

10.4100 2115 2807 2607

23747
S/170/61/004/006/001/015
B129/B212

11.9000

AUTHORS: Baum, V. A., Bologa, M. K., Brdlik, P. M.

TITLE: Heat transfer in the case of a transverse flow around plane surfaces

PERIODICAL: Inzhenerno-fizicheskij zhurnal, v. 4, no. 6, 1961, 13-20

TEXT: This paper deals with the theoretical and experimental research of heat transfer in vertical plane surfaces. The experimental data agreed well with those obtained theoretically. The heat exchange on plane surfaces surrounded by an air current is of great practical interest since it determines the reliability and life of many technical products. So far, this type of heat exchange has hardly been investigated. Two experiments are known, which treat several points of this problem. The paper of Jakob, which is mentioned in the literature, deals with the case of a plane surface surrounded by an air current. Summarizing, the following can be said: 1) The tests were done on small surfaces and the local heat transfer coefficients had not been determined. 2) The theoretical investigations dealt with the frontal point and its surroundings. It is

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Heat transfer in the case of ...

still uncertain whether this solution is valid for the whole surface. The present paper aims at determining this and at investigating the heat transfer in transverse flows around plane surfaces, determining the effect of the dimensions on the mean heat transfer coefficient, and an analysis of the local heat transfer coefficients and their distribution on the surface of the heat exchange. An attempt has also been made by the authors to solve the problem analytically for a plane disk. The theoretical considerations start from the energy equation

$$W_r \frac{\partial t}{\partial r} + W_z \frac{\partial t}{\partial z} = a \left(\frac{\partial^2 t}{\partial r^2} + \frac{1}{r} \frac{\partial t}{\partial r} \right) + a \frac{\partial^2 t}{\partial z^2} \quad (1)$$

(the dissipation function and terms which are pressure dependent have been neglected). Assuming incompressibility of the liquid and neglecting the heat conduction along r the simplified energy equation $W_z dt/dz = a d^2t/dz^2$ is obtained. This equation is solved by employing reduced parameters. The solution shows that the local heat transfer coefficient will not be a function of the disk radius, i.e., it is constant for the whole disk.

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Fig. 1 shows the experimental arrangement which was used for checking the theoretical results. The temperature of the disk surface had been varied from 50-350°C. The air channel having a cross section of 600 · 600 mm furnished an air flow of from 1-17 m/sec (the one having a cross section of 250 · 250 mm showed velocities up to 40 m/sec). The temperature fields on the boundary layer, which were used to determine the distribution of the local heat transfer coefficients along the diameter of the disk, had been measured by changing the location of the thermocouples. The experiment showed that the mean heat transfer coefficients for the whole disk agree with the mean values of the local heat transfer coefficients. These had been found according to the temperature distribution along the boundary layer. It was also found that for $N_{Re} = \text{const.}$ (abstracter's note: N_{Re} is not defined) the local heat transfer coefficients are practically constant for the whole surface. V. P. Motulevich and G. Shlikhting are mentioned. There are 4 figures and 10 references: 6 Soviet-bloc and 4 non-Soviet-bloc. The most important reference to English-language publication reads as follows: Jakob N., Proc. Phys. Soc., 59, 335, 726, 1947.

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23747

Heat transfer in the case of ...

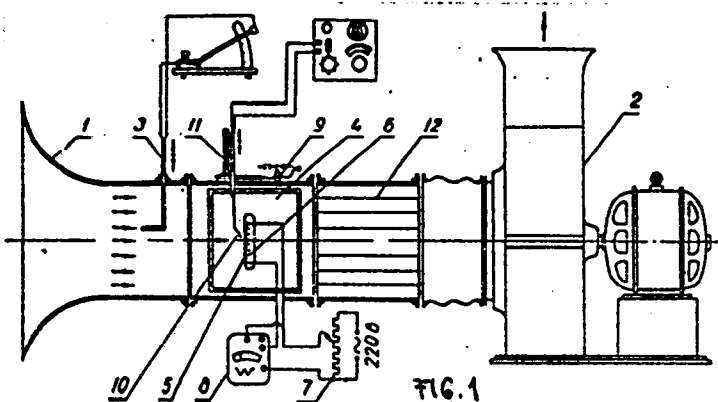
S/170/61/004/006/001/015
B129/B212

ASSOCIATION: Energeticheskiy institut imeni G. M. Krzhizhanovskogo AN SSSR
(Institute of Power Engineering imeni G. M. Krzhizhanovskiy
of the AS USSR)

SUBMITTED: April 8, 1961

Fig. 1: Diagram of the experimental arrangement

Legend: 1) Wind tunnel; 2) fan; 3) Prandtl tube; 4) observation window; 5) examined disks; 6) heater; 7) heater control; 8) voltmeter; 9), 10), and 11) adjusting device of the micrometer.



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S/030/61/000/008/003/005
B105/B206

AUTHORS: Baum, V. A., Kruzhilin, G. N.

TITLE: Solar radiation as a future source of energy

PERIODICAL: Akademiya nauk SSSR. Vestnik, ³¹no. 8, 1961, 64-70
1

TEXT: The authors discuss technical and economic problems of the utilization of solar energy. The prospects and necessity of utilizing solar energy can be evaluated by studying the existing sources of energy, which is done on the basis of a compilation of data on the power sources of the earth. Calculations show that if energy consumption continues to increase at the present rate, coal deposits will be exhausted within 70 to 150 years, and gas and oil deposits within 25 to 50 years. Man must utilize new sources of energy in the near future. Figures show the immense, inexhaustible energy flow of solar radiation which exceeds ten thousand times the amount of energy consumed in the whole world. In the course of one year the earth receives more energy from the sun than all other known energy deposits amount to. More than half of this energy reaches the surface of the earth. The conversion of thermal into electric

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Solar radiation as a future source....

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energy by means of thermoelectric batteries was practically impossible 20 years ago, since the efficiency of the individual metal thermocouples amounted only to fractions of one percent. Owing to studies by A. F. Ioffe and his students, semiconductor thermocouples with an efficiency of 9-10 % are now produced in the USSR. The solar thermoelectric generators of the type СТЭГ (STEG), which have an efficiency of about 5-8 %, are mentioned in this connection. At the Energeticheskiy institut im. G. M. Krzhizhanovskogo (Power Engineering Institute imeni G. M. Krzhizhanovskiy) a calculation method for such devices was elaborated, and the first STEG with an output of 40 w was produced. Solar photoelectric cells could be produced, which convert solar energy directly into electric energy with an efficiency of about 10-11 %. Photoelectric cells developed at the Fizicheskiy institut im. P. N. Lebedeva (Institute of Physics imeni P. N. Lebedev) can operate at almost natural light. Owing to high cost, however, they can only be used in special cases. The development and application of "selective" coatings is described as being important. Dimensions and fields of application of solar installations are also discussed. Solar stoves and solar boilers for domestic use are mentioned, which were already developed and tested. In order to define possibilities

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and prospects, an experimental station must be established for the purpose of solving some theoretical and design problems. A project of such a station with a 2500-kw output, elaborated by the Power Engineering Institute, is to be realized in one of the rayons of the Armyanskaya SSR. In some cases the application of solar batteries is determined, not by economic, but by other requirements, e.g., the utilization of solar energy when solving cosmic problems, its application in high-temperature solar furnaces and so forth.

Card 3/3

S/024/62/000/003/002/011
E191/E481

AUTHORS: Baum, V.A., Sakr, I. (Moscow)

TITLE: Mass transfer through a hole from a chamber placed in
turbulent flow

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Energetika i avtomatika.
no.3, 1962, 114-121

TEXT: An investigation is reported carried out in connection with
the design of Sun furnaces. The furnace chamber of spherical or
cylindrical shape has an aperture for the entry of a beam of
sun rays reflected by a concentrator. In some designs, a
protective atmosphere must be maintained in the chamber and the
losses due to the blowing away of the protective gas by the
impinging wind must be replenished. The rate of blow-away is
assumed proportional to the velocity of the external flow and the
area of the aperture. The factor of proportionality was the
subject of the investigation which was carried out by testing
a scale model. Three basic processes were observed:
1) The chamber aperture either faces the external flow or faces
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away from it. In both cases, the external medium penetrates the chamber at irregular intervals of time, displacing equal volumes of the internal medium. The resulting pulsations cause inter-mixing inside the chamber. The inter-mixing becomes a random process and the stationary process can be described as diffusion.

