"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 49251-65

ACCESSION NR: AP5010797

field of 38 kOe. When the experiments were discontinued in 1957 in favor of work with a different model, 70 MeV electrons had been produced. The experience with the accelerator confirmed the principles on which it was based and, in particular, showed that it is possible to produce a magnetic field of given form with great accuracy by means of shaped conductors under conditions of small skin depth. "The following, to whom the authors express their gratitude, participated in various stages of the work: A.M.Stefanovskiy, I.M.Samoylov, L.I.Yudin, V.M.Volosov, B.V. Chirikov, and L.N.Bondarenko." Orig. art. has: 7 figures.

ASSOCIATION: None

SUBMITTED: 06Apr64 ENCL: 00 SUB CODE: NP

NR REF SOV: 004 OTHER: 003

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 36656-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-10 IJP(c)

ACCESSION NR: AP5008173 S/0286/65/000/005/0053/0054

AUTHOR: Abramyan, Ye. A.; Budker, G. I.; Naumov, A. A. 48

TITLE: Nonferrous accelerator for charged particles. Class 21, No. 168808 B

19

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 53-54

TOPIC TAGS: particle accelerator, charged particle accelerator, nonferrous charged particle accelerator

ABSTRACT: This Author Certificate introduces a nonferrous accelerator for charged particles which contains a vacuum chamber, a resonator for particle acceleration, an injector, and current-conducting busbars which generate a magnetic field of the necessary configuration. To utilize the same magnetic flux for acceleration of like-charge particles for both counterflow directions, an equilibrated central busbar is employed which creates two paths for particle accelerations enveloped by a magnetic flux. [JA]

ASSOCIATION: none

SUBMITTED: 08Apr63 ENCL: 00 SUB CODE: NP

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3223

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 36273-65 EWT(m)/EPA(w)-2/EWA(m)-2 Pab-10/Pt-10 IJP(c)
ACCESSION NR: AP5008174 S/0286/65/000/005/0054/0054

50
B

AUTHORS: Abramyan, Ye. A.; Budker, G. I.; Naumov, A. A.

TITLE: Method of shaping a variable magnetic field for cyclic charged particle accelerator. Class 21, No. 168809

19

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 5, 1965, 54

TOPIC TAGS: charged particle, cyclic accelerator, magnetic field, ferromagnet

ABSTRACT: This Author Certificate describes a method for shaping a variable magnetic field for a charged particle cyclic accelerator. The shape of the variable magnetic field is created simultaneously in the poles of a ferromagnet and a shaped metallic conductor whose thickness is substantially greater than the effective skin-layer thickness on the selected frequency fed into the magnetic system. This is done to remove current scattering, to secure the required shape of the magnetic field in the whole region between the poles, and to utilize properly the reactive energy.

ASSOCIATION: none

SUBMITTED: 08Apr63 ENCL: 00 SUB CODE: NP,EM

NO REF SOV: 000 OTHER: 000

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 21931-66 EWT(M)/T

ACC NR: AP6014489

AUTHOR: Budker, G. I.

SOURCE CODE: UR/0089/65/019/006/0505/0507

ORG: none

TITLE: High-current positron source

46

B

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 505-507

TOPIC TAGS: positron, electron beam, electric field, magnetic trap, synchrotron

ABSTRACT: It is proposed that positrons obtained from a 5- to 10- Mev electron beam be slowed down in a special gaseous target to thermal or near-thermal velocities, be extracted by an electric field from the target, and then be accelerated again to injection energies. Since all the positrons approach the edge of the target with almost zero energy, a parallel monochromatic beam of positrons can be obtained with subsequent acceleration in a homogeneous electric field. It is roughly estimated that the positrons can be slowed down in a trap ~1 m long with a gas pressure of 100 torr (argon or xenon). An electron conversion factor of about 3×10^{-5} is assumed. This factor increases sharply with increased initial electron energy. The slow positrons are accelerated to 10 kev and enter a second magnetic and electric trap having a length of ~1 m and a gas pressure of < 1 torr. At this pressure the time of accumulation is 1 msec. Thus with a synchrotron injection time of 3×10^{-8} sec the time ratio is 3×10^{4}, and 3 Mev positrons can be injected with a current of 1 amp. A model converting electrons to positrons was designed, and experiments will be started in the near future. Orig. art. has: 2 figures. [NA]

SUB CODE: 20 / SUBM DATE: none

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 25774-66 EWT(m) IJP(c)

ACC NR: AP6016378 SOURCE CODE: UR/0089/65/019/006/0507/0510

AUTHOR: Budker, G. I.; Dimov, G. I.; Popov, A. G.; Sviridov, Yu. K.; Sukhina, B. N.; Timoshin, I. Ya.

ORG: none

TITLE: Experiments with charge exchange injection of protons in a storage ring

34
B

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 507-510.

TOPIC TAGS: Van de Graaff accelerator, proton, hydrogen ion

ABSTRACT: Negative hydrogen ions were extracted from a high freqüency source and were accelerated in a Van de Graaff machine to 12 μamp. This beam then struck a neutralizing gas target of hydrogen or carbon dioxide having an optimum thickness of 2.5×10^{16} or 3×10^{15} molecules/cm^2 respectively. The resulting beam of neutral hydrogen atoms then struck a jet of hydrogen having a thickness of $\sim 10^{17}$ atoms/cm^2. The hydrogen jet was directed along a radius from the center of a storage ring with an aperture of 8 X 4 cm and an orbital radius of 42 cm. The particle losses did not exceed a few percent with injections up to 1500 revolutions. The orbital current increased linearly for the first 100 revolutions and remained constant for ~ 150 revolutions. During this period the orbital radius of the beam decreased and then struck the internal hydrogen stream. Thus the injection efficiency was close to 100%. These preliminary results indicate that it is possible to accumulate a proton current that is limited only by the space charge. Orig. art. has: 5 figures. [NA]

SUB CODE: 20 / SUBM DATE: none

Card 1/1 LC

2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 25792-66 EWT(m) IJP(c)

ACC NR: AP6016376

SOURCE CODE: UR/0089/65/019/006/0498/0502

AUTHOR: Budker, G. I.; Kushnirenko, N. A.; Naumov, A. A.; Onuchin, A. P.; Popov, S. G.; Sidorov, V. A.; Skrinskiy, A. N.; Tumaykin, G. M.

ORG: none

40
B

TITLE: Status report on the VEP-1 electron storage ring

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 498-502

TOPIC TAGS: electron scattering, synchrotron, electron energy/B-25 synchrotron

ABSTRACT: This paper updates the report given at the International Conference on Accelerators held in Dubna in 1963 and describes the work carried out since that time. In the last two years the following work has been accomplished: accumulation of electrons simultaneously on two paths, study of certain interaction effects between two beams, and measurement of the luminance of the machine from the electron-electron scattering in the range of angles from 45 to 90 deg. The VEP-1 storage ring, designed to operate at electron-electron energy of 2 X 130 Mev, is connected to a B-25 synchrotron, as shown in a schematic diagram. The magnetic paths are 43 cm in dia and the aperture is 3 X 4 cm. All experiments were made at electron energies of 43 Mev and resonator voltage of 5 kv. The average injection current pulse did not exceed 10 ma, although more than 100 ma were available. Injection mode stability left much to be desired. Results of the experiments are shown in a series of graphs. Further experiments are planned at electron energies of 100 Mev. Orig. art. has: 8 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 005

Card 1/1 cd

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05822-67 EWT(m) IJP(c) GD

ACC NR: AT6031467 SOURCE CODE: UR/0000/65/000/000/0001/0014

AUTHOR: Budker, G. I.; Kushnirenko, Ye. A.; Skrinskiy, A. N.; Naumov, A. A.; Onuchin, A. P.; Popov, S. G.; Sidorov, V. A.; Tumaykin, G. M.

ORG: none

50
B+1

TITLE: Present state of research on the VEP-1 electronic storage ring

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut yadernoy fiziki. Doklady, 1965. Sostoyaniye rabot na elektronnom nakopitele VEP-I, 1-14

TOPIC TAGS: synchrotron, electron scattering, electron beam/VEP-1 electronic storage ring, B-2C electronic synchrotron

ABSTRACT: The VEP-1 electronic storage ring consists basically of two paired high-vacuum magnetic tracks, 43 cm in radius, with a 3 x 4 cm^2 aperture a special B-2C electronic synchrotron, an electronic-optic channel, and a single thread system to extract the electron beam from the accelerator and insert it into the storage ring. This storage ring was designed for experiments in electron scattering with electrons of an energy of 2 x 130 Mev. It is now being used in

1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05822-67

ACC NR: AT6031467

experiments with electron scattering in a 45—90 degree angle. Descriptions are given of the installation, the process of electron storage, and radiance measurements. The results of the first experiments on electron scattering show that divergences from the reference curve of the Moller electron scattering do not exceed the statistical error. Orig. art. has: 8 figures.

