KRYLOV, A.P., red.; AFANAS'YEVA, A.V., kand. tekhn.nauk, red.; BORTSOV, Yu.P., doktor tekhn. nauk, red.; BRISKMAN, A.A., red., kand. tekhn. nauk; BUCHIN, A.N., kand. ekon. nauk, red.; VIRNOVSKIY, A.S., doktor tekhn. nauk, prof., red.; ZHELTOV, Yu.P., kand. tekhn. nauk, red.; MAKSIMOV, M.I., kand. geol.-miner. nauk, red.; MARKOVSKIY, G.E., inzh., red.; MELIK-PASHAYEV, V.S., doktor geol.-miner. nauk, red.; NIKOLAYEVSKIY, N.M., doktor ekon. nauk, prof, red.; PETROVSKAYA, A.N., kand. geol.-miner. nauk, red.; PILATOVSKIY, V.P., doktor fiz.-mat. nauk, red.; ROZENBERG, M.D., doktor tekhn. nauk, red.; SAFRONOV, S.V., kand. tekhn. nauk, red.

[Petroleum production; theory and practice. 196[illegible] yearbook] Dobycha nefti; teoriia i praktika. Ezhegodnik 1963. Moskva, Nedra, 1964. 302 p. (MIRA 17:9)

1. Chlen-korrespondent AN SSSR (for Krylov). 2. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut (for Melik-Pashayev, Rozenberg). 3. Institut mekhaniki AN SSSR (for Nikolayevskiy).

BRISKMAN, A.A.; LYKOV, N.A.; KLIMANOV, I.T.

Investigating the operation of an automatically controlled flow bean. Trudy VNII no.41:108-134 '64.

(MIRA 17:11)

BRISKMAN, A.M.; TARANENKO, D.S.

Problem of myoclonus epilepsy. Zhur.nerv.i psikh. 59 no.7:833-835 '59. (MIRA 12:11)

1. Nervologicheskoye otdeleniya (zav. A.M. Briskman) Cherkasskoy oblastnoy bol'nitsy (glavnyy vrach G.I. Ivakhno).
(EPILEPSY, case reports,
myoclonus epilepsy (Rus))

BRISKMAN, A.M.

Pulseless disease. Vrach.delo no.9:973 S '59. (MIRA 13:2)

1. Nevrologicheskoye otdeleniye (zaveduyushchiy - A.M. Briskman) Cherkasskoy oblastnoy bol'nitsy.
(PULSE)

BRISKMAN, A.M. (Cherkassy)

Bekhterev's choreic epilepsy. Zhur. nevr. i psikh. 61 no.6:862-864 '61. (MIRA 15:2)

(EPILEPSY)

BRISKMAN, A.M.; MESHALKIN, Ya.I. (Cherkassy)

Treatment of lumbosacral radiculitis with antireticular cytotoxic serum. Vrach. delo no.1:149-150 Ja '62. (MIRA 15:2)

1. Nevrologicheskoye otdeleniye oblastnoy bol'nitsy, Cherkassy.
(SPINAL NERVE--INFLAMMATION)
(ANTIRETICULAR CYTOTOXIC SERUM)

ERISKMAN, A.M.; KHOLODIY, P.I.

Rare case of scleroderma. Vrach.delo no.8:139-140 Ag '62.
(MIRA 15:11)

1. Cherkasskiy oblastnoy kozhno-venerologicheskiy dispanser i nevrologicheskoye otdeleniye Cherkasskoy oblastnoy bol'nitsy.
(SCLERODERMA)

BRISKMAN, A.M.; KOBZARENKO, M.P. (Cherkassy)

Disturbance of sensibility in amyotrophic lateral sclerosis. Vrach. delo no.4:138 Ap'63. (MIRA 16:7)

1. Nevrologicheskoye otdeleniye Cherkasskoy oblastnoy bol'nitsy.

(AMYOTROPHIC LATERAL SCLEROSIS)
(SENSES AND SENSATION)

BRISKMAN, A.M.; KOBZARENKO, M.P.; MESHALKIN, Ya.I.

Treatment of multiple sclerosis with endolumbar introduction of vitamin B_{12}. Zhur. nevr. i psikh. 64 no.6:854-857 '64. (MIRA 17:12)

1. Nevrologicheskoye otdeleniye (zaveduyushchiy A.M. Briskman). Cherkasskoy oblastnoy bol'nitsy (glavnyy vrach S.Ya. Yevchenko).

RADZIYEVSKIY, V.N., inzh.; BRISKMAN, A.N., inzh.

Seam welding of centrifuge screens made of thin brass sheets. Khim. mash. no.4:35-36 Jl-Ag '61. (MIRA 14:8)
(Centrifuges) (Brass--Welding)

26017
S/135/61/000/008/006/011
A006/A101

1.2300 1573

AUTHORS: Briskman, A.N., Radziyevskiy, V.N., Engineers

TITLE: Seam welding of fins to pipes

PERIODICAL: Svarochnoye proizvodstvo, no. 8, 1961, 18 - 20

TEXT: Seam welding is the most efficient process of joining fins and pipes. The process is characterized by the simultaneous production of two seams, a longer course of the welding current passing through the pipe wall, and sagging of the pipe due to excessive heat developed. Difficulties arising due to the first two causes are eliminated by higher electric power. Sagging is prevented by internal water cooling when welding up to 3 mm thick pipes, and by a higher speed for welding 3 mm and thicker pipes. V.G. Aliseyenko designed the МШП-150 (MShP-150) machine intended for the welding of fins to pipes. Experimental heat exchangers were produced on this machine and their size and weight were considerably reduced. The machine is shown in a schematic diagram. There are 1 table, 4 figures and 3 references.

ASSOCIATION: Sumskiy mashinostroitel'nyy zavod im. Frunze (Sumy Machinebuilding Plant imeni Frunze)

Card 1/3

Seam welding of fins tb pipes

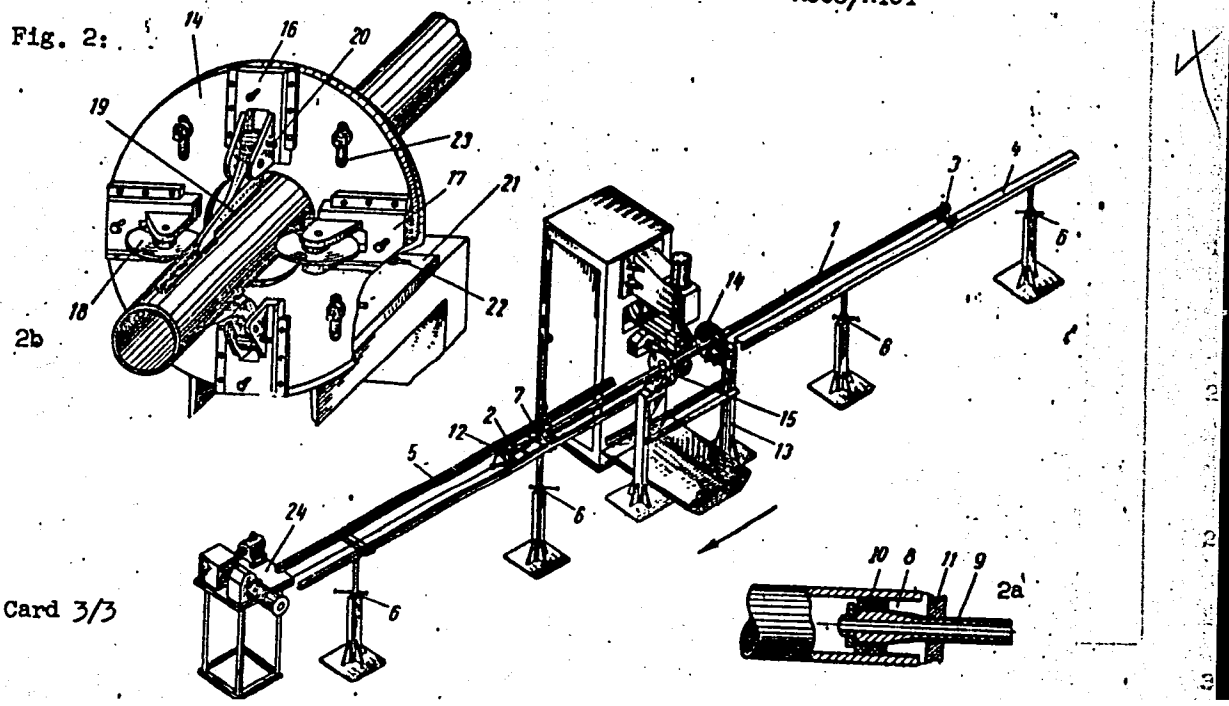
Fig. 2: Schematic diagram of a unit for welding fins on pipes (Welding direction indicated by an arrow)
1 - pipe; 2 and 3 - clamping carriages; 4 and 5 - guides; 6 - screw jack; 7 - draw-in clamp (Fig. 2a) consisting of split tongs 8; hollow shaft 9; rubber packing 10; clamping screw 11; 12 - dividing attachment; 13 - guide fixture adjusting the axes of the pipe and the fins consisting of collor plates 14 and 15 (Fig. 2b); 16 and 17 slides in grooves of plate 14 moving in mutually perpendicular direction; 18 - centering roll mounted on slides 17, moving horizontally; 19 - blades attached on slides 16, assuring coaxial position of fins and the pipe; 20 - locators maintaining the blades in a parallel position to the pipe; 21 - support; 22 and 23 - grooves; 24 - additional drive.

