LYAPUNOV, Aleksandr Mikhaylovich; BASOV, V.P., otv. red.; TSAR'KOVA, Z.I., red.; YELIZAROVA, N.A., tekhn. red.

[Investigation of a particular case of the problem of stability of motion] Issledovanie odnogo iz osobennykh sluchaev zadachi ob ustoichivosti dvizheniia. Leningrad, Izd-vo Leningr. univ., 1963. 115 p. (MIRA 16:10)
(Mechanics)

LYAPUNOV, A.M., akademik; SRETENSKIY, L.N., otv.red.toma; GERMOGENOV, A.V., red.izd-va; KISELEVA, A.A., tekhn.red.

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akad. nauk SSSR. Vol.3. 1959. 374 p. (MIRA 12:5)

1. Chlen-korrespondent AN SSSR (for Sretenskiy).
(Mechanics, Analytic)

LYAPUNOV, A.M., akademik; SRETENSKIY, L.N., red.; NIKOLAYEVA, L.K., red.izd-va; GUSEVA, A.P., tekhn.red.

[Collected works] Sobranie sochinenii. Moskva, Izd-vo Akad. nauk SSSR. Vol.4. 1959. 644 p. (MIRA 12:11)

1. Chlen-korrespondent AN SSSR (for Sretenskiy).
(Equilibrium)

137-58-6-11923

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 6, p 106 (USSR)

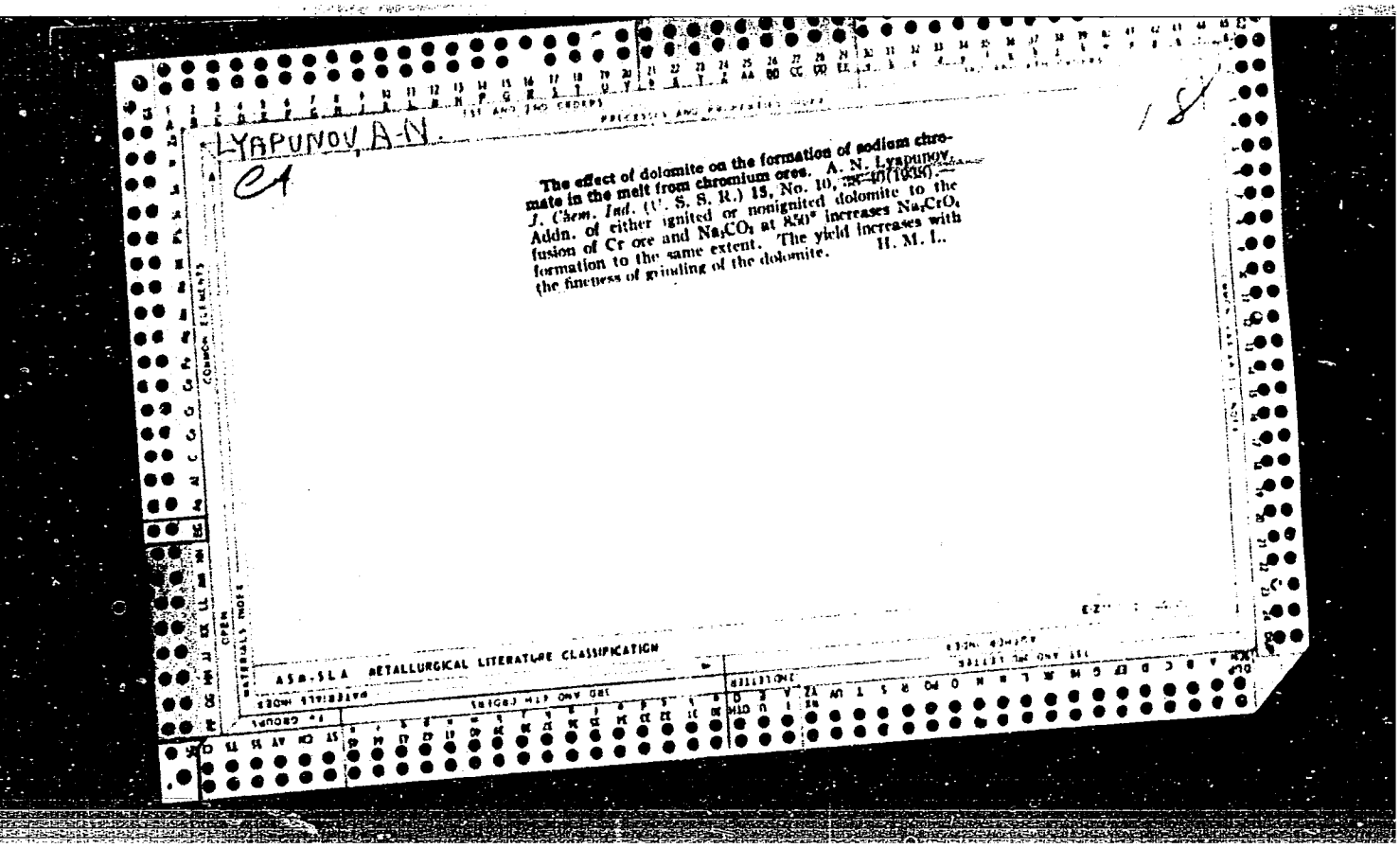
AUTHORS: Lyapunov, A.N., Pashkova, V.A.

TITLE: Analysis of the Functioning of a Countercurrent Washing System for Sumps Taking Contaminated Wash-water Drainage (Analiz raboty protivotochnoy promyvnoy sistemy iz otstoynikov pri zagryaznennykh slivakh promyvnykh vod)

PERIODICAL: Tr. Vses. n.-i. alyumin.-magn. in-ta, 1957, Nr 40, pp 126-131

ABSTRACT: A specific example of the operation of an alumina department at one of the aluminum plants is employed to illustrate a method of designing sump wash systems taking contaminated drainage. Data are presented relative to increasing the loading of the washers with reflux circulation of red mud through the washing system. A calculation of the loss of caustic in the discard mud water, when the washer drainage is contaminated with precipitate, is adduced. It is shown that the loss of caustic with the discard mud water is sharply reduced when contamination of the drainage by precipitate is eliminated. 1. Water--Contamination 2. Water--Disposal 3. Aluminum--Production 4. Industrial plants--Equipment

