

KHOLCFOVA, N.T.

Unstudied copy of a 17th century manuscript of a "Cosmography."
Vest.Mosk. un. Ser. 5; Geog. 17 no.1:66-67 Ja-F '62. (MIRA 16:7)
(Geography) (Manuscripts, Russian)

YEFREMOV, Yu.K.; KHOLOPOVA, N.T.

Report on the activity of the Moscow Branch of the Geographical Society of the U.S.S.R. for 1961. Vop. geog. no.63:180-192 '63. (MIRA 17:3)

YEFREMOV, Yu.S.; MAGIEVSKINA, I.N.; KHOLOPOVA, N.T.

Report on the operations of the Moscow Branch of the Geographical
Society of the U.S.S.R. for 1963. Vol. geogr. no. 64:174-182 '64.
(MIRA 17:10)

KHOLOPOVA, Nadezhda Timofeyevna; PETROVA, K.A., red.; LAZAREVA, L.V.,
tekhn. red.

[Aleksandr Sergeevich Barkov] Aleksandr Sergeevich Barkov. Mo-
skva, Izd-vo Mosk. univ., 1961. 62 p. (Zamechatel'nye uchenye Mo-
skovskogo universiteta, no.26) (MIRA 14:12)
(Barkov, Aleksandr Sergeevich, 1873-)

KHOLOPOVA, N.T.

Conference dedicated to the memory of N.I.Sokolov. Nov.kar.i
spel. no.2:98 '61. (MIRA 15:9)
(Sokolov, Nikolai Il'ich)

KHOLOPOVA, V.G.

Work of the health center at a chemical plant. Fel'd. i akush.
28 no.2:37-41 F'63. (MIRA 16:9)

1. Starshiy fel'dsher punkta zdravookhraneniya Novomoskovskogo
khimicheskogo kombinata, Tul'skaya oblast'.
(NOVOMOSKOVSK (TULA PROVINCE)—MEDICINE, INDUSTRIAL)

LEVIN, L.I.; KHOLOPOVA, V.S. (Vladivostok)

Clinical aspects of serous viral meningitis in adults. Sov.med.
24 no.9:60-64 S '60. (MIRA 13:11)
(MENINGITIS)

KHOLOPOVA, Z.I., inzhener; TSUKERNIK, S.V., inzhener.

Protecting the insulation of electric machinery windings against
mold fungi. Vest.elektrom. 27 no.12:59-62 D '56.

(MIRA 10:1)

1. Khar'kovskiy elektromekhanicheskiy zavod.
(Electric insulators and insulation) (Molds (Botany))

KHOLOPOVA, Z.I., inzhener; TSUKERNIK, S.V., inzhener.

Action of mold on electric apparatus with plastic parts. Vest. elektrom.
prom. 28 no.3:72-73 Mr '57. (MLRA 10:4)

1. Khar'kovskiy elektromekhanicheskiy zavod.
(Electric apparatus and appliances) (Plastic materials)
(Molds (Betany))

Kholopova, Z.I.

110-2-2/22

AUTHORS: Skorik, N.S. (Engineer), Kholopova, Z.I. (Engineer) & Tsukernik, S.V. (Engineer).

TITLE: On the electric strength of stator winding insulation on high voltage electrical machines. (K voprosu elektricheskoy prochnosti izolyatsii obmotok statora vysokovolnykh elektricheskikh mashin).

PERIODICAL: Vestnik Promyshlennosti, 1958, No.2, pp.7-12. (USSR)

ABSTRACT: The electric strength of machine insulation is defined as the r.m.s. sinusoidal voltage which causes breakdown when applied for one minute. The present article refers only to 6 and 6.6 kV machines with continuous mica-tape compound-impregnated insulation. The mean breakdown voltage of coils has been given as 30 - 42 kV (the lower value relating to insulation of reduced thickness) and the minimum voltage to 22 - 23 kV. The great difference between the maximum and minimum values should be noted. Curves of the distribution of breakdown voltages of coil insulation are given in Fig.1. The scatter of results, though wide, is normally distributed and depends on the non-uniformity of the insulating material and its method of application. As usual in cases of this kind, the breakdown voltage depends on the size of the electrodes. Curves of the probability of breakdown of compound-impregnated mica-tape insulation of 6 - 6.6 kV stator windings are given in Fig.2. The dotted curves relate to values re-calculated to a constant electrode area by a formula which

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On the electric strength of stator winding insulation on high voltage electrical machines.

is given. Because of the electrode area effect, the breakdown voltage for windings as a whole will be lower than that of individual coils; curves displaying this effect are given in Fig.3. The results confirm that the test voltages in the standard ~~FOCT~~FOCT-183-55 for the insulation of 6-8.6 kV are correctly chosen and correspond to the actual insulation level. The disadvantages of using higher test voltages during manufacture are explained: machines made to the present test voltage level have proved reliable. The use of voltage tests for maintenance purposes is then discussed at length. The level of test voltage that can be considered non-destructive to the insulation is considered. Data about the probability of breakdown of new mica-tape, compound-impregnated insulation which has not been subjected to preliminary high-voltage testing are given in Fig.4. These curves are derived from tests on 160 coils made with reduced insulation in order to get a reasonable number of breakdowns. The results show that when the breakdown voltage level is high, compared with the value of the frequently applied test voltage, the latter makes little difference to the probability of breakdown. However, when the test voltage is nearer to the breakdown voltage there is a considerable increase in frequency of breakdown. These results show that frequent application for one minute of voltages of 13.2 and 21 kV would cause deterioration in insulation having a breakdown voltage 1.7 - 1.8 times higher than

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.On the electric strength of stator winding insulation on high voltage electrical machines.

the test voltage. In general, application of a voltage much over 1.5 times the rated voltage will cause damage. This argument is developed at length and it is claimed that still lower maintenance test voltages, not greater than 1.2 - 1.4 rated voltage, should be used if insulation has been in service for a long time or is in bad condition. There are 4 figures, 4 literature references (all Russian).

SUBMITTED: September, 27, 1957.

ASSOCIATION: Khar'kov Electro-Mechanical Works (Khar'kovskiy elektromekhanicheskiy zavod)

AVAILABLE: Library of Congress.

Card 3/3.

SOV/110-58-7-2/21

AUTHOR: Skorik, N.S., Engineer, ~~Kholopova, Z.I., Engineer,~~
and Tsukernik, S.V., Engineer.

TITLE: On the nature of moisture absorption by continuous
mica foil insulation of high-voltage machines.
(O kharaktere uvlazhneniya nepreryvnoy mikalentnoy
izolyatsii vysokovol'tnykh mashin)

PERIODICAL: Vestnik Elektropromyshlennosti, 1958, Nr 7 pp 6-12 (USSR)

ABSTRACT: It is important to know whether high-voltage elec-
trical machines may be connected up without first
drying-out. The answer to this question depends
on the design of the windings, their insulation and
degree of dampness. The following factors should
be taken into account: the condition of the slot
insulation and the end-windings; the possibility
of break-down of insulation at joints and winding
clamps with flash-over to the frame; the possibi-
lity that intensive drying may damage the insulation.

