"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, A. Z.

621.316.5.064.22 : 621.316.57.064.45

646. IMPROVEMENT OF THE EFFICIENCY OF AUTOMATIC RECLOSING ON INDIVIDUAL TRANSMISSION LINES FED AT BOTH ENDS, L.N. Aleksandrov and A.Z. Krasnovskii. Elekt. Stantsii, 1956, No. 5, 44-50. In Russian.

A special reclosing gear, type BAPV, is described. This gear, in combination with air-blast breakers, is recommended for use on projected lines. The optimum value of the current-pause to be adjusted is 0.3 sec. Recommendations for improvements of air-blast breakers working with automatic reclosing gear are discussed as well as the U.S.S.R. standards on electrical installations. — Electrical Research Association

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ALEKSANDROV, I.N., inzhener; KRASNOVSKIY, A.Z., inzhener.

Automatic reclosing (AVR-APV) for internal use busbars of electric power stations and busbars of step-down substations. Elek.sta. 28 no.9:54-59 S '57. (MIRA 10:11)

(Electric bus bars)

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KRASNOVSKIY, A. Z.

8(6) PHASE I BOOK EXPLOITATION SOV/1876

Aleksandrov, Igor' Nikolayevich, and Andrey Zakharovich Krasnovskiy

Avtomaticheskoye povtornoye vklyucheniye odinochnykh liniy elektroperedachi s dvustoronnim pitaniyem (Automatic Reclosure of Single Electric Transmission Lines With Two-way Feed) Moscow, Gosenergoizdat, 1958. 94 p. (Series: Iz opyta sovetskoy energetiki) 8,500 copies printed.

Ed.: S. Ye. Stepunin; Tech. Ed.: G. Ye. Larionov.

PURPOSE: This book is intended for engineers and technicians working with relay protection and automatic control of electric power systems.

COVERAGE: The authors describe the characteristics of automatic reclosure of single electric transmission lines with two-way feed. They explain the processes occurring when two sections of an electric power system are connected or disconnected under emergency conditions. Diagrams of systems for automatic reclosing

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with synchronism - check equipment and diagrams of systems for high-speed automatic reclosure of 110 kv and 220 kv air circuit breakers are presented. They explain also the principle of operation and the application and testing of an automatic reclosure system without synchronization. The authors state that this book is a summarization of practical and experimental work carried out by engineers and technicians of Belorusenergo. They thank Engineers S. Ye. Stepunin, and Ye. D. Zeylidzon, Candidate of Technical Sciences V. I. Novash, Docent of the Belorusskiy Politekhnicheskiy Institut, and Engineers, Ya. Ye. Botvinnik, M. Ye. Barabanov, D. V. Reshetnikov, and N. N. Solov'yeva of Belorusenergo. There are 19 Soviet references.

TABLE OF CONTENTS:

Foreword 3

Introduction 5

Ch. 1. Processes Accompanying Automatic Disconnecting and Connecting of Two Sections of Electric Power System Under Emergency Conditions 9

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ALEKSANDROV, I.N., inzh.; KRASNOVSKIY, A.Z., inzh.

Protection and automatic reclosing of high-voltage busbars at electric substations and power plants. Elek. sta. 31 no.3:56-60 Mr '60. (MIRA13:8)
(Electric substations) (Electric power plants)
(Electric switchgear)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

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VARANKIN, Yu.V., red.; VOLKOV, N.P., red.; KASATKIN, I.I., red.; KRASNOVSKIY, A.Z., red.; MATYUSH, A.N., red.; NOVASH, V.I., red.; PEKELIS, G.B., red.; RATSEVICH, V.O., red.; DOLGIY, V.Ya., red.

[Electric power plants and networks; exchange of technical and work experience] Elektrostantsii i seti; obmen proizvodstvenno-tekhnicheskim opytom. Minsk, 1962. 87 p. (MIRA 17:6)

1. Nauchno-tekhnicheskoye obshchestvo energeticheskoy promyshlennosti. Belorusskoye respublikanskoye otdeleniye.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

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41261

S/264/62/000/011/004/005
D036/D114

3.5410

AUTHOR: Krasnovskiy, B.L.

TITLE: On the design and operation of the ADG-1 automatic proportioning and granulating unit, and ways of further perfecting the latter

PERIODICAL: Referativnyy zhurnal, Vozdushnyy transport, no. 11, 1962, 26, abstract 11A171 (Issled. oblakov, osadkov i grozovogo elektrichestva. M., AS USSR, 1961, 318-321)

TEXT: The АДГ-1 (ADG-1) is intended for dispersing supercooled clouds and fog with the aid of granulated carbon dioxide which is dropped from an aircraft under the effect of its own weight and rarefaction created by a special diffuser mounted on the aircraft fuselage. The unit converts factory-made carbon-dioxide blocks, and carbon dioxide in the form of "snow" and briquettes obtained from liquid carbon-dioxide containers, into 0.5-1.0 cm^3 granules which are automatically ejected into the atmosphere at 2-3-second intervals in amounts of 100 to 3000 granules per minute. The ADG-1 unit is described, and its design basis and technical and operational characteristics are given. [Abstracter's note: Complete translation].

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KRASNOVSKIY, B.[illegible], [illegible]; [illegible], [illegible].

Machine for lapping equipment. [illegible]

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, G.A.; DERKACHEV, V.A.

Complex preparation of fine-grained shale with the use of external beneficiation. Energotekh. ispol'. topl. no.2:160-170 '62. (MIRA 16:5)

(Oil shales)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

~~KRASNOVSKI, I.M.~~ [Krasnovskiy, I.M.] (Komsomolsk na Amur)

The calculation of the mechanism with cams. Gaz mat fiz 14 no.4:211-215 Ap '62.

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KHASNOVSKIY, M.I.; LOZOVIK, V.G.

Acoustic field of an infinite circular cylindrical emitter with mixed boundary conditions on its surface. Akust. zhur. 10 no.3: 313-317 '64. (MIRA 17:11)

1. Kiyevskiy politekhnicheskiy institut.

3

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

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KRASNOVSKIY, N.N. (Sverdlovsk)

Theory of A.M. Liapunov's second method for the study of stabitlity. Mat.sbor. 40 no.1:57-64 S '56. (MIRA 9:12)
(Motion) (Stability)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

SAKHNOVSKIY, L.V., kandidat tekhnicheskikh nauk; KRASNOVSKIY, N.V., kandidat tekhnicheskikh nauk.

Instrument for speedy determination of moisture in lumber. Der.i lesokhim.prom. 2 no.7:6-9 Jl '53. (MLRA 6:5)

1. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny. (Wood--Moisture)

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KRASNOVSKIY,N.V., kandidat tekhnicheskikh nauk; SAKHNOVSKIY,L.V., kandidat tekhnicheskikh nauk

Standardizing wood drying requirements. Der.prom.4 no.9:5-9 S '55. (MLRA 8:11)

1. TSentral'nyy Nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny
(Lumber--Drying) (Wood--Moisture)

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KRASNOVSKIY, N.V., kandidat tekhnicheskikh nauk; SAKHNOVSKIY, L.V., kandidat tekhnicheskikh nauk.

Ways of achieving the norm requirements for quality in chamber drying lumber. Der.prom.5 no.6:3-6 Je '56. (MIRA 9:9)

1.TSentral'nyy nauchno-issledovatel'skiy institut mekhanicheskoy obrabotki drevesiny.
(Lumber--Drying)

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KRASNOVSKIY, N.V., kand.tekhn.nauk; MARAVIN, B.L., inzh.

There is a wide application field for particle boards. Der.prom. 10 no.11:7-9 N '61. (MIRA 14:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR.
(Hardboard)

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OTLIVANCHIK, A.N., kand. tekhn. nauk; Prinimali uchastiye: KRASNOVSKIY, N.V., kand. tekhn. nauk; MARAVIN, B.L., inzh.; GUZMAN, M.A., red. izd-va; GOL'BERG, T.M., tekhn. red.

[Manufacture and use of particle boards]Proizvodstvo i primenenie drevesno-struzhechnykh plit. Moskva, Gosstroiizdat, 1962. 310 p. (MIRA 15:10)

(Hardboard)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

LOSKUTOVA, L.T.; MAKOTINSKIY, M.P., kand. arkh.; RUDINA, M.A., arkh.; SHPANOV, I.A., arkh. Prinimal uchastiye LIVSHITS, A.M., inzh.; GROMOV, V.L., kand. tekhn. nauk, retsenzeng; KRASNOVSKIY, N.V., kand. tekhn. nauk, retsenzent; PAVLOV, V.P., kand. tekhn. nauk, retsenzent; PODZOROVA, N.G., inzh., retsenzent; FOLOMIN, A.I., doktor tekhn. nauk, retsenzent; GURVICH, E.A., red.

