

USHAKOV, F.I. (Kiyev)

Work practices of the Ukrainian clothing factories in the improvement of production quality. Shvein.prom. no.5:4-7 S-0 '62.

(Ukraine—Clothing industry)

(MIRA 15:10)

USHAKOV, F.V., kandidat tekhnicheskikh nauk; KAUFMAN, B.N., kandidat tekhnicheskikh nauk, nauchnyy redaktor; TUMARKIN, D.M., redaktor izdatel'stva; BORODINA, I.S., redaktor izdatel'stva; GUSEVA, S.S., tekhnicheskiiy redaktor

[Thermotechnical properties of large panel walls] Teplotekhnicheskie svoistva krupnopanel'nykh sten. Moskva, Gos. izd-vo lit-ry po stroit'stvo i arkhitekture, 1956. 102 p. (MLRA 9:11)
(Walls)

USHAKOV, F.V., kandidat tekhnicheskikh nauk.

Effect of the quality of bricklaying on heat-insulating properties
of walls. *Biul.stroi.tekh.* 13 no.11:8-10 N '56. (MLRA 10:1)

1. Institut stroitel'noy tekhniki Akademii stroitel'stva i arkhitektu-
ry SSSR.

(Bricklaying) (Insulation (Heat))

KREMER, B.A.

Georgii Alekseevich Ushakov, 1901-1963; obituary. *Meteor. i gidrol.*
no.3:62-63 Mr '64. (MIRA 17:3)

USHAKOV, G.

Training specialists for the financial system. Fin. SSSR 16 no. 11:
Fin. SSSR 16 no. 11: 54-58 N '55. (MLRA 9:1)
(Finance--Study and teaching)

USHAKOV, G.

In close cooperation. Sov. profsoiuzy 6 no.6:67-69 Ja '58.
(MIRA 11:7)

1. Predsedatel' Latviyskogo respublikanskogo komiteta profsoyuza
rabochikh mashinostroyeniya.
(Latvia--Machinery industry) (Trade unions)

SERYAKOV, Ivan Maksimovich. Prinsipali uchastiye: BEDAREV, G.; VETSRUMB, N.;
DOBROVOL'SKIY, V.; KAPLAN, S.; KOMZA, G.; KOROLEV, L.; KUZGINOV, K.;
PETROV, V.; SUMAKOV, M.; SMOLYANINOV, N.; USHAKOV, I.; USHAKOV, G.;
ZAYCHIK, M.I., prof., doktor tekhn.nauk, nauchnyy red.; KOLOMIYTSOVA,
O.I., red.; ROZEN, E.A., tekhn.red.

[The story of the tractor] Povest' o traktore. Moskva, Izd-vo
"Sovetskaya Rossiya," 1960. 318 p. (MIRA 13:12)
(Tractors)

VAL'TS, Georgiy Borisovich; USHAKOV, Gavriil Alekseyevich; KUSKOV, G.I.,
otv.red.; KOVALEVA, Z.G., red.; RUDNITSKAYA, I.T., tekhn.red.

[Mechanical devices for drawing and transposing projections]

Mekhanizmy dlia cherchenia i preobrazovania proektsii.

Khar'kov, Izd-vo Khar'kovskogo gos.univ., 1960. 455 p.

(MIRA 14:6)

(Mechanical drawing—Equipment and supplies)

USHAKOV, G. (Vologda)

Fulfill the plan for all revenues and all districts. Fin.
SSSR 22 no.7:64-67 J1 '61. (MIRA 14:7)
(Vologda Province--Internal revenue)

ACCESSION NR: AP4044124

S/0084/64/000/008/0028/0029

AUTHOR: Gal'perin, M. (Engineer); Ushakov, G. (Engineer); Vasil'chanko, G. (Engineer)

TITLE: The resource is doubled

SOURCE: Grazhdanskaya aviatsiya, no. 8, 1964, 28-29

TOPIC TAGS: piston aircraft, scoring, local overheating, connecting rod, cylinder, side pressure, lubricant, oil

ABSTRACT: This article deals with the necessity of increasing the reliability and resources of piston aircraft. In the case of the Il-14, Il-12 and An-2 aircraft the main cause of trouble seems to be the scoring of the pistons no. 2 and 5 caused by local overheating and side pressure. These two pistons, coupled to the main connecting rods, are acted upon by forces of 2035 and 1600 kg during compression and expansion, respectively. The Omsk aircraft factory has solved the problem of decreasing the side pressure on the working surface of the pistons by means of decreasing the deformation of the cylinders through constant and uniform air cooling. The Omsk designers have succeeded in lowering the piston temperature, improving the cylinder lubricants and finally, reducing the loss of horsepower of the cylinders of

Card 1/2

ACCESSION NR: AP4044124

the main connecting rods. All these improvements have almost doubled the life span of these piston engines. Orig. art. has: 7 figures.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: AC

NO REF SOV: 000

OTHER: 000

Card 2/2

USHAKOV, G. A.

Geography & Geology

Across untrodde land; Predisl. V. A. Obrucheva. Moskva, Izd-vo Glavsevmornuti, 1951.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

USHAKOV, G. A.

Severnaya Zemlya

"Across untrodden land." G. A. Ushakov. Reviewed by V. P. Dadykin, Geog. v. shch. No. 4, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, UNCLASSIFIED.

USHAKOV, G. A.

Severnaya Zemlya

Book about the northern land ("Through impassible land." Reviewed by L. Gromov).
Vokrug Sveta no. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, July ²195~~4~~. Unclassified.

USHAKOV, G. A.

Po Nekhozhenoy Zemle (Through an Untraveled Land), Moskva. "Molodaya Gvardiya",
1953. 405 pages, illus., maps

B/4 621.12 .U8

USHAKOV, G.A., doktor geograficheskikh nauk.

Over untrod land. Nauka i shisn' 20 no.5:40-43 My '53. (MLRA 6:6)
(Arctic regions--Description and travel)

USHAKOV, Georgiy Alekseyevich; PROKHODTSEVA, S.Ya., red.; MALKES, B.N.,
mladshiy red.; VILENSKAYA, E.N., tekhn.red.

[Across untrodden land] Po nekhozhenoi zemle. Moskva, Gos.
izd-vo geogr.lit-ry, 1959. 367 p. (MIRA 13:2)
(Savernaya Zemlya)

USHAKOV, Georgiy Alekseyevich; PROKHODTSEVA, S.Ya., red.; MALKES, B.N.,
mladshiy red.; VILENSKAYA, E.N., tekhn.red.

[Across untrodden land] Po nekhozhenoi zemle. Moskva, Gos.izd-vo
geogr.lit-ry, 1959. 367 p. (MIRA 13:6)
(Severnaya Zemlya)

GAL'PERIN, M., inzh.; USHAKOV, G., inzh.; VASIL'CHENKO, G., inzh.

Resource has doubled. Grazhd. av. 21 no.8:28-29 Ag '64.

(MIRA 18:4)

USHAKOV, G.A., kandidat tekhnicheskikh nauk.

