SOV/124-57-5-5541

Translation from: Referativnyy zhurnal. Mekhanika, 1957, Nr 5, p 61 (USSR)

AUTHOR: Kovalev, Ya. T.

TITLE: On a Submergence Criterion for a Circular-section Bottom Outlet Through Which Water Flows Under Pressure (O kriterii zatopleniya donnogo vodospuska kruglogo secheniya pri napornom dvizhenii)

PERIODICAL: Sb. nauch. rabot. Beloruss. politekhn. in-t, 1956, Nr 54, pp 63-70

ABSTRACT: The author confirms the earlier finding of other authors to the effect that an error is generally made in the calculation of the discharge capacity of pressure-type water conduits in two specific cases: 1) if the effective pressure head is assumed to equal the difference between the head-water level and the tail-water level when the tail-water level lies above the location of the center of gravity of the area of the outlet cross section of the conduit; and 2) if the effective pressure head is assumed to equal the vertical distance of the head-water level above the location of the center of gravity of the area of the outlet cross section of the conduit when the tail-water level lies below said center-of-gravity location. It is recommended that a water-conduit [outlet] be considered unsubmerged whenever the actual

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On a Submergence Criterion for a Circular-section Bottom Outlet (cont.)

tail-water depth h_a is smaller than the depth h_2. When the opposite holds true, the outlet must be regarded as submerged. It is necessary to point out that merely establishing a satisfactory submergence criterion for pressure-type water conduits does not in itself solve the problem of determining correctly their discharge capacities (see, for example, Faktorovich, M. E., Izv. Vses. n.-i. in-ta gidrotekhn., 1947, Vol 34). The author's recommendations to the effect that the coefficient ξ be used to allow for the pressure-force impulse in a water pipe's outlet-section plane are debatable. His method of proving the validity of the numerical values that he arrives at for this coefficient is unconvincing, because his correlation of experimental data with the calculation results that include this coefficient is based upon the very same experiments and relationships that he used to obtain the values in the first place. Consequently, the numerical values which he gives for his coefficient ξ in this paper cannot be applied to conditions differing at all significantly from the particular conditions that obtained in his experiments.

M. E. Faktorovich

KOVALEV, Ya.T.; KUZMENKOV, V.I.

Laboratory testing results of the permeability of low-pressure locks. Sbor.nauch. trud. Bel. politekh.inst. no.78:78-82 '60.
(MIRA 13:11)
(Locks (Hydraulic engineering)--Testing)

VIL'NER, Yakov Moiseyevich, dots.; VOMNYARSKIY, Iosif Pinkhusovich, dots.; KOVALEV, Yakov Timofeyevich, dots.; KUZMENKOV, Vasiliy Ivanovich, dots.; LAZAREVICH, Ivan Grigor'yevich, dots.; SHUL'PIN, Igor' Aleksandrovich, dots.; AKALOVICH, N.M., red.

[Laboratory practice in hydraulics: Manual and methodological instructions on laboratory procedures in hydraulics; for correspondence and part-time students] Laboratornyi praktikum po gidravlike: Rukovodstvo i metodicheskie ukazaniia po provedeniiu laboratornykh rabot po gidravlik dlia studentov zaochnogo i vechernego obucheniia. [By] IA.M.Vil'ner i dr. Minsk, Izd-vo M-va vysshego, srednego spetsial'nogo i professional'nogo obrazovaniia BSSR, 1961. 131 p. (MIRA 18:4)

1. Kafedra gidravliki Belorusskogo politekhnicheskogo instituta (for all except Akalovich).

L 10747-67 FDN

ACC NR: AP6016791 (A) SOURCE CODE: UR/0416/65/000/011/0079/0083

AUTHOR: Kovalev, Ye. (Lieutenant Colonel; Technical Service)

ORG: None

TITLE: Winter servicing of fuel dump equipment

SOURCE: Tyl i snabzheniye sovetskikh vooruzhennykh sil, no. 11, 1965, 79-83

TOPIC TAGS: fuel storage, arctic maintenance, bulk processing equipment, petroleum industry equipment, armed force logistics, equipment winterization

ABSTRACT: Modern fuel dumps are equipped with complicated and varied types of equipments and many of the accidents which occur in the dumps during the winter months are the result of insufficient knowledge on the part of service personnel, or of a careless attitude while servicing the equipment. Permanent storage facilities must be carefully checked for cracks, splits or improperly adjusted fittings. Foundations should be tamped down and covered. The covers of buried, or semi-buried, containers should be carefully checked. All valves and gaskets should be checked. The heating elements in the tanks require a great deal of attention so they will function properly in cold weather. The area must be cleared of snow so each dump must have snow removal or clearing equipment, such as a "Belarus" mounted on a truck chassis. Other equipment for this purpose includes MS-49 snowplows, or trucks equipped with

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ACC NR: AP6016791

hydraulic scoops, or snowplows. A DMM-5 handcar will clear snow from railroads. Dry sand should be kept on hand to reduce slippage on ice. All vehicles should be provided with tire chains and entrenching tools. When sectional pipelines are used to connect tanks all snow and ice must be removed and they must have the proper slope. If the temperature is below -30°C tanks made of rubberized cloth must be heated prior to folding or unfolding. Rubber hose too must be heated (especially new hose) under such conditions. Winter servicing of equipment calls for the full attention of all personnel, strict supervision of the work by commanders, and a constant increase in the level of technical knowledge of specialists and commanders.

SUB CODE: 15, 21, 13/SUBM DATE: None

Card 2/2

KOVALEV, Ye., Geroy Sotsialisticheskogo Truda, brigadir

In step with time. Mast. ugl. 7 no.8:6 Ag '58. (MIRA 11:9)

1.Kombaynovaya brigada shakhty No.8-9 kombinata Stalinugol'.
(Coal mining machinery)

KOVALEV, Ye., podpolkovnik tekhnicheskoy sluzhby

Mechanization and automatization at fuel depots. Tyl i snab. Sov. Voor. Sil 21 no.10:57-63 O '61. (MIRA 15:1)
(Russia--Army--Fuel)

KOVALEV, YE. A.

18(7) PHASE I BOOK EXPLOITATION SOV/2296

Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii i mashinostroyeniya

Korroziya i zashchita metallov v mashinostroyenii (Corrosion and Protection of Metals in the Machine-building Industry) Moscow, Mashgiz, 1959. 347 p. (Series: Its: [Sbornik] kn. 92) 3,500 copies printed.

Ed.: A. V. Ryabchenkov, Doctor of Chemical Sciences, Professor; Ed. of Publishing House: A. I. Sirotin, Engineer; Tech. Ed.: B. I. Model'; Managing Ed. for Literature on Heavy Machine Building (Mashgiz): S. Ya. Golovin, Engineer.

PURPOSE: This collection of articles is intended for designers, technologists, and industrial and research workers concerned with corrosion and corrosion protection of metals.

COVERAGE: This collection of articles deals with problems of corrosion and metal protection under investigation at TsNIITMASh during the past two years. The articles discuss stress corrosion, intergranular corrosion, scale and heat resistance of austenitic steels in gaseous media, protective coating, fretting corrosion, and resistance of metals to cavitation. No personalities are mentioned. References follow each article.

TABLE OF CONTENTS:

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(13)

83457
S/137/60/000/007/011/013
A006/A001

26.2122 also 2308

Translation from: Referativnyy zhurnal, Metallurgiya, 1960, No. 7, p. 326, # 16439

AUTHORS: Vedenkin, S. G., Kovalev, Ye. A.

TITLE: Vanadium Corrosion of Gas-Turbine Alloys

PERIODICAL: Tr. Vses. n.-i. in-ta zh.-d. transp., 1959, No. 171, pp. 143-164

TEXT: The authors studied the effect of ash from V-containing petroleum of the Ural-Volga deposits, on the corrosion and strength features of heat-resistant ЭИ 417 (EI417) and ЭИ 481 (EI481) austenite steels. It is shown that when contacting "artificial ash", containing V_2O_5, the EI417 steels corrode at 730°C several hundred times faster than in air atmosphere. Endurance of EI481 steels at 700°C within a stress range of 20 - 27 kg/mm^2 decreases by over a factor of 3. Holding the EI417 and EI481 steel specimens in contact with ash for 300 hours at 730°C entails considerable loss of static strength and ductility; cyclic strength of EI481 steel determined thereafter at room temperature, decreased by a factor of 2. The effect of the V_2O_5 + Na_2SO_4 mixture on the corrosion rate at 730°C is explained by the chemical interaction of V_2O_5

Card 1/2

KOVALEV, Ye.A., inzh.

Corrosion of the blades of a gas-turbine locomotive fired with heavy liquid fuel. Vest.TSNII MPS 19 no.5:33-37 '60. (MIRA 13:8)
(Gas-turbine locomotives)
(Corrosion and anticorrosives)

18.7400

68923

AUTHOR: Kovalev, Ye.A.

