"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S.M.

VLADIMIRSKIY, V.V.; KOMAR, Ye.G.; MINTS, A.L.; GOL'DIN, L.L.; KOSHKAREV, D.G.; MONOSZON, N.A.; NIKITIN, S.Ya.; RUBCHINSKIY, S.M.; SKACHKOV, S.V.; STREL'TSOV, N.S.; TARASOV, Ye.K.

Basic characteristics of the projected 50-60 Bev proton accelerator with alternating-gradient focusing. Atom.energ. no.4:31-33 '56. (MLRA 9:12)

(Particle accelerators) (Protons)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S.M.

MINTS, A.L.; RUBCHINSKIY, S.M.; VEYSBEYN, M.M.; VASIL'YEV, A.A.

Injection process control systems and particle acceleration in the proton synchrotron. Radiotekh. i elektron. 1 no.7:974-985 Jl '56. (MLRA 10:1)

(Synchrotron)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

"A Coupling System of Frequency of the Accelerating Field and the Intensity of the Magnetic Field of a 10 Bev Synchrophasotron," by A. L. Mints, S. M. Rubchinskiy, M. M. Veysoeyn, F. A. Vodop'yanov, A. A. Kuz'min, and V. A. Uvarov, Radiotekhnika i Elektronika, No 7, Jul 56, pp 910-927

The requirements of a system relating f and H of a synchrophasotron at 10 Bev are considered. The tolerances of the adiabatic instability of f and N, the parasitic harmonic and the noise modulation of the frequency, and the amplitudes of the accelerating voltage were determined.

The block diagrams of the system are described together with the program frequency regulation with the help of the fundamental or auxiliary accelerator electromagnet. The fundamental elements of an integrator, functional transformer, and wide-band, frequency-modulated oscillator are also described.

Persons who worked on the project are Z. A. Budyanskaya, A. A. Vasil'yev, I. M. Gromev, A. I. Dzergach, Yu. F. Dushin, and N. V. Kovalev.

SUM-1305

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S. M.

"On Measuring the Instantaneous Frequency of Frequency-Modulated Oscillations," by S. M. Rubchinskiy, A. A. Vasil'yev, V. F. Kuz'min, and N. I. Fedorenko, Radiotekhnika i Elektronika, No 7, Jul 56, pp 986-1000

Four methods for precision measurement of the instantaneous frequency of frequency-modulated oscillations were considered. It was proved that the four methods employed in the construction of the 10 Bev synchrophasotron, the selectivity method, the stroboscope method, the two-channel heterodyne method, and the phase method, all possessed accuracies better than $\pm 5 \times 10^{-4}$.

SUM. 1305

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY S.M.

CERN Conference (Symposium) on charged particle accelerators held in Geneva, June 11-16, 1956. Radiotekh. i elektron. 1 no.7:1024-1030 Jl '56. (MLRA 10:1)

(Geneva--Particle accelerators--Congresses)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S.M., MINTS, A.L., VEYSBEYN, M.M., VODOPYANOV, F.A., VASIL'YEV, A.A.

"Some Technical Characteristics of the 10 GeV Proton Synchrotron Electronic System," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S.M., VASIL'YEV, A.A., SELDOVICH, M.P., KUSMIN, V.F., KUROCHKIN, S.S.

"Measurement of Instantaneous Values of Variable Magnitude in Proton Synchrotron Technique," paper presented at CERN Symposium, 1956, appearing in Nuclear Instruments, No. 1, pp. 21-30, 1957

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

SOV-120-58-1-13/43

AUTHORS: Zel'dovich, M. P. and Rubchinskiy, S. M.

TITLE: A Device for Measuring the Azimuthal Symmetry of the Field of Powerful Electromagnets (Izmeritel' azimutal'noy simmetrii polya moshchnykh elektromagnitov)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 1, pp 56-58 (USSR)

ABSTRACT: In order to study experimentally the intensity of the magnetic field in the gap of the electromagnet of the 680 MeV phasotron at the United Institute for Nuclear Studies, a special device was developed which can be used to determine rapidly the azimuthal symmetry in the median plane of the gap. When working the machine produces a magnetic field of 10-16 kÖer while the maximum allowable deviation of the field from the average at the orbit is 0.5%. For this reason the instrument must have a sensitivity sufficient to be able to show changes less than 0.05% in the magnetic field. The device uses the variation of the magnetic permeability with magnetic field. Carbonyl iron was chosen as the working substance. The electronic circuit of the instrument is shown in Fig.1. The characteristic $\mu(H)$ was obtained using a high frequency oscillator. A coil whose core was made of carbonyl iron was part of the circuit of a valve oscillator and the change

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A Device for Measuring the Azimuthal Symmetry of the Field of Powerful Electromagnets.

in μ was obtained from the change in the frequency of the output from the oscillator. In order to increase the sensitivity of the method, the method of beats was employed (cf.Fig.1). The beats were obtained between the above oscillator and a quartz oscillator. The change in the beat frequency ΔF as the probe is displaced from a field H into a field $H + \Delta H$ is given by:

$$\Delta F = \alpha \Delta H \quad \text{or} \quad \Delta H = \Delta F/\alpha$$

where α is the sensitivity. The dependence of α on H is shown in Fig.2 and is roughly linear. A photograph of the device is shown in Fig.3. Fig.4 shows results of measurements of $\Delta H/H$ in per cent as a function of azimuth for different radii of the electromagnet of the phasotron. These curves show that the azimuthal symmetry of the magnetic field of the electromagnet of the phasotron is not worse

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SOV-120-58-1-13/43

A Device for Measuring the Azimuthal Symmetry of the Field of Powerful Electromagnets.

than 0.3% within a radius of 250 cm. F. A. Kuzin assisted in the construction of the instrument. There are 4 figures, and no references.

SUBMITTED: June 15, 1957.

1. Particle accelerators--Electromagnetic properties 2. Electromagnetic fields--Measurement 3. Electromagnets--Testing equipment

TITLE: Phasotrons

Card 3/3

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

BURSHTEYN, E.L.; VASIL'YEV, A.A.; MINTS, A.L., akademik; PETUKHOV, V.A.; RUBCHINSKIY, S.M.

High-energy cyclic accelerators with a self-tuning magnetic field. Dokl. AN SSSR 141 no.3:590-592 N '61. (MIRA 14:11)
(Particle accelerators)
(Magnetic fields)

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24 6730

S/120/62/000/004/003/047
E140/E420

AUTHORS: Rubchinskiy, S.M., Batskikh, G.I., Vasil'yev, A.A. Vodop'yanov, F.A., Gutner, B.M., Kuz'min, A.A., Kuz'min, V.F., Lebedev-Krasin, Yu.M., Uvarov, V.A.