Card 1/1

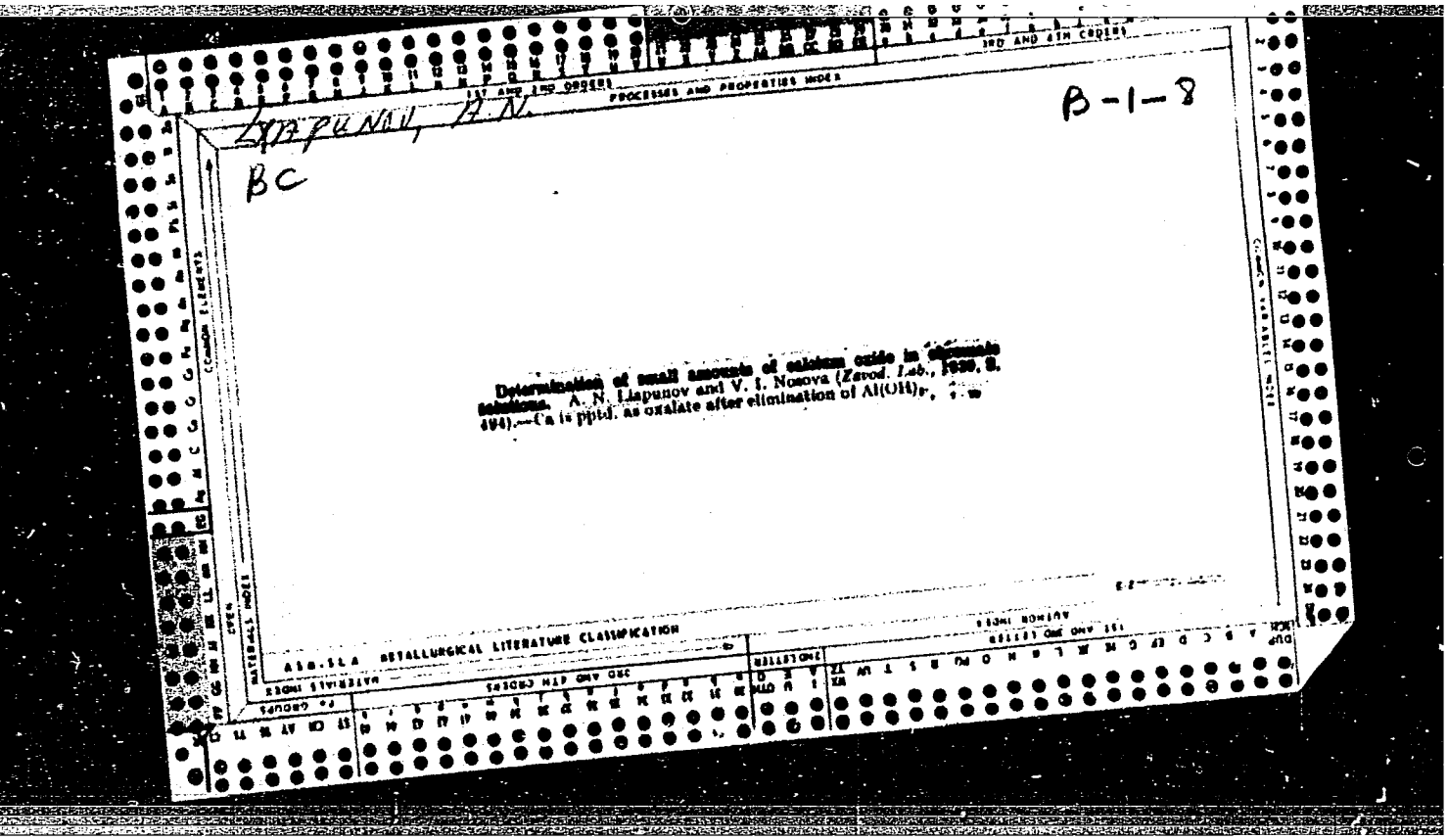


LYAPUNOV, A-N.

C1

The effect of dolomite on the formation of sodium chromate in the melt from chromium ores. A. N. Lyapunov. *J. Chem. Ind.* (U. S. S. R.) 15, No. 10, [illegible] (1938).—Addn. of either ignited or nonignited dolomite to the fusion of Cr ore and Na_2CO_3 at 850° increases Na_2CrO_4 formation to the same extent. The yield increases with the fineness of grinding of the dolomite. H. M. L.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



SOV/137-58-8-16628

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 54 (USSR)

AUTHORS: Bernshteyn, V.A., Lyapunov, A.N., Montvid, A.E.

TITLE: The Development and Improvement of the Bayer Process in the USSR (Razrabotka i usovershenstvovaniye sposoba Bayyera v SSSR)

PERIODICAL: V sb.: Legkiye metally. Nr 4. Leningrad, 1957, pp 26-33

ABSTRACT: The USSR was the first country in which the Bayer process was used for separation-resistant diaspore bauxites (B) with elevated contents of Ca and Mg carbonates and organics. This required a marked change in the engineering parameters of the process and an improvement in equipment design. Wet grinding of the B in a closed cycle was employed with classification in hydrocyclones. This made it possible to obtain >70% of 53-micron undersize. An increase in leaching (L) temperature to 220-230°C and of pressure to 22-28 atmospheres excess pressure made it possible to increase extraction of Al_2O_3 to 89-90%, to obtain a solution of 1.65 basicity and reduce the consumption of caustic. A system of vertical series-connected autoclaves without mechanical stirrers has been developed for

Card 1/2

SOV/137-58-8-16628

The Development and Improvement of the Bayer Process in the USSR

continuous L. Five-compartment red-mud thickeners made it possible to treat pulp of 1.7-1.68 basicity without hydrolytic losses of Al_2O_3, and the return of the slime waters in the washing system eliminated losses of caustic and Al_2O_3 in the final tailings and made for a considerable saving of soda. Improvement in decomposer design made it possible to reduce the duration of aluminate-solution centrifuging to 58-60 hours with 50-52% decomposition of the solution. A combination of methods of vaporizing the solutions with sintering of the soda, that has crystallized out was developed to remove the carbonates and organic substances accumulating therein from the return solutions. Ideas are advanced relative to the directions to be followed in further improvement of the processes and equipment.

G.Z.

1. Bauxite--Processing 2. Aluminum--Production

Card 2/2

SOV/137-58-11-22174

Translation from: Referativnyy zhurnal. Metallurgiya, 1958, Nr 11, p 49 (USSR)

AUTHORS: Lyapunov, A. N., Pavlov, A. V.

TITLE: The Aluminum Plants of Yugoslavia (Alyuminiyevyye zavody Yugoslavii)

PERIODICAL: V sb.: Legkiye metally. Nr 3. Leningrad, 1957, pp 61-78

ABSTRACT: Al output in Yugoslavia is concentrated at 2 plants, one at Lozovtse (annual output 3500-4000 t Al_2O_3, 1500 t Al), and the other at Kidrichevo (50,000 t Al_2O_3, 15,000 t Al). In addition, the chemical plant at Ljubljana has an Al_2O_3 department (7500-8000 t Al_2O_3 per year). A description is offered of the aluminum plant at Kidrichevo, which is of interest because of the unique Al_2O_3 production technology and the novelty of certain solutions of industrial engineering problems. The plant was launched in 1954. After completion of construction of the 2nd unit, its Al_2O_3 and Al power will be doubled. The plant processes Drnish bauxite (mined about 450 km away). The Bayer process provides the basis of the flowsheet, with the following modifications: 1) Treatment of ground bauxite 1-15 mm in piece size; 2) countercurrent leaching of bauxite in batteries of autoclave-type

Card 1/2

The Aluminum Plants of Yugoslavia

SOV/137-58-11-22174

leaching tanks, with periodic charging and discharging and simultaneous slimes washing; 3) removal of silicon from the evaporated solution employed in bauxite leaching; 4) employment of a relatively weak return solution (180 g/liter caustic Na_2O). The consumption indices per t alumina are: 1) 2.55-2.6 t bauxite (Al_2O_3 51.5%, SiO_2 3.5%, H_2O 0.8%); 2) 0.18-0.19 t soda (100% Na_2CO_3); 3) 4.5 kg cellulose; 4) 1900-1950 nm^3 generator gas ($Q_p^{low} = 1450$ kcal/nm^3), including 940-960 nm^3 for calcining the Al_2O_3; 5) 470-520 kwh electrical energy; 6) 5.9 t steam for the Fulda process. 21.3 man hours are required to produce 1 t Al_2O_3. The chemical composition of the resultant Al_2O_3 is as follows in %: Na_2O 0.24-0.57, Fe_2O_3 0.039-0.06, SiO_2 0.014-0.03, others 0.15-0.25. The average technical and process indices of the operation of the electrolysis department are: 84-85% current efficiency, 0.89 amps/cm^2 anode cd, 4.5-4.6 v average working potential on cell, 17,000 kwh/t consumption of D-C electrical energy. 90% of the Al produced is of the following % composition: up to 0.12 SiO_2, 0.3 Fe, and 99.58 Al; while 10% of the Al is of the following composition: up to 0.08 SiO_2, up to 0.15 Fe, and 99.77 Al.