S/032/60/036/03/015/064
B010/B005

TITLE: Application of the Method of Electric Resistance in Investigating the Corrosion and Destruction of Steel at High Temperatures

PERIODICAL: Zavodskaya laboratoriya, 1960, Vol 36, Nr 3, pp 296-298 (USSR)

TEXT: The time passing until cracking in the expansion of samples was determined by measuring the electric resistance of these samples. A special device (Fig 1) was used in which an indicator measures the increase in length of the sample with an accuracy of 0.01 mm. The tensile stress of the sample is gradually increased by means of weights and rotation of a disc. The experiments were made on a wire sample (diameter 3 mm, length 300 mm) of 1 Kh18N9T steel. The electric resistance of the sample is determined by a double Benson bridge over a measuring length of 20 mm. The temperature is measured by a thermocouple and a PP-1 potentiometer. Tests were carried out at 700, 750 and 850°, the sample being placed in air or in a salt solution (41.6% V_2O_5, 11.2% Na_2SO_4, 16% Al_2O_3, 16% Fe_2O_3, 7.2% SiO_2, 6.4% NiO, and 1.6% CuO). The curves of the change in electric resistance of the sample during a test at 800° are given as an example (Fig 2). The curves show a distinct salient point short before the fracture of the sample, i.e. the electric resistance rises sharply. Metallographic investigations showed that the sample was cracking after the rise in electric resistance. If, however, loading is interrupted before the rise in electric resistance, no cracking is observed. The

Card 1/2

KOVALEV, Ye. A., Cand Tech Sci, "Vanadium corrosion of heat-resistant alloys and measures for combating it. Moscow, 1961. (Min of Higher and Sec Spec Ed RSFSR. Moscow Inst of Chem Machine Building). (KL, 2-61, 209).

IGNATOV, D.V. (Moskva); KOVALEV, Ye.A. (Moskva)

Mechanism of the effect of vanadium pentoxide on the speed of oxidation of EI-417 steel. Izv. AN SSSR. Otd. tekh. nauk. Met. i topl. no.6:107-114 N-D '61. (MIRA 14:12)
(Chromium-nickel steel--Corrosion)
(Vanadium oxide)

34542
S/659/61/007/000/030/044
D217/D303

1,1800

AUTHORS: Gorbunov, N.S., Kovalev, Ye.A., and Latukhova, A.G.

TITLE: Investigating diffusion coatings resistant to media containing vanadium pentoxide

SOURCE: Akademiya nauk SSSR. Institut metallurgii. Issledovaniya po zharoprochnym splavam, v. 7, 1961, 263 - 270

TEXT: In this investigation, in which the service conditions of gas transport turbines were simulated, the excess pressure of the working process and the speed of gas flow were not allowed for. The work was carried out at the Institut fizicheskoy khimii AN SSSR (Institute of Physical Chemistry AS USSR) and at the Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo transporta (All Union Scientific Research Institute of Railway Transportation) in association with the Kolomenskiy teplovozostroitel'nyy zavod im. Kuybyshev (Kolomensk Internal Combustion Works im. Kuybyshev). Diffusion coatings were produced on the surface of the austenitic class chromium-nickel steel ЭИ 417 (EI417), from which flat speci-

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mens, 15 x 10 x 6 mm were made. Silicide diffusion coatings were produced at 1000, 1020 and 1050°C by soaking for 2 - 6 hours. Aluminizing was carried out at 1000 and 1100°C, soaking for 4 - 6 hours and chromiding in vacuum at 1000°C for 4 - 6 hours. 730°C was selected as the temperature for corrosion testing, this being the maximum service temperature for guide vanes of a gas turbine. To select the mode of application of the corrosive mixture to the specimens, at which the rate of corrosion of the specimens at elevated temperatures should approach the intensity of destruction of the alloys in the course of service of the gas turbine plant, two methods were investigated: Immersion of the specimens in molten cinder and application of a suspension to the specimens at room temperatures (painting). On testing the above coatings in an atmosphere of air in contact with cinder (10 and 41.6 % V_2O_5) at 730°C, silicided specimens exhibited the greatest resistance against corrosion by vanadium pentoxide. The resistance of aluminized and alumino-silicided specimens was lower. All coatings, apart from silicided ones, failed on testing for 500 hours in contact with cinder at 730°C. The corrosive medium diffused through the coating to the me-

tal, oxidizing the latter at the boundary line of diffusion. The thickness of a silicided layer under similar conditions decreased somewhat and pitting corrosion appeared on the surface; however, molten cinder did not penetrate to the metal and the latter did not corrode. In the presence of SiO_2 in air atmosphere, the rate of corrosion of alumino-silicided and aluminized specimens is the same as the rate of corrosion in pure air. Chromided and silicided specimens exhibit high stability under these conditions. A combination cementation coating (Si and Al) gave less protection to the steel EI417 against vanadium pentoxide than a coating consisting of one of the individual elements. On periodically cooling the specimens (cooling 40 times from 730 to 20°C within 15-20 minutes), no exfoliation and destruction of the protective layer of chromided and silicided specimens occurred. No cracks or ruptures in the diffusion layer were observed on water quenching silicided specimens from 1150°C and the adhesion of the coating to the base metal remained unimpaired. Siliciding and chromiding are recommended for protection of gas vanes of gas turbine plants against corrosion during combustion of sulphur-containing petroleum residues of high

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vanadium content. There are 5 figures, 2 tables and 11 references: 3 Soviet-bloc and 8 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: Corrosion, 11 no. 1, p. 35, 1955; Iron and Steel Inst., 179, no. 4, p. 342, 1955; Corrosion, 12, no. 9, pp. 49-54, 1956; Iron and Steel Inst., 182, no. 2, p. 195, 1956.

with an elevated [illegible] which, [illegible] turbine blades with 60 - 75% vanadium pentoxide which, [illegible] 650°C, results in the rapid corrosion destruction of the blades. To prevent corrosion, a protective coating is applied to the blade surface by the diffusion metallization method. Coatings were tested which were applied by aluminum siliconizing, calorizing, chrome plating and siliconizing. It is pointed out that chrome-

S/123/62/000/012/007/010
A004/A101

The resistance of...

plated and siliconized specimens in the course of 500 hours testing showed the maximum resistance to vanadium corrosion at 730°C in contact with ashes containing 10 and 41.6% vanadium pentoxide. There are 4 references.

[Abstracter's note: Complete translation]

Card 2/2

KOVALEV, Ye.A., kand.tekhn.nauk

Corrosion of locomotive parts and methods for its control. Vest. TSNII MPS 23 no.2:35-38 '64. (MIRA 17:3)

KOVALEV, Ye.A., kand.tekhn.nauk; VIKKER, I.V., kand.fiz.-matem.nauk

Resistance to corrosion of the diffusion coatings of the turbine blades of gas-turbine locomotives. Vest. TSNII MPS 21 no.1:36-37 '62. (MIRA 15:2)

(Diffusion coatings)
(Steel—Corrosion)

S/180/61/000/006/011/020
E071/E335

AUTHORS: Ignatov, D.V. and Kovalev, Ye.A. (Moscow)

TITLE: On the mechanism of the influence of vanadium pentoxide on the velocity of oxidation of steel ЭИ-417 (EI-417)

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Metallurgiya i toplivo, no. 6, 1961, 107 - 114 + 1 plate

TEXT: Combustion in a gas turbine of a high-sulphur oil, also containing increased quantities of vanadium and sodium, causes a rapid corrosion of the turbine blades. There is no agreement in the literature as to the mechanism of this type of corrosion and for this reason the authors investigated the process of oxidation of steel specimens heated to temperatures of 600 - 850 °C in air, in contact with and without vanadium pentoxide and a mixture of vanadium pentoxide and sodium sulphate. A chromium nickel austenitic steel EI-417 (0.11% C, 1.24% Mn, 0.76% Si, 24.1% Cr, 18.47% Ni, 0.022% P and 0.013% S), after hot-rolling without thermal treatment, was used for the investigation. Specimens were prepared in the form of plates 20 x 10 x 17 mm. A synthetic