TITLE: The electronic system of the 7 Gev proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 20-26

TEXT: The article surveys the electronic system of the 7 Gev proton synchrotron, the individual parts of which are described in individual articles in the same number of the journal. The electronic circuits control the continuous increase of the energy of the accelerated particles. For the chamber aperture used in the apparatus, the deviation of the momentum from the equilibrium value cannot exceed $\pm 5 \times 10^{-3}$. The instantaneous values of H must be held to within 10^{-3} at the start (f = 0.67 Mc/s) and 5×10^{-5} at the end of the acceleration cycle (f = 8.31 Mc/s). The synchrotron frequency varies from 3600 to 130 c/s. To keep the oscillations of phase with passage through resonance less than the adiabatic damping of these oscillations, the harmonic frequency modulation of the accelerating potential by the synchrotron frequency should not exceed 0.5 c/s and the harmonic amplitude

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of the modulation at the same frequencies should be less than 2×10^{-4} at the start and 5×10^{-3} at the end of the cycle. The spectral density of noise modulation should be of the order of 2×10^{-3} cs^2/cs. The precision of measuring H at the instant of injection was prescribed as 3×10^{-4}. These requirements are met by a programmed frequency control with correction for the radial and phase positions of the beam, calculated for beam intensities of 10^8 to 10^{12} particles. The beam measuring system consists of a precise discrete integrator and a meter for the initial level of the magnetic field intensity. Special equipment is required for the automatic measurement of the instantaneous values of frequency and field intensity, the measurement of micromodulation of the frequency and amplitude of the accelerating potential, variations of beam intensity over the acceleration cycle, the azimuthal distribution of particle density in the bunch, and the position of the beam in the vacuum chamber. An overall block diagram of the system is given and also summary descriptions of the systems for generating the accelerating field, the acceleration control and the measuring equipment. The

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particles are accelerated at the seventh harmonic of their frequency of revolution - in the band from 0.67 to 8.31 Mc/s. The energy increase is 4.3 keV per revolution. The accelerating elements are 2.4 m drift tubes located in 11 compensating electromagnets. The transit angle in each tube is about 25° and the ratio of accelerating potential to the potential across the tube is about 0.43. The system ensures a phase oscillation of the beam below 0.05 r and stabilizes the radial position to within ± 1 mm. There is 1 figure.

ASSOCIATION: Radiotekhnicheskiy institut GKAE
(Radio Engineering Institute GKAE)

SUBMITTED: April 23, 1962

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S/120/62/000/004/021/047
E192/E382

AUTHORS: Kuz'min, V.F. and Rubchinskiy, S.M.

TITLE: System of automatic radio measurements on the 7 GeV proton synchrotron

PERIODICAL: Pribory i tekhnika eksperimenta, no. 4, 1962, 115 - 118

TEXT: The accuracy of the functional relationship between the frequency f of the accelerating field and the magnetic field H of the proton synchrotron should be 10^{-5} at the commencement and 8×10^{-5} at the end of the acceleration cycle. The functional relationship between f and H is checked at 5 fixed points of the acceleration cycle. Automatic equipment, whose block diagram is shown in the figure, is used for this purpose. The equipment consists of: 1 - a precision frequency meter; 2 - memory device; 3 and 6 - recorders; 4 - precision voltage comparator; 5 - electronic msec meters and memory devices for U and 7 - a uniselector. The deviations of the instantaneous frequency f from the nominal

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value is measured by the frequency meter 1, which is based on the measurements of a time interval τ during which the phase of the controlled frequency-modulated signal changes by a predetermined angle φ. The deviations $\Delta\tau$ of the measured time interval τ from the nominal value τ_0 is measured in order to determine the frequency deviation Δf. The stability of the frequency-programmer elements is checked by measuring the instantaneous value of the integrator output U_i and the functional converter output $U_{\varphi n}$ (V.A. Uvarov, PTE, no. 4, 1962, 89). Measurement of these signals is performed by an accurate voltage comparator which produces an output pulse at the instant when the controlled voltage and the standard comparator become equal. The control of all the elements of the automatic-measurement system is effected by means of the uniselector 7, which is advanced one step by the pulse produced at the end of each acceleration cycle. There are 1 figure and 3 tables.

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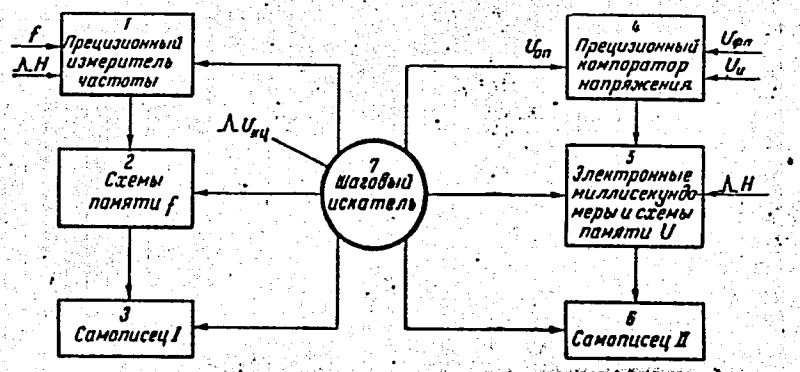
System of automatic S/120/62/000/004/021/047
E192/E382

ASSOCIATION: Radiotekhnicheskiy institut GKAE
(Radio-engineering Institute, G.K.A.E)

SUBMITTED: April 6, 1962

Figure



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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S. M.

33231
S/089/62/012/002/002/015
B102/B158

24.6730

AUTHORS: Burshteyn, E. L., Vasil'yev, A. A., Mints, A. L., Petukhov, V. A., Rubchinskiy, S. M.

TITLE: Application of the principle of magnetic field self-correction in superhigh-energy cyclic accelerators

PERIODICAL: Atomnaya energiya, v. 12, no. 2, 1962, 111 - 115

TEXT: The authors discuss the possibility of automatically controlling local magnetic field characteristics by using accelerated particle beam data. By this means the chamber cross section could be reduced, the beam energy increased and the accelerator structure simplified. As betatron and synchrotron oscillations are closely related to the chamber parameters, the self-correction of these oscillations is very important. Two main problems arise with betatron oscillations: Control of the equilibrium orbit, and stabilization of the number of oscillations. They are considered in the following. (A). A "smoothened" motion under the action of a constant focusing field is described in linear approximation by the equation $x'' + Q^2x = F_t(\theta)$ without automatic control; x denotes the

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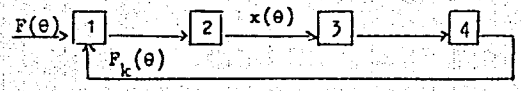
deviation from the chamber axis, Q the number of betatron oscillations per revolution, $F_t(\theta)$ is the perturbation, a periodic function of θ (period 2π) which is slightly time-dependent. A correction function $F_k(\theta) = -L_t(x''+Q^2x)$ is introduced, so that with automatic control the equation reads $x'' + Q^2x = F_t(\theta) - L_f(x'' + Q^2x)$ or $(1 + L_t)(x'' + Q^2x) = F_t(0)$. A possible block diagram (Fig. 1) is proposed: The initial perturbation $F_t(\theta)$ and the correction signal $F_k(\theta)$ act on the controlled object (1), measuring unit (2) measures the $x(\theta)$ deviations, computing unit (3) determines $x'' + Q^2x$ and (4) is the amplifying transducer with the characteristic operator L_t and a time delay T_1 of ~ 1 msec: $L_t = k/(1 + pT_1)$.



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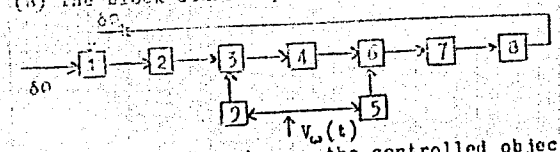
B102/B138

Application of the principle...

(a) The block diagram proposed for the stabilization of Q is the following:



The particle beam, i. e., the controlled object, (1), is excited by a pulsed field betatron oscillations $x(\theta)$ with frequency $Q = Q_0 \pm 0.25 + \Delta Q$, Q_0 is an integral number and $\Delta Q = \delta Q + \delta Q_k$, the perturbation plus the correcting signal. (2) is a signal electrode mixer, (3) is supplied with voltage from (9), (4) is an l-f filter, (6) - mixer with filter, acting as voltage divider. (7) is a frequency detector and (8) the executive component. The parameters of self-corrected proton accelerators with 300 and 1000 Bev were calculated for small and large radii of curvature. There are 2 figures, 1 table, and 6 references: 2 Soviet and 4 non-Soviet. The four references to English-language publications read as follows: E. Courant

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Application of the principle...

et al. Phys. Rev. 80, 1190, 1950; E. Johnsen, C. Schmelzer. Symposium CERN, v. 1, 1956, p. 335; A. Sokolov, Theory of linear and non-linear perturbations of betatron oscillations in alternating gradient synchrotrons. CERN, Geneva, 1958; M. Barton, Rev. Sci. Instrum. 31, 1290 (1960).

