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CHERNYKH, N. P., Candidate Tech Sci (diss) -- "The effect of hydrogen on the long-range strength of certain steels". Moscow, 1959. 19 pp (Acad Sci USSR, Inst of Metallurgy im A. A. Baykov), 150 copies (KL, No 24, 1959, 143)

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CHERNYKH, N.P.

PHASE I BOOK EXPLOITATION SOV/3559

Akademiya nauk SSSR. Institut metallurgii. Nauchnyy sovet po probleme zharoprochnykh splavov

Issledovaniya po zharoprochnym splavam, t. 5 (Investigations of Heat-Resistant Alloys, Vol 5) Moscow, Izd-vo AN SSSR, 1959. 423 p. Errata slip inserted. 2,000 copies printed.

Ed. of Publishing House: V.A. Klimov; Tech. Ed.: I.F. Kuz'min; Editorial Board: I.P. Bardin, Academician, G.V. Kurdyumov, Academician, N.V. Ageyev, Corresponding Member, USSR Academy of Sciences (Resp. Ed.), I.A. Oding, I.M. Pavlov, and I.F. Zudin, Candidate of Technical Sciences.

PURPOSE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

COVERAGE: This book, consisting of a number of papers, deals with the properties of heat-resisting metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and W on the heat-resisting properties of various alloys are studied. Deformability and workability of certain metals as related to the thermal conditions are the object of another study described. The problems of hydrogen embrittlement, diffusion and the deposition of ceramic coatings on metal surfaces by means of electrophoresis are examined. One paper describes the apparatus and methods used for growing monocrystals of metals. Boron-base metals are critically examined and evaluated. Results are given of studies of interatomic bonds and the behavior of atoms in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

Lanskaya, K.A., N.M. Kireyeva, and E.N. Gorchakova. EI 736 Austenitic Steel 19

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BORODULIN, V.A., inzh.; CHERNYKH, N.P., inzh.

New products for artificial beds in jigs. Obog. i brik.ugl. no.10:3-13 '59. (MIRA 13:9)
(Kuznetsk Basin--Coal preparation)

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28(5) SOV/32-25-5-26/56

AUTHOR: Chernykh, N. P.

TITLE: Method for the Investigation of Tubes With Respect to Resistivity Under Internal Pressure of Gaseous or Liquid Medium (Metodika ispytaniya trub na dlitel'nuyu prochnost' pod vnutrennim davleniyem gazoobraznoy i zhidkoy sredy)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 5, pp 591 - 595 (USSR)

ABSTRACT: The Engineers V. D. Molchanova and M. I. Mil' took part in the investigation. For the purpose of determining the true characteristics of the resistance in the case of tube metals a method was worked out for testing the tubes (Ref 1) with respect to resistivity (R). For these tests in which (R) is investigated under a pressure of gas, vapor-gas, liquid or pasty neutral or corrosive media flowing through the tube, a suitable device IT-1 (Fig 1) (scheme of the device) was constructed. From the schematical drawing and the description it may be seen that the sample is tested at 600 atm hydrogen pressure or nitrogen and varying temperature and duration. The sample is in a heat conductive, hydrogen-resistant protective tube made of EI 579 steel and is heated in an electric furnace under automatic con-

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trol of temperature by means of a millivoltmeter ERM-47; temperature is automatically recorded by an electron potentiometer EPP-09. The manometers with Bourdon tube are protected against destruction by hydrogen pressure, those with a spiral tubule according to Boys of steel EI 579 are not destroyed. The tubes are tested on the described device with respect to (R) under nitrogen- and hydrogen pressure (for 2000 - 3000 hours) in the course of 1.5 years. It is also possible to investigate hydrogen diffusion by the walls of the tube under creep conditions and the inter-crystalline corrosion under the pressure of the medium. Tests of (R) were carried out at 600 atm hydrogen- and nitrogen pressure and at 550° on samples of the steels EI 579, EI 579 B and 30 KhMA and the results from the experimental function (7) between tension and the time until the destruction are graphically shown (Fig 3). (R) of tubes under hydrogen pressure is weaker than under nitrogen pressure which appeared most clearly in the case of steel 30 KhMA and least clearly in the case of steel EI 579 B. The microstructure of the samples showed that under hydrogen pressure the grain limit is relatively rapidly destroyed. Nb, V, W, Cr and elements forming stable

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Method for the Investigation of Tubes With Respect to Resistivity Under Internal Pressure of Gaseous or Liquid Medium SOV/32-25-5-26/56

carbides increase the resistance of steel to the destructive effect of hydrogen. There are 3 figures and 7 references, 5 of which are Soviet.

ASSOCIATION: Irkutskiy filial Vsesoyuznogo nauchno-issledovatel'skogo i konstruktorskogo instituta khimicheskogo mashinostroyeniya (Irkutsk Branch of the All-Union Scientific Research- and Designing Institute of Chemical Machine Construction)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

S/137/63/000/003/011/016
A006/A101

AUTHOR: Chernykh, N. P.

TITLE: Investigating the effect of hydrogen upon the endurance strength of some steels

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 3, 1963, 63 - 64, abstract 3I337 ("Tr. Vses. n.-i. i konstrukt. in-t khim. mashinostr.", 1960, no. 34, 33 - 49)

TEXT: Information is given on a method of testing pipes for σ_{end} under pressure of a flowing medium and under conditions approaching industrial ones. The investigation was made with tubular specimens of grade ЭИ 579 (EI579), ЭИ 579Ъ (EI579B), 30ХМА (30KhMA) and "20" steel at H_2 and N_2 pressure (600±10) atm and (550±2°C) temperature, and with specimens that were preliminarily held in H_2 and N_2 under the same conditions. σ_{end} of the specimens, held in H_2, was lower than σ_{end} of specimens in the initial state and held in N_2, but higher than for pipes under H_2 pressure. This is related to the saturation of the pipe

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wall with H_2 during the test. An exception are specimens of EI579B steel for which σ_{end} do not change under the aforementioned conditions and are equal to σ_{end} in the initial state. To characterize the metal of pipes operating under creep conditions, the term "hydrogen durable strength" is introduced which means the stress causing the breakdown during a given period of time at a given temperature and H_2 pressure. To calculate pipes operating under the pressure of hydrogen-containing media, it is recommended to employ as a calculation characteristic the ultimate hydrogen endurance strength obtained during tests with tubular specimens under H_2 pressure.

Ye. Linetskiy

[Abstracter's note: Complete translation]

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

BORODULIN, V.A., inzh.; SARYCHEV, V.P.; CHERNYKH, N.P.

Practices in the operation of jigs with an artificial bed of weighted rubber. Ugol' 35 no.8:59-60 Ag '60. (MIRA 13:9)

1. Kuznetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Borodulin, Chernykh). 2. Obogatitel'naya fabrika "Tomusinskaya 1-2" (for Sarychev).
(Coal preparation plants--Equipment and supplies)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

GILYAZETDINOV, M.M., inzh.; CHERNYKH, N.P., inzh.

Suspended matter from local weighting compounds and results of operation of a new laboratory separator. Nauch. trudy KuzNIIUgleobog. no.1:5-33 '62. (MIRA 16:8)
(Coal preparation—Equipment and supplies)
(Separators (Machines)—Testing)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

GANOV, V.S., inzh.; PTITSYN, V.M., inzh.; CHERNYKH, N.P., inzh.