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On the nature of moisture absorption by continuous mica foil insulation of high-voltage machines

This article is concerned only with high-voltage machines with coil-type windings having continuous mica foil compound-impregnated insulation for voltages up to 6.6 kV. Tests made at the Kharkov Electro-mechanical works show that the electrical properties of this kind of insulation remain good even after prolonged exposure to moisture. Break-down voltage data for damp and dry 6-kV insulation of this type is given in Table 1, which shows that exposure for 20 days to a relative humidity of 95 - 98% at 20°C reduces the break-down voltage by only 3.4% and 40 days exposure reduces it by 3.7%. Immersion in water for 20⁴ days reduced the break-down voltage by 43% but the insulation was still

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On the nature of moisture absorption by continuous mica foil insulation of high-voltage machines

suitable for operation. Models were made up to determine the depth of water-penetration into mica-foil compound impregnated insulation. The amount of water absorbed on exposure was determined and the results are given in Fig. 2. It will be seen that the moisture absorption was much greater when the insulation was finished with an external covering of cotton tape, which, indeed, absorbed most of the moisture. The total quantity of moisture absorbed, the amount absorbed by the surface tape and the amount absorbed by the mica insulation are shown in Fig. 3. It will be seen that what little moisture is absorbed by the micafoil is mostly held in the outside layers. There is at present no satisfactory method of assessing the dampness of the insulation of electrical machines. Insulation-resistance measurements are commonly used for this purpose, but they cannot distinguish between surface- and volume-resistance and, therefore, cannot reveal whether moisture has penetrated deeply into the insulation. Data about changes in these two

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resistances and in the total insulation resistance of 6-kV windings after exposure in a humidity chamber are given in Fig. 5. It will be seen that the surface resistance falls much more than the volume resistance and determines the insulation resistance figures for the machine. The main electrical characteristics of the insulation of the joints and winding clamps in the dry and the damp condition are given in Table 2. Specific values of surface- and volume-resistivity for damp high-voltage micafoil compound-impregnated insulation are given in Fig. 6, which also includes for comparison corresponding data for varnished cloth insulation. It is shown how reliance on insulation resistance measurements may lead to false conclusions about the degree of dampness of insulation. It is sometimes recommended to base assessments on the ratio

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of the insulation resistance 60 secs after the application of voltage to that after 15 secs. This method is also unsatisfactory. In deciding whether a machine can be connected-up without drying, the important factor is the characteristics of the insulation of joints and winding clamps, including the possibility of surface flashover of this insulation. This question was studied by making surface-resistance and flashover tests on wet micafoil compounded 6-kV insulation treated with grey enamel. The tests were made on sections that had been in water for 2 and 25 days. The results are given in Table 3 and the results are discussed. It is concluded that there is no risk of surface flashover of insulation that has been immersed in water when double the working voltage (about 8 kV) is applied provided that the distance between the electrodes is greater than 50 mms, which it usually is in practice. On the basis of the work described, it is

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On the nature of moisture absorption by continuous mica foil insulation of high-voltage machines SOV/110/59-7-2/21

considered that to connect-up without preliminary drying-out is permissible in electrical machines of rated voltage up to 6.6 kV having stator coil windings insulated with compound-impregnated continuous micafoil insulation. This applies to machines which have been in a works or in stores or under normal transport conditions, and supposes that the machines have not been left unpacked out of doors for a long time and have not been in water. Before applying voltage the total insulation resistance of the cold stator winding should be checked and should not be less than 50 megohms. Load should be applied gradually at first. There are 3 tables and 6 figures.

Card 6/6

1. Insulation (Electric)--Absorptive properties
2. Electric machinery--Insulation

KHOLOPOVA, Z.I., inzh.; TSUKERNIK, S.V., inzh.

Selection of the class of heat resistance of the insulation
of low-voltage electrical machines. Elektrotehnika 35 no.11:
23-27 N '64. (MIRA 18:6)

KHOLOPOVA, Z.I., inzh.; TSUKERNIK, S.V., inzh.

Heat resistance of windings using aluminum and copper wires
with enamel insulation based on polyamide resol and polyester
laquers. Elektrotehnika 36 no.8:1-4 Ag '64.

(MIRA 17:9)

KHOLOPOVA, Z.V.

Category: USSR/General Division. History. Classics. Personalities. A-2

Abs Jour: Referat Zh.-Biol., No 6, 25 March, 1957, 21300

Author : Vasileva, L.N., Kholopova, Z.V.

Inst : not given

Title : To the Memory of a Far-Eastern Phytopathologist --
Ivan Nikolaevich Abramov (1884-1953).

Orig Pub: Botan. zh., 1956, 41, No 3, 435-437

Abstract: A brief outline of the life and activity of Abramov, the agriculturist and phtopathologist, who worked in the Far East almost 42 years. He worked out and put into practice measures combating blight on wheat and oats; he studied seed infection by fusaria and helminthosporia; worked out a system of measures securing full recovery of seeds from the disease. His fundamental book, "Diseases of Far Eastern agricultural plants" represents the only summary and indispensable reference text for mycologists and agriculturists. He also published a mono-

Card : 1/2

-17-

KHOLOPTSEV, V.P.

V 1419. OPERATION OF THE DEPHENOLATION INSTALLATION AT THE MISCH COKE BY-PRODUCT PLANT. Nagornyi, G.K., Kholoptsev, V.P. and Kaplina, E.G. (Koks i Khim. (Coke & Chem., Moscow), Feb. 1955, 17-18; abstr. in Ref. Zh. Khim. (Ref. J. Chem., Moscow), 1956, (23), 75892). Phenol is removed from tar water by the steam method. The throughput is 16-20 cu.m/h of water and the phenol content is reduced from 1.5-1.7 to 0.315 g/l. with a consumption of 0.8 tons alkali to 1 ton of 100% phenol. Phenol content was further reduced to 0.130 g/l. by reducing the ammonia concentration in the water to 0.068-0.085 g/l., increasing the quantity of circulating phenolates to

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23-25 cu.m/h and increasing the quantity of circulating vapour.

Moskovskiy Koksogazovyy zavod.

KHOLOP'TSEV, V.P.

AFONIN, K.B.; BURTSEV, K.I.; BYSTROV, S.N.; VINETS, G.B.; VODNEV, G.G.; VORONIN, A.S.; GEVLICH, A.S.; GRYAZNOV, N.S.; GUDIM, A.F.; GUSYATINSKIY, M.A.; DVORIN, S.S.; DIDENKO, V.Ye.; DMITRIYEV, M.M.; DONDE, M.M.; DOROGOBID, G.M.; ZHDANOV, G.I.; ZAGORUL'KO, A.I.; ZELENETSKIY, A.G.; IVASHCHENKO, Ya.N.; KAPTAN, S.I.; KVASHA, A.S.; KIREYEV, A.D.; KLISHEVSKIY, G.S.; KOZYREV, V.P.; KOLOBOV, V.N.; LGALOV, K.I.; LEYTER, V.A.; LERNER, B.Z.; LOBODA, N.S.; LUBINETS, I.A.; MANDRYKIN, I.I.; MUSTAFIN, F.A.; NEMIROVSKIY, N.Kh.; NEFEDOV, V.A.; OBUKHOVSKIY, Ya.M.; PRITSEV, M.A.; PETROV, I.D.; PODOROZHANSKIY, M.O.; POPOV, A.P.; RAK, A.I.; REVIYAKIN, A.A.; ROZHKOV, A.P.; ROZENGAUZ, D.A.; SAZONOV, S.A.; SIGALOV, M.B.; STOMAKHIN, Ya.B.; TARASOV, S.A.; FILIPPOV, B.S.; FRIDMAN, N.K.; FRISHBERG, V.D.; KHAR'KOV-SKIY, K.V.; KHOLOP'TSEV, V.P.; TSAREV, M.N.; TSOGLIN, M.E.; CHERNYI, I.I. CHERTOK, V.T.; SHIL'KOV, A.K.