N. P.

Card 2/2

136-7-10/22

TITLE: Critical notes on S.I. Kuznetsov's Articles. (Kriticheskiye zamechaniya o stat'yakh S. I. Kuznetsova).

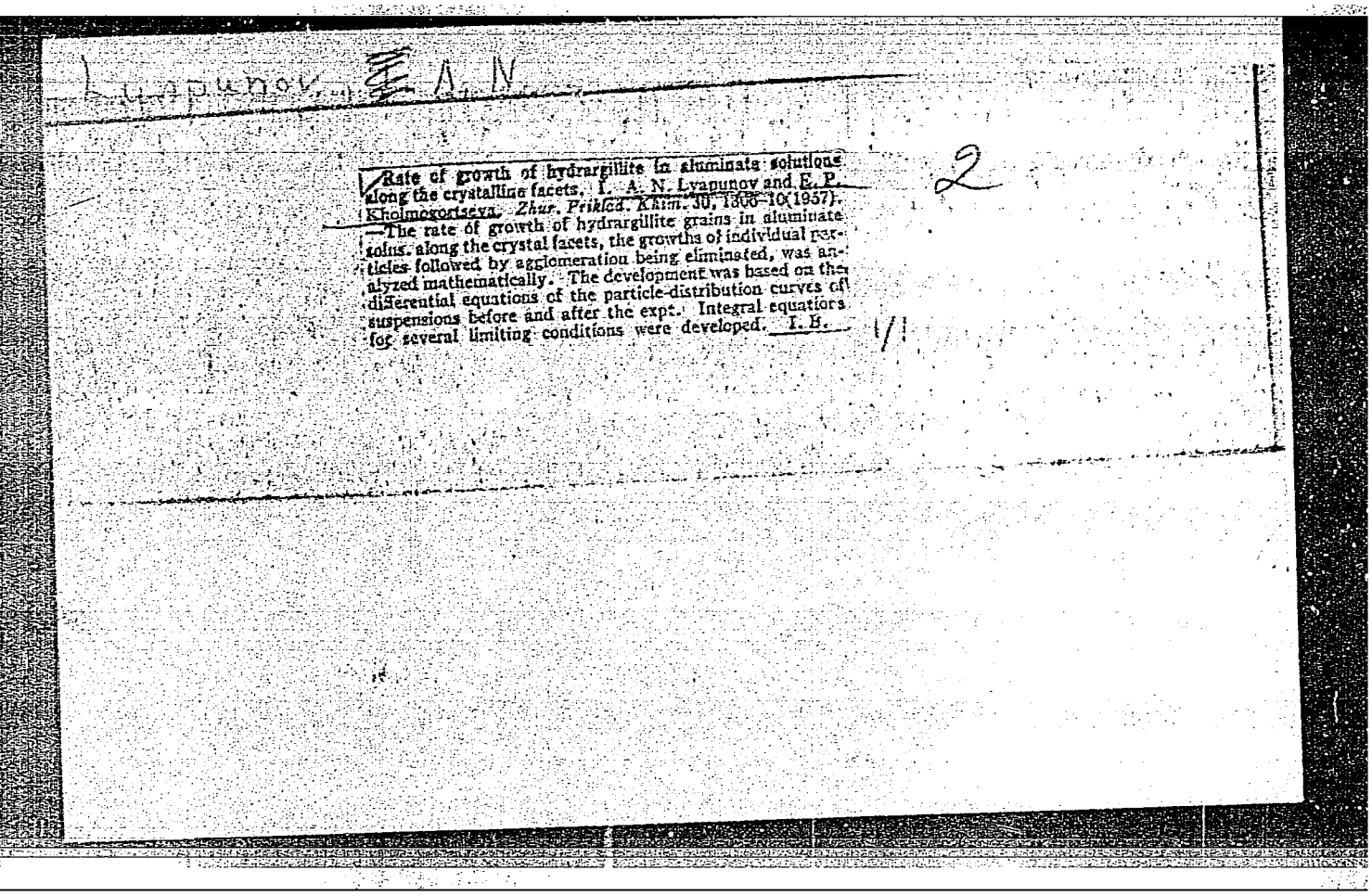
PERIODICAL: "Tsvetnyye Metally", 1957, No.7, pp.52-56 (USSR).

ABSTRACT: Two articles by Kuznetsov are severely criticised: "Periodical Breaking-up of Aluminium Hydroxide during the Decomposition of Aluminate Solutions" ("Tsvetnyye Metally", 1956, No.9, pp.62-66) and "Nature of the Growth of Hydrargillite Crystals during the Decomposition of Aluminate Solutions" ("Tsvetnyye Metally", 1956, No.11, pp.59-62). The author brings extensive literature data and his own calculations to refute Kuznetsov's views. The articles are finally dismissed as merely vehicles for the unsupported personal ideas of Kuznetsov and quite unsuitable as bases for practical action on industrial-scale decomposition. There are 8 references, 6 of them Slavic.

1/1

ASSOCIATION: VAMI.

AVAILABLE: Library of Congress



Lyapunov, E. A. N.

2

Rate of growth of hydrargillite in aluminate solutions along the crystalline facets. I. A. N. Lyapunov and E. P. Kholmogortseva. *Zhur. Prikład. Khim.* 30, 1806–10(1957).—The rate of growth of hydrargillite grains in aluminate solns. along the crystal facets, the growths of individual particles followed by agglomeration being eliminated, was analyzed mathematically. The development was based on the differential equations of the particle-distribution curves of suspensions before and after the expt. Integral equations for several limiting conditions were developed. I. H.

1/1

Lyapunov, A N

3
4E4c

Rate of growth of hydrargillite in aluminate solutions along the crystalline facets. II. A. N. Lyapunov and B. P. Kholmogortseva. *Zhur. Prikhl. Khim.* 30, 1635–42 (1957); cf. C.A. 52, 3416f.—The rate of growth of hydrargillite crystals in aluminate solns. of the same degree of satn. increased with the temp. from 50 to 65° and with the degree of satn. The effect of the latter was more pronounced at 65° than at 50°. I. Hencowitz

1/1

LYAPUNOV, A.N.

137-58-5-9274

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 70 (USSR)

AUTHORS: Lyapunov, A.N., Kholmogortseva, Ye.P.

TITLE: On the Optimal Value of the Priming Ratio in the Process of Decomposition of an Aluminate Solution (Ob optimal'noy velichine zatravochnogo otnosheniya pri dekompozitsii alyuminatnogo rastvora)

PERIODICAL: Tr. Vses. alyumin.-magn. in-ta, 1957, Nr 39, pp 100-108

ABSTRACT: The present method of computing the optimal value for the priming ratio is based on experiments conducted in order to determine how the degree of decomposition of aluminate solutions is affected by their module, by the concentration of the Na_2O, and by the amount of priming precipitate.

P.K.