[Catalog of finishing materials and elements] Katalog otdelochnykh materialov i izdelii. Moskva, Gosstroiizdat. Pt.8. [Wood and paper] Derevo i bumaga. 1962. 56 p. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov.

(Finishes and finishing)

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L 5171-66 EPA(s)-2/EWT(m)/EPF(c)/EPF(n)-2/EWG(m)/T/EWP(t)/EWP(b) IJP(c)
ACCESSION NR: AT5022451 JD/WW/JG/GS UR/0000/65/000/000/0001/0030

AUTHOR: Leypunskiy, A. I.; Kazachkovskiy, O. D.; Pinkhasik, M. S.; Krasnoyarov, N. V.; Bagdasarov, Yu. Ye.; Troyanov, M. F.; Milovidov, I. V.; Afrikantov, I. I.; Poydo, M. S. (Deceased); Stekol'nikov, V.V.

TITLE: BN-350 nuclear power plant

SOURCE: Obninsk. Fiziko-energeticheskiy institut. Doklady, 1965. Atomnaya stantsiya BN-350, 1-30

TOPIC TAGS: nuclear power plant, liquid metal cooled reactor, fast reactor, nuclear reactor technology, desalination

ABSTRACT: After a brief discussion of the advantages of using fast neutron reactors for power production, a new 350 Mw fast neutron sodium cooled reactor of BN-350 type is described. At present, a power plant equipped with such reactors and P-50 back pressure steam turbines is under construction in the Mangyshlak peninsula area at the northeastern coast of the Caspian Sea. The dual-purpose plant will generate 150 Mw of electric power and produce 1200 ton/hr of

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ACCESSION NR: AT5022451

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steam. The steam will be used by a desalting plant designed to supply 120,000 cu m of fresh water per day. It is expected that the power plant will be put into operation in 1968 or 1969. The primary and the secondary intermediate loops of the reactor will be cooled by liquid sodium. The third loop will be of steam-water type. The reactor core carries 211 sexagonal fuel assemblies each containing 169 uranium-dioxide elements. At the beginning, a compound of uranium-dioxide and plutonium will be used in fuel elements. There are 120 inner and 320 outer assemblies placed in concrete shields. The selected essential data on BN-350 reactor are as follows:

Thermal power	1000 Mw
Core Volume	1.87 cu m
Core diameter	1.495 m
Core height	1.06 m
Vessel diameter	6 m
Vessel height	2.2 m
Coolant temperature (inlet)	300 C
Coolant temperature (outlet)	500 C

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Many other details and data are given on reactor core and concrete shielding as well as on the reactor tank made of X18H9 stainless steel. A special chapter is devoted to the discussions of various control systems including power control, measurements, automatic regulation, reactivity compensation, and emergency protection. The replacement and handling of fuel elements is also discussed. The radiation shielding is briefly described. Some information is given on the selection of materials as well as on the experimental investigation of various control and safety systems. An extensive analysis of heat transfer system is also presented dealing with primary and secondary loops, heat exchanger, pumps, piping, emergency heat removal, steam generators and other equipment. In conclusion, some further possible improvements in the design and operation of fast neutron reactors are outlined including a more efficient burn-up of

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ACCESSION NR: AT5022451

fuel elements, a further increase in temperature and an eventual use of fuel carbides instead of oxides. Orig. art. has: 2 tables and 6 figures.

ASSOCIATION: none

SUBMITTED: 02Mar65 ENCL: 00 SUB CODE: EE, NP

NO REF SOV: 000 OTHER: 000

Card 4/4 Md

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L 01067-66 EWT(m)/EPF(c)/EPF(n)-2/EWG(m) WW/DM

ACCESSION NR: AP5014557 UR/0089/65/018/005/0474/0477
621.039.51

AUTHOR: Krasnoyarov, N. V.; Nikol'skiy, R. V.; Yefimov, I. A.

19
B

TITLE: Investigation of power effects of the BR-5 reactor

SOURCE: Atomnaya energiya, v. 18, no. 5, 1965, 474-477

19

TOPIC TAGS: fast reactor, fuel element warmup, reactivity variation, power effect

ABSTRACT: After pointing out first that earlier studies were made for the most part with the control-rod regulating system disconnected, but that it is more desirable to test the response of the reactor to a change in the power load with the regulating system turned on, the authors describe experiments in which a sudden change in power was made and the behavior of the control rod was identified with the transient characteristics of the reactor. The input parameter was taken to be the change in power, and the output parameter the reactivity. The tests were made at various coolant flow rates. All tests were made on the linear part of the control rod, so as to make it convenient to convert from changes in rod position to changes in reactivity. Principal attention was paid to methods in which the power-response component connected with the warm-up of the fuel can be separated. The results show that for each rate of coolant flow there is one section on the plot

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L 01067-66

ACCESSION NR: AP5014537

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of reactivity vs. time, in which the reactivity remains practically at zero, followed by a continuous and smooth rise of reactivity to a certain maximum, which in turn is followed by a decline in reactivity. Both the reactivity rise time and the decrease time depend on the rate of flow of the coolant. This makes it possible, by examining the transient characteristics of the reactivity at different rates of coolant flow, to separate the fast and slow reactivity changes, and also to determine the asymptotic or limiting value of the reactivity, which in turn gives information on the contribution due to the warm-up of the fuel. Orig. art. has: 4 figures, 1 formula, and 1 table.

ASSOCIATION: none

SUBMITTED: 10Apr64 ENCL: 00 SUB CODE: NP

NR REF SOV: 002 OTHER: 007

Card 2/2 DP

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KRASNOVSKIY, O.V.

ca

19

Accelerated method of analyzing glass O. V. Krasnovskii, *Nauch.-Issledovatel. Inst. Stekla* No. 1, *Steklotekhnika* 219-24(1934).—A method is described for the chem. analysis of Ca-magnesia-soda glass. All alkalies and cryst. oxides can be detd. from the joint weight; but owing to the decompn. of the glass by its treating with HF and $H_2C_2O_4$, according to the method of Sullivan and Turner, CaC_2O_4 is directly pptd. as a residue of the disintegration. SiO_2 and SO_3 are detd. as usual from a special weight. Details as to proceedure are given. A table is given showing the comparative results of the analysis of lime-soda and lime-magnesia-soda glasses according to this and the classical methods. M. V. K

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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KRASNOVSKIY, O.V.

CA

17

A rapid method of analysis of aluminum-magnesium glass. O. V. Krasnovskii. *Sbornik "Sovremennye Metody Kontr. Proizvodstva v Stekol'nol Prom."* 1938, 9-13.—In one sample of glass SiO_2 and R_2O_3 are detd. In a second sample Mg and Na are detd. The glass is decompd. with a mixt. of H_2SO_4 and HF. The excess H_2SO_4 is removed and the dry residue heated to transform $Fe_2(SO_4)_3$ and $Al_2(SO_4)_3$ into their oxides. The residue is treated with water, and Fe and Al are pptd. from soln. with NH_4OH in the presence of CH_3COONH_4. From the same soln. Ca is pptd. with an $(NH_4)_2CO_3$ soln., the soln. filtered, the filtrate is evapd. and the residue heated at 500°. The calcined residue, contg. $MgSO_4$ and Na_2SO_4, is dissolved in water, Mg is pptd. with an alc. soln. of $(NH_4)_2CO_3$, the filtrate evapd., and Na detd. as Na_2SO_4. In a third sample Ca is detd. The glass is decompd. with a mixt. of HF with $H_2C_2O_4$, the fluorides are converted to oxalates by heating them with $H_2C_2O_4$, the sol. oxalates are extd. from the dry residue with water and dil. CH_3COOH. The CaC_2O_4 residue is converted to oxide and Ca is detd. as $CaSO_4$. **A rapid semimicrochemical method of the determination of silica acid and of the sesquioxides in glass.** O. V. Krasnovskii. *Ibid.* 1938, 13-16.—SiO_2 can be sepd. quantitatively from the glass melt with NaOH by treating the melt once with concd. HNO_3. R_2O_3 is detd. in the filtrate from SiO_2 by the usual method. The air bath and the water bath used for the semimicrochem. method are illustrated. Through *Khim. Referat. Zhur.* 2, No. 2, 81-2(1939). W. R. Henn

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KRASNOVSKIY, O.V.