SUB CODE: 09, 20/ SUBM DATE: none/ ORIG REF: 005/

kh

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 25793-66 EWT(m) IJP(c) SOURCE CODE: UR/0089/65/019/006/0502/0505

ACC NR: AP6016377

AUTHOR: Auslender, V. L.; Blinov, G. A.; Budker, G. I.; Karliner, M. M.; Kiselev, A. V.; Livshits, A. A.; Mishnev, S. I.; Naumov, A. A.; Panasyuk, V. S.; Pestov, Yu. N.; Sidorov, V. A.; Sil'vestrov, G. I.; Skrinskiy, A. N.; Khabakhnashev, A. G.; Shekhtman, I. A.

ORG: none

TITLE: Status report on the VEPP-2 positron-electron storage ring

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 502-505

TOPIC TAGS: electron positron pair, electron interaction, synchrotron, electron scattering, luminescence, betatron/B-3M synchrotron

ABSTRACT: The VEPP-2 was designed for electron-positron interaction experiments at energies of 2 X 700 Mev. as reported in the "Proceedings of the International Conference on Accelerators", Dubna, 1963. Work accomplished in the two years following that conference includes the following: start-up of the synchrotron injector, accumulation of large electron currents in the storage ring, study of instability related to the interaction of the beam with the resonator, and the accumulation of positrons. At present the VEPP-2 is being used to study the interaction of two beams and to measure the luminescence from the small-angle positron-electron scattering. An over-all schematic diagram of the VEPP-2 is shown, including its connection to a B-3M synchrotron. The latter operates in light-duty mode at 200 Mev, and its 100 ma output pulse is shorter than 20 nsec. Its energy scattering is less than 2% and pulse repetition frequency is about 3 cycles. The storage ring is a weakly focussing racetrack with four identical rectilinear segments 60 cm long. The equilibrium orbit radius is 150 cm and the aperture is

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 25793-66

ACC NR: AP6016377

8 X 14 cm. One segment of the ring is the experimental working section; the opposite section is a resonator; the remaining two are used to inject electrons and positrons. The experiments made and the operation of the equipment are described in detail. It is noted with interest that when betatron oscillations are excited by individual inflector pulses, most of the initial oscillation amplitude decays in a time interval much shorter than the natural radiation decay time. Orig. art. has: 4 figures. [JPRS]

SUB CODE: 20 / SUBM DATE: none / ORIG REF: 006 / OTH REF: 001

Card 2/2 CC

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05821-67 EWT(m) IJP(c) GD

ACC NR: AT6031468 SOURCE CODE: UR/0000/65/000/000/0001/0012

AUTHOR: Auslender, V. L.; Blinov, G. A.; Budker, G. I.; Karliner, M. M.; Kiselev, A. V.; Livshits, A. A.; Mishnev, S. I.; Naumov, A. A.; Panasyuk, V. S.; Pestov, Yu. P.; Sidorov, V. A.; Sil'vestrov, G. I.; Skrinskiy, A. N.; Khabakhpashev, A. G.; Shekhtman, I. A.

ORG: none

44
B+1

TITLE: Present state of research on the VEPP-2 electron-positron ring

26

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut yadernoy fiziki. Doklady, 1965. Sostoyaniye rabot na pozitron-elektronnom nakopitele VEPP-2, 1-12

TOPIC TAGS: electron, positron, electron positron storage ring, electron beam /B-3M synchrotron, VEPP-2 electron-positron, steradian

ABSTRACT: The VEPP-2 electron-positron storage ring was designed for experiments on the interaction of positrons and electrons with an energy of up to 2 x 700 Mev. It is basically a special type of B-3M synchrotron, 19 and is equipped with an exterior injector, a high-vacuum storage track, a single thread system to extract the electron beam from the accelerator and insert it into the storage ring.

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05821-67

ACC NR: AT6031468

0

It has electron-optic channels and a converter to transform an electron beam into a positron beam. It now works at an energy of 200 Mev. Basic studies of the process of insertion into the storage ring were made at an energy of 100 Mev. A detailed description is given of the installation and storage of electrons and positrons. A system of spark chambers, comprising a 2 x 0.7 solid angle steradian close to the vertical direction, was prepared for experiments on the interaction of positrons and electrons. Efforts are now being made to increase the accumulation speed of positrons. Orig. art. has: 4 figures.

SUB CODE: 20/ SUBM DATE: none/ ORIG REF: 006/ OTH REF: 001/

kh

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 29307-66 EWT(m) IJP(c) GD

ACC NR: AT6012261 SOURCE CODE: UR/0000/65/000/000/0001/0013

AUTHORS: Budker, G. I.; Dimov, G. I.; Popov, A. G.; Sviridov, Yu.K.; Sukhina, B. N.; Timoshin, I. Ya.

ORG: Institute of Nuclear Physics, Siberian Department AN SSSR (Institut yadernoy fiziki Sibirskogo otdeleniya AN SSSR)

53

B+1

TITLE: Experimental investigation of charge-exchange injection of protons in annular accelerators and storage rings

19

SOURCE: AN SSSR. Sibirskoye otdeleniye. Institut yadernoy fiziki. Doklady, 1965. Eksperimental'noye issledovaniye perezaryadnoy inzhektsii protonov v kol'tsevyyee uskoriteli i nakopiteli, 1-13

TOPIC TAGS: charge exchange, proton accelerator, energy scattering, circular accelerator

ABSTRACT: The authors describe experiments on the accumulation of protons in an annular track by means of a charge exchange (Fig. 1). A beam of atoms or negative ions of hydrogen is introduced on a proton orbit in a magnetic field at the point where it crosses a hydrogen jet. The particles lose electrons in the jet and are accumulated on the orbit in the form of protons. The protons passing many times through the jets lose energy and are scattered. In a constant magnetic field the time of

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 29307-66

ACC NR: AT6012261

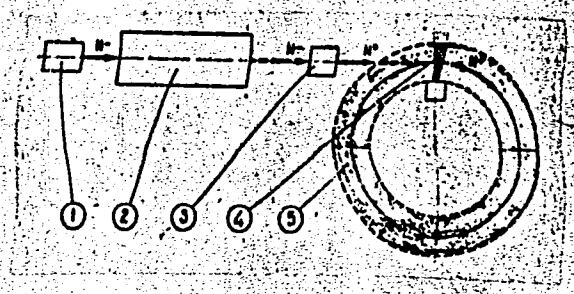

Fig. 1. Diagram of experimental setup. 1 - Source of negative hydrogen ions, 2 - accelerator, 3 - input gas target, 4 - jet of hydrogen on orbit, 5 - storage ring

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 29307-66

ACC NR: AT6012261

accumulation is limited by the loss of the circulating protons to the inner wall of the storage ring. If the average energy loss is compensated for, the storage time is limited by elastic scattering and by the energy scatter of the protons. The experimental setup was described elsewhere (Mezhdunarodnaya konferentsiya po uskoritelyam Dubna, 1963, [International Conference on Accelerators], Moscow, 993 -- 996, 1964). Methods of measuring the proton current and the proton lifetime in the storage ring are briefly described. Various parts of the experimental setup are described in detail. The ion source was a modified electrostatic generator. Up to 10^{12} protons could be accumulated in the betatron loop (current ~ 1 ampere). The injection efficiency was close to 100%. Hydrogen and carbon dioxide were used for the input targets, with optimal thickness 2.5×10^{16} and 3×10^{15} mol/cm^2. An accelerating voltage of 200 v was applied in pulses of 500 μsec duration, so that accumulation for 2500 revolutions was possible. The loop current increased approximately linearly to 300 ka. The various sources of losses are briefly analyzed. Orig. art. has: 8 figures and 7 formulas.

SUB CODE: 20/ ORIG REF: 001/ OTH REF: 001

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 42088-66 EWT(m)

ACC NR: AP6016033 SOURCE CODE: UR/0030/66/000/004/0030/0043

AUTHOR: Budker, G. I. (Academician)

ORG: none

68
64
B

TITLE: Opposed beam accelerators

SOURCE: Akademiya nauk SSSR. Vestnik, no. 4, 1966, 30-43

TOPIC TAGS: synchrotron, nanosecond pulse, Bev accelerator, Gev accelerator, cyclic accelerator, electron beam, electron scattering/B-3M synchrotron

ABSTRACT: Currently, plans are being made for 100-Gev accelerators. However, when opposed-beam accelerators are developed, it will be possible, at the same expense, to produce collisions with an energy of 2 x 1000 Gev, which corresponds to a 2 x 10^{15} ev accelerator with a stationary target.

