"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

LUKHTAN, I.V.; SMOLYANSKAYA, L.M. [Smoliansʼka, L.M.]; ILʼCHENKO, F.F.; SHUSTER, S.I.; SHATAYKIN, S.P.; BOKSERMAN, Ye.I. [Bokserman, IE.I.]; CHIZHMAKOVA, V.P. [Chyzhmakova, V.P.]

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BOKSERMAN, Ye.I. [Bokserman, IE.I.]; BALK, E.Ye. [Balk, Ye.Yu.]; CHIZHMAKOVA, V.P.

New methodology for the evaluation of the hygrothermal resistance of leather. Leh. prom. no.3:30-31 Jl-S '65. (MIRA 18:9)

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Work of the Dnepropetrovsk Administration of Gas Mains. Gaz.prom. 5 no.10:34-37 O '60. (MIRA 13:10)
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16G53

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"Liquifaction of Saratov Gas," Yu. I. Bokserman, Engr, 4 pp

"Gorod Khoz Moskvy" Vol XXII, No 1

Discusses problems of accumulation of natural gases being brought on Saratov-Moscow line at rate of 54-55 thousand cubic meters an hour, and which must be stored for use during peak hours and peak seasons. Discusses liquifaction as acceptable solution. Engineers sketch of a plant for liquifaction of natural gas. Refers to construction of two new gas lines to Moscow: one from gasification plant to be

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Fuel

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BOKSERMAN, Yuriy Izraillevich; TREBIN, F.A., professor, doktor tekhnicheskikh nauk, redaktor; NOVIKOVA, M.M., vedushchiy redaktor; KHLEBNIKOVA, L.A., tekhnicheskiy redaktor

[Natural gases and their utilization] Prirodnye gazy i ikh ispol'zovanie. Pod red. F.A.Trebina. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 257 p. (MLRA 10:7)
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1362. PROBLEMS OF NEW TECHNIQUE IN THE GAS INDUSTRY IN THE SIXTH FIVE YEAR PLAN (1956-60). Bokserman, Yu.I. (Rep. to Scientific and Technical Society of the Oil Industry (NTO NP), Moscow, Dec. 1956) abstr. in Gas. Prom. (Gas Ind., Moscow), Feb. 1957, 38, 39). - Owing to the opening up of new natural gas fields in North Caucasus, Ukraine, the Volga valley, Ukhta etc, production is expected to rise to 50,000 million cu. m. in 1960. The first stage of the Stavropol-Moscow pipe line was completed in 1956. This will raise the percentage of gas in the fuel balance of Moscow to 17% and the construction in 1957-58 of a second pipe and 9 compressor stations will raise it to 72%. By 1960 the 8 million tons of coal now brought into Moscow annually will be reduced tenfold; domestic consumers will all have gas, and so will the bulk of industry.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, YURIY ISRAIL'YEVICH

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Prirodnyye gazy i ikh ispol'zovaniye (Natural gas and its utilization) Moskva, Gostoptekhizdat, 1957.

257 (2) p. illus., diagrs., graphs, tables.

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Development of the transportation of gas in pipelines in the U.S.S.R. Gaz.prom. [no.11]:15-18 '57. (MIRA 10:12)
(Gas, Natural--Pipelines)

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BOKSERMAN, Yuliy Izrailevich.; YERSHOV, P.R., ved. red.; POLOSINA, A.S., tekhn. red.

[Development of the gas industry in the U.S.S.R.] Razvitie gazovoi promyshlennosti SSSR. Moskva, Gos. nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1958. 128 p. (MIRA 11:10)
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Bokserman, Yuriy Israilevich

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128 p. Illus., Diagrs., Graphs, Tables. 22 cm.

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.22(b) PHASE I BOOK EXPLOITATION SOV/1068

Ministerstvo gazovoy promyshlennosti SSSR. Vsesoyuznoye nauchno-issledovatel'skoye

Pod redaktsiyey gazovoy promyshlennosti SSSR. Vsesoyuznoye nauchno-issledovatel'skoye (Trends in the Development of the Gas Industry in the USSR; Materials Presented at the All-Union Conference) Moscow, Gostoptekhizdat, 1958. 452 p. 3,000 copies printed.

Eds: A.B. Beerts, B.S. Tkachenko, P.S. Bondarenko, Ye.A. Krems, V.I. Popov, V.I. Rudnev, E.I. Rybakov, P.A. Shmarov, A.S. Zel'nevich; Resp. Eds.: E.I. Gorgonenko and E.E. Reviman; Tech. Ed.: E.A. Mukhina; Editorial Board: E.V. Milovanov (Chief Ed.), E.S. Kazanko, Ye.A. Krems, V.I. Rudnev, and E.I. Rybakov.

PURPOSE: The book is intended for specialists engaged in the production and gathering of natural gas, the extraction of gas from coal and shale, the construction and operation of trunk gas pipelines, gas supply to cities, and the processing of gas.

Card 1/11

COVERAGE: The authors review the basic trends in the development of the USSR gas industry, the prospecting and exploration of new gas deposits, the gasification of solid fuels, the gathering and utilization of natural gas, the automation of gas field operations, the exploitation of gas wells, and ways to increase output. They further discuss the processing of natural gas with application of refrigeration, the experience gained in the laying and operating of trunk gas pipelines, the automation of gas pipeline operation, and underground gas storage facilities. There are no references.

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BOKSERMAN, Yu.I.

Great prospects for the development of the gas industry in the U.S.S.R. Stroi. pred. neft. prom. 3 no.1:1-3 Ja '58.
(MIRA 11:3)

1.Zamestitel' nachal'nika Glavnogo Upravleniya Gazovoy promyshlennosti pri Sovete Ministrov SSSR.
(Gas, Natural)

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BOKSERMAN, Yu.I.

Introduce new methods on a large scale in the gas industry.
Stroi. truboprov. 3 no.10:1-3 O '58. (MIRA 11:11)

1. Zamestitel' nachal'nika Glavgaza SSSR.
(Gas, Natural)

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BOKSERMAN, Yu.

The use of natural gas in the national economy. Sov.profsoiuzy 6 no.16:25-29 N '58. (MIRA 12:2)

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BOKSERMAN, Yu.I.

Natural gas is the most important raw material for the development of the chemical industries. Gaz. prom. no.8:1-4 Ag '58. (MIRA 11:8)

(Natural gas) (Chemical industries)

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11(3) Berman, Yu. I. PHASE I BOOK EXPLOITATION SOV/2254

Nauchno-teknicheskoye obshchestvo energeticheskoy promyshlennosti Moskovskoye pravleniye

Ispol'zovaniye gaza v promyshlennykh pechakh i kotel'nykh ustanovkakh g. Moskvy i Moskovskoy oblasti; materialy Moskovskogo nauchno-tekhnicheskogo soveshchaniya (Utilization of Gas in Industrial Furnaces and Boiler Units in Moscow and Moscow Oblast'; Materials of the Moscow Scientific and Technical Conference) Moscow, Gostoptekhizdat, 1959. 227 p. Errata slip inserted. 5,000 copies printed.