Regulating settling machines in the central preparation plant at the "Koksovaya-1" Mine. Nauch. trudy KuzNIIUgleobog. no.1: 80-85 '62. (MIRA 16:8)
(Kuznetsk Basin—Coal preparation plants—Electric equipment)
(Automatic control)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

S/184/62/000/004/003/006
D040/D113

AUTHORS: Chernykh, N.P., Candidate of Technical Sciences, and Mil', M.I., Engineer

TITLE: Effect of high-temperature high-pressure soaking in hydrogen on the strength of steels

PERIODICAL: Khimicheskoye mashinostroyeniye, no. 4, 1962, 28-30

TEXT: Tubular specimens of ЭИ 579 (EI579), ЭИ 579 Б (EI579B), 30 ХМА (30KhMA) and "20" steel were soaked for 2-1000 hrs in hydrogen at 200-600°C and 300-600 atm. The first two grades are used extensively for service at 510°C and 700 atm; "20" and 30KhMA steels destined for lower service temperatures were chosen so as to find the nature of the hydrogen effect. The maximum experimental temperature was based on the hydrogenation process with possible overheats considered. Only one steel, i.e. EI579B, developed by the Laboratory of Refractory Metals of the TsNIIChM, had an unchanged

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D040/D113

Effect of high-temperature high-pressure....

microstructure and unchanged mechanical properties after soaking for 1000 hrs in hydrogen, though its creep resistance was slightly reduced. Its composition is (in %): 0.16 C, 0.38 Mn, 0.32 Si, 0.007 S, 0.030 P, 2.72 Cr, 0.15 Ni, 0.45 Mo, 0.40 W, 0.70 V and 0.50 Nb. All other steel grades were strongly affected by hydrogen, and less strongly affected by nitrogen. The temperature limit at which soaking in hydrogen at 600 atm did not affect the long-term strength was 200°C for steel "20", 350°C for 30KhMA, and 530°C for EI579. Higher alloying reduced the sensitivity to hydrogen. Increased creep rate and lower plasticity of the metal in the fracture is explained by decarbonization and destruction of the grain boundaries caused by hydrogen. High deformation before cracking stated in EI579B steel is apparently due to the stable Nb carbides which were not destroyed in 1000 hrs in hydrogen. The process of creep and destruction on the grain boundaries is accelerated due to the presence of extremely porous grain boundaries caused by the destruction of the carbides by hydrogen. There are 4 figures and 2 tables.

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L 6900-65 EWT(m)/EPF(c)/EWP(q)/EWP(b) Pr-4 AFETR/SSD/ASDF/AFWL MJW/JD
S/0137/64/000/006/I004/I005

ACCESSION NR: AR4044232

SOURCE: Ref. zh..Metallurgiya, Abs. 6I424

56

AUTHOR: Chernyakh, N. P.

TITLE: The influence of hydrogen on the stress-rupture strength of certain steels

CITED SOURCE: Sb. Vliyaniye vodoroda na sluzhebn. svoystva stali. Irkutsk, 1963, 22-46

TOPIC TAGS: steel, hydrogen, stress rupture strength, stress, rupture strength

TRANSLATION: There are determined ($\sigma_{s-r\ s}$) of steels EI579, EI579B, 30KhMa, and steels 20, EI802, and EI994 in a H_2 medium and there is established the change of microstructure under the influence of H_2, pressure, and temperature. Tubular samples 20 mm in diameter and 140 mm long were placed in an electric tube heater and after heating to a given temperature through the sample was passed H_2 at constant pressure (300 or 600 atm). Different stresses were attained by changing the

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ACCESSION NR: AR4044232

thickness of the walls. At 550° the $\sigma_{s-r\ s}$ of steel EI579 under H_2 pressure under test conditions for 50 hours is equal to $\sigma_{s-r\ s}$ under N_2 pressure. With an increase of the duration of the tests, $\sigma_{s-r\ s}$ drops. At 600°, $\sigma_{s-r\ s}$ under H_2 pressure decreases more intensely and in a shorter time. Steel EI579B, containing Nb, at 550° insignificantly lowered the $\sigma_{s-r\ s}$ under H_2 pressure. The extrapolated $\sigma_{s-r\ s}$ for steel EI579B is higher than for steel EI579 ($\sigma_{s-r\ s}$ is 12 and [illegible] kg/mm², respectively). For steel 30ХhMA at 550°, $\sigma_{s-r\ s}$ under H_2 pressure of 300 atm is lower than under N_2 pressure, but higher than under H_2 pressure of 600 atm. With an increase in the duration of the tests [illegible] difference becomes larger. For steel 20, $\sigma_{s-r\ s}$ under H_2 pressure of [illegible] is significantly [illegible] than under N_2 pressure. For high-chrome steels EI802 (C-0.11%, Cr-12.5%, Mo-0.57%, W-0.75%, V-0.28%) and EI994 (C-[illegible], [illegible]%, Mo-[illegible]%, W-[illegible]) under H_2 pressure of 600 atm at 600°, $\sigma_{s-r\ s}$ is equal to that under N_2 pressure ($\sigma_{10,000}$ 7 kg/mm²). During brief tests, changes in the microstructure of steel under the influence of H_2 are not observed. With an increase of the time of the test there is noted a thickening of the grain boundaries and there is brittle fracture along the grain boundaries. During very long tests there begins

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ACCESSION NR: AR4044232

decarbonization of the internal surface, and the mechanical properties of the metal of the walls of the pipes decrease. For steel EI802 after tests under H_2 pressure of 600 atm at 60° for 597 hours, changes in structure are not revealed. The $\sigma_{s-r\,s}$ of cylindrical samples coincides with that of tubular samples tested under identical conditions under N_2 pressure. $\sigma_{s-r\,s}$ under H_2 pressure is lower for tubular samples than for cylindrical samples. As the calculating characteristic for pipes operating under H_2 pressure it is necessary to use $\sigma_{s-r\,s}$ for [illegible] the operating pressure. There is given an [illegible] of the mechanism of steel fracture under conditions of creep under H_2 pressure on the basis of the [illegible] theory. See also Journal of Abstracts, Metallurgy, 1963, 71385.

SUB CODE: MM, AS ENCL: 00

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ACCESSION NR: AR4041597 S/0137/64/000/005/E008/E008

SOURCE: Ref. zh. Metallurgiya, Abs. 5E48

AUTHOR: Turitsina, N. P.; Molchanova, V. D.; Cherny*kh, N. P.

TITLE: Investigation of hydrogen stability of welded joints

CITED SOURCE: Sb. Vliyaniye vodoroda na sluzhebn. svoystva stali. Irkutsk, 1963, 98-115

TOPIC TAGS: welded joint, welded joint property, hydrogen

TRANSLATION: In Irkutsk branch of All Union Scientific Research and Designing Institute of Chemical Machine Building the influence of H_2 on properties of steel welded joint 20Kh2.5 Moscow Branch were investigated in conditions of thick wall body work of high pressure apparatus (under pressure H_2 320 - 600 kgs/ cm^2 at 300 - 350°). Chemical composition and mechanical properties of base and built up metal are given. Method of investigations and results of

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central pipe welded joints test of coiled construction apparatuses are described, and also large sections of welded joints, carried out by automatic welding. 3 illustrations.

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GILYAZETDINOV, M.M., inzh.; CHERNYKH, N.F., inzh.

Efficiency of sorting during coal preparation in the STS three-product separator, designed by the Kuznetsk Coal Preparation Research Institut. Nauch.trudy KuzNIUgleobog. no.23:9-25 '64. (MIRA 17:10)

Results of industrial testing of the STS-1 three-product separator designed by the Kuznetsk Coal Preparation Research Institute. Ibid.: 25-35

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FADEYEV, A.D., kand. ist. nauk; YAKOVLEVA, A.P.; CHERNYKH, N.S., otv. red.; KALASHNIKOVA, P.I., red.; KOGAN, I.B., red.; KRASNUSHKIN, A.A., red.; CHISTYAKOV, V.P., red.; KOZHEVNIKOVA, V.A., red.; DURASOVA, V.M., tekhn. red.

[The V.I.Lenin Volga Hydroelectric Power Station, 1950-1958] Volzhskaia GES imeni V.I.Lenina (1950-1958 gg); dokumenty i materialy. Kuibyshev, Kuibyshevskoe knizhnoe izd-vo, 1963. 407 p. (MIRA 16:7)

1. Kommunisticheskaya partiya Sovetskogo Soyuza. Kuybyshevskiy oblastnoy komitet. Partiynyy arkhiv.. 2. Starshiy prepodavatel' kafedry istorii partii Kuybyshevskogo politekhnicheskogo instituta (for Fadeyev). 3. Nauchnyy sotrudnik partarkhiva Kuybyshevskogo oblastnovo komiteta Kommunisticheskoy partii Sovetskogo Soyuza (for Yakovleva).
(Volga Hydroelectric Power Station (Lenin))

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, N.S.