2) The external and internal media do not inter mix but the internal medium is simply displaced.

3) Neither the diffusion nor the convection components can be ignored. In fact if the aperture is at an angle to the external flow, a circulation takes place inside the chamber.

The test model was operating with water. A model of the chamber was placed in a water tunnel having a rectangular cross-section of 200 x 50 mm in which the water velocity could reach 1 m/sec. The chamber model was designed as three telescoping cylinders. Rotation of the intermediate cylinder performed the opening and closing of the aperture. The medium inside the chamber was a weak aqueous solution of sodium hypo-sulphite so that its density was nearly equal to that of water and the effect of gravity was practically excluded. The chamber aperture was closed before the
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start of the test when the aperture was opened for a given time and shut again. The chamber was removed from the tunnel, its contents thoroughly mixed and the concentration of hypo-sulphite was determined by iodine analysis. The measured concentration as a percentage of the initial concentration was plotted against the time interval during which the aperture was held open. It is shown that the above factor of proportionality can be derived from these tests. This factor is plotted against the Reynolds number of the external flow at various angular positions of the aperture in relation to the direction of external flow. Typical values for angular positions of 0° (facing the flow), 30° and 60° are 0.03 at a Reynolds number of 7000. The factor changes only moderately with the Reynolds number except at an aperture position of 90° when the factor drops to 0.01 at a Reynolds number of 10000. When the aperture faces away from the flow, the value of the factor is only slightly smaller than for an aperture facing the flow but the process becomes highly unstable. There are 10 figures and 1 table.

SUBMITTED: March 10, 1962
Card 3/3

BAUM, V.A., doktor tekhn.nauk

Symposium on solar energy in the united States. Vest. AN SSSR 32
no.1:110-112 Ja '62. (MIRA 15:1)

(Solar energy)

BAUM, V. A.

"Possibilities for utilizing sun energy to meet some of the energy needs of the population of economically under-developed countries"

report to be submitted for the United Nations Conference on the Application of Science and Technology for the Benefit of the Less Developed Areas - Geneva, Switzerland, 4-20 Feb 63.

BAUM, V.A.; BAYRAMOV, R.

Heat transfer in solar distillers of the hothouse type. Izv.AN
Turk.SSR.Ser.fiz.-tekh., khim.i geol.nauk no.3:20-26 '63.

(MIRA 17:3)

1. Energeticheskiy institut im. G.M.Krzhibzhanovskogo.

SHORIN, Serafim Nikolayevich; BAUM, V.A., doktor tekhn. nauk,
prof., retsenzent; SAMSONOVA, M.T., red.

[Heat transfer] Teploperedacha. Moskva, Vysshaya
shkola, 1964. 489 p. (MIRA 18,1)

BAUM, V.A., doktor tekhn. nauk, otv. red.; ORPIK, S.L., red.

[Utilization of solar energy in the national economy of
the U.S.S.R.] Ispol'zovanie solnechnoi energii v narodnom
khoziaistve SSSR. Moskva, Nauka, 1965. 125 p.
(MIRA 18:4)

1. Moscow. Energeticheskiy institut.

L 24077-66 EWT(1)/EWP(m)/EWT(m)/EWA(d)/T/EWA(h)/EWA(1) JET/WW/JW/JMD/NE/JT
ACC NR: AP6014966 SOURCE CODE: UR/0281/65/000/002/0158/0159

AUTHOR: Alad'yev, I. T.; Aleksandrov, B. K.; Baum, V. A.; Golovina, Ye. S.;
Gol'denberg, S. A.; Zhimerin, D. G.; Zakharin, A. G.; Iyevlev, V. N.; Knorre, V. G.;
Kozlov, G. I.; Leont'yeva, Z. I.; Markovich, I. M.; Meyerovich, E. A.; Mikhnevich, G. V.;
Popkov, V. I.; Popov, V. A.; Predvoditelev, A. S.; Pyatnitskiy, L. N.; Styrikovich,
M. A.; Tolstoy, Yu. G.; Tsukhanova, O. A.; Chukhanov, Z. F.; Sheyndlin, A. Ye.

125
120
B

ORG: none

TITLE: Lev Nikolayevich Khitrin

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 2, 1965, 158-159

TOPIC TAGS: academic personnel, physics personnel, combustion, carbon, high temperature research, plasma beam, fuel

ABSTRACT: Professor L. N. Khitrin Corresponding Member, Academy of Sciences USSR, State Price Laureate, and Doctor of Engineering Sciences, died after a short but severe illness at the age of 58. He was well known here and abroad as an outstanding scientist and specialist in the field of combustion theory and the development of methods for speeding up burning of fuel. He began his scientific work at the All Union Heat Engineering Institute after graduating from the physics department of Moscow University in 1930. His early work was on the propagation of flames in gases, and on heterogenous combustion. In 1948 he defended his Doctor's Dissertation on the theory of combustion of car-

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UDC: 621.036:92

L 24077-66

ACC NR: AP6014966

bon. His monograph "Combustion of Carbon" was awarded the State Prize in 1950. In 1951 he became the permanent director of the laboratory for the intensification of combustion processes of the G. M. Krzhizhanovskiy Power Institute. He was elected a corresponding member of the Academy of Sciences USSR in 1953. He headed the All Union Advisory Board on combustion, represented Soviet science at International Symposia, and was a member of the International Institute of combustion. For a number of years, he directed the Moscow general seminar on combustion, and took an active part in the work of the Scientific Council of the Academy of Sciences USSR, on high temperature heat physics, and of the scientific council on the comprehensive utilization of fuel. He devoted a large amount of attention to teaching work. He directed the Combustion Division of the Physics Department of Moscow State University. His monograph "Physics of Combustion and Explosion" (1957) is a basic text for students in this field. Three Doctor's Dissertations and fifteen Candidate Dissertations were defended under his direction. In the last years of his life he directed work on methods for comprehensive utilization of fuel at power stations so as to obtain valuable products from the mineral part of the fuel, as well as work on the physical chemical processes in a plasma stream, and the mechanism of interaction between carbon and gases. He was the author of more than 60 scientific works, for which he was awarded the Order of the Red Banner of Labor and medals. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 21, 20 / SUEM DATE: none

Card 2/2 *plc*

ALAD'YEV, I.T.; ALEKSANDROV, B.K.; BAUM, V.A.; GOLOVINA, Ye.S.;
GOL'DENBERG, S.A.; ZHIMERIN, D.G.; ZAKHARIN, A.G.; IYEVLEV, V.N.;
KNORRE, V.G.; KOZLOV, G.I.; LEONT'YEVA, Z.I.; MARKOVICH, I.M.;
MEYEROVICH, E.A.; MIKHNEVICH, G.V.; POPKOV, Z.I.; POPOV, V.A.;
PREDVODITELEV, A.S.; PYATNITSKIY, L.N.; STYRIKOVICH, M.A.;
TOLSTOV, Yu.G.; TSUKHANOVA, O.A.; CHUKHANOV, Z.F.; SHEYNDLIN, A.Ye.

Lev Nikolaevich Khitrin, 1907-1965; obituary. Izv. AN SSSR. Energ.
i transp. no.2:159-160 Mr-Ap '65. (MIRA 18:6)

L 01863-67 EWT(m) JR/GD

ACC NR: AT6029305

SOURCE CODE: UR/0000/66/000/000/0026/0033

AUTHOR: Baum, V. A.

ORG: none

TITLE: Calculation of the temperature distribution in water flowing in a channel of a water-water power reactor

SOURCE: Moscow, Energeticheskiy institut. Teploobmen v elementakh energeticheskikh ustanovok (Heat exchange in power installation units). Moscow, Izd-vo Nauka, 1966, 26-33

TOPIC TAGS: nuclear reactor technology, temperature measurement

ABSTRACT: The calculations are based on the active zone of a reactor with a diameter of 3 meters and a height of 2.5 meters, consisting of 343 working channels and 6 scram channels, of hexagonal tubular construction. The cross section of the channels was 144 mm and the length 3.2 meters. In each channel there were 91 fuel elements. The fuel elements were in the form of long rods (2500 mm) with a diameter of 10.2 mm. They were arranged in a triangular grid with a spacing of 14.3 mm. The evolution of heat, along the length of the reactor as well as over the cross section, is non-uniform and is described by the formula:

$$q \approx q_{max} \sin \frac{\pi z}{H} \left(1 - 2.405 \frac{r}{R} \right).$$

Card 1/2

BAUM, V.G.