Plotting affinity and axonometric projections in mining. Trudy
VNIMI no.29:128-150 '54. (MLRA 8:3)
(Mine maps)

3(4)

PHASE I BOOK EXPLOITATION

SOV/2024

Ushakov, Gavriil Alekseyevich, Candidate of Technical Sciences,
Docent, and Iosif Davidovich Gol'din, Candidate of Technical
Sciences

Naglyadnyye marksheyderskiye grafiki (Mine Surveyors' Illustrative Graphics) Kharkov, Metallurgizdat, 1959. 187 p.
Errata slip inserted. 2,800 copies printed.

Resp. Ed.: M.V. Korzhik; Ed. of Publishing House: Ye K.
Sinyavskaya; Tech. Ed.: S. P. Andreyev

PURPOSE: This book is intended for engineering and technical personnel of the mining industry and for students of mine surveying.

COVERAGE: This book gives comprehensive coverage to the basic principles of constructing illustrative graphics used in the mining industry. The types of projections are described as are the geometric relationships. Affine relationships and

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Mine Surveyors' Illustrative Graphics

SOV/2024

affine transformations are stressed. A chapter is devoted to the instruments used in making pictorial mine graphics, both Russian and foreign devices being described. Finally, the methodology of constructing the graphics and the method of taking off measurements are explained. The author thanks Professor D.N. Ogloblin, Doctor of Technical Sciences, for his assistance. There are 40 references, of which 35 are Soviet, 3 German and 2 English.

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AVAILABLE: Library of Congress

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7-7-59

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1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		3RD AND 4TH ORDERS	
<p>F 1142. <u>THREE CHAMBER FURNACE FOR UNPREPARED MILLED PEAT. Ushakov, GA (4a Ekon. Topliva (Fuel Ekon.) Apr. 1950, (4), 7-10).</u> Description and test results. The furnace is said to be promising for boilers of 15-18 tons capacity. A rough section of its three chambers can be obtained by drawing a flat W with centre peak lower than the two sides. Chamber 1 is within the left hand V of the W and has a flat roof above it. Chamber 2 is within the right hand V with a vertical shaft above for the hot gases. Fuel is fed in at the top left corner of chamber 1 and its small particles are blown upwards by two air blasts. These particles burn partly in chamber 2, into which they are carried. At high loads most of the combustion occurs in the W, i.e. at the front of the furnace. There are top and bottom openings between chambers 2 and 3, a horizontal grate and removing clinker. The function of chamber 3 is to receive the larger pieces of peat from chamber 2 and to keep a continuous fire going on its grate at all loads. (L)</p>					
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>					
1ST ORDER		2ND ORDER		3RD ORDER	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100		1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	

COMMON ELEMENTS		1ST AND 2ND LETTERS		3RD AND 4TH LETTERS		5TH AND 6TH LETTERS	
F		M.					
<p>RESULTS OF ONE YEAR'S OPERATION OF THREE CHAMBER FURNACE FOR COMBUSTION OF MILLED PEAT. Ushakov, G. A. (Za Ekon, Topliva (Fuel Econ.) Apr. 1961, 11-13). This furnace heats a boiler with 419 sq. m. of heating surface and burns milled peat with a moisture content of 47 to 62%. The report is generally satisfactory. (L)</p>							
<p>ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION</p>							
SANDS #1		SIGNED MAP ONLY GET		SIGNED MAP ONLY GET		SIGNED MAP ONLY GET	
SANDS #2		SIGNED MAP ONLY GET		SIGNED MAP ONLY GET		SIGNED MAP ONLY GET	

F

6377. DESIGN OF THREE-CHAMBER FURNACES FOR INTEGRATED MILLED FEAT.
Gulakov, G.A. and Golitsky, V.I. (Za Ekon. Topliva (Fuel Econ.),
June 1951, 2-34). The first furnace of this type was so successful that
the principle is being widely adopted in industry. Outline dimensions
to be followed in design: the principle are set out here with sections
of typical furnaces. (1).

Fuel Abstracts

*Steam Raising & Steam
Engines Vol. 1, p. 52*

4652. TECHNICAL AND ECONOMIC COMPARISON OF FURNACES WHEN MAKING
SELECTIONS FOR INDUSTRIAL BOILER PLANTS. Ushakov, G.A. (Za k on
Iopliya (Fuel Econ.), July 1952, 21-27). Illustrations and comparative data are g
given on four Soviet furnaces under boilers giving 9, 10, 7 and 24 tons/h
of steam respectively: a shaft pulveriser furnace and a three chamber
furnace burning milled peat, and a furnace with scraper bar and another
shaft pulveriser furnace burning Moscow Region brown coal. (L)

F.A.

M.

1622. LIMITS OF APPLICATION OF CATION PROCESS OF WATER PURIFICATION IN INDUSTRIAL BOILER PLANTS. Ushakov, G. A. (Za Ekon. Topliva (Fuel Econ.) Apr. 1952, 27-29)
Adoption of the cation treatment using sodium cation equipment and H⁺ cation units with sulphuric acid solution using barrier filters yields good quality soft water even with hard initial water. The water-acid jet pump should be used for initial water with high alkalinity and moderate mineral residue. In the preparation of water for power station boilers the type of boiler and saturated steam requirement and the raising of salt content and alkalinity, to obviate an excessive number of cleanings, should be considered. A table gives data on the cleaning of horizontal water tube boilers by different methods. (L)

B.E.A.

USHAKOV, G. A.

Furnaces - Construction.

Best use of outer brickwork of fire boxes of low capacity boilers.
Za ekon. top., 9, no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, June 1953/2 Uncl.

USHAKOV, G. A.

Boilers.

Extent to which cation water-purification can be used in industrial boiler rooms. Za ekon.top. 9 no. 4:27-29 Ap '52.

9. Monthly List of Russian Accessions, Library of Congress, July 195~~7~~² Unclassified.

1. USHAKOV, G. A. .
2. SSSR (600)
4. Furnaces
7. Ways toward improved construction of YU. G. Vasil'yev furnaces.
Tekst. prom. 12 No. 11, 1952

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

USHAKOV, G.A.

Simplifying circulation schemes in modernising multiple-
drum, horizontal water-tube boilers. Energ.Mul. no.3:5-13
Mr '54.

(MLRA 7:3)

(Steam boilers--Design)

USHAKOV, G.A., inzhener.

Increasing the steam-generating capacity of boilers. Tekst.prom.14
no.2:36-40 F '54. (MLRA 7:5)
(Steam boilers)

KONOVALOV, V.I., kandidat tekhnicheskikh nauk; USHAKOV, G.A., inzhener;
SHAPOSHNIKOV, B.I., kandidat tekhnicheskikh nauk; UZHOV, V.N.,
inzhener.

"Thermal electric power plants of industrial enterprises." V.V.Luk-
nitskii. Reviewed by V.I.Konovalev, G.A.Ushakov, B.I.Shaposhnikov,
V.N.Ushov. Elek.sta. 25 no.7:61-64 J1 '54. (MLRA 7:8)
(Electric power plants) (Luknitskii, V.V.)

USHAKOV, G.A., dots.

Increasing the efficiency of large unit-type plants by using bleed steam for preliminary drying of fuel. Izv.vys.ucheb.zav.; energ. no.6:56-65 Je '58. (MIRA 11:9)

1.Ivanovskiy energeticheskii institut im. V.I. Lenina.
(Coal--Drying) (Steam power plants--Equipment and supplies)

USHAKOV, G.A., dots.