~~29932~~ 26017

8/135/61/000/008/006/011
A006/A101

Seam welding of fins to pipes

Fig. 2:



Card 3/3

BRISKMAN, B.A., inzh.

Heat transfer in nuclear reactors with gas cooling. Teploener-getika 10 no.7:87-90 Jl '63. (MIRA 16:7)

(Nuclear reactors)

L 06460-67 EWT(m) ES/JR

ACC NR: AP6024538 SOURCE CODE: UR/0089/66/021.001/0022/0026

AUTHOR: Safronov, Ye. Ya.; Briskman, B. A.; Bondarev, V. D.; Shishov, V. S. 42 B

ORG: none

TITLE: Investigation of thermal deformations of fuel elements 19

SOURCE: Atomnaya energiya, v. 21, no. 1, 1966, 22-26

TOPIC TAGS: reactor fuel element, thermal stress, temperature gradient, shell deformation, reactor neutron flux

ABSTRACT: The authors investigated the temperature differentials in the walls of a metal-clad fuel element of hexagonal cross section under conditions of a radial neutron-flux gradient. An analytic solution of the differential equations showed that the temperature drop can reach 40C. The experiments were made on an electrically heated dummy fuel rod (AND-5000/2500) cooled with tap water. Formulas are derived for the dependence of the temperature drop on the current, with allowance for the temperature dependence of the dummy-rod resistance. The procedure for measuring the stresses in various points of the cladding is described in detail. Plots were obtained for the deflection of the rod against the temperature drop, of the distribution of the deformation along the height of the rod, of the distributions of the temperature and of the deflection over the perimeter of the central section of the rod, and of the deformation distribution over several sections of the rod. At temperature drops ~25C, the maximum deflections in the central section of a rod was 0.6 - 0.7 mm. It is con-

Card 1/2 UDC: 621.039.548

L 06460-67

ACC NR: AP6024538

cluded that in view of the small gaps between cladding of neighboring fuel elements, the thermal deformation imposes a limit on the attainable reactor power. Orig. art. has: 6 figures and 13 formulas.

SUB CODE: 18/ SUBM DATE: 17Nov65/ ORIG REF: 001/ OTH REF: 001

Card 2/2 pla

L 60319-65 EPF(c)/EPF(n)-2/EWT(m)/EWG(m) Pr-4/Ps-4/Pu-4 WW

ACCESSION NR: AP5019114 UR/0286/65/000/012/0146/0146

621.039

AUTHOR: Koz'menkov, K. F.; Briskman, B. A.; Stariznyy, Ye. S.

TITLE: Method for detecting leakage in fuel element jackets. 19 Class 90, No. 172259

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 146

TOPIC TAGS: nuclear reactor, reactor fuel element

ABSTRACT: This method, intended for reactors with a free water surface above the core, is based on the measurement of radioactivity of the water in the primary loop. In order to prevent fission products from the fuel element from entering the main [illegible] the water flowing through the element is shut off by means of a cap mounted [illegible] upper face. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 21Jan64 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4060

Card 1/1

VARENIK, Ye.I., doktor tekhn.nauk, prof.; KANTOROER, S.Ye., kand.tekhn. nauk, dotsent; PARAUBEK, G.E., kand.tekhn.nauk, dotsent; GALKIN, I.G., kand.tekhn.nauk, dotsent; PETROV, I.A., doktor tekhn.nauk, prof.; VIKHREV, I.D., kand.tekhn.nauk, dotsent; DIKOV, N.D., kand.tekhn.nauk, dotsent; SYRTSOVA, Ye.D., kand. tekhn.nauk, dotsent; BRISKMAN, L.A., ekonomist; IL'IN, V.M., [illegible], nauchnyy red.; LEVKIN, B.P., ekonomist, nauchnyy red.; SKVORTSOVA, I.P., red.izd-va; GERASIMOVA, G.S., red.izd-va; GOL'BERG, T.M., tekhn.red.; KASIMOV, D.Ya., tekhn.red.

[Organization and planning in the construction industry] Organizatsiia i planirovanie stroitel'nogo proizvodstva. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1961. 526 p. (MIRA 14:12)

1. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Varenik).
(Construction industry)

VARENIK, Ye.I.; PETROV, I.A., doktor tekhn. nauk; KANTORER, S.Ye., doktor ekon. nauk; GALKIN, I.G., doktor ekon. nauk; PARAUBEK, G.E., kand.tekhn.nauk; DIKOV, N.D., kand. tekhn. nauk; VIKHREV, I.D., kand. tekhn. nauk; SYRTSOVA, Ye.D., kand.tekhn. nauk; BALIKHIN, M.I., kand. ekon. nauk; BRISKMAN, I.A., ekonomist

[Organization and planning of construction production] Organizatsiia i planirovanie stroitel'nogo proizvodstva. 2. izd. [By] E.I.Varenik i dr. Moskva, Stroiizdat, 1965. 531 p. (MIRA 18:2)

BRISKMAN, I.P., inzh.,red.; VYDRA, A.Ya., inzh.,red.; VYSOTSKAYA, M.P., inzh., red.; GORDIYENKO, M.G., inzh.,red.; ZORUK, V.L., inzh.,red.; STARIKOVICH, F.K., inzh., red.; OVSYANNIKOV, Ya.S., red.

[Use of fast dyes and special types of finishes in the textile and knit goods industry; from the materials of the Republic Seminar] Primenenie stoikikh krasitelei i spetsial'nykh vidov otdelok v tekstil'no-trikotazhnoi promyshlennosti; po materialam respublikanskogo seminara. Kiev, In-t tekhn. informatsii, 1962. 181 p.
(MIRA 17:11)

1. Respublikanskiy seminar po primeneniyu sinteticheskikh krasiteley i spetsial'nykh vidov otdelok v tekstil'no-trikotazhnoy promyshlennosti, Kiev, 1961. 2. Ukrainskiy nauchno-issledovatel'skiy institut po pererabotke iskusstvennykh i sinteticheskikh volokon (for Gordiyenko).

BRISKMAN, M. A.

Briskman, M. A.

"V. G. Anastasevich (the history of Russian bibliography)." Leningrad State Library Inst imeni N. K. Krupskaya. Leningrad, 1956. (Dissertation for the Degree of Candidate in Pedagogical Science)

So: Knizhnaya letopis', No. 25, 1956

BRISKMAN, M.I

LIVSHITS, A.L.; BRISKMAN, M.I.

The 473 electric pulse push-broaching and copying machine. Stan. i instr. 28 no.5:10-15 My '57. (MLRA 10:6)
(Broaching machines)

BRISKMAN, M.Ya.

Motor and evacuatory function of the stomach and small intestine in schizophrenic patients in a state of stupor; as shown by X-ray examination. Vop. psikh. i nevr. no.1:79-107 '57 (MIRA 11:8)

1. Iz Leningradskoy psikhonevrologicheskoy bol'nitsy im. I.M. Balinskogo.
(SCHIZOPHRENIA)
(ALIMENTARY CANAL)

BRISKMAN, M.Ya.

Radiographic investigation of the motor reaction of the stomach in response to conditioned and unconditioned food stimuli in patients with schizophrenia. Sbor. trud. Len. nauchn. ob-va nevr. i psikh. no.6:279-288 '59. (MIRA 13:12)

1. Iz Leningradskoy psikhonevrologicheskoy bol'nitsy imeni Balinskogo (glavnyy vrach S.N. Popova).

(SCHIZOPHRENIA) (CONDITIONED RESPONSE)
(STOMACH--RESPONSE)

S/137/62/000/003/017/191
A006/A101

AUTHORS: Briskman, V. A., Smirnov, A. G.