BAUM, V.G., inzhener.

Feeding lumber-loading booms with electric power by means of
trolleys. Les.prom. 14 no.7:24-25 JI '54. (MLRA 7:7)

1. Tonskiy lesoperevalechnyy kombinat.
(Lumbering--Machinery)

BAUM, V.G.

Circuits of noncontact frequency converters. Prom.energ.
16 no.9:17-19 S '61. (MIRA 14:8)
(Frequency changers)

BAUM, V.G., inzh.

Automatic line for cutting and sorting pit props. Mekh.1
avtom.proizv. 17 no.11:11-12 N '63. (MIRA 17:4)

BAURA, V.

Baura, V.

"Rotary-head type shoveling and loading machines." p. 245.
(Bányászati Lapok. Vol. 8, no. 5, May 1953, Budapest.)

SO: Monthly List of East European Accessions, Vol. 2, No. 9, Library of Congress, September
1953, Uncl.

BAUMA, V.

BAUMA, V. Tasks of grinding and preparation of mineral metals. p. 155

VOL. 11, no. 3, March 1956
BANYASZATI LAPOK
TECHNOLOGY
Budapest, Hungary

SO: East European accession Vol. 6, no. 3, March 1957

HUNGARY/Chemical Technology - Ceramics, Glass, Adhesives,
Concretes.

H.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 54639
Author : Bauma
Inst : ~~.....~~
Title : Enrichment of Kaolin by Dedantation.
Orig Pub : Banyaszati lapok, 1956, 11, No 4, 213-217
Abstract : No abstract.

Card 1/1

BAUMA VIKTOR

HUNGARY/Chemical Technology. Chemical Products and Their
Application. Ceramics. Glass. Binders. Concrete. I-8

Abs Jour : Ref Zhur-Khimiya, No 2, 1958, 5318.
Author : Bauma Viktor
Inst : No given
Title : Methods for the Concentration of Kaolin.
Orig Pub : Bayasz. lapok, 1957, 12, No 1, 37-41.
Abstract : Brief description of various methods of
kaolin concentration.

Card : 1/1

BAUMA, N.

Filtration and thickening operations of kalin fluid.

P. 477 (Baryaszati Lapok. Vol. 12, no. 9, 1957, Budapest, Hungary)

Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 2,
February 1958

BAUMA, Viktor, okl. banyamernok

The mineral industry is ten years old. Bany lap 93 no. 1:1-11. Ja '60

1. Nehezipari Miniszterium, Erc- es Asvanybanyaszati Foiskola.

BAUMA, Viktor, okleveles banyamernok

The Hungarian mineral industry is ten years old. Bany lap 93
no.1:1-11 Ja '60.

1. Nehesipari Miniszterium Erc- es Asvanybanyaszati Fozosztaly.

BAUMA, V.

Zsigmond iasitsek, 1881-1962; obituary. Bany lap 95 no.12:855 D '62.

BAUMANN, A.

PHASE I BOOK EXPLOITATION

SOV/6261

Kernenergie und Flotte; Artikelsammlung (Nuclear Energy and the Navy; Collection of Articles) [Berlin] Deutscher Militärverlag [1961]. 232 p. Errata slip inserted. 2000 copies printed.

Translation from the Russian of: Atomnaya energiya i flot.

Translator: Erika Steuk, Lieutenant Commander. Responsibility for German edition: Claus Gruszka, Engineer; Ed.: Klaus Krumsieg.

PURPOSE: This collection of articles is intended for officers of the army, coast guard, and merchant marine.

COVERAGE: The book, a translation from the Russian, contains 25 articles dealing with the application of nuclear weapons to naval combat operations. Chapters 19 and 25 have been supplemented with additional data for this edition. The devastating features of nuclear explosions are discussed. Attention is also given to the protection of personnel, ships, and coastal facilities against nuclear weapons, and to the present and future applications of nuclear power plants to shipping. No personalities are mentioned. There are 16 references: 10 Russian (including 3 translations from English-language sources), 1 French, 1 German, 1 English, 1 American, and 2 either English or American.

Nuclear Energy and the Navy (Cont.)		SOV/6261
12.	<u>V. Galin</u> , Engineer Colonel. Nuclear Protection of Coastal Installations	106
13.	<u>I. Frolov</u> . Detection of Radiation	120
14.	<u>M. Alekseyev</u> , Engineer Lieutenant Colonel. Deactivation on Board Ship	129
15.	<u>N. Polyakov</u> , Engineer Captain (Navy). Protecting a Ship Against Ionizing Contamination	135
16.	<u>P. Khokhlov</u> . Living Conditions of the Crew on Board Ship	141
17.	<u>Ya. Nikiforov</u> , Lieutenant Colonel of Medical Service. Sanitary Management Aboard Ship	145
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BAUMAN, A.

TABLE I BOOK EXPLOSION 807/2708

21(2)

Almanac, George I. Glet, Atomic Energy and the Navy Collection of Materials, Moscow, 1955, 251 p. (Serial: Moscow-Populynaya Biblioteka) Number of copies printed not given.
M. B. N. Sadri, Subh. M. A. N. Ovrilova, M. and Compiler L. B. Chernova, Engineer, Captain.

NOTE: This book is intended for the general reader.

CONTENTS: The report is this collection discuss in popular style, and on the basis of data collected in the British and non-British press, problems of the use of this and biological weapons in combat operations at sea. The collection includes reports on the damaging factors of a nuclear explosion and on the use of this weapon of mass destruction. A number of articles are devoted to the anti-nuclear defense of ships and of shore objects. The introduction of nuclear power plants in naval vessels. The collection includes articles on the construction of the world's first atomic icebreaker, the "Lada", and with the construction of the world's first atomic icebreaker, the "Lada", which is expected to play an important role in the further conquest of the Arctic regions. The collection also contains papers published in the journal "Sovietly Izv" in 1973-1974, in revised and supplemented form.

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Prubov, E., Engineer Commander. Inductive Determination of Steam of a Ship	66
Arondov, Z., Captain, and V. Vladimirov, Engineer Captain. Antinuclear Defense of a Ship	75
Prubov, E., Engineer, Doctor of Technical Sciences, Engineer Captain. Situation of Ships Against Explosions	88
Shalshals, P., Captain. Means of Antinuclear Protection of Ships of Soviet Navy	89
Shalshals, P., Candidate of Technical Sciences, Engineer Commander. Antinuclear Defense of Light Ships	96
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Prubov, E., Doctor, Candidate of Technical Sciences, Engineer Lieutenant Colonel. Atomic Depth Bomb (According to Data from the Foreign Press)	197
Prubov, E., Engineer War Admiral. Atomic Power Plants on Ships	200
Prubov, E., Doctor, Candidate of Technical Sciences, Engineer Captain. Use of Atomic Engines in Ships	211
Prubov, E., Corresponding Member of the Academy of Sciences of the USSR, Senior Researcher in the Field of Science and Technology of the Navy. Atom-powered Ships	217
Prubov, E., Senior Researcher in the Field of Science and Technology of the Navy. Atom-powered Ships	225

AVAILABLE: Library of Congress (DT767-039)

BAUMAN, Alicja; POPOVIC, V.

Determination of Sr-90 in soil. Arh. hig. rada 15 no.1:3-8 '64.

1. Institut za medicinska istrazivanja i medicinu rada.

BAUMAN, Alica; TAGLIATTI, S.

Rapid methods for the determination of potassium in water. Arh.
hig. rada 15 no.4:399-403 '64.

1. Institut za medicinska istrazivanja i medicinu rada Zagreb.

BAUMAN, A.V.; KOMAROVA, P.A.; DOLZHENKOV, Yu.N.; KUSHCHANOV, G.K.;
BRENNER, V.A.; IM, A.I.; KAZAKOV, V.M.; KOZHAKHANOV, S.;
MURATOV, B.A.

Self-propelled drilling rig. Gor. zhur. no.7:75 J1 '63.
(MIRA 16:8)

BLOKH, S.A., kand.tekhn.nauk; GUZ, D.B., inzh.; RUBASHEVSKIY, I.Ya.,
inzh.; BAUMAN, A.Zh., inzh.; SEN', Z.P., kand.tekhn.nauk;
KHARITON, Ya.G., inzh.