Results of the scientific and technical conference on spreaded drying
of damp fuels. Izv.vys.ucheb.zav.; energ. no.8:133-134 Ag '58.

(Fuel--Congresses)

(MIRA 11:11)

USHAKOV, G.A.

Increasing the efficiency and reliability of electric power plants
by open drying of moist fuels. Nauch. dokl. vys. shkoly; energ. no.1:
169-174 '58. (MIRA 11:10)
(Electric power plants) (Fuel)

USHAKOV, G.N.; ARKHANGEL'SKIY, Yu.V., red.; LARIONOV, G.Ye., tekhn.red.

[First atomic power plant; experience of construction and operation] Pervaya atomnaya elektrostantsiya; opyt stroitel'stva i eksploatatsii. Moskva, Gos.energ.izd-vo, 1959.
223 p. (Atomic power plants) (MIRA 12:12)

USHAKOV, G.A., dots.

Conversion of thermal circuits of stations equipped with K turbines from evaporators to water purification. Izv.vys.ucheb. zav.; energ. 2 no.5:69-78 My '59. (MIRA 12:10)

1. Ivanovskiy energeticheskiy institut im. V.I.Lenina.
(Feed-water purification)

USHAKOV, G.A., inzh.

Open drying of moist fuel. Elek.sta. 30 no.1:29-33 Ja '59.
(MIRA 12:3)
(Coal--Drying)

USHAKOV, G.A., dotsent, kand.tekhn.nauk; KOROL', V.N., inzh.

Vibration packing of mine cars as a means to increase their
loadability. Ugol' 35 no.3:41-44 Mr '60.

(MIRA 13:6)

1. Khar'kovskiy gornyy institut.
(Mine railroad--Cars) (Vibrators)

STYRIKOVICH, M.A.; USHAKOV, G.A., inzh.

Selecting the pulverization systems for the preparation of Donets
Basin anthracite fines and lean coals. Teploenergetika 9 no.2:
15-20 F '62. (MIRA 15:2)

1. Moskovskiy energeticheskiy institut. 2. Chlen-korrespondent
AN SSSR (for Styrikovich).

(Coal, Pulverized)

USHAKOV, G.A., inzh.

Economy characteristics of the feed pump turbine drive in electric power plants. Teploenergetika 9 no.3:30-33 Mr '62. (MIRA 15:2)

1. Moskovskiy energeticheskiy institut.
(Pumping machinery) (Steam turbines)

USHAKOV, G. A., kand. tekhn. nauk

Concerning A. E. Gel'tman's article "Choice of a system for
drying wet lignite in large state regional electric power
plants." Energomashinostroenie 8 no.12:40-41 D '62.
(MIRA 16:1)

(Electric power plants) (Lignite—Drying)

ACCESSION NR: AP4012088

S/0020/64/154/002/0366/0368

AUTHORS: Moiseyenko, U. I.; Istomin, V. Ye.; Ushakov, G. D.

TITLE: Influence of unilateral pressure on electric resistivity of rocks

SOURCE: AN SSSR. Doklady*, v. 154, no. 2, 1964, 366-368

TOPIC TAGS: electric rock resistivity, electroresistivity under pressure, rock electrical conductivity

ABSTRACT: Electric conductivity of rocks under pressures corresponding those at great depths is scantily studied and therefore the authors investigated the electric resistivity of olivenite, marble, serpentinite, dunite, basalt, pyroxenite and peridotite under a unitalteral pressure of 20000 kG/cm². Under unilateral pressure the specific resistivity decreases, reaches a minimum typical of each rock type, the greatest change being observed for marble, serpentinite and basalt, the smallest for peridotite and pyroxenite. Further increase in pressure reverses the trend and increases the resistivity. These data can be useful for studies of rock deformations

Card 1/2

ACCESSION NR: AP4012088

both in natural and experimental conditions especially with regard to changes in electric resistivity of rocks at different depths from the crust. Orig. art. has: 1 Figure,

ASSOCIATION: Institut geologii i fiziki Sibirskogo otdeleniya AN SSSR (Institute of geology and physics of the Siberian Branch AN SSSR)

SUBMITTED: 07Jun63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: PH

NR REF SOV: 003

OTHER: 001

Card

2/2

LUCHITSKIY, I.V.; GRAMIN, V. I.; POKHODIN, V. I.

Joint deformation of clay and carbonate rocks under different
conditions and nature. Dokl. Akad. Nauk SSSR. 1981. 251, 1-4.

(MIRA 1843)

1. Institut geologii i geofiziki Sibirskogo nauchnogo tsentra AN SSSR,
Novosibirsk.

USHAKOV, G. I.

DECEASED

1963/3

c' 1962

TEXTILE INDUSTRY

see ILC

USHAKOV, G.K., kandidat meditsinskikh nauk (Yaroslavl')

Role of medical auxiliary personnel in preventing excitation of
psychiatric patients. Med.sestra 15 no.6:15-20 Je '56. (MIRA 9:9)
(PSYCHIATRIC NURSING)

USHAKOV, G. K.

The effect of aminazine on psychomotor agitation. G. K. Ushakov, V. A. Kiselev, B. V. Grigorenko and V. K. Verbitskiy. *Med. Iss. Vostoka i Prib. Psichiatr. Hosp. Yuzhnyy. Ser. Psichiatr. Psichiatr. im. Koriakov* 56, 571-4, 1971. Thirteen female patients were given intramuscularly of 1% soln. of aminazine daily for 8 days. Eight patients were catatonic and catatonic-paranoid psychotics, 5 were manic psychotics, 2 manic-depression psychotics, and 1 was a patient with a depression syndrome. The effect of aminazine on the state of all patients. Nine patients improved sufficiently to be sent home within 10-20 days from the termination of the treatment. The pos. effect of aminazine in these 9 patients was accompanied by marked symptoms of asthenia. There was an increase in the rate of protein oxidation.

plete protein oxidation had been protective. There was an increase in the amount of prothrombin and the rate of its activity on the 8th day.

walls. Contrary to the reported findings of many other investigators, no hypothermia was observed in any of these patients. This may have been due to the fact that the aminazine dosage used was considerably smaller than the dosage used in other investigations. Changes in arterial pressure in this group of patients did not exceed 20 mm Hg, which is within the limits of normal individual error.

USSR / Human and Animal Physiology. Blood. Form Elements. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101752.

Author : Ushakov, G. K; Il'ina, V. N.; Panus, L. V.

Inst : ~~NOT given.~~

Title : The Peculiarities of Reactivity of the Blood System in Schizophrenia.

Orig Pub: V sb.: Aktual'n. probl. nevropatol. i psikhatrii, Kuybyshev, 1957, 270-276.

Abstract: 2000 investigations of blood were conducted in psychic patients. In 92.8% of the analyses, erythropenia was discovered, in 88.76% hypohemoglobinemia, in 50.3% low indexes of sed. rate. The reduction of the speed of the sed. rate was mostly observed in low indices of Hb content and number of erythrocytes. Leucopenia was observed in 40.1% of patients; furthermore, even in normal indices

Card 1/2 Chair of Psychiatry, Yaroslavl State Med. Inst. and
 ~~ex~~ Oblastnoy Psikhonevrologicheskoy bol'nitsy.

USSR / Human and Animal Physiology. Blood. Form Elements. T

Abs Jour: Ref Zhur-Biol., No 22, 1958, 101752.

