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SOV/5590

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BARBOY, V.M.; GLAZMAN, Yu.M.; DYKMAN, I.M.

Coagulation of lyophobic sols under the effect of electrolyte mixtures. Part 3: Effect of counter-ion adsorption [with summary in English]. Koll.zhur. 23 no.4:376-380 Jl-Ag '61. (MIRA 14:8)

1. Tekhnologicheskiy institut legkoy promyshlennosti, Kiyev.
(Adsorption) (Electrolytes)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZMAN, Yu.M.

"Colloid chemistry" by A. Sheludko. Reviewed by Yu.M. Glazman. (MIRA 14:8)
Koll.zhur. 23 no.4:508 [illegible] 161.
(Colloids) (Sheludko, A.)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

BARBOY, V.M.; GLAZMAN, Yu.M.; DYKMAN, I.M.

Coagulating action of electrolyte mixtures on lyophobic sols. Effect of counterions. Dokl.AN SSSR 138 no.1:139-142 My-Je '61. (MIRA 14:4)

1. Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti. Predstavleno akademikom P.A.Rebinderom.
(Colloids) (Electrolyte solutions) (Coagulation)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

BARAN, A.A.; GLAZMAN, Yu.M.; STRAZHESKO, D.N.

Adsorption of counter-ions in the coagulation of lyophobic sols by electrolytes. Koll. zhur. 26 no.3:278-283 My-Je '64 (MIRA 17:9)

1. Institut fizicheskoy khimii imeni Pisarzhevskogo AN UkrSSR i Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

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BARAN, A.A.; GLAZMAN, Yu.M.; [illegible]

Radiometric study of the adsorption of surface-active ions in the coagulation of arsenic and antimony sulfide sols by mixtures of electrolytes. Dokl. AN SSSR 158 no.5:1147-1148 O '64. (MIRA 17:10)

1. Institut fizicheskoy khimii im. L.V.[illegible] AN UkrSSR i Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

BARBOY, V.M.; G[illegible]MAN, Yu.M.

Theory of the stability of [illegible] heat [illegible] regulation by electr[illegible] [illegible] [illegible] [illegible] [illegible] '63.

(MIRA 17 10)

1. [illegible] [illegible] institut [illegible] [illegible], Kiyev.

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZMAN, Yu.M.; KRASNOKUTSKAYA, M.Ye.; SAPON, I.P.

Coagulation zones in the course of action of surface-active agents on hydrophobic sols. Koll. zhur. 27 no.2:290 Mr-Ap '65. (MIRA 18:6)

1. Tekhnologicheskiy institut legkoy promyshlennosti, Kiyev.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

BARAN, A.A.; [illegible] L.N.; GLAZMAN, Yu.M.; YEREMENKO, B.V.

Density of the surface coating of a disperse phase of lyophobic sols by potential-determining ions. Dokl. AN SSSR 163 no.1:124-127 Jl '65. (MIRA 18:7)

1. Institut fizicheskoy khimii im. L.V.Pisarzhevskogo AN UkrSSR i Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti. Submitted December 25, 1964.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZMAN, Yu.M.; BARAN, A.A.; BARBOY, V.M.; STRAZHESKO, D.N.

Sorption of counterions in the coagulation of iron hydroxide sols. Koll. zhur. 27 no.4:513-519 Jl-Ag '65.

(MIRA 18:12)

1. Institut fizicheskoy khimii AN UkrSSR imeni L.V. Pisarzhevskogo i Kiyevskiy tekhnologicheskiy institut legkoy promyshlennosti.
Submitted October 2, 1964.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

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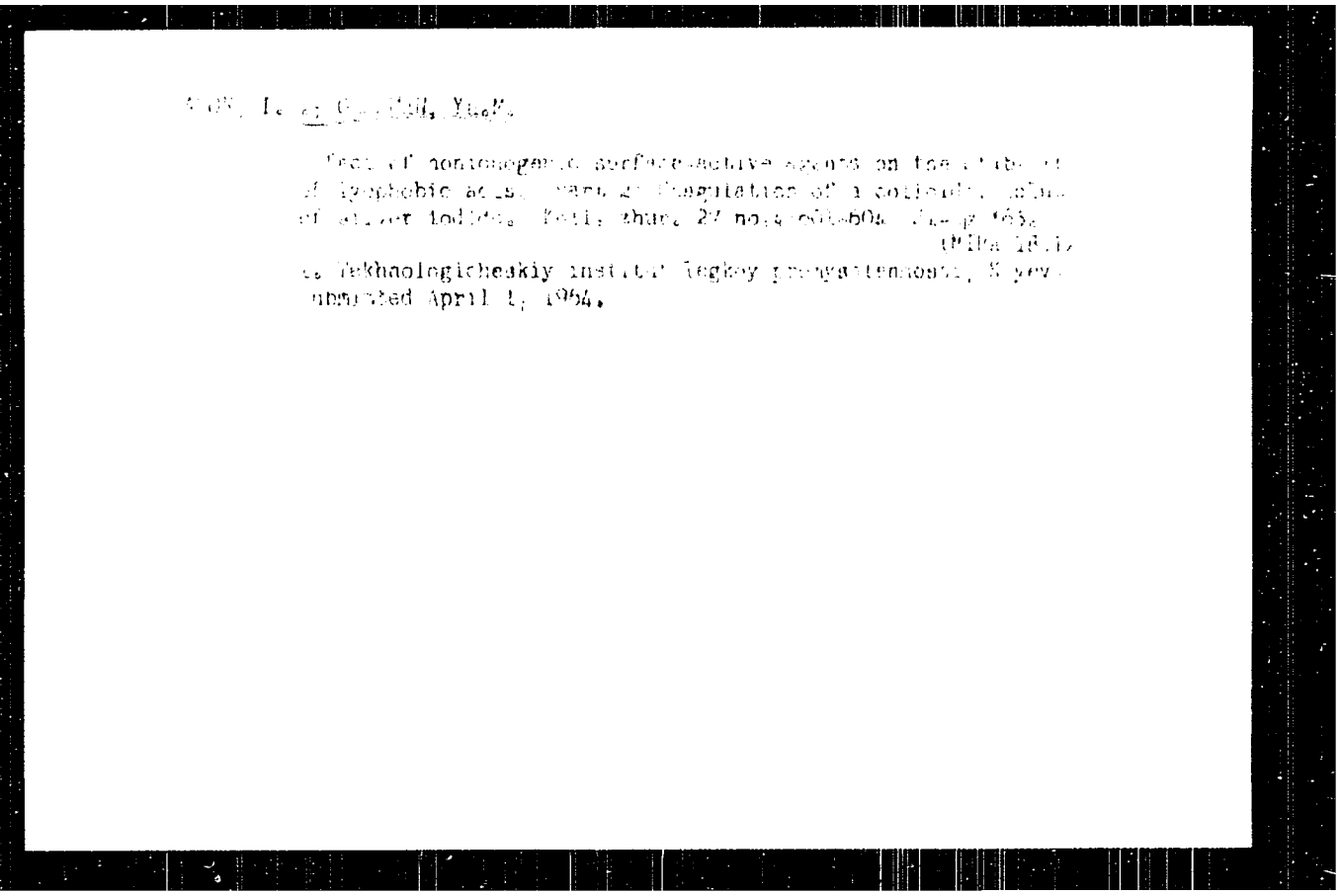

[illegible] I. [illegible]

"Effect of nonionogenic surface-active agents on the [illegible] of lyophobic sols. Part 2. Coagulation of a colloidal solution of silver iodide." Kolloid. zhur. 27 no.4 603-608 Jl-Ag '65. (MIRA 18:12)

1. Tekhnologicheskiy institut legkoy promyshlennosti. Submitted April 1, 1964.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

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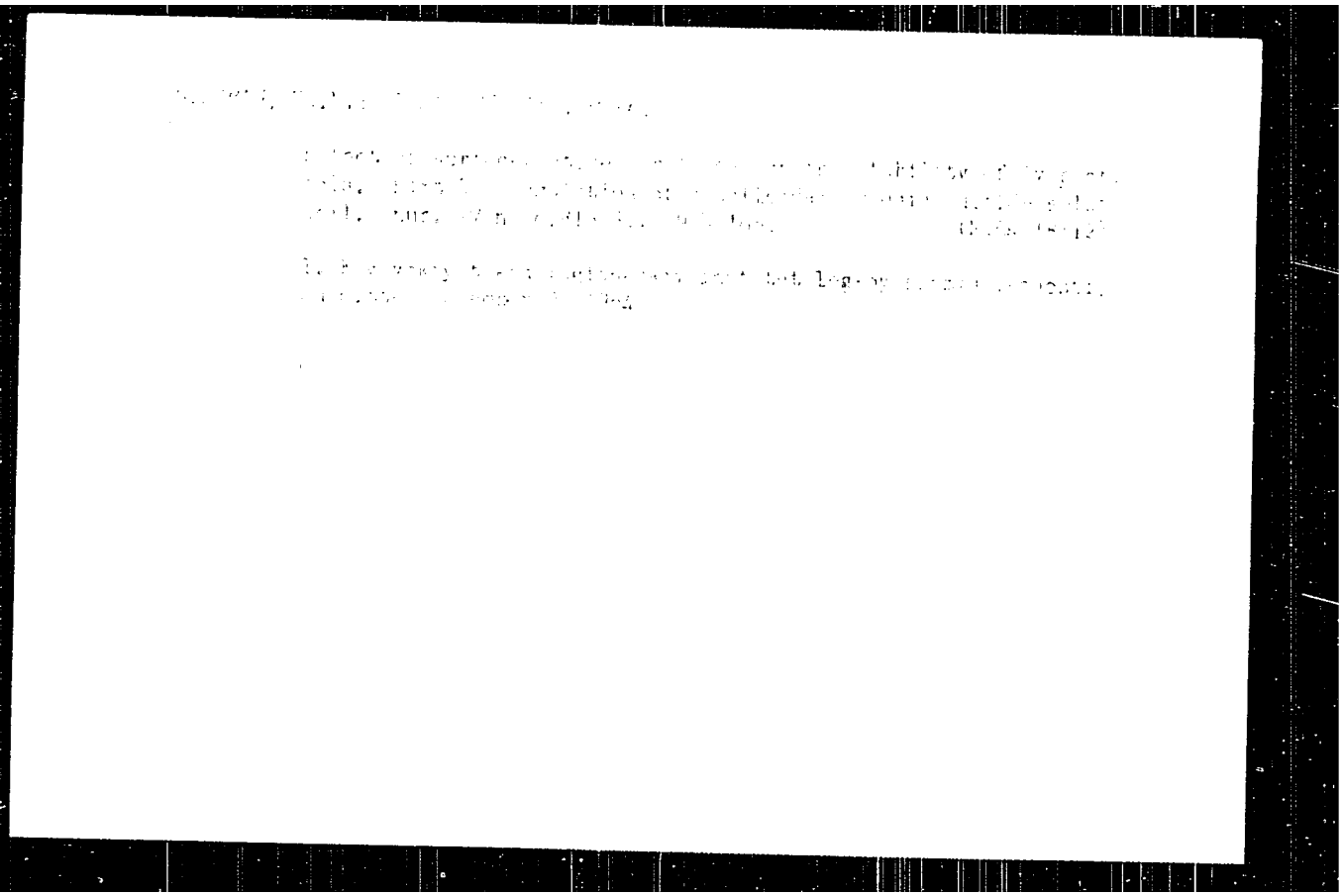

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GIAZOV, A...; KATYSHEV, V.S., [deceased].

Using cold cathode ion sources in synchro-cyclotrons. Prib.i tekh. eksp.no.3:13-16 M-D '56. (MLRA 10:2)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Cyclotron) (Ion beams)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

24(3)

AUTHORS: Glazov, A.A., Novikov, D.L. 307/57-28-10-31/40

TITLE: Investigation of a High-Frequency Resonance Discharge (Issledovaniye rezonansnogo vysokochastotnogo razryada)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, Vol 28, Nr 10, pp 2294-2301 (USSR)

ABSTRACT: This paper contains a description of the theoretical and experimental investigation of a high-frequency resonance discharge in a magnetic field in the frequency range of 50 to 100 Mc . This investigation was carried out in the Laboratoriya yadernykh problem Ob"yedinennogo instituta yadernykh issledovaniy (Laboratory for Nuclear Problems at the United Institute of Nuclear Research) in 1956 - 1957. A special apparatus had to be constructed for the investigation of the properties of a high-frequency resonance discharge, henceforth referred to by the term RHD. The RHD is produced due to the secondary electrons, the time of flight of which in the most simple case is equal to the half-period of the high frequency. The conditions prevailing in the formation of a RHD are investigated for the following two cases: 1) The cathode is simultaneously the high-frequency electrode, $l = 0$. 2) The cathode projects into the high-frequency electrode, $l > 0$. The experimental investigation of the RHD proceeded in two sections:

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Investigation of a High-Frequency Resonance Discharge

SOV/57-28-10-31/40

1) An investigation of the conditions prevailing in the formation of the RHD and the resonance properties of the RHD. 2) An investigation of the characteristics of the discharge plasma. The experience gained in a series of experiments substantiated the correctness of the results of the theoretical study of the sparkover conditions of the RHD with $l = 0$ and also with the existence of a drift space ($l > 0$). The relations obtained in this connection can be utilized in the analysis of the sparkovers in the acceleration chambers for the purpose of an effective arc suppression and in the design of ion sources utilizing a RHD mechanism. The analysis of the discharge characteristics showed that an ion source operating on RHD principles exhibits certain advantages as compared to a low-frequency arc discharge and to ordinary high-frequency E-discharges. It differs from the first by a high percentage of H_1^+ and a practically unlimited life of the cathodes. From the second it differs by the low values of sparkover voltages and a stable performance in a high vacuum. This work was undertaken due to the initiative of V.S.Katyshev (deceased). The mechanic V.A. Teperin assisted in the experiments.