Conveyor kiln with a walking hearth for rapid saggerless
firing of porcelain. Stek. i ker. 23 no.1:29-32 Ja '66.
(MIRA 19:1)

1. Institut gaza AN UkrSSR (for Blokh). 2. Konstruktorskoye
byuro Ukrainskogo soveta narodnogo khozyaystva (for Rubashevskiy,
Bayman). 3. Ukrainskiy institut stekol'noy i farforo-fayansovoy
promyshlennosti (for Sen', Khariton).

BADMAN B.V.

Influence of nitrogen on the structure and mechanical

SOV/137-58-8-17773D

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 226 (USSR)

AUTHOR: Bauman, B. V.

TITLE: Influence of Nitrogen on the Structure and Mechanical Properties of Cast Iron (Vliyaniye azota na strukturu i mekhanicheskiye svoystva chuguna)

ABSTRACT: Bibliographic entry on the author's dissertation for the degree of Candidate of Technical Sciences, presented to the Mosk. in-t stali (Moscow Steel Institute), Moscow, 1958. Ref. RZhMet, 1958, Nr 4, abstract 8267

ASSOCIATION: Mosk. in-t stali (Moscow Steel Institute), Moscow

1. Cast iron—Mechanical properties
2. Nitrogen—Metallurgical effects

Card 1/1

BAUMAN, B.V.; BLAGOV, B.N.; CHERNIN, E.A.

Pneumatic tube transportation in foundries. Lit. proizv. no.8:
39 Ag '63. (MIRA 16:10)

Baumh, B.

Ленинград. Политехнический институт
PAGE 1 BOOK EXPLOITATION SOV/1199

Собрание докладов и тезисов докладов, труды
научно-технической конференции (научные
достижения в промышленности, транспорте, сельском
и техническом образовании) (научные достижения)
Москва, Наука, 1970. 136 с. Цена 11 коп.
1,000 copies printed.

Башп. 84: Ю. А. Соболевский, Доктор технических
наук, профессор, К. С. Дирябин, Доктор технических
наук, профессор, и К. П. Лобов, Доктор технических
наук, профессор, Кабинет № 10, Механический факультет,
Московский институт инженеров транспорта, Москва.
Ю. А. Соболевский, и Л. В. Соболевский.

Резюме: Эта книга предназначена для технического персонала
и студентов. Она может быть использована в качестве
справочника. Она содержит коллекцию статей, посвященных
проблемам в области металлургии. Индивидуальные статьи
рассуждают о проблемах. Индивидуальные статьи рассуждают
о проблемах. Индивидуальные статьи рассуждают о проблемах.

СОДЕРЖАНИЕ: Эта коллекция статей посвящена проблемам в
области металлургии. Индивидуальные статьи рассуждают
о проблемах. Индивидуальные статьи рассуждают о проблемах.
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о проблемах. Индивидуальные статьи рассуждают о проблемах.

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- 42. Gerasimov, N. G., and A. Ya. Joffe. Phosphide Eutectic:
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VII. NONFERROUS METAL CASTINGS

- 43. Chugajev, T. M. Problems of Grain Refining of Some Copper
Alloys 309

BAUMAN, B. V.; CHERNIN, E. A.

Scientific and technical conference on "Practices in the
design and operation of automatic foundry lines." Lit.
proizv. no.10:43-44 0 '62. (MIRA 15:10)

(Founding—Congresses)

BAUMAN, Dorian, dipl.ek.

Quartz (flint) sand; a survey of its production and marketing in Yugoslavia and abroad. Kem ind 9 no.9:N-43--N-45 S '60.

1. "Jugomineral", Zagreb.

BAUMAN, Dorijan, dipl.ec.

Feldspar. Kem ind 9 no.12:N-47--N-48 D '60.

1. "Jugomineral", Zagreb.

BAUMAN, Dorijan, dipl. ecc. (Zagreb)

Diatomaceous earth (Kieselguhr). Kem ind 10 no.10:339-341 0 '61.

(Diatomaceous earth)

MARTYNOV, V.S.; BAUMAN, E.D.

Low-frequency LC delay lines with minimum weight. Elektrosviaz' 18
no.3:51-58 Mr '64. (MIRA 17:4)

BAUMAN, E.

BAUMAN, E. Use of complexometry in technical analysis. p.175

Vol. 4, No. 9, Sept. 1955 KEMIJA U INDUSTRIJI

SO: Monthly List of East European Accessions, (EEAL), IC, Vol. 5, No. 3
March, 1956

BAUMAN, E.

BAUMAN, E. Resistance of plastic masses to chemicals; research on juvidur. p. 119

Vol. 6, No. 4 Apr. 1955

MASINSKO*TEHNICKI GLASNIK

SO: Monthly List of East European Accessions, (EEAL) IC, Vol. 5, No. 3
March, 1956

BAUMAN, EGON

Yugoslavia/Chemical Technology. Chemical Products and Their Application -- Crude rubber, natural and synthetic. Vulcanized rubber, I-21

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 6068

Author: Bauman, Egon

Institution: None

Title: Chemical Stability of Plastics

Original

Publication: Nafta (Zagreb), 1955, 6, No 4, 119-124

Abstract: Results of tests of the chemical stability of rigid polyvinyl chloride plastics of grade Yuvidur D-102 (transparent) and Yuvidur D-112 (pigment-containing), comprising a plasticizer (dioctyl phthalate) and a stabilizer (diphenyl thiourea). Yuvidur D-112, sp. gr. 1.38, shows good resistance to action of 25-30% NaOH up to 60°, 25% H₂CrO₄ at 20° and 12% H₂CrO₄ at 60°, 50% CH₃COOH at 20° and 25% CH₃COOH at 60°, 12% HCl and 25% HNO₃ at 20°; Yuvidur D-102, sp. gr. 1.44, is less stable in relation to chemical agents than D-112 but is more stable to the action of HNO₃ (withstanding the action of 55% HNO₃ at 60°).

Card 1/1

BAJMAN, E.; STROHAL, P.; LOVRECEK, I.

Removing sulfur from coke. II. p. 244.
(Kemija U Industriji, Vol. 5, no. 10, October 1956. Zagreb, Yugoslavia)

SO: Monthly List of East European Accessions. (EEAL) LC. Vol. 6, No. 7,
July 1957. Uncl.

BAUMAN, EGON

YUGOSLAVIA / Chemical Technology. Chemical Products and Their
Application - Treatment of solid mineral fuels

J-8

Abs Jour : Referat Zhur - Khimiya, No 2, 1958, 5823

Author : I. Lovrecek Ivan, Bauman Egon
II. Lovrecek Ivan, ~~Bauman Egon~~, Strohal Petar

Inst : Not given

Title : Desulfurization of Coke

Orig Pub : Kemija u industriji, 1956, 5, No 4, 61-63; No 10, 244-246

Abstract : In a laboratory unit a study was made of the desulfurizing
action of gaseous NH_3 on coal, of the Rasha and Lashko-
Rasha deposits, during the coking process. Coke of Rasha
coal that was not treated with NH_3 contained 7.51% S;
after coking in NH_3 atmosphere it contained 6.34% S. The S-
content of coke from Lashko-Rasha coal was, respectively,

Card 1/2

BAUMAN, EGON

✓ Desulfurization of coke. II. Ivan Lovreček, Egon Bauman, and Petar Štrobai (Univ. Zagreb, Yugoslavia). *Kemija i tehnologija* (Zagreb) 5: 214 (1958); of CAS 50: 17388j. --Coking of Rata, Mursko Središće, and Konjina coals, and a mixt. of Rata and Luško coal, on a lab. app. at 700°C for 2-4 hrs. in the presence of superheated H₂O vapor. (The authors state that the results are similar to those obtained with other coals.)

31
Egon

BAUMAN, E.

7 7 F
1000. Prediction of physical and physico-chemical properties of
chemical compounds. E. Bauman, *Nature (London)*,
1962, 7, 11, 116-117. MR

Knowing only the mol. structure and the atm. t. p., the
physical properties of a mol. may be estimated by the methods

KMM
TLL

YUGOSLAVIA/Chemical Technology. Chemical Products and Their Uses. Part LLL. Chemical Processing of Solid Fossil Fuels. H

Abs Jour : Ref Zhur-Khimiya, No 15, 1958, 51436

Author : Lovrecek, Ivan; Popovic, Milivoj;
Bauman, Egon

Inst : -
Title : Operation of a Jigger and Enrichment Curves.

