous Metals); Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

Translation of Annotation: Data on the physico-chemical properties of the most important aluminum compounds and aluminum solutions are presented, phase diagrams of chemical systems determining the processes of alumina production by alkali methods are given, and standards and technical conditions are reviewed.

Various alumina production methods and reference data on the technology and equipment of alumina production are described.

The handbook is intended for engineers and technicians engaged in the aluminum industry. Ninety-one figures, 116 tables, 176 references.

TABLE OF CONTENTS (Abridged)

1/3

USSR

AGRANOVSKIY, A. A., et al., "Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of Non-Ferrous Metals), Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

USSR

AGRANOVSKIY, A. A., et al., "Spravochnik metallurga po tsvetnym metallam" (Metallurgist's Handbook of Non-Ferrous Metals), Moscow, Izd-vo "Metallurgiya," 1970, 320 pp

3/3

USSR

UDC 627.81.034(47+57)

NISHCHIMENKO, A. YA., MONZHOSOV, A. I., SHEVCHENKO, P. K.

"Reformation of the Banks of the Dnepr Reservoirs"

Tr. koorkinats. soveshchaniy po gidrotekhn. (Works of the Coordinating Meetings on Hydroengineering), No 59, 1970, pp 50-59 (from RZh-Elektrotekhnika i Energetika, No 2, Feb 71, Abstract No 2 D39)

Translation: Generalization of many years of stationary studies by the hydrogeological expedition of the Ministry of Water Conservancy of the Ukrainian SSR in the shore zone of the Dnepr Reservoir permitted classification of reservoir banks considering the genesis and dynamics of the reworking processes. The characteristic and spread of types of banks are presented for the three largest reservoirs: Kiev, Kremenchug and Kakhovka. There are 3 illustrations and a 2-entry bibliography.

1/1

USSR

UDC 669.721'71'5.018.9

VYAZNER, M. YA., TAYTS, A. YU., and MORACHEVSKIY, A. G.

"Equilibrium of Liquid-Vapor Over Binary Melts of Magnesium-Aluminum and Magnesium-Zinc"

V. sb. Vakuumn. protesessy v tsvetn. metallurgii (Vacuum Processes in Nonferrous Metallurgy -- Collection of Works), Alma-Ata, "Nauka," 1971, pp 120-124 (from Referativnyy Zhurnal -- Metallurgiya, No 6, Jun 71, Abstract no 6G186)

Translation of Abstract: The equilibrium of liquid-vapor in the systems Mg with Zn and Mg with Al was studied and the possibility was shown of the distribution of the liquid melt on pure components by means of fractional distillation (Five illustrations; 20 bibliographic entries).

1/1

1/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

TITLE--THERMODYNAMIC PROPERTIES OF MOLTEN ALLOYS OF THE LEAD,SODIUM,BISMUTH SYSTEM -U-

AUTHOR-(03)-MORACHEVSKY, A.G., STATSENKO, S.I., BUSSEMACHUKAS, V.B.

COUNTRY OF INFO--USSR

SOURCE--IZVEST. V.U.Z. TSVETNAYA MET., 1970, (2), 97-101

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--THERMODYNAMIC PROPERTY, ORDERED ALLOY, ELECTROMOTIVE FORCE, LEAD ALLOY, SODIUM ALLOY, BISMUTH ALLOY, SODIUM CHLORIDE, CALCIUM CHLORIDE, BARIUM CHLORIDE, ENTROPY, GLASS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3003/1498 STEP NO--UR/0149/70/000/002/0097/0101

CIRC ACCESSION NO--AT0130427

UNCLASSIFIED

2/2 032 UNCLASSIFIED PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AT0130427

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THERMODYNAMIC PROPERTIES OF A NUMBER OF ALLOYS OF THE PB,NA,BI SYSTEM WERE STUDIED BY MEASURING THE E.M.F OF (MINUS)NA, GLASS, (NACL-CACL SUB2 -BACL SUB2) SUBEUT, GLASS, PB(N SUBPB), NA (N SUBNA), BI(N SUBBI) (PLUS) CONCENTRATION CELLS BETWEEN THE TEMP. OF THE LIQUIDUS LINE AND 910DEGREESC. THE NEGATIVE VALUES OF THE ENTROPY OF MIXING OBTAINED FOR THE SYSTEM WERE ATTRIBUTED TO THE EXISTENCE OF ORDERING IN THE ALLOYS, SIMILAR TO THAT CHARACTERIZING SUCH COMPOUNDS AS NA SUB3 BI.

UNCLASSIFIED

USSR

UDC 621.396.6-181.48

MORALEV, S. A., TABARNYY, V. G., MOLCHANOV, A. A., LESHCHENKO, YU. I., and LOGVINENKO, N. P.