KAVERIN, A.A.; KUKLIN, G.V.; YEGORCHENKO, I.F.; CHERNYKH, N.S.

Observations of the partial lunar eclipse of May 24, 1956, in Irkutsk. Astron.tsir. no.172:14-18 Ag '56. (MLRA 10:1)

1. Irkutskaya gorodskaya astronomicheskaya observatoriya gosudarstvennogo universiteta imeni A.A.Zhdanova.
(Eclipses, Lunar--1956)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KAVERIN, A.A.; KUKLIN, G.G.; CHERNYKH, N.S.; CHERNYKH, L.I.

Observations of the transit of Mercury across the sun's disk on May 6, 1957, in Irkutsk. Astron. tsir. no.181:16-17 Je '57. (MIRA 13:3)

1. Irkutskaya gorodskaya astronomicheskaya observatoriya Gosudarstvennogo universiteta im. Zhdanova.
(Mercury (Planet), Transit of)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH N. S.

KULAGIN, S.G.; KOVBASYUK, L.D.; DAGAYEV, M.M.; ROZENBLYUM, N.D.; YEGORCHENKO, I.F.(Irkutsk); KAVERIN, A.A. (Irkutsk); KONSTANTINOVA, T.G. (Irkutsk); KUKLINA, V.A. (Irkutsk); KUKLIN, G.V. (Irkutsk); SAZONOVA, Z.G., (Irkutsk); CHERNYKH, L.I. (Irkutsk); CHERNYKH, N.S. (Irkutsk); DEMIDOBICH, Ye.G.; BRONSHTEN, V.A.; YAKHONTOVA, N.S. (Leningrad); PEROVA, N.B.; DOKUCHAYEVA, O.D.; KATASEV, L.A.; KLYAKOTKO, M.A.; PARENAGO, P.P.; SHCHERBINA-SAMOYLOVA, I.S.; MASEVICH, A.G.; RYABOV, Yu.A.; SHCHEGLOV, V.P.; PEREL', Yu.G.; MARTYNOV, D.Ya.; FEDYNSKIY, V.V.; VORONTSOV-VEL'YAMINOV, B.A.; ZIGEL', F.Yu.; BAKULIN, P.I., otv.red.; RAKHLIN, I.Ye., red.; AKHLAMOV, S.N., tekhn.red.

[Astronomical calendar] Astronomicheskii kalendar'. [A yearbook; variable section for 1959] Ezhegodnik. Peremennaia chast', 1959. Red.kollegiia P.I. Bakulin i dr. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1958. 370 p. (Vsesoiuznoe astronomo-geodezicheskoe obshchestvo, no.62) (MIRA 12:2)

1. Gosudarstvennoye astronomo-geodezicheskoye obshchestvo (for Kulagin, Kovbasyuk, Demidovich). 2. Moskovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva (for Dagayev, Rozenblyum, Bronshten, Perova).

(Astronomy--Yearbooks)

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SOV/35-59-8-6201

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 8, p 15

AUTHOR: Chernykh, N.S.

TITLE: The Observations of Occultations of Stars by the Moon in Irkutsk

PERIODICAL: Astron. tsirkulyar, 1958, February 28, Nr 189, p 27

ABSTRACT: Two moments of occultations, obtained in November 1957 with the aid of a Zeiss refractor (D = 130 mm, 94 X) are given.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

SOV/35-59-8-6203

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 8, p 15

AUTHOR: Chernykh, N.S.

TITLE: The Observations of Occultations of Stars by the Moon in Irkutsk

PERIODICAL: Astron. tsirkulyar, 1958, July 3, Nr 193, p 32

ABSTRACT: The moments of eight occultations of stars, obtained in January-March 1958 are given.

Card 1/1

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

SOV/35-59-8-6195

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 8, p 15

AUTHORS: Kaverin, A.A., Chernykh, N.S.

TITLE: The Observation of the Occultation of Venus by the Moon on July 14, 1958

PERIODICAL: Astron. tsirkulyar, 1958, July 3, Nr 193, p 33

ABSTRACT: The moments of four contacts of the occultation of Venus by the Moon are given, obtained at the Irkutsk Municipal Astronomical Observatory.

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SOV/35-59-9-7256

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 9, p 62 (USSR)

AUTHORS: Kaverin, A.A., Chernykh, N.S., Yegorchenko, I.F.

TITLE: Observation of the Total Lunar Eclipse on November 7, 1957, in Irkutsk

PERIODICAL: Astron. tsirkulyar, 1958, July 3, Nr 193, pp 34 - 35

ABSTRACT: The observations were carried out in good weather. The brightness of the eclipse according to Danjon's scale was estimated to be of the 4 degree. The moments of the 4 contacts are given, as well as those of the covering and uncovering of the lunar craters. The observations of the integrated brightness of the Moon were carried out with the aid of a visual photometer. During the eclipse the brightness changed from -11^m8 to $-4^m.3$.

G.A.M.

Card 1/1

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KAVERIN, A.A.; CHERNYKH, N.S.

Occultation of Regulus by Venus on July 7, 1959. Astron.tsir. no.197:17-18 N '58. (MIRA 12:7)

1. Irkutskaya gorodskaya astronomicheskaya observatoriya. (Occultations)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KULAGIN, S.G.; KOVBASYUK, L.D.; DAGAYEV, M.M.; LAZAREVSKIY, V.S.; KAVERIN, A.A.; KUKLIN, G.V.; CHERNYKH, N.S.; DEMIDOVICH, Ye.G.; BRONSHTEN, V.A.; YAKHONTOVA, N.S. (Leningrad); PEROVA, N.B.; DOKUCHAYEVA, O.D.; KATASEV, L.A.; MASEVICH, A.G.; SHCHERBINA-SAMOYLOVA, I.S.; ARSENT'YEV, V.V.; FRANK-KAMENETSKIY, D.A.; LEYKIN, G.A.; SHCHEGLOV, P.V.; PEREL', Yu.G.; BAKULIN, P.I., otv.red.; MASEVICH, A.G., red.; PARENAGO, P.P., red.; RAKHLIN, I.Ye., red.; AKHLAMOV, S.N., tekhn.red.

[Astronomical calendar. A yearbook; variable section for 1959] Astronomicheskii kalendar'. Ezhegodnik. Peremennaia chast', 1960. Red.kollegiia P.I.Bakulin i dr. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1959. 351 p. (Vsesoiuznoe astronomo-geodezicheskoe obshchestvo, no.63) (MIRA 13:1)

1. Gosudarstvennoye astronomo-geodezicheskoye obshchestvo (GAGO) (for Kulagin, Kovbasyuk, Lazarevskiy, Demidovich). 2. Moskovskoye otdeleniye Vsesoyuznogo astronomo-geodezicheskogo obshchestva (MOVAGO) (for Dagayev, Bronshten, Perova).
(Astronomy--Yearbooks)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, N.S. (Irkutsk)

Observation of Mrkos' comet (1957d) in Irkutsk. Astron. tsir. no.199: 1-2 Ja '59. (MIRA 13:2)

(Comets--1957)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

GRASYUK, A.Z.; ZUYEV, V.S.; KOKURIN, Yu.L.; KRYUKOV, P.G.; KURBASOV, V.V.; LOBANOV, V.F.; MOZHZHERIN, V.M.; SUKHANOVSKIY, A.N.; CHERNYKH, N.S.; CHUVAYEV, K.K.

Optical location of the moon. Dokl. AN SSSR 154 no.6:1303-1305 F '64. (MIRA 17:2)

1. Fizicheskiy institut im. P.N.Lebedeva AN SSSR i Krymskaya astrofizicheskaya observatoriya AN SSSR. Predstavleno akademikom D.V.Skobel'tsynym.

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, N.S.