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ash(composition, %: V_2O_5 - 41.6, Na_2SO_4 - 11.2, Al_2O_3 - 16.0, Fe_2O_3 - 16.0, SiO_2 - 7.2, NiO - 6.4 and CuO - 1.6, corresponding to the ash of a fuel oil) and vanadium pentoxide in the form of paste were used for coating the specimens. Experiments on the kinetics of oxidation of the steel were carried out in air at temperature of 600, 650, 700, 750, 800 and 850 °C. For comparison, oxidation of specimens of the same composition and at the same temperatures but without contact with the ash or vanadium pentoxide, was carried out for 1, 2, 4, 8, 16, 32, 64 and 100 hrs. The coating was renewed every 20 hours in the oxidation tests of the coated specimens. Removal of corrosion products from the specimens was done electrochemically. It was found that, on heating in air, steel EI-417 oxidises according to the parabolic law (with the exception of the first stage during the first four hours) and, on heating in contact with V_2O_5 or with the above mixture - according to the linear law in the whole temperature range investigated (650 - 850 °C). The corresponding velocity constants were calculated as: 0.085, 21.2 and 41.5 g/m^{2}hr. On contact of

On the mechanism of ....

the specimens with corrosive mixtures the velocity of corrosion sharply increases with increasing temperature. A particularly sharp increase in the corrosion velocity was observed above 650 °C for the mixture and above 700 °C for vanadium pentoxide. Thus, a rapid oxidation was observed only in the presence of liquid V_2O_5 phase and low melting iron vanadates and their mixtures with iron and chromium oxides. The oxide film of specimens oxidised in air was analysed by electron-diffraction methods and the corrosion products of specimens oxidised in contact with V_2O_5 and the mixture were submitted to X-ray and electron-diffraction analyses. The results obtained indicate that the film formed on oxidation of specimens in air (not in contact with V_2O_5 or the mixture) consisted of solid solutions of the spinels $FeCr_2O_4$ and $NiFe_2O_4$. The scale formed on the specimens oxidised in contact with V_2O_5 consisted mainly of a mixture of solid solutions of α-Fe_2O_3, α-Cr_2O_5 and V_2O_5. In the scale of specimens in contact with the mixture, in addition to the above oxides of the

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On the mechanism of ....

α-Al_2O_3 type, the presence of other compounds, e.g. V_2O_5, Na_2SO_4 was confirmed. A more accurate determination of the composition was not possible due to the low intensity of the lines and a large number of phases present. On the basis of the results obtained the following mechanism of the influence of V_2O_5 and V_2O_5 + Na_2SO_4 on the velocity of oxidation of EI-417 steel is postulated: liquid V_2O_5 in contact with the surface of specimens rapidly destroys a thin layer (100 - 200 Å), consisting mainly of Fe_2O_3, formed during the preparation of specimens and their initial heating to the melting temperature of V_2O_5. Therefore, during the initial period of oxidation, instead of a protective oxide layer in the solid state, a liquid layer consisting of a mixture of V_2O_5 and α-Fe_2O_3 is formed. Air oxygen penetrates this layer easily to the boundary metal-oxide layer and oxidises the components of steel, predominantly iron and chromium. If no fresh V_2O_5 is added, the protective

properties of the oxide film can be regenerated due to the reduction of V_2O_5 with chromium to high-melting V_2O_3. In the presence of liquid V_2O_5 the scale formed is porous and consists mainly of a mixture of oxides α-Cr_2O_3, α-Fe_2O_3, V_2O_5 and possibly of small quantities of vanadates, $FeVO_4$, $CrVO_4$ and compounds of the type $2NiO.V_2O_5$. Shearing stresses are generated in the scale causing its peeling off from the metal on cooling, due to a large molecular volume of V_2O_5. Oxide compounds of the spinel type are absent in this case, because in the presence of V_2O_5 free NiO and FeO are not formed. The mechanism of the influence of the mixture (V_2O_5 + Na_2SO_4) on the velocity of oxidation of the steel is basically the same as of V_2O_5, except that, due to the presence of sodium sulphate, the activity of the mixture is increased. The latter is due to a

On the mechanism of ....

decrease in the melting temperature (to 650 °C) and the appearance of sulphuric anhydride ($V_2O_5 + Na_2SO_4 = 2NaVO_3 + SO_3$).

There are 3 figures, 4 tables and 16 references: 1 Soviet-bloc (translated from non-Soviet publication) and 15 non-Soviet-bloc. The four latest English-language references mentioned are:
Ref. 1: W. Foster, M. Leipole, T.A. Shevlin - Corrosion, 12, no.11, 1956, 23; Ref. 7: E. Fitzer, I. Schwab - Corrosion, 12, no. 9, 1956, 49; Ref. 10: G. Lucas, M. Weddell, A. Precce - J. Iron and Steel Inst., 1955, 179, 342; Ref. 15: H. Logan - Corrosion, 15, no. 8, 1959, 61.

SUBMITTED: February 10, 1961

Card 6/6

KOVALEV, Ye.B., inzh.; TOKARENKO, A.T., inzh.; BURKOVSKIY, A.N., inzh.

Study of finned casings of VAO series electric motors. Elektrotekhnika 35 no.12:3-5 D '64. (MIRA 18:4)

PERTSOV, G.I., kand.tekhn.nauk; KOVALEV, Ye.B., inzh.; GORBOVTSOV, R.B., inzh.

Determination of the heat emission of the frameworks of enclosed asynchronous motors. Vest. elektroprom. 33 no.10:32-35 O '62. (MIRA 15:9)
(Electric motors, Induction--Cooling)

KOVALEV, Ye.B., inzh.; BURKOVSKIY, A.N., inzh.; TOKARENKO, A.T., inzh.

Heat emission in the intrarib hull grooves of enclosed induction motors. Elektrotekhnika 36 no.11:27-29 N '65. (MIRA 18:11)

PANKRAT'YEV, A.F., inzh.; POVOLOTSKIY, M.Ye., inzh.; KOVALEV, Ye.B., inzh.

A series of explosionproof asynchronous motors with 0.27kv. to 100 kv. power ratings. Vest. elektroprom. 34 no.3:4-7 Mr '63. (MIRA 16:8)

(Electric motors, Induction)
(Mining machinery--Electric driving)

S/137/63/000/001/010/019
A006/A101

AUTHOR: Kovalev, Ye. D.

TITLE: Experimental use of automatic welding

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 1, 1963, 17, abstract 1E86 (In collection: "Vnedreniye peredovoy tekhnol. svarki", no. 1, Irkutsk, 1960, 50 - 52)

TEXT: Information is given on the experimental use of automatic welding at a mechanical repair plant in Angarsk. Welding of 34 mm thick 15 K (15 K) steel containers for the storage of liquid ammonia is performed without beveling of edges on a TC-17 M (TS-17 M) automatic machine with CB-08 A (SV-08A) wire 4 mm in diameter, under AH-348 A (AN-348A) flux. The pipe plate blanks are of 115 mm thick Ст.3 (St.3) steel. Butt-welding was performed on an АДС -1000-2 (ADS-1000-2) automatic machine in 8 passes, using 5 mm-diameter SV-08A wire under AN-348A flux. Double-V grooving of the edges was performed on a gas cutting АСП -1 (ASP-1) automatic machine. Automatic welding without beveling of edges was assimilated at the plant with up to 40 mm thick sheet steel and type 18-8 stainless steel, using AH-26 (AN-26) flux.

V. Klyuchnikova

[Abstracter's note: Complete translation]

Card 1/1

KOVALEV, YE. F.

China - Economic Conditions

Progress of economic and cultural development of the Chinese People's Republic, Plan. khoz., No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, July 1952. Unclassified.

1. KOVALEV, YE. F.

2. USSR (600)

4. Mao, Tse-Tung, 1893-

7. Selected works, Vol. 1, Mao Tse-tung, reviewed by E. F. Kovalev, vop. ist., no. 4, 1953.

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

KOVALEV, Evgenii Fedorovich.

People's Republic of China - a great world power Moskva, Znanie, 1954. 55 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. ser. 1, 1954, no. 28-29)

MASLENNIKOV, Vyacheslav Aleksandrovich,; KOVALEV, Ye. F., otv. red.; SHVETSOV, N.I., red. izd-va,; MAKUNI, Ye.V., tekhn. red.

[Economic structure of the Chinese People's Republic] Ekonomicheskii stroi Kitaiskoi Narodnoi Respubliki. Moskva, Izd-vo Akad. nauk SSSR, 1958. 390 p. (MIRA 11:11)
(China--Economic conditions)

KOVALEV, YE. G

PHASE I BOOK EXPLOITATION SOV/4149

Leningrad. Arkticheskiy i Antarkticheskiy nauchno-issledovatel'skiy institut

Problemy Arktiki; sbornik statey, vyp. 7 (Problems of the Arctic; Collection of Articles, No. 7) Leningrad, Izd-vo "Morskoy transport," 1959. 135 p. 500 copies printed. ERRATA SLIP

Additional Sponsoring Agency: USSR. Ministerstvo morskogo flota.