Orig Pub : Kemija u industriji, 1956, No 11, 277-283

Abstract : Experimental work was done on comparison of results of jigging of various grades of Yugoslavian coals. The work was conducted on a hand operated jigger and on a semi-commercial jigger of the Gertz type. The

Card : 1/2

BAUMAN, EGON.

YUGOSLAVIA/Chemical Technology - Chemical Products and Their
Application, Part 4. - Synthetic Polymers, Plastics.

H-28

Abs Jour : Ref Zhur - Khimiya, No 7, 1958, 23168

Author : Egon Bauman

Inst : -

Title : Use of Plastic Tubes in Industry.

Orig Pub : Zast. mater., 1957, 5, No 1, 12-15

Abstract : A brief review of properties (anticorrosion in particular)
and utilization of plastic tubes based on: polyethylene,
acetobutyrate, cellulose, styrene copolymers, polyvinyl-
chloride, polyvinylidenechloride, polyesters and asbo-phe-
nolaldehyde plastics.

Card 1/1

BAUMAN

YUGOSLAVIA / Chemical Technology. Processing of Nat- H
urally Deposited Solid Fuels.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 75191.

Author : Lovrechek, ~~Bauman~~, Sokele.

Inst : Not given.

Title : Desulfurization of Coke. III.

Orig Pub: Kemija u industriji, 1957, 6, No 1, 1-4.

Abstract: Laboratory coking experiments were conducted on four varieties of native coals at 800°C, for the purpose of decreasing their sulfur content. To the charge was added: 0.25 - 2.0% of Al₂O₃, 2% of MoO₃, 5% of Fe and 2% of Cr₂O₃. A catalytic effect of these inorganic additives was shown, whereby the Al₂O₃ was found to be most effective.

Card 1/2

6

YUGOSLAVIA / Chemical Technology. Processing of Nat- H
urally Deposited Solid Fuels.

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 75191.

Abstract: The conclusion was drawn that by the introduc-
tion of inorganic additives and the correspond-
ing modification of coking conditions, it is
practically feasible to decrease considerably
the sulfur content in coke.

Communication II, see: R. Zh. Khim., 1958,
5823.

Card 2/2

39

YUGOSLAVIA/Chemical Technology. Chemical Products H-22
and Their Applications. Chemical Pro-
cessing of Solid Fossil Fuels.

Abs Jour : Ref Zhur-Khimiya, No 7, 1959, 24737

Author : Lovrook, I., Bauman, E., Hrdlicka, N.
Inst : -
Title : Desulfurization of Coke. IV.

Orig Pub : Kenija u industriji, 1957, 6, No 12, 367-
368, 380

Abstract : Results are presented of the coking experi-
ments conducted at 700 and 800° employing
four types of local coal with the addition
of 2 percent Al_2O_3 , 1-2 percent sodium alu-
minate, gaseous NH_3 , and water vapors in dif-
ferent combinations. The effectiveness of

Card : 1/2

YUGOSLAVIA/Chemical Technology. Chemical Products H-22
and Their Applications. Chemical Pro-
cessing of Solid Fossil Fuels.

Abs Jour : Ref Zhur-Khiniya, No 7, 1959, 24737

the above additives in the desulfurization
of coke obtained from the mentioned samples
of coal and their mixtures is evaluated. For
Part III, see Ref Zhur-Khiniya, 1958, 75191.
-- K. Zarenbo

Card : 2/2

17-106

AUTHORS:

Deur-Šiftar, Đurđa, Engineer, Assistant of the Technological Faculty; Bauman, Egon, Engineer, Assistant of the Technological Faculty

YUG/2-59-1-1/22

TITLE:

Complexometric Determination of Calcium and Magnesium in Bonding Agents (Kompleksometrijsko određivanje kalcija i magnezija u vezivnim materijalima)

PERIODICAL:

Kemija u industriji, 1959, Nr 1, pp 1 - 6 (YUG)

ABSTRACT:

Complexometric determination of calcium and magnesium in bonding agents is considered quicker and cheaper than the classical gravimetric method. Certain operations are eliminated by the complexometric method which reduces the chances of errors. The accuracy of the final results corresponds in every way to that obtained by the gravimetric method. The authors made various analyses of the most common bonding agents - limestone, dolomite, marl, cement, magnesite, gypsum - to determine the method most suitable and acceptable for domestic conditions. The classical method is long and the conditions of precipitations and the accuracy of determination are conditioned by a series of

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Complexometric Determination of Calcium and Magnesium in Bonding Agents

YUG/2-59-1-1/22

factors of which the most important is the relation between quantities of calcium and magnesium which are present. By introducing complexons into this quantitative analysis this factor presented no more difficulties. The complexometric titration of calcium and magnesium are described. Indicators such as murexide and other dyes, i.e. metal phthalene, calconyl, calceine and eriochrome black T, which is the one most frequently used, were used in the complexometric titration of calcium. The heavy metals must be eliminated either by precipitation, extraction or by masking, since they create complexes with the indicators. For the complexometric titration of magnesium the indicator eriochrome black T is also the one most frequently used. Since calcium and magnesium usually appear together in solutions they are separated by various methods, i.e. the "gradual" method by which the calcium is titrated first, or by the "difference" method, in which case the magnesium is determined by calculating the difference in the consumption of complexons during titration of calcium by murexide and the consumption

Card 2/4

Complexometric Determination of Calcium and Magnesium in Bonding Agents

YUG/2-59-1-1/22

of complexons during titration of calcium and magnesium together with eriochrome black T. This "difference" method is the one most frequently adopted. As the presence of metals, i.e. silicon, iron and aluminum, impedes the success of the complexometric method these must be eliminated. The usual method adopted in this case is to dissolve a sample in hydrochloric acid which is followed by the separation of silicic acid by dehydration and the precipitation of Fe and Al hydroxides. Here the authors replaced the usual method of precipitation of SiO_2 by the method of precipitating silicic acid with gelatine which considerably accelerated the analysis and did not affect the accuracy of the final results. The calcium and magnesium content of the resulting filtrate was then determined by the complexometric method. The test results compared very favorably with those obtained by the classical gravimetric method. There are

Card 3/4

Complexometric Determination of Calcium and Magnesium in Bonding Agents YUG/2-59-1-1/22

5 tables, and 25 references of which 12 are English, 1 French, 1 Yugoslav, 1 Swiss, 1 Polish, 2 Czech and 7 German.

ASSOCIATION: Zavod za anorgansku tehnologiju i metalurgiju, Zagreb
(Institute for Inorganic Technology and Metallurgy,
Zagreb)

Card 4/4

BAUMAN. E.

Rudolf Pribil's Komplexometria (Complexometry); a book review. p. 99.

CROATICA CHEMICA ACTA. (Hrvatsko kemijsko društvo, Sveučilište u Zagrebu i Hrvatsko prirodoslovno društvo) Zagreb, Yugoslavia. Vol. 31, no. 2, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 9, no. 2, 1960.
Uncl.

Y/002/62/000/010/001/001
D285/D307

AUTHORS: Lovreček, Ivan, Professor, Engineer and Bauman,
Egon, Doctor, Engineer

TITLE: The extraction of bromine from the mother liquors
remaining after the recovery of NaCl from seawater

PERIODICAL: Kemija u Industriji, no. 10, 1962, 579-595

TEXT: The economics and possibilities are discussed of
the extraction of useful products from seawater concentrates remain-
ing after the extraction of NaCl. Chemical compositions and some
physical properties of various waters and concentrates are tabulated.
The chemical reactions and physical properties of elemental bromine,
and some of its organic and inorganic compounds are reviewed in
brief, and a description is given of the known processes by which
bromine may be extracted from seawater, its transportation, storage
and handling. On the basis of their own work, the authors proposed
a design for a semi-industrial scale bromine extraction plant. The
process consists essentially of treating the heated concentrate,

Card 1/2

Y/002/62/000/012/001/003
D267/D307

AUTHORS: Deur-Šiftar, Durda, Engineer and Bauman, Egon,
Engineer

TITLE: Express analysis of Sn-Pb-Sb type alloys

PERIODICAL: Kemija u industriji, no. 12, 1962, 695-699

TEXT: It was attempted to apply the methods described by Goldberg (Chem. Analyst, v. 44, no. 4, 1955) and Brown, Forshaw and Hayes (Laboratory methods, v. 55, no. 327, 1957) to alloys with Sn, Pb and Sb as main components (sometimes also with Cu and Zn). The specimens were discovered in HCl to which H₂O₂ was added to dissolve Cu and Zn; for alloys containing more than 50% Pb the specimen was dissolved first in glacial CH₃COOH + H₂O₂, the HCl being added only at the end. The excess of H₂O₂ was eliminated by boiling, and tartaric acid was added to convert Sn and Sb to tartrates, as well as some excess of NH₃ to have Pb, Cu and Zn dissolved in the form of amino complexes. Sn was determined by titration with a standard

Card 1/2

Express analysis of ...