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21(9)

SOV/89-6-6-7/27

AUTHORS: Vasilevskaya, D. P., Glisov, A. A., Danilov, V. I., Denisov, Yu. N., Dzhelepov, V. P., Dmitriyevskiy, V. P., Zamoldchikov, B. I., Zaplatin, N. L., Kol'ga, V. V., Kropin, A. A., [illegible], Rybalko, V. S., Savenkov, A. L., Sarkisyan, L. A.

TITLE: Putting Into Operation a Cyclotron with a Spatially Varying Tension of the Magnetic Field (Zapusk tsiklotrona s prostranstvennoy variatsiyey napryazhennosti magnitnogo polya)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 6, pp 657 - 658 (USSR)

ABSTRACT: In the present "Letter to the Editor" the authors report on some measurements and theoretical considerations concerning some parameters of the new cyclotron. In the Laboratoriya yadernykh problem Ob"yedinennogo instituta yadernykh issledovaniy (Laboratory for Nuclear Problems of the Joint Institute for Nuclear Research) in the town of Dubna the new cyclic accelerator was started in January 1959; this new type shows both an azimuthally and a radially periodically varying magnetic field. The diameter of the magnet of the accelerator is 1200 mm. The lines of constant field tension have the shape of spirals of Archimedes, r = 16 2 ,, periodicity of the field structure:

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N = 6. The mean value of the field tension increases radially according to the relativistic mass increase of the accelerated ions. Since the acceleration originates from the center of the magnet the fundamental frequencies of the free oscillations change accordingly $\nu_z = 0$, $\nu_r = 1$ (at $r=0$) to $\nu_z = 0.2$, $\nu_r = 1.01$ (at $r = 52$ cm). It was shown theoretically that the radial increase of the mean magnetic field tension which is necessary for the elimination of the nonlinear resonance effect occurring in the center of the accelerator may decrease with increasing N, according to $N/2^N(N-1)!$ and with an increase of the radial spacing in the case of a fixed N as $(\lambda_1/\lambda_2)^{N-2}$. These investigation results were taken into account in selecting the six-spiral structure of the magnetic field in the center of which no nonlinear resonance occurs. All measurements of the field tensions were carried out by means of a nuclear magnetometer (error ± 1.5 Oe). A resonance quarter-wave system with one D-shaped electrode was used for the ion acceleration. In the cyclotron deuterons

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Putting Into Operation a Cyclotron with a Spatially Varying Tension of the Magnetic Field SOV/89-6-6-7/27

were accelerated up to 12 Mev and α-particles up to 24 Mev at a minimum amplitude of the accelleration tension on the grant of 8 kv. The two methods which were used for measuring the energy in the case of a maximum orbital radius are briefly described. A picture shows the accelerating chamber of the cyclotron (Fig 2), another one an autograph of a neutron beam in the case of different radii. The investigation results prove the possibility of producing a relativistic cyclotron with a proton energy which equals that of a modern phasotron. There are 2 figures and 2 references, 1 of which is Soviet

SUBMITTED: April 9, 1959

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CZ/38-60-2-9/22

AUTHORS: Glazov, A.A., Kuzmiak, M.

TITLE: Ion Source With Cavity Cathode

PERIODICAL: Jaderná Energie, 1960, Nr 2, p 62

ABSTRACT: This article is an illustrated description of ion source with a cavity cathode. In the introduction the author points out that the application of the customary hot cathode ion source is connected with certain technical difficulties and that the described ion source with the Penning-type discharge meets all requirements. The special feature of this ion source is a cavity cathode, 400 mm depp and 3 mm in diameter. After giving constructional details of the ion source, the author states that the presence of the cavity secures a high discharge current density (I = 10 A/cm^2) under high vacuum into the discharge chamber. The high vacuum permits the use of a larger opening (3 mm) in the anticathode for the ion extraction. By the use of the described apparatus it is possible to reach high ion currents during the extraction parallel to the magnetic field. This article is written in Slovak.

Card 1/2

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

Ion Source With Cavity Cathode

CZ/38-60-2-9/22

There are: 4 diagrams and 2 referances, 1 of which is Czechoslovak and 1 English.

ASSOCIATION: Spojený ústav jádrového výskumu v Dubne (Combined Nuclear Research Institute, Dubna).

Card 2/2

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S07/89-[illegible]-3-2/32

AUTHORS: [illegible], D. [illegible], Danilov, V. I., Denisov, Y. N., [illegible], Dmitriyevskiy, V. P., Zamolodchikov, [illegible], [illegible] N. L., Kol'ga, V. V., Kropin, A. A., [illegible], V. S., Savenkov, A. L., [illegible]

TITLE: A [illegible] Magnetic Field Intensity

PERIODICAL: [illegible], pp [illegible] (USSR)

ABSTRACT: The paper [illegible] charged particle motion in a magnetic [illegible] structure along its azimuth and [illegible] performed during the [illegible] from [illegible] accelerator [illegible] Joint Institute for Nuclear Research ([illegible] Institut yadernykh issledovaniy). [illegible] following the [illegible] Dubno and Harwell. The [illegible] theory and investigated [illegible]

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A Cyclotron With a [illegible]
Magnetic Field Intensity [illegible]

[illegible]-2/32

[illegible] the extreme values of [illegible] field follow [illegible]:

[illegible]

where ε [illegible] depth of [illegible] variation; $2\pi\lambda$ radial pitch; R, [illegible] field structure. [illegible] λ, [illegible] Kerst, [illegible] ([illegible]) [illegible] unity in the [illegible] radial [illegible] linear theory [illegible] radial and

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A Cyclotron With a Spatially [illegible]
Magnetic Field Intensity

[illegible]
SOV/89-8-3-2/32

vertical oscillations and [illegible] the limitations on proton energies [illegible] oscillations. Next, they note that the small parameter λ in Eqs. (2) and (7) [illegible] accelerators field [illegible] of magnetic [illegible] nonlinear resonances. [illegible] was [illegible] λ [illegible], $\varepsilon = 0.02$, [illegible] shown on Fig. [illegible] centers of [illegible] points, while the [illegible] computations [illegible] > λ [illegible] is radial [illegible] magnetic [illegible] and ε [illegible] λ = [illegible] of orbits [illegible] to the [illegible] and [illegible] the [illegible] potential

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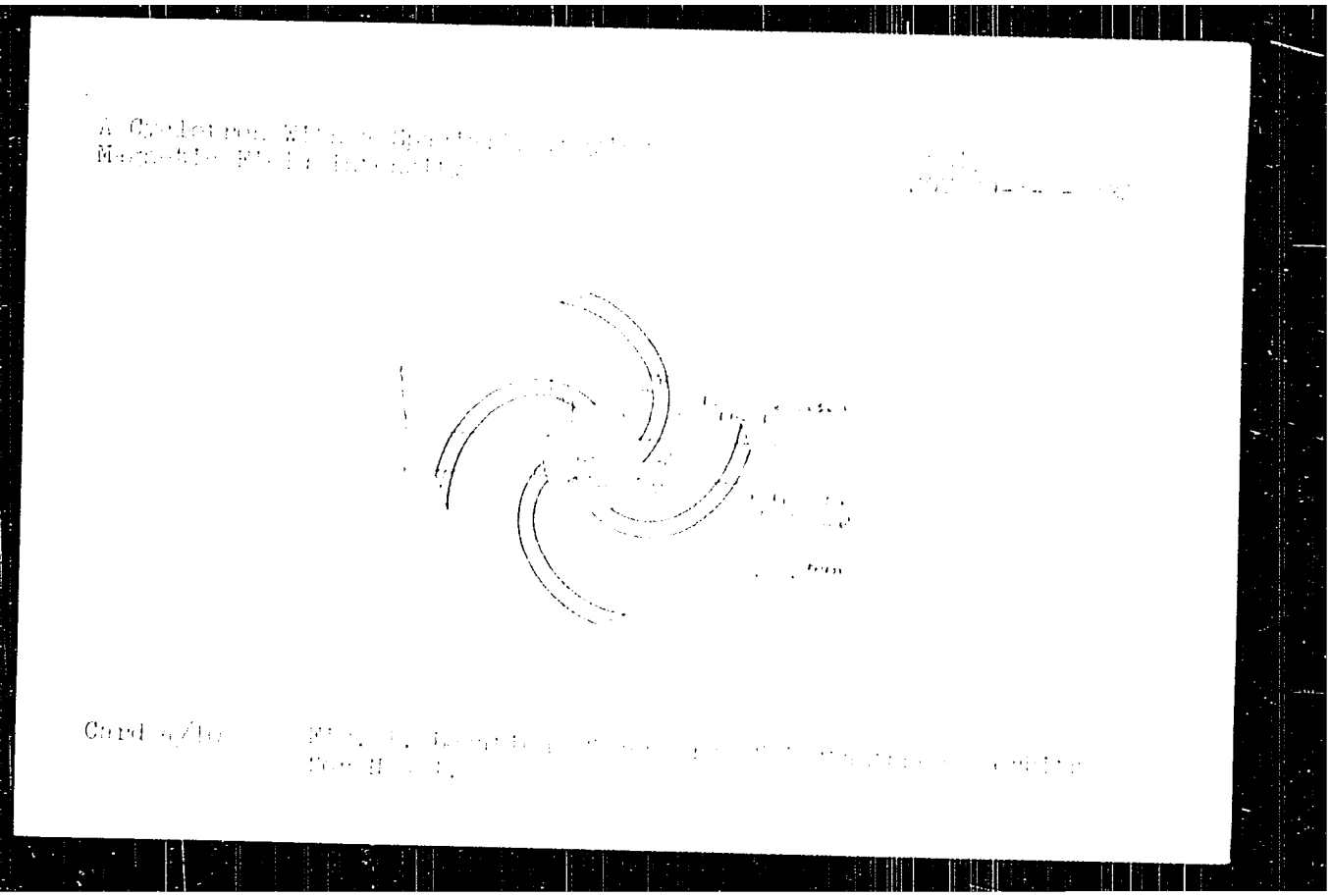

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A Cyclotron With a Spacially Varying Magnetic Field Intensity

78317
SOV/89-8-3-2/32

of the dees was 5 kv. Figure 4 shows the relation between inner beam intensity and accelerator radius with an accelerating dee voltage of 11 kv. The beam was well focused everywhere and the half-width of its vertical spread was less than 1 cm. Next, the authors describe the computations of the required magnetic field and compare them with experimentally measured values. Figure 7 shows results for a field with N = 3, λ = 2.7. The absolute values of the field were measured using the Hall and nuclear resonance effect magnetometers. In the region of [illegible] 3,000 oersted with a 5-10% gradient, the fields were measured with an accuracy of ±0.01%. Volume of the magnetometer feeler was $2 \cdot 10^{-4}$ cm^3, and the gradients were measured with an accuracy of ±1%. The cyclotron magnetic field intensity was stabilized accurately to 0.005% using a nuclear stabilizer as described by Denisov (Pribory i tekhnika eksperimenta (Instruments and Technics of Experiment), Nr 1, [illegible] (1960)). The h-f system was described earlier by Glazov and others (Radiochastotnaya

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A Cyclotron With a Spatially Varying Magnetic Field Intensity

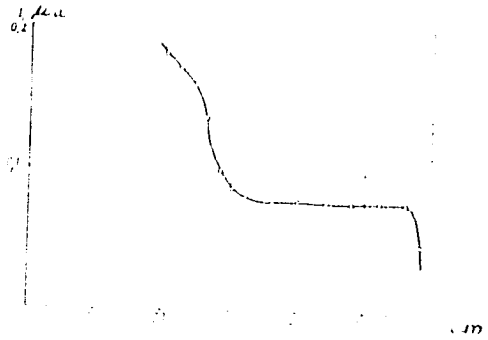

Fig. 4. Particle [illegible] as a function of radii (= 11 kv).

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A Cyclotron With a Spacially Varying Magnetic Field Intensity

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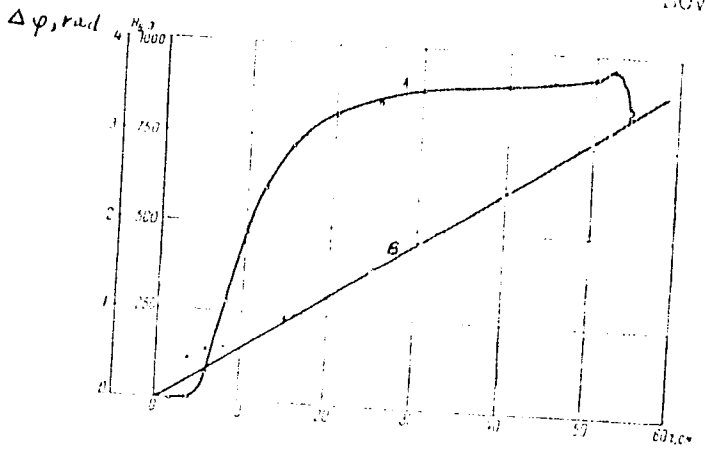

Fig. 7. (A) Amplitude of sixth harmonic of magnetic field H_0 versus radius. (B) Phase φ of spiral shim versus radius (full line--calculated; crosses--experimental data).