CA

19

Accelerated methods of chemical control in the glass industry. O. V. Krasnovskii. *Stekolnaya Prom.* 15, No. 7, 29-30(1939). The accelerated analysis of glass is based on the detn. of SiO_2 and total oxides of Al and Fe from one sample, CaO from another sample, and MgO and total oxides of Na and K from the 3rd sample. Several persons may work together. (1) SiO_2 is sepd. from glass by melting it with NaOH at 480 or 500°. The melt is dissolved with strong HNO_3 and then dried. Surplus HNO_3 is removed. The dry sediment is treated with NH_4NO_3 and filtered, washed and calcined. An acid reaction is present, so that the silica is free from impurities. The total quantities of the oxides of Al and Fe are detd. in the silica filtrate by sepg. Al and Fe in the form of hydroxides with ammonia and purifying the remnants of oxides as usual. (2) Ca detn.: Glass is dissolved with HF and oxalic acid. With repeated oxalic acid treatment of the residue, fluorine is removed and fluorides are changed into oxalates. The residue is washed and treated with AcOH, the oxalates are removed. The residue contains Ca oxalate, which is sepd., calcined, treated with H_2SO_4 to change it into sulfate from which Ca is detd. (3) Detn. of MgO and Na_2O and K_2O: Glass is dissolved with HF and the residue is removed by H_2SO_4. Calcining will change sulfates of Al and Fe into oxides. The residue is treated with water. Al and Fe are sepd. as hydroxides. They are sepd. by ammonia in the presence of ammonia and AcOH. Ca is sepd. in the form of carbonates. The residue is filtered and Mg is sepd. in the form of a double salt of $MgCO_3$ (method of Shafgost). The residue is calcined and Mg is detd. as oxide. The dry filtrate of ammonium and Mg carbonates is calcined and the sulfates of K and Na are obtained. An accelerated chem. analysis of the chief glass-forming raw materials has been developed also.

M. V. Condoide

ASM-SLA METALLURGICAL LITERATURE

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KRASNOVSKIY, O. M.

CA 19

Simplified method for the analysis of glass. O. V. Krasnovskiy. *Stekol'naya i Keram. Prom.* 1944, No. 4/5, 20; *Ceram. Abstracts* 1946, 82 (in *J. Am. Ceram. Soc.* 29, No. 5).—A simplified method is described for the analysis of SiO_2-Al_2O_3-Fe_2O_3-CaO-MgO-Na_2O glasses. These constituents are detd. on 3 sep. samples. On one (approx. 0.5 g. fused with a fourfold quantity of Na_2CO_3), SiO_2 and the total quantity of Fe_2O_3 are detd. The second (approx. 0.5 to 1.0 g.) is treated with concd. H_2SO_4 and HF, and on it is detd. the total quantity of Al_2O_3 and Fe_2O_3, CaO, and MgO. On the third (approx. 0.5 g.), treated in a similar manner, the total quantities of the alkali oxides are detd. Details of the procedure are given. The time required for completion of this analysis is 12 to 15 working hrs.

M. F. R.

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KRASNOVSKIY, O.V.

Rapid gravimetric method for determination of total alkali oxides in silicon-aluminum-calcium-magnesium-sodium-potassium glass as well as in glasses containing in addition of boron, fluorine, barium, and manganese, and in feldspar minerals. O. V. Krasnovskii, E. P. Bil'tynkova, and E. V. Castera. *Nauch.-Tekh. Inform. Byull. Vsesoyuz. Nauch.-Issledovatel. Inst. Stekla* 1953, No. 5, 10-21; *Referat. Zhur., Khim.* 1955, No. 2283.—To det. alkali oxides in glasses and silicates contg. large amts. of Al_2O_3, treat a 0.5-g. sample with a mixt. of 40% HF and concd. H_2SO_4 while heating to remove Si, F, and B as volatile fluorides, heat the resulting sulfates at 700-800° treat the sulfates with water, and ppt. all metals except the alkali with a satd. aq.-alc. soln. of $(NH_4)_2CO_3$. Det. the alkali metals remaining in soln. by any accepted method. This procedure is applicable to macro- as well as microdetn. In the former case, detn. takes 11-12 hrs. which is half the time required by the sulfate-baryte method, and by the semimicromethod it takes only 7 hrs.

M. Hosch

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

PANASYUK, Vitaliy Ivanovich; PLEMYANNIKOV, M.N., redaktor; KRASNOVSKIY, O.V., kandidat khimicheskikh nauk, retsenzent; EL'KINA, E.M., tekhnicheskiy redaktor.

[Chemical control of glass production] Khimicheskii kontrol' proizvodstva stekla. Izd. 2-e. Moskva, Gos. nauchno-tekhn.izd-vo Ministerstva promyshl.tovarov shirokogo potrebleniia SSSR, 1955. 295 p.
(Glass manufacture—Chemistry) (MIRA 8:4)

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

15(2)

SOV/72-59-4-6/21

AUTHORS: Krasnovskiy, O. V., Bil'tyukova, N. P., Yeremko, A. M.

TITLE: Complexometric Determination of Calcium Oxide and Magnesium Oxide in Vertically Drawn Glass (Kompleksometricheskoye opredeleniye okisi kal'tsiya i okisi magniya v stekle vertikal'nogo vytyagivaniya)

PERIODICAL: Steklo i keramika, 1959, Nr 4, pp 22 - 25 (USSR)

ABSTRACT: The complexometric method of titration makes it possible to simplify considerably the accelerated glass analysis (see paper by O. V. Krasnovskiy, Ref 1). The determinations of calcium and magnesium may be carried out according to two methods as may be seen from the papers by K. B. Yatsimirskiy on the one hand and by T. B. Styunkel' and Ye. M. Yakimets on the other (Refs 2 and 3). In order to check the complexometric methods of determination comparative investigations with synthetic solutions were carried out, the salt content of which corresponded to those of the solutions in the glass analysis. In table 1 the experimental results are given. Later, the same experiments were carried out with samples of industrial sheet glass which was drawn vertically.

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Complexometric Determination of Calcium Oxide and Magnesium Oxide in Vertically Drawn Glass SOV/72-59-4-6/21

The results of these analyses are listed in table 2. In conclusion, 2 formulae are mentioned according to which the per cent content of CaO and MgO in glass may be computed. The necessary specific reagents and their preparation are shown in the "Instructions for the Determination of Water Hardness by Means of the Complexometric Method" (MKhP, SSSR, 1957, pp 1-5). There are 2 tables and 5 Soviet references.

ASSOCIATION: Institut stekla (Glass Institute)

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APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

POCHTOVIK, G., nauchnyy sotrudnik; KRASNOVSKIY, R., nauchnyy sotrudnik; KHOBOTOV, V.

"Radio and electronics in the production of precast reinforced concrete" by I.S.Vainshtok. Reviewed by G.Pochtovik, R.Krasnovskiy and V.Khobotov. Na stroi. Ros. 3 no.2:39-40 F '62. (MIRA 16:2)

1. Kafedra stroitel'nykh konstruktsiy Moskovskogo avtodorozhnogo instituta (for Pochtovik, Krasnovskiy). 2. Zaveduyshchiy laboratoriyey eledtroniki Moskovskogo avtodorozhnogo instituta (for Khobotov).
(Electronic apparatus and appliances) (Vainshtok, I.S.)
(Concrete plants—Equipment and supplies)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

AGEYEV, D.N., inzh.; KRASNOVSKIY, R.O., inzh.; POCHTOVIK, G.Ya., inzh.

Standardization of the strength and deformation characteristics of structural keramzit concrete. Bet. i zhel.-bet. no.1:17-21 Ja '62. (MIRA 15:4)

(Lightweight concrete--Testing)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

ZHOIZISHSKIY, L.L., kand.tekhn.nauk; ERASMOVSKIY, R.O., kand.tekhn.nauk; LUK'YANCHUK, P.M., inzh.; KURITS, F.K., inzh.

Roofing for industrial buildings from gas-ash silicate. Prom.stroi. 43 no.12:33-35 '65.

(MIRA 18:12)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, R.O., inzh; POGHTOVIK, V.K., inzh.

Mechanism of the deformation of tensils reinforced concrete. Bet. i zhel.-bet. 8 no.5:201-206 My '62. (MIRA 15:6)
(Prestressed concrete)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, S. S.