Observations of minor planets at the Crimean Astrophysical Observatory of the Academy of Sciences of the U.S.S.R. Biul. Inst. teor. astron. 10 no.3:236-237 '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

ACC NR: AP6019595 SOURCE CODE: UR/0293/66/004/003/0414/0426

AUTHOR: Kokurin, Yu. L.; Kurbasov, V. V.; Lobanov, V. F.; Mozhzhorin, V. M.; Sukhanovskiy, A. N.; Chernykh, N. S.
ORG: none

TITLE: On the feasibility of measuring lunar disk and orbital parameters by optical radar

SOURCE: Kosmicheskiye issledovaniye, v. 4, no. 3, 1966, 414-426
TOPIC TAGS: lunar albedo, moon, laser application

ABSTRACT:

Yu. L. Kokurin and coworkers [1] have reviewed the theoretical problems in laser ranging of the moon, with the object of determining more accurate values for several Earth-Moon parameters. The authors discuss methods for 1) obtaining a more detectible reflection signal and 2) using the measured range to compute such parameters as mean lunar orbital radius, lunar disk radius, parallax constant, and Earth equatorial radius.

The basic range equation for a reflected electromagnetic signal is taken as a starting point. The factors are the same as in the radar range equation, except that the return signal varies inversely as the square, rather than as the fourth power, of range, since it is assumed that all the generated laser flux is incident on the Moon. Using an average figure for atmospheric absorption, a lunar albedo of 0.1, and an effective telescope area of 5.3 m^2 (actual area of a telescope currently in use), the authors calculate

Card 1/5 UDC: 523.31.082.5 + 521.61.082.5

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ACC NR: AP6019595

that the relationship between reflected and transmitted energy is

$$W_{refl} \approx 2 \times 10^{-19} \; W_{tr}.$$

It follows that with the highest sensitivity photodetectors now available, W_{tr} must be at least 150 joules in order to obtain from the Moon a consistently detectible reflection, i.e., one that does not require statistical analysis to be detected. The pulse must be as short as possible to maximize range resolution; however, present laser pulses of the energy level demanded would have durations of the order of milliseconds, which means a range uncertainty of several hundred kilometers. If Q-switching is used to shorten pulse time, there is an intolerable loss in power amplitude. The conclusion is that only when more powerful short-pulse lasers are developed can there be a significant refinement in lunar ranging measurements.

Factors which degrade the laser technique are also discussed. One of these is the unavoidable divergence of the beam in the atmosphere, estimated at 2" to 3", which would give a lunar spot of some 3.5–5 km across. Contour irregularities within the illuminated area can add to the range uncertainty in the return signal, in the form of range "smear." Owing to the Moon's curvature, a similar effect occurs which increases as a function of

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ACC NR: AP6019595

the distance of the target area from the center of the lunar disk. An obvious way to improve the technique would be to place some form of mirror on the Moon; the authors propose an optical corner reflector for this purpose (see Fig. 1) and have analyzed ways of optimizing its design. With the density of the reflector material assumed to be the limiting factor, it is shown that one large reflector is more effective than several small ones. For a glass corner reflector, the gain β in return signal over that from the lunar surface alone (assuming a ruby laser) is calculated to be $\beta = 2.15 \times 10^{-3} a^4$, where a is the length of a joint edge in cm (see Fig. 1). Assuming a glass density of 2.7 g/cc, the authors find values of gain ranging from $\beta = 25$ for $a = 10.4$ cm up to $\beta = 1330$ for $a = 28.2$ cm. Some loss in reflectivity

Fig. 1. Corner reflector (Hexagon indicates effective reflective area)

must be anticipated, such as by dust contamination, so the foregoing figures are based on a reflection coefficient of only 0.5.

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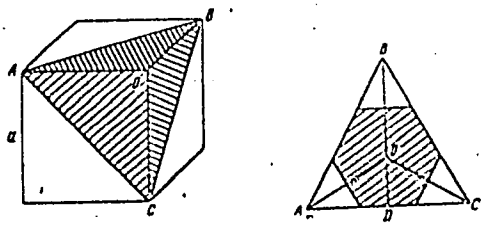
ACC NR: AP6019595



Orientation of the reflector would be critical. If the plane of the aperture is not nearly normal to the laser beam, a severe loss in return signal results; for example, a 15° offset would mean a signal loss of approximately 30% (Initial acquisition of the reflector is not discussed). Constraints on reflector geometry are also quite severe, if diffraction losses are to be minimized. For a reflector with $a = 14$ cm, it is estimated that the angular tolerance between adjoining faces should be held within 0.1"; with such tight tolerances, temperature extremes and mechanical stresses could be

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critical factors in reflector performance. Under reasonably good conditions, however, it is calculated that a reflector with $\beta = 40$ would return an adequate detectible signal to Earth from a Q-switched ruby laser of 4 to 5 joules output.

The possibility of confusing a genuine signal with noise or surface rather than reflector return can be minimized by using multiple detection and correlating the results. In fact, if three photomultipliers are used simultaneously, the experiment could be performed in daylight, with a low probability of error.

The authors conclude by giving the procedures for calculating mean lunar orbital radius (mean distance between Earth and Moon mass centers), radius of the lunar disk, Earth equatorial radius, and Earth-Moon parallax constant. All of these are obtainable from knowledge of an arbitrary line-of-sight distance from the Earth to the Moon, measured as described above. The calculations show that, with the improved ranging method, parameters such as the Moon's orbital radius and disk radius could be determined to accuracies of several hundreds of meters, a great improvement over the present accuracy of several kilometers. Unfortunately, these accuracy figures do not seem to be tied to any tolerance on the range measurement.

/FSB: v. 2, no. 9/ Orig. art. has: 33 formulas, 2 figures and 1 table.

Card 5/5 SUB CODE: 03,20 / SUBM DATE: 20May65 / ORIG REF: 009 / OTH REF: 003

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

MAKARENKO, S.F., inzh.; STOYANCHENKO, S.I., inzh.; CHERNYKH, O.G., inzh.; SUMTSOV, V.F., inzh.

Melting steel in a converter with side blow stopping at a given carbon content. Mashinostroenie no.4:46-48 Jl-Ag '62. (MIRA 15:9)

1. Luganskiy zavod imeni Parkhomenko.
(Bessemer process)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

L 12434-65 EWT(m)/EWP(w)/EPR/EWA(d)/EWP(t) [illegible] Pg-4 [illegible]

ACCESSION NR: AP4047693 [illegible]

AUTHORS: Cherny*kh, O. G. (Engineer) [illegible] Ya. (Engineer)

TITLE: Influence of different components [illegible] abrasion resistance [illegible] aluminum alloys

SOURCE: Mashinostroyeniye, no. 5, 1964, [illegible]

TOPIC TAGS: aluminum alloy, iron alloy, manganese alloy

ABSTRACT: In order to determine the influence of different components on the abrasion resistance of aluminum-iron a[illegible] temperatures, samples [illegible] which the Al, Cr, and Si contents were [illegible] wide range [illegible] abrasion tests. Results of the exper[illegible] from [illegible] sharply increases th[illegible] the Mn content was changed from 0.47-7.62% and the C content from 0.26-0.84% it was found that the alloy with 3.2% Mn, 1.28% Si, 22.8% Al, and 0.75% C had the best corrosion resistance; in changing the Cr content from 0.29-6.28% with 24% Al and 1.4-1.9% Si it was found that increasing the Cr content above 1.34% had very little effect on the abrasion resistance; in changing the Si content from 2.86-8.15% (Al ≈ 24%) the abrasion resistance increased but at high Si concentrations the metal was discolored.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

L 12434-65

ACCESSION NR: AP4047693

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00

SUB CODE: MM NO REF SOV: [illegible] OTHER: [illegible]

Card 2/2

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

ACCESSION NR: AP4044902 S/0032/64/030/009/1137/1138

AUTHORS: Cherny*kh, O. G.; Stoyanchenko, S. I.; Sumtsov, V. F.