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A [illegible]cron With a Spacially Varying Magnetic Field Intensity

93317
SOV/89-8-3-2/32

Sistema modeli tsiklotrona s prostranstvennoy variatsiyey magnitnogo polya, Otchet Laboratorii yadernykh problem OIYaI (Radiofrequency System for a Model of a Cyclotron With Spacially Varying Magnetic Field, Report of the Laboratory of Nuclear Problems OIYaI) (1959)). The special feature is the existence of a single dee with a radius of 57.5 cm and a small gap between the dees and the chamber of 1.6-3 cm. Aperture of the dee was 5 cm. The amplitude of the accelerating potential was stabilized to an accuracy of 1.5%. To reduce the background due to ionized radioactive isotopes, the cyclotron chamber was made from the "avial" alloy. Working vacuum was 1 to $2 \cdot 10^{-5}$ mm Hg. The ion source was of the Penning variety and could be displaced in arbitrary direction with affecting the vacuum. Three sparse targets with tungsten wire served as visual or current measuring indicators of the beam. The authors claim that all tests confirmed the linear theory of spacial stability of the charged particle motion in accelerators, and that the methods of creating necessary magnetic field variations exhibit sufficient accuracy.

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A Cyclotron With a Spacially Varying
Magnetic Field Intensity

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SOV [illegible]

Theoretical and experimental investigation of the spacially varying fields and the methods developed for shimming the central field enable one to obtain, in cyclotrons of appropriate size, resonant accelerations of particles up to energies achieved until now only in phasotrons and with beam currents of the order of hundreds of microamperes. K. A. [illegible], N. I. [illegible], M. F. Shul'ga, and F. V. [illegible] were the directors of various divisions of the OIYaI engaged in the construction of the cyclotron. D. I. Blokhintsev, D. V. Yefremov, K. N. Meshcheryakov, and V. N. Sergiyenko showed interest and helped accelerate the work. E. G. Komar, I. F. Malyshev, and L. N. Fedulov constructed the chamber and the accelerator magnet, while A. V. Chestnoy helped in the early stages of planning the technical problems. There are 9 figures; and [illegible] references, [illegible] Soviet, 5 U.K., 9 U.S. The 5 most recent U.K. and U.S. references are: N. King, W. Walkinshaw, [illegible] (19[illegible]); D. Kerst, H. [illegible], R. [illegible], L. [illegible], F. Miller, T. Ohkawa, F. Peterson, A. [illegible], J. Snyder,

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

A Cyclotron With a Spatially Varying
Magnetic Field Intensity

W. Walkinshaw, Rev. Scient. Instrum., 28, Nr 1., 7[illegible] (1957); W. Walkinshaw, N. King, Linear Theory for S[illegible]R Cyclotron Design, AERE, GP R [illegible] (1956); P. Dick, L. Mallett, T. Pickavance, W. Walkinshaw, J. Wilkins, CERN Symposium, 1, 9 (1956); D. Bent, E. Tanenbaum, K. Symon, L. Jones, Bull. Amer. Phys. Soc., 30, Nr 1 (1955).

SUBMITTED: August 27, 1959

Card 10/10

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

VASIL'YEVSKAYA, D.P.; GLAZOV, A.A.; DENISOV, Yu.N.; DZHELEPOV, V.P.; DMITRIYEVSKIY, V.P.; ZAMOLODCHIKOV, B.I.; ZAPLATIN, N.L.; KOL'GA, V.V.; KROPIN, A.A.; KUZNYAK, M.; ONISHCHENKO, L.N.; RYBALKO, V.S.; SARKISYAN, L.A.; SHVAGE, Ye.; SARANTSEVA, V.K., tekhn. red.

[Theory and the modeling of a circular synchro-cyclotron with a spiral magnetic field] Voprosy teorii i modelirovaniia kol'tsevogo sinzotrona so spiral'noi strukturnoi magnitnogo polia. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 7 p.
(MIRA 15:4)

(Synchrotron)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZOV, A.A.; SHVABE, Ye.; KOCHKIN, V.A.

A model of the high frequency system of the ring-shaped proton synchrotron. Nukleonika 7 no.7/8:455-463 '62.

1. Ob"yedinennyy institut yadernykh issledovaniy, Dubna, Laboratoriya yadernykh problem.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZKOV, A.A.

Power balance during acceleration in a linear electron accelerator. Uskoriteli no.5:55-64 '63.

Time dependence of pressure in exhaust systems. Ibid.:163-170 (MIRA 17:4)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AT4019725 S/2759/63/000/005/0096/0107

AUTHOR: Val'dner, O. A.; Glazkov, A. A.; Pyatnov, Ye. G.; Seleznev, V. D.

TITLE: Experimental study of the Y-10 linear accelerator. I. Preparation for operation and measurement techniques

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli (Accelerators), no. 5, 1963, 96-107

TOPIC TAGS: accelerator, linear accelerator, beam stability, reliability

ABSTRACT: The aim of the paper is to make a detailed test of the type Y-10 linear accelerator in the following respects: 1) correspondence between the obtained beam parameters and the calculated data, and the verification of the assumptions made in the design; 2) determination of operational characteristics of the accelerator which are important in estimating the stability of its operation and which describe the beam reaction to variations in the feed conditions; 3) verification of the operational reliability of the accelerator for a long duty-cycle. Orig. art. has: 7 figures and 10 equations.

ASSOCIATION: Inzhenerno-fizicheskiy institut, Moscow (Engineering-Physics Institute)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AT4019726 S/2759/63/000/005/0108/0124

AUTHOR: Val'dner, O. A.; Glazkov, A. A.; Pyatnov, Ye. G.; Seleznev, V. D.

TITLE: Experimental study of the Y-10 linear accelerator

SOURCE: Moscow. Inzhenerno-fizicheskiy institut. Uskoriteli (Accelerators), no. 5, 1963, 108-124

TOPIC TAGS: accelerator, linear accelerator, particle accelerator, electron accelerator, linear electron accelerator

ABSTRACT: The first part of this paper appears as the preceding paper in the same issue. This second part describes the energy spectra of the particles, the frequency characteristics, the power and current characteristics, and the beam-power and high-frequency efficiency. Orig. art. has: 12 figures and 5 formulas.

ASSOCIATION: Inzhenerno-fizicheskiy institut, Moscow (Engineering-Physics Institute)

SUBMITTED: 00 DATE ACQ: 19Mar64 ENCL: 00

SUB CODE: NP NO REF SOV: 003 OTHER: 001

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APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZOV, A.A.; KOCHKIN, V.A.; ONISHCHENKO, L.M.; SHVAEE, E.

High frequency system for proton accelerators built as cavity resonators. Nukleonika 8 no.2:89-100 '63.

1. Ob"yedinennyy institut yadernykh issledovaniy, Dubna.

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZOV, A.A.; DZHELEPOV, V.P.; DMITRIYEVSKIY, V.P.; ZAMOLODCHIKOV, B.I.; KOL'GA, V.V.; KROPIN, A.A.; ONISHCHENKO, L.M.; SHVABE, Ye.

Effect of a space charge on the frequency of free oscillations of particles in an isochronous cyclotron. Aton. energ. 15 no.3:205-209 S '63. (MIRA 16:10)

(Cyclotron) (Oscillations)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

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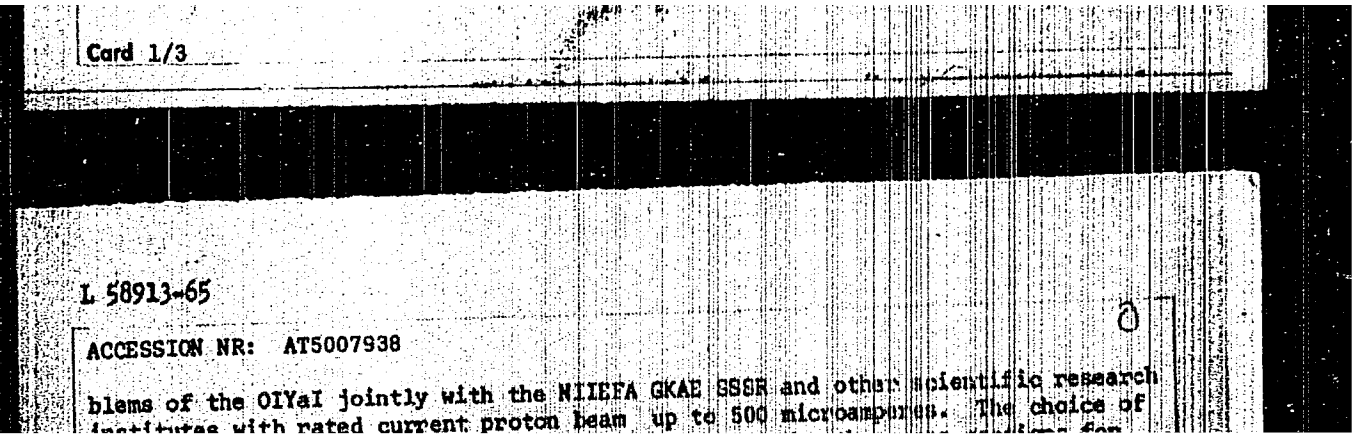

Card 1/3

L 58913-65

ACCESSION NR: AT5007938

blems of the OIYaI jointly with the NIIEFA GKAE SSSR and other scientific research institutes with rated current proton beam up to 500 microamperes. The choice of

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ACCESSION NR: AT5007938

producing beams of secondary particles and their channeling and focusing; (g) development of plans for the protection of personnel and instruments from radiation. The paper concludes that the relativistic cyclotron offers wide new possibilities for nuclear research in radiobiology, solid state physics, etc. Orig. art. has: 7 figures, 3 tables.

ASSOCIATION: (I) Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research, Dubna); (II) Nauchno-issledovatel'skiy institut

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Card 1/3

L 2274-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) UR/0000/64/000/000/0611/0615

ACCESSION NR: AT5007943

AUTHOR: Glazov, A. A.; Dzhelepov, V. P.; Dmitriyevskiy, V. P.; Zamolodchikov, B. I.; Kol'ga, V. V.; Kropin, A. A.; Onishchenko, L. M.; Shvabe, Yu. I.

TITLE: Effect of space charge on the free oscillation frequency of particles in an isochronous cyclotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 611-615

TOPIC TAGS: high energy accelerator, space charge, cyclotron

ABSTRACT: Theoretical studies of the effect of space charge on the motion of particles in accelerators have been carried out in a number of works: Berestetskiy, V. V.; Gol'din, L. L.; Koshkarev, D. T. *Pribory i tekhnika eksperimenta*, 3, 26 (1956); Dmitriyevskiy, V. P.; Zamolodchikov, B. I.; Kol'ga, V. V. *Doklad na konferentsii po tsiklotronam* (Report on the Cyclotron Conference), Gracow, 1960; Kolomenskiy, A. A.; Lebedev, A. N. *Atomnaya energiya*, 7, 549 (1959). To create strong-

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L 2274-66

ACCESSION NR: AT5007943

celerated particles. Pertinent measurements were carried out on a cyclotron with spiral magnetic field for the specific case of molecular hydrogen ions accelerated up to the energy of 12 Mev (Vasilevskaya, D. P., et. al., *Atomnaya energiya*, 8, 189 (1960)). The results of the present work shows that the effect of the space charge does not prevent beam intensities of the order of several milliamperes in relativistic cyclotrons. A result of this space charge is the displacement of the zones of resonant interaction of the oscillations. Expressions are obtained which describe the effect of the space charge on the basis of linear equations for the free oscillations, taking account of the electromagnetic field of the accelerated particles. It is assumed that the particles in a condensed bunch are uniformly distributed along the azimuth and that the vertical size of the bunch is much smaller than the azimuthal extension. The main topics discussed are: (1) the density of the charged particles in a relativistic cyclotron and its influence upon the frequency of the axial oscillations; (2) measurement of the azimuthal extension of the bunch; (3) measurement of the frequency of the axial free oscillations; and (4) the limiting intensity of the internal beam in a relativistic cyclotron. Orig. art. has: 6 figures, 8 formulas.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

SUBMITTED: 26May64 55

ENCL: 00 SUB CODE: NP

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L 4230-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c) GS

ACCESSION NR: AT5007967 S/0000/64/000/000/0946/0949

AUTHOR: Glazov, A. A.; Kochkin, V. A.; Onishchenko, L. M.; Rapfe, L. M.; Semenov, M. M.; Tuzov, I. V.; Shvabe, Ye.