The opposed-beam principle is most effective with light particles. Work on opposed electron beams was started in the laboratory of the Atomic Energy Institute im. Kurchatov at the end of 1956 just after the Geneva conference. It was at that conference that the problem of the realizability of opposed beams had been raised for the first time. The work on opposed beams was later transferred to the Institute of Nuclear Physics of the Siberian Department of the Academy of Sciences USSR.

Initially two installations were constructed: the VEP-1 for electron-electron beams with an energy of 2 x 130 Mev, and the VEPP-2 for positron-electron beams with a maximum energy of 2 x 700 Mev. The Fourth International

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACC NR: AP6016033

Conference on Accelerators, held in 1963 in Dubna, heard progress reports on these two installations. At that time a beam had been accumulated in the VEP-1 and the VEPP-2 had been assembled. In the fall of 1965, the Fifth International Conference on Accelerators, held in Frascati, was informed of the first experiments with counter beams in electron-electron scattering at large angles. Simultaneously a report was presented on the start-up of an installation for positron-electron counter beams for an ultimate energy of 2 x 700 Mev and the interaction of these beams.

Each of the Siberian installations (the VEP-1 and VEPP-2) consists of the following elements: 1) A cyclic accelerator of electrons with its own injector, 2) an accumulating magnetic track, 3) a high-vacuum system, 4) a strong high-frequency power supply system for accelerating the particles in the accelerator and maintaining their energy constant in the storage device, 5) a system of single-revolution ejection from the accelerator and injection on the track, 6) a system for transporting and focusing the beam, 7) a system for observing the beam, and 8) a system of counters and spark chambers for execution of the experiment.

The Institute of Nuclear Physics uses cyclic accelerators for the injection of particles into storage rings. An important part of the installations are the powerful generators of nanosecond pulses used in the injection-ejection system developed by the Institute. At a power above 100 Mw they produce pulses with a front less than one-billionth of a second and are synchronized with the same precision. This makes it possible to change the magnetic field on the orbit for a time smaller than one revolution, and to

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 42088-66

ACC NR: AP6016033

transfer the beam from one magnet into other, virtually without losses. In the VEP-1 the energy of electron injection into the storage device is 43 Mev. The ultimate operational energy is 2 x 130 Mev. A special iron-free B-2S synchrotron with a spiral accumulation of electrons is used as the injector. The current of the extracted beam from the synchrotron in a pulse of less than 5 nanosec duration is about 300 mamp (more than 10^{10} particles). The energy spread does not exceed 0.2%. The repetition rate of acceleration pulses is once per 15 sec. In the VEPP-2 the storage track is a weakly focusing race-track with a 150-cm radius and four identical rectilinear gaps. Two gaps are used for electron and positron injection, the third contains a high-frequency resonator, and the fourth is intended for conducting the experiments. The ultimate operational energy is 2 x 700 Mev.

A special B-3M synchrotron used as an accelerator injector presently operates up to 200 Mev. The external injector of the synchrotron, the so-called "amplitude accelerator," produces an electron beam with an energy of about 3 Mev. The current of the extracted beam reaches 300 mamp (more than 3×10^{10} particles) in a pulse with a duration of less than 20 nanosec duration. The energy spread does not exceed 0.2%. The repetition rate of acceleration pulses is up to 3 cps. The B-3M synchrotron is intended for use with positrons by the end of 1966. Orig. art. has: 11 figures. [ATD PRESS: 5002-F]

SUB CODE: 20/ SUBM DATE: none

Card 3/3 at

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 43734-66 EWT(1) IJP(c) AT

ACC NR: AP6030920 SOURCE CODE: UR/0207/66/000/004/0038/0041

AUTHOR: Alikhanov, S. G. (Novosibirsk); Budker, G. I. (Novosibirsk); Kichigin, G. N. (Novosibirsk); Komin, A. V. (Novosibirsk)

ORG: none

50
47
B

TITLE: Implosion of a metal liner by the action of a magnetic field

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 4, 1966, 38-41

TOPIC TAGS: implosion, metal liner implosion, magnetic implosion, plasma heating, megagauss field, megagauss magnetic field, STRUCTURE DYNAMIC STABILITY, STRUCTURE STABILITY

ABSTRACT: The experimental results of theta-pinch of metal liners by the action of a magnetic field of a single-turn solenoid are presented and compared with theoretical data on the collapse mechanics of liners. The charge of a 5×10^{-2} f condenser at a voltage of 4 kv was used to activate the solenoid. AD-1M (aluminum) and M-1 (copper) cylindrical liners 80 mm in outside diameter and 150 mm long were used. Wall thickness was 2.5 mm with the aluminum liner and 1 mm with the copper liner; weight was 250 g and 350 g, respectively. The circuit current and battery voltage were recorded along with other data during the experiment. A series of photographs taken from the end projection of the

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 43734-66

ACC NR: AP6030920

3

liner during the process of collapse showed that the liner's cross-section area remains constant and that its cylindricality is unimpaired. An analysis of the interrelationship existing between the stage of collapse, the speed of collapse, and the circuit current showed that most of the acceleration occurs during the first half of travel, viscosity of the material and the central air pad causing a decrease in acceleration during the second half prior to the explosion. The ensuing vapor cloud, having a reduced inductance because of its expansion, is said to explain the continuation of the current peak of 2.8×10^6 Ma in the circuit after the collapse. The copper liner displayed the same characteristics of the process as the aluminum liner. The kinetic energy of the liner acquired in acceleration reached 100 kJ at 35 percent efficiency. This energy level is considered to be of practical interest for such applications as plasma heating and the production of megagauss magnetic fields. The authors thank V. A. Polyakov and V. G. Belan for help in carrying out the experiment. Orig. art. has: 5 figures and 4 formulas. [FP]

SUB CODE: 20/ SUBM DATE: 15Feb65/ ORIG REF: 001/ OTH REF: 004
ATD PRESS: 5076

Card 2/2 hs

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05642-67 EWT(m) IJP(c)

ACC NR: AP6021620 (N) SOURCE CODE: UR/0089/66/020/003/0206/0210

AUTHOR: Budker, G. I.; Kiselev, A. V.; Kon'kov, N. G.; Naumov, A. A.; Nifontov, V. I.; Ostreyko, G. N.; Pandsyuk, V. S.; Petrov, V. V.; Yudin, L. I.; Yasnov, G. I. 31 B

ORG: none

TITLE: Starting of the B-3M synchrotron, used as an injector for a positron-electron storage ring

SOURCE: Atomnaya energiya, v. 20, no. 3, 1966, 206-210

TOPIC TAGS: synchrotron, ~~particle~~ linear accelerator, storage ring, cyclotron magnet/ VEPP-2 storage ring, B-3M synchrotron, ILU linear accelerator

ABSTRACT: The article describes an adjustment of a synchrotron with external single-turn injector and single-turn emission of electrons and with a specially constructed electromagnet. This pulsed synchrotron is designed to serve as an injector for the VEPP-2 storage ring for colliding positron and electron beams, designed and described by one of the authors (G. I. Budker, et al., in Trudy Mezhdunarodnoy konferentsii po uskoritelyam, Dubna, 1963 [Transactions of International Conference on Accelerators, Dubna, 1963], Atomizdat, 1964, p. 1065, and elsewhere). The article describes the synchrotron itself (Fig. 1), the magnet, two variants of capture into synchronism, and various test procedures. The injector for the B-3M synchrotron was an ILU pulsed linear accelerator. The injected electrons had energy 1 - 1.5 Mev (pulse duration ~7 nsec) and were accelerated to 50 Mev. The B-3M synchrotron makes it possible to

Card 1/2 UDC: 621.384.612.12

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 05642-67

ACC NR: AP6021620

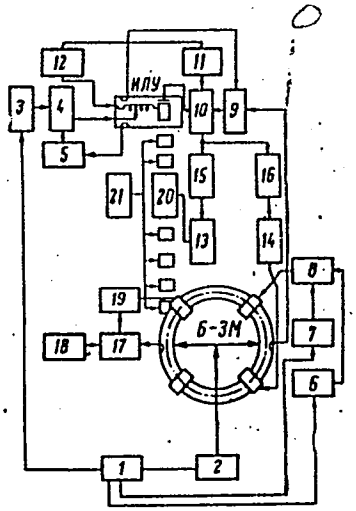

Fig. 1. Block diagram of the apparatus of the B-3M synchrotron. 1 - Starting-pulse block, 2 - electromagnet excitation, 3 - hf generator modulator, 4 - injector hf generator, 5 - phase shifter, 6,7 - modulators, 8 - amplifier, 9 - computer, 10 - phase fixing block, 11 - delay line, 12 - electron gun pulse generator, 13 - electron shutter pulse generator, 14 - inflector pulse generator, 15,16 - delay line, 17 - voltage comparison, 18 - reference voltage, 19 - deflector pulse generator, 20 - electronic shutter, 21 - channel electron supply block.

operate the VEPP-2 storage ring at energies 100 - 130 Mev and an electron current ~100 mA, at an approximate repetition frequency 1 cps. The ILU injector was recently replaced by one with higher injection energy (2.5 - 3 Mev) and longer injection pulse (15 nsec). This increased the number of electrons in the storage ring by approximately a factor of 10. Orig. art. has: 10 figures.