TITLE: An apparatus for determining the abrasive wearing of alloys at high temperatures

SOURCE: Zavodskaya laboratoriya, v. 30, no. 9, 1964, 1137-1138

TOPIC TAGS: alloy abrasion, metal durability/ Kh25N12T steel, 30Yu6 alloy, 30 Yu16 alloy, 30 Yu 20 alloy, Kh18N9T steel

ABSTRACT: An apparatus, shown in Fig. 1 on the Enclosure, was developed for studying abrasive wearing of alloys at temperatures up to 1200C. Here (1) is a resistance oven, (2) is a cover, (3) is rotating bar, (4) is self-centering disk with three holders (diameter 10.1 mm and depth 10 mm) for three round (diameter 10 mm and length 20 mm) specimens, (5), (6) are chromomagnesium abrasive, (7) is an air-cooled breech, (8) is gearing, (9) is a thermocouple for oven temperatures. The temperatures and rotation velocity for testing can be varied through broad limits. Losses through sample abrasive wearing are determined by the formula: $\Delta G = q\frac{10}{F\tau}$, where

ΔG is the loss in weight of the specimen in grams with 1 m^2 of exposed alloy surface per hour; q - the mean magnitude of abrasive wearing of three specimens

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ACCESSION NR: AP4044902

(loss measured in milligrams), F - area of exposed specimen surface in square centimeters, and τ - time of testing in hours. A plot is presented showing the temperature dependence of abrasive losses for three aluminum alloys tested at fixed rotation velocity, fixed normal load, and through the temperature interval from 700 to 1100C. The tests indicate that increased aluminum content yields better abrasion resistance. Orig. art. has: 2 figures and 1 equation.

ASSOCIATION: Luganskiy mashinostroitel'ny*y zavod im. Parkhomenko (Lugan' Machine Construction Factory)

SUBMITTED: 00 ENCL: 01

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

Card 2/3

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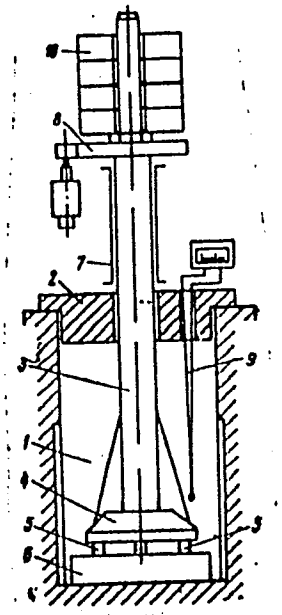
"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

ENCLOSURE: 01

ACCESSION NR: AP4044902

Fig. 1. A scheme of the apparatus for determining abrasive wearing of alloys at high temperatures.



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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

L 22465-66 EWT(d)/EWT(m)/EWP(w)/EWP(v)/T/EWP(t)/EWP(k)/EWP(h)/EWP(l) JD/DJ

ACC NR: AP6013577 SOURCE CODE: UR/0032/65/031/009/1140/1141

AUTHOR: Chernykh, O. G.

ORG: Lugan Machinebuilding Institute (Luganskiy mashinostroitel'nyy institut)

40
B

TITLE: Improved device for studying the abrasive resistance of alloys at elevated temperatures

SOURCE: Zavodskaya laboratoriya, v. 31, no. 9, 1965, 1140-1141

TOPIC TAGS: wear resistance, abrasive, annealing, furnace, metallurgic testing machine, alloy

ABSTRACT: Existing devices for determining the wear of alloys are designated for operation under normal and elevated temperature (up to 500°C) conditions. However, many parts operating in agglomerating factories, in annealing furnaces and other devices are worn away by moving materials at 900-1000°C.

To study the abrasive wear of alloys at high temperatures the authors designed and constructed a device which consists of a resistance furnace and an abrasive cylinder made of refractory material which is 300 mm long and 100 mm in diameter. A detailed description of the device is presented.

The wear value is determined by the difference in weight of the specimen before and after testing and by the change of its length related to 1 meter of path at established load and rate of motion of the specimen on the abrasive. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 20, 11, 13 / SUBM DATE: none

Card 1/1 BK UDC: 620.178.162:1.03

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, O.I.

Some data on the Pre-Upper Permian post-igneous activity in the eastern part of the Kurama Range. Uzv.geol.zhur. 7 no.1:38-40 '63. (MIRA 16:4)

1. Kompleksnaya geologos"yemochnaya poiskovaya ekspeditsiya Glavnogo upravleniya geologii i okhrany nedr pri Sovete Ministrov UzSSR.
(Kurama Range--Mineralogy)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

BERG, P.P., doktor tekhn. nauk; LYASS, A.M., doktor tekhn. nauk, prof., retsenzent; CHERNYAK, O.V., inzh., red.; TIKHANOV, A.Ya., tekhn. red.

[Molding materials] Formovochnye materialy. Moskva, Mashgiz, 1963. 407 p. (MIRA 17:1)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, O.V. (Leningrad, P-101, ul. Skorokhodova, d.3, kv.21)

Acid and alkaline phosphatase activity in the blood serum in cancer and suppurative processes of the lung. Vop. onk. 10 no. 2:24-28 '64. (MIRA 17:7)

1. Iz kliniki gospital'noy khirurgii 1-go Leningradskogo meditsinskogo instituta imeni akademika Pavlova (zav. kafedroy - prof. F.G. Uglov).

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S. D.

CHERNYKH, S. D. -- "INVESTIGATION OF THE PROCESS OF DRYING OF SEED EARS OF CORN." SUB 29 APR 52, ALL-UNION SCI RES INST OF MECHANIZATION OF AGRICULTURE (VIM) AND ALL-UNION SCI RES INST OF ELECTRIFICATION OF AGRICULTURE (VIESKH) (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCE)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.D., kandidat tekhnicheskikh nauk.

Studying the process of seed corn drying. Sel'khozmashina no.10: 3-7 O '56. (MLRA 9:12)

(Corn (Maize)--Drying)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.I.

Increasing metal recovery from ores by flotation with a countercurrent of froth. TSvet.met. 34 no.10:81-83 O '61. (MIRA 14:10)

1. Akhtal'skaya obogatitel'naya fabrika.
(Flotation)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

RUBENCHIK, L.I. [Rubenchyk, L.I.]; KORDYUM, V.A.; CHERNYKH, S.I.

Development of micro-organisms in the leaves of some plants under natural conditions. Mikrobiol.zhur. 24 no.2:3-7 '62. (MIRA 15:12)

1. Institut mikrobiologii AN UkrSSR.
(MICRO-ORGANISMS) (PLANTS)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KORDYUM, V.A.; EYNOR, L.O.; LAZURKEVICH, Z.V.; CHERNYKH, S.I.

Characteristics of respiration of the thermophilic variant of Chlorella vulgaris. Dop. AN URSR no.5:655-658 '63. (MIRA 17:9)

1. Institut mikrobiologii AN UkrSSR i Institut botaniki AN UkrSSR. Predstavleno akademikom AN UkrSSR D.K.Zerovym.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.I.

Modernization of Mekhanobr-1, 3A and 4A flotation machines.
TSvet. met. 36 no.6:86-89 Je '63. (MIRA 16:7)

(Flotation--Equipment and supplies)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNIKH, S.I.

Increasing the efficiency of dressing complex metal ores from the Gyumushlug deposit. Tsvet. met. 37 no.10:73 O '64. (MIRA 18:7)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.I.

Improving the design of suspension bearings for spiral classifiers. Tsvet. met. 37 no.10:79 O '64. (MIRA 18:7)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.I.

Ways to reduce the consumption of copper sulfate. TSvet. met. 38 no.2:87 F '65. (MIRA 18:3)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYEH, S.I.; AZAIYAN, R.G.

Adopting a two-stage comminution flow sheet at the Akhta Ore Dressing plant. Tsvet.met. 38 no.7:12-16 Jl '65. (MIRA 18:8)

APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6"

"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, S.I.

Industrial testing of the performance of small ball mills operating at high speeds. TSvet. met. 38 no.8:12-15 Ag '65. (MIRA 18:9)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

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24.3500

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 264 (USSR)

AUTHORS: Litvinova, P.S., Chernykh, T.F.