Resp. Ed.: V.V. Frolov; Editorial Board: L.L. Balakshin, A.A. Girs, P.A. Gordiyenko (Deputy Resp. Ed.), I.M. Dolgin, L.G. Kaplinskaya, A.A. Kirillov, Ye.S. Korotkevich, V.V. Lavrov, I.V. Maksimov, A.I. Ol', I.I. Poznyak, and B.V. Pelisov; Tech: L.P. Drozhzhina.

PURPOSE: The publication is intended for geographers, oceanographers, and particularly for all those interested in the studies of Arctic and Antarctic regions.

COVERAGE: This collection of 19 articles is the seventh of a series of publications dealing with problems of the Arctic and Antarctic. The articles deal mainly with the characteristics of water in the Barents Sea, hydrological conditions in the estuaries of Siberian rivers, types of atmospheric circulation in the Arctic, distribution of the hydrological stations in the Soviet Arctic, magnetic storms and their effect on radio communications. Included is brief information on Soviet meteorological and oceanographical expeditions. References accompany most of the articles. No personalities are mentioned.

TABLE OF CONTENTS:

KOVALEV, Ye.G.

Cyclic fluctuations of ice conditions in the region of the Novosibirskiye Islands and their possible use for prognostic purposes. Dokl. AN SSSR 135 no.2:439-442 N '60. (MIRA 13:11)

1. Arkticheskiy i antarkticheskiy nauchno-issledovatel'skiy institut Glavnogo upravleniya Severnogo morskogo puti. Predstavleno akademikom A.A.Grigor'yevym.
(Novosibirskiye Islands region--Ice)

ASKEROV, Ali Aslanovich, kand. med. nauk; KOVALEV, Yefim Ivanovich, kand. med. nauk; MAKAROV, V.A., red.; BASHMAKOV, G.M., tekhn. red.

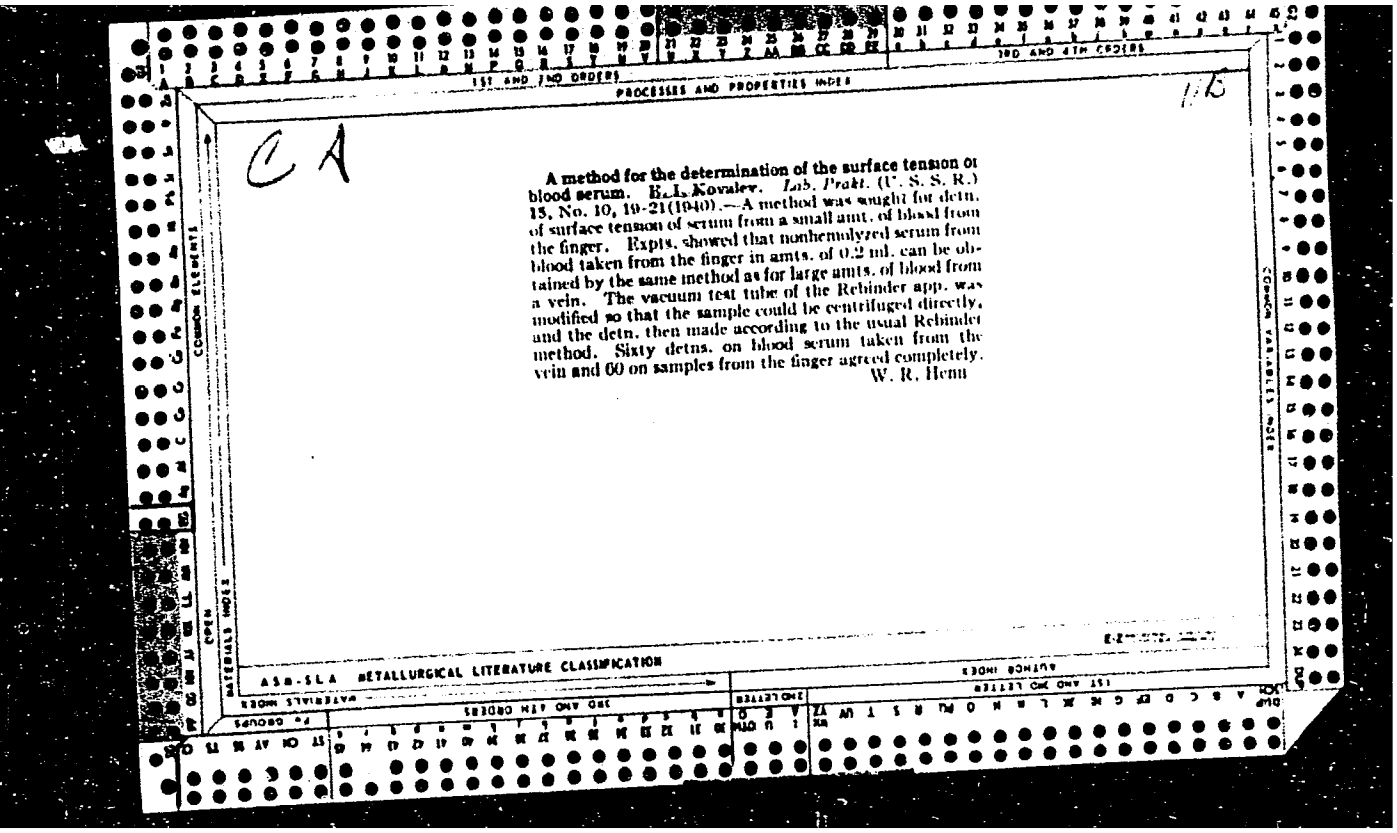
[Medical control of physical exercises for elderly subjects] Vrachebnyi kontrol' pri zaniatiiakh fizicheskimi uprazhneniiami v starshem vozraste. Moskva, Medgiz, 1962. 180 p. (MIRA 15:12)

(EXERCISE THERAPY)
(AGED--CARE AND HYGIENE)

ASKEROV, A.A., kand.med.nauk; KOVALEV, Ye.I., kand.med.nauk

Medical supervision of physical exercises performed by elderly persons and the role of a nurse. Med. sestra 22.no.4:15-20 Ap'63. (MIRA 16:7)

(EXERCISE)



C A

1/5

A method for the determination of the surface tension of blood serum. B. L. Kovalev. *Lab. Prakt.* (U. S. S. R.) 15, No. 10, 19-21(1940).—A method was sought for detn. of surface tension of serum from a small amt. of blood from the finger. Expts. showed that nonhemolyzed serum from blood taken from the finger in amts. of 0.2 ml. can be obtained by the same method as for large amts. of blood from a vein. The vacuum test tube of the Rebinder app. was modified so that the sample could be centrifuged directly, and the detn. then made according to the usual Rebinder method. Sixty detns. on blood serum taken from the vein and 60 on samples from the finger agreed completely.

W. R. Henn

KOVALEV, Ye. I.

Investigations of the peripheral vessels by means of electrosphymography. Ter. arkh., Moskva 25 no.6:69-72 Nov-Dec 1953. (CIML 25:5)

1. Candidate Medical Sciences. 2. Moscow.

KOVALEV, Ye.I., kandidat meditsinskikh nauk; KORZHAVIN, B.V., kandidat meditsinskikh nauk (Moskva)

Electrosphygmographic examinations in endarteritis obliterans. Vrach.delo no.2:121-124 F '56. (MLRA 9:7)
(ARTERIES--DISEASES) (SPHYGMOGRAPH)

KOVALEV, YE. I.

DAKHIN, A.D., kand.med.nauk, KOVALEV, Ye.I., kand.med.nauk (Moscow)

Role of neuropsychic factors in the angina pectoris syndrome.
Vrach. delo no.5:469-473 My '58 (MIRA 11:7)

1. Meditsinskiy otdel (nachal'nik - G.K. Fomchenko) Akademii im. M.V. Frunze.
(ANGINA PECTORIS)

FOMCHENKO, G.K., general-mayor meditsinskoy sluzhby; KOVALEV, Ye.I., polkovnik meditsinskoy sluzhby; ASKEROV, A.A.

Electrocardioscopic and electrosphygmoscopic study of the functional state of the cardiovascular system. Voen.-med.zhur. no.10:31-35 O '59. (MIRA 13:3)
(ELECTROCARDIOGRAPHY)

KOVALEV, Ye.M., inzh.

Selection of the type of trap for the separation of secondary vapor. Khim. i neft. mashinostr. no.1:9-11 Ja '65. (MIRA 18:3)

KOVALEV, Ye.N.

Reaction of cerebral vessels to hypothermia. Zhur.nevr. i psikh. Supplement:4 '57. (MIRA 11:1)

1. Kafedra nervnykh bolezney (zav. - dotsent Ye.N.Kovalev) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(HYPOTHERMIA) (BRAIN--BLOOD SUPPLY)

KOVALEV, Ye.N.