SUB CODE: 20/ SUBM DATE: 22Nov65/ ORIG REF: 006

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 11426-67 EWT(m)---IJP(c)

ACC NR: AP6031256 SOURCE CODE: UR/0057/66/036/009/1523/1535

AUTHOR: Budker,G.I.; Medvedev,P.I.; Mostovoy,Yu.A.; Nozhovenko,O.A.; Nelidov,A.B.; Ostreyko,G.N.; Panasyuk,V.S.; Samoylov,I.M.

ORG: none

TITLE: The BSB iron-free single turn synchrotron

SOURCE: Zhurnal tekhnicheskoy fiziki, v.36, no. 9, 1966, 1523-1535

TOPIC TAGS: electron accelerator, synchrotron

ABSTRACT: This paper is concerned with the type BSB iron-free single turn synchrotron developed at the IYaF CO AN SSSR for injection of up to 180 MeV electrons into a storage ring. A general description of the machine has been given elsewhere by Ye.A. Abramyan and 22 other authors (Transactions of the International Conference on Accelerators, Dubna, 1963, p.1065, Atomizdat, M., 1964). In the present paper certain features of the accelerator are described in somewhat more detail, including the magnet, the magnet power supply, and the injector, and the adjustment of the machine is discussed. The magnet winding consists of two concentric duralumin rings between which the beam circulates. The outer ring is capable of withstanding a magnetic pressure of 50 atm, and the geometry is such that the inner ring is in equilibrium under the magnetic forces, being subjected only to a hydrostatic pressure. The magnet is powered by a 0.045 F capacitor bank charged to 10 kV. The maximum magnet current is about

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

L 11426-67

ACC NR: AP6031256

10^6 A, corresponding to an electron energy of 180 MeV. There are two auxiliary capacitor banks which are discharged at selected phases of the cycle to control the time dependence of the magnetic field. Injection of 600 kV electrons is accomplished during a single revolution of the captured electrons. The discharge of the auxiliary and main capacitor banks is so timed that the field is approximately constant during injection. The rf accelerating voltage is frequency modulated from 103.5 to 116 MHz, and is applied to the beam with the aid of a single resonator with a Q of 200. Some difficulties were encountered in the adjustment of the machine, but none that could not be overcome. It was possible to inject about 1.2 A of 600 kV electrons into the approximately constant field, and to accelerate some 20 % of the injected electrons. The maximum beam current was found to be limited by longitudinal space charge effects (the negative mass effect), rather than by transverse space charge effects. It is suggested that higher currents might be achieved with a strong focusing iron-free pulsed machine. The authors thank A.A.Naumov for his interest and discussion, A.A. Kerbeyenko for organizing the fabrication of the main parts of the accelerator, and A.I.Kordrakhin, A.A.Livshits, and P.G.Kharchenkov for participating in the development of certain parts of the accelerator. Orig. art. has: 3 formulas and 6 figures.

SUB CODE: 20/ SUBM DATE: 27Sep65/ ORIG REF: 009/ OTH REF: 001

Card 2/2 bab

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKER, S. B.

1474. NEW METHOD OF TEMPERATURE MEASUREMENT. Fainzil'berg, S.N. and Budker, S.B. (Ogneupory (Fireproof Mat., Moscow), 1955, vol. 20, 173). When it is not practicable to send a car equipped with thermocouples through the kiln (e.g. owing to its design or the temperature being too high) a special electrical circuit for connecting thermocouples is recommended.

B.Ceram. R.A.

2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKER, S.B.

Small gas-pipeline route finder. Neft. i gaz. prom. no.3: 60-63 Jl-S '64. (MIRA 17:12)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKER, S.B., inzh.; LEYDERMAN, M.I., inzh.

Hearth burners operating on liquid gas for cast iron sectional boilers. Energ. i elektrotekh. prom. no.1:30-31 Ja-Mr '65. (MIRA 18:5)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKER, S.B.; BUTAYEV, O.A.; LEYDERMAN, M.I.; MELAMED, S.S.

Using gear pumps for transporting liquefied petroleum gases.
Gaz. prom. 10 no.9:19-22 '65. (MIRA 18:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

AKHELIS, Elizabet [Achelis, Elisabeth]; BUDKEVICH, A.V. [translator]; PEREL', Yu.G. [translator]

World calendar. Priroda 52 no.3:46-48 '63. (MIRA 16:4)
(Calendar reform)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACCESSION NR: AP4013337 S/0020/64/154/003/0692/0694

AUTHOR: Slinyakova, I. B.; Budkevich, G. B.; Neymark, I. Ye.

TITLE: Hydrophobic hydrogen-silicic adsorbent with Si--H bond (xerogel of polysiloxane hydride).

SOURCE: AN SSSR. Doklady*, v. 154, no 3, 1964, 692-694

TOPIC TAGS: silica gel, hydrophobic silica gel, hydrophilic silica gel, hydrophobic silica gel preparation, adsorption isotherms, polysiloxane hydride xerogel, hydrogen silica gel, specific surface, silicon hydrogen bond

ABSTRACT: A silica gel on whose surface the hydroxyl groups are replaced by atoms incapable of forming hydrogen bonds, whose dimensions do not exceed those of the hydroxyl groups, and which have a high polarizability was synthesized. The "hydrogen" silica gel was prepared by hydrolysing an organosilicon compound to a hydrogel of silane triol $[HSi(OH)_3]_n$, which on drying formed a high molecular porous material $(HSiO_{3/2})_n$, containing 51.1% Si, insoluble in organic solvents,

Card 1/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACCESSION NR: AP4013337

stable to 300C and having a Si--H bond strength of 75kcal. In the spatial lattice, each Si contains an H; the surface of the xerogel is evenly covered with hydrogen atoms giving it hydrophobic properties. The sorption isotherms for water, methanol and hexane vapors at 20C were determined. The specific surface of the material is similar to that of hydrophilic silica gel-about 520 sq. m. /gm.; the adsorption of hexane on these two materials is equal; the adsorption of methanol on the new material is about two times less than adsorption of hexane, while water adsorption is practically nil. Hexane adsorption is explained by the dispersive forces which are almost the same in the hydrogen and the hydrophilic silica gels, regardless of the chemical nature of the surface. Since the hydrogen layer of the xerogel cannot form donor-acceptor bonds, water is not adsorbed. The weak adsorption of methanol is based only on dispersion forces. "Determination of the nitrogen sorption isotherms was conducted by N. P. Samchenko and A. I. Ponomarenko, for which the authors express their appreciation." Orig. art. has: 1 table and 1 figure

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACCESSION NR: AP4013337

ASSOCIATION: Institut fizicheskoy khimii im. L. V. Pisarzhevskogo Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences, SSSR)

SUBMITTED: 30Aug63 DATE ACQ: 26Feb64 ENCL: 00

SUB CODE: PH NO REF SOV: 004 OTHER: 000

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SLINYAKOVA, I.B.; BUDKEVICH, G.B.; NEYMARK, I.Ye.

Gels of organosilicon compounds. Part 3: Adsorptive and other properties of a hydrogen-silica adsorbent with a Si-H bond (polysiloxane hydride xerogel). Koll. zhur. 27 no.5:758-764 S-O '65. (MIRA 18:10)

1. Institut fizicheskoy khimii AN UkrSSR imeni Pisarzhevskogo, Kiyev.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, V.B.

NOSOV, S.D.; BUDKEVICH, V.B.; LEVINA, S.S.; METEL'KOVA, Ye.M.; PESIKOVA, M.I.; FILICHEVA, Z.V.