Ed.: D. B. Ginzburg, Doctor of Technical Sciences; Exec. Ed.: N. I. Stepanchenko; Tech. Ed.: A. S. Polosina.

PURPOSE: This collection of articles is intended for specialists engaged in designing and operating gas units of industrial enterprises and electric power plants.

COVERAGE: The change-over in some industrial enterprises from solid and liquid fuel to natural gas is discussed and further possibilities existing along this line are examined. Advantages of using natural gas as a source of energy are outlined. Different gas burner systems, devices for automatic control of the combustion process, structural features of furnaces operating on natural

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gas, gas-supply systems and the introduction of safety measures in the construction and operation of gas units are described. The book contains many diagrams of gas-supply systems and equipment. No personalities are mentioned. One article is followed by references.

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BOKSERMAN, Yu.I.; BORISOV, A.A.; BROD, I.O.; VASIL'YEV, V.G.; YELIN, N.D.; [redacted], N.S.; KUDRYASHOVA, N.M.; L'VOV, M.S.; MIRCHINK, M.F.; MURATOVA, A.T.; NEVOLIN, N.V.; SOKOLOV, V.L.; TROFIMUK, A.A.; YERSHOV, P.R., vedushchiy red.; TROFIMOV, A.V., tekhn.red.

[Gas resources of the U.S.S.R.] Gazovye resursy SSSR. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 350 p. (MIRA 12:8)

(Gas, Natural)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, Yu.I.

11(2) PHASE I BOOK EXPLOITATION SOV/2253

Vsesoyuznyy nauchno-issledovatel'skiy institut prirodnykh gazov

Razrabotka i ekspluatatsiya gazovykh mestorozhdeniy, transport gaza (Development and Exploitation of Gas Fields, Transportation of Gas) Moscow, Gostoptekhizdat, 1959, 353 p. (Series: Its: Trudy, vyp. 5/13/) Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Glavnoye upravleniye gazovoy promyshlennosti pri Sovete Ministrov SSSR.

Eds.: Ye. M. Minskiy and V.N. Raabov; Exec. Ed.: N.P. Martynova; Tech. Ed.: A.S. Polosina.

PURPOSE: This collection of articles is intended for scientists, engineers, and technicians associated with the gas industry.

COVERAGE: The articles discuss the development of gas fields, natural gas recovery, gas transportation, and subsurface gas conservation. Gas field operating conditions are analyzed from the commercial point of view. The author notes that due to the specific geological conditions prevailing in the Soviet Union the application of gas extraction methods of the type used in the USA is not always advantageous. Individual articles discuss problems of the development of gas fields with narrow oil containing fringes, the theory of gas inflow, the study of gas well performance, gas filtration dynamics, and the study of gas condensates. A number of articles are devoted to the study of unstabilized gas flow in pipelines, and discuss theoretical problems connected with the performance of gas ejectors and compressors. The authors also deal with corrosion of the inner surface of gas pipelines. Conclusions made by the authors are supported by mathematical calculations. No personalities are mentioned. References accompany each article.

Khodanovich, I.Ye., and F.G. [illegible]. On the Automodel Determination of Gas Flow in Pipelines 201

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3(8)

SOV/10-59-4-5/29

AUTHOR: Bokserman, Yu.I.

TITLE: The Development and Distribution Problems of the Gas Industry During the 1959-65 Period

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geograficheskaya 1959, Nr 4, pp 46-54 (USSR)

ABSTRACT: The article deals with the development and distribution problems of the gas industry during 1959-65, sometimes supplying data up to 1972. While oil production is scheduled to rise from 113 million tons in 1958 to 230-240 million by 1965, the figures for gas are 30 and 150 billion cu m respectively. As a result, the combined oil and gas share in the fuel volume will rise from the present-day 31 % to 51 % by 1965. By 1972, oil production is to reach 400 million tons, whereas that of gas - about 270-320 billion cu m. The research organizations of the Glavgaz USSR estimate Soviet gas reserves at 18-20

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The Development and Distribution Problems of the Gas Industry During the 1959-65 Period

trillion cu m which greatly exceeds that of the USA. Ten trillion cu m are supposed to be in those areas, where the gas production is already under way (Ukraine - 1.8 trillion cu m, Northern Caucasus - 1.8 trillion, Volga region - 2.8 trillion, Bukhara and Khiva district - 2 trillion, Azerbaydzhan - 0.8 trillion, and Ukhta region - 0.8 trillion, whereas the remaining ten trillion have not yet been tapped and are supposed to be in Siberia (6.2 trillion cu m), in the Turkmenskaya SSR (2.5 trillion), and in the Caspian depression (1 trillion). The industrial reserves of gas must last for at least 20 years, with a minimum of 3.3 trillion cu m of gas by the end of 1965. The total length of gas pipelines will reach 40,000 km, with 50 million people using natural gas for household purposes by that time. There are 7 tables, 1 map sketch, and 2

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The Development and Distribution Problems of the Gas Industry During the 1959-65 Period

Soviet references.

ASSOCIATION: Glavnoye upravleniye gazovoy promyshlennosti pri Sovete Ministrov SSSR (Central Administration of the Gas Industry of USSR Council of Ministers)

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BOKSERMAN, Yu.I.; ZANEMBO, K.S.; OKHRIMENKO, Ye.P.

Studying the corrosion of inside surfaces of steel pipes for gas pipelines. Trudy VNIIGAZ no.5:304-322 '59. (MIRA 12:9)

(Pipe, Steel) (Corrosion and anticorrosives)

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Development of the U.S.S.R. gas industry in 1959-1965.
Geog.v shkole 22 no.4:13-18 Jl-Ag '59. (MIRA 12:11)
(Gas, Natural)

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Technical progress is the basis for a successful development of the gas industry. Gaz.prom. 5 no.1:9-12 Ja '60. (MIRA 13:4)

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BOKSERMAN, Yu.I.

Construction of compressor stations is the most important objective in expanding the gas industry. Stroi.truboprov. 5 no.11:1-3 N '60. (MIRA 13:11)
(Gas industry) (Gas, Natural--Pipelines)

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BOKSERMAN, Yuliy Izrailevich; YERSHOV, P.R., ved. red.; VORONOVA, V.V., tekhn. red.