TITLE: High-frequency system of the 700-Mev cyclotron

SOURCE: International Conference on High Energy Accelerators. Dubna, 1963. Trudy. Moscow, Atomizdat, 1964, 946-949

TOPIC TAGS: high energy accelerator, cyclotron, proton accelerator

ABSTRACT: The accelerating system of the 700-Mev cyclotron must ensure a regime of continuous proton acceleration for a current at maximum radius up to 1 milliampere. It is necessary here to have the maximum possible collection of energy of the accelerated protons per revolution, with the restriction that the power of the high-frequency supply to the accelerating electrodes be technically possible and economically admissible. The configuration and structure of the region where the particle acceleration occurs and the design of the accelerator electromagnet are the determining factors in the selection of the scheme for the accelerating system. The small height of the acceleration region, the absence of gap variation accord-

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ing to azimuth, and insignificant variation according to radius ($2h_{min}$=146 mm, $2h_{max}$=220.4 mm) with maximum gap in the middle radii are the special features of the accelerator under consideration; namely, a high-field machine with small variation of the magnetic field strength and large spiral. A similar structure for the operating zone excludes the use of simple bulk resonators as accelerating systems even during operation at multiple frequencies of considerable multiplicity, because the vertical dimension of the resonator must amount to about one half of the wavelength of the accelerating voltage, and the period of revolution of a proton in the cyclotron field is 83.3 nanosecond ($f = 1/T = 12$ megahertz). It is also practically impossible to use a multi-electrode (three or more) accelerating system operating at multiple frequencies in the case of an effectively structured region where the acceleration of the protons occur. Even for operations at a frequency equal to twice the frequency of proton revolution, the radius of the accelerator turns out to be greater than a quarter of the wavelength of the accelerating voltage. Moreover it is hardly technically feasible to create a cantilever design more than three meters with supporting elements arranged in the small interpole gap, with rigid requirements upon the constancy and magnitude of the gap between the accelerating electrode and the chamber. A two-dee accelerating system with dees in

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ACCESSION NR: AT5007967

which the proton flight angle is close to 180° can be realized by various methods. The Joint Institute of Nuclear Research and the Scientific Research Institute of Electrophysical Apparatus have investigated theoretically and experimentally modifications of the accelerating system with semicircular dees, which are closed in a small part of the arch near the axis of symmetry, dees that are part of the homogeneous rectangular line, and dees that are part of the rectangular line with variable wave resistance. Of all the considered possibilities of accelerating system design, the accelerating system in the form of the rectangular line with increased wave resistance outside the gap of the electromagnet possesses the optimum characteristics from the viewpoint of the magnitude of the losses, excitation, and realization of the design. The accelerated system chosen is shown in the present report to satisfy the requirements imposed upon it. The radio-engineering and mechanical designs carried out at the mentioned two institutes and the modelling of the various accelerating system elements point to the possibility of realizing its design and construction and to the expediency of selecting the indicated scheme and principal parameters. Orig. art. has: 3 figures.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy, Dubna (Joint Institute of Nuclear Research)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AP4018359 S/0120/64/000/001/0034/0037

AUTHOR: Glazov, A. A.; Kuzmyak, M.; Novikov, D. L.; Onishchenko, L. M.

TITLE: Ion source for a 1-Mev proton accelerator

SOURCE: Pribory* i tekhnika eksperimenta, no. 1, 1964, 34-37

TOPIC TAGS: proton accelerator, 1 Mev proton accelerator, ion source, impulse ion source, Penning discharge, ion beam focusing

ABSTRACT: A Penning-discharge impulse ion source in which a cold aluminum cavity-type cathode is used is described. The source is intended for mounting in the hollow projection of a torus-type resonator-accelerator. The anti-cathode aperture towards the ion escape is 120°, the drawing-electrode angle is 90°. The source is supplied by an electronic device which develops 50-microsec-long ignition pulses and 20-microsec-long ion-drawing pulses. It was experimentally found that a system of different-potential electrodes with grids ensures the best

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ACCESSION NR: AP4018359

focusing. The effects of the size of the emission aperture in the anti-cathode and of the drawing voltage upon the extraction current were experimentally determined (curves supplied). It was found that the source is capable of producing a current of 20-40 ma (pulse) at 20-25 kv, and a focusing of 10 mm. The cold cathode ensures the constancy of characteristics during long periods of operation. The source is used in a linear accelerator that employs a high frequency of 1.2 Mv and a pulse intensity of 10 ma. Orig. art. has: 5 figures.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 01Feb63 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: PH, NS NO REF SOV: 004 OTHER: 005

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AP4033120 S/0120/64/000/002/0100/0104

AUTHOR: Glazov, A. A.; Onishchenko, L. M.

TITLE: Device for reproducing current-pulse shape

SOURCE: Pribory* i tekhnika eksperimenta, no. 2, 1964, 100-104

TOPIC TAGS: current pulse, pulse shape, pulse shape reproduction, Rogovsky belt, toroidal transformer

ABSTRACT: A simple device is described which is based on the principle of a toroidal transformer (Rogovsky's belt) and can serve for measuring the shape of a current pulse passing a conductor or of a charged-particle cluster. The transformer-secondary signal is integrated by an electron-tube circuit as it was suggested by V. Elmor and M. Sands in their book, "Electronics in Nuclear Physics." The present article supplies elements of the theory involved and briefly reports on experiments with a ferrite toroid (OD = 121 mm; ID = 85 mm;

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ACCESSION NR: AP4033120

thickness, 10 mm) wound with an insulated 0.65-mm wire. Its $\sqrt{LC}$ = 1.5 microsec; optimum resistance, 23 kohms; sensitivity, 140×10^{-6} v/a/sec. Three oscillograms illustrate the degree of true reproduction of the current-pulse shape. Orig. art. has: 6 figures and 12 formulas.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Nuclear Research Institute)

SUBMITTED: 27Oct62 DATE ACQ: 11May64 ENCL: 00

SUB CODE: GE, NS NO REF SOV: 002 OTHER: 001

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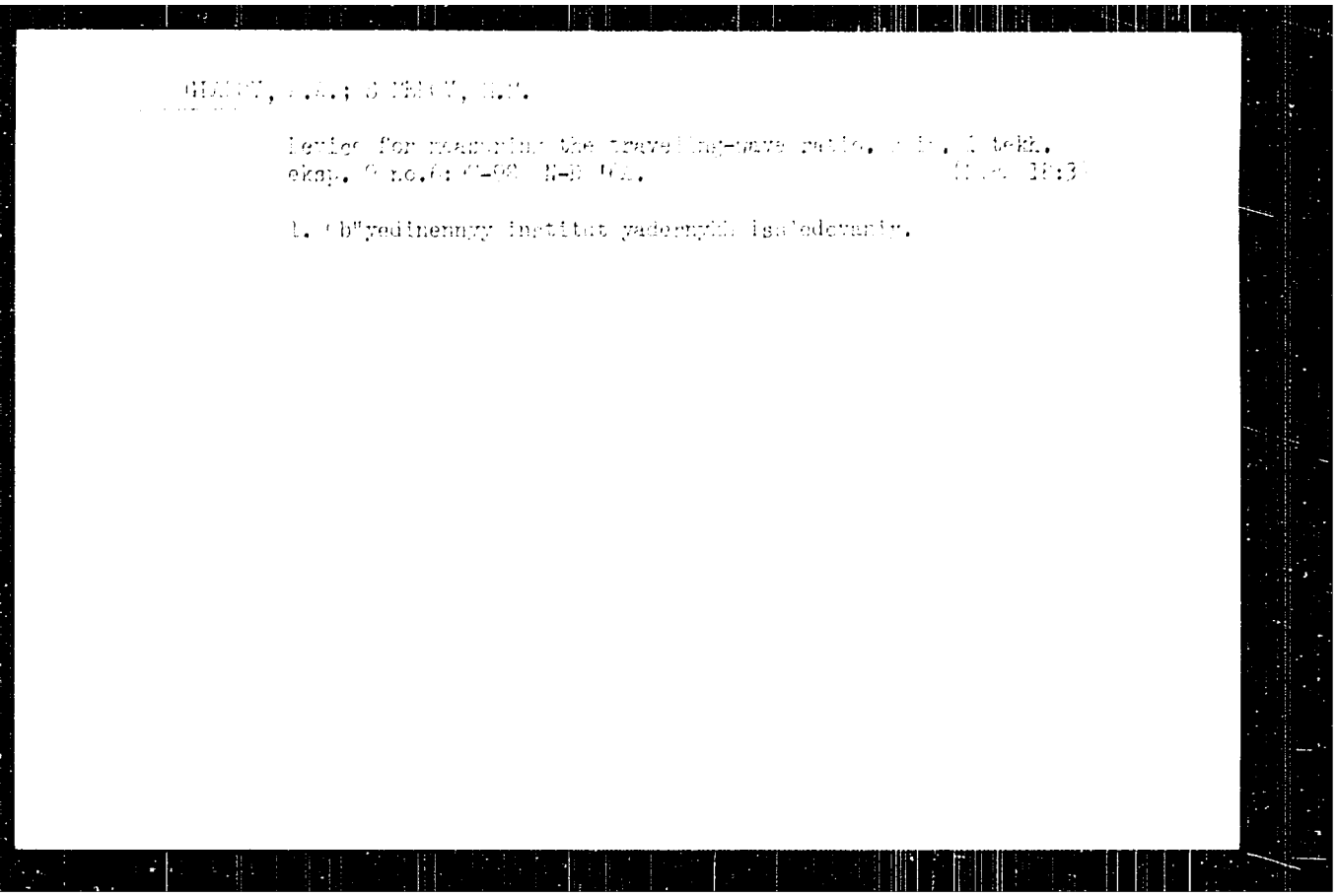

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AP4042004 S/0057/64/034/007/1272/1284

AUTHOR: Glazov, A.A.; Kochkin, V.A.; Novikov, D.L.; Onishchenko, L.M.

TITLE: A high frequency resonant cavity for accelerating protons to 1 MeV

SOURCE: Zhurnal tekhnicheskoy fiziki, v.34, no.7, 1964, 1272-1284

TOPIC TAGS: particle accelerator, proton accelerator, injector

ABSTRACT: A re-entrant resonant cavity is described which, when operated as a single stage proton accelerator, produces 20 microsec 10 mA pulses of approximately 1 MeV protons at a repetition rate of 50 sec^{-1}. The accelerator was developed during the years 1960 to 1962 at the Joint Institute for Nuclear Research as an injector for the phasotron described elsewhere by D.P.Vasilevskaya and 13 other authors (Preprint OIYaI R-930, Dubna, 1962; Nucl.Instr.21,85,1963). The accelerator consisted of a 1 m diameter 1 m long steel cylinder with 30 cm diameter copper cylinders projecting radially inward from each end to within 2 cm of the center. One of these cylinders was movable in the axial direction for adjustment of the 4 cm accelerating gap, and the other contained the cold cathode Penning discharge ion source. The interior of the cavity was covered with polished copper; a Q of 14 000 was thereby achieved.

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ACCESSION NR: AP1043004

The cavity was excited by a self-excited grounded grid oscillator of which the cavity was the frequency determining element. Difficulty was experienced with resonant reflex discharge in the accelerating gap at an amplitude of about 1000 V. The cavity was therefore pre-excited at each pulse by a separately excited oscillator, and the self-excited oscillator took over only after the resonant discharge region was past. When the instrument was operating under presumably typical conditions, the beam was 3 cm in diameter and contained protons with energies from 0.7 to 1.1 MeV with half the protons in the energy range from 0.83 to 0.95 MeV. The possibility of employing a buncher between the ion source and the accelerator to obtain a more nearly monoenergetic beam is discussed, and it is concluded that this would be feasible. It is pointed out that although the accelerator was designed as an injector for a phasotron, it would be suitable as a primary accelerator for low energy nuclear research. For this purpose it has over electrostatic accelerators the advantages of compactness, low cost, and high pulse current. "In conclusion, the authors thank V.P.Dmitriyevskiy for valuable advice in planning the work and for discussing the results, Ye.Shvabe and M.Kuzmyak for assistance in developing certain critical parts of the accelerator, and also comrades V.V.Kudryushov, V.A.Akkuratov, P.T.Rybakov and M.G.Akimov for participating in the assembly of the electronic accessories and the construction of the accelerator." Orig.art.has: 17 formulas and 8 fi-

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GLAZOV, A.N.

USSR/Physics of the Earth - General Problems, O-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36293

Author: Glazov, A. N.

Institution: None

Title: Use of Radioactive Isotopes in Hydrogeological and Engineering-Geological Investigations Abroad

Original Periodical: Razvedka i okhrana nedr, 1956, No 4, 55-58

Abstract: Description of several cases of the application of radioactive isotopes in hydrogeological and engineering-geological investigations in England, US, Japan, and other countries. The change in the density of the ground is measured with an instrument based on the use of scattering of gamma rays passing through any substance. The source of gamma rays and the detector (Geiger-Mueller counter) are mounted in a tube and driven into the ground. The intensity of the scattering, which is proportional to the density of the ground, is determined from the number of pulses per unit time, recorded by the counter. The instrument is calibrated relative to

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

USSR/Physics of the Earth - General Problems, O-1

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 36293

Abstract: grounds of known density. A method of determining the density of concrete with an accuracy up to 1-2%, based on the absorption of radioactive radiation, is described. Reports are made on the development of instruments for the determination of the moisture content of grounds on the basis of measurement of the scattering of slow neutrons by the substance. Their scattering is greatest when the neutrons collide with atoms of hydrogen (in water). Water is detected in any aggregate state, making it possible to carry out investigations under conditions of perpetual frost. The neutrons source employed is a mixture of polonium or radium with beryllium. The source together with the detector are mounted in the form of a probe. The sensitivity of the instrument is constant over wide range of moisture content. It is noted that radioactive substances have been successfully used in many countries for the study of hydrogeological conditions of petroleum deposits, to investigate the erosion of shores, the accumulation and transfer of river deposits, the flooding of irrigation systems, etc.