Use of steelmaking irons for malleable iron. A. P. Shakhov and S. S. Krasnovskii. Liteinoe Proizvodstvo 1955, No. 11, 25-7.—Former practice invariably called for a portion of charcoal Fe in the cupola burden for malleable castings. Lab. and plant experiences have shown that any Fe can be used satisfactorily, provided that a compn. comprising a S : Mn ratio of 3.2:1 with a max. Mn of 0.6-0.65 and Si of 0.9-1.4% can be maintained. J. D. Gat

MG

(1)

Df

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 01861-67 EWT(d)/EWT(m)/EWP(j)/EWP(v)/EWP(k) IJP(c) WW/RM

ACC NR: AP6032392 SOURCE CODE: UR/0198/66/002/009/0053/0058

AUTHOR: Didyk, R. P. (Dnepropetrovsk); Krasnovskiy, S. S. (Dnepropetrovsk)

ORG: Dnepropetrovsk Mining Institute (Dnepropetrovskiy gornyy institut)

39
B

TITLE: On determining dynamic-stress fields in cylindrical shells

26

SOURCE: Prikladnaya mekhanika, v. 2, no. 9, 1966, 53-58

TOPIC TAGS: cylindric shell, impulse pressure, radial stress,,tangential stress, static stress, dynamic stress

ABSTRACT: The dynamic behavior of a cylindrical shell subjected to internal pressure which varies according to an exponential law is investigated. The radial vibration and stresses in a cylindrical tube under impulse pressure which varies according to the exponential function $P_0e^{-\alpha\tau}$ (where P_0-is the static pressure, α-is the rate of pressure variation at the wall, and τ-is the time) are discussed under the assumptions that the tube material is incompressible, and the tube deformation is planar. The nonhomogeneous differential equation of motion of the material (in which the dissipation of energy is not accounted for) is solved for deformations within the elastic range, and expressions for determining the radial (δ_r) and tangential (δ_θ) stresses are derived which include the natural frequency ω of radial vibrations of the tube. When $\alpha^2 \ll \omega^2$, the expressions for δ_r and δ_θ are identical with those obtained under suddenly applied pressure. That means that the tube walls perform

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ACC NR: AP6032392

harmonic vibrations with frequency ω about the state described by an exponential curve. The stresses δ_r and δ_θ consist of exponential and sinusoidal components depending on α; their variation along the wall thickness, associated with the variation of α, is discussed and illustrated by diagrams. It is shown how to determine (for practical purposes) the maximum dynamic tangential stresses τ_d by using the static stresses τ_{st} and a dynamic factor K_d depending on the α/ω ratio. The factor K_d is the ratio of the maximum tangential stress produced by the pressure impulse to the stress under static pressure P_o. Formulas for K_d are derived and the (K_d, α/ω) curve is plotted. Simple formulas for τ_{st} and τ_d are also given. Orig. art. has: 5 figures and 18 formulas. [VK]

SUB CODE: 20/ SUBM DATE: 20Oct64/ ORIG REF: 002/ OTH REF: 002/ ATD PRESS: 5096

Card 2/2 LC

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, S.S.

Dependence of the electric properties of Krivoy Rog Basin martite-hematite quartzites on the frequency of the electric field and the temperature. Izv. DGI 42:91-93 '64.
(MIRA 18:11)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 44196-66 EWT(1)/FCC GW

ACC NR: AP6016844 (A,N) SOURCE CODE: UR/0026/66/000/005/0014/0020

67
B

AUTHOR: Krasnovskiy, V. I.

ORG: Institute of Physics of the Atmosphere, AN SSSR, Moscow (Institut fiziki atmosfery AN SSSR)

TITLE: Solar wind and aurorae

SOURCE: Priroda, no. 5, 1966, 14-20

TOPIC TAGS: solar wind, aurora, light radiation, corpuscular radiation, upper atmosphere, earth surface boundary layer, interplanetary space, electric field, earth electromagnetosphere, comet, solar plasma, helium ion

ABSTRACT: The author analyzes some similarities in the origin of comets and aurorae, with emphasis on light radiation and solar corpuscular radiation, compare the tails of comets with that of the earth, and finds similarities in their formation. Still unexplained factors in the tails of comets will probably be understood after observations of the interaction of the solar wind with the magnetic field

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 44196-66

ACC NR: AP6016844

and the earth' s atmosphere. It is quite possible that strongly magnetized comets may be found. Aurorae are of special interest because the interaction and combined flow of plasma of charged particles of the solar wind with the earth' s "electro-magnetosphere", as the author calls the matter closest to the earth' s surface boundary layer, may be observed in them. In his discussion of the origin of aurorae, the author emphasizes the importance of the phenomenon of dissipation of the earth' s atmosphere. He also discusses the complex interaction of solar wind with the magnetic field and the small increase of solar-wind energy even during the strongest aurorae, as compared to the extremely frequent changes in aurorae intensity. The importance of finding out how the magnetic field of interplanetary space is related to the solar-wind matter is stressed. The author adds that the confirmation of a recent American discovery of helium ions in the solar wind will also confirm the magnetohydrodynamic action as at least a complementary cause of the discharge of solar particles. The fine composition of aurorae may be related to the existence, in the earth' s surface boundary layer, not only of the extremely variable magnetic fields of the solar wind, but also of electric fields related to the circulation of the ionosphere, which may account for the extreme variation in aurorae intensity. The author does not believe in the existence of a third, outer-most, terrestrial radiation belt, and adds that the more descriptive word "spora

Card 2/3

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 44196-66

ACC NR: AP6016844

should be used instead of "trap" when discussing charged-particle traps in the geomagnetic field. Orig. art. has: 4 figures. [GC]

SUB CODE: 04, 20, 03/ SUBM DATE: none/

Card 3/3

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, V.I.; SHKLOVSKIY, I.S.; GAL'PERIN, Yu.I.; SVETLITSKIY, Yu.M.; KUSHNIR, Yu.M.; BORDOVSKIY, G.A.

Detection of electrons with an energy of about 10 kev. in the upper atmosphere. Isk.sput.Zem. no.6:113-126 '61. (MIRA 13:12)
(Atmosphere, Upper—Rocket observations)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KUZ'MINA, Ye.G., dotsent; KRASNOVSKIY, V.Ye., student

Regulation of intrapleural pressure. Trudy Izhev.gos.med. inst.21:84-87 '64.

(MIRA 19:1)

1. Kafedra patologicheskoy fiziologii (zav. - dotsent Ye.G. Kuz'mina) Izhevskogo meditsinskogo instituta.

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVSKIY, Ye.N.

Detachable cabins for excavators and loading cranes. Bezop.truda v prom. 5 no.1:37 Ja '61. (MIRA 14:2)

1. Glavnyy mekhanik Ryazanovskogo torfopredpriyatiye Shaturskogo trosta Mosoblsovnarkhoza.
(Excavating machinery) (Cranes, derricks, etc.)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOVA, F. S.

30412

Vliyaniye sryezki sotsvyetiy gladiolusov na razvitiye klubnyelukovits.
Byullyetyen' Glav. botan. sada, vyp. 3, 1949, s. 63-66

SO: LYTOPIS' No. 34

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

AUTHORS: Leypunskiy, O. I., Abramov, A. I., Andreyev, V. N., Bartenikov, A. I., [illegible], Kazarovetskiy, [illegible], Kuzlova, M. V., Afrikanov, N. V., Kurchatov, B. I., Morozov, V. N., Nikolayev, M. N., Seirenkin, G. N., [illegible], Ukraintsev, V. I., Usachev, L. N., Fetisov, N. I., Sherman, [illegible]

TITLE: Investigations of the Physics of Reactors with Fast Neutrons. I (Issledovaniya po fizike reaktorov na bystrykh neytronakh)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 5, pp. 277-287 (USSR)

ABSTRACT: Since 1950 experiments have been carried out with fast reactors by the Main Administration of the Use of Nuclear Energy. At the Physics Institute of this organization the fast-neutron reactor [redacted] was put into operation early in 1955, and the reactors [redacted] and [redacted] 3 followed in 1956 and 1957 respectively.

Reactor [redacted] 1:

Power	50 KW
Active zone	diameter and height ~[illegible] cm
Fuel	plutonium diameter ~[illegible] cm
Canning	thin steel tube

Card 1/4

The active zone may be surrounded by 2 mobile shields. Shield 1 consists of depleted uranium, and shield 2 of copper. An additional shield can be fastened on one side on to the shield with a diameter of 70 cm, so that total thickness can be increased to 60 - 100 cm. With this reactor investigations were carried out of: the spatial and energy distribution of the neutrons, of which the results are shown in a table for Pu^{239} (n,f), U^{235} (n,f), U^{235} (n,f), U^{238} (n,f), Np^{237} (n,f), Pu^{240} (n,f), U^{238} (n,γ), Au^{197} (n,γ), U^{238} (n,2n). Measurement of the conversion factor. The latter was determined experimentally as amounting to 2,4 to 2,5. It was also calculated by means of the multi-group computation method in S_4-th approximation (Ref 1). The electronic computer was used under the supervision of Professor Ye. S. Kuznetsov. For computation the experimental values for μ of V. I. Kalashnikova (Ref 5), G. N. Seirenkin (Ref 6), B. I. Kurchatov (Ref 7), and for σ the values obtained by F. Ye. Spivak (Ref 8), V. N. Andreyev (Ref 9) were used. As a result of computations the coefficient was found to amount to 2,6.

Card 2/4

The Distribution of Neutrons in Uranium

The cross sections of the various reactions for the equilibrium spectrum and for the asymptotic spectrum of the isolated uranium was determined both theoretically and experimentally. The asymptotic length of diffusion determined experimentally and theoretically amounts to 9,1 ± 0,1 cm. The average number of fissions of uranium 238 caused by fission neutrons amounts to 0,17 ± 0,01. This is in agreement with the data given by reference 10.

