USSR/Farm Animals. Cattle. Q

Abs Jour: Ref Zhur-Biol., No 17, 1958, 78725.

Author : Demchenko, P.V.
Inst :
Title : Increase of Early Maturity of Cattle - An Important Economic Factor.

Orig Pub: Zhivotnovodstvo, 1957, No 9, 29-35.

Abstract: It is recommended to conduct the first covering at the age of 15-16 months, in order to obtain the first calving from the cows at 24-26 months.

Card : 1/1

DEMCHENKO, P.V., kand.sel'skokhozyaystvennykh nauk.

A discussion on the protein problem to be concluded. Zhivotnovodstvo 20 no.8:19-23 Ag '58. (MIRA 11:10)
(Proteins)--(Feeding and feeding stuffs)

DEMCHENKO, P.V., kand.sel'skokhozyaystvennykh nauk

International conference on protein problems in stockbreeding (concluded). Zhivotnovodstvo 20 no.9:38-45 S '58. (MIRA 11:10)
(Proteins) (Feeding and feeding stuffs)

DEMCHENKO, P.V., kand.sel'skokhozyaystvennykh nauk

Evolution of the mixed feed industry under the seven-year plan. Zhivotnovodstvo 21 no.1:45-49 Ja '59. (MIRA 12:2)

1. Zaveduyushchiy laboratoriyey kombikormov Vsesoyuznogo nauchno-issledovatel'skogo instituta zhivotnovodstva.
(Feeding and feeding stuffs)

DEMCHENKO, P.V., kand.sel'skokhozyaystvennykh nauk

Nitrogen metabolism in growing cattle. Zhivotnovodstvo 21 no.8:15-22 Ag '59. (MIRA 12:11)
(Cattle—Feeding and feeds) (Nitrogen metabolism)

DEMCHENKO, P. V., Doc Agr Sci -- (diss) "Matter and energy metabolism in large horned cattle in the periods of their growth, development, and first year of lactation." Leningrad-Pushkin, 1960. 37 pp; (Ministry of Agriculture RSFSR, Leningrad Agricultural Inst); 180 copies; free; bibliography on pp 36-37 (18 entries); (KL, 50-60)

DEMCHENKO, Petr Vasil'yevich; KADIYEVA, Ye.V., red.; PEVZNER, V.I., tekhn.red.

[Feeding high-productive cows] Kormlenie vysokoproduktivnykh korov. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 182 p. (MIRA 14:3)

(Cows--Feeding and feeds)

ZAKHARCHENKO, A.L.; DEMCHENKO, P.V.; YAKUKHINA, A.F.; SOLOV'YEV, B.F.; KINSH, A.S.; MINENKOVA, V.R., red.; PEVZNER, V.P., tekhn. red.; TRUKHINA, O.N., tekhn. red.

[Reference book on corn]Spravochnik po kukuruze. Moskva, Sel'khozizdat, 1962. 519 p. (MIRA 16:4)
(Corn (Maize))

POLYVANNYY, I.R.; DEMCHENKO, R.S.

Rate of reduction of sodium sulfate. Izv.AN Kazakh.SSR. Ser.met.obog.i ogneup. no.2:34-42 '60. (MIRA 13:8)
(Sodium sulfate)

POLIVYANNYY, I.R.; DEMCHENKO, R.S.; PONOMAREV, V.D.

Sodium sulfate method of treating lead concentrates. Izv. AN Kazakh.SSR. Ser. met. obog. i ogneup. no.3:52-63 '60. (MIRA 14:4)
(Lead—Metallurgy) (Sodium sulfate)

TARABAYEV, S.I.; DEMCHENKO, R.S.; SHCHUROV, K.A.

Equilibrium in sulfide - chloride systems. Izv.AN Kazakh.SSR. Ser.met.,obog.i ogneup. no.2:13-25 '58. (MIRA 16:2)
(Systems (Chemistry)) (Hydrometallurgy)

DEMCHENKO, R.S.; POLYVYANNYY, I.R.

Blowing of sodium matte and slag melts. Izv. AN Kazakh. SSR. Ser. met. obog. i ogneup. no.3:79-85 '60. (MIRA 14:4)
(Nonferrous metals—Metallurgy) (Converters)

POLYVYANNYY, I.R.; DEMCHENKO, R.S.; SOLOV'YEVA, V.D.

Over-all recovery of metals from the intermediate products of lead industry. Izv. AN Kazakh. SSR. Ser. met., obog. i ogneup. no.3: 20-26 '61. (MIRA 15:1)
(Nonferrous metals--Metallurgy) (Lead industry--By-products)

DEMCHENKO, R.S.; POLYVYANNYY, I.R.

Sodium sulfate method of processing copper dross. Trudy Inst. met. i obog. AN Kazakh. SSR 6:91-105 '63. (MIRA 16:10)

POLYVYANNYY, I.R.; MALKIN, Ya.Z.; PONOMAREV, V.D.; SOLOV'IEVA, V.D.; SOSNIN, A.P.; DEMCHENKO, R.S.