TITLE: On the mixing of steel in an open-hearth furnace by means of a running magnetic field'

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 27, abstract 3V185 ("Uch. zap. Permsk. un-t", 1961, v. 19, no. 3, 59-61)

TEXT: The authors analyze the possibility of linearization of the basic equations of magnetic hydrodynamics for steel mixing processes in open-hearth furnaces. A solution of these equations is given for the case of a free heat surface. The calculation shows that low frequencies are the optimum parameter for mixing steel in an open hearth furnace; however, commercial frequencies may be employed in practice.

Yu. Nechkin

[Abstracter's note: Complete translation]

Card 1/1

S/124/62/000/005/008/048
D251/D308

AUTHORS: Briskman, V.A., and Smirnov, A.G.

TITLE: Agitation of steel in an open-hearth furnace with a movable magnetic field

PERIODICAL: Referativnyy zhurnal. Mekhanika, no. 5, 1962, 13, abstract 5B64 (Uch. zap. Permsk. un-t, 1961, v. 19, no. 3, 59 - 61)

TEXT: The authors showed the possibility of linearization of the equations of magnetic hydrodynamics in the case of described processes which arise from the stirring of steel in a Marten furnace with the aid of a travelling magnetic field. By linearizing the system and averaging all the terms of the equations with respect to time, the authors found the solution for the case of a free surface of the melt. It was shown that with the assumptions made, the velocity of the metal depends only on the ratio of the depth of penetration of the magnetic field in the metal to the depth of the layer of the melt. The results of the calculation are presented in the form of graphs. [Abstractor's note : Complete translation].

Card 1/1

ACCESSION NR: AT4042312 S/0000/63/003/000/0349/0355

AUTHOR: Briskman, V.A., Mashkautsan, V. V., Rezin, M.G.

TITLE: Simulation of electromagnetic mixing of a metal in the ladle

SOURCE: Soveshchaniye po teoreticheskoy i prikladnoy magnitnoy gidrodinamike. 3d, Riga, 1962. Voprosy* magnitnoy gidrodinamiki (Problems in magnetic hydrodynamics); doklady* soveshchaniya, v. 3. Riga, Izd-vo AN LatSSR, 1963, 349-355

TOPIC TAGS: electromagnetic mixing, electromagnetic stirrer, molten metal mixing, foundry technology

ABSTRACT: The authors discuss the importance and area of applicability of the electromagnetic mixing of metals, calling attention to the numerous advantages of this method. A study was made of the processes involved in the mixing of a melt in ladles by means of a traveling magnetic field. It is noted that this type of mixing can be employed to accelerate and deepen the degassing of the steel during vacuum melting in the ladle, accelerate the reduction of the metal and dissolve the alloying additions during the desulfuration of cast iron in the ladle, etc. A mixing technique employing low-frequency current was adopted, in view of the difficulties that arise when attempting to make use of the conventional 50-

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cycle industrial current. The research described in the paper was conducted on a model geometrically similar to ladles actually in use in the metallurgical industry. The authors note that, in order to achieve physical similarity over the entire range of velocities of practical interest in mixing, the following two determining criteria constitute the sole factors of importance:

$$\Omega^2 = \frac{2\pi\sigma\omega d^2}{c^2}, \quad (1)$$

$$s = 1 - \frac{A_0/\sqrt{\rho}}{\omega d}, \quad (2)$$

where ω is the circular frequency of the current; A_0 is the linear current load of the stator; d is the characteristic dimension (mean ladle diameter); σ is the electroconductivity; ρ is the density of the liquid metal; and c is the speed of light. When slippage is close to unity, criterion (2) has little effect on mixing. In this case (covering the majority of the measurements made on the model ladle in question), the results can be extended more widely than permitted by expression (2). A sectional diagram of the model is shown in Figure 1 of the Enclosure. The ladle was manufactured of viniplast, with a casing of non-magnetic steel. Mercury was used as the liquid metal. The depth of the mercury

ACCESSION NR: AT4042312

layer was equal to the mean internal diameter of the ladle (23 cm). Water was poured over the surface of the mercury. The frequency of the stator current was varied from 10 to 200 cycles, with an asynchronous generator employed as the power supply. The methods and instrumentation used in the measurement of fields and velocities in the liquid metal are not described in this article. Three versions were tested, involing different arrangements and connections of the stators: 1. two stators, placed diametrically opposite one another at different sides of the ladle and acting on the melt with forces of identical direction; 2. two stators with forces of opposite direction; 3. one stator. A discussion of the results follows and the authors point out that, on their basis, it is possible to construct a picture of the movement of the liquid metal in the ladle of an industrial mixing unit and to select that version which is most suitable from the metallurgical point of view. When designing a specific installation on the basis of $\phi(\Omega)$ curves with A = const, a function $\phi(\Omega)$ can be plotted for constant power and the optimal frequency for a given ladle thus found. According to the values of $\frac{v}{A_0\sqrt{\rho}}$, one can determine the linear stator loads which will be necessary

Card 3/5

ACCESSION NR: AT4042312

for the attainment of the required velocities. Orig. art. has: 2 formulas and 4 figures.

ASSOCIATION: none

SUBMITTED: 04Dec63 ENCL: 01 SUB CODE: ME, MM

NO REF SOV: 001 OTHER: 000

Card 4/5

ACCESSION NR: AT4042312

ENCLOSURE: 01

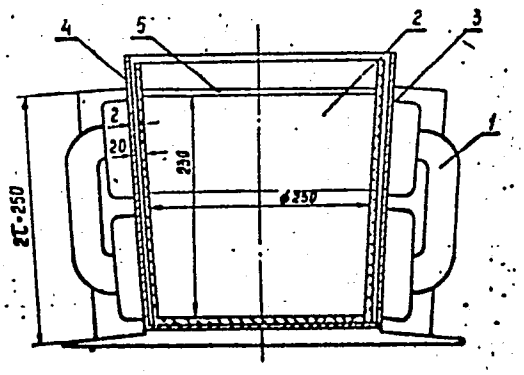


Fig. 1. Model diagram: 1 - stator; 2 - mercury; 3 - lining; 4 - casing; 5 - water.

Card 5/5

BRISKMAN, V.A.; LYUBIMOVA, S.N.; REZIN, M.G.

The stirring of liquid metal in the ladle; theoretical estimate. Trudy Ural. politekh. inst. no.133:11-16 '63. (MIRA 17:9)

REZIN, M.G.; BRISKMAN, V.A.; MASHKAUTSAN, V.V.

Results of the investigation of electromagnetic stirring processes with the help of laboratory equipment. Trudy. Ural. politekh. inst. no.133:25-33 '63. (MIRA 17:9)

BELYANCHIKOV, V.N., inzh.; NOVIKOV, I.V., inzh.; ZAYTSEV, L.Ye., inzh.; AKIL'YEV, S.A., inzh.; BELKIN, V A., inzh.; POCHKINA, L.A., inzh.; VASIL'YEV, O.A., inzh.; Prinimali uchastiye: KOPEYKINA, O.P.; SMIRNOVA, A.N.; BELKINA,S.S.; SHILINA, Ye.I.; LAGUNOV, Ye.N.; REZNIK, S.Z.; BRISMAN, B.I.; KUZ'MINYKH, A.A., red.izd-va; SHIBKOVA, R.Ye., tekhn. red.

[Operational life of parts of excavating, construction, and road machinery; a reference catalog] Sroki sluzhby detalei ekskavatorov, stroitel'nykh i dorozhnykh mashin; katalog spravochnik. Izd.2., perer. i dop. Moskva, Goslesbumizdat. Pt.2. [Road, construction machinery, and machinery for manufacturing building materials] Dorozhnye, stroitel'nye mashiny i mashiny dlia proizvodstva stroitel'nykh materialov. 1963. 306 p. (MIRA 17:4)

1. "Stroitiyazhmashzapchast'," Tekhnicheskaya kontora. Konstruktorskoye byuro.

BRISTELA, F.

"The tenth anniversary of socialist agriculture."

p. 25 (Zemelske Stroje, Vol. 3, no. 2, Feb. 1958, Praha, Czechoslovakia)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, no. 9, September 1958

BRISTOL', B. N.