Samuil Borisovich Barme. Keka i khim. no. 6:64 '56.
(Barme, Samuil Borisovich, 1910-1956)

(MLRA 9:10)

SOV/68-58-11-15/25

AUTHORS: Isayenko, I.P., Kholoptsev V.P. and Zelenetskiy A.G.

TITLE: Methods of Improving the Distillation of Coal Tar (Puti uluchsheniya distillyatsii smoly)

PERIODICAL: Koks i Khimiya, 1958, Nr 11, pp 47-51 (USSR)

ABSTRACT: After a short outline of the two column tar distillation plant on the Chelyabinsk Works, designed by Giprokoks (Fig 1), changes introduced in the distillation practice and resulting improvements in the yields and qualities of the individual fractions are described. The designed throughput of 14 tons/hr was increased to 19-20 tons/hr. Analyses of the individual fractions and their yields are shown in Table 1 and Fig 2; material balance of the distillation and the distribution of naphthalene and phenols between the individual fractions in Table 2.

Card 1/1 There are 2 tables, 2 figures and 1 reference (Soviet).

ASSOCIATION: Chelyabinskiy metallurgicheskiy zavod (The Chelyabinsk Metallurgical Works), and VUKhin

KAGASOV, V.M.; KHOLOPTSEV, V.P.; NEMIROVSKIY, N.Kh.; LOPAREV, V.G.;
KHARLAMPOVICH, G.D., kand.tekhn.nauk

Separate recovery of ammonia and pyridine bases from coke-oven
gas. Koks i khim. no.6:32-35 '60. (MIRA 13:7)

1. Chelyabinskiy metallurgicheskiy zavod (for all except Khar-
lampovich). 2. Ural'skiy politekhnicheskiy institut (for Khar-
lampovich).
(Coke-oven gas) (Ammonia) (Pyridine bases)

KHOLOPTSEV, V.P.; DOBROVOL'SKIY, I.P.; NEYZHMAK, V.Ye.; DUBOVIK, A.N.

Improved methods for the production of electrode coke. Koks i
khim. no.7:29-32 JI '61. (MIRA 14:9)

1. Chelyabinskiy metallurgicheskiy zavod (for Kholoptsev, Dobrovol'skiy).
2. Koksokhimstantsiya (for Neyzhmak, Dubovik).
(Coke industry)

KHOLOPTSEV, V.V.

Applying the method of initial parameters to the calculation of the strength of composite beams with elastic-plastic shear connectors.
Sudorem. i sudostr. no.2:166-178 '63. (MIRA 17:4)

1. Odesskiy institut inzhenerov morskogo flota.

KHOLOPTSEV, V. V.

Kholoptsev, V. V. - "Investigation of Beams for Ship Construction with Openings in the Walls." Odessa Inst of Engineers of the Maritime Fleet. Odessa, 1955 (Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 116-127

REUT, V.I., doktor tekhn.nauk; KHOLOPTSEV, V.V., kand.tekhn.nauk

Effect of the spacing of beam knees on deck stability. Sudostroenie
29 no.11:13-17 N '63. (MIRA 16:12)

REUT. V.I.; KHOLOPTSEV, V.V.

Reinforcement of ship decks for the purpose of increasing ship stability. Sudorem. i sudostr. no.2:153-166 '63. (MIRA 17:4)

1. Odesskiy institut inzhenerov morskogo flota.

SOV/124-58-7-8170

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 7, p 120 (USSR)

AUTHOR: ~~Kholoptsev, V.V.~~

TITLE: An Experimental Investigation of the Plane Bending of Welded Beams Having Holes in Their Webs (Eksperimental'noye issledovaniye ploskogo izgiba svarnykh balok s otverstiyami v stenke)

PERIODICAL: Nauchn. tr. Odessk. in-t inzh. morsk. flota, 1957, Nr 13, pp 235-251

ABSTRACT: Results are given of bending tests of twenty welded I-beams having dissimilar flanges. The beam material was grade 3S steel. The walls of seventeen of the beams were weakened with holes in them adjacent to the larger flange. The shape, length, and height of the holes varied. For comparison purposes tests were made of three beams having no holes in their webs. The tests were all conducted within the elastic range on a UIM-50 universal testing machine. The stiffness of the beams having holes in their webs was found to be considerably less than that of the beams which did not. A redistribution of the normal stresses was noted in the cross sections in comparison with

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SOV/124-58-7-8170

An Experimental Investigation of the Plane Bending (cont.)

the results of the elementary calculation which took into account the weakening of the web; the stresses in the larger flange had decreased, those in the smaller flange having increased. In cases where hole dimensions were varied, the effect produced by an increase in their height was especially noticeable.

B.M. Broude

1. Beams--Mechanical properties
2. Beams--Test results
3. Welds--Effectiveness

Card 2/2

KHOLOPSEV, V.V., kand.tekhn.nauk

Method of designing girders with holes in their sides.
Nauch.trudy OITMF no.16:112-130 '58. (MIRA 11:11)
(Girders)

MIRONOVA, M.P.; KHOLOPTSEVA, N.P.

Effect of trace elements on some biochemical and physiological processes in peas and beans. Uch. zap. Petrozav. gos. un. 12 no.3:32-35 '64. (MIRA 19:1)

1. Botanicheskiy sad Petrozavodskogo gosudarstvennogo universiteta imeni O.V. Kuusinenä.

GANCHEL', F.F., otv.red.; GERBACHEVSKIY, A.F., zaslushenny vrach USSR, red.; KAPLINA, A.V., zaslushenny vrach USSR, red.; KRASNOMOVETS, V.N., red.; PAVSHA, G.F., zaslushenny vrach USSR, red.; KHOLOPSEVA, Z.I., red.; SNEZHIN, M.I., red.; KOPEYCHIK, P.N., tekhn.red.

[Research articles by physicians of Zhitomir Province, Ukrainian S.S.R.] Nauchnye trudy vrachei Zhitomirskoi oblasti Ukrainskoi SSR. Zhitomir, 1959. 255 p. (MIRA 14:2)

1. Zhitomirskiy oblastnoy otdel zdavookhraneniya. 2. Zaveduyushchiy Zhitomirskim obl'sdarvotdelom (for Ganchel'). 3. Zhitomirskaya oblastnaya bol'nitsa (for Gerbachevskiy, Kaplina, Krasnomovets, Pavsha).

(MEDICINE)

KHOLOSH V.