[Gas supply of the national economy and technical progress] Gazosnabzhenie narodnogo khoziaistva i tekhnicheskii progress. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1961. 92 p. (MIRA 14:12)

(Gas distribution)

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BOKSERMAN, Yu.I.; ZAREMBO, K.S.; SHEVELEV, B.P.

Anticorrosive insulation of the inner surface of gas pipelines. Gaz.prom. 6 no.5:32-37 My '61. (MIRA 14:5)
(Gas, Natural--Pipelines)
(Corrosion and anticorrosives)

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BOKSERMAN, Yu.I.

Toward further improvements in the use of natural gas in the national economy. Gaz. prom. 7 no.3:1-3 '62. (MIRA 17:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

SOROKIN, Aleksey Ivanovich; GROZOV, Nikolay Vasil'yevich; STEPANOV, Aleksandr Makarovich; STAROSTIN, Yevgeniy Il'ich; CHERNYAK, Lev Mikhaylovich; SVYATITSKAYA, K.P., vedushchiy red.; BOKSERMAN, Yu.I., red.; YAKOVLEVA, Z.I., tekhn. red.

[Liquefied gases in England; their transportation, storage, uses] Szhizhennye gazy v Anglii; transport, khranenie, ispol'zovanie. Moskva, Gostoptekhizdat, 1963. 140 p. (MIRA 16:6)
(Great Britain--Liquefied petroleum gas)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

SOROKIN, Aleksey Ivanovich; GROZOV, Nikolay Vasil'yevich; STEPANOV, Aleksandr Makarovich; STAROSTIN, Yevgeniy Il'ich; CHERNYAK, Lev Mikhaylovich; BOKSERMAN, Yu.I., red.; SVYATITSKAYA, K.P., ved. red.; YAKOVLEVA, Z.I., tekhn. red.

[Liquefied gases in England; their transportation, storage, uses] Szhizhennye gazy v Anglii; transport, khranenie, ispol'zovanie. Moskva, Gostoptekhizdat, 1963. 140 p. (MIRA 16:10)

(Great Britain--Liquefied petroleum gas)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, Yu.I.; LATUKHINA, Ye.I., ved. red.

[Methods for developing new equipment in the gas industry of the Soviet Union] Puti razvitiia novoi tekhniki v gazovoi promyshlennosti SSSR. Moskva, Izd-vo "Nedra," 1964. 311 p. (MIRA 17:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, Yu.I.

Centennial of the national oil and gas industry. Stroi. truboprov. no.9:1-3 S '64. (MIRA 17:10)

1. Zamestitel' predsedatelya Gosudarstvennogo proizvodstvennogo komiteta po gazovoy promyshlennosti SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, Yu.I.

Editorial. Gaz. prom. 9 no.11:1-3 '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSERMAN, YURIY IZRAILEVICH

Gazosnabzheniye narodnogo khozyaystva i tekhnicheskiy progress. Moskva, Gostoptekhizdat, 1961.
92 [2] p. illus., diagrs., graphs, maps, tables.
Bibliography: p. [94]

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

L 25253-65 EWT(m)/EWP(t)/EWP(b) Pad IJP(c) JD/HW/JG

ACCESSION NR: AP5004339 S/0070/65/010/001/0059/0062

AUTHOR: Yemel'yanova, Ye. N.; Grum-Grzhimaylo, S. V.; Boksha, O. N.; Varina, T. M.

TITLE: Synthetic beryllium containing V, Mn, Co, and Ni

SOURCE: Kristallografiya, v. 10, no. 1, 1965, 59-62

TOPIC TAGS: hydrothermal synthesis, absorption spectrum, isomorphous crystal, alkali solution

ABSTRACT: Beryllium single crystals with admixtures of V, Mn, Co and Ni in boron compounds (H_3BO_3 and $N_2B_4O_7$) were synthesized by the hydrothermal method. The absorption spectra of the obtained crystals were studied at room as well as low temperatures in order to determine which of the admixtures in the crystal are isomorphous, and what is their valency. It was found that in boric acid solutions it is totally dissolved and crystallized in the form of other alumosilicates such as cancrinite, nepheline, and albite. Orig. art. has: 2 figures.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography, AN SSSR); Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University)

Card 1/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

L 25253-65

ACCESSION NR: AP5004339

SUBMITTED: 20Apr64 ENCL: 00 SUB CODE: SS, IC

NO REF SOV: 007 OTHER: 008

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

LOKHANIN, G.N.; SINITSYN, V.I.; SHTAN', A.S.; MATVEYEVA, A.V., red.; BOKSHA, R.V., red.; MAZEL', Ye.I., tekhn. red.

[Protective equipment and devices for working with radioactive substances] Zashchitnoe oborudovanie i prisposobleniia dlia raboty s radioaktivnymi veshchestvami. Moskva, Gos. izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 129 p. (MIRA 14:11)
(Radiation protection)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BALABUKHA, V.S., prof.; RAZBITNAYA, L.M.; RAZUMOVSKIY, N.O.; TIKHONOVA, L.I.; BOKSHA, R.V., red.; POPOVA, S.M., tekhn. red.

[Problem of drawing long-lived radioisotopes out of the body] Problema vyvedeniia iz organizma dolgozhivushchikh radioaktivnykh izotopov. Moskva, Gosatomizdat, 1962. 166 p. (MIRA 15:8)

(RADIATION PROTECTION)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

GOL'DENBLAT, Iosif Izrailevich; NIKOLAYENKO, Nikolay Aleksandrovich; BOKSHA, R.V., red.; POPOVA, S.M., tekhn. red.

[Calculation of thermal stresses of nuclear reactors]Raschety temperaturnykh napriazhenii v iadernykh reaktorakh. Moskva, Gosatomizdat, 1962. 158 p. (MIRA 15:11)
(Nuclear reactors)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, S. S.

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical analysis. Phase transitions. B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29909

Author : Butuzov V. P., Boksha S. S., Gonikberg M. G.
Inst : Academy of Sciences ~~USSR~~
Title : Polymorphous Transformations of Phosphorus at Super-High Pressure

Orig Pb : Dokl. AN SSSR, 1956, 108, No 5, 837-840

Abstract: A system has been worked out for the investigation of polymorphous transformations in super-high pressure units, with continuous automatic recording of temperature changes, which makes it possible to determine slight thermal effects. An investigation has been made of the behavior of black crystalline phosphorus at super-high pressures (20000 kg/cm^2) and high temperatures (1200°), but no new modifications of phosphorus were obtained; on an increase of the pressure there takes place only a uniform rise of the fusion temperature of black crystalline phosphorus. At 18000 kg/cm^2 the temperature

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

Category: USSR / Physical Chemistry
Thermodynamics. Thermochemistry. Equilibrium. Physico-chemical analysis. Phase transitions. B-8

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 29909

of fusion of phosphorus reaches about 1000°. Investigation of the behavior of red phosphorus revealed that at 4000 kg/cm² and about 600° the formation of a new modification of phosphorus takes place, which is reversible and has a small thermal effect.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, S. S.