Y/002/62/000/012/001/003
D267/D307

iodine solution (Goldberg). Sb was determined by titrating trivalent Sb with bromate; it was found that errors are due not only to SO₂ and to the presence of Cu, but that it was necessary to start the reaction at a lower acidity and to raise it afterwards. Pb was determined by the complexometric method (Complexone III). Colorimetric determination was used for Cu (ammonia solution). Finally Zn was determined by a complexometric method (Complexone III). The entire analysis requires about 2 hours, and the results are accurate. There are 6 tables.

ASSOCIATION: Tehnološki fakultet, Zagreb (Technological Faculty, Zagreb)

Card 2/2

BAUMAN, Egon, doc.inz.

Some new types of distillation trays. Strojarstvo 4 no.9/10:131-140
'62.

1. Zavod za kemijsko inženjerstvo, Tehnološki fakultet, Sisak.

LOVRECEK, Ivan, prof. ins.; BAUMAN, Egon, doc. ins.

Bromine recovered from the bitterns of sea saltworks. Kem ind 11
no.10:579-595 '62.

1. Zavod za anorgansku kemijsku tehnologiju, Kemijako-tehnološki
odjel, Tehnološki fakultet u Zagrebu.

L 24546-66 EWT(d)/FSS-2

ACC NR: AP6006323

SOURCE CODE: UR/0413/66/000/002/0043/0044

AUTHORS: Martynov, V. S.; Alekseyev, A. T.; Bauman, E. D.

ORG: none

TITLE: A method of separating tone-noise signals ⁹ Class 21, No. 177939

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1966, 43-44

TOPIC TAGS: voice identification, voice communication, signal noise separation

ABSTRACT: This Author Certificate presents a method of separating tone-noise signals in devices with "conpanding" (contraction-expansion) of the voice signal. The method is based on the difference in structure of the spectrum of the tone sound and of the noise. It separates the main tone from the spectrum of the tone help of groups of narrow band filters of the low frequency region in the voice range, and then selects the maximum and the minimum of the signal. The method increases the reliability of the separation in conditions when the present spectrum of the noise does not have sharp dips. The voltages obtained from each group of filters (the band of frequencies of which is equal to the width of the

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UDC: 621.395.1.01-534.4

30
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L 24546-66

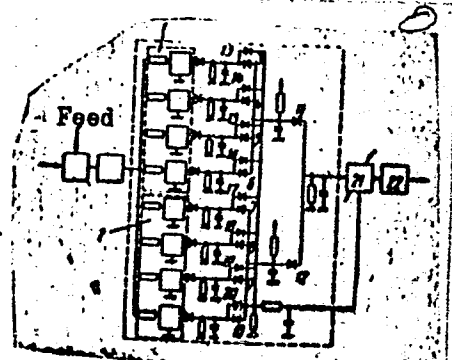
ACC NR: AP6006323

first formant of the sounds), after being separated by the diodes of the minimum values, are fed to the other diodes for selection of the amplitude maximum. The rectified voltages from all narrow band filters (after the appearance of the maximum values) are fed simultaneously through three groups of diodes to the functional unit. The output signal of the functional unit is inversely proportional to the maximum voltage of the groups. The latter voltage is fed to one of the inputs and is directly proportional to the maximum voltage of all narrow band filters (see Fig. 1). A binary tone-noise signal is obtained at the output of the cutoff unit based on the selected ratios of the two voltages.

L 24546-66

ACC NR: AP6006323

Fig. 1. 1 and 2 - groups of narrow band filters; 3 to 10 - diodes for the selection of minimum values; 11 and 12 - diodes for the selection of the amplitude maximum; 13 to 20 - three groups of diodes; 21 - functional output unit; 22 - cutoff unit.



Orig. art. has: 1 figure.

SUB CODE: 09/ SUBM DATE: 02Jan64

Card 3/3 *mg S*

ACCESSION NR: AP4026140

S/0106/64/000/003/0051/0058

AUTHOR: Marty*nov, V. S.; Bauman, E. D.

TITLE: Low-frequency minimum-weight LC delay lines

SOURCE: Elektrosvyaz', no. 3, 1964, 51-58

TOPIC TAGS: delay line, LF delay line, LC delay line, minimum weight delay line

ABSTRACT: Low-frequency delay lines consist mainly of low-pass-filter and phase-shift-circuit sections. Π -sections, T-sections, and Pierce unsymmetrical sections (Wallis, "Electrical Engineering," Dec., 1952) are compared. It is proven that, with any section, an optimum characteristic impedance exists which makes the section weight minimum; formulas for the optimum impedance and minimum weight of section components are developed. It is found that the Pierce section has the lowest weight. This data for 6 types of LF delay lines is

Cord 1/2

ACCESSION NR: AP4026140

compared: optimum characteristic impedance, delay deviation, number of coils, number of capacitors, weight, and band-utilization factor. "In conclusion, the authors wish to thank Doctor of Technical Sciences, Professor A. F. Beletskiy for his valuable comments." Orig. art. has: 6 figures, 12 formulas, and 2 tables.

ASSOCIATION: none

SUBMITTED: 01Dec62

DATE ACQ: 17Apr64

ENCL: 00

SUB CODE: EC

NO REF SOV: 002

OTHER: 001

Card 2/2

~~BAUMAN I. A.~~
~~KUZLOVSKIY, M. T.~~

5 (1) PHASE I BOOK EXPLOITATION SCV/2216

Sveshchaniye po elektrokimii. ath, Moscow, 1956.

Trudy... i [labornik] (Transactions of the Fourth Conference on Elect-rochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed. Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A. M. Pruckin (Resp. Ed.) Academician, G. A. Yezlin, Professor, I. S. Zhidnev (Resp. Ed.), B. M. Kabanov, Pro-fessor, Y. I. Zhdanov (Resp. Ed.), A. A. Kabanov, Professor, Ya. M. Koltuchin, Doctor of Chemical Sciences, V. V. Losev, P. D. Lukovtsev, Professor, Z. A. Solov'yeva, V. V. Stander, Professor, and G. M. Florianovich; Ed. of Publishing House: M. G. Yegorov; Tech. Ed.: T. A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engi-neers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Depart-ment of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial elec-trolysis. Abstracted discussions are given at the end of each divi-sion. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Dothaktem, Ya. P. (Institut geokhimii i analiticheskoy khimii AN SSSR) Imeni V. I. Vernadskogo - Institute of Geochemistry and Analytical Chemistry Imeni V. I. Vernadskiy, Academy of Sciences, USSR). Diffusion of Electrolytes and the Polar-ographic Method 677

Rozresheniye... and E. A. Zhizelova (Institute of Physical Chemistry, Academy of Sciences, USSR). Diffusion of Oxygen Through Thin Films of Electrolytes 684

Discussion [O.S. Kaenzhek, Yu. A. Chizmadzhev, Yu. A. Yevvin, O. B. Eshchuryan and contributing authors] 689

PART VIII. ELECTROCHEMICAL PROCESSES IN NONFERROUS METALLURGY 695

Stender, Y. Y. (Dnepropetrovsk Institute of Chemical Technology and Analytical Chemistry, Institute of Chemistry, Academy of Sciences, USSR). Electrolysis as a Means of Combining of Metals With Analsgans 697

Several Metallurgical and Chemical Production Processes (Some New Processes of Hydroelectric Metallurgy) 697

Kozlovskiy, M. T. (Kazakh State University, Academy of Sciences, USSR). Some Problems of Amalgam Metallurgy - Cementation of Metals With Analsgans 704

Dalimarkiy, Yu. K., B. P. Markov, I. D. Panchenko, Ye. B. Alimyan, and A. A. Kologiy (Institute of General and In-organic Chemistry, Academy of Sciences, USSR). Elect-rolytic Purification of Lead From Pused Salts 710

Chibrikov, D. M., and V. M. Koyzylina (Institute of Metallurgy, Academy of Sciences, USSR). Investigation of the Potentials and Anodic Polarization of Metallic Solifides and their Alloys 715

Lesin, T. I., and I. A. Bauman (Deceased) (Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov - All-Union Scientific Research Institute of Nonferrous Metals). Special 720

features of the Anode Process During the Purification of a Copper-Nickel Anode in a Sulfate-Chloride Electrolyte Zaretakiy, S. A.; I. O. Zharmitzkiy (Deceased), and I. A. Bogdanova. Anodic Behavior of Pnsigames and its Alloys 723

SOV/169-59-6-6168

Translation from: Referativnyy zhurnal, Geofizika, 1959, Nr 6, p 111 (USSR)

AUTHORS: Bauman, I.A., Solonin, S.V.