Furthermore, the influence exercised by the resonance structure of the cross sections upon the spatial distribution of the neutrons is investigated. Kh. I. Kishchenko showed that for neutrons with 24 keV the total cross section for copper is reduced by about three times its amount with a modification of target thickness of from 0,5 to 30 mm. There are 12 figures, 7 tables, and 13 references, 9 of which are Soviet.

(Continued on abstract 7/13)

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

SOV/89-[illegible]-7 15

AUTHORS: Leypunskiy, A. I., Abramov, A. I., Andreyev, V. N., [illegible]nikov, A. I., Bondarenko, I. I., Galkov, V. I., Golubev, V. I., Gul'ko, A. D., Guseynov, A. G., Kazachkovskiy, O. D., Kozlova, N. V., Krasnoyarov, N. V., Kuz'minov, B. D., Morozov, V. N., Nikolayev, M. N., Smirenkin, G. N., Stavisskiy, Yu. Ya., Ukraintsev, P. I., Usachev, L. N., Petisov, N. I., Sherman, L. Ye.

TITLE: Investigations of the Physics of Reactors With Fast Neutrons.II (Issledovaniya po fizike reaktorov na bystrykh neytronakh) (Continued from abstract 6/15)

PERIODICAL: Atomnaya energiya, 1958, Vol. 5, Nr 3, pp. 288-293 (USSR)

ABSTRACT: The reactivity and the kinetics of the reactor were measured. It could be shown that in the center of the active zone the weight of the 5 MeV neutrons is higher by ~15% than that of 250 MeV neutrons. The effective yield of the delayed neutrons in the reactor with a uranium shield exceeds that of a reactor with a copper shield by 1,4 times its amount.

Reactor [illegible] 3:

The active plutonium zone is the same as in reactor БР-1. In the center of the reactor a water-uranium channel is provided, which is separated from the plutonium zone by a uranium layer

Card 1/[illegible]

of 8 cm thickness. The uranium-water lattice consists of cylindrical slugs of normal uranium, which have a diameter of 35 mm. The canning material is aluminum. The ratio between water and uranium is 0,35. The lattice spacing is 40 mm. Measurements carried out with the water-uranium lattice instead of with the pure uranium layer showed:

1) The conversion factor is reduced from 2,45 ± 0,10 to 1,7 ± 0,2.

2) In the case of a fixed power output of the active zone the velocity with which the total quantity of plutonium 239 and uranium 235 is formed was increased by 35%.

3) The velocity with which plutonium is produced increased by 1,8 times its amount.

4) In the case of a fixed power output of the active zone the total power output of the reactor is increased by 2,[illegible] times its amount.

Reactor [illegible] -2:

This reactor was described more in detail in references 12 and 13. Its nominal power output is 120 kW, the maximum output is 200 kW. In the active zone of the reactor БР-2, which consists of plutonium rods, mercury is used as a coolant, which takes up

Card 2/[illegible]

~17% of the total volume of the active zone. The regulating rods (interior of shield) are made from a copper-nickel alloy. The external shield consists of uranium slugs canned with stainless steel. Thickness ~25 cm. The uranium shield is surrounded by copper of 15 cm thickness.

The presence of mercury in the active zone leads to a decrease of the content of fast neutrons in the spectrum. The conversion factor was 1,6 ± 0,2.

Theoretically the kinetic equation for this reactor was calculated by G. I. Marchuk according to the method developed by V. S. Vladimirov. Theoretical calculation of the critical mass was carried out with an error of 4%, and that of the effectiveness of the regulating rods with an error of 6%. The effective yield of the delayed neutrons was found to amount to 0,27%, while the experimental value was 0,24 ± 0,04%. There are [illegible] figures, 1 table, and 13 references, 9 of which [illegible].

Card 3/[illegible]

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21(4) PHASE I BOOK EXPLOITATION SOV/2583

International Conference on the Peaceful Uses of Atomic Engergy. 2nd, Geneva, 1958.

Doklady sovetskikh uchenykh; yadernyye reaktory i yadernaya energetika. (Reports of Soviet Scientists; Nuclear Reactors and Nuclear Power) Moscow, Atomizdat, 1959. 707 p. (Series: Its: Trudy, vol. 2) Errata slip inserted. 8,000 copies printed.

General Eds.: N.A. Dollezhal, Corresponding Member, USSR Academy of Sciences, A.K. Krasin, Doctor of Physical and Mathematical Sciences, A.I. Leypunskiy, Member, Ukrainian SSR Academy of Sciences, I.I. Novikov, Corresponding Member, USSR Academy of Sciences, and V.S. Fursov, Doctor of Physical and Mathematical Sciences; Ed.: A.P. Alyab'yev; Tech. Ed.: Ye. I. Mazel'.

PURPOSE: This book is intended for scientists and engineers engaged in reactor designing, as well as for professors and students of higher technical schools where reactor design is taught.

COVERAGE: This is the second volume of a six-volume collection on the peaceful use of atomic energy. The six volumes contain the reports presented by Soviet scientists at the Second International Conference on Peaceful Uses of Atomic Energy, held from September 1 to 13, 1958 in Geneva. Volume 2 consists of three parts. The first is devoted to atomic power plants under construction in the Soviet Union; the second to experimental and research reactors, the experiments carried out on them, and the work to improve them; and the third, which is predominantly theoretical, to problems of nuclear reactor physics and construction engineering. Yu. I. Khryakin is the science editor of this volume. See SOV/2081 for titles of all volumes of the set. References appear at the end of the articles.

PART II. EXPERIMENTAL AND RESEARCH REACTORS

Leypunskiy, A.I., V.G. Grabin, M.N. Aristarkhov, I.I. Bondarenko, O.D. Kazachkovskiy, O.I. Lobanov, S.A. Pashkov, V.S. Fishkeyt, K.K. Nesmeyanov, Yu.Ya. Stavisskiy, F.I. Ukraintsev, L.N. Usachev, and K.A. Stumbur. Experimental Fast Reactors in the USSR (Report No. 2129) 215

Nikoin, I.K., V.A. Dmitriyevskiy, I.S. Grigor'yev, Yu.Yu. Glazkov, S.V. Kordzovskiy, and G.D. Dubovskiy. Pilot-plant Reactor With Volatile and Fissionable UF_6 (Report No. 2502) 232

Goncharov, V.V. and et al. Some New and Rebuilt Thermal Research Reactors (Report No. 2185) 243

Brokhovich, B.V., F.Ya. Ovchinnikov, V.I. Klimenkov, F.V. Glazkov, and M.M. Shishchuk. Dismantling an Experimental Graphite-uranium Isotope Producing Reactor After Four Years of Operation (Report No. 2297) 319

Feynberg, S.M., Ye. D. Vorob'yev, V.M. Gryazev, V.B. Klimentov, K.V. Lysenchenko, and V.A. Tsykanov. An Intermediate Reactor for Obtaining High Intensity Neutron Fluxes (Report No. 2142) 334

PART III. PHYSICS AND ENGINEERING OF REACTOR DESIGN

Leypunskiy, A.I., A.I. Abramov, V.N. Andreyev, A.I. Baryshnikov, I.I. Bondarenko, V.I. Galkov, V.I. Golubev, A.D. Gulko, A.A. Quayd[illegible], O.D. Kazachkovskiy, N.V. Kostrov, N.V. Krasnoyarov, B.D. Kuz'minov, V.N. Morozov, M.N. Nikolayev, O.N. Sazonov, Yu. Ya. Stavisskiy, F.I. Ukraintsev, L.N. Usachev, N.I. Petisov, D.F. Sherman. Research on the Physics of Fast Neutron Reactors (Report No. 2038) 377

Dyakov, V.N. and B.L. Ioffe. Homogeneous Natural Uranium Reactor (Report No. 2296) 398

Feynberg, S.M., Ye. S. Antsiferov, V.P. Kackov, L.V. Komissarov, I.K. Levina, Yu. V. Nikol'skiy, A.N. Novikov, V.S. Osmachkin, G.R. Stulkarov, and Ye. V. Shevelev. Fuel Burn Up in Water-water Power Reactors and Experiments With the Uranium Water Lattice (Report No. 2145) 411

Sidorenko, V.A. Self-regulation in a Water-water Power Reactor (Report No. 2186) 534

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

21 (9)

AUTHORS: Andreyev, V. N., Kazachkovskiy, O. D., Krasnoyarov, N. V. SOV/89-7-4-7/28

TITLE: The Behavior of a Reactor With Temperature Auto-regulation

PERIODICAL: Atomnaya energiya, 1959, Vol 7, Nr 4, pp 363-366 (USSR)