TITLE: On the Temperature Dependence of Absorption in Sulfide Phosphors in the Long Wave Region of Excitation

PERIODICAL: Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te, 1958, Nr 36, pp 329-332

ABSTRACT: The authors studied temperature quenching and the temperature dependence of absorption in two ZnS-Cu-phosphors under excitation conditions characterized by various wavelengths of the exciting light. Absorption begins to increase in the region where the rise in luminescence intensity during heating slows down and is replaced by a drop in intensity. A change in the wavelength of the exciting light does not affect the regularities in the absorption and temperature quenching of the phosphors. On the temperature quenching curve of one of the samples, the quenching of which begins at $\sim 90^{\circ}C$, a maximum is observed at $140^{\circ}C$. The rise in absorption decreases approximately in this region. The luminescence of this phosphor has a different spectrum at room temperature and at a

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SOV/58-59-7-16513

On the Temperature Dependence of Absorption in Sulfide Phosphors in the Long Wave Region of Excitation

temperature of 174°C. It is assumed that supplementary absorption in the region of temperature quenching is only connected with local lattice inhomogeneities, and not with a temperature shift of the edge or tail of intrinsic absorption.

K.S. Rebane

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CHERNYKH, V., inzhener.

Shortcomings in the organization of wages at the Veeikovskaia briquet plant. Sets.trud.no.2:116. F '56. (MLRA 9:7)
(Briquets (Fuel)) (Wages)

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CHERNYKH, V.

Experience in determining the potentialies for increased production at the enterprises of the Vladimir Economic Region. Biul. nauch. inform.: trud i zar. plata no.7:66-68 '59. (MIRA 12:10)
(Vladimir Province--Efficiency, Industrial)

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CHERNYKH, V.

Production specialization is an important factor in the increase of labor productivity. Sots. trud 5 no.6:11-20 Je '60. (MIRA 13:11)
(Industrial organization) (Labor productivity)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, V.

Production specialization is an important factor in the increase of labor productivity. Biul.nauch. inform.:trud i zar. plata 4 no.4:18-26 '61. (MIRA 14:6)
(Founding--Labor productivity)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

GEL'FOND, S. (g.Odessa); SHIGANOV, A. (g.Chernigov); SMETANINA, Z., pryadil'-shchitsa, udarnik kommunisticheskogo truda; DIL'DIN, M., rabochiy; SKRIPKIN, P. (g.Ulan-Ude); FILIPPOV, A. (g.Petropavlovsk); CHERNYKH, Vl. (g.Kursk)

From letters to the editors. Sov. profsoiuzy 16 no.21:54-57 N '60. (MIRA 13:10)

1. Fabrika imeni Balashova, g.Ivanovo (for Smetanina). 2. Sovkhoz "Teplichnyy", Moskovskaya obl. (for Dil'din).
(Trade unions)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KUSHNARENKO, A., inzh.; CHERNYKH, V., inzh.

Difficulties that can be overcome. Grazhd. av. 19 no.4:25 Ap '62. (MIRA 15:5)

(Akrports--Equipment and supplies)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KLIMENKO, K.; CHERNYKH, V.

Current problems in shortening the time required for mastering new machinery. Vop. ekon. no.1:26-35 Ja '64. (MIRA 17:3)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

RAVICH, B.M., inzh.; CHERNYKH, V.A., inzh.

New trends in coal briquetting. Ugol' Ukr. 4 no.7:8-11 Jl '60. (MIRA 13:8)

1. Moskovskiy gornyy institut.
(Briquets (Fuel))

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

YEFASHKIN, G.V.; CHERKYKH, V.A.

Strength of compressed products as a hyperbolic function of the compaction pressure. Konstr. uglegraf. mat. no.1:256-261 '64. (MIRA 17:11)

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L 29869-66 EWT(1)/EWP(m)/EWT(m)/T WW/DJ

ACC NR: AP6013215 SOURCE CODE: UR/0421/66/000/002/0139/0140

44
B

AUTHOR: Chernykh, V. A. (Moscow)

ORG: none

TITLE: Flow of a jet into a closed cylinder

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 2, 1966, 139-140

TOPIC TAGS: jet flow, boundary layer theory

ABSTRACT: The article gives an exact solution of the problem of the axisymmetrical flow of a jet of an ideal liquid into a closed cylinder, with an arbitrary ratio of length to diameter. The velocity field of an ideal liquid has a potential which must satisfy the Laplace equation

$$\frac{\partial^2 U}{\partial r^2} + \frac{1}{r}\frac{\partial U}{\partial r} + \frac{\partial^2 U}{\partial z^2} = 0 \qquad (1)$$

Here U is the potential of the velocities. In the present case, this equation must be solved with the following boundary conditions:

$$\partial U / \partial z = 0 \text{ at } z = l, \quad \partial U / \partial r = 0 \text{ at } r = a, \quad \partial U / \partial z = f(r) \text{ at } z = 0$$

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ACC NR: AP6013215

Here $\partial U/\partial r$, $\partial U/\partial z$ are the radial and axial components of the velocity vector, respectively; l is the length of the closed cylinder; a is the radius of the closed cylinder. The author uses the method of [redacted]ration [redacted]ables in the solution of the problem. Orig. art. has: 7 formulas and 1 figure.

SUB CODE: 20/ SUBM DATE: 22Oct65/ ORIG REF: 003.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, V.F.; AZELITSKAYA, R.D.; PONOMAREV, I;F.; MANDRYKIN, Yu.I.

Effect of alkalies on the mineral-forming process and hydration of calcium silicates. TSement 29 no.5:7-9 S-O '63. (MIRA 16:11)

1. Novocherkasskiy politekhnicheskiy institut.

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, V.F.; AZELITSKAYA, R.D.; PONOMAREV, I.F.

Clinker-forming compounds - water systems. Part 1: Effect of alkalies and active silica on the hydration of calcium silicates. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.5:834-840 '63. (MIRA 16:12)

1. Novocherkasskiy politekhnicheskiy institut imeni S.Ordzhonikidze, kafedra tekhnologii vyazhushchikh veshchestv.

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CHERNYKH, V.F.; PONOMAREV, I.F.; AZELITSKAYA, R.D.

Investigating the calcium silicate hydration process and the effect on it of caustic potash. Trudy NPI 154:15-26 '63. (MIRA 17:10)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, V.F.; AZELITSKAYA, R.D.; PONOMAREV, I.F.

Systems clinker-forming compounds-water. Part 2: Influence of sodium and potassium oxides and active alumina on the hydration in the system C_3A - C_4AF. Izv.vys.ucheb.zav.; khim.i khim.tekh. 7 no.6:976-981 '64. (MIRA 18:5)

1. Novocherkasskiy politekhnicheskiy institut imeni Ordzhonikidze, kafedra tekhnologii vyazhushchikh veshestv.

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PA 65T35

CHERNYKH, V. G.

USSR/Communications
Telephony
Cables, Telephone

Apr 1948

"Single-Channel Apparatus for High-Frequency Telephony," V. G. Chernykh, Engr, 3½ pp

"Vest Svyazi - Elektro-Svyaz'" No 4 (97)

Single-channel high-frequency systems can be used with steel as well as copper wire. Copper wire, however, will carry impulses farther than will steel wire under below-freezing temperature conditions. Briefly describes the operation of single-channel systems.

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CA CHERNYKH, V. I.