TITLE: On the Use of Extrapolation Formulae for the Forecast of
Cyclone Shifts

PERIODICAL: Tr. Lenigr. gidrometeorol. in-ta, 1958, Nr 8, pp 34 - 38

ABSTRACT: The verification of the Petersen extrapolation formulas, modified by Gandin, showed their clear advantage over other methods in forecasting direction and shift velocity of cyclones. The verification was performed for 106 cyclones, observed during the period from September 1954 to January 1956. The ratio of the mean vector difference between the calculated and effective velocities in relation to the mean value of the effective velocities amounts to 39%. The mean deviation of the forecast directions from the real directions amounts to 16°; in 47% of all cases this deviation did not exceed 10°. The results of the

Card 1/2

SOV/169-59-6-6168

On the Use of Extrapolation Formulae for the Forecast of Cyclone Shifts

verification showed that the limitations for the selection of cases are very great when using the present method. For this reason, merely 106 cyclones were found for which this method could be used. Bibl. 6 titles.

L.V. Klimenko

VB

Card 2/2

S/169/61/000/005/012/049
A005/A130

AUTHOR: Bauman, I.A.

TITLE: Some features of occurrence of Siberian anticyclones

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 5, 1961, 58, abstract 5
B 477. (Tr. Leningr. gidrometeorol. in-ta, 1960, no. 9,
76-92)


TEXT: The author reports on investigation of the macrosynoptic conditions of occurrence of Siberian anticyclones with varieties of the main circulation patterns proposed by G.Ya. Vangengeym, its vertical extent and its thermal structure. Varieties of the elementary synoptic processes (ESP) in winter seasons from October 1939 to March 1959 are examined. The total number of ESP of each variety and the recurrence of the variety relative to the total number of ESP with the given circulation pattern were calculated. Seven varieties were observed for western and eastern circulation patterns. The total recurrence of the most frequently encountered varieties relative to the total number of ESP, referred to western and

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Some features of occurrence of Siberian ...

S/169/61/000/005/012/049
A005/A130

eastern circulation patterns, equalled 69 and 75% respectively. Pattern C evinced 5 varieties in all. Their total recurrence was equal to 81%. For the main varieties of western-pattern processes the lifetime of an anticyclone amounts to 5-7 days. The pressure in the anticyclone center does not exceed 1,055-1,060 mb. This being the case, anticyclones are low and cold formations. A Siberian anticyclone with eastern circulation pattern forms mostly below the entrance of a frontal altitude zone into the rear of an altitude cyclone. Together with a European warm anticyclone, it forms near the ground an intense anticyclone system over Eurasia, with pressures in its center of up to 1,070-1,075 mb. Such anticyclones last 18-20 days. Siberian anticyclones with eastern pattern may be high or low and warm or cold, but they are mostly thermally asymmetric. The lifetime of well developed anticyclones of the C pattern does not exceed 12-14 days; their intensity is 1,055-1,065 mb. The anticyclones may be high or low, warm or cold (but mostly thermally asymmetric). In eastern pattern processes the recurrence of well developed anticyclones



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is twice as frequent as in other circulation patterns, and their extension in area and lifetime is very great.

I. Cherenkova

[Abstractor's note: Complete translation.]

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3.5000

41167

S/169/62/000/009/082/120
D228/D307

AUTHOR: Bauman, I. A.

TITLE: Indices of atmospheric circulation as a characteristic of its main forms

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 38, abstract 9B222 (Tr. Leningr. gidrometeorol. in-ta, no. 12, 1961, 3-9)

TEXT: A. L. Kats' indices were calculated from 500-mb surface maps for a territory, situated between 60-110°E and 50-70°N, for 40 winter months (November-March, 1949-1956) in order to ascertain the role of the atmospheric circulation's zonal and meridional components in processes of different circulation forms (G. Ya. Vangengeym's W, C, and E). The zonal (I_z), meridional (I_m), and total ($I_o = I_z/I_m$) circulation indices were determined separately for the latitudinal zones 50-60 and 60-70°N and then averaged for the whole of the territory chosen. The values of I_z and I_m vary from 4.2 to

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6.4 and from 0.2 to 7.3 dkm/1⁰ equiv. respectively. For each circulation form the mean values of the indices ("norms") were obtained from their daily values. Definite combinations of values of I_z , I_m , and I_o are on an average inherent to each circulation form. ✓

The zonal form's processes are characterized by a large (1.7 dkm/1⁰ equiv.) zonal and a small (1.2 dkm/1⁰ equiv.) meridional index, but the easterly form's processes are characterized by a small zonal (0.6 dkm/1⁰ equiv.) and a large meridional (1.6 dkm/1⁰equiv.) index. The processes of form C are characterized by high I_z and I_m

values (1.4 dkm/1⁰ equiv.). Comparison of the values of the indices with the sign and magnitude of the corresponding mean monthly temperature and pressure anomalies during each circulation form showed that negative temperature and positive pressure anomalies correspond to the processes of form E, and that the reverse anomaly relationship corresponds to those of form W. Different values of the I_z and I_m indices determine the fluctuations in the magnitudes of anomalies for the same circulation form. The relation-

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ships of the circulation indices were derived for cases of the anomalous development of each circulation form. The mean monthly values of the circulation indices and the maximum values of mean monthly temperature and pressure anomalies are given for cases of the transformation of each of the main and combined circulation forms. The investigation's results indicate that indices, computed for West and Central Siberia, are definitely related synchronously to the magnitudes and sign of the mean monthly temperature and pressure anomalies during the main forms of atmospheric circulation. The relation allows the indices to be taken into account when diagnosing the initial macroprocesses for forecasts. 4 references. [Abstracter's note: Complete translation.]

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S/169/62/000/009/084/120
D228/D307

AUTHORS: Bauman, I. A. and Yegorova, L. A.

TITLE: Upper cyclones near the Moscow-Leningrad air route

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 41, abstract 9B238 (Tr. Leningr. gidrometeorol. in-ta, no. 12, 1961, 140-144)

TEXT: The trajectories and frequency of upper cyclones over northwestern districts of the Union's European part and, in particular, near the Moscow-Leningrad air route were investigated statistically from daily synoptic and aerologic charts for the period January 1958 - July 1960. 100 cases of the development of upper cyclones, whose centers existed for not less than 2 days on the 500-mb surface map, were studied in all. The authors give the frequency of cyclonic centers on the 850-, 700-, 500-, 300-, and 200-mb isobaric surfaces and also at sea level during different forms of atmospheric circulation (G. Ya. Vangengeym's W, O, and E). The vertical structure of upper cyclones is extremely irregular. 415 cy-

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Upper cyclones near ...

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clones, which were observed on 500-mb surface maps, corresponded to 273 sea-level cyclonic centers. The frequencies of cyclonic centers at the chief isobaric surfaces in relation to the total number of days with each of the atmospheric circulation forms were derived. The maximum frequency of cyclonic centers is noted during the processes of form C, the minimal being recorded during the processes of form E. This agrees with the principal synoptic features of processes during the main atmospheric circulation forms. The average duration of the existence of cyclonic centers on the 500-mb surface is somewhat more than 4 days. Enclosed regions or cold troughs corresponded to the majority of cyclones (65%) on the OT-500/1000 maps. The rate of movement of upper cyclones exceeded 20 km/hr in most cases (63%) and in about 1/3 of the cases was close to that of near-ground cyclones. In 12% of the cases the velocity of cyclones, observed to the 200-mb level, exceeded 40 km/hr. There is a definite connection between the processes of the main atmospheric circulation forms and the directions of movement of upper cyclones. The authors give the standard trajectories of upper cyclones that are characteristic of each circulation form. 4 references. [Abstracter's note: Complete translation.]
Card 2/2

L 12987-66 EWT(1)/FCC GW

ACC NR: AR6000803

SOURCE CODE: UR/0169/65/000/009/B035/B036

SOURCE: Ref. zh. Geofizika, Abs. 9B271

AUTHOR: Bauman, I. A.; Yegorova, L. A.