Aminazin for treating trigeminal neuralgia. Zhur.nevr. i psikh. Supplement:34 '57. (MIRA 11:1)

1. Klinika nervnykh bolezney Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(CHLORPROMAZINE) (NEURALGIA, TRIGEMINAL)

T

Country : USSR
Category : Human and Animal Physiology, The Nervous System

Abs. Jour. : Ref Zhur Biol, No. 2, 1959, No. 8425

Author : Kovalev, E.N.
Institut. : --
Title : The Psychogenic Disturbance in the Compensation of the Functions of Injured Divisions of the Central Nervous System. Report I.
Orig. Pub. : Zh. nevropatol. i psikhiatrii, 1958, 58, No. 2, 218--222.

Abstract : A number of cases are described in which, as a result of psychic trauma, symptoms of organic damage to the central nervous system were evident (hepatolenticular syndrome, cerebral arteriosclerosis with manifestations of parkinsonism, chronic encephalitis, chorea, brain tumor). Deterioration of the patients' conditions occurred, not as a result of acceleration of the disease process under the influence of the psychogenic factor, but was associated with the disturbance in compensation which was present during the antecedent psychic trauma.

Card: 1/3

Clinic Nervous Diseases, Ryazan Med Inst im I. P. Pavlov

KOVALEV, Ye. N., (Ryazan')

Acute pulmonary emphysema in hypothermia. Eksp.khir. 4 no.3:46 My-Je '59. (MIRA 12:8)
(EMPHYSEMA, PULMONARY) (HYPOTHERMIA)

KOVALEV, Ye.N.

Disorders of compensatory functions induced by influenza intoxication in tumors of the central nervous system. Zhur.nerv.i psikh. 59 no.9:1088-1094 '59. (MIRA 12:11)

1. Klinika nervnykh bolezney (zav.kafedroy - dots. Ye.N. Kovalev) Ryazanskogo meditsinskogo instituta im. I.P. Pavlova.
(CENTRAL NERVOUS SYSTEM neoplasms)
(INFLUENZA compl.)

KOVALEV, Ye.N.; MOKSHINOVA, A.P.

Treatment with Sapozhok mud of subacute forms of radiculitis. Vop. kur., fizioter. i lech. fiz. kul't. 26 no.4:309-311 Jl-Ag '61. (MIRA 15:1)

1. Iz kliniki nervnykh bolezney (zav. - dotsent Ye.N.Kovalev) Ryazanskogo meditsinskogo instituta i Ryazanskoy oblastnoy bol'nitsy (glavnyy vrach B.N.Shirokov).

(SAPOZHOK--BATHS, MOOR AND MUD)
(NERVES, SPINAL--DISEASES)

KOVALEV, Ye.N.; SHISHKINA, A.V.

Clinical aspects of smallpox vaccinal encephalitis. Zhur.nevr.i psikh. 61 no.3:368-371 '61. (MIRA 14:7)

1. Klinika nervnykh bolezney (zav. - kafedroy - dotsent Ye.N. Kovalev) Ryazanskogo meditsinskogo instituta imeni I.P.Pavlova.
(ENCEPHALITIS) (SMALLPOX)

KOVALEV, Ye.N., dotsent; KOCHENKOVA, A.V.; RUBTSOVA, V.R.

Effect of working conditions on the nervous system in workers of the Ryazan Combine of Artificial Fibers (1960-1962). Nauch. trudy Riaz.med.inst. 28:91-96 '63.

(MIRA 18:12)

1. Kafedra nervnykh bolezney (zav. kafedroy - dotsent Ye.N. Kovalev) Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova i oblastnaya bol'nitsa imeni Semashko (glavnyy vrach - B.N.Shirokov).

KOVALEV, Ye.N.

Combination of cerebral tumors with pregnancy. Report No.1. Nauch.trudy Riaz.med.inst. 18 no.2:262-270 '64.

Influence of pregnancy on the growth of a cerebral tumor. Report No.2. Ibid.:271-279

Medical tactics in respect to pregnancy in cases of a cerebral tumor. Report No.3. Ibid.:280-293

Pathogenesis of the acceleration of the development of a cerebral tumor in gravidas. Report No.4. Ibid.:293-299

Development of symptoms of a tumorous disease of the brain in multiparas. Report No.5. Ibid.:300-309

(MIRA 19:1)

1. Kafedra nervnykh bolezney (zav. - dotsent Ye.N.Kovalev) Ryazanskogo meditsinskogo instituta.

KOVALEV, Ye.P.; NIKOLAYEV, S.N.

Results of investigations of the UER excavator. Stroi. truboprov. 10 no.2:14-17 F '65. (MIRA 18:5)

1. Moskovskiy eksperimental'nyy mekhanicheskiy zavod (for Kovalev). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut po stroitel'stvu magistral'nykh truboprovodov (for Nikolayev).

KOVALEV, Ye.P.

The UGBl horizontal-boring unit. Biul. tekh. ekon. inform. no.9:7-9 '59. (MIRA 13:3)
(Boring machinery)

KOVALEV, YE. S.

42309: KOVALEV, YE. S. - Opredeleniye temperaturnykh koefitsientov invarnykh provolok kompant'ye po dennym polevykh izmereniy. Sbornizh trudov DIIT'a (Dnepropetr. in-t inzh. zh.-d. Transporta im. Kaganovicha), VYP. 17, 1947, s. (1-(.

SO: Letopis' Zhurnal'nykh Statey, Vol. 47, 1948.

KOVALEV, Ye.S., dots., kand.tekhn.nauk

Temperature corrections in bases of first-class triangulation.
Trudy DIIT no.27:215-226 '58. (MIRA 12:1)
(Railroads--Surveying) (Triangulation)

KOVALEV, Ye.S.; SVIRIDOV, V.M.

Lengthening the operating period of a kiln between relinings. TSement 27 no.6:13 N-D '61. (MIRA 15:3)
(Kilns, Rotary)

RAPOPORT, E.M., dots.; KOVALEV, Ye.S., dots., red.

[Azimuth determination in railroad surveying] Azimutal'-nye opredeleniia pri izyskaniiakh zheleznykh dorog; uchebnoe posobie. n.p. Dnepropetrovskii in-t inzhenerov zhel-dor. transporta. Pt.1. 1961. 53 p. (MIRA 16:4)
(Railroads—Surveying)

KORABLEV, Anatoliy Aleksandrovich; TSENTNARSKIY, Igor' Aleksandrovich; KOVALEV, Yuriy Sergeyevich; AKUL'SHIN, A.F., inzh., retsenzent; MEL'KUMOV, L.G., inzh., retsenzent; BOGOPOL'SKIY, B.Kh., otv. red.; ABRAMOV, V.I., red.izd-va; ZHIVRINA, G.V., tekhn. red.; BOLDYREVA, Z.A., tekhn. red.

[Handbook for mine electricians servicing automatic control devices] Spravochnik elektroslesaria shakhty po obsluzhivaniiu avtomaticheskikh ustanovok. Moskva, Gosgortekhizdat, 1963. 192 p. (MIRA 17:3)

CA KOVALEV YE. S. 20

Means for increasing the output of old-construction rotary kilns. B. S. Kovalev. *Tsement* 17, No. 6, 19-20(1951).— The increase was brought about by replacing the section between the 2nd and 3rd support by one of greater diam. and 2 connecting cones. The angle of the furnace was increased, a chain curtain was installed, and other tech. changes were made. M. Hosch

Zdolbunovskiy tsementnyy zavod

KOVALEV, Ye. S.

4544 Rekonstruktsiya Vrashch Ayushchi Khsya Pechey Na Podol'skom Tsemetnom Favode. M., Promstroyizdat, 1954. 50 S. S Chert.; 3 L. Chert 20 SM. (Novatory Prom-sti Stroit. Materialov.) 2,000 EKF 1 R. 20K. (55-158) P 666.94.041-77

Kovalenko, K.A. Ustroystvo Dlya Mekhanicheskoy Podachi Dosok Na Tsirkul'nuyu Pilu.- (T.B. Monesova, Mekhanifm Dlya

KOVALEV, Ye. S.

SUBJECT: CHINA/Cement 101-4-6/13

AUTHORS: Kovalev, Ye.S., Engineer and Kuznetsov, A.M., Candidate of Technical Sciences.

TITLE: From Experiments to Produce Alumina Cement by Means of Clinkering in Rotary Kilns (Iz opyta polucheniya glinozemistogo tsementa spekaniyem vo vrashchayushchikhsya pechakh)

PERIODICAL: "Tsement", 1957, # 4, pp 23-24 (USSR)

ABSTRACT: Experiments with rotary kilns were conducted by the authors in a cement plant in the Chinese People's Republic in 1955-1956. Local high quality bauxite and limestone mined in the TSYUANSI province served as raw material. By employing the sintering method, different compositions of kiln charges were tested, mainly using low base calcium aluminates - $CaO.Al_2O_3$ and $CaO.2Al_2O_3$. Fineness of grinding was found to be from 2.9 to 6.5 % on 0085 sieves. Calcination temperatures ranged from 1350-1370°, and were controlled by optical pyrometers. Based on 19 test charges, the contents of main oxides varied from 4.9-9.84 % for SiO_2, 45.71-59.26% for Al_2O_3 and from 30.0-39.42 % for CaO.