In the article, "A New Method of Obtaining Extremely High Gas Pressures," by S. S. Boksha, a description and drawing is given of a pistonless thermal compressor in which "all the shortcomings of more complex installations are either wholly or partially eliminated."

The compressor operates on the principle of the expansion of a pressurized gas heated in stages of four progressively smaller, electrically heated steel cylinders, which are interconnected by a steel tube through which gas can flow in one direction only. Gas (nitrogen) at a temperature of 800 degrees centigrade and a pressure of 150 atmospheres, in the pressurized tank at the beginning of the cycle, can be brought to a pressure of 2,500 atmospheres in the final (4th) cylinder. The cylinders are made of YalT stainless steel; their volumes are 2,130, 1,360, 500, and 480 milliliters. The cooling jacket surrounding the cylinders holds 1.5 cubic meters of water; during operation, the temperature of the cylinders increases only 40-50 degrees.

The compressor is ready for use in laboratory work as well as in industry. (Kristallografiya, Vol 2, No 1, 57, pp 198-200) (U)

Sum. 1391

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3

Polymorphous transformations of phosphorus at ultrahigh pressures. V. P. Butuzov, S. S. Boksha, and M. G. Gonikberg. *Doklady Akad. Nauk* ~~S.S.S.R.~~ 108, 837–40 (1956).—The polymorphous transformations of P were studied at pressures of up to 23,000 kg./sq. cm. and at temps. up to 250°. Industrial grade of yellow P failed to undergo polymorphous transformations, which was attributed to the presence of sol. impurities. With purified yellow P, the formation of black cryst P (Bridgman, *C.A.* 8, 3160; Jacobs, *C.A.* 32, 415[1]) was confirmed. A special app. was designed for the study of the transformation thermal effects at temps. up to 1200°, and at ultrahigh pressures, and the thermogram of conversion of the yellow into black P recorded no addnl. modifications of P. The m.p. of black P rises smoothly with rise in pressure, and is about 1000° at 18,000 kg./sq. cm. A new reversible modification of red P was observed on the thermogram at 4000 kg./sq. cm. and 600°. The automatic temp.-recording method developed may be useful in similar studies also.

W. M. Sternberg

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

Beksha, S. S.

533.1 : 539.893

2862. A NEW METHOD OF PRODUCING SUPER-HIGH GAS PRESSURES / S.S.Beksha. Kristallografiya, Vol. 2, No. 1, 198-200 (1957). In Russian.

A number of cylinders are provided with internal heating and connected in series by means of non-return valves. Gas is introduced into the system and the pressure in the final cylinder built up by the cyclic heating of the cylinders and the introduction of fresh gas. In an example quoted, the pressure of nitrogen gas was built up from 150 atm to 2000 atm. R.F.S.Hearmon

2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

SOV-120-58-3-21/33

AUTHORS: Boksha, S. S., Shakhovskoy, G. P.

TITLE: An Apparatus for Obtaining Ultra High Pressure and Simultaneously High Temperature (Apparatura sverkhvysokogo davleniya s odnovremennym polucheniyem vysokikh temperatur)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 3, pp 86-90 (USSR)

ABSTRACT: An apparatus is described for obtaining ultra high gas pressures and high temperatures using a multiplicator described in Ref.4. The entire apparatus is shown in Fig.1. The gases may be compressed up to a pressure of 30 000 kg/cm^2 with a simultaneous achievement of temperatures of the order of 2000°C. A method is also described for obtaining ultra high gas pressures using solid carbon dioxide. The apparatus has been used to study the variation of the melting point of metals with pressure, e.g. aluminium and copper. Another substance which was studied was black crystalline phosphorus. Fig.2 shows that the melting point of copper and aluminium increases linearly with pressure in the range 2000 to 20 000 kg/cm^2. It is well-known that phosphorus takes up a number of polymorphous forms: yellow, red, black amorphous and black crystalline. Up to the present time no one has succeeded in melting black phosphorus

Card 1/2

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SOV-120-58-3-21/33

An Apparatus for Obtaining Ultra High Pressure and Simultaneously High Temperature

under high pressure. It is shown that as the pressure increases right up to approximately 20 000 kg/cm^2, no changes in black phosphorus can be observed. At 18 000 kg/cm^2 the melting temperature of black phosphorus is about 1000°C. There are 2 figures, no tables and 22 references, of which 12 are Soviet and 10 are English.

ASSOCIATION: Institut kristallografii AN SSSR (Institute of Crystallography of the Academy of Sciences, USSR)

SUBMITTED: August 31, 1957.

1. High pressure research--USSR 2. High temperature research--USSR 3. Metals--Melting 4. Phosphorus--Melting

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

24(2) PHASE I BOOK EXPLOITATION SOV/2353

Akademiya nauk SSSR. Institut kristallografii

Rost kristallov, tom. 2 (Growth of Crystals, Vol. 2) Moscow, 1959. 238 p. Errata slip inserted. 2,000 copies printed.

Resp. Eds.: A. V. Shubnikov, Academician, and N. N. Sheftal', Doctor of Geological and Mineralogical Sciences; Ed. of Publishing House: K. S. Aleksandrov; Tech. Ed.: T. V. Polyakova.

PURPOSE: This book is intended for scientists and researchers engaged in crystallography and in growing industrial monocrystals.

COVERAGE: This is the second of two volumes on crystal growth. The first volume contained reports delivered at the First Congress on Crystal Growth. The present volume also contains an extensive study of corundum synthesis by S. K. Popov [deceased]. These studies reflect the development of Soviet research in crystallography in the period following the first congress. The studies contain some essentially new results obtained by Soviet scientis The editors express the hope that these studies will unite the efforts of So iet scientists engaged in studying the process of crystal growth and in grow ing industrially valuable monocrystals. No personalities are mentioned. References are given at the end of each article.