BRISTOL', B. N. -- "EFFECT OF THE TECHNOLOGY OF ASSEMBLY ON THE WEAR OF ENGINE CYLINDERS." SUB 2 JUN 52, ALL-UNION CORRESPONDENCE POLYTECHNIC INST (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

PHASE I BOOK EXPLOITATION SOV/5223

Bristol', Boris Nikolayevich

Konstruirovaniye prisposobleniy dlya metallorezhushchikh stankov (Construction of Accessories for Metal-Cutting Machine Tools) Moscow, Mashgiz, 1959. 238 p. 13,500 copies printed. (Series: Biblioteka konstruktora)

Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo mashinostroitel'noy promyshlennosti. Kiyevskaya oblastnaya organizatsiya.

Reviewers: G. A. Preys, Candidate of Technical Sciences, and A. V. Sivay, Docent; Ed.: N. V. Oleynik, Docent; Ed.: B. I. Leuta; Chief Ed. (Southern Dept., Mashgiz): V. K. Serdyuk, Engineer.

PURPOSE: This book is intended for technicians and designers in the machine industry.

COVERAGE: The book contains fundamental data and calculation methods necessary to the designer of fixtures and accessories.

Card 1/12

Reference tables and typical designs of the machine parts, sub-assemblies, and fixtures are provided. No personalities are mentioned. There are 33 references, all Soviet.

TABLE OF CONTENTS:

MEL'NIKOV, N.F.[deceased]; BRISTOL', B.N.; DEMENT'YEV, V.I.; CHIKHACHEV, S.A., inzh., retsenzent; LIBERMAN, B.S., inzh., retsenzent; GLEYZER, L.A., doktor tekhn. nauk, prof., red

[Technology of the manufacture of machinery] Tekhnologiia mashinostroeniia. Moskva, Mashinostroenie, 1965. 367 p. (MIRA 18:4)

DANILENKO, I.; BRIT, V., ekonomist

Productivity accounting in a brigade. Sots.trud 8 no.3:128-132 Mr '63.
(MIRA 16:3)

1. Nachal'nik planovo-ekonomicheskogo otdela Gomel'skogo zavoda elektroapparatury (for Danilenko).
(Gomel'—Wages—Electric equipment industry)

S/194/61/000/008/032/092
D201/D304

AUTHOR: Britall', V.

TITLE: Hydraulic and combined systems of automatic control

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 8, 1961, 38, abstract 8 V292 (V sb. Vopr. pnevmo-i gidroavtomatiki, M., AN SSSR, 1960, 175-179)

TEXT: A communication on developments in the field of automatic control technique of industrial processes as carried out in the German Democratic Republic. One of the promising directions of the development of control techniques is said to be combining universal hydraulic flow regulators with pneumatic and electronic measuring and control equipment. This makes it possible to amalgamate the wide circuit possibilities of electronic and pneumatic equipment with high output power hydraulic drives. With this in view, a universal hydraulic power unit has been developed. It has a pump, flow amplifier, power cylinder, measuring diaphragm elements,

Card 1/2

Hydraulic and combined systems...

valves, filters etc. All the above elements are placed in an oil-filled container. Parallel to the above, a set of installations has been developed for coupling the electronic and pneumatic equipment to the hydraulic power drive stage, these being all electro-mechanical pressure transducers for various pressure ranges, remote pick-ups etc. Work is also going on in developing pick-ups for various parameters as met in hydraulic control and which do not require supplementing transducers. [Abstracter's note: Complete translation]

Card 2/2

KOVALEV, V.S.; BRITAN, A.B.

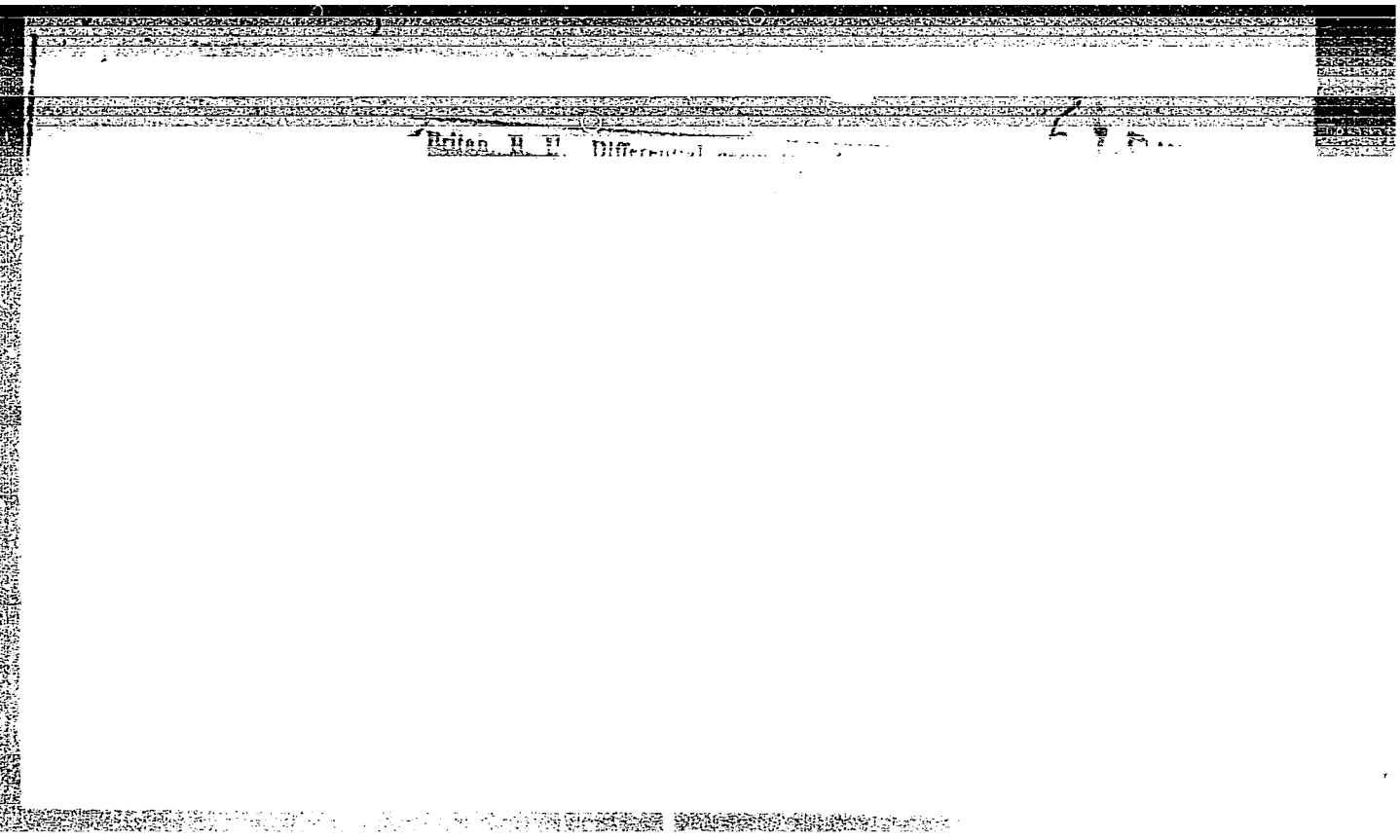
Paralysis and paresis in tuberculous spondylitis. Probl. tub. 42 no.11:72-73 '64. (MIRA 18:8)

1. Sanatoriy "Yuzhnyy" (glavnyy vrach V.S.Kovalev), Chernomorka - Odessa.

BRITAN, B. U.

BRITAN, B. U. - "Congruence of Geodetic and Linear (Ruled) Surfaces in Three-Dimensional Riemannian Space and in a Space of Constant Curvature." Sub 23 Apr 52, Sci Res Inst of Mechanics and Mathematics, Moscow Order of Lenin State U imeni M. V. Lomonosov. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952



$\partial D_c V_i$

BRITAN, M.I., inzhener.

Equipment for building asphalt concrete roads. Mekh. stroi.4 no.5: 5-6 My '47. (MLRA 9:2)

1.Gushosdor.
(Pavements, Asphalt) (Road machinery)

KOZLOV, N.S.; BRITAN, Ye.A.; ZUYEVA, N.D.

Catalyzed condensation of azomethines with aliphatic-aromatic ketones.
Zhur.ob.khim. 34 no.1:298-303 Ja '64. (MIRA 17:3)

MARMOL'-REBUEL'TA, L.Ye., inzh.; BRITAN, Yu.M., inzh.; MAKEYEV, S.A., red.; KAMYSHNIKOVA, A.A., tekhn. red.