The Poole effect in glass. I. Cover glasses. A. M. Venderovich and V. I. Chernykh (Siberian Phys. Tech. Inst.). *Zhur. Tekh. Fiz.* 18, 317-28(1948).—(1) The effect, first established by Poole (*Phil. Mag.* 32, 112(1916)) for mica, of an exponential increase of the elec. cond. σ with the elec. field strength E, was subsequently shown to be due to a superposition, at high E, of an electronic cond. σ_e on the ionic cond. σ_i. In mica, the contribution of σ_e is almost 100% in $E = 5 \times 10^6$ v./cm. below 300°; it decreases with increasing temp. By the data of Pruzhimma-Granovskaya (*Zhur. Ekspl. Teoret. Fiz.* 7, 506(1937); *C.A.* 31, 5638[8]; 36, 3410[9]) for mica, and of V. (*Zhur. Ekspl. Teoret. Fiz.* 11, 448(1941)) for calcite at 107° and 95°, the variation of $\sigma_e = \sigma - \sigma_i$ (where σ = total elec. cond.) does not follow Poole's formula, but log σ_e is linear in $\sqrt{E}$, in conformity with Frenkel's theory. The ionic contribution σ_i in cryst. solids either does not change or changes only very little with increasing E. (2) In contrast, in amorphous substances both σ_e and σ_i increase with E. In glass, at 72 and at 90°, log σ is proportional to E down to the lowest E, i.e. $\sigma = \sigma_0 e^{\alpha E}$, where, in terms of the temp., $\sigma_0 = Ae^{-U/kT}$. The absence of a horizontal portion at low E indicates that the increase of ionic cond. with increasing E involves the same carriers that are present at the lowest E. If, in analogy to Frenkel's mechanism, ionic construction in a glass is conceived as occurring through motion of a cation from one unionized O atom to another, at a distance d generally greater than the distance between neighboring O atoms, and sepd. by a potential barrier U_1, the cond. in weak fields is $\sigma_0 = be^{-(U_1 + U_2)/2kT} = be^{-U/2kT}$, where U_1 = dissocn. energy. In a strong field E, the energy ϵEd imparted to the ion by field over the distance d becomes significant, and therefore $\sigma = be^{-(U - \epsilon Ed)/2kT} = \sigma_0 e^{\alpha Ed/2kT}$, where ϵ = charge of the ion. An exptl. estn. of $\alpha = \epsilon d/2kT$ permits an evaluation of d; from data of α, at 50°, $d \sim 1.2 \times 10^{-7}$ cm., of a plausible order of magnitude. In the face of conflicting literature reports on the temp. behavior of α, new detns. of σ as a function of E were made between 35 and 120°, on cover-glass samples heated in vacuo at 105°, and placed in dry air, with sputtered-on Ag electrodes. Plots of α as a function of the temp. show, depending on the specimen, discontinuous upward jumps of α in temp. ranges (approx. 75-90° and 100-115°) well below the softening temp. If these discontinuities of α are interpreted as discontinuous changes of d, they indicate structural transitions in the corresponding temp. ranges; such structural transitions are indicated also by observations of thermal expansion, n, and x-rays. (3) Plots of log σ as a function of E for crystd. (mat, milky) glass, obtained by 12 hrs'. heating at 600°, at 33.5 and 90°, consist of 2 rectilinear portions, one with a steeper slope at low, the other, less steep, at higher E. Each of these 2 slopes is practically the same at the 2 temps. The breaking point, at both temps., lies at E = 70 v./cm. These samples evidently consist of an outer layer of crystd. glass, of substantially higher σ, and an inner core of amorphous glass, of lower σ. The exptl. ratio of the 2 slopes cannot, however, be interpreted on the assumption of unequal increase of the true field strength in the 2 layers.

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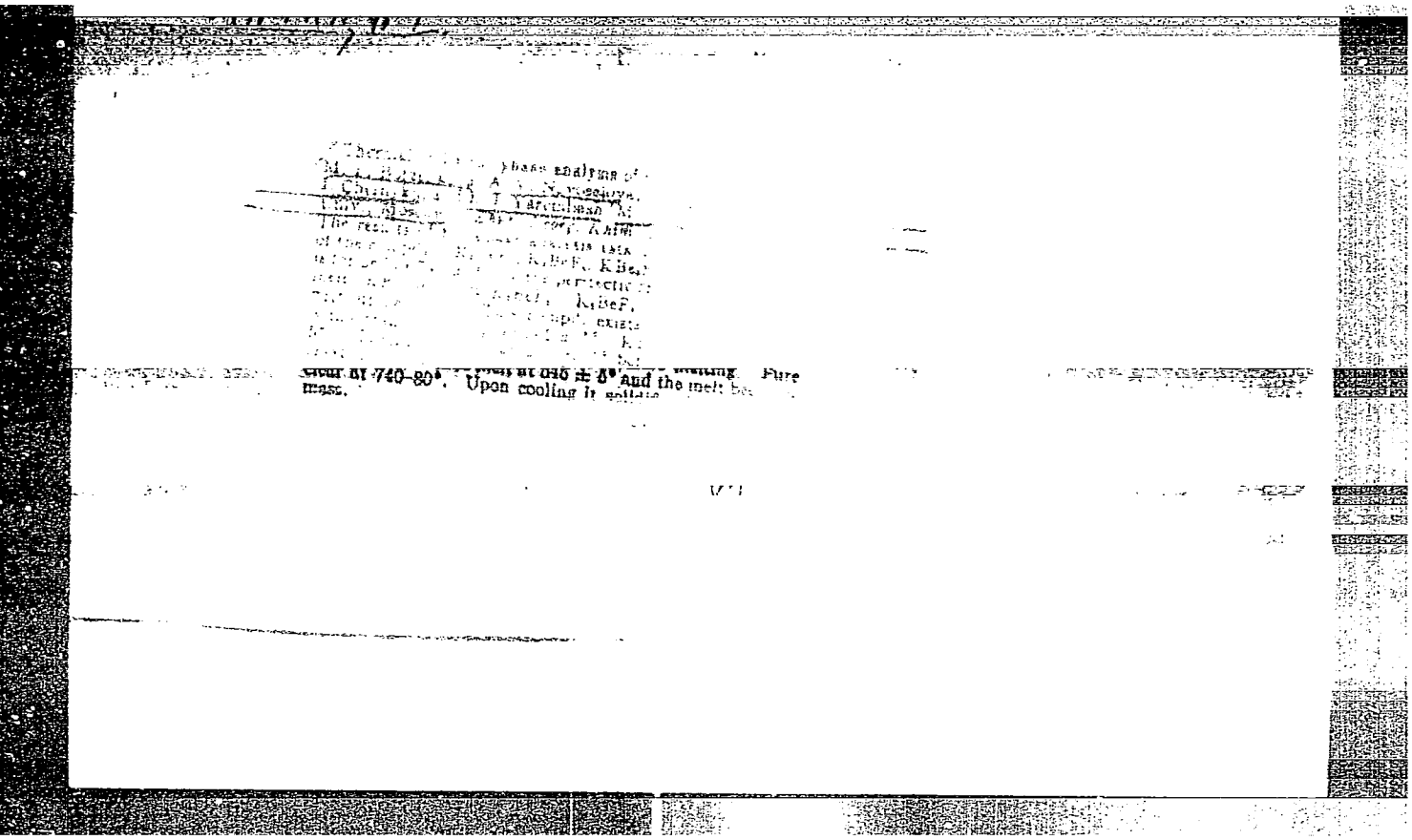

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CHERNYKH, V.I.

Plastic faucets. Plast.massy no.6:66-67 '61. (MIRA 14:5)
(Faucets) (Plastics)

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PETROV, K.A.; YEVDAKOV, V.P.; BILEVICH, K.A.; CHERNYKH, V.I.

Properties of phosphorus acid amides. Part 4: Reaction of aminolysis and phenolysis of amidophosphites and amidophosphonites. Zhur.ob.khim. 32 no.9:3065-3069 S '62. (MIRA 15:9)
(Phosphoramidous acid) (Phosphonamidic acid)

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CHERNYKH, V. I.

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PHASE I BOOK EXPLOITATION SOV/6246

Soveshchaniye po tseolitam. 1st, Leningrad, 1961.

Sinteticheskiye tseolity; polucheniye, issledovaniye i primeneniye (Synthetic Zeolites: Production, Investigation, and Use). Moscow, Izd-vo AN SSSR, 1962. 286 p. (Series: Its: Doklady) Errata slip inserted. 2500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk. Komisiya po tseolitam.

Resp. Eds.: M. M. Dubinin, Academician and V. V. Serpinskiy, Doctor of Chemical Sciences; Ed.: Ye. G. Zhukovskaya; Tech. Ed.: S. P. Golub'.

PURPOSE: This book is intended for scientists and engineers engaged in the production of synthetic zeolites (molecular sieves), and for chemists in general.

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Synthetic Zeolites: (Cont.) SOV/6246

COVERAGE: The book is a collection of reports presented at the First Conference on Zeolites, held in Leningrad 16 through 19 March 1961 at the Leningrad Technological Institute imeni Lensovet, and is purportedly the first monograph on this subject. The reports are grouped into 3 subject areas: 1) theoretical problems of adsorption on various types of zeolites and methods for their investigation, 2) the production of zeolites, and 3) application of zeolites. No personalities are mentioned. References follow individual articles.

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SOV/6246

Synthetic Zeolites: (Cont.)