Tsinober, L.I., L. G. Chentsova, and A. A. Shternberg. The Green and Brown Tint of Synthetic Quartz Crystals 61

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Belyustin, A. V. Possibility of Determining Surface Energy of Crystals From Equilibrium States 70

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Popova, A. A. Orientation of Monocrystals of Certain Ferrites 84

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Timofeyeva, V. A. Studying the Process of Barium Titanate Crystal Growth in a Fused Solution With Barium Chloride 95

Belyarev, L. M., G. S. Belikova, and G. F. Dobrzhanskiy. Apparatus for Growing Organic Crystals From a Melt 102

Boksha, S. S. New Type of Pistonless Compressor for the Production of Extremely High Gas Pressures 105

Chernakov, A. A. Growing of a Benzophenone Crystal and Its Morphological Symmetry 109

Sizyukova, I. A., and I. V. Stepanov. Synthesis of Extrapure Salts of Calcium Fluoride and Barium Fluoride for Growing Optical Monocrystals 115

Kokorish, Ye. Yu. Effect of Cooling Conditions on the Creation of Dislocations on the Creation of Dislocations in Germanium Crystals 120

Rez, I. S., and L. A. Varfolomeyeva. Guanidine-aluminum sulfate-hexahydrate (Synthesis, Growing of Monocrystals, and some Properties of the Monocrystals) 126

Kokorish, N. P. Crystallization of Germanium on Silicon and Silicon on Germanium 132

Popov, S. K. Growing and Certain Uses of Corundum Crystals 140

III. SURVEYS AND DISCUSSION ARTICLES

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Slavnova, Ye. N. Main Trends in the Study of Mixed Systems: Inorganic Crystals - Organic Admixture (Survey) 223

AVAILABLE: Library of Congress 25

BOKSHA, S. S.

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83957

S/019/60/000/012/040/097
A152/A029

AUTHOR: Boksha, S. S.

TITLE: A Device for Producing Superhigh Pressures of Gases or Vapors

PERIODICAL: Byulleten' izobreteniy, 1960, No. 12, p. 30

TEXT: Class 27b, 15_{02}. No. 129279 (650888/25, January 16, 1960). 1) This device is for producing superhigh pressures of gases and vapors and consists of cylinders, connected successively by capillary tubes and provided with internal electric heaters and cut-off valves. It has the following special features: to control the release of the working substance from the device, the last cylinders are made in the form of containers having release valves with a differential piston multiplier operating after the electric heaters have been switched on. 2) A device as specified in (1), distinguished by the following special feature: it has an electrical remote control system for successively switching on the electric heaters singly or in groups according to a set program and regulating the duration of the heating cycles. 3) A device as specified in the preceding two points, with the following special feature: to reduce the thermal inertia

Card 1/2

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83957

S/019/60/000/012/040/097
A152/A029

A Device for Producing Superhigh Pressures of Gases or Vapors

of the electric heaters, the latter are made of parallel thin tightly stretched metal threads evenly distributed throughout the entire volume of the heater. Freely rotating disk-type temperature compensators are also used. 4) A device as specified in the preceding three points, but with the following special feature: to prevent the electric leads from burning out rapidly, and to pack them reliably, they are mounted in obturators located in the lower part of the cylinders. 5) A device as specified in the preceding four points, distinguished by the following special feature: it is provided with a hermetic differential packing with a noncompensated area and a liquid seal. 6) A device as specified in the preceding five points, but with the following special feature: to increase the rigidity of the high-pressure cylinders, autofrettaged jackets and rings are placed over them, while the obturator nuts and valve boxes are screwed into the autofrettaged jackets in order to secure the cylinder axially. 7) A device as specified in the preceding six points, but distinguished by the following special feature: it has differential cut-off valves with soft packing and a noncompensated area.

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

40145

S/058/62/000/007/001/068
A061/A101

AUTHOR: Boksha, S. S.

TITLE: A new type of pistonless compressor for the generation of superhigh gas pressures

PERIODICAL: Referativnyy zhurnal, Fizika, no. 7, 1962, 13, abstract 7A125 (In collection: "Rost kristallov. T. 2". Moscow, AN SSSR, 1959, 105 - 108)

TEXT: A pistonless compressor which is able to generate gas pressures of up to 3,000 atm is described. It consists of a system of six cylinders of successively decreasing volumes (3,000 - 300 cm^3), connected by steel capillaries and separated from one another by one-way action valves. By means of series-connected heaters placed in each cylinder the gas is partially conveyed in steps to the last small-volume cylinder. The compressor has a cyclic operation, and the process is made automatic by an appliance which is described in the paper. It takes 25 min to raise the pressure from 150 atm (pr ssure in the gas source-container) to 2,400 atm. The power input is 7 kva.

[Abstracter's note: Complete translation] A. Kikoin

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

S/081/62/000/011/021/057
E194/E184

AUTHOR: Boksha, S.S.

TITLE: Super-high gas pressure equipment for crystal synthesis

PERIODICAL: Referativnyy zhurnal, Khimiya, no.11, 1962, 165, 166, abstract 11 E8. (In the Symposium: "Rost kristallov" ("Growth of Crystals"), v.3, Moscow, AN SSSR, 1961, 258-264. Discussion, 501-502).

TEXT: A new model of pistonless gas compressor is described which compresses gas up to 150 - 7000 atm with a maximum output of 300 cc of compressed gas per hour. The compressor consists of twelve steel cylinders installed in a common pipe. Each cylinder has a valve which permits the gas to pass only to the following cylinder. The cylinders contain heaters of low thermal inertia. A special super-high pressure valve is located beyond the last cylinder. When the pressure in the compressor reaches the required value a powerful heater in this special valve is connected for a few seconds to heat water. The steam drives the piston and the gas passes from the compressor into the working

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chamber. The compressor is automatically controlled. The working space of the equipment contains a crucible with the substance under investigation, a manometer and thermocouple. This chamber is closed by an obturator with an uncompensated valve. Another type of working chamber is also described in which the final high pressure is created by pressing a piston. The preliminary pressure is developed by means of the compressor.

[Abstractor's note: Complete translation.]

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

S/564/57/000/000/024/029
D258/D307

AUTHORS: Butuzov, V. P., and Boksha, S. S.

TITLE: A new method of studying phase transformations at high pressures and temperatures and its application to the study of the polymorphism of phosphorus

SOURCE: Rost kristallov; doklady na Pervom soveshchanii po rostu kristallov, 1956 g. Moscow, Izd-vo AN SSSR, 1957, 311-319

TEXT: The present work is concerned with some problems of the simultaneous production of ultra-high gas pressures and elevated temperatures, measurement of these quantities, and their application. The high pressures were produced by means of solid CO_2 and liquid layers between gaskets and the compressed gas. The temperature inside the pressure vessel was measured with the aid of a combined 4-junction thermocouple,

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A new method of...

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D258/D307

2 junctions of which were under pressure. Fe-nichrome couples were used up to 600°C, and Pt/Pt-Rh at higher temperatures. A photo-recording pyrometer was also used at ultra-high pressures for automatic recording of heating and cooling curves. Pressure was measured with manganin manometers calibrated by the allotropic transformations of various substances, using the data of Bridgman. The apparatus was applied to study of the conditions of formation of black crystalline phosphorus at up to 22,000 kg/cm^2, showing that this modification is stable up to its m.p. (~1000°C at 18,000 kg/cm^2). No new modifications were found. There are 8 figures.