Card 1/2 The strength of cement, using standard Chinese sand (1:3), was

SUBMITTED:
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KOVALEV, Ye.S., inzhener.

Increasing the stability of rotary kiln linings in cement industries of the Chinese People's Republic. TSement 23 no.1:29 Ja-F '57. (China--Cement industries) (Kilns, Rotary) (MLRA 10:4)

KOVALEV, Ye. S.

PHASE I BOOK EXPLOITATION SOV/3592

Vsesoyuznoye khimicheskoye obshchestvo imeni D.I. Mendeleyeva

Silikaty; sbornik statey po khimii i tekhnologii silikatov, vyp. 1 (Silicates; Collection of Articles on the Chemistry and Production of Silicates, No. 1) Moscow, Gosstroyizdat, 1959. 105 p. Errata slip inserted. 3,000 copies printed.

Editorial Board: M.A. Matveyev (Resp. Ed.), Yu.M. Butt, and K.O. Yushkevich; Ed. of Publishing House: V.A. Rozanova; Tech. Ed.: N.I. Rudakova.

PURPOSE: This booklet is intended for chemists and geologists interested in silicate analysis.

COVERAGE: This is a collection of articles on the chemistry and technology of silicates. The contributing authors discuss the effect of admixtures on sintering processes and on the properties of Portland cements. The text also discusses the properties of certain glasses, the processing of ceramic materials, the process of drying facing tile, the stability of solid solutions of calcium alumoferrite, the activation of cement, the production of aluminous cement, the preparation of pulping rolls, the interaction of quartz with lime, and various problems related to the production of silicate-calcite materials. No personalities are mentioned. References are given at the end of each article.

TABLE OF CONTENTS:

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15 (6) SOV/101-59-5-9/11

AUTHOR: Kovalev, Ye. S.

TITLE: The Two-Stage Grinding of Cement in Separated Ball Mills

PERIODICAL: Tsement, 1959, Nr 5, pp 29 - 30 (USSR)

ABSTRACT: The author states that at the Hua-hsing tsementnyy zavod (Hua-hsing Cement Plant) (Red China) a new cement grinding operational scheme is being introduced. The hourly production of the scheme is 38 to 40 tons, and the respective consumption of electric energy is 20 to 22 kW. Table 1 contains comparative data on the hourly production obtained at the Nikolayevskiy tsementnyy zavod (Nikolayev Cement Plant) and at the Hua-hsing Cement Plant, using mills of 2.6 x 13 m and 2.73 x 4 m of the separated type, respectively. Diagram 1 shows the principle of the installation scheme of the separated ball mills. The fineness of the grinding gives about 8% remnant on the sieve, with a grain of 0.085 mm. The Charging of the mills with the grinding balls (in tons) is shown on table 2. There are 2 tables and 1 diagram.

Card 1/1

KUZNETSOV, Aleksey Matveyevich; KOVALEV, Yevgeniy Semenovich; LYSAK, D.A., red.; KHRUSTALEVA, N.I., red. izd-va; VORONINA, R.K., tekhn. red.

[New means of manufacturing cement containing alumina] Novye sposoby proizvodstva glinozemistogo tsementa. Moskva, Gos. izd-vo "Vysshaia shkola," 1961. 86 p. (MIRA 14:7)

(Cement)

KOVALEV, Ye.S., dotsent, kand.tekhn.nauk

Solving problems of the vertical planning of terrains. Trudy DIIT no.36:31-37 '62. (MIRA 16:10)

PETRUSHOV, A., doktor ekonom.nauk; AFANAS'YEV, L.A., kand.ekonom.nauk; DANILEVICH, M.V., kand.ekonom.nauk; YEGIAZAROVA, N.A., kand.ekonom. nauk; KOVALEV, Ye.V.; KOL', M.A.; KUZNETSOV, B.P., kand.ekonom. nauk; KUTSOBINA, N.K.; MARTYNOV, V.A., kand.ekonom.nauk; MEN'SHIKOVA, M.A.; NIKITENKO, B.A.; ONUFRIYEV, Yu.G.; PROKHOROVA, G.N.; RYDVANOV, N.F.; SEGAL', N.M., kand.istor.nauk; UKHOVA, A.M.; FARIZOV, I.O., kand.istor.nauk; SHIFRIN, E.L., doktor ekonom.nauk; SHLIKHTER, A.A., kand.ekonom.nauk; LISOVSKIY, Yu.P.; MARTYNOV, V.D.; GARSIA, L., red.; MOSKVINA, R., tekhn.red.

[Agriculture of capitalist countries; a statistical manual] Sel'skoe khoziaistvo kapitalisticheskikh stran; statisticheskii spravochnik. Otvet.red.A.Petrushov. Moskva, Izd-vo sotsial'no-ekon.lit-ry, 1959. 829 p. (MIRA 13:6)

1. Akademiya nauk SSSR. Institut mirovoy ekonomiki i mezhdunarodnykh otnosheniy.
(Agriculture--Statistics)

KOVALEV, Ye. V.

Dissertation defended for the degree of Candidate of Economics Sciences in the Institute of World Economics and International Relations

"Agrarian Relations in Spain and the Agrarian Policies of Francoism."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

GAL'PERIN, G., kand. tekhn. nauk; PEYSAKHOVICH, A., inzh.;
KOVALEV, Yu., inzh.; SUKHOY, L., inzh.

Fastening pulleys and gears in roller mills. Muk.-elev. prom. 28 no.1:18-19 Ja '62. (MIRA 16:7)

1. Odesskiy tekhnologicheskiy institut (for Gal'perin, Peysakhovich). 2. Direktor Odesskogo mel'nichnogo kombinata No.2 (for Kovalev). 3. Proyektno-konstruktorskiy institut UKRGiprostanok (for Sukhoy).
(Flour mills--Equipment and supplies)

KOVALEV, Ye. Ye.

USSR/Nuclear Physics C-6

Abs Jour : Referat Zhur - Fizika, No 5, 1957, 11264

Author : Gusev, N.G., Kovalev, Ye.Ye.

Inst : Not given

Title : Concerning the Article "Radiation From a Spherical Source in the Presence of Self-Absorption."

Orig Pub : Zh. tekhn. fiziki, 1956, 26, No 11, 2602

Abstract : In connection with the above article by Bak et al (Referat Zhur Fizika, 1956, 25052), it is noted that the problem of absorption in a spherical source was formulated and analytically solved by Dixon (Dixon, W., Nucleonics, 1951, 8, No 4) under analogous initial assumptions. A simple scheme of Dixon's derivation of the formula obtained in Bak et al work is given, along with a general expression for the self-absorption function, correct for a linear, cylindrical, and spherical source.

Card 1/1

AUTHOR: KOVALEV,E.E., POPOV,V.I., SMIRENNYY,L.N. PA - 2267

TITLE: The Radiation Field of a Rectangular Source (Pole izlucheniya pryamougol'nogo istochnika, Russian).

PERIODICAL: Atomnaia Energiia, 1957, Vol 2, Nr 2, pp 181 - 182 (U.S.S.R.)
Received: 3 / 1957 Reviewed: 4 / 1957

ABSTRACT: The sources of rectangular shape have certain advantages in connection with the radiation of some objects for cold sterilizing etc. One of those advantages is the possibility of creating a steady radiation field, which is very important in some cases. The authors computed the radiation field of a rectangular source with any dimensions on the following conditions: 1) The radioactive substance is dispersed evenly over the whole field. 2) The sample has neither eigen-absorption nor eigen-scattering. Under such conditions it is easy to show that the dosage output of γ-radiation at the measuring point, which is caused by a source with the side-lengths a and b and the surface density σ of radio-activity, depends only on the relative dimensions $n = b/a$ and the relative distance $m = h/a$ from the assumed point. Without reducing the general character of the calculations the values of n can be restricted to the interval $0 < n \leq 1$, for the longer side of the rectangle can always be denoted with a. The results of these calculations are shown in a nomogram which is suited for practical use. Computations were carried out for σ = 1 mg-Äq.Ra/cm^2

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The Radiation Field of a Rectangular Source.

for the most frequently occuring relative distances ($0{,}01 \leq m \leq 5$) and relative dimensions ($0{,}025 \leq n \leq 1$).