SUBMITTED: December 6, 1961

Card 4/4

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S. M.

S/089/62/012/006/003/019
B102/B104

AUTHORS: Vladimirskiy, V. V., Komar, Ye. G., Mints, A. L., Gol'din, L. L., Monosson, N. A., Rubchinskiy, S. M., Tarasov, Ye. K., Vasil'yev, A. A., Vodop'yanov, F. A., Koshkarev, D. G., Kuryshev, V. S., Malyshev, I. F., Stolov, A. M., Strel'tsov, N. S., Yakovlev, B. M.

TITLE: The design of the 7-Bev proton synchrotron

PERIODICAL: Atomnaya energiya, v. 12, no. 6, 1962, 472-474

TEXT: The history of the first Soviet cyclic accelerator with rigid focusing is briefly described, and the most important data on its planning and operation are presented. Planning was started in 1953. The parameters of this proton accelerator, the energy of which exceeds the antinucleon production threshold, were so chosen that the dependence of the orbital circumference on the particle momenta was completely compensated. This was achieved by employing 14 quadrupole magnets with orbits of negative curvature. Technical data: output current, 10^{10} protons/pulse; maximum field strength, 8475 oe; length of equilibrium orbit, 251.2 m; radius of

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curvature of the trajectories in the bending magnets (C), 31 m, and in the compensation magnets (X), ∞; number of magnetic sectors, 98C + 14X; gap length between the C-magnets, 304.0 mm; gap length around the X-magnets, 417.5 mm; index of the decrease in field strength, 460; internal height and width of the chamber, 80 and 110 mm, respectively; number of betatron oscillations per revolution, 12.75, and per periodic element, 0.91; number of magnets per periodic element, 8; total critical energy, 19.2 Bev; maximum deviation of the periodic orbit with 100% deviation of the momentum from the equilibrium momentum, 1.47 m; rate of energy increase per revolution, 4.3 kev; duration of one cycle, 1.55 sec; 10-12 cycles/min; particle revolution frequency at the beginning of the cycle, 0.11 Mc/sec, and at the end, 1.19 Mc/sec; frequency of synchrocyclotron oscillations, 3600 and 130 cps; weight of the electromagnet steel, 2500 tons; maximum power of the supply system, 25 Mw; Van de Graaff injector (particle energy, 3.8 Mev; field strength 90 oe); admissible deviations from field strength and field gradients, $\sim 10^{-3}$; deviations at the chamber edge due to nonlinearities, $\sim 10^{-2}$; admissible frequency deviation of the accelerating field at the beginning of the cycle, 10^{-3}, and at the end, $5 \cdot 10^{-5}$. There are 1 figure and 1 table.

SUBMITTED: March 12, 1962

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

ACC NR: AP6034096 (N) SOURCE CODE: UR/0089/66/021/004/0292/0292

AUTHOR: Kartovitskaya, M. A.; Rubanov, S. M.; Shkorbatova, L. S.

ORG: none

TITLE: Efficiency of boration of metal-water shields

SOURCE: Atomnaya energiya, v. 21, no. 4, 1966, 292

TOPIC TAGS: reactor shielding, borate, boron compound, radiation dosimetry

ABSTRACT: This is a summary of paper No. 100/3736, submitted to the editor and filed but not published in full. It deals with the dependence of the weight and dimensional characteristics of iron-water and lead-water shields on the content of boron and on the place where the boron is introduced in the shield. Boration is shown to lead to redistribution of the components of the total dose, but is effective only up to 0.5 wt.% of boron in the case of lead-water shields. The reduction in thickness is on the order of 1 - 3% in the case of lead. The reduction of weight is 1.5 - 2% in the case of lead and can reach 9% in the case of iron. The best effect is shown to be produced when the first shielding layers are borated. In the heterogeneous lead-water shields, boration has little effect, and in iron shields it reduces their weight by 5%. Blocking the iron or lead layers with boron carbide has the same effect as boration of the heavy component.

SUB CODE: 18/ SUBM DATE: 12May66/ ORIG REF: 001

UDC: 621.039.58

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ACCESSION NR: AT5007965

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AUTHOR: Vedop'yanov, P. A.; Zhukovskiy, L. S.; Zalmanzon, V. B.; Ivanov, Yu. S.; Izergina, Ye. V.; Kuz'min, A. A.; Prokop'yev, A. I.; Temkin, A. S.; Rubchinskiy, S. M.

TITLE: System for the generation of the accelerating field of a 70-Gev proton synchrotron 19

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moskva, Atomizdat, 1964, 932-936

TOPIC TAGS: high energy accelerator, synchrotron, particle beam, magnetic field

ABSTRACT: After the development of a high-precision system of frequency control of the accelerating field of the proton 50-60 Gev synchrotron with critical energy compensation (Mints, A. L., et al., Proc. International Conference on High Energy Accelerators and Instruments, CERN 1959), it was decided to achieve an alternative accelerator with transition through the critical energy, which makes it possible to increase the energy to 70 Gev. In this modification of the accelerator serious difficulties are encountered with the realization of a system for generating an accelerating field with frequency control only according to the H-program. Therefore,

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it was decided to achieve a system with twin frequency control: rough, according to the $\dot{H}$-program, and precise, according to the information on the radial and phase position of the accelerated particle beam. The present report discusses the principal characteristics governing the achievement of a programmed FM-generator, a system of frequency control according to information of the position of the accelerated particle bunches, and accelerator installation. The programmed FM-generator consists of the usual elements: transducer of the derived magnetic field strength (inductive coil in the gap of the measuring electromagnet), electronic switch, tube integrator, modulator, FM-oscillator, phase manipulator, amplitude modulator of accelerating voltage, amplifier-distributor, and a system of cable contacts. To obtain energy increase per revolution of ΔE = 166 Kev for a rate of change of magnetic field strength of $\dot{H}$ = 550 oersteds/second and ϕ_s = 30°, provision is made for the application of 53 accelerator stations with rated input of 7 kilovolts and 6 kilowatts power. Provisions are also made for the short-duration increase of this voltage, 1.8 times up to the time of beam bunching (around 15 microseconds), and its slow decrease to about 2 times less toward the end of the acceleration cycle with the aim of preserving constant equilibrium phase during the fall in the magnetic field growth rate. The system of frequency control of the accelerating field according to the information on the accelerated particle beam position is similar in

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ACCESSION NR: AT5007965

principle of operation to a system described by Yu. S. Ivanov and A. A. Kuz'min (*Pribory i tekhnika eksperimenta*, No. 4, 106, (1962)), which was intended to stabilize the position of the center of gravity of the beam according to radius and phase. Orig. art. has: 1 figure.

ASSOCIATION: Radiotekhnicheskiy institut AN SSSR (Radio Engineering Institute, AN SSSR)

SUBMITTED: 26May64 ENCL: 00 SUB CODE: NP, EE

NO REF SOV: 001 OTHER: 001

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

L 43088-65 EWT(m)/ EPA(w)-2/EWA(m)-2 Pab-10/Pt-7 IJP(c) JT/GS

ACCESSION NR: AT5007918 S/0000/64/000/000/0197/0201

AUTHOR: Vladimirskiy, V. V.; Gol'din, L. L.; Koshkarev, D. G.; Tarasov, Ye. K.; Yakovlev, B. N.; Gustov, G. K.; Komar, Ye. G.; Kulikov, V. V.; Malyshev, I. F.; Monosson, N. A.; Popkovich, A. V.; Stolov, A. M.; Strel'tsov, N. S.; Titov, V. A.; Vodop'yanov, F. A.; Kuz'min, A. A.; Kuz'min, V. F.; Minta, A. L.; Rubchinskiy, S. M.; Uvarov, V. A.; Zhadanov, V. M.; Filaretov, S. G.; Shiryayev, F. Z.