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Studying the physiological functions of the body in climatotherapy for tuberculosis on the southern shores of the Crimea. Vop.kur. fizioter. i lech.fiz.kul't. 21 no.1:13-17 Ja-Mr '56. (MLRA 9:9)

1. Iz Yaltinskogo tsentral'nogo klinicheskogo sanatoriya No.1 (rukovoditel' - kandidat meditsinskikh nauk G.P.Fedorov)
(TUBERCULOSIS) (CRIMEA--SEA AIR)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

USSR/Human and Animal Physiology. Sense Organs. Interoception. T

Abs Jour: Ref Zhur-Biol., No 20, 1958, 93727.

Author : Boksha, V.G.
Inst : [redacted]
Title : The Problem of Adaptation of Receptors.

Orig Pub: Fiziol. zh. SSSR, 1957, 43, No 12, 1149-1155.

Abstract: Two cannuli were inserted in the wall of the urinary bladder of decerebrated anesthetized cats through the dissected peritoneal cavity. Warm physiological solution was placed in the bladder of one, and the other was connected to a water monometer for kymographic registration of intravesical pressure (P). In an empty urinary bladder impulses in the peripheral segment of the pelvic nerve were usually absent. Even a small

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Twelfth Conference of Physicians at Crimean Military Sanatoria.
Vop.kur.fizioter. i lech.fiz. kul't. 23 no.6:565-567 N-D '58
(MIRA 11:12)

(CLIMATOLOGY, MEDICAL)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Study of physiological functions of the human body during climatotherapy on the southern coast of the Crimea. Voen.-med.zhur. no.6:56-60 Je '59. (MIRA 12:9)
(CLIMATE, ther. use
climatother., physiol. studies of subjects (Rus))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Effect of various forms of climatic therapy on gas exchange in pulmonary tuberculosis. Probl.tub. 37 no.5:64-68 '59. (MIRA 12:10)

1. Iz Yaltinskogo tsentral'nogo klinicheskogo sanatoriya No.1 (nauchnyy rukovoditel' sanatoriya - kand.med.nauk G.P.Fedorov).

(TUBERCULOSIS, PULMONARY - therapy)
(CLIMATE - therapy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Adaptation of interceptors. Report No.2. Restoration of functional properties of vesical interoceptors following inactivation of prolonged stimuli. Biul.eksp.biol. i med. 47 no.6:10-13 Je '59. (MIRA 12:8)

1. Iz Instituta normal'noy i patologicheskoy fiziologii (dir.-deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim). Predstavlena deystvitel'nym chlenom AMN SSSR V.N.Chernigovskim).

(BLADDER, physiol.
restoration of interoceptive funct. after inactivation of stimuli of long duration in decerebrated animals (Rus))

(BRAIN, physiol.
restoration of bladder interoceptive funct. after inactivation of stimuli of long duration in decerebrated animals (Rus))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V. G., Cand Med Sci — (diss) "Functional disturbance of internal respiration in lung tuberculosis, ways of compensating for it and methods of restoration," Moscow, 1960, 20 pp, 210 cop. (Institute of Normal and Pathological Physiology, AMS USSR) (KL, 45-60, 128)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Thirteenth conference on research and practice of physicians at military santoriums on the southern coast of the Crimea. Vop. Kur., fizioter. i lech. fiz. kul't. 25 no. 6:563-565 N-D '60. (MIRA 14:2)

(CRIMEA—CLIMATOLOGY, MEDICAL)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.

Some data on the mechanism of action of climatic methods of treatment. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:100-107 Mr-Ap '61. (MIRA 14:4)

1. Iz Yaltinskogo sanatoriya Ministerstva oborony SSSR (nachal'nik Ye.I. Fedorov).
(CLIMATOLOGY, MEDICAL)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BERSHITSKIY, Ya.M.; BOKSHA, V.G.

25th Conference on Research and Practice by Crimean physicians on Problems of Climatotherapy. Vop. kur., fizioter. i lech. fiz. kul't. 26 no. 2:182-184 Mr-Ap '61. (MIRA 14:4)
(CLIMATOLOGY, MEDICAL—CONGRESSES)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G. (Yalta)

Clinical significance and the reciprocal relation of some hemodynamic indices. Vrach. delo no.5:17-20 My '62. (MIRA 15:6)

1. Sanatoriy Ministerstva oborony SSSR.
(BLOOD--CIRCULATION)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.; BERSHITSKIY, Ya.M.

Ukrainian Republic Conference on Climatotherapy. Vop.kur., fizioter. i lech.fiz.kul't. 27 no.2:181-183 Mr-Ap '62. (MIRA 15:11)
(UKRAINE--CLIMATOLOGY, MEDICAL--CONGRESSES)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G.; ZOL'NIKOVA, A.I.; TROTSENKO, S.Ya.

All-Union Conference on Experimental Study of Health Resorts and Physical Therapy. Vop.kur., fizioter. i lech. fiz. kul't. 28 no.2:184-191 Mr-Ap'63. (MIRA 16:9)
(HEALTH RESORTS, WATERING PLACES, ETC.—CONGRESSES)
(PHYSICAL THERAPY—CONGRESSES)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, Vyacheslav Georgiyevich; BERSHITSKIY, Yakov Markovich; IVANOVA, Z., red.

[Sea, sun and air are waiting for you... (health resort visitor's booklet on climatic therapy during a warm period of the year)] Vas zhdut more, solntse, vozdukh... (Pamiatka kurortnika o klimaticheskom lechenii v teplyi period goda). Simferopol', Krymizdat, 1963. 29 p. (MIRA 17:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

KESEL'BRENER, Ye.G.; BOKSHA, V.G.; BOGUTSKIY, B.V.; BRUDNYY, O.Ye.; KASATKIN, V.N.

Use of cybernetics in climatic therapy. Vop. kur., fizioter. i lech. fiz. kul't. 28 no.5:404-410 S-O '63.

(MIRA 17:9)

1. Iz bazovogo sanatoriya imeni V.V. Kuybysheva, Yalta i Instituta meditsinskoy klimatologii i klimatoterapii imeni Sechenova.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G., kand. med. nauk

Climatological therapy as a factor increasing the nonspecific resistance of the organism. Vop. kur., fizioter. i lech. fiz. kul't. 29 no.2:97-104 Mr-Ap'64 (MIRA 18:2)

1. Institut meditsinskoy klimatologii i klimatoterapii imeni Sechenova, Yalta.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOGUTSKIY, D.V.; BOKSHA, V.G.; TATEVOSOV, S.R. (Yalta)

50th Anniversary of the I.M. Sechenov Institute of Medical Climatology and Climatotherapy. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.1:90-92 Ja-F '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

LATYSHEV, G.D.; BOKSHA, V.G.