KHOLOSH, V.

~~On work duty. Mor.flot 17 no.11:23-24 N '57.~~

(MIRA 10:12)

1.Sakhalinskoye parokhodstvo.

(Merchant seamen)

(Lende, Iosif Vasil'evich)

KHOLOSH, V.

From dificits to work with profit. Mor, flot 24 no.3;6-8 Mr '64.
(MIRA 17:6)

1. Sekretar' Partiynogo komteta Sakhalinskogo parokhodstva.

KHOZASHA, V., inzhener.

Role of removable 'tween-deck stanchions on two-deck ships. Mer.
flot 16 no.9:17 S '56. (MIRA 9:10)

1. Ministerstvo stankostroyeniya Dal'nevostochnoye parokhodstva.
(Bulkheads (Naval architecture)) (Coal-carrying vessels)

LAVRINENKO, M.Z.; GONCHARENKO, A.A.; KHOLOSHA, V.I.

Effect of certain technological factors on the durability of
drill rods. Gor. zhur. no. 12:72-73 D '65. (MIRA 18:12)

1. Rudoremontnyy zavod tresta Leninruda (for Lavrinenko).
2. Dnepropetrovskiy gornyy institut (for Goncharenko, Kholosha).

KHOLOSHCHAPOV, V.A.

Post-graduate student V.A.KHOLOSHCHAPOV (Novocherkassk Veterinary Institute) gave a report at the All-Union Helminthological Conference summoned by the All-Union Society of Helminthologists of the USSR Academy of Science and held December 8-12, 1948. "Study of the Methods of Diagnosis of Ovine Haemonchosis During Life". He believes possible the establishment of diagnosis according to the third stage larvae, by the allergy method of diagnosis, giving 79% correct indices, and according to the changes in the blood picture.

SO: Veterinariya;Vol.26;No.2;45-48;February 1949;uncl

KHOLOSHCHANOV, V.A.

Candidate of Veterinary Sciences, V.A. KHOLOSHCHANOV (Rostov Oblast Veterinary Experiment Station)--"An Allergical Method for Diagnosis of Haemonchosis in Sheep".

In order to establish a diagnosis of haemonchosis in sheep the author tested an allergical method of diagnosis, using haemonchosis antigen for this purpose.---In studying the intracutaneous reaction the author employed the RL-1 haemonchosis antigen modified by Yegorov (extract of fresh sexually mature Haemonchus sp. hematodes prepared in Ringer-Lokkovskiy solution) and FKh antigen (extract of the same hematodes prepared in a physiological solution with a 0.5 percent solution of chloroform added)-----On the basis of the results obtained the author considers it possible to recommend this allergical method of diagnosis of haemonchosis in sheep, using hematological examinations simultaneously as an auxilliary method. (pp.5-8) (Veterinariya; No.4; April 1950, pp.26-30)
U-5551;16 Feb 54

KHOLOSHCHANOV, V.A. and GOLOSNITSKIY, A.K.

Candidate of Veterinary Sciences A.K.Golosnitskiy and V.A.KHOLOSHCHANOV(Rostov Veterinary Experimental Station)--"Methods of Using Phenothiazine in Mass Dehelminthization of Sheep." (Helminthic Diseases in Farm Animals and Poultry." Veterinariya, Vol.28; No.4, April 1951;p.28)
SO:Veterinariya;No.4;1951;p.7;uncl

KHOLOSHCHANOV, V.A., kandidat veterinarnykh nauk.

Epizootology of Moniezia infection and methods of its control.
Veterinariia 32 no.4:33-35 Ap '55. (MLRA 8:5)

1. Rostevskaya NIVOS.
(SHEEP--DISEASES) (TAPWORMS)

KHOLOSHCHANOV, V.A., kandidat veterinarnykh nauk; PETROV, V.A., nauchnyy
soтрудnik.

Epizootology and prophylaxis of coccidiosis in sheep. Veterinariia 32
no.11:89-90 N 155. (MIRA 8:12)
(SHEEP--DISEASES) (COCCIDIOSIS)

KHOLOSHCHANOVA, G. M.

USSR / Human and Animal Physiology. Nervous System.

T-10

Abs Jour : Ref Zhur - Biologiya, No 1, 1959, No. 3887

Author : Kholoshchanova, G. M.
Inst : Novocherkassk Zootechnical Veterinary Institute
Title : Formation of Conditioned Reflexes in Sheep

Orig Pub : Tr. Novocherkasskogo zootekhn.-vet. in-ta, 1957,
Vyp. 10, 191-194

Abstract : Against a background of uninterrupted secretion of the parotid, submaxillary and sublingual glands in response to the beat of a metronome, positive and inhibitory conditioned reflexes were obtained in 2 sheep in the form of salivation increase and decrease. Differentiation was worked out by means of a combination of stimulation of the rectum (that inducing unconditioned salivary inhibition) with the action of the conditioned stimulus. -- K. A. Jordanis

Card 1/1

MAKSIMOV, V.P.; KHOLOSHYNA, G.G.; IVANOV, S.K.; LEVKOV, P.V.

Operation of an automated system of gas gathering points in the
Shebelinka gas field. Neft. i gaz. prom. no.1:53-56 Ja-Mr '64.
(MIRA 18:2)

GANDURIN, A.N.; KHOLOSTOV, F.Ya.

Use and processing of artificial and synthetic fibers in the
United States. Tekst.prom. 19 no.2:61-68 F '59.

(MIRA 12:5)

(United States--Textile fibers, Synthetic)

KHOLOSTOV, F.Ia.

All resources to be used for a fulfillment of the plan ahead of
time. Tekst.prom. 20 no.7:8-12 JI '60. (MIRA 13:7)

1. Zamestitel' predsedatelya Mosoblsovmarkhoza.
(Moscow Province--Textile industry)

ALEKSEYEV, Ye.T.; KHOLOSTOV, F.Ya.; MIKHAYLOV, L.I.; AVGUSTAYTIS, L.M.

Practices in mechanization and automatization in the textile industry. Tekst.prom. 21 no.2:17-34 Ja '61. (MIRA 14:3)

1. Predsedatel' Ivanovskogo sovnarkhoza (for Alekseyev). 2. Zam. predsedatelya Mosoblsovnarkhoza (for Kholostov). 3. Zam. predsedatelya Leningradskogo sovnarkhoza (for Mikhaylov). 4. Zam. nachal'nika Upravleniya legkoy promyshlennosti sovnarkhoza Latviyskoy SSR (for Avgustaytis).

(Textile industry) (Automatic control)

KHOLOSTOV, I.N.

Fulfillment of the obligations assumed by the collectives of
tire factories in response to the initiative of the factories in
Yaroslavl. Kauch. i rez. 22 no.5:54-55 My '63. (MIRA 16:7)
(Tires, Rubber) (Socialist competition)

KHOLOSTOV, I.N.

... Movement for communist labor in the plastics industry. Plast.
massy no.8:1-2 '63. (MIRA 16:8)

(Plastics industry)

NAUMENKO, M.F.; KHOLOSTOV, I.N.

Produce more high-quality tires. Kauch.i rez. 22 no.1:60-61 Ja
'63. (MIRA 16:6)

(Tires, Rubber)

KHLOSTOV, M.V.