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GLAZOV, A.N., inzhener.

Use of radioactive isotopes in engineering research. Gidr. i mel. 8 no.9:13-19 S '56. (MLRA 9:10)

(Radioisotopes) (Soil research)

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3(5) GLAZOV A N PHASE I BOOK EXPLOITATION SOV/1546

Glazov, Nikolay Vasil'yevich, and Anatoliy Nikolayevich Glazov

Novyye pribory i metody, primenyayemyye v inzhenerno-geologicheskikh izyskaniyakh (New Methods and Instruments Used in Geological Engineering Explorations) Moscow, Gosgeoltekhizdat, 1957. 69 p. 3,000 copies printed.

Ed. of Publishing House: B.S. Filippova; Tech. Ed.: S.A. Pen'kova

PURPOSE: This booklet is intended for exploration geologists, geophysicists, and hydrologists, as well as drilling, and highway construction engineers.

COVERAGE: This booklet reports on new methods and instruments used in geological engineering exploration and testing. The authors consider the use of radioactive isotopes as the best and most popular method for improving exploration and testing techniques, and indicate ways for further increasing the scope of its application. The supplement contains a price list of the various radioactive isotopes turned out by Trest Soyuzreaktivshyt. The authors express their gratitude to N.A. Ogil'vi and F.S. Zavel'skiy of VSEGINGEO for their valuable assistance. There are 17 diagrams and 43 bibliographic references of which 36 are Soviet,

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

5 English, 1 German, and 1 French

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New Methods and Instruments (Cont.) SOV/1546

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

AUTHORS: Monastyrskiy, V.Ya. (Senior Foreman) and Glazov, A.N., (Deputy Manager). 130 - 6 - 10/27

TITLE: Fettling electric-furnace walls and bottoms with fine chrome ore. (Zapravka podiny i otkosov elektropechey melkoy khromistoy rudoy).

PERIODICAL: "Metallurg" (Metallurgist), 1957, No.6, pp.21-22 (USSR).

ABSTRACT: Difficulties with bottom and wall erosion by metal and slag when stainless steel is melted in 30-ton basic electric furnaces with oxygen blowing are described. The authors, together with Kibenko, proposed the use of chromite ore for (10% + 30% magnesite + 30% calcined ferruginous dolomite) fettling and the adoption of this has saved the Kuznetsk metallurgical combine about 100 000 roubles in a year on account of fettling materials alone: 14.6% less of magnesite powder, 13.3% less of calcined ferruginous dolomite. The fine chromite ore consumption is 2.5 kg/ton.

There are 2 tables.

ASSOCIATION: Electric Steel-Melting Shop, Kuznetsk Metallurgical Combine. (Elektrostaleplavil'nogo tsekha, Kuznetskiy Metallurgicheskiy Kombinat).

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

TOLSTOGUZOV, N. V., KONOVALOV, K. N., GLAZOV, A. N., TEDER, L. I., DANILOV, P. M., SHIRINKIN, E. N. and GUDAYEVICH, M. G.

"Vacuum Treatment of the MX 15-Steel and Commercial Experience of the Vacuum Transformer Treatment."

paper presented at Second Symposium on the Application of Vacuum Metallurgy.

1-6 July-1958

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

SOV/130-59-1-7/21

AUTHORS: Glazov, A.N., and Mesyats, V.I.

TITLE: Improvement of Electric-Furnace Lining (Usovershenstvovaniye futerovki elektropechey)

PERIODICAL: Metallurg, 1959, Nr 1, pp 14-19 (USSR)

ABSTRACT: The authors describe ways in which electric-furnace lining life has been improved at the Kuznetskiy metallurgicheskiy kombinat (Kuznetsk metallurgical combine). Since 1953 wall and rod lives have improved from 54 and 68 heats, respectively, to 164 and 127 respectively. Some of the wall-life improvement is due to the adoption of cased chrome-magnesite bricks, but better wall design, especially of the arch over the tapping hole (Fig 1) and improved maintenance, have been important factors. Better inner lines made possible through the adoption in April 195? of a suggestion by Monastyrskiy, Fudkoman and Shtep that shell diameter be increased by 250 mm (Fig 2) led to further improvement. The authors attribute great importance in wall-life to the form of the bottom and banks and discuss the optimal form and its maintenance for furnaces producing stainless or ball-bearing steels with occasional

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Improvement of Electric-Furnace Lining

melting of eg 12KhN3A, 0KhN1M imposing a greater thermal load on the bottom. A special device (Fig 3) is used for removing the top softened layers of the bottom remaining after tapping. A bottom-life of about 2000 heats has been achieved. The authors describe bottom construction (Fig 4) and maintenance and state that the latter is the major life-controlling factor. The bottom lining is covered after brief heating to 100°C with a slightly tamped 30-40 mm thick layer of magnesite powder in water glass and furnace charging is started after this has been heated for 3 hours with coke and firewood. After tapping the first heats the bottom and banks are fettled with dry magnesite powder and kept heated by lowering the hot electrodes. The first 6-8 heats after bottom repairs are of carbon steels. Old bottoms are removed in one piece (Fig 5). The authors briefly describe roof construction, contrasting the old arrangement and that adopted in 1955 (Figs 1a and 1b respectively), at the suggestion of Fudkomar and Kornilov which secured improved service conditions for the bricks and led to a life increase of

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Improvement of Electric-Furnace Lining

35 heats. The improvements in refractory consumption (kg per tonne of steel) and down time brought about by the measures described are shown in Table 2. In 1957 the total (magnesite chrome-magnesite and silica) refractory consumption was 8.7 kg/tonne and the down time 1.4% of calendar time, while the corresponding 1953 figures were 20.4 and 3.0.

There are 6 figures and 2 tables.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk metallurgical combine)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

18(5) SOV/148-59-1-8/19

AUTHORS: Levin, A.M., Docent, Candidate of Technical Sciences; Teder, L.I.; Glazov, A.N.; Monastyrskiy, V.Ya.; Chernenko, A.D. and Alyavdin, V.A., Engineers

TITLE: Metal Refining in Intensified Smelting of Structural Electric Steel (Rafinirovaniye metalla pri intensifikatsii plavki konstruktsionnoy elektrostali)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy - Chernaya metallurgiya, 1959, Nr 1, pp 71-81 (USSR)

ABSTRACT: Comparative tests were carried out on kinetics of harmful impurities with the use of conventional and experimental methods of structural steel smelting. The basic peculiarities of the experimental technology which caused intensification of smelting and reduced the smelting time by one hour, included: dephosphorization during the smelting process; use of gaseous oxygen; termination of smelting combined with oxidizing blowing-through; reduced quantity of burning-out carbon; preliminary deoxidation with silico-manganese and early addition of ferrosilicon plus coke dust, and ferrochrome; metal treatment by slag of the same metal at the moment of discharge. Results

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Metal Refining in Intensified Smelting of Structural Electric Steel

of the tests were compared and the following conclusions were made: Dephosphorization did not depend on the basicity of the slag and on the temperature, whereas the ferrous oxide content had a strong effect on phosphorus distribution between the metal and the slag; due to metal treatment by slag of the same metal, the desulfurization rate in the test method was higher than in the conventional technology; a strong effect of ferrous oxide on the desulfurization coefficient in the ladle was observed and therefore slag deoxidation prior to the discharge was imperative. The decrease of burning-out carbon did not increase the hydrogen content. Preliminary deoxidation and early addition of ferrosilicon dust caused speeded-up elimination of oxygen. Prior to the addition of agents with higher reducing capacities than those of carbon, the oxygen content depends on the carbon content and, in the case of "12KhN2A" steel on the silicon content. Mixing of the metal with the slag caused a decrease of the oxygen content during the discharge. The determination of non-metallic impurities was carried out by Engineer S.N. Yeremenko, who stated that, in spite of the shortened reduction time, intensified deoxidation created favorable conditions for eliminating impurities. The

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Metal Refining in Intensified Smelting of Structural Electric Steel

mixture of the metal with the reducing slag had a positive effect on the decrease of non-metallic impurities. The described method ensures the production of high quality metal. The author presents graphs comparing changes of the impurity content in experimental and conventional methods. There are 13 graphs and 1 Soviet reference.

ASSOCIATIONS: Sibirskiy metallurgicheskiy institut (Siberian Institute of Metallurgy). Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

SUBMITTED: October 25, 1958

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

137/133-59-4-10/32

AUTHOR: Levin, A.M., Docent, Kuder, L.I., Gonchtyrskiy, V.Ya., Glazov, A.I., Alyavdin, V.A., and Chernenko, A.D., Engineers

TITLE: Intensification of Melting Structural Electric Steel (Intensifikatsiya plavki konstruktsionnoy elektrostali)

PERIODICAL: Stal', 1959, Nr 4, pp 323-327 (USSR)

ABSTRACT: An investigation of the possibilities of intensifying the electric melting process carried out at the Kuznetsk Metallurgical Combine during 1956-1957 is described. For this purpose 100 heats of structural steels were carried out (table 1) in which the following methods of intensification of smelting were tested: 1) the use of oxygen for the oxidation of admixtures; 2) combining of the end of the melting period with the beginning of oxidation; 3) dephosphorisation of metal during melting; 4) decreasing the amount of burned out carbon (up to 0.2%); 5) intensification of the deoxidation by the use of a preliminary precipitation deoxidation with complex deoxidants and with an addition of powdered ferrosilicon after the making of a reducing slag together with powdered coke; tapping of metal

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Intensification of Melting Structural Electric Steel

together with slag with an energetic stirring;
6) intensification of the desulphurization process;
7) intensification of alloying by starting it at the beginning of the reducing period. The comparison of changes in the composition of metal and slag during melting by the usual and experimental practices for steel 40Kh is given in Fig 1 and 2 respectively, the comparison of mechanical properties of metal produced by the usual and experimental practices - table 2. Mean duration of the individual melting periods and whole heats - table 3. It is considered that the experimental technology of melting electric structural steels can be used with advantage. The investigation of the metal produced by the experimental technology indicated that it is of satisfactory quality which was confirmed by a considerable decrease in the proportion of out of grade steel (from 0.472 to 0.186%). The mean duration of a heat is decreased by 1 hour which under operating conditions of the melting shop on the work increased the productivity of a furnace by 14% and

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Intensification of Melting Structural Electric Steel

decreases the specific power consumption by 80 kwhr/ton of steel. There are 2 figures, 3 tables and 11 references of which 9 are Soviet , 1 German and 1 American.

ASSOCIATION: Sibirskiy Metallurgicheskiy Institut i Kuznetskiy Metallurgicheskiy Kombinat (Siberian Metallurgical Institute and the Kuznetsk Metallurgical Combine)

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Glazov, A.N.

PHASE I BOOK EXPLOITATION SOV/4548

Akademiya nauk SSSR. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali

Primeneniye vakuuma v metallurgii (Use of Vacuum in Metallurgy) Moscow, Izd-vo AN SSSR, 1960. 334 p. Errata slip inserted. 4,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut metallurgii imeni A.A. Baykova. Komissiya po fiziko-khimicheskim osnovam proizvodstva stali.

Resp. Ed.: A.M. Samarin, Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: G.M. Makovskiy; Tech. Ed.: S.G. Markovich.

PURPOSE: This collection of articles is intended for technical personnel interested in recent studies and developments of vacuum steelmaking practice and equipment.

COVERAGE: The book contains information on steel melting in vacuum induction furnaces, and vacuum arc furnaces, reduction processes in vacuum, and degassing of steel and alloys. The functioning of apparatus and equipment, especially vacuum furnaces and vacuum booster pumps is also analyzed. Personalities are mentioned in connection with some of the articles and will appear in the Table of Contents. Three articles have been translated from English. Some of the

Kasachkov, I.P., and G.I. Khitrik. Effect of Vacuum Treatment [in a Ladle] of the Carbonless Ferrochrome on the Amount of Its Oxide Inclusions 127

Fedorov, T.F., and F.I. Shamray. Physicochemical Principles of Vacuum-Thermic Methods of Treating Lithium 137

PART IV. DEGASSING OF STEEL AND ALLOYS

Novik, L.M., A.I. Lakutin, and A.M. Samarin. Vacuum Treatment of Bessemer Steel 145

Kuznetsov, M.F., and G.M. Trubanov. The Effect of Vacuum Treatment in Ladle on the Properties of Bessemer Rail Steel 151

Krasovskiy, A.I., and V.D. Koinlov. The Effect of Vacuum Treatment in Ladle on the Weldability of Bessemer Constructional Steel 156

Cyks, G.N., G.A. Sokolov, I.I. Ansheles, Han Yaowen, L.A. Danilin, and M.G. Lapshova. Use of Vacuum for Improving the Quality of Alloyed Steels 166

Markaryants, A.A., and Yu.D. Smirnov. Some Theoretical and Practical Problems of Steel Degassing 178

Chuyko, N.M., A.F. Tregubenko, and Ye.I. Kalinov. The Effect of Vacuum Treatment of Metal Pouring on the Quality of ShKh15 Steel [the work was performed by the Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute) and the "Dneprospetsstal'" (Dnepr Special Electrical Steel Mill, in Zaporozh'ye) with the participation of engineers V.B. Rutkovskiy, M.P. Konishchev, T.M. Bobkov, L.S. Barash, A.N. Men', Yu.P. Shamil', A.I. Khitrik, P.A. Zhalo, Yu.P. Talovich and G.P. Parkhomenko] 189

Tselikov, ..., K.N. Kosovalov, A.N. Glazov, ..., M.G. Shulgevich, P.M. Danilov and Ye.N. Shipitsin. Vacuum Treatment of Molten Transformer Steel and of ShKh15 Steel [A.S. Shtepa, L.S. Klimasenko, P.S. Plekhanov, V.I. Mesyats, V.Ye. Pashchenko and P.A. Mironov participated in the work] 196

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Eminger, Z., and Z. Kletechka. [Czechoslovak People's Republic, Plzen Plant imeni Lenin]. Use of Vacuum for Raising the Quality of Aluminum Alloys 211

Zhak, G. [Polish People's Republic, Institute of Iron Metallurgy in Gliwice). Vacuum Melting and Pouring of Alloyed Carbon Steel 219

Burtsev, V.T., R.A. Karasev and A.M. Samarin. Desulfurization of Molten Iron Alloys in Vacuum 223

Vishkarev, A.F., and V.V. Kondakov. Destruction of Nonmetallic Inclusions in the Vacuum Treatment of Steel 230

Driving, N.Ya., R.A. Karasev and A.M. Samarin. Investigation of the Kinetics of Steel Decarburization in Vacuum by Means of a Mass Spectrometer 243

Musikhin, V.I., O.A. Yesin, and B.M. Lepinskikh. The Effect of Hydrogen and Nitrogen on the Activity of Silicon in Molten Cast Iron 248

Marmer, E.N. Investigation of Gas Liberation and Penetrability of Ceramics in Vacuum 251

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GLAZOV, A.N.; KOLYVANOV, A.D.