When using the nomogram the dosage output P_A of the γ radiation of the rectangular source can be computed with any surface density σ according to a formula $P_A = \sigma . P\,(h/a,\ b/a)$, where $P(h/a, b/a)$ is taken from the nomogram. This formula permits the determination of the radiation field for the case that the projection of the measuring point is identical with one corner of the rectangle. In all other cases of a reciprocal arrangement of source and measuring point the radiation output of the γ-radiation can be computed as follows: A formula for P_A is given in case that the projection of the measuring point is within the source. All terms of this formula are taken from the nomogram and therefor the case under investigation can now be reduced to the preceding one. In a similar manner the dosage output at a measuring point the projection of which is outside the source may be found. Thus the here duscussed computations apply to any arrangement of the source with respect to the measuring point. With sources of non-uniform surface density σ the source has to be separated into part-rectangles with non-uniform . (2 illustrations).

AUTHOR KOVALEV, Ye.Ye. 89-6-8/24

TITLE Radiation of a Cylindrical Preparation.
(Izlucheniye tsilindricheskogo istochnika - Russian)

PERIODICAL Atomnaya Energiya, 1957, Vol 2, Nr 6, pp 538 - 543

ABSTRACT In this paper the analytical radiation equations are described for radially emitted radiation for two cases of cylindrical sources-
a) without and b) with self-absorption.
A source without self-absorption is e.g. a cylindrical filled with gasous γ-rays or a neutron source housed in a cylindrical capsule.
The derived equation may also be used for sources with self-absorption if only the self-absorption coefficient is computed and inserted into the given equation. About 350 self-absorption coefficients for various absorbers and different H/D ratios H - height, D - diameter of the clinder, are given in a table

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AUTHOR KOVALEV, Ya. Ya., POPOV, V.I., SMIRENNYY, L.N., KHOKHLOV, YU.S. 89-6-12/24

TITLE The Experimental Determination of the Emission of γ-Radiation from Extensive Sources. (Eksperimental'noye opredeleniye vykhoda γ-izlucheniya iz protyazhennykh istochnikov.- Russian)

PERIODICAL Atomnaya Energiya 1957, Vol 2, Nr 6, pp 553-555 (USSR)

ABSTRACT The manifold character of shapes, dimensions, and conditions of application of extensive radiation sources makes it necessary to carry out special experiments for each concrete case. The difficulty consists in the fact that the various factors determining the emission of γ-radiation from the extensive sources act simultaneously. The experimental determination of the dependence of the factors determining the emission of γ-radiation from the extensive sources can be no means be carried out on real extensive sources. A method which was suggested makes use of the model of an extensive source and permits a separate experimental investigation of the influence exercised by one or the other factor upon the emission of the γ rays.

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89-6-12/24

The Experimental Determination of the Emission of γ -Radiation from Extensive Sources.

This method can be applied to any extended or distributed sources. This is of particular interest in the case of such sources as represent rotational bodies or rotational figures. The authors at first investigate the modelling of an extensive source which has no self-absorption and multiple scattering. For a given extensive source a differential volume element is sought by the rotation round the axis of the source of which it is possible to reproduce the entire volume of the extensive source. By suitable selection of the volume element the influence of self-absorption and multiple scattering can be eliminated. The emission of γ radiation from such a rotating body is determined by purely geometric factors. The authors then discuss the application of this modelling method to some simple forms of sources. This modelling method can also be used for the investigation of the influence exercised by self-absorption and multiple scattering upon the emission of γ-radiation from an extensive body. Experiments concerning the evalution

CARD 2/3

AUTHOR KOVALEV, Ye Ye, OSANOV, D.P. 89-6-13/24

TITLE The Influence exercised by the measurements of a disk shaped source on the weakening of γ-rays in a protective medium. (Vliyaniye protyazhennosti ploskogo istochnika na oslableniye γ-izlucheniya v zashchite. - Russian)

PERIODICAL Atomnaya Energiya 1957, II/6, 555-558.

ABSTRACT Theoretically the influence exercised by the measurements of an infinitely thin disk-shaped γ-source which is embedded in a protective medium upon the weakening of γ-radiation is taken up by the protective medium (in this case the multiple scattering of γ-radiation in the protective medium is taken into consideration. The derived equation is numerically worked out for water, concrete, iron, lead, and γ-energies of from 0,5 MeV to 3,0 MeV, and results are graphically recorded in which case the ratio k/k_0 is used as a characteristic. This ratio, which is called degree of relative weakening, is defined as follows:

k_0 = degree of weakening for a punctiform γ-source

k = degree of weakening of a disk-shaped γ-source but both in consideration of the multiple scattering of γ-radiation.

CARD 1/2

The influence exercised by the measurements of a disk shaped source on the weakening of γ-rays in a protective medium.

The following curves illustrate the computed results:
1) For various thick materials with small and medium Z
2) for various materials of 5 cm thickness, in which case $E_{\gamma} = 0,5$ MeV
3) with different energies in dependence of the thickness of the concrete (up to 120 cm).

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CARD 2/2

KOVALEV, Ye Ye.

ANDREYEVA, O.S., kand.med.nauk; KOVALEV, Ye.Ye., kand.tekhn.nauk

Determination of radium aerosols in the presence of other α-active aerosoles [with summary in English]. Gig. i san. 22 no.5:27-30 My '57. (MIRA 10:10)

(RADIUM, determination,
aerosols in presence of other -active aerosols (Rus))
(AEROSOLS,
radium, determ. in presence of other -active aerosols (Rus))

AUTHORS: Kovalev, Ye. Ye., Popov, V. I. 57-27-7-38/40

TITLE: Multiple Scattering Effect in Cylindrical Sources (K uchetu mnogokratnogo rasseyaniya v tsilindricheskikh istochnikakh).

PERIODICAL: Zhurnal Tekhnicheskoy Fiziki, 1957, Vol. 27, Nr 7, pp. 1621-1623 (USSR)

ABSTRACT: In order to be able to take into account the self-scattering of the gamma-radiation in a cylindrical source, the so-called storage-factor B ($h\nu$, x, Z) has to be introduced for the self-absorption-factor in the expression of the equation standing below the integral. This factor takes into account the production of the scattering-radiation upon passage of the gamma-rays with an energy $h\nu$ of the substance-layer x with an atomic number Z. When they introduce B ($h\nu$, x, Z) they go over from the self-absorption-factor f_o to the self-weakening-factor f which takes into account the self-absorption and the self-scattering of the gamma-radiation in the source. The equation for the self-weakening-factor is here derived under consideration of the multiple scattering. The method given here makes it possible

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to determine in a simple manner and without difficulties the influence of multiple scattering upon the gamma-ray-emission from extended sources. The determination of the self-weakening-factor is performed on the basis of existing data for the self-absorption.
There are 10 references, 3 of which are Soviet.

ASSOCIATION: Institute of Biophysics of the Academy of Medical Sciences USSR, Moscow (Institut biofiziki AMN SSSR, Moskva).

SUBMITTED: February 11, 1957

AVAILABLE: Library of Congress

1. Gamma rays-Scattering-Mathematical analysis

KOVALEV Ye.Ye.

GUSEV, N. G., KOVALEV, Ye.Ye. and POPOV, V. I.

"Gamma-Radiation Inside and Outside Extended Sources."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 1958.

AUTHORS: Kovalev, Ye. Ye., Osanov, D. P. SOV/57-28-7-33/35

TITLE: Taking Into Account the Influence of Multiple Scattering on the Attenuation of the γ-Radiation of Extended Sources (K uchetu vliyaniya mnogokratnogo rasseyaniya na oslableniye γ-izlucheniya protyazhennykh istochnikov)

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1958, Vol. 28, Nr 7, pp. 1610 - 1612 (USSR)

ABSTRACT: The difficulties connected with the taking into account of the multiple scattering in the protective material can be overcome to a certain extent in the case of extended sources, as there are truncated cone and disk. This is the case when the analytical expression given in Ref 2 is used for the accumulation factor. This formula applies to wide ranges of the γ-radiation energy values and protective thicknesses. When this formula and the notation assumed (Ref 1) are used it can be shown that the power of a γ-radiation dose emitted from the truncated cone covered by a protective layer can be determined by the formula (2). In (2) the multiple scattering in the protective material is taken into account by the introduction of the accumulation factor B under the in-

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tegral sign. In order to be able to take into account the multiple scattering in a source surrounded by a protective material the spectrum emitted from the radiation source must be known. For this reason such a taking into account of this scattering is difficult at present. - Some special cases which are of interest for practical work are investigated: 1) Radiation of an infinite half-space through an absorbing and scattering protective layer. The formula (3) (according to the method described in Ref 1) obtained by the integration of (2) is turned into formula (4) in this case. 2) The radiation of a truncated cone of infinite thickness through an absorbing and scattering protective layer: formula (5). - In the case where the protection lacks, the multiple scattering in the source itself can be taken into account. For this purpose the formula (1) is used with other values for the accumulation factors. In the same way as with (3) the formula (7) is determined for the power of the γ-radiation dose (emitted from the truncated cone taking into account the multiple scattering without protective layer). By means of (7) the following can be obtained: 3) Radiation

Taking Into Account the Influence of Multiple Scattering on the Attenuation of the γ-Radiation of Extended Sources

of an infinite half-space with multiple scattering. 4) Radiation of an infinite plate of finite thickness without protective layer. 5) Truncated cone of infinite thickness without protective layer. There are 3 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy inzhenerno-fizicheskiy institut (Moscow Engineering Physics Institute)

SUBMITTED: March 23, 1957

1. Conical bodies--Applications 2. Gamma radiation--Attenuation

21(8) PHASE I BOOK EXPLOITATION SOV/2783

Gusev, Nikolay Grigor'yevich and Kovalev, Yevgeniy Yevgen'yevich

Nomogrammy dlya rascheta zashchity ot gamma-luchey Ra, Co^{60}, Cs^{137}, i Ir^{192}. (Nomograms for Calculating Protection Against Gamma-Rays From Ra, Co^{60}, Cs^{137}, and Ir^{192}) Moscow, Atomizdat, 1959. 71 p. Errata slip inserted. 5,000 copies printed.