[Inventions; motion pictures, photography, optics]Sbornik izobretenii; kino, foto, optika. Moskva, TSentr. biuro tekhn. informatsii, 1962. 145 p. (MIRA 15:12)

1. Russia (1923- U.S.S.R.)Komitet po delam izobreteniy i otkrytiy.
(Motion pictures--Technological innovations)
(Photography--Technological innovations)
(Optics--Technological innovations)

L 07343-67 EWT(1) IJP(c)

ACC NR: AP6012151 SOURCE CODE: UR/0413/66/000/007/0069/0069

33
B

AUTHOR: Britan, Yu. M.

ORG: none

TITLE: A method for demonstrating the parallel positions of the generatrices forming cylindrical optical systems. Class 42, No. 180378 [announced by Moscow Bureau of Motion Picture Equipment (Moskovskoye konstruktorskoye byuro kinoapparatury)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 7, 1966, 69

TOPIC TAGS: optic system, optic prism, collimator, collimation

ABSTRACT: This Author Certificate presents a method for demonstrating the parallel position of the generatrices forming cylindrical optical systems and running in a desired direction. The method is based on forming the image of a test object in the focal plane of the cylindrical component placed behind the collimator. To increase the accuracy of showing the generatrices, the parallel position of the generatrix of a cylindrical component running in a desired direction is determined by bisecting the distance between straight parallel lines formed by the

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representations of extreme bright points on the test object. The central straight line representing the bright point of the same test object is used as the bisector.

SUB CODE: 13, 20/ SUBM DATE: 13Jan65

Card 2/2 VmL

BRITANISHSKIY, G. R.

Lapitskiy, D. A. and Britanishskiy, G. R. "Changes in the currents of heart activity (electrocardiograms) in passing through injured portions of the organism", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 308-11.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

BRITANISHSKIY, G. R.

Britanishskiy, G. R., Lapitskiy, D. A. , and Sobolev, V. I. "The recording of diaphragm currents -- electrodiaphragmography", In the collection: Mekhanizm patol. reaktsiy, Issues 11-15, Leningrad, 1949, p. 384-90.

SO: U-4392, 19 August 53, (Letopis 'Zhurnal 'nykh Statey, No 21, 1949).

BRITANISHSKIY, G. R.

"Cardiac Disturbances During Changes in the Functional Condition of the Central Nervous System (Experimental Data)." Dr Med Sci, Leningrad State Inst for the Advanced Training of Physicians, Leningrad, 1954. (RZh Biol, No 2, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

BRITANISHSKIY, R.

107-5-31/54

AUTHOR: Klibson, V. and Britanishskiy, R.

TITLE: "Soyuz" and "Znamya" TV Sets
(Televizory "Soyuz" i "Znamya")

PERIODICAL: Radio, 1956, Nr5, pp. 35-39 (USSR)

ABSTRACT: A description of two new factory-made Soviet tv sets. They were developed in "one of the Leningrad radio-manufacturing plants". As "new" items rectangular picture tubes and elliptic speakers are featured.

Both sets are intended for 5 tv channels and also FM VHF radio reception on 64 to 73 mc. They differ in the type of picture tube used and in the acoustic system. "Soyuz" has 210 x 280 mm 35ЛК2Б type picture tube, "Znamya" has 255 x 340 mm 43ЛК2Б type picture tube.

Sensitivity on all channels 200 μv or better. Horizontal definition 500 lines. Sound amplifier band 100 to 6.000 c at 1 watt.

Both tv sets are designed for 110, 127, 220-v a-c supply, and consume 125 w with tv reception and 60 w with FM radio reception.

"Soyuz" weighs 21.5 kg, "Znamya" - 25.5 kg.

Each set uses 15 tubes and 5 semiconductor diodes. Beat frequency 6.5 mc is used for sound reception. First 5 stages are used jointly for video and sound channels. Asymmetrical input is desgned for a 75-ohm cable.

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"Soyuz" and "Znamya" TV Sets

The circuits of the tv sets are designed along the conventional lines. Wooden cabinets have dimensions:"Soyuz" 440 x 420 x 467 mm, "Znamya" 500x 460 x 480 mm.

An editorial note announces that both new tv sets have been tested and showed "good" results.

Four figures are given including detailed circuit diagrams.

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NUROK, G.A.; BRITAREV, V.A.

Hydraulic open-pit mining. Ugol' 34 no.10:16-19 O '59.
(MIRA 13:2)

1.Moskovskiy gornyy institut im. I.V. Stalina.
(Hydraulic mining) (Coal preparation)

BRITAREV, V.A., inzh.

Preparation of coal mined in bulk by the open cast method.
Obog.i brik.ugl. no.27:49-59 '62. (MIRA 17:4)

BRITAREV, V.A., gornyy inzh.

Hydromechanization of coal mining in the open-pit mines of Kuznetsk Basin. Ugol' 37 no.3:20-24 Mr '62. (MIRA 15:2)
(Kuznetsk Basin--Strip mining)

S/169/63/000/002/011/127
D263/D307

AUTHOR: Britayev, A. C.

TITLE: On the problem of determining the ozone content by a chemical method

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 13, abstract 2B105 (In collection: Atmosfern. ozon, M., Mosk. un-t, 1961, 18-31 (summary in Eng.))

TEXT: To determine the variations in ozone concentration close to the Earth's surface and in free atmosphere, an electrochemical method has been developed and tested at the Tsentralnaya aerologicheskaya observatoriya (Central Aerologic Observatory). The method is based on the measurement of changes in the electric conductance of aqueous potassium iodide which reacts selectively with aerial ozone. A known quantity of sodium thiosulfate is added to the solution to combine the gaseous iodine evolved during this reaction. The moment of full consumption of the thiosulfate, corresponding to the completion of reaction with a known amount of ozone, is de-

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termined by the change of the conductance of the solution in dependence of the amount of air bubbled through. Concentration of ozone in the given sample of air is then determined from the knowledge of the reaction and the volume of air passed through. Results of such measurements, carried out in 1959 - 1960 near Moscow, show that variations in the ozone concentration in the layer close to the ground usually correspond to variations of the general ozone content in the atmosphere. Vertical descending currents of air are frequently associated with an overall increase of the ozone content. High concentrations of ozone are predominatly noted during north and north-western winds, and in some cases after precipitation. The diurnal variation of ozone at the 2 m level, on days with antycyclone weather, shows a well-pronounced broad maximum around noon, and a minimum at night and in the morning. During variable weather the variations are rapid, from 0 to 50 γ/m^3 and higher. Particular attention was paid to the analysis of cases when the concentration varied, since these show the possibility of the formation and decomposition of ozone directly in air, both near the ground and in the troposphere. In connection with this,

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On the problem of ...

the possible ozone formation and decomposition processes in the lower layers of the atmosphere are considered. [Abstracter's note: Complete translation.]

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BRITAYEV, A.S.

Unsteady temperature field of waterdrops. Trudy TSAO no.17:3-14 '56.
(MIRA 10:3)

(Drops) (Atmospheric temperature)

Britayev, A.S.

AUTHORS: Khrgian, A.Kh., Britayev, A.S. 53-4-7/10

TITLE: The International Geophysical Year (Mezhdunarodnyy geofiziches-kiy god)

PERIODICAL: Uspekhi Fiz. Nauk, Vol. 62, Nr 4, pp. 475-483 (USSR)

ABSTRACT: First, the author gives a short report on the past geophysical years. Next, the organization of the present geophysical year is described. The object of the scientifical investigations of the international geophysical year is the solution of those most important planetarial problems of geophysics which demand simultaneous observations on the entire universe. The program of the works during the international geophysical year include the most important branches of modern geophysics: meteorology, terrestrial magnetism, polar phenomena and luminescence of the sky at night, ionosphere, solar activity, cosmic radiation, determination of longitudes and latitudes, glacialogy, oceanography, seismology and gravitation. The various investigations are, however, combined by the leading ideas to a whole. Increased observations shall take place during the so-called "regular world days" (full moon, solar eclipse, increased falling of meteors, etc.). An important place is occupied during the international geophysical year by the investigation of the circulation of the atmosphere;

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special attention is devoted to the antarctic. The exact determination of time and longitudes by means of astronomical methods is connected with the problem of the entire circulation of the atmosphere. Rotation of the earth becomes slower within the course of centuries , and, besides there exist fairly regular annual fluctuations of the duration of the day. Whilst the angular momentum of the earth remains constant, either the moment of inertia or the relative velocity of the rotation of the atmosphere changes. Here the actual velocities of wind on the entire earth have to be taken into account. The longitudinal determinations of various observatories have to solve the problem of the motion of the continents. A further complex of problems is connected with solar radiation received by the earth. With this also the reflection of solar radiation by the earth is connected. The investigation of the spectra of the polar phenomena, luminescence of the night sky and the corona are of great importance. Further fields of research are mentioned.