TITLE: 60-70 Gev Proton Synchrotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 197-201

TOPIC TAGS: high energy accelerator, synchrotron

ABSTRACT: A 60-70 Gev proton synchrotron with strong focusing is being constructed not far from Serpukhov, as has been reported earlier (e.g. "Research Institute for Electro-Physical Equipment, Leningrad," in Proceedings of the International Conference on High Energy Accelerators and Instrumentation (CERN, 1959), p. 373). The present report describes parameter changes and improvements in precision structural characteristics of the accelerator, and the present state of construction in mid-1963. The parameters of the magnet are presented in a table. A small change in the original plans permitted an increase in the length of a part of the free

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ACCESSION NR: AT5007918

sections, some of which are utilized for input and exit of beams. The super-period design is described. The lengthened sections were obtained as a consequence of shortening the focusing and defocusing blocks by 112 cm. The focusing properties of the magnetic channel were diminished consequently, but very little; and the limiting energy was lowered by 2-3 Gev. The construction of the magnet is described. Each of the magnetic blocks is divided lengthwise into 5 sub-blocks which are enveloped by the common winding. These sub-blocks consist of laminar two-millimeter silicon steel. These steel sheets were stamped out without subsequent mechanical working, and were subjected to sorting and intermixing in order to smooth out their magnetic characteristics. The sub-blocks are constricted by lateral welded plates without adhesion. Provision was made for windings on the poles in order to correct for pole nonlinearity and for variations in the drop reading. These windings make it possible to introduce artificial quadratic (square) nonlinearity that changes the dependence of the frequency of transverse oscillations during a pulse. In order to correct for straying of the residual field, provision has been made for windings on the yoke in series with the main winding. The sub-blocks must undergo calibration on a magnet stand in order to make correcting systems more precise and to determine the most convenient disposition of the sub-blocks along the ring. The winding of the electromagnet is made of aluminum busbars with hollow cores for cooling water. The length of the busbar is so selected that there would be no

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ACCESSION NR: AT5007918

welded joints inside the coils. The winding consists of 4 sections, two of which are disposed on the upper pole and two on the lower. The most important characteristics of the electromagnet and power supply system are described in a table. Also described are the vacuum chamber and accelerating field (obtained by 53 paired resonators with ferrite rings, which operate at the 30-th harmonic of revolution and give accelerating potential of 350 kilovolts). The ring tunnel and the general arrangement of the accelerator are shown in figures and described. The building for the injector and portions of the ring tunnel from the injector to the experimental room have been completed in the main and are ready for installation of equipment. This room, in the form of a single-aisle building without internal supports, permits one to work on beams brought into the inner and outer sides. A 90-meter arch covers this room, whose overall length is 150 meters. Provisions have been made for a second experimental room at the southwest part of the ring. Orig. has 4 figures, 2 tables.

ASSOCIATION: Institute teoreticheskoy i eksperimental'noy fiziki GKAE SSSR (Institute of Theoretical and Experimental Physics, GKAE SSSR). (2) Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury imeni D. V. Yefremova GKAE SSSR (Scientific Research Institute of Electrophysical Apparatus, GKAE SSSR).

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2

ACCESSION NR: AT5007918

(3) Radiotekhnicheskiy institute AN SSSR (Radio Engineering Institute, Academy of Sciences SSSR). (4) Gosudarstvennyy proyektnyy institut GKAE SSSR (State Planning Institute, GKAE SSSR).

SUBMITTED: 26May64 ENCL: 00 SUB CODE: EE, NP

NO REF SOV: 002 OTHER: 001

Card 4/4

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

VLADIMIRSKIY, V.V.; KOMAR, Ye.O.; MINTS, A.L.; GOL'DIN, L.L.; MOMOSZON, N.A.; RUBCHINSKIY, S.M.; TARASOV, Ye.K.; VASIL'YEV, A.A.; VODOP'YANOV, F.A.; KOSMAREV, D.G.; KURYSHEV, V.S.; MALYSHEV, I.F.; STOLOV, A.M.; STREL'TSOV, N.S.; YAKOVLEV, B.M.

The 7 bev. proton synchrotron. Prib. i tekh. eksp. 7 no.4:5-9 Jl-Ag '62. (MIRA 16:4)

1. Institut teoreticheskoy i eksperimental'noy fiziki Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR, Nauchno-issledovatel'skiy institut elektrofizicheskoy apparatury Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR i Radiotekhnicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Synchrotron)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, S.M.; BATSKIKH, G.I.; VASIL'YEV, A.A.; VODOP'YANOV, F.A.; GUTNER, B.M.; KUZ'MIN, A.A.; KUZ'MIN, V.F.; LEBEDEV-KRASIN, Yu.M.; UVAROV, V.A.

Radio electronic systems of the 7 bev. proton synchrotron. Prib. i tekh. eksp. 7 no.4:20-26 Jl-Ag '62. (MIRA 16:4)

1. Radiotekhnicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Synchrotron) (Electronic circuits)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

VLADIMIRSKIY, V.V.; KOMAR, Ye.G.; MINTS, A.I.; GOD'DIN, L.L.; MOMOSZON, N.A.; RUBCHINSKIY, S.M.; TARASOV, Ye.K.; VASIL'YEV, A.A.; VODOP'YANOV, F.A.; KOSHKAREV, D.G.; KURYSHEV, V.S.; MALYSHEV, L.F.; STOLOV, A.M.; STREL'TSOV, N.S.; YAKOVLEV, B.M.

Designing a 7 Bev. synchrotron. Atom. energ. 12 no.6:472-474 Je '62. (MIRA 15:6)

(Synchrotron)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

KUZ'MIN, V.F.; RUBCHINSKIY, S.M.

System of automatic electronic measurements in the 7 bev. proton synchrotron. Prib. i tekh. eksp. 7 no.4:115-118 Jl-Ag '62. (MIRA 16:4)

1. Radiotekhnicheskiy institut Gosudarstvennogo komiteta po ispol'zovaniyu atomnoy energii SSSR.
(Automatic control) (Synchrotron)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

TIKHEEEV, B.N., doktor tekhn. nauk; RUBCHINSKIY, Y.M., kand. tekhn. nauk

Avalanche type silicon rectifiers and possibility for their use on electric trains. Elek. i tepl. tiaga 9 no.11:39-42 N '65. (MIRA 19:1)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBASHKINA, S.Sh., starshiy nauchnyy sotrudnik

Method for the preparation of antibacterial substances from the tissues and organs of beef cattle. Trudy VNIIMP no.16: 221-226 '64. (MIRA 18:11)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, V.M.

Automatic control of air temperature in a building. Vod. i san. tekh. no.10:23-24 O '61. (MIRA 14:11)
(Automatic control)
(Air conditioning)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

AG[illegible]OVA, L.I.; [illegible]CHINSKIY, V.[illegible].

Thermostat manufactured by the [illegible] and Braun Company. Priborostroenie no. 2:25-26 [illegible] '61. (MIRA 14:2)
(Thermostat)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, V.M., inzh.