Diagnosis and treatment of empyema and bronchial fistula following pulmonary resection. Grud.khir. 3 no.6:86-90 N-D '61.

(MIRA 15:3)

1. Iz khirurgicheskoy kliniki usovershenstvovaniya vrachey No.1
(nach. - deystvitel'nyy chlen AMN SSSR prof.P.A. Kupriyanov)
Voyenno-meditsinskoy ordena Lenina akademii imeni S.M. Kirova.
(LUNGS—SURGERY) (EMPYEMA) (FISTULA, BRONCHIAL)

KHOLOSTOV, M.V.

USSR

Causes and incidence of empyema of the pleura and bronchial fistulae following radical operations on the lungs. Nov.khri. arkh. no.1:23-28 '62. (MIRA 15:8)

1. Khirurgicheskaya klinika dlya usovershenstvovaniya vrachey I (nachal'nik - deystvitel'nyy chlen AMN SSSR, prof. P.A. Kupriyanov) Voenno-medsinskoy ordena Lenina akademii imeni Kirova. (FISTULA, BRONCHIAL) (LUNGS---SURGERY) (EMPYEMA)

SMIRNOV, A.P., dotsent; KHOLOSTOV, V.A., inzhener, redaktor.

[Principles of the technology of factory processing of tobacco]
Osnovy tekhnologii fabrichnoi pererabotki; tabachnyi tsekh.
Pod red. V.A.Kholostova. Moskva, Gos. izd-vo Ministerstva legkoi
i pishchevoi promyshl., 1953. 170 p. (MLRA 7:4)
(Tobacco industry)

KHOLUSTOV, V. A.

Tobacco Industry

Constantly improve the work of enterprises. Tabak 14, No. 1, 1953.

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June 1953. UNCL.

DENSHCHIKOV, Mikhail Tikhonovich, kand.tekhn.nauk; SILIN, P.M., prof., red.; VESELOV, I.Ya., prof., red.; SMIRNOV, V.A., prof., red.; RZHEKHIN, V.P., red.; LEBEDEV, P.P., red.; KOVALENKO, Yu.T., red.; KUPCHINSKIY, P.D., red.; BENIN, G.S., red.; P'YANKOV, A.G., red.; SHNAYDMAN, L.O., red.; MOREV, N.Ye., red.; SHMAIN, M.M., red.; BULGAKOV, N.I., red.; MAYOROV, V.S., red.; TERNOVSKIY, N.S., red.; RAZUVAYEV, N.I., red.; OGORODNIKOV, S.T., red.; BURMAN, M.Ye., red.; ~~KHOL...~~, red.; NAMESTNIKOV, A.F., red.; NASAKIN, T.N., red.; KOVALEVSKAYA, A.I., red.; KISINA, Ye.I., tekhn. red.

[Wastes from the food industry and their utilization] Otkhody pishchevoi promyshlennosti i ikh ispol'zovanie. Izd. 2., dop. 1 perer. Moskva, Pishchepromizdat, 1963. 615 p. (MIRA 16:6)
(Food industry--By-products)

KHOLOSTOV, V. G.
KHOLOSTOV, V.G.

Wild boar in Arkhangel'sk Province. Biol.MOIP. Otd.biol. 61 no.4:82
Jl-Ag '56. (MLRA 10:8)
(BOVDINO DISTRICT--WILD BOAR)

PERMITIN, Ye.N., otv. red.; SMIRNOV, N.P., zam. otv. red.; DEBRIN,
I.I., red.; SMIRNOV, S.V., red.; UVAROV, V.S., red.;
FORMOZOV, A.N., red.; KHOLOSTOV, V.G., red.; SHOLOKHOV,
M.A., red.; NAUMOV, V.V., red.

[Hunting grounds] Okhotnich'i prostory. Moskva, Fizkul'-
tura i sport. Vol.20. 1964. 230 p. (MIRA 17:8)

KHOLOSTYAKOV, M. (Kirgizskaya SSR)

Water-tank has been improved. Pozh.delo 7 no.4:31 Ap '61.
(MIRA 14:4)

(Kirghizistan--Fire engines)

MEL'NIKOV, N.N.; KHOLOV, D.N.

From the field of organic insectofungicides. Part 15. Synthesis of certain thiophosphoric acid esters containing various substitutes in the aromatic radical. Zhur.ob.khim. 23 no.8:1357-1364 Ag '53. (MLRA 6:8)
(Insecticides) (Fungicides) (Thiophosphoric acid esters)

KHOLOV, YU.K.

PA - 2067

AUTHOR:

CHOLOV, JU.K.

TITLE:

Some Rules for the Cross Sections of Electric Quadrupole Transitions in the Nuclear Photoeffect. (Nekotorye pravila summ dla sečenij electriceskich kyadрупolnykh perechodov pri jadernom fotoeffekte, Russian).

PERIODICAL:

Zhurnal Eksperimental'noi i Teoret.Fiziki, 1957, Vol 32, Nr 1, 124-129 (U.S.S.R.)
 Received: 3 / 1957

Reviewed: 4 / 1957

ABSTRACT:

The author studies two summation laws characterizing the cross section of the quadrupole transitions which establish connections between some constants (depending upon nuclear structure) and the cross section $\sigma_{E2}(\nu)$ of the electric quadrupole transitions connected with the nuclear photoeffect. Here ν denotes the energy of the photon. In computing one of these constants (the other is computed trivially) the author uses a phenomenological term for the distribution function of the coordinates of the two protons of the nucleus. This term was experimentally determined for dipole transitions. Therefore the present paper considers as a first step the two known laws of summation. These two summation laws read as follows:

$$\int_0^{\infty} \sigma_{E1}(\nu) d\nu = 2\pi^2(\hbar/c)(1/i\hbar) \langle \dot{D}\dot{D} - \dot{D}\dot{D} \rangle, \int_0^{\infty} \sigma_{E1}(\nu) d\nu / \nu = (4\pi^2/\hbar c) \langle D^2 \rangle$$

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Some Rules for the Cross Sections of Electric Quadrupole Transitions in the Nuclear Photoeffect.

Here $\sigma_{E1}(\nu)$ denotes the total cross section of the dipole transitions, D - any component of the operator of the dipole moment in long wave approximation and the symbol $\langle \dots \rangle$ denotes the averaging over the ground state of the nucleus. For the sake of precision $D = D_z = \sum_{\alpha} e_{\alpha} z_{\alpha}$ is put here, where e_{α} and z_{α} respectively denote the charge and the z projection of the coordinate \vec{q}_{α} of the α -th nucleon. The dot above the operator denotes the commutator multiplied by i/\hbar with the HAMILTONIAN of the nucleus. For the zero-th distribution the equation is determined. The sum rule for the general case resulting therefrom is explicitly given. The main reason for the deviation of the true distribution of the coordinates of two correspondent nucleons from the "zero distribution" is the PAULI principle. It is therefore sufficient to study the simplest nuclear model, because this model takes the PAULI principle into account.

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PA - 2067

Some Rules for the Cross Sections of Electric Quadrupole Transitions in the Nuclear Photoeffect.