1. Aluminate solutions--Decomposition 2. Sodium oxides --Applications

Card 1/1

S/136/60/000/011/007/013
E021/E406

AUTHORS: Arakelyan, O.I., Lyapunov, A.N., Chistyakova, A.A. and Kavina, V.A.

TITLE: Study of Phase Transformations of the Hydroxide in Different Conditions of Decomposition of Aluminate Solutions

PERIODICAL: Tsvetnyye metally, 1960, No.11, pp.54-58

TEXT: Eperiments were carried out on the phase transformations occurring during the decomposition of aluminate solutions in the presence of two types of nuclei (hydrargillite or bohmite) at 65 and 95°C. At 65°C, the experiments lasted 79 days. A solution containing 125.6 g/l Na_2O and 119 g/l Al_2O_3 was used. The degree of decomposition after seven days was 38.2% using a bohmite nucleus and 50.2% using a hydrargillite nucleus. After 79 days only hydrargillite was found with very small inclusions of bohmite where bohmite nuclei were used, thus showing that bohmite is not stable at 65°C. At 95°C with a solution containing 117 g/l Na_2O and 166 g/l Al_2O_3, using bohmite nuclei 40 to 58% decomposition occurred after seven days according to the source of the bohmite. It was shown that the precipitate contained 87% bohmite and 13% hydrargillite. When hydrargillite nuclei were used,

Card 1/2

S/136/60/000/011/007/013
E021/E406

Study of Phase Transformations of the Hydroxide in Different Conditions of Decomposition of Aluminate Solutions

decomposition reached 16.6% after seven days and 23.3% after fourteen days. Crystal-optical studies showed that the precipitate was completely hydrargillite. There are 1 figure and 16 references : 11 Soviet and 5 German.

Card 2/2

LYAPUNOV, A.N.

Design calculation of a bank of continuous decomposers with internal circulation of the solution. Zhur. prikl. khim. 34 no.1:162-167 Ja '61. (MIRA 14:1)

(Chemical engineering—Equipment and supplies)

ACCESSION NR: AT4013961 S/2659/63/010/000/0252/0257

AUTHOR: Fedorchenko, I. M.; Lyapunov, A. P.; Skorokhod, V. V.

TITLE: The nature of the high temperature oxidation of porous nickel

SOURCE: AN SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 10, 1963, 252-257

TOPIC TAGS: nickel, porous nickel, nickel oxidation, oxidation, high temperature oxidation

ABSTRACT: Porous products manufactured by powder metallurgical methods are finding even wider use in various fields of engineering. In many cases these products viz. metal-ceramic bearings, filters, and packings, work at high temperatures. The authors have investigated the oxidation of porous products to determine the specific features of this process at high temperatures and to observe the qualitative variations connected with internal oxidation of the sample. The process of oxidation of porous bodies differs greatly from that of compact bodies. This is expressed by disruption of the normal course of the temperature-oxidation curve and by a variation in the observed oxidation law. These features of the oxidation of porous bodies can be explained by the decrease in the surface area taking part

Card 1/2

ACCESSION NR: AT4013961

in the oxidation, caused by the oxides clogging the pores, and by obstruction of the access of the oxidizer to the inner layers of the porous body. Oxidation of porous bodies is accompanied by significant variations in their structural and physical properties due to boundary oxidation, this being expressed by variation of the specific electrical resistance. Shrinkage is observed during oxidation of porous bodies, reaching high values not only at high temperatures (900-1000C), but also at low temperatures. Orig. art. has: 5 figures.

ASSOCIATION: Institut metallurgii AN SSSR (Institute of Metallurgy AN SSSR)

SUBMITTED: 00	DATE ACQ: 27Feb64	ENCL: 00
SUB CODE: MM	NO REF SOV: 003	OTHER: 000

Card 2/2

ACCESSION NR: AP4029207 S/0226/64/000/002/0051/0056

AUTHOR: Fedorchenko, I. M.; Lyapunov, A. P.

TITLE: On the effects of self-heating and shrinkage with high temperature oxidation of porous nickel

SOURCE: Poroshkovaya metallurgiya, no. 2, 1964, 51-56

TOPIC TAGS: self heating, shrinkage, oxidation, nickel porosity

ABSTRACT: The results of the authors' investigation revealed that temperature increases spontaneously during heating at a temperature range of 400-800°C and attains its maximum at 500-600°C. The oxidation of nickel, estimated by weight increase, has a non-monotonous character with a temperature increase. The maximum degree of oxidation is observed at the 650-700°C range; it lessens, however, at higher temperatures. The kinetics depend upon porosity and cross-section of the sample; as the thickness increases, the relative degree of oxidation decreases. Heating in an air medium with oxidation results in shrinkage of the sample, the amount of which increases with temperature and porosity. The monotonous increase in shrinkage is disrupted in the 700-750°C range by oxidation which results in significantly less shrinkage. Orig. art. has: 5 figures.

Card 1/2

ACCESSION NR: AP4029207

ASSOCIATION: Institut problem materialovedeniya AN SSSR (Institute of Metal Behavior Problems, AN SSSR)

SUBMITTED: 18Feb63 DATE ACQ: 28Apr64 ENCL: 00

SUB CODE: ML NO REF SOV: 003 OTHER: 003

Card 2/2

LYAPUNOV, B.

Required a highly qualified tractor operator. Prof.-tekh.obr. 11 no.8: 4 N '54. (MLRA 8:1)

1. Direktor Leninskoy MTS (Moskovskaya oblast')
(Tractors)

LYAPUNOV, B.; BOLOTNOV, P.

Machine-tractor stations prepare to switch over to cost accounting. p. 30

MASHINIZIRANO ZEMEDELIE. Vol. 7, No. 6 June 1956

Sofiya, Bulgaria

So. East European Accessions List Vol. 5, No. 9 September, 1956

LYAPUNOV, B.

They conquer time this way. Znan.ta pratsia no.1:16-17 Ja '59. (MIRA 12:10)

(Motion-picture photography)

LYAPUNOV, B.

GOLEY, M.; LYAPUNOV, B.

[The electric power plant] Fabriki elektrichestva. Moskva, Gos. izd-vo detskoi lit-ry, 1953. 158 p. (MLRA 7:2)
(Electric power plants)

LYAPUNOV,B., inzhener

Chemical armer for metals. Tech. mol. 23 no.5:26 My '55.
(Corrosion and anticorrosives) (MLRA 8:6)

S/025/60/000/011/001/008
A166/A026

AUTHOR: Lyapunov, B.

TITLE: Report From Space

PERIODICAL: Nauka i zhizn', 1960, No. 11, pp. 4 - 8 and 16

TEXT: This is a ficticious description of the world as it may be in the 21st century when man has conquered space and established bases on the other planets of the solar system. The author looks forward to the production of electricity from the sun's light and of heat by helioelectric plants on the moon or artificial space stations. The electric power is stored in miniature batteries which are then shipped to earth. Industry could flourish on raw materials mined on the other planets and processed in artificial asteroids. Mars could be reclaimed for habitation and its atmosphere gradually enriched with oxygen. A solar observation station would be established on Mercury.

Card 1/1

S/025/60/000/011/004/008
A166/A026

AUTHOR: Lyapunov, B.

TITLE: We Are Not Alone in the Universe

PERIODICAL: Nauka i zhizn', 1960, No. 11, p. 33

TEXT: The author speculates on the form that life might take on other planets, but doubts the existence of intelligent beings on Mars on the grounds that they would surely have visited earth. Due to the endless variations of circumstances and environment throughout the universe, other life-forms may differ immensely from each other and from terrestrial standards. As the Soviet astronomer Professor I.F. Poldak has pointed out, some other branch of highly-organized being than the primates may have developed on other planets.