New circuits for controlling mixing air valves. Vod. i san. tekh. no.1:19-21 Ja '62. (MIRA 15:6)
(Air conditioning--Equipment and supplies)
(Automatic control)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kand.tekhn.nauk

A.c. electrified motorcar rolling stock. Vest. elektroprom. 33 no.5:1-7 My '62. (MIRA 15:5)
(Railroad motorcars)
(Electric railroads—Rolling stock)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Zigmund Moiseyevich, kand. tekhn. nauk; TASTEVEN, Yevgeniy Edmundovich, inzh.; SHIRYAYEV, Arkadiy Pavlovich, inzh.; DOLMATOV, A.A., kand. tekhn. nauk, retsenzent; LIBMAN, G.M., inzh., retsenzent; NAKHODKIN, M.D., kand. tekhn. nauk, retsenzent; SAZONOV, I.A., inzh., retsenzent; TRAKHTMAN, L.M., kand. tekhn. nauk, retsenzent; ZUBLEVSKIY, S.M., inzh., red.; RAKOV, V.A., inzh., red.; USENKO, L.A., tekhn. red.

[Design, arrangement, and working principles of the rolling stock of multiple-unit trains]Ustroistvo i rabota motorvagonnogo podvizhnogo sostava. Moskva, Transzheldorizdat, 1962. 335 p. (MIRA 16:1)

(Electric railroads--Rolling stock)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Zigmund Moiseyevich, kand.tekhn. nauk; TASTEVEN, Yevgeniy Edmundovich, inzh.; SHIRYAYEV, Arkadiy Pavlovich, inzh.; DOLMATOV, A.A., kand. tekhn. nauk, retsenzent; LIEMAN, G.M., inzh., retsenzent; NAKHODKIN, M.D., kand. tekhn.nauk, retsenzent; SAZONOV, I.A., inzh., retsenzent; RAKOV, V.A., inzh., red.; ZUBLEVSKIY, S.M., inzh., red.; USENKO, L.A., tekhn. red.

[Design, arrangement, and working principles of the rolling stock of multiple-unit trains]Ustroistvo i rabota motorvagonnogo podvizhnogo sostava. Moskva, Transzheldorizdat, 1962. 335 p. (MIRA 16:1)

(Electric railroads--Rolling stock)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kand.tekhn.nauk; KAPUSTIN, L.D., inzh.

ER6 electric train with regererative rheostat-controlled braking. Elek.i tepl.tiaga. 4 no.6:29-34 Je '60.(MIRA 13:8)
(Riga--Electric railroads--Trains)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

8(0), 32(3) SOV/112-58-3-4086

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1958, Nr 3, p 90 (USSR)

AUTHOR: Rubchinskiy, Z. M.

TITLE: Electric-Motor-Car Units With Regenerative-and Rheostatic Braking (Motorvagonnyye sektsii s rekuperativno-reostatnym tormozheniyem)

PERIODICAL: Vestn. Vses. n.-i. in-ta zh. d. transp., 1956, Nr 4, pp 9-15

ABSTRACT: The "Dinamo" manufacturing plant imeni Kirov has developed a scheme and manufactured all equipment necessary for regenerative-and-rheostatic braking of an electric-motor-car unit. A distinguishing feature of the circuit is a permanent series connection of the traction motors that permits operating the motors with 750 v on their commutators. At the same time, a deep motor-field weakening, down to 20%, is used for wide-range speed regulation. The electric circuit provides for the following types of automatic braking at various speeds: (1) rheostatic braking with separate excitation (up to the point of balance with the contact-wire voltage); (2) regenerative braking

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8(0), 32(3) SOV/112-58-3-4086

Electric-Motor-Car Units With Regenerative-and-Rheostatic Braking

with separate excitation; (3) rheostatic braking with self-excitation; (4) pneumatic braking from about 8 km/hour down to zero. Initial test results have exhibited considerable advantages of the regenerative-and-rheostatic braking, including large savings on brake shoes and the metal required for them. Electric energy is also saved, and the stopping distance shortened, particularly in the case of higher speeds.

Ye.G.L.

Card 2/2

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

SOV/112-59-3-5113

32(3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 3, p 116 (USSR)

AUTHOR: Rubchinskiy, Z. M., and Petrov, G. A.

TITLE: Electric Braking of Motive-Power Units
(Elektricheskoye tormozheniye motorvagonnykh sektsiy)

PERIODICAL: Elektr. i teplovozn. tyaga, 1958, Nr 1, pp 7-10

ABSTRACT: Distinctive features of a new system of regenerative-rheostatic braking lie in the use of four traction motors connected in series with 750-v on the commutator. The traction motors have three steps of field weakening (60, 27, and 20%). Independent excitation is provided for the speed range over 45 km/hr, self-excitation is used at lower speeds. Experimental motive-power units have a counter-compound-field exciter that ensures stability of operation of the regenerative-rheostatic braking system. To compensate for the transformer action of the exciter series-field winding on the separate-excitation winding supplied by the control circuit, the exciter field winding is connected in

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SOV/112-59-3-5113

Electric Braking of Motive-Power Units

series with a stabilizing-transformer secondary. The transformer primary is connected in series with the series-field winding. Braking process starts with the separate excitation of the motors; the rheostatic-braking system functions up to the armature voltages close to the contact-line voltage. Thereupon, the system is automatically switched over to the regenerative braking which lasts up to 45 km/hr, after which the system again is automatically switched over to the rheostatic braking but with self-excitation of the traction motors. Function of various elements of the motive-power unit is described; it is noted that, with aid of the electropneumatic brakes on trailers, the train can be brought to full stop. Tests showed that switching from rheostatic braking to the regenerative and vice versa takes place without large bumps of current or sharp fluctuations of braking effort. Regenerative-rheostatic braking ensures a smoother train-stopping than pneumatic braking. In the course of investigations of the new braking system, a new short-circuit protection and a new anti-spinning system

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SOV/112-59-3-5113

Electric Braking of Motive-Power Units

were tested. Electric-energy return with the regenerative braking amounts to 20-30% depending on the section length. It is mentioned that in 1958, an experimental type ER train will be built; the train will be equipped with regenerative-rheostatic braking and will be designed for a maximum speed of 130 km/hr.

L.A.Ch.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kand.tekhn.nauk

Experience in the use of a.c. multiple-unit trains with semiconductor rectifiers. Vest.TSNII MPS 23 no.2:3-11 '64. (MIRA 17:3)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kand.tekhn.nauk; PETROV, G.A., inzh.

Electric braking of motor rail car sections. Elek. i tepl. tiaga 2 no.1:7-10 Ja '58. (MIRA 11:3)
(Railroad motor cars)
(Railroads--Brakes)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

VIL'KONETSKIY, M., inzhener; RUBCHINSKIY, Z., inzhener.

Requirements for new streetcar rolling stock. Zhil.-kom. khoz. 3 no.5: 25-27 My '53. (MLRA 6:7)

(Street railroads) (Trolley buses)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

1. RUBCHINSKIY, Z.

2. USSR (600)

4. Electric Railroads - Cars

7. Advantages and shortcomings of present-day methods of streetcar operation, Zhil.-kom.khoz. 2 no. 11, 1952.

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

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

TRAKHTMAN, I.M.; IOFFE, A.B.; CHERNYY, M.I.; KUZNETSOV, S.F.; SOLOV'YEV, N. P.; DOROGUSH, G.I.; KAPUSTIN, L.D.; VINBERG, B.G.; RUBCHINSKIY, Z. M.; PETRO, G.A.; ZAGORDAN, N.M.; BRAVIN, V.F.

Multiple-unit rail car with regenerative braking. Prom. e erg. 15 no.11:18-19 N '60. (MIRA 14:9)
(Railroad motorcars) (Electric railway motors)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kandidat tekhnicheskikh nauk.