ABSTRACT: An investigation of the physics of fast-neutron reactors indicates the following: The variations of the reactivity with increasing reactor power may be subdivided into comparatively rapid variations (which are essentially connected with the mechanical deformations of the heat-emitting elements and with the expansion of the coolant) and into slow variations (which are connected with the thermal dilatation of the elements of reactor construction). For some processes the power coefficient of reactivity may be subdivided into an instantaneous power coefficient p and a retarded power coefficient k with the average retardation time τ. Such a treatment is suited also for reactors with neutrons having medium and thermal energies. The coefficients p and k may be both positive and negative. The authors investigated the behavior of a reactor, which is connected only with the above-mentioned temperature effects. The neutrons were subdivided into two groups: instantaneous

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neutrons (with the life-time zero) and retarded neutrons (with the life-time τ_0). When the reactor is stopped, the contribution of the retarded power effect decreases exponentially with time. The equation for the reactor kinetics, which corresponds to these conditions is the following:

$$W(t) = \frac{\beta}{\tau_0[\beta-\rho(t)]} \int_{-\infty}^{t} W(t') \exp\left(-\frac{t-t'}{\tau_0}\right)dt', \left[\rho(t)<\beta\right]$$

$$\rho(t) = \rho_0 + pW(t) + \frac{k}{\tau}\int_{-\infty}^{t} W(t') \exp\left(-\frac{t-t'}{\tau}\right)dt'$$

Here $W(t)$ denotes the power of the reactor, $\rho(t)$ - reactivity, β - the effective contribution of the retarded neutrons, ρ_0 - the reactivity of the cooled reactor (with $W(t) = 0$). This system of equations is reduced to a nonlinear differential equation for $W(t)$ (or for $\rho(t)$), which, by the substitutions $W(t) = x$, $\tau W'(t) = y$ assumes the form

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$$\frac{dy}{dx} = \frac{A_1y^3 + A_2y^2x + A_3yx^2 + A_4x^3 + A_5y^2 + A_6yx + A_7x^2}{A_8yx^2 + A_9yx}$$

Here A_1 to A_9 are constant coefficients which depend on k, p, τ, τ_0, β, ρ_0. The authors investigated all 6 singular points of this equation. The most interesting were the points $x = 0$, $y = 0$, and $x = -\rho_0/(k + p)$; $y = 0$. The surroundings of the first singular point determine the character of the increase of reactor power from zero onwards, and the second singular point determines the behavior of the reactor in the power range near the steady power. In the neighborhood of the steady point the solutions of the above equation are more manifold: There are aperiodically steady and aperiodically non-steady, oscillation-stable and oscillation-unstable solutions. In addition, there is a special type of stable solutions. The ranges within which the solutions enumerated exist are shown by a diagram. Also the behavior of the integral curves on the whole is investigated. The steady point is always

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

The Behavior of a Reactor With Temperature Auto-regulation SOV/89-7-4-7/28

stable. Three diagrams show characteristic cases of the behavior of the integral curves. The authors thank A. I. Leypunskiy for his interest in the present investigation. There are 4 figures and 7 references, 4 of which are Soviet.

SUBMITTED: January 8, 1959

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APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOYAROV, [illegible] V., MOROZOV, V. N., NIKOLAYEV, N. N., [illegible], M. S., [illegible], G. N., STAVISSKIY, Y.Y., SALNIKOV, O. A., [illegible], F. I., USACHEV, L. N., LEYPUNSKIY, A. I., KAZACHKOVSKIY, O. D., AB[illegible], A. I., AL[illegible]DROV, Y. A., ARISTARHOV, N. N., [illegible], [illegible]

Physical charactistics of the BR-5 reactor

report submitt d for the IAEA Seminar on the Physics of Fast and Intermediate Reactors, Vie na, 3-11 August 1961
(report presented by G. I. Marchuk)

Acad, Sci. USSR, Moscow

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B102/B214

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AUTHORS: Blokhin, G. Ye., Blokhintsev, D. I., Blyumkina, Yu. A., Bondarenko, I. I. Deryagin, B. N., Zaymovskiy, A. S., Zinov'yev, V. P., Kazachkovskiy, O. D., Kim Khen Bon, Krasnoyarov, N. V., Leypunskiy, A. I., Malykh, V. A. Nazarov, P. M., Nikolayev, S. K., Stavisskiy, V. Ya., Ukraintsev, F. I., Frank, I. M., Shapiro, F. L., Yazvitskiy, Yu. S.

TITLE: A pulsed fast reactor

PERIODICAL: Atomnaya energiya, v. 10, no. 5, 1961, 437-446

TEXT: The present paper gives a description of the pulsed fast reactor of the Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research) which became critical in June, 1960. This reactor, called ИБР (IBR) reactor, serves as pulsed fast neutron source (mean power ≈1 kw) for physical investigations, particularly for time-of-flight experiments. Its most distinguishing feature is the very small contribution ($\sim 10^{-4}$) of the delayed neutrons in its normal operation; it is about

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A pulsed fast reactor

one hundredth of that of the usual steady uranium reactor. In pulses appear because whenever the reactor becomes overcritical a burst of prompt neutrons results. The half width of these pulses is 36 μsec. The frequency with which the pulses are repeated can be varied between 8 and 80 pulses/sec. Fig. 2 shows the construction of this reactor. The periodic change in the reactivity is brought about by the displacement of the two U^{235} blocks placed in two disks that can be rotated. The main block is pressed in the form of a disk, 1100 mm in diameter, and can be rotated with a peripheral velocity of 276 m/sec (at 6000 rpm) during which it passes through the core center. The reactivity change obtainable from the motion of the main block is 7.4 %, that obtainable from the motion of the auxiliary block is 0.4 %. The stationary part of the core consists of plutonium lumps in steel jackets. The reactor is started by a rough regulator, in this case a movable part of the reflector. It gives a reactivity change at the rate of $13 \cdot 10^{-5} - 1.3 \cdot 10^{-5}$ sec^{-1}. The manually operated rod is also a part of the reflector. Two plutonium rods in electromagnetic suspension serve as scram. They can be separated from the core with an acceleration of 20 g. Their separation causes a reactivity

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A pulsed fast reactor

decrease of 2-1.1 %; the rough regulator allows a reactivity change of 2.4 %, the manual regulator 0.1 %, and the automatic regulator 0.036 %. The reactor possesses also a reactivity booster for the production of one intensive pulse. The control and shield system is an automatically functioning electronic arrangement with BF_3 counters and ionization chambers. The whole reactor is placed in a room of size 10·10·7 m whose concrete walls allow complete protection from radiation. The most important experimental arrangement consists of a 1000 m long neutron conductor, a metal tube, 400 mm in diameter in the first part and 800 mm in the second part in which a pressure of 0.1 mm Hg is maintained. This conductor connects a chain of socalled "intermediate pavilions" (at distances of 70, 250, 500, 750, and 1000 m from the reactor) in which experiments can be carried out. There is also an additional neutron conductor of 100 m length. The reactor chamber is joined to an experimental chamber in which four neutron beams of up to 800 mm diameter are available. There us such an experimental chamber also above the reactor chamber. Various experiments were carried out with the reactor and they are described in the present paper. These are experiments with stand

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A pulsed fast reactor

assemblies and slowly moving main block for the determination of the most important parameters of the reactor; experiments with a core assembly (unmoved), experiments with rotating (5000 rpm) main block and a Ra-α-Be source in the core for the investigation of the effect of the multiplication factor, etc. The most important results are represented graphically. For example, Fig. 8 shows the dependence of the half width θ of a pulse on the reactivity; the dashed line holds for the quasistationary case, the dot-dash line for the case of $\theta = K(\tau/\alpha)^{1/3}v^{-2/3}$, where v is the velocity of motion of the (rotating) main block; in the quasistationary case $\theta = 2\sqrt{\varepsilon_m/\alpha v^2}$, where ε_m is the reactivity at the maximal multiplication factor; $\varepsilon = \varepsilon_m - \alpha x^2$, where x is the displacement of the main block. The reactor has been actually used for the measurement of the total, scattering, capture, and fission cross sections by the time-of-flight method. Further experiments will be carried out with a view to obtaining increase of power and decrease of the pulse duration. There are 15 figures and 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc. The reference to the English-language publication reads as follows: J. Orndorf, Nucl. Sci. and Engng, 2, No. 4, 450 (1957).

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L 20049-65 EPF(c)/EPF(n)-2/EPR/EPA(s)-2/EWT(m)/EPA(bb)-2/EWP(b)/EWP(t)
Pr-4/Ps-4/Pz-10/Pu-4 SSD/AFWL/IJP(c) DM/WW/JD/JG
ACCESSION NR: AP4049534 S/0089/64/017/005/0345/0348

AUTHORS: Leypunskiy, A. I.; Kazachkovskiy, O. D.; Afrikantov, I. I.; Pinkhasik, M. S.; Krasnoyarov, N. V.; Poydo, M. S.