Industrial conference in the Kursk Magnetic Anomaly. Metallurg 7 no.4:5-6 Ap '62. (MIRA 15:3)

1. Predsedatel' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya na Kuznetskom metallurgicheskom kombinate (for Glazov). 2. Sekretar' postoyanno deystvuyushchego proizvodstvennogo soveshchaniya na Kuznetskom metallurgicheskom kombinate (for Kolyvanov).
(Kursk Magnetic Anomaly—Metallurgical plants)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AP4019474 S/0133/64/000/003/0229/0231

AUTHORS: Konovalov, K. N. (Engineer); Glazov, A. M. (Engineer); Danilov, P. M. (Engineer); Pashchenko, V. Ye. (Engineer)

TITLE: The effect of ingot mold lubrication on the surface quality of steel 1Kh18N9T

SOURCE: Stal', no. 3, 1964, 229-231

TOPIC TAGS: steel, 1Kh18N9T stainless steel, steel melting, steel pouring, ingot mold lubricant, oxidizing lubricant, reducing lubricant, evaporative lubricant, refractory powder, slag powder, naphthalene, anthracene, petrolatum, lakoil lubricant

ABSTRACT: The effect of ingot mold lubrication on the quality of the surface of stainless steel ingots (1Kh18N9T) was studied experimentally. The casts were produced by both top- and bottom-pouring methods. The results showed that the addition of oxidizing or reducing powders to the usual lubricant did not eliminate the formation of crust and of pitted surface, while evaporative lubricant applied to cool molds decreased the number of pits but increased various defects associated

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ACCESSION NR: AP4019474

with the formation of crust. It was also determined that the absence of lubricant or the use of the refractory and slag powders as substitutes for lubricants increased the number of scabs on the ingot surface, and that the presence of moisture or of organic matter in such powders increased the degree of surface pitting. Adding dry borax to the "lakoil" lubricant improved somewhat the surface quality, whereas using naphthalene, anthracene, and petrolatum as lubricants created reducing conditions during steel pouring and resulted in a uniform "lubricating" layer of soot on the mold walls and produced a greatly improved general appearance of the ingot surface. Orig. art. has: 3 figures.

ASSOCIATION: Kuznetskiy metallurgicheskiy kombinat (Kuznetsk Metallurgical Combine)

SUBMITTED: 00 DATE ACQ: 27Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 003 OTHER: 000

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LEVIN, A.M.; GLAZOV, A.N.; VERSHININ, V.I.; LANILOV, P.M.; PASHCHENKO, V.Ye.

Characteristics of the production of catalyzer steel with a low addition content. Izv. vys. ucheb. zav.; chern. met. 8 no.10:62-68 '65. (MIRA 18:9)

1. Sibirskiy metallurgicheskiy institut i Kuznetskiy metallurgicheskiy kombinat.

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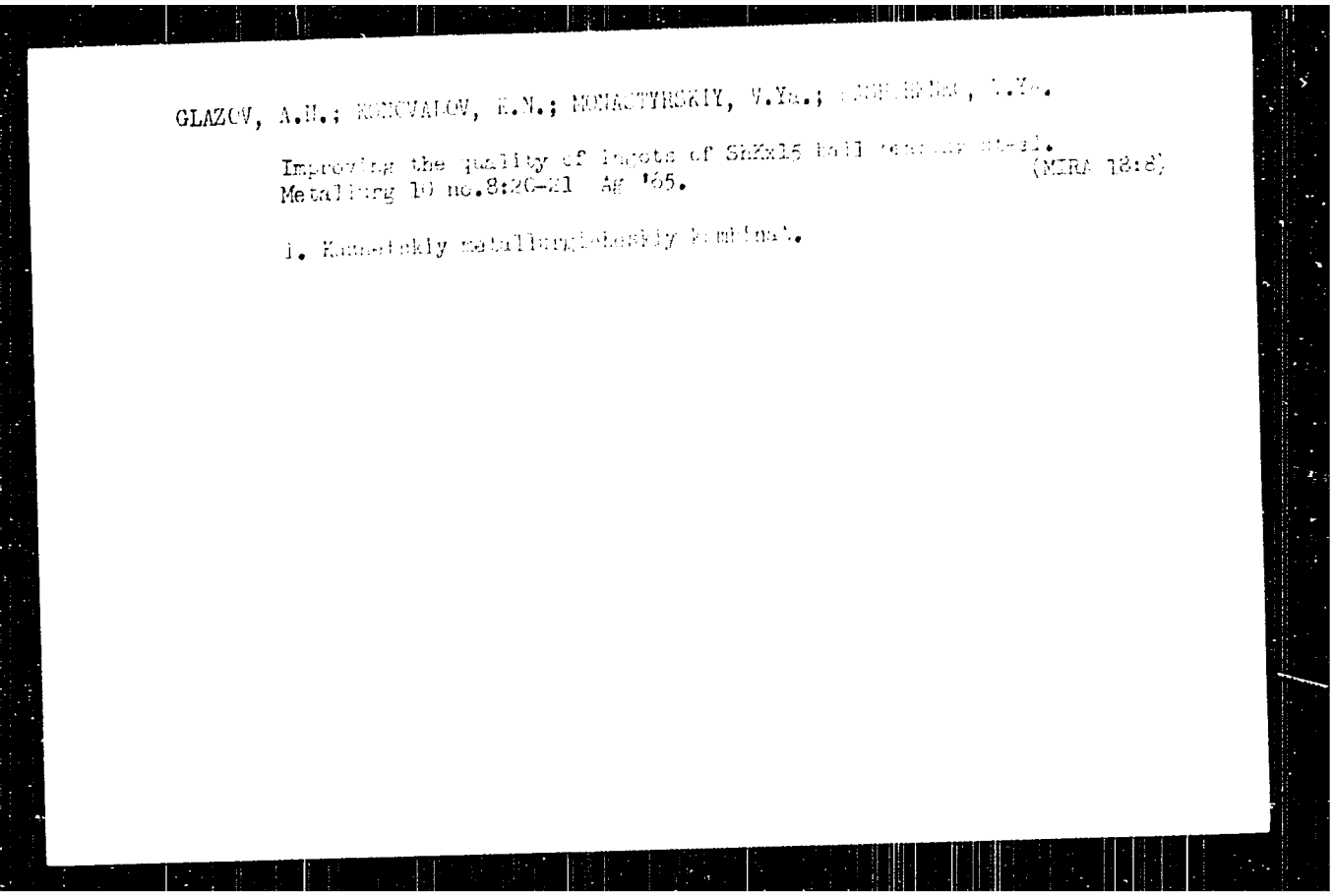

GLAZOV, A.N.; KONOVALOV, E.N.; MONASTYRSKIY, V.Ya.; [illegible]

Improving the quality of ingots of 5Kh5V2F hot-work steel. (MIRA 18:8)
Metallurg 10 no.8:20-21 Ag '65.

1. Kamenskiy metallurgicheskiy kombinat.

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GLAZOV, A.N., inzh.; DANILOV, P.M., kand. tekhn. nauk; ZAMARAYEV, Ye.M., inzh.; MESYATS, V.I., inzh.; PASHCHENKO, V.Ye., inzh.

Influence of the technology of smelting on the quality of Kh17N7IU steel sheet and rolled shapes. Stal' 25 no.10 911-913 O '65. (MIRA 18:11)

1. Kuznetskiy metallurgicheskiy kombinat.

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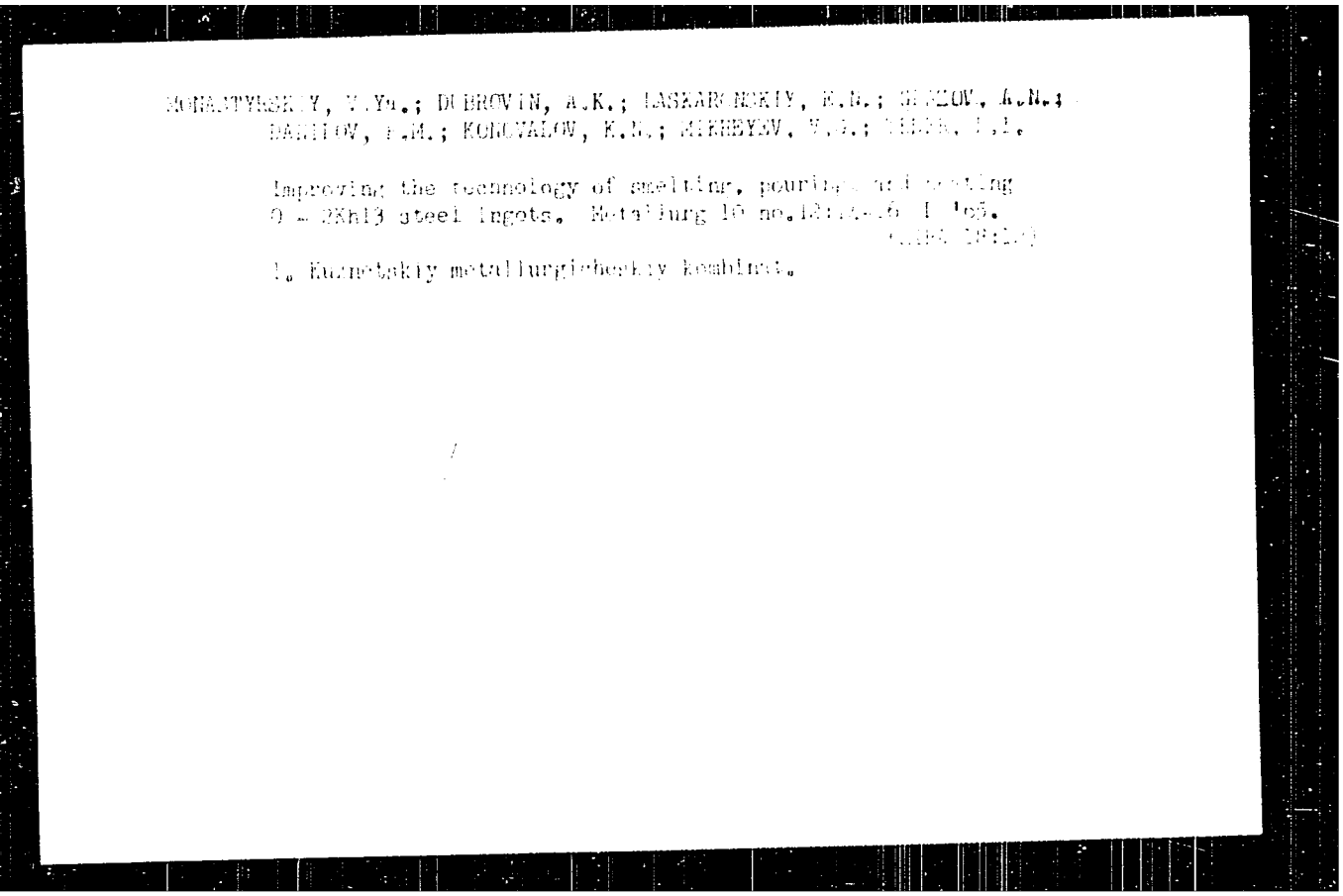

MONASTYRSKIY, V.Yu.; DUBROVIN, A.K.; LASKARZHEVSKIY, E.N.; MIZELOV, A.N.; BARILOV, I.M.; KONOVALOV, K.N.; MIRNYY, V.I.; [illegible]

Improving the technology of smelting, pouring, and forging 0.4-2Kh13 steel ingots. Metallurg 10 no.12:[illegible] D '65.