Abstract: of number of leucocytes, the prevalence of the right nuclear shift of neutrophyles (75.2%) relative lymphocytosis, monopenia (56.46%), eosinopenia, and high levels of hemacytologic index of reactivity (56.3%) were observed. Apparently, there is not only a changed but also a lowered reactivity of the blood system. Additional observations were conducted on 100 patients with an unfavorable course of schizophrenia. The degree of changes of red and white blood rose with the duration of the disease and the worsening of its course. -- E. R. Paley.

Card 2/2

17

USHAKOV, G.K.

Insulin for treating mental diseases. Med.sestra 16 no.6:8-13
Je '57. (MIRA 10:8)

1. Iz kafedry psikhiiatrii Yarosl'vaskogo gosudarstvennogo
meditsinskogo instituta
(INSULIN) (PSYCHOSES)

[Ushakov, G.K.]
SURIKOV, M.P.; USHAKOV, G.K.; IL'INA, V.N.; VERBLYUNSKAYA, A.A.; KHOKHLOV, L.K.

Utilization of glutathione in the treatment of mental disorders
[with summary in French]. Zhur.nevr. i psikh. 57 no.2:237-240 '57.
(MLRA 10:6)

1. Kafedra biologicheskoy khimii (zav. - dotsent M.P.Surikov) i
psikhiatrii (zav. - dotsent G.K.Ushakov) Yaroslavskogo meditsinskogo
instituta i Yaroslavskaya oblastnaya psikhiatricheskaya bolintsa
(glavnyy vrach G.I.Ovchinnikov)

(MENTAL DISORDERS, ther.
glutathione)

(GLUTATHIONE, ther. use
ment.disord.)

USHAKOV, Gennadiy Konstantinovich; SALLYAYEV, Vladimir Nikolayevich;
TITOVA, Aleksandra Ivanovna, red.

[Epilepsy; problems in practical diagnosis, prevention, and
treatment] Epilepticheskaya bolezni'; voprosy praktiki
raspoznavaniya, preduprezhdeniya, lecheniya. Iaroslavl,
Iaroslavskoe knizhnoe izd-vo, 1958. 95 p. (MIRA 13:8)
(EPILEPSY)

SALYAYEV, V.N., STOLYARCHUK, A.A., USHAKOV, G.K.

Cholinesterase activity of blood serum in certain pathological
processes. Vrach.delo no.9:903-905 S'58 (MIRA 11:10)

1. Kafedra psikhatrii (zav. - dots. G.K. Ushakov) i kafedra
farmakologii (ispolnyayushchiy obyazannosti zav. - kand.med.nauk
V.N.Salyayev) Yaroslavskogo meditsinskogo instituta.
(CHOLINESTERASE)
(SERUM)

USHAKOV, Gennadiy Konstantinovich

[Chronic alcoholism and its control] Khronicheskii alkogolizm
i bor'ba s nim. IAroslavl', IAroslavskoe knizhnoe izd-vo,
1959. 29 p. (MIRA 13:8)
(ALCOHOLISM)

USHAKOV, G. K.

EXCERPTA MEDICA Sec 8 Vol 12/12 Neurology Dec 59

6330. NEUROPSYCHIATRIC DISTURBANCES OCCURRING IN WERLHOF'S DISEASE - Uber neuro-psychische Störungen bei der Werlhof'schen Krankheit - Uschakow G. K. Lehrstuhl für Psychiat., Med. Inst., Jaroslavl - Z. ARZTL. FORTBILD. 1958, 52/12 (499-504) Reports of 2 cases in which definite neuropsychiatric disturbances were present, and overshadowed the symptoms of the underlying basic illness, namely idiopathic thrombocytopenic purpura (Werlhof's disease). These neuropsychiatric disturbances occur in the form of syndromes, such as disturbances in the cerebral circulation, apatho-abulistic disturbances, hypotonic neurasthenia, and hallucinatory and paranoid experiences. Because of the disturbances in the cerebral circulation, which is of unknown aetiology, cerebral neoplasm has to be considered and ruled out by appropriate clinical and laboratory tests. The same is true for the changes in the eyegrounds. These neuropsychiatric disturbances are similar to those seen in cases of haemorrhagic neuro-nephritis, as described by I. B. Galant.

Levy - Spokane, Wash. (VIII, 6*)

IL'INA, V.N.; POLETAYEV, A.S.; USHAKOV, G.K.; KHOKHLOV, L.K.; GAIKINA, Z.I.:
SALYAYEV, V.N.; STOLYARCHUK, A.A.

Clinical aspects and psychopathology of Q fever. Zhur. nevr. i psikh.
59 no.3:295-303 '59. (MIRA 12:4)

1. Kafedry psikhiiatrii (zav. - dots. G.K. Ushakov), infektsionnykh
bolezney (zav. - prof. A.I. Reznikov), farmakologii (ispolnyayushchiy
obyazannosti zaveduyushchego - kand. med. nauk V.N. Salyayev) Yaroslav-
skogo meditsinskogo instituta i Gorodskaya klinicheskaya infektsionnaya
bol'nitsa (glavnyy vrach A.S. Poletayev).

(Q FEVER, compl.

ment.-disord. (Rus))

(MENTAL DISORDERS, etiol. & pathogen.

Q fever (Rus))

USHAKOV, G.K.

Electrophoretic investigation of blood proteins in dementia paralytica.
Zhur. nevr. i psikh 59 no.3:337-343 '59. (MIRA 12:4)

1. Kafedra psikiatrii (zav. - dots. G.K. Ushakov) Yaroslavskogo meditsinskogo instituta.

(PARSIS, blood in,
dementia paralytica, blood proteins (Rus))
(BLOOD PROTEINS, in var. dis.
dementia paralytica (Rus))

USHAKOV, G.K.; IL'INA, V.N.; KHOKHLOV, L.K. (Yaroslavl')

Changes in the reactivity of the body during Q fever. Kaz.med.zhur.
no.5:117 S-O '60. (MIRA 13:11)
(Q FEVER)

USHAKOV, G. K., Dr. Medic. Sci. (diss) "Materials for Investigation of Etiology and Pathogenesis of Endogenous Psychoses," Kuybyshev, 1961, 23 pp. (Kuybyshev Med. Inst.) 300 copies (KL Supp 12-61, 283).

USHAKOV, G.K.

Psychiatry in the Mongolian People's Republic. Zhur. nevr. i psikh.
62 no.1:144-149 '62. (MIRA 15:4)

(MONGOLIA---PSYCHIATRY)

USHAKOV, G.K. (Moskva)

Seminar of the European Regional Bureau of the World Health
Organization on the problems of hospital treatment of mentally
ill children; informative report. Zhur. nevr. i psikh. 84
no.7:1102-1105 '64.
(1089 17412)

USHAKOV, G.K.

January Plenum of the Board of the All-Union Scientific Medical
Society of Neuropathologists and Psychiatrists; informative report.
Zhur. nevr. i psikh. 63 no.6:948-950 '63.