Medical evaluation of the weather; index of the weather and the reactions of patients. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.4:345-351 Jl-Ag '65. (MIRA 18:9)

1. Yaltinskiy sanatoriy Ministerstva oborony SSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G., kand. med. nauk; TROTSENKO, S.Ya., kand. med. nauk

Scientific session dedicated to the 50th anniversary of the I.M. Sechenov Institute of Medical Climatology and Climatotherapy. Vop. kur., fizioter. i lech. fiz. kul't. 30 no.4: 376 Jl-Ag '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHA, V.G., kand.med.nauk

Compensation of disorders in the respiratory function in various forms of pulmonary tuberculosis. Probl. tub. no.2:14-19 '65. (MIRA 18:12)

1. Institut meditsinskoy klimatologii i klimatoterapii imeni I.M.Sechenova (direktor E.V.Bogutskiy), Yalta.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

ACC NR: AT7001013 SOURCE CODE: HU/2502/65/046/002/0151/0157

AUTHOR: Bokshai, Z., (Dr.); Bouquet, Gusztav—Buke, G. (Dr.), and Csakvari, Bela,--Chakvari, B. (Dr.)

ORG: Institute for General and Inorganic Chemistry at L. Eotvos University, and Research Group for Inorganic Chemistry at the Hungarian Academy of Sciences (Original-language versions not given), both in Budapest

22
B+1

"Interpretation of Jordan's Equation Introduced for the Calculation of the Alkaline Error of Glass Electrodes"

Budapest, Acta Chimica Academiae Scientiarum Hungaricae, Vol 46, No 2, 5 Dec 1965, pp 151-157.

Abstract: [English article] The constants in the equation described by JORDAN, D. O., (Trans. Farad. Soc., Vol 34, 1938, p 1305) were interpreted in terms of factors and coordinate relations determined by thermodynamic functions and average activity coefficients of the solutions. Alkaline error values for glass electrodes were calculated with the aid of this equation and it was found that these values correlate well with experimentally established figures. Orig. art. has: 1 figure, 24 formulas and 3 tables. [JPRS: 33,906]

TOPIC TAGS: glass electrode, electrochemistry

SUB CODE: 07,09 / SUBM DATE: 29Mar65 / ORIG REF: 003 / SOV REF: 001 / OTH REF: 003

Card 1/1 egh

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHANIN, Yu.R., kand. tekhn. nauk.

Effective output of packing box boards made by the NTD machine. Der. prom. 7 no.1:13-14 Ja '58. (MIRA 11:1)

1. TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.

(Woodworking machinery)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHCHANIN, Yuriy Richardovich, kand. tekhn. nauk; KVYATKOVSKAYA, A.P., otv. red.; PAL'MINA, N., tekhn. red.

[Ways of expanding the processing and use of larch wood] Puti rasshireniia perarabotki i potrebleniia listvennitsy. Sverdlovskoe obl. upr. nauchno-tekhn. ob-va bumazhnoi i derevoobrabatyvaiushchei promyshl., 1962. 107 p. (MIRA 16:4)

(Larch) (Wood-using industries)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHCHANIN, Yu.R.

Survey of research work of the Sverdlovsk Scientific Research Institute of Wood Processing completed in 1963. Der. prom. 13 no.9:17-18 S '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHCHANIN, Yu.R., kand.tekhn.nauk; MISHIN, V.A., inzh.

Conveyor for heating logs. Der. prom. 14 no.1:10-12 Ja '65. (MIRA 18:4)

1. Sverdlovskiy nauchno-issledovatel'skiy institut pererabotki drevesiny.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

SEMENOV, A.I.; BOKSHCHANIN, Yu.R.

International symposium on sawmilling. Der. prom. 14 no.4:30-32 Ap '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

43461

S/191/62/000/012/013/015
B101/B186

15.8060

AUTHORS: Bokshitskaya, N. A., Klinov, I. Ya.

TITLE: Behavior of stressed polyethylene in some aggressive media

PERIODICAL: Plasticheskiye massy, no. 12, 1962, 58-62

TEXT: Samples of ПЭ-150 (PE-150) high-pressure polyethylene and П (P) low-pressure polyethylene were immersed in a vessel containing an aggressive medium, kept at a definite temperature (20-80°C) and subjected to tensile stress by a lever and weights. The deformation of the sample and the change in tensile strength due to the medium and stress were measured. The apparatus enabled 36 samples to be tested simultaneously. The strength of polyethylene was found to be unaffected by exposure at room temperature in unloaded state to the action of 10 or 40% NaOH for 240 hrs, of 10, 30 or 80% H_2SO_4 for 480 hrs, and of 10 or 30% HCl for 1000 hrs. The tensile strength was not changed in high-pressure polyethylene loaded at room temperature with 39, 52, and 65 kg/cm^2 for 1920 hrs in 1, 10, 20 or 30% NaOH. The same holds for low-pressure

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polyethylene loaded under otherwise equal conditions to 83.4, 111.2, or 139 kg/cm^2. At 60°C, however, the tensile strength of high-pressure polyethylene soon dropped from 130 to 50 kg/cm^2 and that of low-pressure polyethylene from 260 to 120 kg/cm^2. Long-period tests on low-pressure polyethylene loaded with 84, 72, 60 or 48 kg/cm^2 and on high-pressure polyethylene loaded with 40, 35, 30 and 25 kg/cm^2 showed that the logarithm of the elongation (%) is a linear function of the logarithm of time, and hence the creep rate an exponential function of the stress. 10-13% NaOH proved particularly aggressive. At 60°C and with a stress of 60 kg/cm^2 the endurance of low-pressure ethylene was only ~30 hrs in 10% NaOH as against 150 hrs in 30% NaOH. There are 6 figures.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

S/184/63/000/002/003/007
A059/A126

AUTHOR: Bokshitskaya, N.A., Engineer

TITLE: Chemical stability of polyethylene in the stressed state

PERIODICAL: Khimicheskoye mashinostroyeniye, no. 2, 1963, 28 - 31

TEXT: The results of tests performed on molded plates of high-density [ПЭ -150 (PE-150)] and low-density [П(P)] polyethylenes exposed to uniaxial elongation are given under the conditions of creep at 40 - 60°C after having kept the material in NaOH or H_2SO_4 of various concentrations for 2 h. The total creep of polyethylene in NaOH was found to consist of three constituents, namely instantaneous elastic, highly elastic, and plastic deformation (true flow). The instantaneous elastic deformation is determined for a given concentration from $\varepsilon_0 = \frac{\sigma_0}{E_T}$, where σ_0 is the working load. For the dependence of the accumulated highly elastic deformation of low-density polyethylene in NaOH on elongation, the relation $\varepsilon_v = A\,\sigma_0^k$ was established, where A is a parameter depending on temperature and concentration, and k is a factor independent of concentra-