The quadrupole transitions: The cross section of the quadrupole transitions in long wave approximation is as follows:

$\sigma_{E2}(\nu) = 4\pi^2 \sum_f (v/\hbar c)^3 |Q_{f0}|^2 \delta(E_f - E_0 - \nu)$. Q here denotes any of the non-diagonal components of the operator of the quadrupole moment. With $Q = Q_{13} = (1/2) \sum_{\alpha} e_{\alpha} x_{\alpha}^2$

$$\int_0^{\infty} \sigma_{E2}(\nu) d\nu/\nu^2 = (4\pi^2/(\hbar c)^3) (-i\hbar/2) \langle Q\dot{Q} - \dot{Q}Q \rangle, \int_0^{\infty} \sigma_{E2}(\nu) d\nu/\nu^3 =$$

$-(4\pi^2/(\hbar c)^3) \langle Q^2 \rangle$ is found. In quadrupole transitions correlation is approximately only half of what it is with the summation rule for dipole transitions. It may eventually be concluded that the "center of mass" of the cross section of the quadrupole transitions lies to the right of the point of dipole resonance (at energies of from $> 10-20$ MeV).

ASSOCIATION: Physical Institute "P.N.LEBEDEV" of the Academy of Sciences of the USSR

PRESENTED BY:

SUBMITTED:

AVAILABLE: Library of Congress

Card 3/3

AUTHORS: Gorbachev, S. V., Kholpanov, L. P. SOV/76-32-7-31/45

TITLE: An Improved Optical System for the Refractographical Method of Investigating the Distribution of Dissolved Substances (Uso-vershenstvovaniye opticheskoy skhemy refraktograficheskogo metoda issledovaniya raspredeleniya rastvorenykh veshchestv)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol 32, Nr 7, pp 1661 - 1662 (USSR)

ABSTRACT: In another paper a refractographical method for the determination of the concentration of a CuSO_4 solution during electrolysis was suggested. In the solution to be investigated the light beam went along the cathetus face of a prism, was refracted and left at the other cathetus face. The disadvantage of this method is the fact that the light beam prior to its refraction passes the solution and is deviated from its direction by the various concentration gradients of the solution; this fact shows an effect on the intensity of the pencil of light. This again may cause a change of the black - white boundary in the photographic measurement and thus can influence the accuracy of the determination. In order to avoid this source of error the authors

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An Improved Optical System for the Refractographical Method of Investigating the Distribution of Dissolved Substances SOV/76-32-7-31/45

presented a modification of the beam direction, with the light beam not passing through the solution layer; thus a change of the direction of the beam is avoided. This method may be employed in the determinations of the concentrations of substances during their dissolution, absorption etc. There are 2 figures.

ASSOCIATION: Khimiko-tehnologicheskii institut im. D.I.Mendeleyeva, Moskva (Moscow, Chemical and Technical Institute imeni D.I.Mendeleyev)

SUBMITTED: December 25, 1957

1. Refractometers--Optical systems analysis 2. Solutions--Refractometric 3. Materials--Solubility

Card 2/2

GOBBACHEV, S. V. ; KHOLPANOV, L. P.

Refinement of the calculation of concentration polarization.
Trudy MKHTI no.26:18-23 '59. (MIRA 13:9)
(Polarization (Electricity))

KHOLPANOV, L. P.

Calculation of concentration polarization in a nonsteady electrolysis process by means of the operational method. Trudy NIIFI no.26:24-33 '59. (MIRA13:9)
(Polarisation (Electricity)) (Electrolysis)

AUTHORS: Kholpanov, I. P., Drakin, S. I.

S/153/60/003/01/003/058
B011/B005

TITLE: Derivation and Solution of the Differential Calculus Describing
the Transport of Substance in Electric Diffusion of Metal Alloys

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya
tekhnologiya, 1960, Vol 3, Nr 1, pp 14-19 (USSR)

TEXT: The authors derive an equation (29) calculating the concentration (or impoverishment) of an alloy if 2 parameters K and D characterizing electric diffusion are known. The transport of substance during electric diffusion can be considered the final result of two processes of opposite direction: a) the migration of the alloy components under the action of electric current producing a concentration gradient, b) back-diffusion released by the above gradient. With a sufficiently long current passage, a steady state develops: the effect of the above factors is counterbalanced, and the transport of substance ceases. Equation (29) derived by the authors characterizes the transport in different points of the alloy at any point of time. As the solution of this problem meets with considerable mathematical difficulties, the authors introduced the following restrictions: only diluted metal solutions are investigated; the electric diffusion is studied in an alloy contained in a tube of a constant cross section q ; the tube lies in the axis x . After extensive mathematical computations starting from equation (1), the authors arrive

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Derivation and Solution of the Differential Calculus S/153/60/003/01/003/058
Describing the Transport of Substance in Electric Dif- B011/B005
fusion of Metal Alloys

at equation (29). The parameters K and D required for the use of equation (29) are determined as follows: K is found from data for steady distribution (Refs 1,2). The ratio c/c_0 (c = concentration of the dissolved metal in equation (1), c_0 = this concentration in all points of the alloy at the beginning of the electric diffusion process: $c(x,0) = c_0$) is measured in any section of the tube shortly after the beginning of the current passage. Thus, the value D can be determined by means of equation (29). It should not be forgotten that equation (29) was derived for an infinitely long tube whereas in practice only finitely long tubes are available (Fig 1). Finally, the authors complain that very few data are found in publications to check equation (29). Figures 2 and 3 are taken from reference 7. They show that the value K, calculated according to reference 7, seems to be much too low. B. Baranovskiy is mentioned in the paper. There are 3 figures and 8 references, 4 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskii institut im. D. I. Mendeleyeva;
Kafedra fizicheskoy khimii (Moscow Institute of Chemical Technology
imeni D. I. Mendelevey; Chair of Physical Chemistry)

SUBMITTED: April 27, 1959

Card 2/2

34377

S/539/61/000/032/002/017
D202/D301

5.4700
AUTHOR: Kholpanov, L.P.

TITLE: On the theory of electrolysis on a rotating disc electrode

SOURCE: Moscow. Khimiko-tehnologicheskiy institut. Trudy, no. 32, 1961. Issledovaniya v oblasti elektrokhemii, 27-34