Reducing hospitalization time in scarlet fever. Zhur.mikrobiol.epid. i immun. no.3:19-23 Mr '54. (MLRA 7:4)

1. Iz kafedry detskikh infektsionnykh bolezney (zaveduyushchiy - professor S.D.Nosov) Ivanovskogo meditsinskogo instituta. (Scarlet fever)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, V. S.

11C

Ca

Participation of acetic and malic acids in the biochemical formation of citric acids. V. S. Budkevich and E. I. Trofimova. *Microbiology* (U. S. S. R.) 7, No. 9-10, 1112-19(1938); *Khim. Referat. Zhur.* 1939, No. 8, 48.—Repeated expts. fail to confirm the conclusions of Chrzaszcz and Zahomorny (*C. A.* 30, 2201[1,2]) that the AcOH and malic acids are formed as intermediate products in the biochem. transformation of sugar into citric acid. The slight increase in citric acid on adding acetate and malate to mold nutritive soln. can be explained by the method used for the inoculation of the fungus. W. R. Henn

ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ZOSIMOVICH, D.P.; ANTONOV, S.P.; BUDKEVICH, V.V.

Anodic oxidation in chromichromate electrolytes. Ukr.khim.zhur. 29 no.6:642-647 '63. (MIRA 16:9)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Chromium compounds) (Oxidation, Electrolytic)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

PA 36/49T46

USSR/Medicine - Plants
Medicine - Carrots

Jan/Feb 48

"Anatomical and Chemical Characteristics of the Fruit of Certain Species of Genus Ferula," N. P. Kir'yalov, E. V. Budkevich, Bot Inst imeni V. L. Komarov, Acad Sci USSR, Leningrad, 10 pp

"Botan Zhur" Vol XXXIII, No 1

Fruits of F. foliosa Lipsky and F. Jaeschkeana Vatke differ sharply in qualitative chemical composition, although they have some common features in the hydrocarbon frame of individual groups of substances. These peculiarities of chemical

36/49T46

USSR/Medicine - Plants (Contd)

Jan/Feb 48

composition suggest that the courses of biochemical and physiological processes in the two Ferula species differ. Fruits also differ in size and anatomical structure, and there are differences in number, size, and disposition of the balsam passages. Essential oil and resin of both species are found as a mixture in these passages. Includes three sketches. Submitted 28 Jan 47.

BUDKEVICH, YE. V.

36/49T46

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, Ye.V.

Anatomical structure of wood of Larix species in connection with their systematics. Bot.zhur.41 no.1:64-80 Ja '56. (MLRA 9:6)

1.Botanicheskiy institut imeni V.L.Komarova Akademii nauk SSSR, Leningrad.
(Larch) (Wood)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, YE. V.

IVANINA, L.I.; GRUSHVITSKIY, I.V.; ARKAD'YEV, G.V.; BUDKEVICH, Ye.V.; POLYANSKIY, V.I.

Setting up the museum exhibit "World vegetation according to the geobotanical regions." Bot.zhur. 41 no.5:667-680 My '56. (MLRA 10:7)
(Phytogeography--Exhibitions)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

YATSENKO-KHMELEVSKIY, A.A.; BUDKEVICH, Ye.V.

Brief description of the structure of wood of Cathaya argyrophylla Chun et Kuang [with summary in English]. Bot. zhur. 43 no.4:477-480 Ap '58. (MIRA 11:6)

(China--Pine) (Wood--Anatomy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, Ye.V.

Anatomical structure of wood of Ducampopinus Krempfii (Lecomte)
Bot. zhur. 43 no.8:1156-1160 Ag '58. (MIRA 11:9)

1. Botanicheskiy institut im. V.L. Komarova AN SSSR, Leningrad.
(Pine) (Wood--Anatomy)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, Ye.V.

Anatomical-microchemical and morpjological investigation of Filipendula ulmaria. Trudy Bot.inst.Ser. 5 no.7:224-232 '61.

(MIRA 14:4)

(Filipendula)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, Yu. B.

Changes in blood gases under the influence of euphyllin. Terap. 34 no.1:61-67 '62. (MIRA 15:7)

1. Iz kafedry fakul'tetskoy terapii (zav. - prof. M. I. Zolotova-Kostomarova) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni N. I. Pirogova.

(BLOOD, GASES IN)
(AMINOPHYLLINE--PHYSIOLOGICAL EFFECT)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKEVICH, Yu.B.

Activity of some blood enzymes in chronic coronary insufficiency. Terap. arkh. 35 no.9:19-24 S'63 (MIRA 17:4)

1. Iz 4-go Glavnogo upravleniya Ministerstva zdravookhraneniya SSSR (nachal'nik - prof. A.M. Markov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

MIHALEWICZ, Janina, prof. dr

Psychological research works carried on in the Warsaw Province apart from the University. Przegl psychol no. 7:9-24 '64.

Report on the activities of the Committee for Applied Psychology of the Polish Psychological Society for the period of May 25, 1961 to October 28, 1962. Ibid.:151-155

1. Chairman of the Warsaw Branch of the Polish Psychological Society, Warsaw.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, [illegible].

Carboniferous clay shales as a valuable industrial raw material. p. 67.
(GEOLOGIA. Vol. 10, no. 1, 1956, Krakow, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, no. 12, Dec. 1957.
Uncl.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, M.

Remarks on mountain crystals of Jeglowa. p. 223.

PREZEGLAD GEOLOGICZNY. Wydawnictwa Geologiczne. Warszawa, Poland, Vol. 7, No. 5, May, 1959.

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No. 9, September, 1959. Uncl.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKINA, L.G. [Budkina, L.H.]

Annual distribution of river drainage in the forrested steppe of the Dnieper Basin. Geog. zbir. no.6:126-129 '62.

(MIRA 15:9)

(Dnieper Valley--Runoff)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, M.

S

1

REFRACTORY SLATES OF THE CARBONIFEROUS PERIOD. M. Budkiewicz. (Hutnik, 1948, vol. 15, May-June, pp. 237-238) (In Polish). The Polish coal mines of the Krakow basin are described, and the occurence of beds of refractory slates is noted.

WJW

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, M.

ea

8

Quartz-topaz rock from Kamień in Lower Silesia. Mieczysław Budkiewicz. *Państwowa Służba Geol., Państwowy Inst. Geol.* (Serv. géol. Pologne, Inst. géol. Pologne), *Bul.* **58**, 12-17(1949).—Petrographic data and a chem. analysis of the rock are given. Michael Fleischer

1951

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, M.

"Native Deposits of Kaolin." p.56
(PRZEGLAD GEOLOGICZNY No. 1/2, Jan./Feb. 1954 Warszawa, Poland)

SO: Monthly List of East European Accessions, LC, Vol. 3, no. 5, May 1954/Uncl.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, M.

"Origin of some kaolin deposits in the region of Swidnica," Przeglad Geologiczny, Warszawa, No 7, July 1954, p. 261.

SO: Eastern European Accessions List, Vol 3, No 11, Nov 1954, L.C.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, Mieczyslaw; SZECOWKA, Mieczyslaw

Glass sand from Krzeszowek at Kamienna Gora. Ceramika 32 no.4: 9-13 '61.

1. Katedra Surowcow Mineralynych Akademii Gorniczo-Hutniczej i Katedra Zloz Rud Akademii Gorniczo-Hutniczej, Krakow.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIEWICZ, Mieczyslaw; HEFLIK, Wieslaw

Mild clay from Baranow and attempts for its enrichment. Ceramika 32 no.4:15-21 '61.

1. Katedra Surowcow Mineralnych Akademii Gorniczo-Hutniczej, Krakow.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

USOV, S.V., prof.; PAVLOV, G.M., kand.tekhn.nauk; SLABIKOV, V.A., kand. tekhn.nauk; BUDKIN, I.A., inzh.

Automatic device for load distribution in power systems. Elektrichestvo no.4:47-51 Ap '60. (MIRA 14:4)

1. Leningradskiy politekhnicheskiy institut imeni Kalinina. (Electric power distribution) (Automatic control)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

VASHCHENKO, Yu. I., inzhener.; BUDKIN, M. A., inzhener.

"Pipe rolling processes". N. F. Ermolaev. Reviewed by Yu. I. Vashchenko, M. A. Budkin. Stal' 16 no.9:861 S '56. (MLRA 9:11)

1. Pervoural'skiy Novotrubnyy zavod.
(Rolling (Metalwork))(Pipe, Steel) (Ermolaev, N.F.)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIN, N.N.; SVIRSKIY, I.T.