TITLE: Forecasting high altitude cyclones ^{12, 4, 56}

CITED SOURCE: Tr. Leningr. gidrometeorol. in-ta, vyp. 22, 1964, 243-248

TOPIC TAGS: weather forecasting, cyclone, meteorology

TRANSLATION: 149 cases of high altitude cyclones (not tracked at sea level) were selected from AT-500 maps for the territory bounded by 40-70° N. lat. and 0-60° E. long. for 1949-1961. 10-12 of these cyclones per year were observed on the average. They lasted no more than three days in 76% of the cases. The deeper the cyclone the longer it continued. High altitude cyclones arise most frequently over the central and northwestern regions of the indicated territory. Not a single case was observed over mountainous regions. In most cases, stratified clouds accompanied by precipitation appeared above the regions where high altitude cyclones were observed. In 97% of the cases, the cyclone showed a low level tropopause (225-350 mb) as distinct

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UDC: 551.509.3

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ACC NR: AR6000803

from ordinary cyclones (the high altitude variety appears in regions with a comparatively low baric and thermal gradient and is practically independent of planetary high altitude frontal zones. The greatest recurrent (31%) was observed for cyclones stretching from the 700 to the 300 mb surface, as well as those tracked only at the 500 and 300 (19%) or 700 and 500 (18%) mb surfaces. Most of the high altitude cyclones with considerable vertical thickness (from 850 to 300 and from 700 to 300 mb) move at a rate of no more than 20 km/hr. When vertical thickness is low, the recurrence of velocities greater than 20 km/hr is approximately 20%. Synoptic conditions for generation of high altitude cyclones reduce to 3 cases: 1) the formation of residual depressions due to filling of the ground section of the cyclone (16% of the cases); 2) the generation of individual formations in a high altitude trough (54%); 3) formation in a comparatively calm high altitude stream (30%) where the cyclonic vortex is first generated at high altitudes and may subsequently "capture" lower lying layers in its circulation. A relationship is established between the generation of high altitude cyclones and the nature of large scale processes. Basic rules are formulated for forecasting the generation and evolution of these cyclones with respect to temperature field on AT-700, AT-500 and UT-500/1000 maps.

SUB CODE: 06

Card 2/2

DYATIWA, V.I., kand. tekhn. nauk; BAUMAN, I.D., tekhnik

Developing a method of sticking polyvinyl chloride film to various
kinds of walls. Sbor. trud. VNINSM no.7:159-163 '63.

(MIRA 17:11)

BAUMAN, J.

MILITARY & NAVAL SCIENCES: GENERAL

Periodical NASA VEDA. Vol. 5, no . 11, Nov. 1958.

BAUMAN, J. Air conditioning. p. 493.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

~~BAUMAN, K. I.~~ kandidat tekhnicheskikh nauk; ORAKHELASHVILI, M.M., laureat
Stalinskoy premii, inzhener.

Regulating the output of reaction turbines by an adjustable tip
on the spiral casing. Trudy VIGM no.12:59-91 '50. (MIRA 10:8)
(Hydraulic turbines)

BAUMAN, K. I.

Experimental Investigation of the Flow in the Spiral Chambers of Radial-Axis Turbines.

The author reports on an experiment in which measurements were made of the velocity field in several transverse sections of the spiral feed chambers of hydroturbines of four different designs. It was shown that the nonuniformity of the radial velocity components is less when a directing apparatus is used and when one of the chambers has an enlarged input section. (RZhMekh, No. 6, 1955) Tr. Vses. n.-i. in-ta Gidromashinostri, No. 18, 1954, 52-65

SO: Sum. No. 744, 8 Dec 55 - Supplementary Survey of Soviet Scientific Abstracts (17)

BAUMAN, K. I., Engineer Cand Tech Sci

Dissertation: "Investigation of the Single-
Blade Regulation of the Low Power Hydroelectric Unit."

26/5/50

Moscow Order of Lenin Power Engineering Institute
V. I. Molotov.

SO Vecheryaya Moskva
Sum 71

BAUMAN, K.I.

KERMABON, R.; TUVENIN, Zh. [Thouvenin, J.]; BAUMAN, K.I., [translator];
ARTEMOV, L.A., redaktor; FRIDKIN, A.M., ~~izdatel'skiy~~ redaktor.

[Reconditioning of rotors of hydroturbines in French hydroelectric
power stations. Translated from the German] Vosstanovlenie
rabochikh koles gidroturbin na gidrostantsiyakh Frantsii. Perevod
s nemetskogo. Moskva, Gos.energ.isd-vo, 1957. 23 p. (MIRA 10:11)
(Hydraulic turbines--Maintenance and repair)

Mittel'shtedt, A. A., Bauman, L. K., and Borog, M. A. "Changes in carbon-dioxide and nitrogen exchange in wartime brain traumas", In the collection: Nevrologiya voyen. vrmeni, Vol. I, Moscow, 1949, p. 105-14.

SO: U-411, 17 July 1953, (Letopis 'Zhurnal 'nykh Statey, No. 1949)

BAUMAN, L. K.

BAUMAN, L. K. -- "On the Modification of Carbon Metabolism During a Disturbance of the Integrity of Cerebral Tissues." Sub 6 May 52, Acad Med Sci USSR (Dissertation for the Degree of Candidate in Biological Sciences).

SO: Vechernaya Moskva January-December 1952

BAUMANN, L.K.

PROPERTY OF BUREAU OF INTELLIGENCE RESEARCH DIVISION

COUNTRY : USSR
CATEGORY : Pharmacology and Toxicology. Narcotics and Hypnotics
ABS. JOUR. : RZhBiol., No. 1 1959, No. 4411
AUTHOR : Bauman, L. K.
INST. : -
TITLE : Distribution of Radioactive Thiamine in the Organs and Tissues in Relation to Hypnotic Doses of Medinal
ORIG. PUB. : Vopr. med. khimii, 1955, 1, No 5, 323-326
ABSTRACT : Thiamine-³⁵S was injected intramuscularly to rats. The radioactivity was determined in a thick layer of dry tissue. In intact rats, after 24 hours the activity of tissue is distributed in the following descending order: liver > kidneys > cardiac muscle > testes > cerebral hemispheres > cerebellum > diaphragm > spleen > lungs > spinal cord > gastrointestinal tract > skeletal

CARD: 1/2

BAUMAN, A.A.

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; MAKAROVA, K.M.

Changes in the carbohydrate and phosphorus metabolism during
treatment of neuroses with prolonged drug-induced sleep. Zhur.
nevr. i psikh. Supplement:35 '57. (MIRA 11:1)

1. Institut nevrologii (dir. - prof. N.V.Konovalev) AMN SSSR,
Moskva.

(SLEEP--THERAPEUTIC USE) (NEUROSES)
(METABOLISM, DISORDERS OF)

KONOVALOV, N.V.; MUTTEL'SHEIMDT, A.A.; BAUMAN, L.K.; GOTOVTSEVA, Ye.V.

Copper metabolism in hepatolenticular degeneration and during treatment of this disease with thiol preparations [with summary in French]. Zhur.nevr. i psikh. 57 no.1:39-48 '57. (MLRA 10:3)

1. Institut nevrologii (dir. - prof. N.V.Konovalev) AMN SSSR, Moskva.
(COPPER, metab.
in hepatolenticular degeneration during ther. with
sulfhydryl compds.)
(HEPATOLENTICULAR DEGENERATION, metab.
copper, without & during ther. with sulfhydryl compds)
(SULFHYDRYL COMPOUNDS, ther. use
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BAUMAN, I. K.

Copper content of tissues of patients with hepatolenticular degeneration. Zhur.nevr.i psikh. 60 no.9:1141-1145 '60.

(MIRA 14:1)

1. Institut nevrologii (dir. - prof. N.V. Konovalov) AMN SSSR, Moskva.

(HEPATOLENTICULAR DEGENERATION)
(COPPER IN THE BODY)

BAUMAN, L. K., PATRUNOVA, V. P., and MITELSHTEDT, A. A. (USSR)

"Aminoferases of Blood Serum and the Amino Acid Metabolism during
Hepato-Cerebral Dystrophy."

Report presented at the 5th International Biochemistry Congress,
Moscow, 10-16 Aug 1961