Motor car sections with recuperative rheostat braking. Vest. TSNII MPS 15 no.4:9-15 D '56. (MLRA 10:2)

(Electric railroads--Brakes)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCHINSKIY, Z.M., kand.tekhn.nauk; PETROV, G.A., inzh.

First experimental motor-coach train with rheostatic regenerative braking. Trudy TSNII MPS no.188:4-37 '60. (MIRA 14:2)
(Electric railroads--Brakes) (Electric railroads--Testing)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

VLADIMIRSKIJ, V.V.; KOMAR, Je.G.; MINC, A.L.; GOL'DIN, L.L.; KOSKAREV, D.C.; MONOSZON, N.A.; NIKITIN, S.Ja.; RUBCINSKIJ, S.M.; SKACKOV, S.V.; STREL'COV, N.S.; TRASOV, Je.K.; MEDONOS, S., inz. [translator]

Main characteristics of the planned proton accelerator for 50-60 BeV energy with sharp focusing. Jaderna energie 3 no.2:56-57 F '57.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

VEKSLER, V.J.; VODOPJANOV, A.F.; JEFREMOV, D.V.; MINC, A.Z.; VEISBEIN, M.M.; GASEV, M.G.; ZEJDLIC, A.J.; IVANOV, T.P.; KOLOMENSKIJ, A.A.; KOMAR, E. G.; MALYSEV, J.E.; MONOSZON, M.A.; NEVJAZSKIJ, J.Ch.; PETUCHOV, V.A.; RABINOVIC, V.A.; RUBCINSKIJ, S.N.; SINELNIKOV, K.D.; STOLOV, A.M.; KULT, Karel, inz.

The synchrophasotron for particle acceleration to 10 BeV energy of the Soviet Academy of Sciences. Jaderna energie 3 no.1:5-9 Ja '57.

1. Ustav jaderne fysiky (for Kult).

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1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

PROCESSES AND PROPERTIES INDEX

M

21

Silvering of Mirror Surfaces by Cathode Sputtering. M. Romanova, A. Rulgoy, and G. Pokrovskii (*Doklady Akademii Nauk U.S.S.R.* (*Compt. rend. Acad. sci. U.S.S.R.*), 1934, 1, 15–16 (in Russian); 17–18 (in German); *C. Abs.*, 1934, 28, 2277).—Silvering was carried out in a hydrogen atmosphere of 0·05 mm. with a current of 15–20 ma., and a potential of 1400 v. Mirrors obtained had a reflectivity of 98% (normal–93%) only very slowly decreasing. Partly transparent mirrors absorbed less than 1% of incident light.—S. G.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCOV, M. V.

"Synthese des isomeres de la hydroquinine. I. Le /5-ethyl-quinouclidyl-(2)/ - /(6-methoxy-quinolyl-(8)/-carbinol". Rubcov, M. V. (p. 1493)

SO: Journal of General Chemistry
(Zhurnal Obshchei Khimii) 1939, Volume 9, #16

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

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G

CZECHOSLOVAKIA/Organic Chemistry. Organic Synthesis.

Abs Jour: Ref Zhur-Khim., No 11, 1959, 38650.

Author : Rubcov, M. V. and Jachontov, L. N.
Inst :
Title : Investigation of the Synthesis of a Number of Quinuclidine Derivatives.

Orig Pub: Ceskoslov Farmac, 7, No 9, 520-528 (1958) (in Czech)

Abstract: A review article with a bibliography listing 75 titles. -- Ye. T.

Card : 1/1

G-35

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RUBCZAK, T.
~~RUBCZAK, L.A.~~
RUBCZAK, T.

POL

625.1/.2 : 627.3

3361

Rubczak T. Land Transport Equipment in Ports.

„Urządzenia transportu lądowego w portach", Warszawa, 1953, Wyd. Komunik., 160, 304 pp., 291 figs., 3 tabs.

Review of general engineering and operational principles, and the features of land transport equipment and traffic means in ports. Role of land transport equipment in port operations. Rail transport equipment. Designing road transport equipment. General transport systems.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZAK, TADEUSZ

Rubczak, Tadeusz. Urzadzenia kolejowe w portach. Warszawa, Wydawn. Komunikacyjne, 952. 185 p. [Railroad construction in ports. illus., bibl.]

SO: Monthly List of East European Accessions, L. C., Vol. 3, No. 5, May 1954, Uncl.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI J

POLAND/Chemical Technology - Chemical Products and Their Uses - Safety Methods. Sanitation Mwthods. H.

Abs Jour : Ref Zhur - Khimiya, No 11, 1958, 36750

Author : Rubczynski, J.

Inst :

Title : Dust Measurements in Gase Products of Combustion.

Orig Pub : Przegl. Electrotechn, 1957, 33, No 6, 255-261

Abstract : NO abstract.

Card 1/1

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKA, Elzbieta; SITARSKA, Ludmila

Typical faults in film printing of knitted goods. Przegl wlokien 17 no.7:Suppl:Biul przem dziew i poncz 1 no.4:4-5 Jl '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

EBNER Seweryn; RUBCZYNSKA, Elzbieta

Automatic printing on tubular fabrics. Przegl wlokien 17 no. 3: Supplement: Biul przem Dziew i poncz 1 no. 1: 3-5 Mr '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, ngr inz.

The Eddystone Electric Power Station. Energetyka Pol 17 no.10: 320-321 O '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan

Modern steam boilers. Energetyka Pol 18 no. 7[i.e.5]:132-134 My '64.

1. Association of Power Engineering, Warsaw.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, mgr inz.

Improved efficiency of boilers by decreasing the temperature of furnace exit flue gases. Gosp paliw 11 no.11:421-423 N '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, mgr inz.

For increasing the availability of newly erected power plants in Poland. Energetyka Pol 18 no.10:289-293 O '64.

1. Association of Power Engineering Industry, Warsaw.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, mgr inz.

Use of combined dust separators in order to increase the general dedusting efficiency and decrease dust emission. Gosp paliw 11 no.9:334-336 S '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, mgr inz.

Development trends of power engineering. Energetyka Pol 17 no.12:353-358 D'63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

Country : Poland H-5
Category :

Jour. Zhur. : 46223

Author : Rubczynski, J.
Institution. :
Title : Chemical Methods of Boiler Cleaning.

Orig. Pub. : Energ. przemys. Gospod. cieplna, 1957, 5, No 6, 265-268

Abstract : An account of the successful results of removal from water-tube boilers (pressure 80 atmospheres) of scale having the composition: 43% Cu, 45% Fe_2O_3, 4.8% CaO, 1.2% SiO_2, 5.9% SO_3 and P_2O_5, by using a 5% solution of HCl containing as inhibitor hexamethylenetetramine (2 kg/m3) or the preparation "Rivolinu" (1.4 kg/m3). Two washings at 30° were used, each of 6-8 hours duration, with continuous circulation of the solution. -- O. Lenchevskiy.

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RUBCZYNSKI, Jan, mgr inz.

"Technology and chemistry of brown coal utilization" by E. Rammler, H.J. v. Alberti, "Contributions to the economy of power supply" by H. Richter, J. Bathe, W. Riesner, and "Power supply pipelines" by [inz.] Wieslaw Beczkowski. Reviewed by Jan Rubczynski. Gosp paliw 11 no.6:231-232 Je '63.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBCZYNSKI, Jan, mgr inz.

Corrosion of the final heating surfaces of boilers caused by burning sulfurous liquid fuels. Gosp paliw 11 no.7:258-261 Jl '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

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RUBCZYNSKI, Jan, mgr inz.

Monotube boilers. Energetyka Pol 17 no.5:139-142 My '63.