MBO-4 unloading and piling machine. Sakh.prom. 34 no.5:78 My '60. (MIRA 14:5)
(Sugar beets) (Loading and unloading)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

43260

S/143/62/000/011/001/002
D201/D308

9.4370
9.2140

AUTHORS: Budkin, V.V., Engineer, Doroguntsev, V.G. and Ovcharenko, N.I., Candidates of Technical Sciences

TITLE: Power flow relays based on the Hall Effect

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Energetika, no. 11, 1962, 24-29

TEXT: The authors analyze the operation of a power protection relay having two Hall Effect sensing elements which constitute the load of ~~apologized~~ polarized relay. Owing to two sensing elements there are no second harmonic components of the Hall Effect emf. Compared with the existing type of Hall Effect protection relay the unit described has a greatly increased sensitivity. This is achieved by: a) restricting the periodicity of the change of magnetic induction in the current circuit by lowering the voltage to its minimum permissible value; b) by limiting the magnetic induction and power dissipated in the current circuit due to S.C. currents exceeding the nominal value; c) by momentary increase of input power of sensing

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

Power flow relays ... S/143/62/000/011/001/002
D201/D308

element with simultaneous decrease of voltages during breakdown periods, by means of nonlinear resistive elements. The power dissipated in the Hall Effect sensing element, when operating the relay at small voltages or currents is increased by utilizing the effect of dependence on the magnetic induction of the resistance of an InSb pick-up. The sensitivity of the relay changes little with temperature, the response is less than half-period of the mains frequency. The relay was designed at the Laboratory of Power System Relay Protection and Automation of the Moscow Power Engineering Institute and has proved in full the possibility of designing simple, reliable and sensitive Hall Effect power flow relays. There are 5 figures.

ASSOCIATION: Moskovskiy ordena Lenina energeticheskiy institut (Moscow, "Order of Lenin" Power Engineering Institute)

SUBMITTED: September 21, 1962

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIN, V.V., inzh.; DOROGUNTSEV, V.G., kand.tekhn.nauk; OVCHARENKO, N.I., kand.tekhn.nauk

Direktional power relay based on galvanomagnetic effects. Izv. vys.ucheb.zav.; energ. 5 no.11:24-29 N '62. (MIRA 15:12)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy releynoy zashchity i avtomatizatsii energosistem.
(Electric relay)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACCESSION NR: AP4019327 S/0105/64/000/003/0082/0086

AUTHOR: Bass, E. I. (Engineer); Budkin, V. V. (Engineer)

TITLE: General relations in Hall-generator relays responsive to two electric quantities

SOURCE: Elektrichestvo, no. 3, 1964, 82-86

TOPIC TAGS: Hall effect, Hall generator, Hall generator relay, phase comparison relay, two Hall generator relay, differential Hall generator relay

ABSTRACT: Relays used for automation and protection of power-circuit elements consist of (a) a Hall generator, (b) a switching (contact or contactless) unit, and (c) a transducer-amplifier. General relations are considered for Hall relays responding to two electrical quantities on the basis of phase comparison; the Hall generators are differentially connected. Formulas for voltage and power transfer constants are developed, as well as relations determining the

Card 1/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

ACCESSION NR: AP4019327

output power available for the switching unit. Also, connections between the parameters at the Hall-wafer inputs and those at the switching-unit input are established. The formulas are intended for calculating power-directional relays, impedance relays, and "other complex relays." Orig. art. has: 2 figures and 25 formulas.

ASSOCIATION: Moskovskiy energeticheskiy institut (Moscow Power-Engineering Institute)

SUBMITTED: 16Aug63 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: GE NO REF SOV: 006 OTHER: 000

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKIN, Ye.M., kapitan, voyennyy shturman vtorogo klassa

Using an auxiliary point in flying to the target. Vest.Vozd.Fl. no.3:50-51 Mr '61. (MIRA 14:6)
(Navigation (Aeronautics))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKINA, P. I.

7

Sodium bromide. V. I. Kseniyenko, B. A. Dianov, N. K. Solov'eva, and P. I. Budkina. U.S.S.R. 102,805, May 25, 1956. Addn. to U.S.S.R. 100,162. The Ca-Br liquor obtained as outlined in U.S.S.R. 100,162 is treated with Na_2SO_4 or Na_2CO_3, and the pptd. $CaSO_4$ or $CaCO_3$ is filtered off. M. Hosch

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, A. I.; VEDENYAPIN, G. V.; SAFRAZBEKYAN, O. A.; LIKHACHEV, V. S.

Agricultural Machinery

Considering G. B. Klimov's article "Evaluation of the work capacity of agricultural machinery by usage coefficients." Sel'khozmashina No. 3, 1953.

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

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

OS'KIN, Aleksandr Ivanovich; BUDKO, Aleksey Ivanovich; KOBYLYAKOV, L.M., redaktor; SOKOLOVA, N.N., tekhnicheskiy redaktor

[Over-all mechanization of harvesting in the Kuban] Kompleksnaia mekhanizatsiia uborki na Kubani. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 157 p. (MLRA 9:11)

(Kuban--Harvesting machinery)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, A.I., inzh.; YERKAYEV, A.D., ekonomist

Economic effectiveness of various corn harvesting methods.
Mekh. i elek.sots.sel'khoz. no.4:23-27 '57. (MIRA 12:4)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniya traktorov i sel'skokhozyaystvennykh mashin.
(Corn (Maize)--Harvesting)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

USSR / Cultivated Plants. Cereal Crops. M-3

Abs Jour : Ref Zhur - Biologiya, No 13, 1958, No. 58566

Author : Marakhtanov, K.; Budko, A.
Inst : Not given
Title : Complex Mechanization of Corn Cultivation

Orig Pub : Mashinno-trakt stantsiya, 1957, No 7, 54-57

Abstract : No abstract given

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, Aleksey Ivanovich

[Using combines for harvesting grain crops in separate stages] Opyt razdel'noi kombainouborki. Moskva, Gos. izd-vo selkhoz lit-ry, 1958. 70 p. (MIRA 12:1)
(Grain--Harvesting) (Combines (Agricultural machinery))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, A. I. Cand Tech Sci — (diss) "Investigation on certain Questions of Technology of the Split Combine Harvest of Grain in the Kuban Region", Moscow, 1960, 19 pp, (Joint Scientific Council of the All-Union Sci Res Institute for the Mechanization of Agriculture, "VIM" and the All-Union Sci Res Institute for the Electrification of Agriculture, "VIESKh")
(KL, 47/60, 101)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

GRIBANOV, Il'ya Petrovich; BUD'KO, nauchnyy red.; SAFONOV, P.V., red. izd-va; ABRAMOVA, V.N., tekhn. red.

[Water supply and local sewerage for rural settlements] Vodosnabzhenie i mestnaia kanalizatsiia sel'skikh nasolennykh punktov. Moskva, Gos. izd-vo lit-ry po stroit., arkhit. i stroit. materialam, 1961. 173 p. (MIRA 14:9)
(Sewerage, Rural) (Water—Supply, Rural)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, A.I.; GALKIN, V.I.; YEGOROV, G.A.; DMITRIYEV, I.N., red.; PEVZNER, V.I., tekhn. red.; DEYEVA, V.M., tekhn. red.

[School of Vladimir Svetlichnyi] Shkola Vladimira Svetlichnogo. Moskva, Sel'khozizdat, 1962. 95 p. (MIRA 15:7)
(Sugar beets)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SVETLICHNYY, Vladimir Andreyevich, Geroy Sotsialisticheskogo Truda; BUDKO, A.I.; ROGINSKIY, G.I.; LEBEDIK, A.I.; VINOKUR, I.Ye., red.; NESMYSLOVA, L.M., tekhn. red.

[Over-all mechanization of sugar-beet growing and harvesting] Kompleksnaia mekhanizatsiia vozdelyvaniia i uborki sakharnoi svekly. Moskva, Proftekhizdat, 1962. 51 p. (MIRA 16:1)
(Sugar beets) (Farm mechanization)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

OS'KIN, A.I.; BUDKO, A.I.

Technology and overall mechanization in cultivating and harvesting corn. Mekh.i elek.sots.sel'khoz. 20 no.4:1-6 '62. (MIRA 15:8)

1. Kubanskiy nauchno-issledovatel'skiy institut ispytaniy traktorov i sel'skokhozyaystvennykh mashin.
(Corn (Maize))

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

KUKTA, G.M., kand. tekhn. nauk; BUDKO, A.I., kand. tekhn. nauk, retsenzent;

[Testing agricultural machinery] Ispytaniia sel'skokhoziaistvennykh mashin. Moskva, Mashinostroenie, 1964. 281 p. (MIRA 17:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A. V.