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

tion. The creep rate v for low-density polyethylene in NaOH and H_2SO_4 of various concentrations at 60°C is related to elongation by the equation: $v = B_1 \sigma_0^m$, where B_1 is the creep coefficient and m the creep factor. Without regard to the highly elastic constituent, the creep rate of polyethylene can be well described by the generalized Maxwell equation:

$$\frac{d\varepsilon}{dt} = B_1 (t) \sigma_0^m + \frac{1}{E} \cdot \frac{d\sigma_0}{dt},$$

and for steady creep (true flow) by the equation:

$$\varepsilon = B_1 \sigma_0^m t,$$

where t is time. The creep factor m is independent of NaOH or H_2SO_4 concentrations, while the influence of concentration on the creep rate is reflected by B_1 which also depends on temperature. Maximum creep rates are calculated for the NaOH concentration of about 13%. The relation between deformation and elongation, time, and NaOH concentration at a given temperature is:

$$\varepsilon = \frac{\sigma_0}{E_T} + (A_0 + \eta C) \sigma_0^k + (B_1^0 + \lambda C) \sigma_0^m t,$$

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

where E_T is the normal modulus of elasticity at a given temperature, A_0, B_1^0, η and λ are temperature-dependent parameters, and k and m are matter constants. The relation between the life of low-density polyethylene in NaOH and H_2SO_4, respectively, of various concentrations at 60°C is:

$$\sigma_0 = D\,\tau^{-n}, \qquad (3)$$

where τ is the life, D a parameter depending on temperature and concentration, and n a dimensionless constant independent of concentration. In addition,

$$D = G e^{\frac{u}{KT}} \qquad (4)$$

holds, where G is a random constant with the dimension of elongation, u the power constant of the material, K Boltzmann's constant, and T absolute temperature. The NaOH concentration corresponding to minimum strength of the material and calculated from

$$C = \frac{D_0' - D_0}{p - p'}, \qquad (7)$$

where D_0 is the value of the parameter at zero concentration, D_0', p, and p'

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are constants, was 13.01, both at 40 and 60°C. Thus, the NaOH concentration, at which the creep rate is maximum, is the same as that corresponding to minimum strength of the material. Instead of equation (3),

$$\sigma_0 = Ge^{\frac{u}{KT}} (D_0 + pC) \tau^{-n}$$

can be used, where D_0 and p also depend on concentration. Under analogous conditions, the strength of polyethylene in H_2SO_4 increases with increasing concentration. There are 6 figures and 1 table.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206110003-8

BOKSHITSKAYA, N.A., inzh.

Chemical stability of polyethylene under stress. Khim.mashinostr. no.2: 28-31 Mr-Ap '63. (MIRA 16:4)

(Polyethylene—Testing)

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L 51986-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AT5012208 UR3078/64/028/000/0151/0164

AUTHOR: Bokshitskaya, N. A.; Klinov, I. Ya. (Doctor of technical sciences, Professor)

TITLE: Static fatigue of polyethylene in sodium hydroxide and sulfuric acid

SOURCE: Moscow. Institut khimicheskogo mashinostroyeniya. Trudy, v. 28, 1964. Korroziya khimicheskoy apparatury (Corrosion of chemical apparatus), 151-164

TOPIC TAGS: polyethylene, plastic strength, plastic corrosion, fatigue strength, plastic creep

ABSTRACT: High pressure (PE-150) and low pressure ("P") polyethylene were tested for creep and fatigue in 1, 10, 20, and 30% NaOH solutions at 40, 60, and 80C, and in 3, 30, and 60% H_2SO_4 solutions at 60C. The chemical stability of polyethylene without load was studied at 20 and 60C in alkaline and acid solutions. It was found that the creep of polyethylene may be generally represented by a three-component nonlinear relation taking into account the instantaneous elastic strain, the built-up highly elastic strain, and the intrinsic flow. An analytical dependence was obtained relating the creep of polyethylene to the chief external factors: stress, time, concentration of the NaOH and H_2SO_4 solutions, and temperature. The time dependence of the strength of polyethylene is described by a power function which takes into account the influence of temperature and of

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ACCESSION NR: AT5012208

the surrounding medium. It is suggested that in NaOH solutions, an increase in concentration up to the critical value is associated with a decrease in surface tension, and hence, in the strength of polyethylene. These quantities then increase again. In sulfuric acid, the surface tension and hence the strength increase with the concentration. Orig. art. has: 11 figures, 2 tables, and 24 formulas.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Chemical Machine Building)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 000 OTHER: 000

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L 51983-65 EPA(s)-2/EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4/Pt-7
WW/RM
ACCESSION NR: AT5012211 UR/3078/64/028/000/0232/0237

44
43
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AUTHOR: Shevchenko, A. A.; Bokshitskaya, N. A.

TITLE: Methods for corrosion testing of plastics

SOURCE: Moscow. Institut khimicheskogo mashinostroyeniya. Trudy, v. 28, 1964. Korroziya khimicheskoy apparatury (Corrosion of chemical apparatus), 232-237

TOPIC TAGS: plastic corrosion, corrosion resistance, fiberglass, reinforced plastic, polyethylene, corrosion testing

ABSTRACT: To determine the behavior of plastics under various testing conditions, the authors studied three types of fiber-glass reinforced plastics (EF-32-301, PN-1, and FL-1) and low- and high-pressure polyethylene in aqueous solutions of sulfuric acid and sodium hydroxide by three different methods: (1) the "gravimetric" or "standard" method - change in tensile strength after keeping the specimens in the aggressive medium without load; (2) keeping the specimens in the medium under a constant tensile load at various temperatures, washing, drying, and testing for tensile strength; (3) testing the materials under a constant tensile load at a high temperature and in an aggressive medium until rupture occurred. Durability curves were plotted on the basis of the results. The data obtained by the three methods exhibit substantial differences, particularly

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ACCESSION NR: AT5012211

between the first and the third method. An analysis of these results shows that the "standard" method is not satisfactory for evaluating plastics as structural materials, because it does not reproduce the conditions characteristic of the operation of such parts in chemical apparatus, namely, the simultaneous action of load, temperature, and an aggressive medium. The third method is much more appropriate for such purpures. Orig. art. has: 3 figures and 2 tables.

ASSOCIATION: Moskovskiy institut khimicheskogo mashinostroyeniya (Moscow Institute of Chemical Machine Building)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 007 OTHER: 001

Card 2/2

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