(MIRA 19:1)

1. Zaporozhskiy metallurgicheskiy kombinat.

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L 29252-66 EWP(j)/EWT(m) RM/WW/JW

ACC NR: AP6019314 SOURCE CODE: UR/0286/65/000/012/0022/0022

INVENTOR: Levin, A. M.; Glazov, A. N.; Vershinin, V. I.; Danilov, P. M.; Plekhanov, P. S.; Pashchenko, V. Ye.; Lachinov, S. S.; Kuznetsov, L. D.; Rabina, P. D.; Levitskaya, T. T.; Tatarov, F. S.; Lipinskaya, V. P.; Chernyeyeva, Z. M.; Alekseyeva, Z. S.

ORG: none

TITLE: Steel for manufacturing ammonia synthesis catalyzer. Class 18, No. 171877

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 22

TOPIC TAGS: steel, ammonia, inorganic synthesis, catalysis

ABSTRACT: A steel for manufacturing ammonia synthesis catalyzers is distinguished by an increased catalyzer activity and has the following chemical composition: 0.10% C, 1.0-2.0% Al, 0.05% Mn, 0.008% P, 0.008% S, 0.05% Cr, 0.10% Cu, 0.05% Ni, 0.40% Si, balance--iron. [JPRS]

SUB CODE: 11, 07 / SUBM DATE: none

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

104-3-13/45

AUTHOR: Barkan, Ya.D., Boyarevich, V.Ya and Glazov, A.P., Engineers.

TITLE: Non-synchronous connection of power stations. (Nesinkhronnoye vklyucheniye elektrostantsiy)

PERIODICAL: "Elektricheskiye Stantsii" (Power Stations), 1957, Vol.28, No.3, pp. 44 - 46 (U.S.S.R.)

ABSTRACT: The use of automatic reclosure without checking synchronism on single circuit lines fed from both ends can greatly increase the reliability of power stations. Calculations of the currents that occur when generators are connected whilst the voltages are out of phase by large angles serve as criteria of the applicability of automatic reclosure without synchronisation. Limitations on automatic reclosure often result from particular conditions of the power station and calculations showed that it could be applied without limitation to only one power station in five on a system. However, tests have shown that if the balance of reactive and power loads is maintained in the separate parts of the power system the currents on reclosing are 14 - 18% less than the calculated values. The region of applicability of automatic reclosure can often be extended by taking proper account of experimental data in this way. Often the frequency of heavily loaded systems does not fall as much as calculations might suggest

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Non-synchronous connection of power stations. (Cont.)

when the link is lost because the fall of frequency itself causes loss of load. The article describes a series of tests that were carried out on a power system to ascertain whether automatic reclosure without synchronisation could be applied. The results of the tests are tabulated. Synchronism was re-established in 1 - 3 seconds and the number of cycles of asynchronous running was not greater than eight. The change of frequency is illustrated in graphs - the frequency was restored from 44 c/s to normal in less than 2 secs. About 40 asynchronous switchings were made and prolonged asynchronous conditions, longer than 20 secs. were observed in only two cases; these unusual cases were thought to be due to the condition of the turbine governors. The experiments were repeated at other power stations with good results and it was shown that asynchronous switching can be applied to all lines of the power system connecting thermal power stations for all practically possible conditions. It has accordingly been introduced on all lines except those leading to hydro-electric power stations.

Card 2/3 It is concluded that in analysing the possibility of applying automatic reclosure local conditions must be taken into account. The magnitudes of loads and their distribution in the system largely govern the nature of the processes that occur on

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Non-synchronous connection of power stations. (Cont.)

reclosure and the rapidity with which synchronism is re-established. At large overload, effect associated with voltage drop have a marked effect on the reduction of frequency. The region of application of automatic reclosure may be extended by making experimental determinations of current values of automatic reclosure.

There are 3 figures.

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AT4010695 S/2601/63/000/017/0111/0119

AUTHOR: Glazov, A. P.; Ly*sak, L. I.; Tikhonov, L. V.; Khazanov, M. S.

TITLE: Investigation of changes in the fine crystalline structure of alloy ZhS-6K during thermal fatigue

SOURCE: AN UkrRSR. Insty*tut metalofizy*ky*. Sbornik nauchny*kh trudov, no. 17, 1963. Voprosy* fiziki metallov i metallovedeniya, 111-119

TYPIC TAGS: thermal fatigue, turbine, turbine blade, thermal stress, macro deformation, microdeformation, roentgenography, cracking, elasticity, alloy Zhs-6K, alloy crystal structure

ABSTRACT: Thermal fatigue is one of the basic factors leading to breakage of gas turbine blades. Continuous, cyclic, thermal loads when starting, stopping, or changing operating conditions sharply decrease the durability of the blades. During the process of cyclic thermal loading cracks usually appear in the surface layers of the blades and quickly lead to breakage. It is usually agreed that thermal stress is the most important factor occurring in processes without fixed thermal influences. Thermal stress surface is

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greatest on the layers; hence structural changes are more evident there. During the loading process an accumulation of elastic macrodeformations takes place leading to the formation of cracks. In this study the blades of a gasturbine were investigated by an X-ray (roentgenographic) method; the blades were tested for thermal stability in conditions maximally approaching working conditions with respect to temperature and speed of the gas stream. X-ray examinations of the blades were made before and after the appearance of cracks. Roentgenographic investigation of the hard solution on the surface layers was conducted in a ionization unit URS-50I which automatically registered the diffused radiation. The results showed that considerable structural changes occur during cyclic, thermal loading only on the surface layers of blades with thickness 0.05 - 0.10 mm. Noticeable changes occur with a relatively low number of thermocycles (about 100). With further increase in the number of thermocycles structural changes do not occur either before or after the formation of cracks. Further, with an increase in the number of thermocycles, the zone of coherent diffusion first increases from an initial 3.10^{-6} cm to a magnitude of 10^{-3} mm and then decreases to 3.10^{-6} cm, after which cracks appear. In blades with cracks the dimensions of the area of coherent diffusion is 10^{-3} cm. During cyclic thermal loading of blades no noticeable accumulation of elastic macro and microdeformations occurs in surface layers as compared with their initial state. At the same

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time, before the formation of a crack, intensive accumulation of plastic deformations is noticeable in the zones of the formation of the crack, accompanied by an increase in the density (closeness) of dislocation. Orig. art. has: 5 figures.

ASSOCIATION: Insty*tut Metaloflzy*ky* AN UkrRSR (Institute of Metallurgical Physics AN UkrRSR)

SUBMITTED: 00	DATE ACQ: 31Jan64	ENCL: 00
SUB CODE: MM, PR	NO REF SOV: 012	OTHER: 000

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

ACCESSION NR: AT4042834 S/2601/64/000/018/0060/0068

AUTHOR: Glazov, A.P.; Tikhonov, L. V.; Khazanov, M. S.

TITLE: Radiographic study of the surface of turbine blades tested for heat resistance

SOURCE: AN UkrSSR. Institut metallofiziki. Sbornik nauchny*kh rabot, no. 18, 1964. Voprosy* fiziki metallov i metallovedeniya (Problems in the physics of metals and physical metallurgy), 60-68

TOPIC TAGS: gas turbine, gas turbine blade, turbine blade heat resistance, turbine blade surface crack, blade surface radiography, narrow beam method, surface oxide film effect, microcrystalline transition layer, mosiac structure, structural disorientation.

ABSTRACT: The size of mosaic structure fragments, the disorientation of adjacent fragments and a parameter characterizing the concentration heterogeneity of the δ-solid solution in various sectors of the surface of gas turbine blades tested for heat resistance were determined by x-ray using a narrow beam with low angular divergence. The irradiated area and volume were 1.57 mm^2 and $7.85 \cdot 10^{-6}$ cm^3, respectively. The average divergence was $12.5 \cdot 10^{-3}$ radians. The methodology is given in detail. The results indi-

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ACCESSION NR: AT4042834

cate the presence of a thin microcrystalline transition layer down the length of the blades prior to and after formation of cracks. It is concluded that the surface oxide film plays a significant part in structural changes resulting in crack formation. The study confirmed results of previous similar studies by other Soviet writers and the authors suggest that studies of dislocation defects and vacancies in the surface layers can yield valuable information on factors governing thermal fatigue of turbine blades. Orig. art. has: 4 graphs, 5 microphotos and 8 formulas.

ASSOCIATION: Institut metallofiziki AN UkrSSR (Metallophysics Institute, AN UkrSSR)

SUBMITTED: 21Mar63 ENCL: 00

SUB CODE: PR, MM NO REF SOV: 002 OTHER: 003

Card 2/2

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L 24446-66 EWT(m)/EWP(w)/EWA(d)/T/EWP(t) IJP(c) JD/HW/GS
ACC NR: AT6010581 (N) SOURCE CODE: UR/0000/65/000/000/0153/0160 43 41 B+1

AUTHOR: Glazov, A. P.; Tikhonov, L. V.

ORG: Institute of Physics of Metals, AN UkrSSR (Institut metallofiziki AN UkrSSR)

TITLE: Crystallostructural changes due to periodic thermal loading in the surface layer of guide vanes made from ZhS-6K alloy

SOURCE: AN UkrSSR. Mekhanizm plasticheskoy deformatsii metallov (Mechanism of the plastic deformation of metals). Kiev, Naukova dumka, 1965, 153-160

TOPIC TAGS: cyclic test, thermal fatigue, guide vane, crystal structure, plastic deformation

ABSTRACT: The paper is a continuation of a previous work (Glazov, A. P., Tikhonov, L. V., Khazanov, M. S., "Problems in the Physics and Science of Metals, 18", *Izd-vo AN UkrSSR*, Kiev, 1964) based on improved methods. More accurate experimental data are given and a number of generalizations are made. Guide vanes made from ZhS-6K alloy were subjected to thermocyclic treatment on a special installation with the following parameters: maximum temperature--800°C, minimum temperature--400°C, time

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of a cycle--120 seconds. The modifications made in the x-ray method used in the previous work are described. Three blades were studied subjected to 300, 560 and 600 cycles. It is found that a periodically changing temperature field causes irreversible processes resulting in considerable structural and phase transformations which gradually accumulate and reduce the resistance of the material to alternating thermal stresses, resulting in final destruction. The greatest structural and phase transformations in ZhS-6K alloy occur in a thin surface layer of the turbine blade (0.05-0.1 mm deep), which is due to the distribution of thermal stresses through the cross section of the blade and to the effect of the aggressive high-temperature gas stream. Thus the state of the surface layer determines the thermal fatigue strength of the blades. The thermal fatigue process may be divided into two successive stages: 1. (up to approximately 100 cycles) a reduction in the flaw density of the crystal structure in the surface layer accompanied by softening; 2. (beginning at a number of cycles which is strongly dependent on the maximum temperature) accumulation of defects in the crystal structure and formation of cracks. The processes which take place in the material during both stages are closely associated with the initial structure of the surface layer. The physical and chemical changes which take place in the surface layer are discussed. The plastic deformation which takes place during the second stage does not increase the overall macro- and microelastic

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ACC NR: AT6010581

deformation in the surface layer as compared to its initial state. A characteristic feature of crystallostructural changes during operation of guide vanes is irregularity in the state of the surface layer in various sections of the blade. This is due to differences in temperature conditions. The greatest structural changes are observed at approximately the middle of the blade on the concave side toward the intake edge. Thermal fatigue cracks are observed in this region as a rule. This indicates that crack formation in the blades is directly associated with plastic effects in the softened surface layer due to periodic thermocyclic stresses. The strong localized irregularity in surface deformation is visible from grain to grain and within the confines of a single grain. The greatest structural changes during thermocyclic treatment occur in grains with considerable structural defects. Intergranular boundaries of complex configuration may serve as stress concentrators and thus are potential sites of crack formations. The structural irregularity of the alloy from grain to grain has a considerable effect on thermal fatigue in causing localized plastic deformation accompanied by concentration of stresses in both intercrystalline and transcrystalline fracture. Orig. art. has: 2 figures, 1 table.

SUB CODE: 11,20/ SUBM DATE: 26Oct64/ ORIG REF: 009/ OTH REF: 000

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

TOKMAKOV, P.P.; GLAZOV, A.V.; LYASIK, S.A.

Origin of the unusual form of quartz "pebbles" in the eastern slope of the Southern Urals. Trudy IGEM no.40:62-65 '60. (MIRA 13:11)
(Ural Mountains--Quartz)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZOV, A.V.

Genetic classification of crystalliferous deposits. Trudy VNIIP [MS] 3 no.2:125-126 '60. (MIRA 14:4)
(Quartz--Classification)

APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2"

"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

KUZ'MIN, A.A.; GLAZOV, B.M.

Automatic program control of oil trap machinery. Mash. i neft. obor. no.12:20-23 '64. (MIRA 18:1)

1. Moskovskiy institut "Soyuzvodkanalproyekt".

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GLAZOV, D.N., inzh.

Gyroflywheel locomotives and the possibility of using them in Kuznetsk Basin Mines. Izv. vys. ucheb. zav.; gor. zhur. no.8: 149-153 '61. (MIRA 15:5)

1. Kemerovskiy gornyy institut. Rekomendovana kafedroy gornykh mashin Kemerovskogo gornogo instituta.
(Kuznetsk Basin--Mine railroads)
(Gyroscopic instruments)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

GIAZOV, D.N., dotsent; MERKASOV, V.I., [illegible]

Determination of the principal parameters of inertial accumulators for underground main line locomotives with pyroelectric drives. Sbor. nauch. trud. Kem. gor. inst., no. [illegible] 1963.