Card 1/1

S/029/60/000/012/002/005
B013/B077

AUTHOR: Lyapunov, B., Engineer

TITLE: Secrets of Our Planet

PERIODICAL: Tekhnika molodezhi, 1960, No. 12, p. 4

TEXT: In this popular scientific article the author writes about the following secrets of the planet earth which have not been disclosed so far: structure of the interior of the earth, tectonic movements of the earth's crust, origin of the oceans, nature of their bottoms and their currents, density and temperature of air in high altitude, noctilucent clouds in about 80 km altitude and finally the mechanism of the interaction between sun and atmosphere. All these problems do not have to remain unsolved, because science obtains new research means continuously which enables it to solve more and more of these problems; successes as those in space research are an example for this. Not long ago it was possible to penetrate the "blue Continent": in 1960 the bathyscaph "Triest" reached the bottom of the deepest part of the world ocean. Also great progress can be recorded in the exploration of the atmosphere

Card 1/2

Secrets of Our Planet

S/029/60/000/012/002/005
B013/B077

with the help of geophysical rockets. Satellites orbiting the earth disclose informations about the space surrounding our earth. Preparations are under way to attack the ocean on a large scale. New mechanisms are developed continuously for deep-sea research. Plans to create means for the research of the interior of the earth are to be realized. There are 4 figures.

Card 2/2

ACCESSION NR: AP4044127 S/0085/64/000/008/0023/0024

AUTHOR: Lyapunov, B.

TITLE: Colonies in cosmos

SOURCE: Kry*l'ya rodiny*, no. 8, 1964, 23-24

TOPIC TAGS: space station, satellite, astronautics, space ship, manned lunar flight

ABSTRACT: The importance of extra-terrestrial stations is discussed. The author quotes the Chief Designer of the "Vostok" space ships and academician A. A. Blagonravev, as proposing the immediate construction of such a station. These stations will be used as "harbors" for future space ships heading toward the Moon and the planets. A great deal of research can be conducted on such stations. Service to mankind would include: meteorological observations, weather study, geographical studies, geophysical studies, astronomical observation and study of the universe. Furthermore, a manned orbiting station will improve radio and T.V. communications and serve as a refueling station for spaceships. Soviet and foreign scientists have proposed many designs and dimensions for such stations. These will depend on the crew which will occupy each respective station. The station personnel ranges from

Card 1/2

ACCESSION NR: AP4044127

a few to twenty thousand (project "cities in interplanetary space" by the American scientist D. Rournick). Academician N. P. Barabashov proposes the construction of lunar stations and settlements. The author concludes that extra-terrestrial stations are a realistic problem of modern astronautics. The Soviet Union, who pioneered cosmic conquest, moves forward with confidence to fulfill this dream of mankind.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: SV NO REF SOV: 000 OTHER: 000

Card 2/2

LYAPUNOV, B.A., inzh. (Moskva)

Man will fly into space. Nauka i zhyttia 10 no.6:7-10 Je '60. (MIRA 13:7)
(Space flight)

LYAPUNOV, B.

In the world of dreams. IUn.tekh. 5 no.10:50-51 O '60. (MIRA 13:12)

(Cybernetics)

LYAPUNOV, B., inzh.

Fiction comes true. Tekh.mol. 29 no.4:40 Ap '61. (MIRA 14:5)
(Science) (Technology)

LYAPUNOV, Boris Ivanovich; PANKOVA, V.M., redaktor; KIRSANOVA, N.A., tekhnicheskiy redaktor

[Decisive power] Reshaiushchaia sila [Moskva] Izd-vo VTsSPS Profizdat, 1956. 60 p. (MLRA 9:10)

1. Direktor Leninskoy mashinno-traktornoy stantsii, Moskovskoy oblasti.
(Collective farms)

LYAPUNOV, B.

Photographed instants. Znan.ta pratsia no.2:5 F '60.
(MIRA 13:5)

(Photography--Scientific applications)

LYAPUNOV, B.

Great friend of men of daring thinking. IUn.tekh. 4 no.4:18-21 Ap '60. (MIRA 13:9)

(Lenin, Vladimir Il'ich, 1870-1924)

LYAPUNOV, B.

On the roads and without the roads. Nauka i zhizn' 29 no.5:58-60 My '62. (MIRA 15:11)

(Vehicles)

LYAPUNOV, B.

Secret of the blue continent. Nauka i zhizn' 25 no.8:74-76 Ag '58. (MIRA 11:9)

(Ocean bottom)

LYAPUNOV, B.V., inzh. (Moskva)

Ocean as a laboratory! Nauka i zhyttia 10 no. 10:17-20 O '60.
(MIRA 14:4)

(Oceanography)

LYAPUNOV, B., inzh.

Secrets of our planet. Tekh. mol. 28 no. 12:4 '60. (MIRA 13:12)

(Earth)

LYAPUNOV, B.

Victory over depth. Znan.sila 35 no. 11: 2 of cover, 1-4 N '60. (MIRA 13:12)

1. Batiskaf "Triyest." (Bathyscaphe) (Piccard, Auguste, 1884-)

LYAPUNOV, B.

Talk with Captain Nemo. Nauka i zhizn' 28 no.9:49-51 S '61.
(MIRA 14:12)

(Submarine boats) (Diving, Submarine)

LYAPUNOV, Boris.

Diving saucer over the continental shelf. Tekh.mol. 29 no.5: 22-24 '61. (MIRA 14:5)

(France—Diving, Submarine)

LYAPUNOV, B., inzh.

Treasures of the ocean. Nauka i zhyttia 11 no.1:41-43 Ja '62. (MIRA 15:2)
(Marine biology)
(Mines, Submarine)

LYAPUNOV, Boris

Second discovery of the Earth. Tekh.mol. 30 no.1:3-4 '62. (MIRA 15:2)

(Submarine topography)(Earth)

LYAPUNOV, Boris

Our dreams; laboratories on the ocean floor. Tekh.mol. 30 no.9:16-17 '62. (MIRA 15:9)
(Oceanographic research)

LYAPUNOV, B.

Settling in space. Kryl. rod. 15 no.8:23-24 Ag '64 (MIRA 18:1)

L 01080-65 FBD/FSS-2/EWT(1)/FS(v)-3/EWG(v)/EWA(1)/EEC-4/EWA(h) Pe-6/Po-4/
Pe-1/Pe-5/Pq-4/Pac-4/Pae-2/Peb/Pi-4 JHB/TT/EMS/GW
ACCESSION NR: AP5012421 UR/0085/65/000/004/0013/0014

66
65
B

AUTHOR: Lyapunov, B.

TITLE: Riches of the universe

SOURCE: Kryl'ya rodiny, no. 4, 1965, 13-14

TOPIC TAGS: space exploration, energy transfer, energy trapping, fuel, metal, universe, planetary exploration

ABSTRACT: Less than ten years have passed since space exploration began, and man is already benefiting from it. Geophysics, astronomy, and other sciences have gained valuable information. In the future, new fields of study will be opened up. When wireless transfer of energy will be accomplished, it will be possible to supply the earth with abundant electrical energy by energy-converting satellites placed in continuously sunny orbits, converting light energy into electrical energy and passing it on to the earth. Such satellites can also have facilities for storing energy for use by space ships going to the distant planets. Eventually, small settlements will evolve on the moon and the planets. The sun's energy again can be utilized in aiding the settlers in the production of raw materials and for other needs. Electromagnetic fields in the univers may also be put to use. According to

Card 1/2

L 51080-65
ACCESSION NR: AP5012421

Professor G. I. Pokrovskiy, it may be possible to extract energy not only from other planets but from cosmic space itself. The moon's gaseous eruptions indicate the presence of gas or fuel that may be utilized as fuel for space ships. This may reduce the amount of fuel carried from the earth. There exists the possibility of finding valuable metals or minerals even on the moon. Man's exploration of space may even find other civilizations. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: SV

NO REF SOV: 000 OTHER: 000

Card 2/2

LYAPUNOV, B. V.