(MIRA 17:6)

USHAKOV, G.K., prof., doktor med. nauk

[Ways of development and trends of studies in psychoneurological clinics of the German Democratic Republic]
O putiakh razvitiia i napravleniakh issledovaniia v
psikhonevrologicheskikh klinikakh Germanской Demokrati-
cheskoi Respubliki. Moskva, Vses. nauchno-med. ob-vo
nevropatologov i psikhiatrov, 1964. 66 p.
(NERA 18:8)

BANSHCHIKOV, V.M., zasl. deyatel' nauki, prof., glav. red.; ROKHLIN, L.L., prof., zam. glav. red.; SHMIDT, Ye.V., prof., red.; KERBIKOV, O.V., prof., red.[deceased]; MYASISHCHEV, V.N., zasl. deyatel' nauki prof., red.; FELINSKAYA, N.I., prof. red.; MIKHEYEV, V.V., prof., red.; FEDOTOV, D.D., prof., red.; BABAYAN, E.M., red.; MOROZOV, G.K., doktor med. nauk, red.; SEREBRYAKOVA, Z.N., kand. med. nauk, red.; USHAKOV, G.K., doktor med.nauk, red.; SNEZHNEVSKIY, A.V., prof., red.

[Transactions of the 4th All-Union Congress of Neuro-pathologists and Psychiatrists] Trudy Vsesoiuznogo s"ezda nevropatologov i psikhiatrov. Moskva, Vses.nauchn. med. obvo nevropatologov i psikhiatrov. Vols.1, 5-6. 1965.

(MIRA 18:11)

1. Vsesoyuznyy s"yezd nevropatologov i psikhiatrov. 4th, Moscow, 1963. 2. Deystvitel'nyy chlen AMN SSSR (for Shmidt, Kerbikov, Snezhnevskiy).

21(2)

PHASE I BOOK EXPLOITATION

30V/25A3

International Conference on the Peaceful Uses of Atomic Energy
2nd, Geneva, 1958.

Doklady sovetskikh nauchnykh i tekhnicheskikh issledovaniy (Reports of Soviet Scientists; Nuclear Reactors and Atomic Power) Moscow, Atomizdat, 1959. 707 p. (Series: Itogi nauki i tekhn., vol. 2) Khrushchev inserted. 8,000 copies printed.

General Eds.: V.A. Dolanin, Corresponding Member, USSR Academy of Sciences, A.K. Kravtsov, Doctor of Physical and Mathematical Sciences, A.I. Lysakovich, Member, Ukrainian SSR Academy of Sciences, I.Ye. Morozov, Corresponding Member, USSR Academy of Sciences, A.F. Pukhov, Doctor of Physical and Mathematical Sciences, Ed.: A.F. Alabuyev, Tech. Ed.: Ye. I. Mel'nik.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERING the first and second volumes of a six-volume collection on the practical aspects of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Germany. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction; the second, to the second and third stages of the development of the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Izrael is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

Polonskii, M. A., A.L. Krainin, M.A. Nikol'skii, A.M. Orlovskii, and G.K. Vukobratov. Experiments on Operating the Piston Nozzle Power Plant in the USSR and the Plant's Work Under Boiling Conditions (Report No. 2183)

Polonski, E.A., A. E. Kasan, P. I. Alekshankov, A.S. Gerasimov,
A.A. Khorosheva, K.G. Vinogradov, V.I. Kestel'tsov, A.M. Rubtsov,
A.A. Shcherbakov, A.A. Kizyash, and A.V. Golitsin. A Granitic-
Eutectic Reactor With High Pressure Steam Superheats (Report No.
2139)

36

Alexandrov, A. P., I. I. Arkentov, A. X. Brandaus, A. I. Brandaus,
G. A. Uradkov, B. Ya. Gisslin, V. I. Neganov, and N. S. Kholopin.
The Atomic Laboratory Lenin (Report No. 2140)

Alvin Karpis, V. and R.O. Johnson, Radiation Safety System of the Atomic Icebreaker (Report No. 2518) 87

ALYOKOV, S. I. Water-water Power Reactors (VVER) in the USSR. (Report No. 2184)

ABRAHAMOV, M. S. A. M. GUMOV, V. V. GOMENYUK, I. I. KOVLEV, and S. A. ALYOKOV. Heat-Producing Elements of Water-Water Reactors of Atomic Power Plants (Report No. 2190)

~~Pushkin~~ D.M. and V.Y. Subbotin. Cooling Water-water Reactors
(Report No. 2744)

Yezhinsky, V.S. and I.V. Itskov. A Study of Unsteady Heat Transfer in Heat-producing Elements of Nuclear Reactors (Report No. 2470)

Yanovsky, M.M.; V.I. Subbotin, and P.A. Yanakuy. High-speed method of measuring the heat transfer coefficient in the pipe (Report No. 2475)

Enclosed are 3.5, V.I. Subbotin, V.M. Borshanskaya, and P. L. Krilov. Heat Exchangers During the Flow of Liquid Metal in the Pipes (Report No. 2210)

~~Dissemination of Atomic Economics of Nuclear Fuel in Fast Power Re-~~
~~actors (Report No. 2028)~~ 188

Belkin, Ya., E. A. Kopylovskiy, Yu. S. Slagovoy, and O. V. Sytyakov.
Thermal Neutron Density Distribution Along the Radius of
Assemblies of Rod-shaped Heat Producing Elements (Report
No. 2035)

USHAKOV, G. N.
KRASIN, A. K., GRIGORYANIS, A. N., NIKOLAYEV, N. A. and USHAKOV, G. N.

"Operating the First USSR Atomic Power Station with the Fuel Channels Working in Boiling Conditions."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

21(9)

PHASE I BOOK EXPLOITATION

SOV/3465

Ushakov, G.N.

Pervaya atomnaya elektrostantsiya; opyt stroitel'stva i ekspluatatsii
(The First Atomic Electric Power Station; Building and Operation Practice)
Moscow, Gosenergoizdat, 1959. 223 p. Errata slip inserted. 5,500 copies
printed.

Ed.: Yu.V. Arkhangel'skiy; Tech. Ed.: G.Ye. Larionov

PURPOSE: The book is intended for nuclear scientists and engineers, designers of nuclear power plants, installation and operational personnel working with graphite-moderated water-cooled nuclear reactors. It may also be used by electrical engineering students.

COVERAGE: A nuclear power plant of 5,000 kw capacity was first put into operation in the Soviet Union on June 27, 1954. Five years of experience in operating this plant provided much valuable information which was used by the author in the book. In it he presents a detailed description of the first Soviet atomic power plant, and discusses problems of construction and installation.

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The First Atomic Electric Power Station (Cont.)

SOV/3465

Particular attention has been given to various aspects of an atomic power plant with a graphite-moderated water-cooled reactor. Included is an appendix containing data on boiling and superheating steam in the reactor of an atomic power plant. There are 11 references, all Soviet.

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The First Atomic Electric Power Station (Cont.)

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The First Atomic Electric Power Station (Cont.)

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AVAILABLE: Library of Congress

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4-27-60

DOLGOV, V.V.; KOZLOV, V.Ya.; KOCHETKOV, L.A.; SUDNITSYN, O.A.;
USHAKOV, G.N.