1. Gorno-elektromekhanicheskiy fakul'tet Kemerovskogo gornogo instituta.

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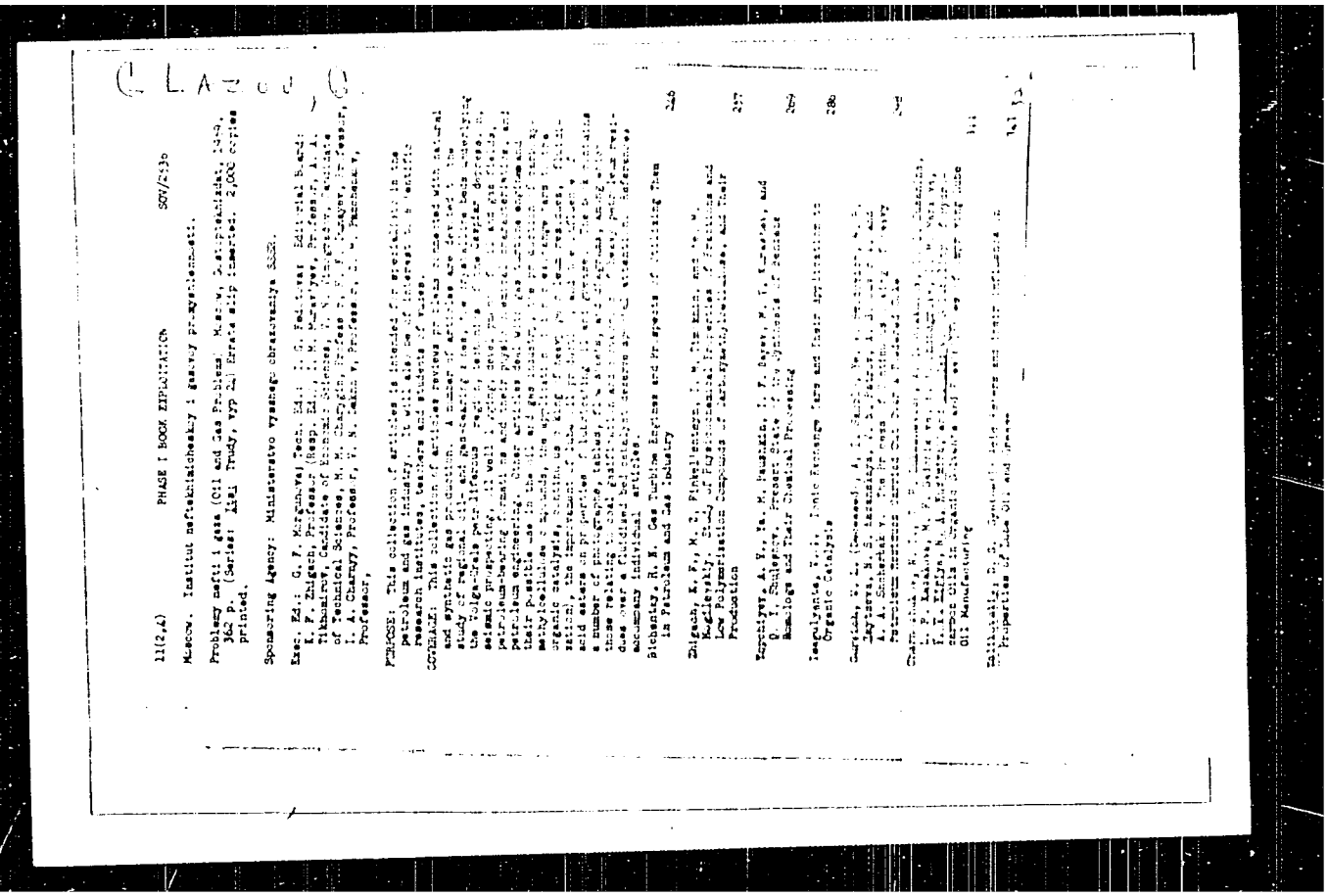

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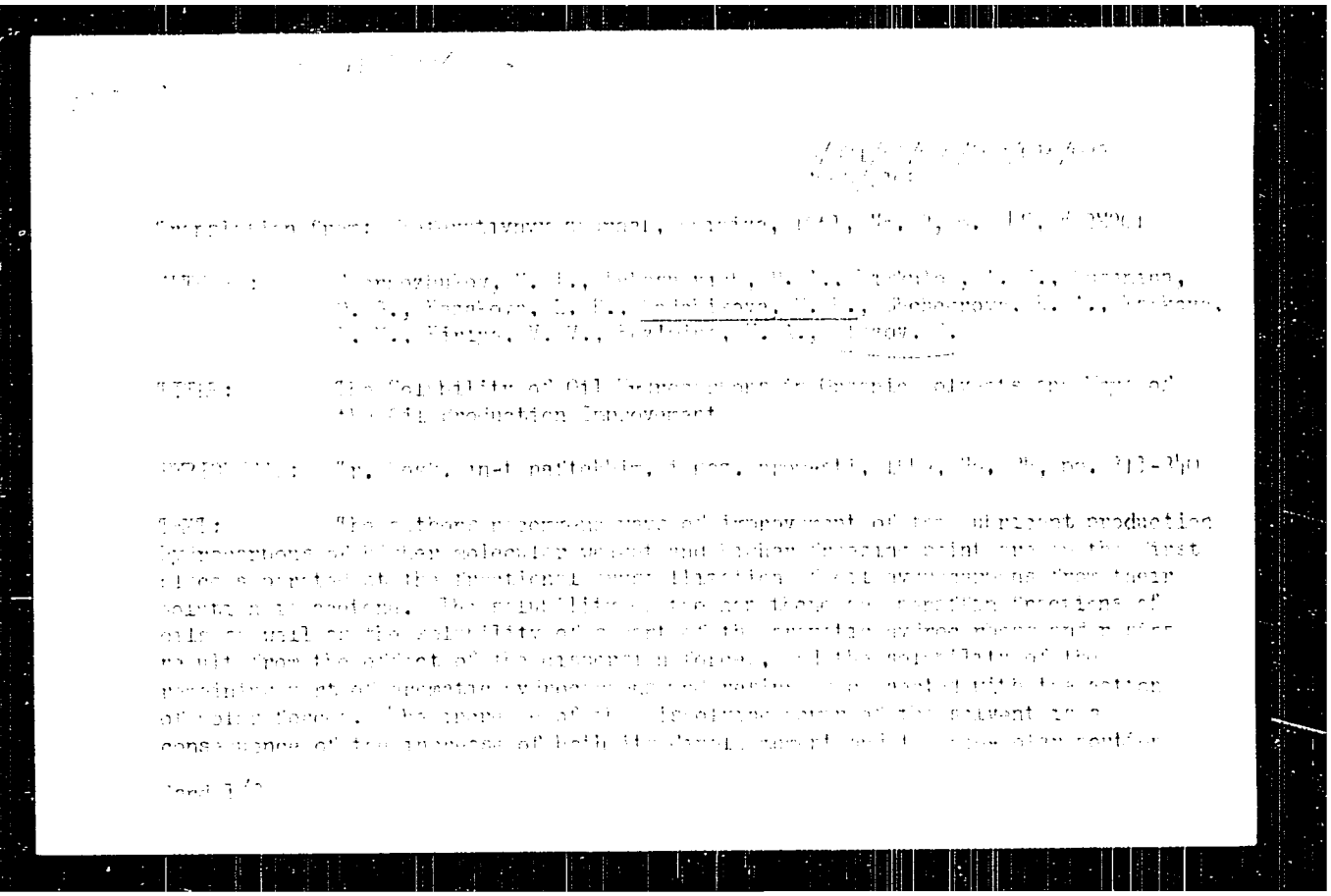

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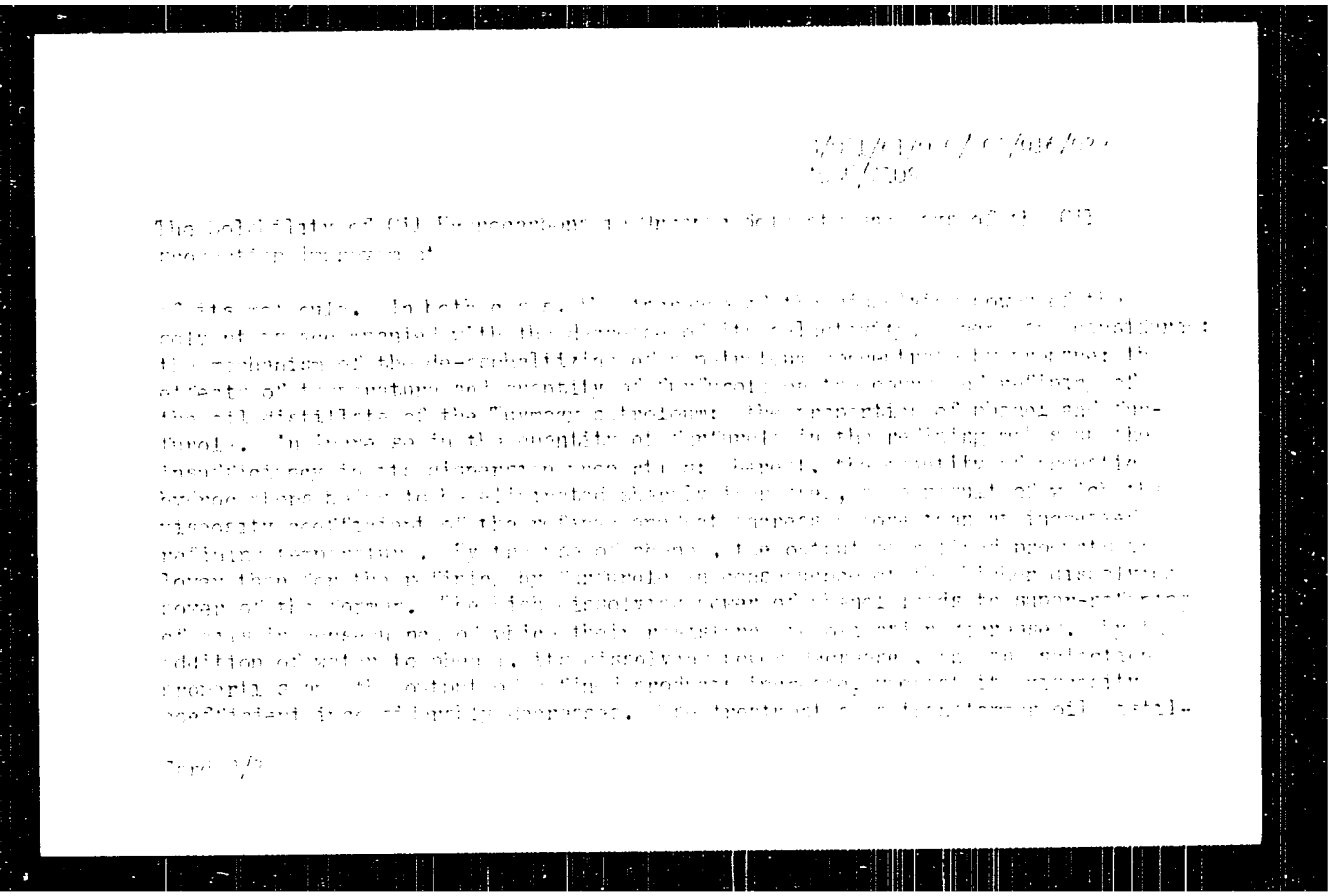

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[illegible]

The Solubility of oil Hydrocarbons in Organic Solvents [illegible] of the Oil Production Improvement

[illegible] from sulfurous paraffin-base petroleum [illegible] it possible to obtain [illegible] oil resistant to [illegible] high susceptibility to antioxidant admixtures. The two-stage deparaffinization of [illegible] oil fractions makes it possible to increase the output of oils. [illegible] of deparaffinized oils and the filtration [illegible] also [illegible] admixtures, in particular, of the [illegible] [illegible]

[illegible]

Translator's note: This is the full translation of the original [illegible] abstract.

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GLAZOV,G.A.; NITROFANOV, S.F., doktor tekhn. nauk,prof., retsenzent; PETROV, V.A., kand.tekhn.nauk,dots.,red.; USIKOV, N.N., inzh., red.izd-va; SHCHEMININA,L.V., tekhn.red.

[Mechanized lines in small lot production] Mekhanizirovannye potochnye linii v melkoseriinom proizvodstve. Moskva, Mashgiz, 1963. 76 p. (MIRA 17:3)

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"APPROVED FOR RELEASE: 09/24/2001 CIA-RDP86-00513R000500020002-2

SHUL'MAN, Yevgeniy Fedorovich; GLAZOV, G.A., inzh., retsenzent; VARKOVETSKAYA, A.I., red. izd-va; DENINA, I.A., red. izd-va; PETERSON, M.M., tekhn. red.

[Line production in the machinery and instrument industries] Potochnoe proizvodstvo v mashinostroenii i priborostroenii; iz opyta zavodov s seriinym proizvodstvom. Moskva, Mashgiz, 1962. 222 p. (MIRA 15:9)
(Machinery industry) (Instrument industry)
(Assembly-line methods)

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