TEXT: The subject of this work was to find an expression for the dependence of the current density on a rotating disc electrode on its angular velocity which would give the current value on a stationary electrode as well. Taking into account the cation and anion transfer numbers, as well as the diffusion effects near the electrode, the author starts with equation

$$i_k = D_k F Z_k \frac{dc_k}{dy} + \mu_k c_k F^2 Z_k^2 \frac{dE}{dy} \quad (1)$$

$$i_a = - D_a F Z_a \frac{dc_a}{dy} + \mu_a c_a F^2 Z_a^2 \frac{dE}{dy}$$

where c_k and c_a are the cation and anion concentrations respectively, Z_k
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On the theory of electrolysis on a ... S/539/61/000/032/002/017
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and Z_k - their valencies, D_k and D_a - their diffusion coefficients, $\frac{dc_k}{dy}$ and $\frac{dc_a}{dy}$ - their concentration gradients and μ_k and μ_a - their respective speeds. From this dependence, after some theoretical considerations, the author deduces the following equation for evaluating current density on the surface of a rotating disc electrode with reference to its angular velocity ω Eq. (15)

$$i = c_o \left[1 - \exp \left(- \frac{Z_k F \Delta E}{RT} \right) \right] \frac{D_k Z_k F \sqrt{\omega} - \mu_k Z_k^2 F^2 c_o \sqrt{0,89 \sqrt{6D} \nu^{1/2}}}{0,89 \sqrt{6D} \nu^{1/2}} \frac{dE}{dy} +$$

$$+ \mu_k Z_k^2 F^2 c_o \frac{dE}{dy} \quad (15)$$

In this equation, the cation concentration directly on the electrode surface is replaced by the electrode potential, using Nernst's equation from which

$$c_k = c_o \exp \left(\frac{-Z_k F \Delta E}{RT} \right).$$

It follows from the equation proposed by the

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On the theory of electrolysis on a ... D202/D301

author that the current density does not become n_{111} when $\omega = 0$. In the second part of the article the author presents his theory of electrolysis on a stationary horizontal electrode placed at some distance from an electrolyte rotating with constant ω . The hydrodynamic conditions which take place on a rotating disc electrode and the reverse ones which occur when the electrode is stationary and the electrolyte rotates at some distance from it, are discussed. In that case, the centrifugal force and the radial pressure gradient in the electrolyte are reciprocally balanced. In the electrolyte in the vicinity of the electrode, the azimuthal velocity would be braked, but the pressure gradient remains the same as at a distance from the electrode; consequently the liquid moves to the center of the electrode and an ascending liquid axial current is formed. The author discusses theoretically the electric current density in case of a purely concentration polarization, assuming that the reagent concentration depends only on the distance from the electrode along the vertical axis, y . The following equation for the value of the diffusion current to the electrode surface Eq.(33)

$$j = D \left(\frac{dc}{dy} \right)_{y=0} = 0,765D^{2/3} \nu^{-1/6} \omega^{1/2} c_0 \quad \text{is deduced and Eq.(39)}$$

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On the theory of electrolysis on a ... S/539/61/000/032/002/017
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$$i = c_0 \left[1 - \exp\left(-\frac{z_k F \Delta E}{RT}\right) \right] \frac{D_k z_k F \sqrt{\omega - \mu_k z_k^2 F^2} \cdot 1,31 \sqrt[3]{D \nu^{1/2}} \frac{d\phi}{dy} + (\lambda_k z_k^2 F^2 c_0 \frac{d\phi}{dy}}{1,31 \sqrt[3]{D \nu^{1/2}}} \quad (39)$$

for the current density on its surface, assuming that the electrolyte concentration at a distance remains constant: $c = c_0$, but at the electrode surface is expressed by the electrode potential. It follows from the last equation that, when $\omega = 0$, the current density has a definite value. The author expresses his gratitude to Professor, S.V. Gorbachev for the interest and consideration given to his work. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. Cochran, Proc. Cambridge Phil. Soc. 30, 365, (1934). ✓

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34378

S/539/61/000/032/003/017
D202/D301

5.4700

AUTHOR: Kholpanov, L.P.

TITLE: A theoretical method of current density evaluation under conditions of simultaneous chemical and concentration polarization on a rotating disc electrode. Report 1.

SOURCE: Moscow. Khimiko-tekhnologicheskiy institut. Trudy, no. 32, 1961. Issledovaniya v oblasti elektrokhemii, 47-56

TEXT: In this report the author presents a new approach to evaluating current density. Electrolysis is considered as a complex process consisting of two stages, one of which is determined by the chemical polarization and the other by the concentration polarization. When the process is set, its velocity is determined by the current density i and has the same value in both stages. The author starts his considerations with known expressions for current intensity on the electrode surface, and deduces Eq. (7)

$$i = \frac{c_o \frac{z}{c} F \omega^{1/2}}{U_i 1,62D^{-2/3} \nu^{1/6} + \omega^{1/2} (kf)^{-1} \exp \frac{A_{ef}}{RT}}$$

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A theoretical method of ...

for a cathodic reaction of first order, where i - current density, ω - angular velocity, U_i - ion transference number, k - a proportionality coefficient, f - activity coefficient and A_{ef} - effective energy of activation. This equation describes electrolysis under conditions of simultaneous chemical and concentration polarizations. The equation shows the dependence of current density on ω and may serve to determine the current in limiting cases when only one kind of polarization influences the electrolysis; it may also be used for an indirect determination of A_{ef} . In the second part of this report the author discusses a process in which an electric field affects the motion of charged particles and proposes a theoretical evaluation of the potential gradient $\frac{d\phi}{dy}$; on the

assumption that the principal changes of potential occur only in the diffusion layer δ the gradient $\frac{d\phi}{dy}$ may be taken as equal to

$$\frac{\phi_c - \phi_{s-s_1}}{\delta} \quad \text{where } \phi_c \text{ - the potential on the cathode surface and } \phi_{s-s_1}$$

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A theoretical method of ...

the potential on the solution-diffusion layers boundary; the author proposes Eq. (13)

$$i = \frac{D_c F c_0 \omega^{1/2} Z_n e}{1.62 D^{1/2} \nu^{1/6} \left[1 + \frac{D_c \omega^{1/2}}{k_f \exp\left(-\frac{\Delta F \phi}{RT}\right) 1.62 D^{1/2} \nu^{1/6}} - \frac{\mu_z Z_n F (|\phi_R - \phi_P - \phi|) \omega^{1/2}}{k_f \exp\left(-\frac{\Delta F \phi}{RT}\right) 1.62 D^{1/2} \nu^{1/6}} \right]} \quad (13)$$

in which $\frac{d\phi}{dy}$ is expressed by $\phi_c - \phi_{s-s}$ and ϕ as $1.62 D_c^{1/3} \nu^{1/6}$

$\omega = 1/2$; he also discusses evaluation of the potential gradient from data given by the electrical double layer theory, proposing a corresponding equation, and also its evaluation in a general case, where the current is carried by both cations and anions. It is concluded that this method allows determination of the potential distribution in the diffusion layer on a rotating disc electrode. The dependences of A_{cf} on the polarization potential $\Delta \phi$ and the velocity constant of the reaction k , when $\Delta \phi = 0$ are discussed. The author expresses his gratitude to Professor J.V. Gorbachev for his interest in this work. There are 7 references: 5
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A theoretical method of ...

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Soviet-bloc and 2 non-Soviet-bloc. The reference to the English-language publication reads as follows: W. Cochran, Proc. Cambridge Phil. Soc., 30, 365, (1934).

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38379

S/539/61/000/032/004/017
D202/D301

5.4700
AUTHOR: Kholpanov, L.P.

TITLE: A theoretical method of current density calculation, under conditions of simultaneous chemical and concentration polarization on a plate electrode with forced and natural convection. Report 2.