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3(7) SOV/50-58-10-4/20

AUTHORS: Britayev, A. S., Iozenas, V. A., Kuznetsov, A. P.

TITLE: On the Relationship Between the Total Ozone Content and Meteorological Conditions (K voprosu o svyazi obshchego soderzhaniya ozona s meteorologicheskimi usloviyami)

PERIODICAL: Meteorologiya i gidrologiya, 1958, Nr 10, pp 24-29 (USSR)

ABSTRACT: The increasing interest in the problem mentioned in the title, in particular in connection with the International Geophysical Year, is not in accordance with the few data available on it. The most usual methods of ozone determination (according to direct sunlight and disperse light in the zenith) are limited by dull and cloudy weather (Refs 1,3,4). The determination of an interrelation between the ozone content and the synoptic processes requires continuous ozone measurements for a number of days (Refs 5-8). This is only possible in certain areas with a maximum of sunny days. In view of these facts, the Tsentral'naya aerologicheskaya observatoriya (Central Aerological Observatory) investigated the fluctuations in the ozone content as mentioned in the title. As the most suitable area that of Nizhneye Povolzh'ye (lower Volga region) was chosen. The period between April 27 and June 8 (1957) corresponds to the highest seasonal intensity of the ozone content (Refs 1,5).

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On the Relationship Between the Total Ozone Content and Meteorological Conditions

A photoelectric spectrophotometer (according to Dobson, modified) was designed by the Moskovskiy gosudarstvennyy universitet imeni M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov) and used as main device for measurements. The total content of ozone was determined according to formula (1), by means of formula (2). Table 1 presents the average values obtained. Figure 1 gives these values in connection with atmospheric pressure on the earth's surface and with the altitude of the tropopause. It may be seen from it that the higher the tropopause the less ozone is contained in the atmosphere, and vice versa. Furthermore, high ozone quantities tend to occur during a low pressure on the earth's surface, this dependence, however, being less pronounced than that on the tropopause. The relation between temperature at an altitude of 2 m and the ozone content is more difficult to be established. The results obtained confirm the relationship between the processes in the troposphere and in the lower stratosphere. It follows from it that the variations of atmospheric conditions in lower layers are one of the principal causes of the variations in the layers up to an altitude of 20-25 km. These data are further indicative of the fact that ozone is not being suddenly destroyed but within dozens of

hours. These rules suggested above are illustrated and explained by examples in dependence on some atmospheric processes in the course of the observation period.-There are 1 figure, 1 table, and 9 references, 5 of which are Soviet.

BRITAYEV, A.S.

3(7) PHASE I BOOK EXPLOITATION SOV/3030

Leningrad. Tsentral'naya aerologicheskaya observatoriya

Nekotoryye voprosy fiziki oblakov (Some Problems in Cloud Physics) Moscow, Gidrometeoizdat (otd.) 1959. 94 p. (Series: Its: Trudy, vyp. 30) 650 copies printed.

Sponsoring Agency: Glavnoye upravleniye gidrometeorologicheskoy sluzhby.

Ed. (title page): A.M. Borovikova; Ed. (inside book): M.I. Sorokina; Tech. Ed.: T. Zemtsova.

PURPOSE: This collection of articles is intended for meteorologists and geophysicists.

COVERAGE: This is a collection of seven articles on problems in cloud physics. All articles were written between 1955-1958 but their publication was withheld for technical reasons. Individual articles discuss the origin of the subfrontal section in warm front cloud systems, radar scattering by non-spherical particles, unipolar charges in aerosols and atmospheric electricity, and the conditions of

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ice crystal growth in the free atmosphere. A base line theodolite method for surveying clouds is described, and a compound for obtaining replicas of cloud elements discussed. References accompany individual articles.

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Some Problems in Cloud Physics SOV/3030

Kondrat'yev, N.N. The Method and Results of Base Line Theodolite Surveying of Clouds 84

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3.5120

AUTHORS: Britayev, A. S., and Kuznetsov, A. P.

TITLE: Vertical distribution of ozone

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 14-15, abstract 12B99 (Tr. Tsentr. aerol. observ., 1959, no. 32, 28-35)

TEXT: The results are given for measurements of the overall content and vertical distribution of ozone over the southern part of the Union's European territory in April-June, 1959, from terrestial observations of direct solar radiation and of UV-radiation scattered from the zenith of a clear sky. The measurements were accomplished with the help of a photoelectric spectrophotometer with a two-fold resolution of light by quartz prisms assembled according to the scheme of Dobson. The temperature, pressure, and direction and velocity of the wind at the surface were simultaneously measured by standard meteoro-

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Vertical distribution...

instruments, and the amount and form of the cloudiness and optical phenomena in the atmosphere were also visually observed. A thermoelectric actinometer was used to estimate the atmosphere's transparency. Air streams, the heights of the tropopause, and atmospheric fronts were established on the grounds of the radioprobe data of neighboring stations and from maps of the baric topography. The meteorologic data were subjected to processing and were compared with the overall content and vertical distribution of ozone in the atmosphere. Calculations of the total content of ozone were made from the Bouger formula, the vertical distribution being computed by the method of Hetz and Dobson with the arbitrary division of the atmosphere into the layers 0 - 5 km, 5 - 20 km, 20 - 35 km, 35- 50 km, and above 50 km. The ozone content in the layer above 50 km was assumed to equal zero, while in the low 5 km layer it was supposed to be equal to 1% per 1 km of the value of its overall content. The decrease in the air temperature in the layer 3 km

Vertical distribution...

beneath the tropopause is revealed when the total ozone content increases with the correlational relation equal to - 0.54. The increase in the total ozone content is accompanied by the warming of the air in the 4 km layer above the tropopause, the coefficient of correlation in this case comprising + 0.48. A low tropopause corresponds to a high ozone content: the appearance of extreme values for the height of the tropopuase almost always precedes by approximately one day the appearance of extreme values for the total ozone content. The character of the vertical distribution of ozone is related to its overall content: as a rule, the higher the quantity of ozone in the atmosphere, the lower the center of gravity and the wider the ozone layer; the curve of the vertical distribution with a sharply expressed maximum concentration and a comparatively high center of gravity, on the contrary, corresponds to a low total content. The sinking of air with a high ozone concentration into the atmosphere's lower layers occurs when the height of the center of gravity of the ozone layer decreases simultaneously with the increase in

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Vertical distribution...

its total content. The ozone concentration in the ozonosphere's upper layers thereby somewhat decreases, but in the lower layers it grows substantially. [Abstracter's note: Complete translation.]

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34501
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3,5120

AUTHORS: Britayev, A. S. and Kuznetsov, A. P.

TITLE: Some results of research on atmospheric ozone

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1962, 14, abstract 2B116 (Tr. Tsentr. aerol. observ., no. 37, 1960, 3-4)

TEXT: The measurement method is described together with some results of research on variations of the total content and concentration of ozone in connection with physical processes in the atmosphere. The observations on atmospheric ozone were made at the Tsentral'naya aerologicheskaya observatoriya (Central Aerologic Observatory) from 1957 by means of a Dobson-type photoelectric spectrophotometer and an electrochemical analyzer designed at the CAO. Measurements of the amount of ozone on days with cloudy weather were accomplished by spectrometrically observing the light scattered from the zenith of the cloudy sky. The magnitudes of the total ozone content were, thereby, determined from transition dia-

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Some results of research ...

grams, constructed from the data of simultaneous observations for direct solar radiation and for radiation scattered from the zenith of the cloudy sky on days with variable cloud. The use of this method permitted the tracing of ozone variations in connection with synoptic processes, whose passage in middle latitudes is usually accompanied by the formation of cloud. It is established that starting from January of each year the ozone content over Moscow increases to reach maximum values in the spring -- in March-May -- thereafter decreasing to minimum values at the end of autumn and beginning of winter. The average yearly value of the amount of ozone above Moscow, calculated with allowance for the Vigru coefficients, comprises 0.347 cm, the variational range of the average monthly values being about 0.13 cm; the maximum value (May 1957) was 0.434 cm, and the minimum (December 1958) was 0.273 cm. As a result of statistically studying 110 cases of ozone observations at the time of airmass interchange it is established that the passage of a warm front is often accompanied by a drop in the quantity of ozone in the atmosphere, while the passage of a cold front is frequently accompanied by the growth of the ozone concen-

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tration. The passage of an occluded front is either marked by no variation whatsoever in the ozone concentration or else is accompanied by the increase or reduction of the total ozone content over the point of observation. Together with changes in the ozone quantity which are in agreement with Dobson's scheme, instances of ozone fluctuations supplementing or contradicting it are noted regularly. Cases of the weak rise in the amount of ozone behind a warm front and of the decrease in the total ozone content behind a cold front were detected in particular. It is established that there is a link between variations in the total ozone content and vertical air-currents in the atmosphere: descending air-currents are accompanied by in increase in the total ozone content, and vice-versa. It is shown that variations in the concentration of ozone in the air near the ground surface usually coincide with those of the total content, although instances are observed, too, where these two quantities deviate from the coordinated course. 13 references. /Abstracter's note: Complete translation./

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35120

AUTHORS: Kuznetsov, A. P., and Britayev, A. S.