[Startup conditions of an atomic power plant with super-heated steam generated in a uranium-graphite reactor]
Izuchenie puskovykh rezhimov elektrostantsii s uran-grafitovym reaktorom s peregrevom para. Moskva, Glav.upr.po ispol'zovaniyu atomnoi energii, 1960. 14 p. (MIRA 17:1)

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5/089/60/039/01/02/001
8014/8070

ATTN:

TITLE:

Dr. V. V. Kozlov, T. Ya. Kozlovskaya, L. A. Kozlovskaya
Submitted by: A. G. Kozlovskaya
Investigation of the Stepping Conditions of a Reactor
Power Station with a Dynamic Control System
with Superheated Steam

PHYSICAL: Atomaya energiya, 1960, Vol. 9, No. 1, pp. 10-15

211: In a specially adapted steam-to-water loop of the first Soviet nuclear power station, the investigation mentioned in the title was carried out by three methods, where the heat generated in the reactor of the power station. The heat engineering calculations were carried by means of the arrangement shown in Fig. 1. The results of the methods applied must satisfy the following requirements: (a) The method applied (b) The start must permit a rapid rise from zero to the rated power, (c) Under the transient conditions the maximum temperature of the fuel elements must not exceed the temperature which the fuel elements have at

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the rated power. (c) Under the transient conditions, it must be possible for the temperature of the fuel elements to be continuously increased. (d) The method applied at the start must be continuously increased. technological equipment. In the first method, the transient is characterized by the following: (a) The temperature of the fuel elements can be increased by 100 - 150°C in a minute. (b) The transition to superheating does not take place simultaneously in the various channels of the steam-to-water loop. (c) In the secondary cycle, a marked change of the pressure takes place, which necessitates an intensive blowing of the steam. During the transient the second method produces a definite cooling of the channels in which the steam is generated. Thus, the whole transition takes place with a minimum of reactor power. With the third method it is possible to prevent an upward temperature jump by lowering the reactor power. The abrupt fall of temperature to superheating conditions. The abrupt fall of temperature is shortened by a smaller reduction of the reactor power, and the blowing through of the channels in which the steam is generated. All results are graphically represented.

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A team of engineers under P. I. Alshchakov participated in the solution of the technical problems. A. K. Kozlov and L. S. Gerasimov followed the work with interest. There are 7 figures and 3 Soviet references.

SUBMITTED: August 17, 1959

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82731

S/089/60/009/002/002/015
B006/B056

21.1920
AUTHORS:

Slyusarev, P. N., Ushakov, G. N., Starkov, O. V.,
Kochetkov, L. A., Nesterova, L. N., Kozlov, V. Ya.

TITLE:

Investigation of the Transfer of Radioactive Substances by
Steam and Water and the Chemical Stability of Deposits
in the Steam - Water Cycle of the First Atomic Power Plant 79

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 2, pp. 98-103

TEXT; The quantity of radioactive substances carried along in boiling-
water reactors by steam and water, their depositing on the inner surfaces
of conduction pipes, as well as the chemical nature and the behavior of
these deposits depends essentially on the mode of operation of the reactor
and the construction of the evaporators and separators. In the plants of
the Pervaya atomnaya elektrostantsiya (First Atomic Power Plant), the
authors investigated the processes in which radioactive substances are
carried along by steam and water. They determined the depositing coeffi-
cient of the substances on the inner surfaces of the conduction pipes and
investigated the chemical stability of these deposits. They further

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Investigation of the Transfer of Radioactive
Substances by Steam and Water and the Chemical
Stability of Deposits in the Steam - Water
Cycle of the First Atomic Power Plant

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B006/B056

investigated problems of the deactivation of some parts of the steam-power equipment of the plant. The steam-water loop consists of two circuits of stainless steel of the grade 1X18H9T (1Kh18N9T), which are insulated against each other. Fig. 1 schematically shows the investigated loop; Table 1 gives data on the two circuits. The coolant used was ordinary distilled water which was kept in circulation by means of pumps. The investigations were carried out with superheated and non-superheated steam; water temperatures, in the first case, amounted to 275°C at the input, and 340-365°C at the output; in the second case they were 265°C and 310°C, respectively (with a 25% steam content). The places where samples were taken are given in Fig. 1; the β - and γ -activity was measured on all coolant samples, and the quantity of the dry residue, the pH-value, as well as the radioisotopic, anionic, and cationic components of the contamination were determined. The transfer of radioactive substances was determined from the change in radioactivity of the dry residue along the loop. Table 2 gives a multiple of numerical values of the radioactivity of the dry residue of the coolant determined at various places in circuit II. The

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Investigation of the Transfer of Radioactive
Substances by Steam and Water and the Chemical
Stability of Deposits in the Steam - Water
Cycle of the First Atomic Power Plant

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time-dependent change in these radioactivities at various places of the loop are shown in Fig. 2. The results obtained by physicochemical investigations of feed water and the water of cycles I and II are given in Table 3. It supplies the following data: dry residue, total activity ($\beta + \gamma$), pH, CO_2 -, NO_3 -, Cl^- -concentration, total chromium concentration, CrO^{4-} and Cr^{3+} -concentration. The contamination consisted of: Co^{60} , Fe^{59} , Cr^{51} , Ca^{45} (4-10% of the total activity); Na^{24} , Cu^{64} , Ni^{65} , Si^{31} , Mn^{56} (90-96% of the total activity). Components with $T_{1/2} < 1$ hour were not taken into account. The radioactivity and chemical stability of the deposits on the tube walls were determined by means of a special device consisting of two equal tubes made from ЭИ-695 (EI-695) steel. Data on outward shape, thickness, radioactivity, and temperature of the walls are given in Table 4, and data on chemical stability in Table 5. The deposits consisted of Co^{60} , Fe^{59} , Cr^{51} , Ca^{45} ($T_{1/2} \geq 27$ days) (70%) and of

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Investigation of the Transfer of Radioactive
Substances by Steam and Water and the Chemical
Stability of Deposits in the Steam - Water
Cycle of the First Atomic Power Plant

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B006/B056

Na²⁴, Cu⁶⁴, Mn⁵⁶, Ni⁶⁵, and Si³¹ ($T_{1/2} \leq 13$ hours) (30%). Finally, a report is given on deactivation experiments undertaken with various aggressive solutions with and without inhibitors. A 6% HCl + Urotropin and a 5% HNO₃ + 2% HCl + K₂Cr₂O₇ solution (~ 0.05 g/l) were used as solutions with inhibitors, and a 5% HNO₃ and a 5-7% HCl solution as solutions without inhibitors. The experiments were carried out at 20°C for 24 to 48 hours and at 40-60°C for 2 to 4 hours. The results obtained are described in detail. The authors thank A. K. Krasin for his interest in this investigation. There are 2 figures, 5 tables, and 6 references: 4 Soviet and 2 US.

SUBMITTED: November 23, 1959

Card 4/4

BOLOGOV, V. V., KOZLOV, V. Ya., KAGANOV, L. A., GORODENKO, G. A., and
and KOLINOV, G. N.

"Single-Phase Superheat Experimental Set-Up at the First Atomic Power
Station Reactor."

report presented at the IAEA Symposium on Power Reactor Experiments in Vienna
Austria, 23-27 Oct 1961.

(report presented by I. I. Bondarenko)

USHAKOV, G. N.

25373

S/089/61/011/001/002/010
B102/8214

21.1000

AUTHORS:

Yevdokimov, Yu. V., Kozlov, V. Ya., Konochkin, V. G.
Kochetkov, L. A., Krasin, A. K., Lytkin, V. V., Sever'yanov,
V. S., Semenov, B. A., Ushakov, G. N.