TITLE: Sodium cooled fast reactors

SOURCE: Atomnaya energiya, v. 17, no. 5, 1964, 345-348

TOPIC TAGS: power reactor, liquid metal cooled reactor, fast reactor/BN-350

ABSTRACT: The first fast-neutron power reactor now being designed in the SSSR (BN-350) is described. It is rated 1000 MW thermal and 350 MW electrical. Sodium coolant at 300C (total volume 165 m^3) is heated in the reactor to 500C by about 200 fuel elements. The volume of the active zone (~2000 liters) and the power ratio (500 kW/liter) ensure a minimum use of fuel in the cycle. The ratio of the diameter of the active zone to its height (D/H) is 1.4 (D = 1.5

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ACCESSION NR: AP4049534

m, H = 1.06 m), the maximum sodium speed is 10 m/sec, the thickness of the breeder zones on the periphery and on the end is 60 cm. The construction permits the active zone size to be varied and to use different types of fuel elements. A ceramic fuel element is used consisting of a mixture of plutonium dioxide (19% Pu) and U^{238}. Enriched (23%) uranium dioxide can also be used. The fuel rod is a stainless steel tube 5 mm in diameter and 0.4 mm thick, filled with pellets of the sintered fuel. The arrangement of the active and breeder zones is such as to produce a conversion ratio ~1.5. The internal conversion ratio is 0.62. The change in reactivity is 0.6% per month and is compensated by motion of central fuel elements with a reactivity margin of 1.4%, permitting 2 months' continuous operation. The shielding, control, and safety precautions are described. The sodium flows through a heat exchanger in which steam is produced at 430C and 50 atm pressure. Some improvements are suggested for future designs on the basis of the experience already gained in the design of the BN-350. Orig. art. has: 1 figure.

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APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KAZACHKOVSKIY, O. D.; KRASNOYAROV, N. V.; MATVEYEV, V. I.

"Calculations on power fast reactor physics."

report submitted for 3rd Intl Conf, Peaceful Uses of Atomic Energy, Geneva, 31 Aug-9 Sep 64.

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

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[illegible], V.B.; [illegible], N.V.; [illegible]
[illegible], M.S.; SAV[illegible], [illegible].

Use of concrete as shielding for nuclear reactors at [illegible] temperatures. Atom. energ. 19 no.6:524-529 D '65.

([illegible] 19:1)

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 28387-66 EPF(n)-2/EWA(h)/EWT(m)/ETC(f)/EWG(m)/EWP(t)/ETI WW/JD/JG

ACC NR: AP6001794 (A) SOURCE CODE: UR/0089/65/019/006/0524/0529

AUTHOR: Dubrovskiy, V. B.; Krasnoyarov, N. V.; Kulakovskiy, M. Ya.; Pergamenshchik, B. K.; Pinkhasik, M. S.; Savitskiy, V. I.

ORG: None

TITLE: Use of concrete for nuclear reactor shielding at high temperatures

SOURCE: Atomnaya energiya, v. 19, no. 6, 1965, 524-529

TOPIC TAGS: nuclear reactor shield, nuclear reactor material, chromite, concrete

ABSTRACT: A theoretical study is presented on the possible utilization of heat-resistant chromite and ordinary refractory concretes for thermal shielding of nuclear reactors. Ordinary concrete was chosen for investigations because this material is widely used in industries while chromite concrete was selected on account of its high neutron absorbing and moderating properties and for its efficient gamma-shielding qualities. The chemical compositions and physical properties of these two materials were summarized in two tables. The heat release produced in concrete by neutron fluxes was calculated under the condition that the gamma flux was equal to zero. It was assumed, that neutrons were emitted from a Pu-239 plate of a 5-cm thickness and infinite length. Data taken from

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ACC NR: AP6001794

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various sources were used for calculating neutron fluxes of different levels up to 10^{13} neutrons per sq cm sec. The distributions of neutron fluxes in ordinary and chromite concrete shieldings were graphically illustrated including total and fast neutron fluxes. Similar curves were plotted for gamma radiations per one neutron. The heat distribution inside chromite concrete shielding per one neutron was also represented. Temperatures were calculated for various neutron fluxes, concrete thicknesses and heat transfer coefficients. The results were plotted in four sets of curves. Mechanical stresses caused by differences in temperature were investigated in connection with the reinforcement of concrete in outer shielding areas. The calculations were made for cylindrical shielding made of chromite concrete (trade mark 400) with embedded metal rings (trade mark 2 x 13). The results of calculations for various thicknesses were tabulated. It was concluded that heat-resistant concrete could be used for neutron fluxes up to 10^{13} neutrons per sq cm sec, temperatures up to 1100 C and temperature drops up to 900 C. Orig. art. has: 3 tables and 7 figures.

SUB CODE: 18, 11/ SUBM DATE: 21Jan65 / ORIG REF: 014 / OTH REF: 007

Card 2/2 CC

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KOMISSAROVA, L.N.; KRASNOYARSKAYA, A.A.; GULIA, V.G.

Scandium thiocyanates. Zhur. neorg. khim. 9 no.2:477-478 F'64. (MIRA 17:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova, kafedra neorganicheskoy khimii.

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOYARSKAYA, L. S.

KRASNOYARSKAYA, L. S.- "Strength of Silk Threads Made of Continuous Fibers." Min of Higher Education USSR, Moscow Textile Inst, Moscow, 1955 (Dissertations For Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No. 26, June 1955, Moscow

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOYARSKAYA, L.S., aspirant

Methods of determining the strength of silk fabrics. Tekst.prom. 15 no.8:40-43 Ag'55. (MLRA 8:11)

1. Kafedra shelka Moskovskogo tekstil'nogo instituta
(Silk--Testing) (Rayon--Testing)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOYARSKIY, P.

Increase the activity of Social Aid Commissions. Zhil.-kom. khoz. 6 no.4:20-21 '56. (MLRA 9:8)

1. Glavnoye upravleniya zhilishchnogo hozyaystva Ministerstva kommunal'nogo khozyaystva RSFSR.
(Housing)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOV, P.V., inzhener; KRASNOYARSKIY, V.E., inzhener.

Shutting off small and middle-sized gushers. Bezop.truda v prom. 1 no.9:31-32 S '57. (MIRA 10:9)
(Petroleum industry--Fires and fire prevention)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

L 00065-66 EWT(m)/EPA(w)-2/EWA(m)-2 IJP(c)

ACCESSION NR: AP5021324 UR/0120/65/000/004/0026/0029
539.1.076

AUTHOR: Teplyakov, V. A.; Yermakov, S. M.; Makarov, A. I.; Gendel', Yu. G.; Krasnovskiy, V. I.; Shembel', B. K.

TITLE: The use of accelerating field focusing in the beginning part of a linear ion accelerator

SOURCE: Pribory i tekhnika eksperimenta, no. 4, 1965, 26-29

TOPIC TAGS: MEV accelerator, ion beam focusing, particle accelerator component

ABSTRACT: The beginning part of an accelerator (b.p.a.) is distinguished by large relative velocity increments within the gaps of the accelerating system. The existing theory of accelerating field focusing is applicable to accelerators with small velocity increments only (1-2%) and describes only poorly the ion motion with the b.p.a.. Such a focusing was tested only on electron models of 4—7 MEV proton linear accelerators and the present authors tested the accelerating field focusing in a b.p.a. with velocity increments of 5—15% and an injection energy of 50 kEV with an operative wavelength of 5 m. This article describes the instrument and by comparing the proton spectra at its exit (drift tubes with a channel

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ACCESSION NR: AP5021324 10

having rectangular or circular cross section) shows that the focusing by means of the accelerating field is quite effective. "The authors thank A. P. Fedotov for his participation during the accelerator design, B. K. Kondrat'yev, R. P. Kuybida, and V. I. Moguchev for their part in putting the device into operation, and A. I. Trikin for his help in carrying out the experiments." Orig. art. has: 4 figures.

ASSOCIATION: None

SUBMITTED: 27May64 ENCL: 00 SUB CODE: NP

NO REF SOV: 003 OTHER: 000

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

KRASNOYARSKIY, V. V.

KRASNOYARSKIY, V.V.

Designing equipment for cathodic protection of underground pipes. Gaz.prom. no.10:24-32 O '57. (MIRA 10:10)
(Pipe) (Electrolytic corrosion)

APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210(

"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

TSIKERMAN, Leonid Yakovlevich,; KRASNOYARSKIY, V.V., red.; AKATOVA, V.G., red. izd-va,; VOLKOV, S.V., tekhn. red.

[Calculations for anticorrosive insulating coatings of underground metal pipelines] Raschet protivokorrozionnykh izoliruiushchikh obolochek podzemnykh metallicheskikh truboprovodov. Moskva, Izd-vo M-va kommun. khoz. RSFSR, 1958. 126 p. (MIRA 11:11)

(Pipelines--General)
(Protective coatings)

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"APPROVED FOR RELEASE: Monday, July 31, 2000 CIA-RDP86-00513R000826210

14(5) PHASE I BOOK EXPLOITATION SOV/1882

Vsesoyuznoye soveshchaniye po korrozii i zashchite metallov. 6th, Moscow, 1956

Teoriya i praktika protivokorrozionnoy zashchity podzemnykh sooruzheniy; trudy soveshchaniya (Theory and Application of Anti-corrosion Measures of Subterranean Installations; Transactions of the 6th All-Union Conference on Corrosion and Protection of Metals) Moscow, 1958. 273 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii. Komissiya po bor'be s korroziyey metallov.