TITLE: Observations on the vertical distribution of ozone over Moscow

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 12, 1961, 15, abstract 12B100 (Tr. Tsentr. aerol. observ., 1960, no. 37, 8-12)

TEXT: The observational methods are stated together with some results of investigating the vertical distribution of ozone over Moscow. Observations were conducted with a photoelectric spectrophotometer of the Dobson type which separates two light rays with wavelengths of 3114 and 3326 Å and spectral intervals of 10 and 14 Å. The vertical distribution of ozone was calculated from measuring the relative intensity of these two rays

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Observations on the...

of scattered light at high zenith angles of the sun in accordance with the method proposed by Walton. The amount of ozone in the lower 12 km layer was assumed to equal 8.5% of the value of its total content, determined from direct sunlight. The exponential decrease in the amount of ozone with altitude was proposed for the layer above 36 km. The absorption coefficients of Viger were used in the calculated solution of the problem; the data on the density of air to a height of 25 - 26 km were determined from tables of aerologic probing, those for greater altitudes being taken from tables of the standard atmosphere. As a result of the calculations, it is shown that the introduction of the new absorption coefficients of Viger instead of the previously used coefficients of Ni Tzi-ze and Chung Shin-pau increases the ozone concentration in all the ozonosphere's layers by approximately one-third. The patterns of the connection of the total quantity of ozone with the meteorologic elements are preserved. The number of cases when the solution of the equa-

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Observations on the...

tions does not lead to definite results has increased. Therefore, the perfection of methods for processing the material of terrestrial spectrometric data and the more precise definition of the coefficient of absorption continue to remain urgent problems. The height of the ozone layer's center of gravity has increased in comparison with previous data, which is evidently explained by the new arbitrary subdivision of the atmosphere into layers for which the ozone concentration is being determined. [Abstracter's note: Complete translation.]

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3,5120

AUTHOR: Britayev, A. S.

TITLE: Measuring the concentration of atmospheric ozone by chemical and electrochemical methods

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1962, 15, abstract 2B117 (Tr. Tsentr. aerol. observ., no. 37, 1960, 13-23)

TEXT: Existing chemical and electrochemical methods of ozonometry are analyzed, and a new means of determining the concentration of ozone in air is proposed; this is simpler and more reliable than the procedure used for analogous purposes abroad. The reaction in which ozone is oxidized by potassium iodide

$$O_3 + 2KI + H_2O \quad I_2 + O_2 + KOH \qquad (1)$$

in a neutral solution containing a definite quantity of sodium

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Measuring the concentration ...

thiosulfate for combining gaseous iodine

$$I_2 + 2Na_2S_2O_3 \quad 2NaI + Na_2S_4O_6 \qquad (2)$$

is taken as the basis of the method. In the measurement the air being analyzed for ozone is drawn out by means of an electric aspirator through a filter and a vessel with the measuring solution and a gas meter. The reaction proceeds in a glass measuring vessel with a cylindrical shape and a capacity of about 10 cm^3, provided with two platinum electrodes that each have an area 1 cm^2. The electrodes may be connected either to a measuring bridge or to the hydrogen-ion indicator's electronic meter. The bridge is supplied from a standard-signal generator with an alternating current of 1600 c/s in frequency in order to eliminate the influence of the electrolysis. When balancing the bridge the electric signals are amplified by a broad-band amplifier and recorded on the tube of a cathode oscillograph or on a galvanometer after their rectification.

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The solution's conductivity is established at a given stage of the reaction from the moment of balance of the bridge which corresponds to the minimum amplitude of a signal. The break of the graph of the relative magnitude of the conductivity in relation to the volume of air passing through the solution corresponds to the complete consumption of the sodium thiosulfate present in the solution. The amount of reacted ozone and its concentration in a given volume of air is calculated from the point of the break of the conductivity curve and from the equation of chemical reaction (2). The colorimetric method, which essentially consists of determining the change in the color of the reaction indicator on its oxidation by ozone, is simpler though less accurate. Color indicators like phenol, bromothymol, nitrophenol, phenolphthalein, and certain others may be used to determine relatively high concentrations of ozone in the air. In measurements by this method air being tested for ozone is passed through till the color changes in 10 cm^3 of a 2% potassium iodide solution to which several drops of one of these indicators have been added. The electrochemical method has been used since January 1959 at the Tsentral'naya aerologicheskaya observatoriya (Central Aerologic Observatory) to ascertain ozone

concentrations in the troposphere. The relation of the ozone concentration in air at the 2 m level to the magnitude of the total ozone content of the atmosphere was established as a result of the observations. The coordinated variation of these two quantities, depending on the vertical currents and on the variation of certain meteorologic characteristics, was detected at the time of airmass interchange. The diurnal variation of ozone at the 2 m level has a clearly expressed broad maximum in the hours around noon and a minimum at night and in the early morning. Sharp fluctuations of ozone near the ground surface are noted on days with changeable weather when the average-daily concentration values are relatively small. Since the ozone fluctuations do not always conform to the advective theory for these variations, it is suggested that an ozone source possibly exists near the ground surface. [Abstracter's note: Complete translation.]

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3,5120

AUTHORS: Yakovleva, A..V., Kudryavtseva, L. A., Britayev, A. S., Gerasev, V. F., Kachalov, V. P., Kuznetsov, A. P., Pavlenko, N. A., Iozenas, V. A.

TITLE: A spectrometric investigation of the ozone layer up to 60-km altitude

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli. no. 14, 1962, 57 - 68

TEXT: The vertical distribution of ozone can be determined from the scattered ultraviolet radiation of the Sun, using reversal effect discovered by Götz, or by direct measurements from the ground surface and from balloons or rockets. In order to compare these indirect and direct methods, simultaneous measurements of altitude ozone distribution with a spectrograph lifted by a rocket and with a ground spectral equipment for observations of ultraviolet light scattered from the sky zenith, were carried out in the USSR on June 15, 1960. A photoelectric spectrophotometer with double light decomposition in

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A spectrometric investigation of the...

quartz prisms was used for observations from the ground surface. The amount of ozone in various atmospheric layers, total amount and the altitude of the gravity center of the ozone layer from these observations are shown in Table 1. The first ascent of a rocket for ozone measurements took place on July 19, 1955. It turned out that all ozone was concentrated in two layers: 13 - 26 km and 50 - 64 km, between which no ozone was detected. The second rise was on October 1, 1958, at a Sun's declination of 19°. The third attempt was made on June 15, 1960. A diffraction spectrograph provided with a tracking device was lifted on a geophysical rocket. The results of Soviet measurements are compared with American ones and presented graphically in Figure 5. Comparison between indirect determinations and measurements from rockets is shown in Figure 6; the agreement between them was found to be satisfactory, but the final answer on their equivalence can be obtained only after further investigations with rockets. There are 6 figures and 3 tables.

SUBMITTED: December 12, 1961

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Table 1. Concentration of ozone in various atmospheric layers according to data of ground measurements on June 15, 1960.

Altitude of layers, km	Content of ozone in the layer, cm	Content of ozone per 1 km, cm.km
0 - 12	0.0257	0.00214
12 - 24	0.1130	0.00942
24 - 36	0.1470	0.01225
36 - 42	0.0126	0.00210
42 - 48	0.00348	0.00058
48 - 54	0.000970	0.00016

Total content is 0.303 cm
The gravity center of the ozone layer is at 24 km.

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A spectrometric investigation of the...