Ed.: A. F. Alyab'yev; Tech. Ed.: N. A. Vlasova.

PURPOSE: The booklet is intended for engineers and technicians as well as for medical personnel concerned with protective measures against gamma-radiation.

COVERAGE: The booklet gives 45 nomograms for rapid and sufficiently accurate calculation of protection against

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gamma-radiation from equilibrium and nonequilibrium radium, Co^{60}, Cs^{137} and Ir^{192}. Lead, iron, lead glass, concrete, and water are used as materials for protection against radiation. Nomograms are based on experiments in decreasing the dosage of a wide beam of gamma-rays. The nomograms are described with examples of their use. No personalities are mentioned. There are 4 references: 2 Soviet and 2 English.

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Kovalyev, Ye. Ye.

PHASE I BOOK EXPLOITATION SOV/3589

Sbornik radiokhimicheskikh i dozimetricheskikh metodik (Collection of Radio-Chemical and Dosimetric Methods) Moscow, Medgiz, 1959. 459 p. Errata slip inserted. 9,000 copies printed.

Eds. (Title page): N.G. Gusev, U.Ya. Margulis, A.N. Marey, N.Yu. Tarasenko, Yu.M. Shtukkenberg; Ed. (Inside book): V.I. Labeznov; Tech. Ed.: A.I. Zakharova.

PURPOSE: This collection of articles is intended for physicists, sanitation and public health doctors, chemists and other specialists working in radioactive dosimetry.

COVERAGE: This work discusses the following subjects: (1) principles of organizing sanitation and dosimetric control in institutions where work is carried on with radioactive substances; (2) radio-chemical and chemical methods for determining certain radioactive substances in samples of air, water, soil and foodstuffs; (3) physical methods of measuring contamination of the air by radioactive gases and aerosols, and methods for determining the level of contamination of working surfaces, clothes and leather coverings; (4) methods of measuring external streams of x- and gamma-radiation, and methods of individual dosimetric monitoring; (5) Absolute and relative methods of measuring the activity of solid and liquid radioactive sources. There are four appendixes dealing with methods of calculating the total dosage from sources of ionizing radiation, units of activity, and doses from natural (background) radioactivity in the calcium of foodstuffs. Sanitary regulations observed during transportation, storage, and handling of radioactive substances are discussed, as well as the permissible level of ionizing radiation. The editors thank Yu.V. Sivintsev and D.P. Shirshov. References appear at the end of each chapter.

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SOV/120-59-3-13/46

AUTHORS: Kovalev, Ye. Ye. and Popov, V. I.

TITLE: Geometrical Correction Factor for a Cylindrical Ionization Chamber (Popravochnyy geometricheskiy faktor dlya tsilindricheskoy ionizatsionnoy kamery)

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 3, pp 63-66 (USSR)

ABSTRACT: In the dosimetry of point sources of γ-radiation it is necessary to determine the true ionization density from the readings of the ionization chamber. This is due to the fact that, frequently, ionization chambers are used whose linear dimensions are not sufficiently small in comparison with the distance between the point source and the geometrical centre of the chamber. An expression is obtained for the correction factor for the case where the source is at an arbitrary distance from the centre of the chamber in the radial direction (Eq 8). Graphs are given (Figs 2 and 3) of the values of the geometrical correction factor for a cylindrical ionization chamber. These graphs may be used to determine the true ionization density from the

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KOVALEV, YE. YE.

(4) PHASE I BOOK EXPLOITATION SOV/2713

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

Doklady sovetskikh uchenykh; polucheniye i primeneniye izotopov (Reports of Soviet Scientists; Production and Application of Isotopes) Moscow, Atomizdat, 1959. 388 p. (Series: Its: Trudy, vol. 6) 8,000 copies printed.

Eds. (Title page): G.V. Kurdyumov, Academician, and I.I. Novikov, Corresponding Member, USSR Academy of Sciences; Ed. (Inside book): Z.D. Andreyenko; Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicians, and biologists engaged in the production and application of atomic energy to peaceful uses; for professors and graduate and nongraduate students of higher technical schools where nuclear science is taught; and for the general public interested in atomic science and technology.

COVERAGE: This is volume 6 of a 6-volume set of reports delivered by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 contains 32 reports on: 1) modern methods for the production of stable radioactive isotopes and their labeled compounds, 2) research results obtained with the aid of isotopes in the field of chemistry, metallurgy, machine building, and agriculture, and 3) dosimetry of ionizing radiation. Volume 6 was edited by: U.V. Levinskiy, Candidate of Medical Sciences; V.B. Prusakov, Candidate of Chemical Sciences; and V.V. Sedov, Candidate of Medical Sciences. See Sov/2081 for titles of volumes of the set. References appear at the end of the articles.

21(9) SOV/89-6-6-14/27

AUTHORS: Osanov, D. P., Kovalev, Ye. Ye.

TITLE: The Shielding of γ-radiation Sources of Rectangular Shape (Zashchita istochnikov γ-izlucheniya pryamougol'noy formy)

PERIODICAL: Atomnaya energiya, 1959, Vol 6, Nr 6, pp 670 - 672 (USSR)

ABSTRACT: By way of introduction the authors of the present "Letter to the Editor" point to the fact that the hitherto published investigations on the shielding of rectangular γ-sources are unsatisfactory and that for practical work investigations on such a source with finite measures would be important. This problem is dealt with under the following assumptions: 1) the source is assumed to consist of an infinitely thin radiating plate 2) the active substance is assumed to be equally distributed on the surface of the source. Figure 1 shows the geometrical conditions for which the γ-ray attenuation and the dose rate are in the following theoretically investigated in dependence on the distance. The formulas obtained are discussed and demonstrated by means of practical examples. Figure 2 shows in 4 diagrams the γ-radiation attenuation in the shield and figure 3 shows the dependence of the dose rate on the

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distance for different sources (point source, linear source, and different rectangular sources). In conclusion, it is said that in the case of large distances and any shield density a rectangular source may be treated as point source and that a rectangular source with a lateral ratio of 0.1 may practically be regarded as linear source at any distance. The authors discuss the consideration of the multiple scattering of the γ- rays, which, in certain cases, may play an important role. A case where the dose rate increases to the five-fold when considering the multiple scattering is given. There are 3 figures and 5 references, 3 of which are Soviet.

SUBMITTED: November 15, 1958

KOVALEV, YE. YE.

PHASE I BOOK EXPLOITATION SOV/5717

Moscow. Inzhenerno-fizicheskiy institut.

Pribory i metody analiza izlucheniy; sbornik nauchnykh rabot, vyp. 2. (Apparatus and Methods for the Analysis of Radiation; Collection of Scientific Papers, no. 2) Moscow, Atomizdat, 1960. 166 p. 4000 copies printed.

Sponsoring Agency: Ministerstvo vysshego i srednego spetsial'nogo obrazovaniya RSFSR. Moskovskiy inzhenerno-fizicheskiy institut.

Ed. (Title page): Ye. L. Stolyarova, Candidate of Physics and Mathematics; Tech. Ed.: S. M. Popova.

PURPOSE: This collection of articles is intended for specialists in nuclear physics, dosimetry of nuclear radiations, and shielding.

COVERAGE: The articles were prepared by scientists of MIFI (Moscow Physics and Engineering Institute) and presented at the 1957 conference of the Institute. Brief annotations to the articles have been included in the Table of Contents. No personalities are mentioned. References follow each article.

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Apparatus and Methods for the Analysis (Cont.) SOV/5717

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