LYAPUNOV, B. V.

Ot rakety do reaktivnogo samoleta. Moskva, Gos. izd-vo kul'turno-prosvetitel'noi lit-ry, 1948. 36 p., illus.

Bibliography: 1 p. at end.

Title tr.: From the rocket to the rocket plane.

TL701.1.L5

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955.

LYAPUNOV, B. V.

The rocket, Moskva, Gos. izd-vo detskoi lit-ry, 1948. 133p. (50-22965)

TL781.L5

LYAPUNOV, B.

20974 Lyapunov, B. Raketa-oruzhiya nauki. Ill, N. Smol'yaninov. Raketa-Oruzhiye Nauki. Ili. N. Smol8yaninov. Tekhnika--Molodezhi, 1949, No. 6, s. 20-22.

SO: LETOPIS ZHURNAL STATEY - Vol. 28, Moskva, 1949

LYAPUNOV, B. V.

Stories about Rockets. Moscow- Leningrad, Gosenergoisdat, 1950, 136 pages

LYAPUNOV, B.V.

Technology

(G s turbines). Moskva, Gosenergoizdat, 1951.

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

LYAPUNOV, B.V.

[Problem of interplanetary voyages in works by Russian scientists; verbatim report of a lecture delivered in the lecture hall of the Moscow City Committee of the All-Union Voluntary Society for the Promotion of Aviation] Problema mezhplanetnykh puteshestvii v trudakh otechestvennykh uchenykh; stenogramma publichnoi lektsii, prochitannoi v lektorii Moskovskogo gorodskogo komiteta DOSAV. Moskva, 1951 22 p. (MIRA 13:6)
(Interplanetary voyages)

LYAPUNOV, B.V.

Rasskazy ob atmosfere (Stories about the atmosphere),
Detgiz, Moscow, and Leningrad, 1951, 96 pp.
The chapter "Raketa--oruzhie nauki" (Rocket--weapon of science)
(pp. 82-9 4) is devoted to high-altitude rockets for investigating
the atmosphere.

LYAPUNOV, B.

Lyapunov's article "Out of the Depths of the Universe," published in the magazine Znaniye-sila (Knowledge is Strength) (No. 10, 1950), and A. Kazantsev's "Guest From the Cosmos," published in Tekhnika-molodyozhi (Technology for Young People) (No. 3, 1951)

Soviet Source: Literaturnaya-gazeta Aug. 4, P. 3.

Current Digest of the Soviet Press (in [redacted] Library), Vol. 3, No. 35, 1951, P. 8.

LIAPUNOV, B. V.

Plynova turbina. Prel. J.Cermak. (Vyd. 1.) Praha. Prumyslove wydavatelstvi, 1952. 61 p. (Kniznice kovoprumyslu, sv. 128) (Gas turbines. Tr. from the Russian. 1st ed. illus., bibl., footnotes)

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 12 December 1956

LYAPUNOV, B.

PHASE I TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 220 - I

BOOK

Call No.: AF587928

Author: LYAPUNOV, B.
Full Title: STRIVING FOR SPEED
Transliterated Title: Bor'ba za skorost'

Publishing Data
Originating Agency: None
Publishing House: Publ shing House of the Central Committee of the All-Union Lenin's Young Communist League "Youth Guards"
Date: 1952 No. pp.: 232 No. of copies: 50,000
Editorial Staff
Editor: Not given Tech. Ed.: Not given
Editor-in-Chief: Not given Appraiser: Not given
Others: Gratitude for valuable assistance is expressed to nine scientists

Text Data
Coverage: This is a popular publication dealing with all aspects of science concerned with high speed or high velocities. The subject matter includes high speed machinery, high speed vehicles, aircraft and rockets, and high speed electrical and electronic radiations. The book describes also engineering problems associated with the attainment of high speeds. Diagrams, graphs, photos, sketches.

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20308

Bor'ba za skorost'

AID 220 - I

The book is an interesting and well presented popularisation of science.

Remark: An abridged translation of this book, and photostatic copies of all diagrams, graphs, photos, and sketches is available as AF 587928

Purpose: Popularization of science
Facilities: Many names mentioned in the text
No. of Russian and Slavic References: None
Available: A.I.D., Library of Congress.

LYAPUNOV, B.

"Skorost" (Speed), Tekhnika-Molodezhi, Vol. 20, No. 6, June, 1952, pp. 19-21.

LYAPUNOV, B.

Interplanetary voyages. Nauka i zhizn' 20 no.6:33-35 Je '53. (MLRA 6:6)
(Interplanetary voyages)

LYAPUNOV, B., inzhener.

Laboratory in space. Tekh.molod. 21 no.8:33-37 Ag '53. (MLRA 6:7)
(Research) (Interplanetary voyages)

PHASE X TREASURE ISLAND BIBLIOGRAPHICAL REPORT AID 651 - X

Call No.: AF645540

BOOK

Author: LYAPUNOV, B. V., Engineer
Full Title: ROCKETS (ROCKET ENGINEERING AND JET AVIATION)
Transliterated Title: Raketa (Raketnaya tekhnika i reaktivnaya aviatsiya)

PUBLISHING DATA

Originating Agency: Popular Science Library of the Soldier and Sailor
Publishing House: Military Publishing House of the Ministry of Defense of the U.S.S.R.
Date: 1954 No. pp.: 128 No. of copies: Not given
Editorial Staff
Appraisers: Kosmodem'yanskiy, A. A., Engineer Col., Doc. of Physical and Mathematical Sci., Prof., Tikhonravov, M. K., Engineer Col., Kand. of Technical Sci.

PURPOSE AND EVALUATION: Popularization of science among soldiers and sailors of the USSR. The book lacks objectivity, since it represents all developments as basically Russian, but otherwise it is a good general popularization of this branch of science.

TEXT DATA

Coverage: A considerable part of this book is concerned with the history of the development of rocket and jet populsion. Russian

Raketa (Raketnaya tekhnika i reaktivnaya aviatsiya) AID 651 - X

achievements are emphasised. The book consists of rather general technical information. It contains some simple diagrams of jet aircraft and rockets, one photo of jet aircraft in flight formation (poor visibility), on an airfield, and a few sketches of well-known rocket launching techniques. The last part reviews speculations on interplanetary travel, based mainly on the Russian scientist Tsiolkovskiy's ideas.

Table of Contents

No. of References: 12 Russian, 1950-1953.
Facilities: None

LYAPUNOV, Boris Valerianovich; PEKELIS, V., redaktor; BODROV, A., tekhnicheskiy redaktor

[Discovery of a world] Otkrytie mira [Moskva] Izd-vo TsK VLKSM "Molodaia gvardiia," 1954. 157 p. (MLRA 8:7)
(Interplanetary voyages)

LYAPUNOV, B.