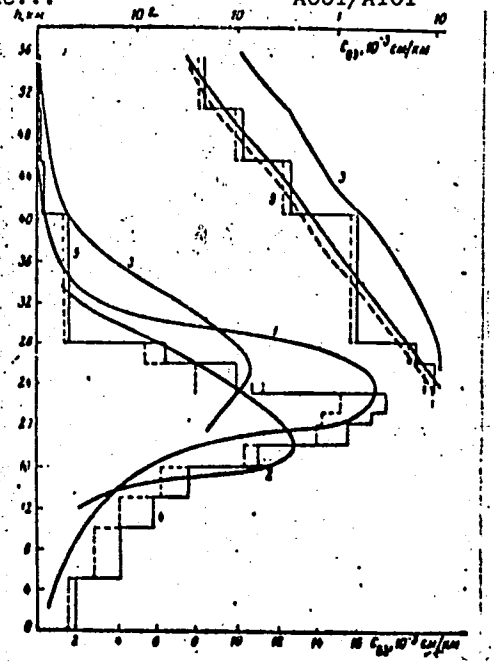

Figure 5. Rocket measurements of ozone vertical distribution
Legend: 1 - measurement of October 10, 1946 (USA);
2 - April 2, 1948 (USA);
3 - June 14, 1949 (USA);
4 - October 1, 1958 (USSR);
5 - June 15, 1960 (USSR).

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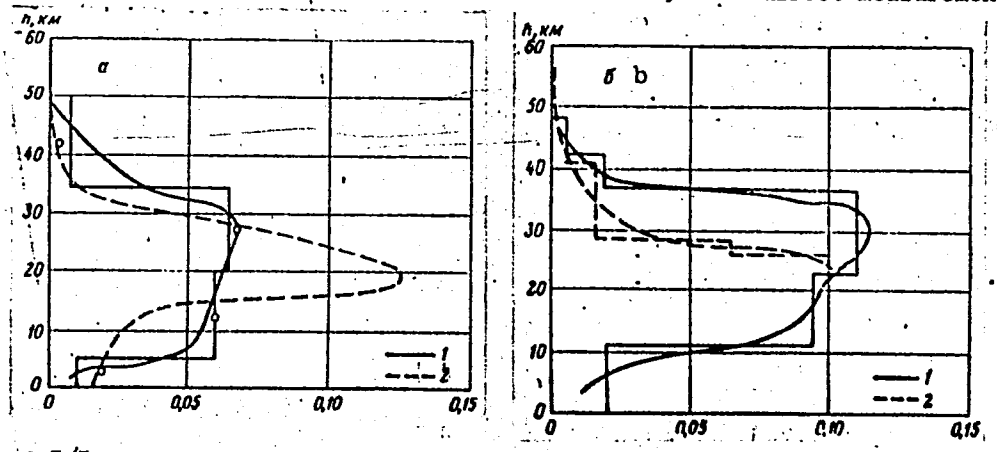
Figure 6. Comparison of data on ozone vertical distribution obtained in direct measurements from rockets and by calculations: a - measurements of April 2, 1948 (USA); b - measurements of June 15, 1960 (USSR)
Legend: 1 - calculation from the reversal effect; 2 - direct measurements.



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D263/D307

AUTHORS: Kuznetsov, A. P., Iozenas, V. A. and Britayev, A. S.

TITLE: Observations of the vertical distribution of ozone in the atmosphere over Moscow

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 13-14, abstract 2B108 (In collection: Atmosfern. ozon, M., Mosk. un-t, 1961, 55-60 (summary in Eng.))

TEXT: The method of calculation is described and some results are quoted of observations of the vertical distribution of ozone in the region of Moscow. The calculations were carried out from spectrophotometric observations of scattered uv radiation from the sun, from the zenith of a cloudless sky, by the method of Getts and Dobson. New coefficients for the absorption of light by ozone (after Virg) were used in the calculations, employing the arbitrary division of the atmosphere into five 12-km concentric layers as suggested by Walton. It was hence established that introduction of the new absorption coefficients increased the calculated ozone concentrations

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by ~1/3, whilst the nature of the relation of this quantity to meteorological elements remained unchanged. During the calculation of ozone distribution with height, the number of cases where solution of equations did not correspond to determined results was increased. Height of the maximum ozone layer was calculated as higher than suggested by previous data, which may probably be due to the new arbitrary subdivision of the atmosphere into layers. [Abstracter's note: Complete translation.]

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D263/D307

AUTHORS: Britayev, A. S. and Kuznetsov, A. P.

TITLE: On the connection of atmospheric ozone with meteorological conditions

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 2, 1963, 15-16, abstract 2B117 (In collection: Atmosfern. ozon, M., Mosk. un-t, 1961, 170-175 (summary in Eng.))

TEXT: The relations between the variation of the overall ozone content and oscillations of the tropopause layer, air, temperature, and vertical currents in the troposphere are studied by statistical analysis. It is shown that, for the region of Moscow, the correlation coefficient between ozone variations and the temperature of the 3 km layer under the tropopause is -0.54, and that between the ozone variations and the temperature of the 4 km layer above the tropopause it is 0.48. The descending currents of air, determined at the 1.5 and 3 km layers by the divergence of wind velocity and at heights of 3 to 28 km by the rotation rates of vanes of

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radiosondes is, as expected, accompanied by an increase in the overall concentration of ozone, whilst the ascending currents are accompanied by a decrease in the ozone content. The best agreements between the variations of these two quantities are found when data concerning the vertical aerial currents above 16 km are used; on the other hand, ozone variations are occasionally in agreement with the sign of the aerial current also in the troposphere. According to the authors, this may be due to the fact that in certain synoptic situations, such as in regions of cyclones and anticyclones, vertical currents of the same direction may cover a large part of the troposphere and extend into the stratosphere, reaching the ozone-rich layer. During the summer and winter months variations in the overall ozone content are related more closely to the vertical movements of air than to the horizontal transport. In intermediate periods, on the other hand, and particularly in the spring, the influence of advection and large scale turbulence plays the predominant part. Appearance of the spring maximum in the overall ozone concentration is connected chiefly with advection, and vertical movements of the air are then practically unconnected with ozone fluctuations. [Abstracter's note: Complete translation.]

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YAKOVLEVA, A.V.; KUDRYAVTSEVA, L.A.; BRITAYEV, A.S.; GERASEV, V.F.; KACHALOV, V.P.; KUZNETSOV, A.P.; PAVLENKO, N.A.; IOZENAS, V.A.

Spectrometric investigation of the ozone layer up to the altitude of 60 km. Isk.sput.Zem. no.14:57-68 '62. (MIRA 15:11)

(Ozone)
(Atmosphere, Upper—Rocket observations)

BRITAYEV, A.S.; KUZNETSOV, A.P.

Atmospheric ozone and some meteorological processes. Trudy TSAO no.45:22-31 '62. (MIRA 16:10)

BRITAYEV, A.S.

Measurements of the concentration of ozone in the troposphere and preliminary results of observation. Trudy TSAO no.45:32-37 '62. (MIRA 16:10)

BRITAYEV, A.S.; STEBLOVA, R.S.

Effect of solar radiation on the ozonosphere based on observation materials of the solar eclipse in February 15, 1961. Trudy TSAO no.45:38-43 '62. (MIRA 16:10)

BRITAYEV, A.S.

Modern methods of ozonometry. Trudy TSAO no.60:4-25 '64. (MIRA 18:5)

ACC NR: AR6032144 SOURCE CODE: UR/0169/66/000/006/B015/B016

AUTHOR: Britayev, A. S.

ORG: Central Aerological Observatory (Tsentral'naya aerologicheskaya observatoriya)

TITLE: Ozone in the atmosphere

SOURCE: Ref. zh. Geofizika, Abs. 6B119

REF SOURCE: Tr. Tsentr. aerol. observ., vyp. 66, 1965, 19-50

TOPIC TAGS: troposphere, ozone concentration, atmospheric ozone

ABSTRACT: Characteristics of ozone in the troposphere and the seasonal and diurnal changes in tis concentration are discussed. The annual ozone concentration in the ground layer of the atmosphere is given for various places on the globe. The maximum annual ozone concentration rate in the Northern Hemisphere was found at the end of spring and beginning of summer; the minimum rate occurs in autumn and winter. The quantity of ozone in the ground layer of the atmosphere is less above continents than oceans. The amplitude of the annual rate increases with land distance from the ocean. A sharp decrease of ozone concentration was observed moving from polar latitudes to middle latitudes. The ozone

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