Bud'ko, A. V.- "The geochemistry of Krivorozh'ye ores," In the collection: Nauch. raboty studentov gorno-metallurg. in-tov Moskvy. Moscow, 1949, p. 91-99

SO: U-4934 29 Oct 53, (Letopis 'Zhurnal 'nykh Statey, No. 16, 1949).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V.

BUD'KO, A.V., kandidat tekhnicheskikh nauk; BURTSEV, L.I., kandidat tekhnicheskikh nauk.

Lumpiness in systems of breaking down hard ore in bulk. Gor. zhur. no.9:14-21 S '55. (MLRA 8:8)
(Mining engineering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V

RUSANOV, K.S.; BURTSEV, L.I.; BUD'KO, A.V.

Improvement of mine development systems in ore mines. Gor.zhur. no.8:16-19 Ag '55. (MLRA 8:8)
(Mining engineering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BURTSEV, L.I.; BUD'KO, A.V.

Mining methods in Sweden. Ger.shur. no.10:28-34 O '55. (MLRA 9:2)
(Sweden--Mining engineering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V., kandidat tekhnicheskikh nauk; BURTSEV, L.I., kandidat tekhnicheskikh nauk; MAKHANOV, V.M., gornyy inzhener.

Advisability of using large diameter boreholes. Ger.zhur.no.12: 24-29 D '55. (MLRA 9:4)

(Boring)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUDKO, A.; BURCEV, L.; MACHANOV, B.

BUDKO, A.; BURCEV, L.; MACHANOV, B. Usefulness of boreholes with an enlarged diameter. p. 205.

Vol. 4, No. 7, July 1956
RUDY
TECHNOLOGY
Praha, Czechoslovakia

So: East European Accession, Vol. 6, No. 3, March 1957

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BURTSEV, L.I.; BUD'KO, A.V.; GOLOMALZIN, A.I.; RUSANOV, K.S.

Mining systems with ore delivery by blasting. Gor.zhur. no.6: 59-60 Je '56. (MLRA 9:8)
(Kazakhstan--Mining engineering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V., kandidat tekhnicheskikh nauk; BURTSEV, L.I., kandidat tekhnicheskikh nauk.

Handling lumpy ore in large block caving systems. Gor.zhur. no.10:27-31 O '56. (MLRA 9:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov.
(Mining ingineering) (Ore handling)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BURTSEV, L.; BUDKO, A.V.

"Extraction of horizontal and slightly inclined ore deposits in the USSR. Tr: from the Russian."

p. 373 (Rudy) Vol. 5, no. 11, Nov. 1957.
Prague, Czechoslovakia

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4, April 1958

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

127-58-7-20/20

AUTHOR: Bud'ko, A.V. and Burtsev, L.I., Candidates of Technical Sciences and Serednyakov, P.Ya., Mining Engineer

TITLE: B. Stoches. "Principles of Mining Works" (B. Stoches. Osnovy gornogo dela") Translated from English by V.A. Agoshkova, under the scientific editorship of M.I. Agoshkov, Member-Correspondent of the AS USSR (Perevod s angliyskogo V.A. Agoshkovoy pod nauchnoy redaktsiyey chl.-korr. AN SSSR M.I. Agoshkova) Metallurgizdat, Moscow, 1957, 302 pages, 240 illustrations, Circulation 6,000 copies. Price 14 r. 55 k. (Metallurgizdat, Moskva, 1957, 302 str., 240 ill. Tirazh 6000. Tsena 14 r. 55 k.)

PERIODICAL: Gornyy zhurnal, 1958, Nr 7, pp 78-80 (USSR)

ABSTRACT: This is a review of the above-mentioned book.

Card 1/1 1. Books-Review

USCOMM-DC-54,905

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SOV-127-58-8-9/27

AUTHORS: Bud'ko, A.V. and Burtsev, L.I., Candidates of Technical Sciences

TITLE: A Method of Calculating Blast Charges for Crushing Rocks in Bulk Breaking (Metod raschëta zaryadov drobleniya pri massovoy otboyke)

PERIODICAL: Gornyy zhurnal, 1958, Nr 8, pp 41-44 (USSR)

ABSTRACT: When breaking rocks by blasting with a sufficient degree of force, crushing must be achieved without excessively increasing the number of blasts. It is also necessary, especially in strip mining, to avoid the scattering of crushed rocks, which endangers surrounding installations and hampers loading operations. It limits the use of "outburst" blasts to obtain the needed degree of crushing. The authors devised formulae by which a correct amount of blasting material in different rock conditions could be calculated. There are 2 tables and 4 Soviet references.

ASSOCIATION: Institut gornogo dela AN SSSR (Mining Institute, AS USSR)

1. Explosive charges--Mathematical analysis 2. Rock--Blast effects
3. Mining engineering

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

Bud'ko, A.V.

14(5) PHASE I BOOK EXPLOITATION SOV/1944

Akademiya nauk SSSR. Institut gornogo dela

Nauchnyye problemy vskrytiya i razrabotki mestorozhdeniy poleznykh iskopayemykh (Scientific Problems in Developing and Exploiting Mineral Deposits) Moscow, Izd-vo AN SSSR, 1959. 333 p. 3,000 copies printed. Errata slip inserted.

Resp. Ed.: N.V. Mel'nikov, Corresponding Member, USSR Academy of Sciences; Ed. of Publishing House: Yu.P. Vasil'yev; Tech. Ed.: F.S. Kashina.

PURPOSE: This book is intended for coal and ore mining engineers.

COVERAGE: The collection of articles reports on the results of scientific studies conducted by members of the Institute of Mining Industries of the AN SSSR on problems of developing and exploiting coal and ore deposits. The book is divided into two parts. Part I discusses the development and exploitation of coal deposits, the trends in developing underground and surface exploitation methods, the scientific bases and principles applied in selecting exploitation methods for different natural conditions, the determination of the basic elements in the use of modern mechanized equipments in underground development, and the preparation and exploitation of coal. Part II is devoted to problems in the development and exploitation of ore deposits, the draining and mining methods used in underground exploitation of deposits in the area of the KMA (Kursk Magnetic Anomaly), the open pit mining method used in exploiting the rich KMA ores, the determination of size of ore, and further ore dressing. The book is dedicated to Academician Lev Dmitriyevich Shevyakov, mining engineer. The articles are accompanied by diagrams, tables, and bibliographic references.

TABLE OF CONTENTS:

Scientific Problems (Cont.) SOV/1944

Bud'ko, A.V., and L.I. Kurtsev. Regulation of Feed Size in High Productivity Systems of Exploitation 304

Golovskaya, G.V. Modern Mining Practices in Developing the Upper Part of Ore Blocks 316

AVAILABLE: Library of Congress (TN 275 . A85)

MM/afm
7-8-59

Card 7/7

3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

Bud'ko, A.V.

AUTHOR: Solomonov, M. SOV/180-59-1-27/29

TITLE: Conference at the Leading Ore-Mining Combine in Tyrny-Auz (Kabardino-Balkariya) (Soveshchaniye na peredovom kombinate gornorudnoy promyshlennosti v Tyrny-Auze (Kabardino-Balkariya))

PERIODICAL: Izvestiya Akademii nauk,SSSR, Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959,Nr 1, p 123 (USSR)

ABSTRACT: A conference was convened on 15-18th September 1958 at the Tyrny-Auz Combine by the Institut gornogo dela Akademii nauk SSSR (Mining Institute of the Academy of Sciences of the USSR), Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta ministrov SSSR (State Scientific and Technical Committee of the Council of Ministers of the USSR), the Kabardino-Balkarskiy Sovnarkhoz (Kabardino-Balkariya Economic Council) and the Nauchno-tekhnicheskoye obshchestvo tsvetnoy metallurgii (Scientific and Technical Society for non-ferrous Metallurgy). The following reports were presented: M.N. Yarmolenko, GITK (probably a mistake for GNTK (State Scientific and Technical Committee) - Abstractor) of the Council of Ministers of the USSR, "Main Lines for Technical Development in the Underground Mining of Ores