"A Station Outside the Earth (Interplanetary Space Stations)", Znan. Sila, No 9, pp. 11-15, 1954

Translation M-317, 30 Mar 55

LYAPUNOV, B., inzhener.

High speed airplane engines. Tekh.mol. 22 no.9:18-23 S '54. (MLRA 7:9)
(Airplanes--Engines)

Name : LYAPUNOV, B.V.

Remarks: Lyapunov, a professional writer, is one of the authors of the articles appearing in "Flight to the Moon", Moskva, 1955, portraying a fictitious flight to the moon.

Source : M: Polet na Lunu (Flight to the Moon), by various authors, Moskva, 1955

LYAPUNOV, Boris Valer'yanovich; IVANOV, P.I., redaktor; FRIDKIN, A.M., tekhnicheskiy redaktor

[Stories about rockets] Rasskazy o raketakh. 2-e dop. izd. Moskva, Gos. energ. izd-vo 1955. 174 p. [Microfilm] (MLRA 8:2)
(Rackets (Aeronautics))

LIAPUNOV, B.

Airplans, rocket, projectile. p. 25.
AVIATIA PATRIEI, Bucuresti, Vol. 1, no. 6, June 1955.

SO: Monthly List of East European Accessions, (EAIL), LC, Vol. 4, no. 12, Dec. 1955, Uncl.

LYAPUNOV,B.V., (Moskva)

Talks on scientific and technical achievements. Fiz. v shkole 15 no.5:43-48 S-O '55. (MLRA 9:1)
(Physics--Study and teaching)

LYAPUNOV, B., inzhener.

At the surface of the atmosphere. Tekh.mol. 23 no.12:9-13 D '55. (MLRA 9:2)
(Space flight)

LYAPUNOV, B.

"Samolet-raketa-snaryad" (Rocket-Missile-airplane), Ogonek, Vol. 33, No. 18 (1455), May, 1955, pp. 19-20.

LYAPUNOV, Boris Valerianovich, inzhener; KOPYTOV, M.I., redaktor; KADER, Ya.M., redaktor izdatel'stva; MYASNIKOVA, T.F., tekhnicheskiy redaktor

[Guided missiles] Upravliaemye snariady. Moskva, Voen. izd-vo Ministerstva obor. SSSR, 1956. 136 p. (MLRA 10:3)
(Guided missiles)

LYAPUNOV, B. V.

Borb'ba Za Skorost' (Struggle for Speed), revised edition, by B. V. Lyapunov, Moscow, "Molodaya Gvardiya," 1956, 208 pp (from catalogue card, State Library USSR imeni V. I. Lenin, 6.01)

"The book describes the design and operation of high-speed engines, the development of high-speed reactive aviation, and the remarkable electronic instruments and automatons used in the most diverse fields of engineering, and discusses the problem of interplanetary travel. In separate examples the author discloses how Soviet engineers and designers, overcoming difficulties, are making an extensive study of the laws of the operation of mechanisms, are creating new materials and designs, are developing new technological processes, and are solving complex problems of high-speed engineering. This edition is revised and supplemented with material dealing with the most recent achievements in physical science and with the use of atomic energy for peaceful purposes."

Sum 1219

LYAPUNOV, V

AID P - 4891

Subject : USSR/Aeronautics - Guided missiles

Card 1/1 Pub. 58 - 11/14

Author : Lyapunov, V., Engineer

Title : Guided missiles

Periodical : Kryl. rod., 7, 17-19, Jl 1956

Abstract : A popularly written review of various types of modern guided missiles, based chiefly on the information gathered from the Soviet and Western publications. Six designs representing known U.S., British and Swiss missiles.

Institution : None

Submitted : No date

Lyapunov, Boris Valer'yanovich

PHASE I BOOK EXPLOITATION 331

Lyapunov, Boris Valer'yanovich

Mechte navstrechu; nauchno-fantasticheskiye ocherki (Toward a Dream; Science Fiction) Moscow, Trudrezervizdat, 1957. 166 p. (Series: Fantastika i priklyucheniya) 15,000 copies printed.

Ed.: Anisimova, K. V.; Tech. Ed.: Matusevich, N. L.

PURPOSE: Fiction.

COVERAGE: The first sketch is concerned with the first landing of Earth men on the Moon in 1974. In the following tales, the author describes a flight to the Moon and back to Earth; the construction of a space station; flights to Mars and to the planets closer to the Sun. In conclusion, he deals with more remote prospects, such as exploration of the solar system and interstellar travel. The book contains 27 illustrations, showing various space vehicles and equipment, part of a space station, landscapes on other planets, various aspects of the sky viewed from other planets, etc.

Card 1/2

Toward a Dream; Science Fiction 331

TABLE OF
CONTENTS:

AVAILABLE: Library of Congress

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IE/eag
30 June 1958

LYAPUNOV, B.

SUBJECT: USSR/Transportation 4-5-11/17

AUTHOR: Lyapunov, B.

TITLE: On the Roads of the Future (Na dorogakh budushchego)

PERIODICAL: Znaniye - sila, May 1957, # 5, p 34 (USSR)

ABSTRACT: The article reviews the book "Transportation of the Future" by Yu. Moralevich which discusses the transportation possibilities of the future. He speaks of atomic locomotives and of moving side-walks - a passenger conveyor with a speed of 20 kilometers per hour. Several variants of this kind of transportation have already been introduced in Moskva and Kiyev. According to the book, automobiles will also be replaced by high-frequency and semiconductor electromobiles, and aircraft will have "electric engines" using the power of ionized particles of the air.
The article contains one picture.

ASSOCIATION:
PRESENTED BY:
SUBMITTED:
AVAILABLE: At the Library of Congress
Card 1/1

LYAPUNOV, B.

SUBJECT: USSR/Engineering - A Book Review 25-5-31/35

AUTHOR: Blagonravov, A., Academician

TITLE: New Technics (O novoy tekhnike)

PERIODICAL: Nauka i Zhizn' - May 1957, No 5, p 60 (USSR)

ABSTRACT: This is a critical review of the revised edition of "Struggle for Speed" by B. Lyapunov, a book originally published in 1952. The new edition, dated 1956, reflects the progress made by science and inventions since 1952. The author first points out the importance of machine building as a basis of current production. Then follow vital problems encountered in aircraft building and the struggle of designers and test pilots for higher speeds. The use of electronic devices, among them semiconductors and prospects of the atomic industry are discussed in detail. Notwithstanding a few defects, as for example the very superficial way of treating the automatic control problems in production processes, the book is of considerable educational value and can be recommended to any reader interested in the latest scientific and technical achievements.

Card 1/2

TITLE: New Technics (O novoy tekhnike) 25-5-31/35

The article contains one picture.

ASSOCIATION:

PRESENTED BY:

SUBMITTED:

AVAILABLE:

Card 2/2

LYAPUNOV, B.V.

AUTHOR: Lyapunov, B. 4-12-18/24

TITLE: On the Screen - the Future (Na ekrane - budushcheye)

PERIODICAL: Znaniye - Sila, 1957, # 12, p 54 (USSR)

ABSTRACT: The author tells of a new film made at the Leningrad Kinostudio, dealing with a journey to the Moon. The film shows the development of rocket engineering, the journey to the Moon, the landing and the first steps of men on the Moon.
There are 4 photographs.

AVAILABLE: Library of Congress

Card 1/1

LYAPUNOV, B.