Editorial Board: I.N. Yershov, Candidate of Technical Sciences; A.P. Lunev, Candidate of Chemical Sciences; Yu.N. Mikhaylovskiy, Candidate of Chemical Sciences, I.V. Strizhevskiy, Candidate of Technical Sciences; N.D. Tomashov, Professor, Doctor of Chemical Sciences; and P.V. Shchigolev, Candidate of Chemical

Card 1/7

Sciences; Resp. Ed.: N.D. Tomashov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: A.L. Bankvitser; Tech Ed.: P.S. Kashina.

PURPOSE: The book is intended for chemists, engineers, and metallurgists concerned with the problem of metal corrosion in underground installations.

COVERAGE: The book contains the papers read at the All-Union Conference of the Committee on the Control of Corrosion of the Academy of Sciences, USSR, held in May, 1956. The following scientific and technical problems discussed at the conference received particular attention: 1) theory of metal corrosion underground (N.D. Tomashov and S.I. Kazmetsov); 2) theory, calculation, and practical application of cathodic and anodic protection of underground installations (A.P. Lunev, Y.N. Yershov, V.G. Kotik, V.V. Krasnoyarskiy, and A.N. Tsekun); 3) study of the anticorrosive properties and the improved technology in manufacturing and applying protective coatings to subterranean metallic installations (L. Ya. Tsikerman, V.I. Zhukov, M.D. Dzhafarov, and V.S. Artamonov); 4) prevention of stray current corrosion (I.V. Strizhevskiy, J.K. Tomlyanovich, P.G. Doroshenko, and

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A.I. Gerdyukhin; 5) development of methods for determining the corrosion activity of soils (Yu. N. Mikhaylovskiy, N.D. Tomashov, N.S. Trifel', and V.V. Krasnoyarskiy); 6) concrete examples of corrosion and protection of underground installations (S.G. Vedenkin and V.S. Artamonov, V.A. Pritula, and S.S. Popov). There are 161 references, 128 of which are Soviet, 30 English, and 3 German.

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Doroshenko, P.G. Electrical Protection of Trunk Pipelines Against by Stray Currents 181

Gerdyukhin, A.I. Protection of the Moscow Underground Pipelines Against Corrosion Caused by Stray Currents 18[illegible]

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14(5) PHASE I BOOK EXPLOITATION SOV/1882

Vsesoyuznoye soveshchaniye po korrozii i zashchite metallov. 6th, Moscow, 1956

Teoriya i praktika protivokorrozionnoy zashchity podzemnykh sooruzheniy; trudy soveshchaniya (Theory and Application of Anti-corrosion Measures of Subterranean Installations; Transactions of the 6th All-Union Conference on Corrosion and Protection of Metals) Moscow, 1958. 273 p. Errata slip inserted. 3,000 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut fizicheskoy khimii. Komissiya po bor'be s korroziyey metallov.

Editorial Board: I.M. Yershov, Candidate of Technical Sciences; A.P. Lunev, Candidate of Chemical Sciences; Yu.N. Mikhaylovskiy, Candidate of Chemical Sciences, I.V. Strizhevskiy, Candidate of Technical Sciences; N.D. Tomashov, Professor, Doctor of Chemical Sciences; and P.V. Shchigolev, Candidate of Chemical

Card 1/7

Sciences; Resp. Ed.: N.D. Tomashov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: A.L. Bankvitser; Tech Ed.: P.S. Kashina.

PURPOSE: The book is intended for chemists, engineers, and metallurgists concerned with the problem of metal corrosion in underground installations.

COVERAGE: The book contains the papers read at the All-Union Conference of the Committee on the Control of Corrosion of the Academy of Sciences, USSR, held in May, 1956. The following scientific and technical problems discussed at the conference received particular attention: 1) theory of metal corrosion underground (N.D. Tomashov and S.I. Kazmetsov); 2) theory, calculation, and practical application of cathodic and anodic protection of underground installations (A.P. Lunev, I.M. Yershov, V.G. Kotik, V.V. Krasnoyarskiy, and A.N. Teskun); 3) study of the anticorrosive properties and the improved technology in manufacturing and applying protective coatings to subterranean metallic installations (L. Ya. Tsikerman, V.I. Zhukov, N.D. Dzhafarov, and V.S. Artamonov); 4) prevention of stray current corrosion (I.V. Strizhevskiy, J.K. Tomlyanovich, P.G. Doroshenko, and

Card 2/7

K.I. Gerdyukhin; 5) development of methods for determining the corrosion activity of soils (Yu. N. Mikhaylovskiy, N.D. Tomashov, N.S. Trifel', and V.V. Krasnoyarskiy); 6) concrete examples of corrosion and protection of underground installations (S.G. Vedenkin and V.S. Artamonov, V.A. Pritula, and S.S. Popov). There are 161 references, 128 of which are Soviet, 30 English, and 3 German.

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SOV/137-59-7-16482

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 7, p 319 (USSR)

AUTHOR: Krasnoyarskiy, V.V.

TITLE: Electrochemical Steel Phosphate-Coating - A Method of Surface Preparation to Apply Protective Coating

PERIODICAL: V sb.: Zashchita morsk. sudov ot korrozii, Moscow, "Morsk. Transport", 1958, pp 93 - 98

ABSTRACT: The author investigated the phosphate-coating process at room temperature (18 - 20°C) in the following solutions (in g/l): 1) H_3PO_4 40, ZnO 15, $NaNO_3$ 10; 2) H_3PO_4 40, ZnO 24.3, HNO_3 7.3; 3) H_3PO 33, ZnO 18.6, $KClO_3$ 17.5, NaF 6.0, with polarization of the specimen. The quality of the phosphate coating was tested in a 3% NaCl solution (according to the time of appearance of rust in the layer pores). Potentials were measured simultaneously. Initially the specimens had a highly negative potential, corresponding to the Zn potential. The appearance of rust was observed subsequently to the abrupt potential shifting towards the positive sign. Increase in weight of the specimens was proportional to time and D (if D >125 ma/dm^2, the potential of Zn deposition is being attained). The electrochemical equivalent of the deposit is ~ 3 g/a-hr, which proves

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Electrochemical Steel Phosphate-Coating - A Method of Surface Preparation to Apply Protective Coating

the simultaneous occurrence of zinc plating and phosphate coating processes. This ensures maximum protective properties of varnish-paint coatings. The advantage of phosphate-coating (in solution Nr 1, if D is 0.5 a/dm², for 10 minutes) as a preparation method, was confirmed also for bituminous coatings. Electrochemical rubbing (after hydro-sandblast preparation of the surface) is a technologically recommendable method of phosphate-coating.

A.L.

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ANDREYEVA, Ye.A.

ANDREYEVA, Ye.A., kand.khim.nauk (Moskva); KRASNOYARSKIY, V.V., inzh. (Moskva); BULAYEV, V.I., inzh. (Moskva)

Means for increasing the stability of anticorrosive coatings of cathodically protected underground pipelines. Stroi. pred. neft. prom. 3 no.1:7-10 Ja '58. (MIRA 11:3)
(Pipelines) (Electrolytic corrosion)

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KRASNOYARSKIY, V.G.

18(7);6(7) PHASE I BOOK EXPLOITATION SOV/2246

Zashchita podzemnykh metallicheskikh sooruzheniy ot korrozii; spravochnik. (Protection of Underground Metal Structures From Corrosion; Manual) Moscow, Izd-vo M-va kommunal'nogo khoz. RSFSR, 1959. 743 p. Errata slip inserted. 6,000 copies printed.

Ed.: N.I. Ryabtsev; Ed. of Publishing House: V.G. Akatova: Tech. Ed.: Ye. S. Petrovskaya.

PURPOSE: This collection of articles is intended as a manual on corrosion protection of underground metal structures.

COVERAGE: The book is divided into four parts. The first part gives information on the characteristics of underground metal structures and sources of stray currents. The second part deals with the theory of soil corrosion of metals and the theory of corrosion of metals by stray current. The third part deals with the problem of combating leakage from sources of stray current, methods and devices for investigating corrosion and the fundamentals of planning corrosion prevention. The fourth part explains measures for preventing corrosion of underground metal structures and gives the basic operating principles of equipment involved. No personalities are mentioned. References follow

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3. Electrical subdivision of cables (M.I. Mikhaylov, K.K. Nikol'skiy, and L.D. Razumov) [illegible]
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