Card 1/3

of Non-Ferrous and Rare Metals in 1959-1965"; M.I. Agoshkov, IGD AN SSSR (AS USSR), "Improvement in the Methods of the Underground Working of Large Deposits of Hard Ores"; V.G. Drizhkov, TsNIGRI, "Experience in the Use of the Single-Stage Method of Working Deposits Under Conditions Preserving the Surface from Caving"; A.A.Popov, Institut Uniprozod (Uniprozod Institute), "Experience in the Working and Safety Precautions of Inflammable Ural Ores"; A.G. Shpital'nikov, Institut Giprotsvetmet (Giprotsvetmet Institute), "Economic Effectiveness of Using Powerful Equipment in Working Large Deposits"; D.P. Sobrov, "Work of the VNIIBT Institute on the Production of Modern Boring Equipment"; D.M. Bronnikov (Mining Institute AS USSR), "Comparative Evaluation of Methods of Charge Drilling in Hard Ores"; N.A. Chinakal, Sibirskoye otdeleniye AN SSSR (Siberian Department of the AS USSR), "Shield Propping in Working Large Luzbass Seams and the Possibility of Using this Propping System in Working Ore Deposits"; A.V. Bud'ko and L.I. Burtsev (Mining Institute AS USSR), "Systems of Working Large Hard-Ore Deposits in Foreign Quarries";

Card 2/3

V.V. Nadin, IGD Ukr SSR (Mining Institute Ukr SSR), "Ways of Combating Dust in Mining Operations". After this the conference heard reports on work at the Noril'skiy kombinat (Norilsk combine), the Nikitovskiy rtutnyy kombinat (Nikitovskiy combine), the "Verkhniy" rudnik ("Upper" quarry) of the kombinat Sikhali (Sikhote-Alin'deposits) of the Degterskoye mestorozhdeniye (Degtyarskoye deposit) Leninogorskiy kombinat (Leninogorsk combine), Tyrny-Auzskiy kombinat (Tyrny-Auz combine), Salairskiy rudnik (Salair quarry) and the Dzhezkazganskoye mestorozhdeniye (Dzhezkazgan deposit). The conference decided on measures for improving mining.

Card 3/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V., kand.tekhn.nauk; BUTSEV, L.I., kand.tekhn.nauk

Safe mining of steep ore deposits. Bezop.truda v prom. 3 no.1:12-14 Ja '59. (MIRA 12:3)

1. Institut gornogo dela AN SSSR.
(Mining engineering--Safety measures)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

18 SOV/127-59-4-2/27

AUTHOR: Agoshkov, M.L., Coresponding Member of the AS USSR, Bud'ko, A.V. and Burtsev, L.I., Candidates of Technical Sciences.

TITLE: The Improvement of Highly-Productive Methods and Technology of Mining Large Deposits of Hard Ores. (Usovershenstvovaniye vysokoproizvoditel'nykh sistem i tekhnologii razrabotki moshchnykh mestorozhdeniy krepkikh rud.) Results of the All-Union Conference on Highly Productive Methods of Mining. (K itogam Vsesoyuznogo soveshchaniya po vysokoproizvoditel'nym sistemam razrabotki.)

PERIODICAL: Gornyy zhurnal, 1959, Nr 4, pp 12-24 (USSR)

ABSTRACT: The scientific-technical conference which took place in Tyrny-Auz in September 1958 was convened to develop measures for the improvement and introduction of highly productive methods and technology of mining of large deposits of

Card 1/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SOV/127-59-4-2/27

The Improvement of Highly-Productive Methods and Technology of Mining Large Deposits of Hard Ores. Results of the All-Union Conference on Highly Productive Methods of Mining.

hard ores. Different mining methods used in the USSR and abroad (USA, Canada, Sweden) as well as the automotive equipment of mines were discussed and compared. The drilling of holes, their diameter and blasting methods were also discussed. The introduction of new powerful technological equipment, such as automotive drilling, loading and unloading of aggregates, implies the modernization of mining methods or their simplification. The introduction of room-and-pillar or of block-caving methods was recommended. A new system of ore-crushing must be developed and improved means of ore-blasting introduced. Care must be taken to avoid excessive pressure in mining chambers

Card 2/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SOV/127-59-4-2/27

The Improvement of Highly-Productive Methods and Technology of Mining Large Deposits of Hard Ores. Results of the All-Union Conference on Highly Productive Methods of Mining.

and to choose such alternate mining methods which will permit intensive exploitation without causing caving-in or sliding of overhead rocks. The application of various mining methods in the West and in Soviet mines is described. At the Sokol'naya Mine, ore was extracted by the compulsory level caving-in, later replaced by the sub-level caving-in method. The drilling equipment used was the SB-4 drilling rig with milling cutters and PBA perforators. The compulsory level caving-in method is used in the Salairskiy Mine, the Tekeliyskiy Mine, Mine 7/9 of the Noril'skiy Kombinat (the Norilsk Combine). Drilling equipment used in these mines is as follows: rigs SB-4, BMK-2b, BMN and perforators KTsM-4 and KS-50. The room-and-pillar method, with massive

Card 3/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SOV/127-59-4-2/27

The Improvement of Highly-Productive Methods and Technology of Mining Large Deposits of Hard Ores. Results of the All-Union Conference on Highly Productive Methods of Mining.

extraction of ore, is used in the Tyrny-Auz Mine. BMK-2b and BA-100p-1 drilling rigs are used. In the Nikitovskiy Rtutnyy rudnik (the Nikitovskiy Mercury Mine) the level caving-in method is used. In the Ural Chalcopyrite Mines, the sub-level caving-in method is used. It is also used in the Krasnogvardeyskiy, Belorechenskiy and imeni III Internatsionala Mines. The room-and-pillar method is used in the Verkhniy Mine of the Sikhali Combine and the method of horizontal layers with filling is used in the Taseyevskiy Mine. This method is presently being perfected by the Tsentral'nyy nauchno-issledovatel'skiy gorno-razvedochnyy institut (the Central Scientific Research Mine Prospecting Institute (TsNIGRI). There

Card 4/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

SOV/127-59-4-2/27

The Improvement of Highly-Productive Methods and Technology of Mining Large Deposits of Hard Ores. Results of the All-Union Conference on Highly Productive Methods of Mining.

are 5 sets of diagrams.

ASSOCIATION: Institut gornogo dela AN SSSR. (The Institute of the Mining Industry of the AS USSR.) Lyubertsy, Moscow Oblast .

Card 5/5

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V.; BOGDANOV, G.I.; TARAN, P.N.; LEVITSKIY, D.Z.

Study and improvement of chamber systems with mass pillar caving in the Krivoy Rog Basin. Gor.zhur. no.4:24-29 Ap '62. (MIRA 15:4)

1. Institut gornogo dela im. Skochinskogo (for Bud'ko, Bogdanov).
2. Trest Leninruda, Krivoy Rog (for Taran, Levitskiy).
(Krivoy Rog Basin--Iron mines and mining)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V., kand.tekhn.nauk; KRIVENKOV, N.A., gornyy inzh.

Effect of wider use of electric power on increased labor productivity according to the system of mining. Gor.zhur. no.8:13-16 Ag '62. (MIRA 15:8)

1. Institut gornogo dela im. Skochinskogo, Moskva.
(Electricity in mining) (Labor productivity)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BRONNIKOV, D.M., doktor tekhn.nauk; BURTSEV, L.I., kand.tekhn.nauk; BUD'KO, A.V., kand.tekhn.nauk

"Handbook on mining," Vol.2: "Underground operations." Reviewed by D.M. Bronnikov, L.I. Burtsev, A.V. Bud'ko. Gor. zhur. no.6:78- 3 of cover Je '62. (MIRA 15:11)
(Mining engineering)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V., kand.tekhn.nauk

New method of breaking ore masses with clusters of contiguous holes. Gor. zhur. no.4:40 Ap '63. (MIRA 16:4)

1. Institut gornogo dela im. Skochinskogo.
(Blasting)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

AGOSHKOV, M.I.; BUD'KO, A.V.; ARUTYUNOV, K.G.; BOGDANOV, G.I.; KRIVENKOV, N.A.; Prinimali uchastiye: ZAMESOV, N.A.; GAGULIN, M.V.; KRASAVIN, G.A.; VORONYUK, A.S.; KOSTAN'YAN, A.Ya., red.izd-va; ASRAF'YEVA, G.A., tekhn. red.; SIMKINA, G.S., tekhn. red.

[Analysis of the development systems of mines in the Krivoy Rog Basin] Analiz sistem razrabotki rudnikov Krivorozhskogo basseina. Moskva, Izd-vo AN SSSR, 1963. 184 p. (MIRA 17:3)

1. Chlen-korrespondent AN SSSR (for Agoshkov).

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2

BUD'KO, A.V. Prinimali uchastiye: BOGDANOV, G.I.; ZAKALINSKIY, V.M.; KRIVENKOV, N.A.; TOLOCHKO, M.K.; MALAKHOV, G.M., prof., doktor tekhn.nauk, redtsnzent

[Automation of stoping operations] Avtomatizatsiia ochistnykh rabot. Moskva, Izd-vo "Nedra," 1964. 133 p. (MIRA 17:6)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307230004-2"