The first step into the universe. Znan.sila 32 no.2:30-31 F '57.
(MLRA 10:5)
(Artificial satelites)

RUBASHEV, B., kand. fiz.-mat. nauk; LYAPUNOV, B., inzh.; KLEBTSEVICH, Yu., kand. tekhn. nauk.

What induces mankind to conquer new planets? Znan. sila 32 no.11: 40 N '57. (MLRA 10:11)

(Planets) (Science)

LYAPUNOV, B.V.

LEVSHINA, Ol'ga Nikolayevna; SHLASHOVA, Zoya Petrovna; LYAPUNOV, B.V., nauchnyy red.; KAUFMAN, I.M., red.; ZUBOV, Yu.S., red.; KHELEMSKAYA, L.M., tekhn.red.

[Artificial earth satellites and interplanetary flights; suggested readings] Iskusstvennye sputniki zemli. Mezhplanetnye polety; rekomendatel'nyi ukazatel' literatury. Nauchnaia red. B.V.Liapunova. Moskva, 1958. 45 p. (MIRA 11:6)

1. Moscow. Publichnaya biblioteka.
(Bibliography--Artificial satellites)
(Bibliography--Space flight)

GOLDOVSKIY, Yevsey Mikhaylovich, zasluzhennyy deyatel' nauki i tekhniki, doktor tekhn.nauk, prof.;STANYUKOVICH, Kirill Petrovich, doktor tekhn.nauk, prof.; LYAPUNOV, Boris Valerianovich, inzh.; DOSTUPOV, Boris Grigor'yevich, kand.tekhn.nauk; MAGAZANNIK, D.N., red.; LANINA, L.I., red.; BERLOV, A.P., tekhn.red.

[News of science and technology; from the materials of Sunday lectures delivered at the Polytechnical Museum] Novosti nauki i tekhniki; po materialam voskresnykh chtenii Politekhnicheskogo muzeia. Moskva, Izd-vo "Znanie," 1958. 53 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.4, nos.32/33) (MIRA 11:12)

(Motion pictures, Three-dimensional) (Calculating machines) (Interplanetary voyages)

Name : LYAPUNOV, B. V.

Remarks : According to an article entitled "Way to the Cosmos", B. V. Lyapunov is the coauthor, with V. I. Solov'yev, of the script to the motion picture "Road to the Stars", a Soviet science-fiction film depicting a voyage to the moon.

Source : P: Nauka i Zhizn', No. 1, January 1958, pp. 40-41

LYAPUNOV, B.V.

AUTHOR: Lyapunov, B.V. 25-1-43/48

TITLE: Artificial Earth Satellites (Iskusstvennyye sputniki)

PERIODICAL: Nauka i Zhizn', 1958, # 1, p 76 (USSR)

ABSTRACT: The article gives information about different publications pertaining to the Sputniks and interplanetary travel. There is one illustration and there are five Russian references.

AVAILABLE: Library of Congress

Card 1/1

LYAPUNOV, B.V., [Liapunov, B.V.], inzh. (Moskva)

Rockets and satellites. Nauka i zhyttia 8 no.8:14-18 Ag '58.
(MIRA 12:1)
(Artificial satellites) (Rockets (Aeronautics))

LYAPUNOV,B.

Along the road of search and discoveries ("Man on wings" by M. Arlazorov. Reviewed by B. Liapunov). Znan. sila 33 no. 5:51 My '58. (MIRA 11:8)

(Aeronautics)
(Arlazorov, M.)

29(0) PHASE I BOOK EXPLOITATION SOV/2587

Lyapunov, Boris Valerianovich

Otkrytiye mira (Discovery of the Universe) 2d ed., rev. and enl. [Moscow] Izd-vo TsK VLKSM "Molodaya gvardiya," 1959. 207 p. 55,000 copies printed.

Ed.: M. Metaniyeva; Tech. Ed.: A. Kovalev.

PURPOSE: This book is intended to acquaint Soviet young people with the development of space science and technology in the USSR.

COVERAGE: The book presents a brief review of the launchings of the first two Sputniks, discusses, in popular language, various aspects of space flight, and gives a preview of future achievements. The chapters on artificial Earth satellites have been newly added in this edition of the book. The preface was written by Professor P.P. Parenago,

Card 1/3

Discovery of the Universe SOV/2587

Corresponding Member of the Academy of Sciences of the USSR. He mentions in particular that the book acquaints the reader with little-known aspects of Tsiolkovsky's scientific heritage, such as space stations and the use of solar energy. He also points out that this book is one of the first to show the extraordinary new possibilities offered to science by rockets. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

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3(1) SOV/25-59-3-38/46

AUTHOR: Lyapunov, B.

TITLE: A Cosmic Station - The Moon (Kosmicheskaya stantsiya - luna)

PERIODICAL: Nauka i zhizn', 1959, Nr 3, p 75 (USSR)

ABSTRACT: This is a review of the book "The Moon" by N.P. Barabashov, Academician of the Ukrainian Academy of Sciences, published by "Sovetskaya Rossiya" publishing house in Moscow, 1958.

Card 1/1

SOV/29-59-4-25/26

AUTHOR: Lyapunov, B.

TITLE: Velocities in the World (Skorosti v mire)

PERIODICAL: Tekhnika molodezhi, 1959, Nr 4, p 40 (USSR)

ABSTRACT: This is a brief review on the velocities in the world which are illustrated in the picture adjoining. The essay is introduced by the words of the Vice-President of the Academy of Sciences, USSR, Academician A. Topchiyev:"Velocity and Energy are the characteristic features of our century. In our days not only the achievements in the field of nuclear physics, aviation and rocket engineering are characterized by velocity, but also all changes which take place in the life of mankind in its rise to progress and perfectness ". The picture adjoining shows the velocities in nature and modern technology. There is an enormous difference between the rates of biological processes and astronomical velocities. They may be compared only on a logarithmic scale. Man successfully competes with nature. This becomes especially manifest in the obtained cosmic velocities: 8 and 11.2 km/sec. Scientists already talk about

Card 1/2

the possibilities of cosmic traveling with the maximum velocity in nature - with light velocity. Seven years ago a velocity curve was published in our periodical which, however, may no more be compared with the present velocities. There is 1 figure.

LYAPUNOV, B.V., inzh. (Moskva)

Cosmic rocket has been neglected. Nauka i zhyttia 9 no.1:14-18 Ja '59. (MIRA 12:1)
(Rockets (Aeronautics))

LYAPUNOV, Boris Valerianovich; KAPLUNOV, A.S., red.; ATROSHCHENKO, L.Ye., tekhn.red.

[Man goes into outer space] Chelovek vykhodit v kosmos. Moskva, Izd-vo "Znanie," 1960. 37 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.10, no.11) (MIRA 13:11)

(Astronautics)

PHASE I BOOK EXPLOITATION SOV/4880

Lyapunov, Boris Valerianovich

Chelovek vykhodit v kosmos (Man Enters the Cosmos) Moscow, Izd-vo "Znaniye", 1960. 40 p. 68,200 copies printed. (Series: Vsesoyuznoye obshchestvo po rasprostraneniyu politicheskikh i nauchnykh znaniy. [Izdaniya] Seriya X.: Molodezhnaya, 11).

Ed.: A. S. Kaplunov; Tech. Ed.: L. Ye. Atroshchenko.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The booklet describes in popular form Soviet outer-space efforts. General outer-space problems, the historical background to space exploration, Soviet earth satellites, and moon and sun probes are discussed. Future possibilities of space exploration are briefly described. No personalities are mentioned. There are 22 references, all Soviet.

Card 1/2