1. Zjednoczenie Energetyki, Warszawa.

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

ZUBKOV, Anatoliy Ivanovich; GORIZONTOV, Boris Borisovich; NEMCHINOV, V.S., akademik, otv. red.; RUBE, V.A., red.; TIKHOMIROVA, S.G., tekhn. red.

[Industrial centers of the Krasnoyarsk Territory] Promyshlennye uzly Krasnoiarskogo kraia. Moskva, Izd-vo AN SSSR, 1963. 110 p. (MIRA 16:11)
(Krasnoyarsk Territory--Industries)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

BOLGOV, A.V.; KARAVAYEV, A.A., prof., otv. red.; RUBE, V.A., red.izd-va; PRUSAKOVA, T.A., tekhn. red.; MAKAGONOVA, I.F., tekhn. red.

[Differential land rent under the conditions of socialism; a theoretical study] Differentsial'naia zemel'naia renta v usloviiakh sotsializma; ocherk teorii. Moskva, Izd-vo AN SSSR, 1963. 221 p. (MIRA 17:2)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

STRUMILIN, S.G., akademik; RUBE, V.A., red.izd-va; MAKUNI, Ye.V., tekhn. red.

[Selected works in five volumes] Izbrannye proizvedeniia v piati tomakh. Moskva, Izd-vo "Nauka." Vol.3. [Problems of labor economics] Problemy ekonomiki truda. 1964. 526 p. (MIRA 17:2)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

GRACHEV, Nikolay Grigor'yevich; RYABUSHIN, T.V., doktor ekon. nauk, otv. red.; RUBE, V.A., red.; SUSHKOVA, L.A., tekhn. red.

[Classifications and indices of industrial structure] Klassifikatsii i pokazateli struktury promyshlennosti. Moskva, Izd-vo AN SSSR, 1963. 121 p. (MIRA 16:10)
(United States--Industries--Classification)
(Russia--Industries--Classification)
(Germany, West--Industries--Classification)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

D'YACHENKO, V.P., red.; LUCHKINA, A.N., red.; RUBE, V.A., red.; LAUT, V.T., tekhn. red.

[The essential social labor expenditures, costs and profitableness] Obshchestvenno neobkhodimye zatraty truda, sebestoimost' i rentabel'nost'; materialy. Pod red. V.P.D'iachenko. Moskva, Izd-vo AN SSSR, 1963. 422 p. (MIRA 16:11)

1. Rasshirennaya sessiya nauchnogo soveta po problemam tsenoobrazovaniya. 1 st, 1962. 2. Chlen-korrespondent AN SSSR (for D'yachenko).

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STRUMILIN, Stanislav Gustavovich, akademik; LUCHKINA, A.N., red.izd-va; RUBE, V.A., red.izd-va; MAKUNI, Ye.V., tekhn. red.

[Selected works in five volumes] Izbrannye proizvedeniia v piati tomakh. Moskva, Izd-vo Akad. nauk SSSR. Vol.1.[Statistics and economics] Statistika i ekonomika. 1963. 486 p. Vol.2.[At the planning front] Na planovom fronte. 1963. 441 p. (MIRA 16:5)

(Statistics) (Economics) (Russia--Economic policy)

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RUBECKI, G.

Esthetic aspect of drugs as a serious factor. Farmacja 10 no.4: 111-112 Ap '54. (EEAL 3:7)

(PHARMACY,
*esthetics of drugs)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBECKI, Grzegorz

Central Direction of Pharmacies and its role in supply of drugs. Farm. polska 10 no.10:259-262 Oct 54.

1. Kierownik Dzialu Skladnic Centralnego Zarzadu Aptek.
(PHARMACY,
in Poland supply of drugs)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

LARIN, P.S., kandidat tekhnicheskikh nauk; IVANOV, S.N., kandidat tekhnicheskikh nauk; RUBEKIN, B.A., inzhener-tekhnolog.

About the article "Pulp separation in continuous beater roll grinding". Bum.prom.31 no.4:21-22 Ap '56. (MLRA 9:7)

1.TSentral'nyy nauchno-issledovatel'skiy institut bumagi (for Larin, Rubekin).2.Lesotekhnicheskaya Akademiya imeni S.M.Kirova (for Ivanov). (Woodpulp industry)

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBEKINA-GOYER, A.M.

PROCESSES AND PROPERTIES INDEX

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

pulping of straw at temperatures up to 100°. A. M. Rubekina-Goer. *Tsentral. Nauch.-Issledovatel. Inst. Bumashnoi Prom. Materialai* (*Central Sci. Research Inst. Paper Ind. Trans.*) 1933, No. 3, 139-61; cf. Reab, Skul'skaya and Rubekina-Goer, *C. A.* 28, 6303°.—Pulping of straw was carried on by single and by 2-stage cooking at atm. pressure. In the 2-stage process, the straw was first treated 4-120 hrs. at 15° and 1-3 hrs. at 60° with 8.5 parts of 20% soln. of NaOH + Na_2S (in proportion of 1.25:1 to 2:1) with consumption of 7.5%, and then 15 days at 15° and 1-4 hrs. at 100° with 5-6 parts of 20% NaOH + Na_2S with consumption of 12.5% of alkali. In the single-stage pulping, with 20% of alkali (12.5% NaOH and 7.5% Na_2S) at 100° for 3 hrs., 48% pulp was obtained with 7-8% lignin, bleachable with a consumption of 10-12% of active Cl_2 and giving paper with a tensile strength 6-8 km., stretch 3.5-5% and folding strength about 2000 folds. By the 2-stage process 54% of slightly better bleachable pulp was obtained and paper similar to the single-stage product. Intermediate washing did not improve the product. Cooking with 20% alkali at 60° and 80° gave 58% of pulp with the same lignin content (7%), unbleachable with 10-11% of active Cl_2 and producing paper inferior to that obtained at 100°. With 15% alkali at 100° for 8 hrs. a pulp resulted contg. 8.5% lignin, consuming 10% of active Cl_2 for bleaching and giving yellowish paper, while at 5° under similar conditions an even more inferior product resulted. With 30% of alkalies at 100° for 3 hrs. a pulp was obtained, contg. 6.9% of lignin, requiring 10-12% of Cl_2 for bleaching and giving paper equal to that prepd. with 20% alkali. With 20% alkali at 15° in 2 weeks a pulp was produced in 70% yield, contg. 16% of lignin and unbleachable with 12.5% Cl_2; 50% alkali at 15° in 4-5 hrs. resulted in unbleachable pulp of inferior mech. properties. Intermediate reworking of pulp in edge runners did not improve the bleaching properties. Thus of the 3 factors, the temp., duration of cooking and the amt. (concn.) of alkali, the temp. is the chief factor affecting the bleaching properties of pulp. C. B.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

KUZNETSOVA, A.D.; RUBEL', A.A.

Creatinuria in labor atonia, one of the abnormal labor forms.
Akush. i gin. 40 no.5:38-41 S-O '64. (MIRA 18:5)

1. Kafedra akusherstva i ginekologii (zav. - prof. I.I.Yakovlev) I Leningradskogo meditsinskogo instituta imeni Pavlova.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

KUZNETSOVA, A.D.; RUBEL', A.A.