TITLE:

Experience from work with the First Nuclear Power Plant

PERIODICAL:

Atomnaya energiya, v. 11, no. 1, 1961, 12 - 18

TEXT: The First Nuclear Power Plant in the USSR, which was the first in the world, has been successfully operated for seven years; this paper presents a short survey of the experiences accumulated during the first six years at this station. The station itself possesses all the equipment available at a large research reactor. The construction of the Beloyarskaya GRES (Beloyarsk State Regional Electric Power Plant) represents a further development of the First Nuclear Power Plant. The working of the reactor at different power levels: In the so-called "cold state", at 0.01% of the nominal power, the reactor has the lowest power level at which the automatic power regulator can still function; the rise in this level is checked by measuring the neutron flux; the power level can be doubled within 20 sec.

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Experience from work with ...

Heating begins with a rise of the power level to 5% of the nominal power (first cycle: 160-170°C, pressure in the second cycle: 7 - 8 atm), then to 10% of the nominal power (temperature at the entrance to the reactor: 190°C, steam pressure 12.5 atm); these parameters remain unchanged on further increase of power. The total heating time for the system is 3.5 - 4 hours; during this time, nitrogen is blown in the graphite system to remove oxygen. The parameters of the power station for 50, 75, and 100% of the nominal power are given in Table 1. On shutting the reactor, it is first cooled, by utilizing the natural loss of heat, to the temperature of water in the first cycle (110-120°C), which requires 1.5-2 hours. The cooling water is then removed from circulation and cooled; this enables the reactor to be cooled rapidly. Reliability and duration of the reactor's operation depend on the quality of the fuel element; the station works with tube type elements. The fuel is contained between two tubes of nonrusting steel (the inner is 0.4 mm thick and the outer 0.2 mm thick). This kind proved to be particularly reliable: Not a single element has been dislocated during the whole period the station has been in operation. The system of partial renewal of the fuel element is used for guaranteeing the deepest possible burning. (N. A. Dollezhal et al. reported on this at the Second Geneva

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Experience from work with ...

Conference, 1958). Numerical data about the consumption are given in Table 2. Deformation of the fuel elements were checked, a deformation of 14.20 ± 0.02 mm of the element jackets was found. Experiments relating to the boiling of water in the fuel channels and determination of the hydrodynamic characteristics of the fuel elements in the reactor were started in 1956. The preliminaries were completed in September 1956, and one channel was brought to boiling operation. This first boiling channel worked for 400 hours at thermal loads of $(0.45 - 0.85) \cdot 10^6 \text{ kcal/m}^2 \cdot \text{hr}$ (steam content 5 - 20% by weight, flow rate 250 kg/hr). As the system proved satisfactory, more channels were brought to boiling operation; in the middle of 1957 there were 70 such channels, more than half of the total. The boiling operation was characterized by the following parameters: Steam content at the exit of the channels: 5 - 25% by weight, thermal load $(0.6 - 1.3) \cdot 10^6 \text{ kcal/m}^2 \cdot \text{hr}$, water flow rate 0.7 - 1 m/hr at 100 atm and 190°C at the exit. Since superheating of steam constitutes one of the most important methods for increasing efficiency, experiments in this connection were carried out in the following years with a special experimental loop (Fig. 1) to study the methods of bringing the steam to a superheated state. For this, a method of

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Experience from work with ...

starting was perfected which requires only such equipment as is used in normal operation. During the period of transformation of the superheating operation, the superheating channel could either be closed, or it could work without cooling ("dry operation"), or with water cooling. The last named method had a number of advantages. The following starting methods were studied: Starting with continuous increase of the reactor power, starting with decrease of the reactor power, and combined methods (first the former, and then the latter but lowering the power only for about 60 - 70%). To increase the safety of the reactor, a special system was built in 1959 which prevents the escape of the gas - steam mixture into the ventilation system when the tubes of the experimental holes break down. This system "for localizing the damage due to accident" (Fig. 2) not only serves this purpose but also helps to purify the gas after the accident has occurred. The system consists of a cylindrical tank (6.2 m^3) whose lower part (1.8 m^3) is filled with water; in it are placed the cooling coils and special nozzles through which the steam - gas mixture streams into the water in the case of an accident. The gas is introduced in a sensitive gas container. The whole system is placed in a protective container equipped with manometers, thermometers, and dosimeters. There

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Experience from work with ...

2 figures and 2 tables.

SUBMITTED: February 6, 1961

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5
USHAKOV, G.N., LITKIN, V.B., KOCHETKOV, L.A., POPOV, V.V., HELINSKAYA, N.T.,
SOKOLOV, A.F.

The operating experience with the steam generators of the first atomic power station.

Report submitted for the Conference on Operating experience with the power reactors, Vienna, 4-8 June 63

BYCHIKOV, Yu. F.; USHAKOV, G. N.; SERGEYEV, Yu. A.

"Portable atomic power station."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva,
31 Aug-9 Sep 64.

ACCESSION NR: AP4037630

S/0096/64/000/006/0005/0007

AUTHOR: Ushakov, G. N. (Candidate of Technical Sciences); Kochetkov, L. A. (Engineer); Konochkin, V. G. (Engineer); Sever'yanov, V. S. (Engineer)

TITLE: Operating experience of the first atomic power plant

SOURCE: Teploenergetika, no. 6, 1964, 5-7

TOPIC TAGS: atomic reactor, atomic power plant, reactor operation, direct flow reactor

ABSTRACT: The authors present data demonstrating the high reliability of plant equipment after ten years of operation. Seventy per cent of fuel elements operated 1.5 to 3.5 times longer than design expectations, while channels and reactor operated normally even with channel flows between 100-1000 g/hr. Compensation capacity of the uncooled, heat-resistant boron-steel rods was 80% that of the previously used boron carbide rods; increasing the boron content beyond 2.5--3.0% did not increase compensation. Life of the fully inserted rods was 54 days at a reactor power of 15 Mw. Filling the graphite pile with nitrogen enabled it to operate at 700-800C. In the beginning of 1960 all channels began operation under

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ACCESSION NR: AP4037630

boiling conditions, and the entire reactor was converted to qualitatively new operating conditions. Prolonged experiment with superheated steam proved the feasibility of starting a direct-flow reactor by gradual displacement of water with steam, and the reliability of cooling it during emergency shutdown. Orig. art. has: 4 tables.

ASSOCIATION: none

SUBMITTED: 00

DATE ACQ: 22Jun64

ENCL: 00

SUB CODE: NP

NO REF SOV: 000

OTHER: 000

Cord 2/2

ACCESSION NR: AP4041445

S/0089/64/016/006/0484/0488

AUTHORS: Ushakov, G. N.; Kochetkov, L. A.; Konochkin, V. G.;
Sever'yanov, V. S.; Kozlov, V. Ya.; Sudnitsy*n, O. A.