Belotserkovskiy, G. M., K. G. Ione, and T. G. Plachenov. Production of Granular Synthetic Zeolites and Study of Their Porous Structure 174

Plachenov, T. G., G. M. Belotserkovskiy, V. F., Karel'skaya, B. A. Lipkind, and L. I. Piguzova. Investigation of the Secondary Porous Structure of Synthetic Zeolites and Their Drying Properties 182

Lipkind, B. A., V. A. Burylov, S. V. Kapatsinskiy, and A. T. Slepneva. Granulation of a Synthetic Zeolite Desiccant 191

Kanavets, P. I., A. E. Sporius, P. N. Melent'yev, A. I. Mazun, O. A. Bokuchava, V. I. Chernykh, and L. B. Khandros. Production of Strong Spherical Granules of Crystalline Zeolite Powders 195

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

BOGACHOV, G.N.; PAVLOV, V.M.; CHERNYKH, V.I.; KLYUKINA, E.P.

Oxidizing calcination of chromite charges in furnaces with a fluidized bed. Khim. prom. no.9:63-64 S '61. (MIRA 15:1)
(Sodium chromate)
(Furnaces)

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LOSEV, B.I.; AMMOSOV, I.I.; MEL'NIKOVA, A.N.; AMMOSOVA, Ya.M.; CHIBISOVA, K.I.; CHERNYKH, V.I.

Use of ultrasonic waves in coal bromination. Trudy IGI 8:131-141 '59. (MIRA 13:1)

(Ultrasonic waves--Industrial application)
(Coal--Analysis)

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KANAVETS, P.I.; GESS, B.A.; SPORIUS, A.E.; MELENT'YEV, P.N.; CHERNYSHEV, A.M.; CHERNYKH, V.I.; KHAYLOV, B.S.; BORISOV, Yu.I.

Experimental pilot plant stand for the nodulizing of finely ground materials by the method of chemical catalysis. Trudy IGI 22:57-69 '63. (MIRA 16:11)

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KANAVETS, P.I.; MELENT'YEV, P.N.; SPORIUS, A.E.; CHERNYKH, V.I.; YENIK, G.I.; IVLEVA, A.S.

Technological characteristics of granulating coal charges. Trudy IGI 22:147-153 '63. (MIRA 16:11)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KANAVETS, P.I.; GESS, B.A.; SPORIUS, A.E.; CHERNYSHEV, A.M.; MELENT'YEV, P.N.; CHERNYKH, V.I.; KHROMYAK, R.P.; KHAYLOV, B.S.; BORISOV, Yu.I.; TSYLEV, L.M.; SOKOLOV, V.S.; Prinimali uchastiye: MARKIN, A.A.; GORLOV, M.Ya.; VORONOV, Yu.G.; BULAKHOV, K.A.; KREMYANSKIY, V.L.; ARSHINOV, G.P.; MAZUN, A.E.; PISARNITSKIY, I.M.; BOKUCHAVA, O.A.; KIRILLOV, M.V.; TSELUYKO, P.I.; POLYAKOV, G.O.; REZKOV, A.S.; ZHUCHKOV, M.I.; ROMASHKIN, A.S.; ZUBKOV, A.S.; KOZLOV, N.N.

Pilot plant for the nodulizing of finely ground charge mixtures by the method of chemical catalysis. Trudy IGI 22: 93-109 '63. (MIRA 16:11)

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KANAVETS, P.I.; GESS, B.A.; MELENT'YEV, P.N.; CHERNYSHEV, A.M.; CHERNYKH, V.I.; SPORIUS, A.E.

Method of chemical catalysis for nodulizing finely ground materials without sintering. Trudy IGI 22:5-30 '63. (MIRA 16:11)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

KANAVETS, P.I.; MELENT'YEV, P.N.; CHERNYKH, V.I.; GESS, B.A.; SPORIUS, A.E.; CHERNYSHEV, A.M.

Using chemical catalysis for nodulizing charge mixtures composed of various raw materials. Trudy IGI 22:114-125 '63. (MIRA 16:11)

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KANAVETS, P.I.; CHIBISOVA, K.I.; CHERNYKH, V.I.; MELENT'YEV, P.N.

Thermographic investigation of coal granules for the purpose of studying their behavior during thermal decomposition. Trudy IGI 22:136-146 '63. (MIRA 16:11)

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CHERNYSHEV, A.M.; GESS, B.A.; KANAVETS, P.I.; MELENT'YEV, P.N.; KISELEV, G.P.; TSYLEV, L.M.; BORISOV, Yu.I.; CHERNYKH, V.I.

Metallurgical properties of granules prepared by the method of chemical catalysis. Trudy IGI 22:39-49 '63. (MIRA 16:11)

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KANAVETS, P.I.; CHERNYKH, V.I.; CHIBISOVA, K.I.

Thermographic investigation of fluxed ore-fuel granules prepared by the method of chemical catalysis. Trudy IGI 22:31-34 '63. (MIRA 16:11)

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYSHEV, A.M.; GESS, B.A.; KANAVETS, P.L.; MELENT'YEV, P.N.; KHODAK, L.Z.; SOKOLOV, G.A.; BORISOV, Yu.I.; CHERNYKH, V.I.; Prinimali uchastiye: VAVILOV, N.S.; MAKARCHENKO, V.G.; KISELEV, G.P.; VOLNISTOVA, R.A.; MOREYEVA, G.P.

Testing granules made by the method of chemical catalysis in a laboratory shaft furnace. Trudy IGI 22:70-78 '63. (MIRA 16:11)

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Experimental blast furnace smelting with replacement in the charge of 20-per cent of the fluxed sinter by granules prepared by chemical catalysis. Trudy IGI 22:110-113 '63. (MIRA 16:11)

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KANAVETS, P.I.; MELENT'YEV, P.N.; SPORIUS, A.E.; CHERNYKH, V.I.; YENIK, G.I.; IVLEVA, A.S.; GESS, B.A.; CHERNYSHEV, A.M.

Obtaining metallurgical coke from weakly-caking coals by the preliminary granulation of coal charge mixtures prior to coking. Trudy IGI 22:154-168 '63. (MIRA 16:11)

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KUZ'MINA, M.D.; SVERCHKOVA, T.F.; GOLOVLEV, A.V.; MUKHANOV, K.I., kand. ekon.nauk; CHERNYKH, V.M., otv.red.; SUSHKOVA, N., red.; LUKASHEVICH, V., tekhn.red.

[Frontiers of the seven-year plan, 1959-1965] Rubezhi semiletki, 1959-1965. Saratov, Saratovskoe knizhnoe izd-vo, 1960. 168 p. (MIRA 14:4)

(Russia--Economic policy)

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USSR / Human and Animal Physiology. Effect of Physical Factors. T-13

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3963

Author : Chernykh, V. M.
Inst : Not given
Title : Pathohistological Changes of the Intestinal Tract in Acute Radiation Sickness

Orig Pub : Tr. Vses. konferentsii po med. radiol. Eksperim. med. radiol. M., Medgiz, 1957, 147-150

Abstract : The dynamics are described of the development of destructive changes from the aspect of epithelium, nerve apparatus, vasculo-connectivotissular structures, migrant elements and lymphoid formations in the intestinal tract of dogs (34) and rats (28) which perished or were killed at various times after a single general Roentgen irradiation of 600 - 2400 r. Especially sharply-defined dystrophic and destructive changes, characterized

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USSR / Human and Animal Physiology. Effect of Physical Factors. T-13

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3963

as serous-homorrhagic enterocolitis, were noted in the intestinal tract of dogs which perished or were killed 3 days after irradiation greater than 1200 r. In autopsy of irradiated dogs, in 1/3 of cases necroses and intestinal ulcers were noted which were, most often localized in the large intestine, particularly in the distal segment of the rectum. -- E. B. Glikson

Card 2/2

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"APPROVED FOR RELEASE: 06/12/2000 CIA-RDP86-00513R000308620015-6

CHERNYKH, V.M.

Qualitative characteristics of certain early changes in the intestine during experimental acute radiation sickness. Arkh. pat. 21 no.8:25-32 '59. (MIRA 13:12)
(INTESTINES) (RADIATION SICKNESS)

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