SOURCE: Moscow. Khimiko-tekhnologicheskii institut. Trudy, no. 32, 1961. Issledovaniya v. oblasti elektrokhemii, 57-68

TEXT: The author presents the results of his calculation of current density on a stationary plate electrode, making the following assumptions: The width and length of the plate are very large in comparison with the thickness of the boundary layer; the concentration distribution depends only on the distance from the plate's edge x , and on the distance along the normal to the plate's surface y . He denotes the velocity of liquid flow, far from the electrode as U and in his calculations takes into account the same limiting conditions as in Report no. 1; deducing the following equations for evaluating current density on the surface of a plate

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A theoretical method of current ...

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electrode Eq.(21)

$$\frac{iU_1}{ZF} = - \frac{\left\{ \frac{ZFkf^n \exp(-A_{ef}/RT)}{\sqrt{Ux}} \right\}^{\frac{1}{n}} - c_o}{0,34 \sqrt{U_o D} \left(\frac{U}{D} \right)^{1/3}}$$

for a reaction of order n where U_1 - ion transfer number, n - the order of the reaction, k - proportionality ratio, f - activity coefficient; and Eq.(22)

$$i = \frac{ZFc_o}{\frac{U_1 (Ux)^{1/2}}{0,34DU_o^{1/2} Pr^{1/3}} + 1} \cdot \frac{fk \exp\left(-\frac{A_{ef}}{RT}\right)}{}$$

for a reaction of the first order, in which $\frac{U}{D}$ is expressed by the Prandtl number. Equations are deduced for evaluating the effective

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energy of activation A_0 and for calculating the potential gradient $\frac{d\phi}{dy}$, discussing also the evaluation of this gradient in the light

of theory of electrical double layer. The method is applied to electrolysis under conditions of natural convection at simultaneous chemical and concentration polarizations, as well as at forced convection and corresponding equations for current density; determinations on the surface of a plate electrode under the above conditions are deduced. The author then discusses the potential gradient $\frac{d\phi}{dy}$ in the case when the current

is carried simultaneously by cations and anions, and proposes two expressions for the potential distribution in the diffusion layer δ under conditions of forced and natural convection: Eqs. 78, 79

$$|\phi_c - \phi_{p-p}| = \frac{1}{b} \ln \frac{a + \delta h}{a} \left[\frac{RTi}{F^2 (Z_k D_k + Z_a D_a) Z_a Z_k} - \frac{(D_k - D_a) RTb}{F (Z_k D_k + Z_a D_a)} \right] \quad (78)$$

where:

$$a = c_{y=0} = \left[\frac{i}{Z_k F k l^n \exp\left(-\frac{A_{ap}}{RT}\right)} \right]^{\frac{1}{n}} \quad (79)$$

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.. theoretical method of...

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..s. 80, 81

$$b = (v_0 - a) \delta^{-1} \tag{S1}$$

$$\delta = 3 \left(\frac{D}{\nu} \right)^{1/4} \sqrt{\frac{\nu x}{U_0}} \tag{S1}$$

and Eqs. 82, 83, 84, and 85.

$$|c_{y0} - c_{y-0}| = \frac{1}{b} \ln \frac{a + b\delta}{a} \left[\frac{RTi}{F^2(Z_k D_k + Z_a D_a) Z_a Z_k} - \frac{(D_k - D_a) RTb}{F(Z_k D_k + Z_a D_a)} \right] \tag{82}$$

where

$$a = c_{y-0} = \left[\frac{i}{Z_k F k t^n \exp\left(-\frac{\Lambda_{i0}\phi}{RT}\right)} \right]^{1/n} \tag{83}$$

$$b = (v_0 - a) \delta^{-1} \tag{84}$$

$$\delta = \frac{x^{1/4}}{0.7 Pr^{1/4} \left(\frac{\mu c_0}{4\nu^2} \right)^{1/4}} \tag{85}$$

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It is pointed out that both formulae are similar, differing only in the value of δ . This means that a different electrode position in respect to the direction of liquid flow largely affects the dimensions of the diffusion layer, which subsequently influences the polarization. The author expresses his gratitude to Professor S.V. Gorbachev for his interest in this work. There are 12 references, 6 Soviet-bloc and 6 non-Soviet-bloc. The references to the English-language publications read as follows: J.N. Agar, Discuss. Faraday Soc. 1, 26, (1947); C. Wagner, Trans. Electrochem., 95, 161, (1949).

✓

Card 5/5

KHOLPANOV, L.P.

Theory of electrolysis on a rotating disk electrode. Zhur.
fiz. khim. 35 no.7:1538-1542 J1 '61. (MIRA 14:7)

1. Khimiko-tehnologicheskii institut im. D.I.Mendeleyeva,
Moskva.

(Electrolysis) (Electrodes)

KHOLPANOV, L.P.

Theory of electrolysis on the rotating disk electrode
under conditions of combined concentration and chemical
polarization. Zhur. fiz. khim. 35 no.7:1567-1570 J1 '61.
(MIRA 14:7)

1. Moskovskiy khimiko-tekhnologicheskii institut im. D.I.
Mendeleeva.

(Electrolysis)

KHOLPANOV, L.P.

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(Electrolysis)

KHOLPANOV, L.P.; GORBACHEV, S.V.

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(Oxidation, Electrolytic) (Reduction, Electrolytic)
(Electrodes)

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(Electrolysis) (Ferricyanides) (Electrodes)

KHOLPANOV, L.P.; GORBACHEV, S.V.

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(Ferricyanides) (Ferrocyanides) (Electrolysis)

KHOLPANOV, L.P.

Theory of concentration polarization in the unsteady state taking
the ohmic factor into account. Zhur.fiz.khim. 36 no:5:1077-1080
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Theory of electrolysis in redox systems under conditions of simultaneous chemical and concentration polarization. Part 1. Zhur. fiz. khim. 37 no.4:890-893 Ap '63. (MIRA 17:7)

1. Tul'skiy gornyy institut.

ACCESSION NR: AP4038002

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AUTHOR: Kholpanov, L. P.

TITLE: Heat exchange at large Pr numbers of a horizontal plane immersed in a rotating liquid

SOURCE: Inzhenerno-fizicheskij zhurnal, no. 5, 1964, 85-87

TOPIC TAGS: heat exchange, heat transfer, hydrodynamics, heat flow

ABSTRACT: An approximate theory of heat exchange is presented for large Pr number on a horizontal plate placed in a volume of rotating liquid. It is shown that the criterial equations of heat exchange on a horizontal plane and on a rotating disk, placed in a volume of rotating and stationary liquid, respectively, are of same form, differing only in their numerical factors. This indicates that the heat flow to the surface of a horizontal plate in a rotating liquid, other things being equal, is greater than the heat flow to a rotating disk in a large volume of liquid. Orig. art. has: 9 formulas.

ASSOCIATION: Politekhnicheskij institut, Tula (Polytechnic Institute)

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L. Tul'skiy politekhnicheskii institut i Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleeva.

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Electrolytic oxidation-reduction of reversible redox systems.
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Part 5: Use of the temperature-kinetic method in the electro-
lysis of ferric-ferrosulfates on a rotating disk electrode.
Ibid.:3020-3024

Electrolytic oxidation-reduction of reversible redox systems.
Part 6: Dependence of electrolysis rate on the rates of the
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sulfate solutions on a rotating electrode. Ibid.:3024-3028
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