TITLE: Operating experience of the first atomic electric station
in the world

SOURCE: Atomnaya energiya, v. 16, no. 6, 1964, 484-488

TOPIC TAGS: reactor control rod, reactor feasibility study,
reactor hazard, reactor operation, boiling water reactor

ABSTRACT: Several preliminary tests aimed at ascertaining the
feasibility of an atomic power station with the steam heated directly
in the reactor are described. These included tests to determine
the degree of throttling of thin parallel boiler tubes directly
cooling the fuel elements at loads up to 10^6 kcal/m² hr with up to
30% steam by weight; tests to prevent pulsations of flow in the

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ACCESSION NR: AP4041445

parallel boiler tubes; experiments on nuclear superheating of the steam in an experimental single-circulation loop. The description covers experiments on the boiling and steam superheat modes in the reactor, tests on the operation of the uncooled control rods, and reactor safety tests. The original control rods made of boron carbide clad with stainless steel and cooled with water. Various shortcomings of these rods have necessitated the development of control rods made of tubular steel carrying equally spaced sleeves of boride steel (18 sleeves in a control rod 1500 mm long). Rods of this type had sufficient absorbing ability and service life to operate at 850C and an integral neutron flux 5×10^{20} neut/cm². The use of these control rods increased the reactivity margin by 0.8%, the operating period by 15 days, and the reactor efficiency by 1%. Other advantages and disadvantages of uncooled boron carbide scram rods are briefly discussed. The safety problems considered involve hermeticity of the fuel element cladding and of the fuel element internal tube which is under pressure. The effects of each

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ACCESSION NR: AP4041445

type of failure are discussed. In the former type the contamination of the first loop by radioactive corrosion products is relatively low even after 10 years of operation. A special system, which prevents the steam-gas mixture from entering the ventilation system in the case of emergency of the latter type, is described. It is claimed that all the safety precautions cause the personnel exposure to radiation to be below the-established" norm. Orig. art. has: 1 figure.

ASSOCIATION: None

SUBMITTED: 11Apr64

ENCL: 01

SUB CODE: NP, IE

NR REF SOV: 000

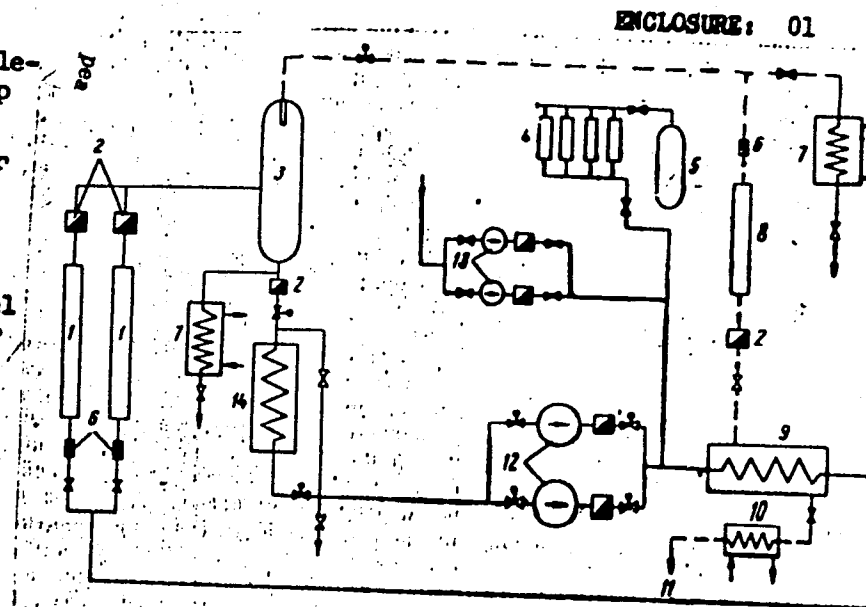
OTHER: 000

Cord 3/4

ACCESSION NR: AP4041445

Principal diagram of single-circulation superheat loop

- 1 - evaporation channels
- 2 - shutoff, 3 - separator
- 4 - water volume compensators, 5 - air volume compensators, 6 - check valves, 7 - sample cooler
- 8 - steam superheat channel
- 9 - regenerative preheater
- 10 - condensate cooler
- 11 - condensate overflow
- 12 - circulating pumps
- 13 - feedwater pumps
- 14 - heat exchanger



Card 4/4

L 16232-65 EWT(m)/EPT(n)-2/T/EPA(bb)-2
ACCESSION NR: AP4049536

Pr-4 SSD/AFWL DM
S/0089/64/017/005/0359/0366

AUTHORS: Ushakov, G. N.; Kochetkov, L. A.; Konochkin, V. G.; Z
Sever'yanov, V. S.; Kozlov, V. Ya.; Sudnitsyn, O. A.; Belinskaya,
N. T.; Slyusarev, P. N.; Ivanov, V. A.
SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 359-366

TITLE: Operating experience with the first atomic electric station
as an experimental installation 19

TOPIC TAGS: research reactor, reactor theory, reactor operation

ABSTRACT: Different experimental loops added to the first atomic
energy station for research purposes are described. These include
the following: 1) double-passage steam superheating loop; 2) water
loop with natural circulation; 3) water loop for water-chemistry
research; 4) high pressure water loop; 5) loops for organic-liquid
research (with high and low melting temperatures). Each of the
loops is briefly described. Other phases of the research are tests
of the behavior of the graphite core at high temperatures, operating

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L 16282-65

ACCESSION NR: AP4049536

tests on various channels and fuel elements of tubular construction, investigations of the radioanalysis of water and superheated steam, investigation of deposition of radioactive impurities from the superheated steam on the turbine blades. Some of the brief reports are accompanied by tables showing the variation of the operating conditions of various sections of the reactor with time. Orig. art. has: 3 tables and 2 figures.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 000

Card 2/2

17
L 24211-65. BWT(m)/EPT(c)/EPT(n)-2/EPR Pr-L/Ps-L/Pa-L IM

ACCESSION NR: AP5001266

S/0089/64/017/006/0448/0452 42

AUTHOR: Sinev, N. M.; Krasin, A. K.; Bychkov, I. F.; Blökhin, O. I.;
Broder, D. L.; Gabrusev, V. N.; Dudnikov, Yur. V.; Zhil'tsov, V. A.; Koptev,
M. A.; Kolov, A. P.; Lantsov, M. N.; Lisochkin, G. A.; Merzlikin, G. A.;
Morozov, I. G.; Komarov, A. Ya. (deceased); Orokhov, Yu. I.; Sergeyev, Yu. A.;
Slyusarev, P. N.; Ushakov, G. N.; Fedorov, N. V.; Chernyy, V. Ya.; Shmelev,
V. M.

TITLE: Small-size atomic electric power installation TES-3 19

SOURCE: Atomnaya energiya, v. 17, no. 6, 1964, 448-452

TOPIC TAGS: small atomic power installation, portable atomic power installa-
tion, nuclear reactor, electric power generation/ TES-3 reactor

ABSTRACT: The paper is a summary of the SSSR report #310 at the Third Inter-
national Conference on Peaceful Uses of Atomic Energy in Geneva, 1964. It
describes a movable small-size atomic electric power installation with the water
cooled and moderated TES-3 reactor (under 10,000 kw). It consists of four

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L 24211-35

ACCESSION NR: AP5001266

blocks each of which was assembled at the manufacturing plant, and which are placed on four self-propelled flatcars on caterpillar tracks. No housing is required for the installation; the only local preparation needed is the radiation protection. The results with a demonstration model show a satisfactory agreement between the theoretically expected and actually obtained parameters of the installation. Orig. art. has: 4 figures

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 000

Card 2/2