"A System for the Machine Design of BIS (Large Scale Integrated Circuits) Based on MOS-Transistors"

Elektron. prom-st'. Nauchn-tekhn. sb. (Electronics Industry. Collected Scientific-Technical Articles), 1972, No 2, pp 44-49 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 B225)

Translation: The proposed machine design system makes it possible to automate the basic stages of the design and development of MOS type, large integrated circuits. This includes the following: from the statement of the technical specifications in the form of functional circuits with an inventory of the circuit-technical and technological limitations to the representation of the topology of the microcircuit in the form of a geometric drawing, along with the corresponding code on perforated tape. The information recorded on the perforated tape is used for the automated production of photopatterns. Resume.

1/1

USSR

UDC 621.382.002:621.382.32

ZARUDNYY, D.I., MORALEV, S.A., MOROZOV, A.A.

"Problems Of Planning And Analysis During Simulation Of The Technological Process Of Production Of Integrated Circuits Based On MIS Structures"

V sb. Mikroelektronika (Microelectronics--Collection Of Works), Moscow, Izd-vo "Sovetskoye Radio," No 4, 1971, pp 294-302

Abstract: The specific special features of the use of mathematical statistics during selection of a strategy of systematic investigation are studied and experiments and their interpretation are conducted, as applied to the technological process of production of integrated circuits based on metal-insulator-semiconductor (MIS) structures. The principal stages of the solution of the problems considered are shown in the form of a block diagram of the control process. A complex algorithm and a program using algorithmic language for the "Minsk-22" electronic computer were developed for solution of the problems considered. The mathematical provision worked out can be extended to other forms of technological processes. 2 fig. 15 ref.

1/1

1/2 023 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--ELECTRON,SPIN,ECHO STUDY OF THE SPATIAL DISTRIBUTION OF RADICALS DURING ALPHA AND GAMMA RADIOLYSIS OF METHANOL AND AN AQUEOUS SULFURIC

AUTHOR-(03)-RAITSIMRING, A.M., MORALEV, V.M., TSVETKOV, YU.D.

COUNTRY OF INFO--USSR

SOURCE--KHIM. VYS. ENERG. 1970, 4(2), 180-2

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY

TOPIC TAGS--ELECTRON SPIN, RADIOLYSIS, METHANOL, SULFURIC ACID, POLONIUM, ALPHA PARTICLE, GAMMA RADIATION, FREE RADICAL, COBALT ISOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0753 STEP NO--UR/0456/70/004/002/0180/0182

CIRC ACCESSION NO--AP0119660

UNCLASSIFIED

2/2 023 UNCLASSIFIED PROCESSING DATE--23OCT7C

CIRC ACCESSION NO--AP0119660

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. PRIME210 PO ALPHA PARTICLE AND PRIME60 CO GAMMA RADIATION RADIOLYSIS WAS STUDIED OF THE GLASS LIKE 8M H SUB2 SO SUB4 SOLID AQ. SOLN. AND OF CRYST. MEOH AT 77DEGREESK. LOCAL RADICAL CONCNS. WERE DETD. BY USING THE 2,IMPULSE ELECTRON SPIN,ECHO METHOD. THE SAME RADICALS OR ATOMS WERE FOUND IN BOTH THE ALPHA AND GAMMA IRRADIATED SYSTEMS, NAMELY CH SUB2 OH WITH MEOH AND H AS WELL AS SO SUB4 PRIME NEGATIVE WITH H SUB2 SO SUB4. THE RELAXATION RATE INCREASED LINEARLY WITH INCREASING MEAN RADICAL CONCN. IN THE GAMMA IRRADN., THE SLOPE OF THE STRAIGHT LINE INDICATING A REGULAR RADICAL DISTRIBUTION. NO CHANGE OF THE RELAXATION RATE AT VARYING MEAN RADICAL CONCN. WAS OBSD. IN THE ALPHA IRRADN. THIS WAS EXPLAINED BY ASSUMING THAT RADICALS ARE STABILIZED ALONG THE ALPHA,TRACK AND AUGMENTED LOCAL RADICAL CONCNS. ARE ATTAINED IN SOME REGIONS; NO SIGNIFICANT DIPOLE MAGNETIC INTERACTION BETWEEN RADICALS SITUATED IN SINGLE REGIONS IS EXPECTED TO OCCUR. THE RADII OF SUCH REGIONS, WHICH ARE PRESUMABLY CYLINDRICAL, ARE 130, 105, AND 55 A AND THE MEAN DISTANCES ARE 30, 35, AND 26 A WITH CH SUB2 OH, H, AND SO SUB4 PRIME NEGATIVE, RESP.

FACILITY: INST. KHIM. KINET. GORENIVA, NOVOSIBIRSK, USSR.

UNCLASSIFIED