Creatinuria in some forms of labor anomalies; preliminary report. Sbor.nauch.trud.Kaf.akush. i gin. 1 IMI no.2:137-141'61. (MIRA 16:7)

(CREATINE) (LABOR, COMPLICATED)
(URINE—ANALYSIS AND PATHOLOGY)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

S/129/62/000/008/002/003
E071/E435

AUTHORS: Rubel', I.S., Engineer, Brilakh, M.M., Engineer, Sadovnichiy, V.P., Engineer

TITLE: Phase composition and properties of austenitic steels containing nitrogen

PERIODICAL: Metallovedeniye i termicheskaya obrabotka metallov, no.8, 1962, 40-43 + 1 plate

TEXT: The influence was studied of short (5 to 30 min) and prolonged (1 to 3 hours) heating on changes in the phase composition of austenite-ferrite steels Х28Н9М2Д1А3 (Kh28N9M2D1A3) and Х30Н9М2Д1А3 (Kh30N9M2D1A3) containing, respectively, 0.65 and 0.53 N. Particularly the dependence of the kinetics of $\delta \rightarrow \sigma$ transformation on the heating temperature and duration during re-heating of hardened specimens and under isothermal conditions were investigated. The amount of σ phase was determined from the percentage decrease in the ferromagnetic phase. In the initial state the structure of the steels consisted of the γ, δ and σ phases. The amount of ferrite phase increased on

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hardening (from 1100°C) from 11-12 to 16% and from 20-22 to 30% for the steels Kh28N9M2D1A3 and Kh30N9M2D1A3 respectively. The microhardness of the structural components of the steels in the initial and hardened states and after ageing at 800°C for 3 hours were determined. Corrosion resistance of the steel specimens in the initial state and after hardening were determined in a suspension of phosphogypsum at 75°C and in a 10% solution of ammonium chloride at 60°C. The results indicate that the transfer of σ phase into solution, caused by hardening, lowers the mean velocity of corrosion. The kinetic curves indicate that the beginning and intensity of $\delta \rightarrow \sigma$ transformation depend on temperature. With increasing temperature the velocity of transformation increases, whereupon at each temperature the velocity of transformation is higher in steel Kh28N9M2D1A3 than in the steel Kh30N9M2D1A3. The transformation velocity has a maximum at 800 to 850°C; at these temperatures the transformation is completed in 8 to 10 min. The upper temperature limit of σ-phase was determined for the case of isothermal treatment: at 1000°C no σ-phase was detected, at 900°C σ-phase was present.

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Phase composition and properties ... S/129/62/000/008/002/003
E071/E435

Study of the structures after ageing (800°C for 3 hours) showed that $\delta \longrightarrow \sigma$ transformation was complete, also $\gamma \longrightarrow \sigma$ transformation was observed along grain boundaries and inside austenitic grains. The hardness of the σ-phase formed in various sectors is high (HB 450 to 600); this phase lowers the impact strength considerably. Therefore these stainless steels should only be used in the hardened state. Presence of considerable quantities of ferrite increases brittleness when heated to elevated temperatures during operation or welding. There are 5 figures and 1 table.

ASSOCIATION: Sverdlovskiy NIPTIMASh

Card 3/3

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

BOGACHEV, I.N.; RUBEL', I.S.

Transformations in microvolumetric specimens of low-carbon silicon steel. Nauch.dokl.vys.shkoly; met. no.1:189-195 '59. (MIRA 12:5)

1. Ural'skiy politekhnicheskiy institut.
(Steel alloys--Metallography)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

18(3), 18(7)

AUTHORS: Bogachev, I. N., Rubel', I. S. SOV/163-59-1-37/50

TITLE: Microvolume Transformations of Low-carbon Silicon Steel (Prevrashcheniya v mikroob"yemakh v nizkouglerodistoy kremnistoy stali)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1959, Nr 1, pp 189-195(USSR)

ABSTRACT: This is an investigation of transformations occurring during the heating and cooling in samples of transformer iron with a carbon content varying from 0.01 to 0.05%. Heating and cooling operations were carried out in baths. The samples were protected against decarburization by nickel plating. When the samples were heated to 650° in a bath a dissolution of the carbides in the alpha-solution was observed already after a halting time of one hour. At higher temperature the carbides dissolve even faster. At 800° and above undissolved carbides are found in the structure after hardening, if the halting time is prolonged. They exhibit a dark rim with a troostite-like structure. If heating is carried through to 950° the grainy carbides and the fragments of the grain boundary zementite quickly dissolve during halting times of a few seconds. In the range of from

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950-1150° austenite regions are formed at the boundaries of the ferrite grains where they are in contact with the carbides. In this temperature range austenite is in equilibrium with ferrite (in the biphase region). After a sufficiently long halting time the austenite spheriodizes to a relatively small extent and afterwards remains in a globular form. Even if the halting times are very long the austenite is not absorbed by the basic mass of the alpha-solution. If quenching (in hardening) is employed, this globular austenite transforms into a martensite structure. If cooling proceeds slowly coarse zementite inclusions are formed at the grain boundaries. If in the structure of transformer iron comparatively coarse carbides are contained, an intermediate transformation, the formation of graphite, is observed. This graphite can also be dissolved, but only at a heating to a temperature exceeding that required for zementite dissolution. Thus the structural analysis furnishes accurate results, whereas the application of physical methods does not provide satisfactory information. The transformations during cooling were investigated with samples which after heating to 1000° with a halting time of 10 minutes were cooled

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

Microvolume Transformations of Low-carbon Silicon Steel SOV/163-59-1-37/50

in baths with 450-700° and afterwards quenched in water. The carbon content of the steel was 0.015 to 0.06%. The diagrams obtained show that a reduction of the carbon content leads to an increase of the stability of the alpha-solution and to a retardation of the separation of carbides. The nature of the carbide formations varies greatly in accordance with the undercooling of the alpha-solution. Finely grained carbides have the most detrimental influence. They lead to a considerable increase of the coercive force. Hence in the heat treatment of transformer iron it must be attempted to obtain the stipulated finely grained structure and the stipulated distribution, or to decarburize the steel as much as possible. There are 5 figures and 3 references, 1 of which is Soviet.

ASSOCIATION: Ural'skiy politekhnicheskiy institut (Ural'skiy Polytechnical Institute)

SUBMITTED: April 11, 1958

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APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBEL, L., Ing.

The new at the Renault. St si Teh Bue 17 no.2:40-41 F '65.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

B[illegible], I., ing.

Colloquium on cast iron, a meeting held in Brazov. St si Teh Buc 16 no.2:34-35,45 F '64.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBEL, L., ing.

The electron, a tool of the future. St si Teh Buc 15 no.11: 3-5 N '63.

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"

"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

RUBEL', L.N.

JANSKER, V.N.; RUBEL', L.N.; SOLOV'YEVA, Ye.V.

Materials on the study of leptospiral jaundice. Report no.8:Parallels in the laboratory and clinical aspects of leptospiral and nonleptospiral jaundice. Trudy Len.inst.epid. i mikrobiol. 9:65-83 '47. (MLRA 10:9)

1. Iz laboratorii po izucheniyu leptospirozov (zav. K.N.Tokarevich) Instituta epidemiologii i mikrobiologii im. Patera (dir. F.I.Krasnik) i infektsionnogo otdeleniya bol'nitsy im. Very Slutskoy (glavnyy vrach E.M.Abkin)

(LENINGRAD--HEPATITIS, INFECTIOUS)
(LENINGRAD--WEIL'S DISEASE)

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"APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0

eB

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The nature of products of protein digestion that are absorbed from the intestine into the blood. A. N. Parshin and L. N. Rubel (Acad. Med. Sci. U.S.S.R., Leningrad). *Doklady Akad. Nauk S.S.S.R.* 77, 313-15(1951).—High-protein diet (cats and dogs) leads to sharply increased amino N and residual N in the blood. Attempts to detect polypeptides in the blood failed, an indication that absorption occurs exclusively in the form of free amino acids as such. The test method was enzymic incubation of deproteinized samples and confirms the chromatographic study reported by Dent and Schilling (*C.A.* 43, 8505*d*). G. M. K.

— Inst. Exptl. 11.

1951

APPROVED FOR RELEASE: 08/22/2000 CIA-RDP86-00513R001445810008-0"