Leaching arsenic from arsenic dust by sodium sulfide solutions. Trudy Inst.met.i obog. AN Kazakh.SSR 11:90-100 '64. (MIRA 18:4)

DEMCHENKO, R.S.; POLYVYANNYY, I.R.; TSEFT, A.L.

Investigating the kinetics of the thermochemical decomposition of sodium carbonate. Trudy Inst.met.i obog. AN Kazakh.SSR 11:101-106 '64. (MIRA 18:4)

POLYYANNYY, T.R.; DENCHENKO, P.S.; MILYUTINA, N.A.

Investigating the aqueous leaching of tungsten-molybdenum containing molten sodium matte. Trudy Inst. met. i obog. AN Kazakh. SSR 12:154-160 '65. (MIRA 18:10)

VZNUZDAYEV, S.T.; DEMCHENKO, R.V.

Regionalization of artesian waters in Moldavia for the purpose of their utilization for irrigation. Izv. AN Mold. SSR no.8: 40-52 '63. (MIRA 18:5)

L 25238-65 EWG(j)/EWG(r)/EWT(m)/EPF(c)/EPF(n)-2/EPR/EWP(j)/T/EWA(h)/EWA(l) C 62 60 B
Pc-4/Pe-5/Pr-4/Ps-4/Pu-4/Peb RPL GG/RM/WW

ACCESSION NR: AP5002750 S/0073/64/030/012/1318/1321

AUTHOR: Kornev, K.A.; Kachan, A.A.; Chervyatsova, L.L.; Polak, L.S.; Mertvichenko, Ye. F.; Demchenko, S.S.

TITLE: Kinetics of the radiochemical graft copolymerization of acrylonitrile with capron fiber

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 12, 1964, 1319-1321

TOPIC TAGS: vapor seeding copolymerization, capron fiber, acrylonitrile vapor, copolymerization constant, radiation polymerization, graft copolymer, polyacrylonitrile

ABSTRACT: Degreased, drawn, capron fiber was irradiated (Co^{60} source, 1600 curies, 100 rad/sec, 10^{-3} mm Hg, room temperature, 0.25 Mrad) and exposed to an acrylonitrile vapor at 80 mm pressure in a study of the kinetics of vapor seeding graft copolymerization which does not involve formation of a homopolymer. Graphs illustrate the effects of temperature (22-60C, 0-24 hrs), radiation dosage (0-20 Mrad) and monomer vapor pressure (30-80 mm Hg, 0-10 hrs). The authors calculated constants for the rate of chain growth, rate of chain disruption, the apparent activation energy (1.9 Kcal/mol), activation energy of chain growth and chain disruption, the average distance between initiation centers (120 A) and the average lengths of chains. An increase in monomer

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L 25238-65

ACCESSION NR: AP5002750

vapor pressure led to an increase in the quantity of copolymerized polyacrylonitrile. An increase in temperature decreased the amount of copolymerization, while an increase in radiation dosage above 2 Mrad had little effect. "The authors are indebted to A. Ya. Rozovskiy for participating in the evaluation of the results". Orig. art. has: 4 figures and 1 formula.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (High polymer institute, AN SSSR)

SUBMITTED: 25Dec63 ENCL: 00 SUB CODE: OC

NO REF SOV: 003 OTHER: 005

Card 2/2

KORNEV, K.A.; KACHAN, A.A.; CHERVYATSOVA, L.L.; POLAK, L.S.; MERTVICHENKO, Ye.F.; DEMCHENKO, S.S.

Kinetics of the radiation-chemical graft copolymerization of acrylonitrile with capron fibers. Ukr. khim. zhur. 30 no.12: 1318-1321 '64 (MIRA 18:2)

1. Institut vysokomolekulyarnykh soyedineniy AN UkrSSR.

L 14492-66 EWT(m)/EWP(j)/T WW/GS/RM

ACC NR: AT6006237 (A) SOURCE CODE: UR/0000/65/000/000/0015/0017

AUTHOR: Mertvichenko, Ye. F.; Demchenko, S. S.

35
B+1

ORG: Institute of the Chemistry of Macromolecular Compounds, AN UkrSSR, Kiev (Institut khimii vysokomolekulyarnykh soyedineniy AN UkrSSR)

TITLE: Physical and mechanical properties of capron fiber modified by grafting of polyacrylonitrile

SOURCE: AN UkrSSR. Modifikatsiya svoystv polimerov i polimernykh materialov (Modification of the properties of polymers and polymeric materials). Kiev, Naukova dumka, 1965, 15-17.

TOPIC TAGS: nylon, caprone fiber, acrylonitrile, graft copolymer

ABSTRACT: A study has been made of the strength of capron-fiber-acrylonitrile graft copolymers prepared by radiation-induced gas-phase graft-copolymerization. Acrylonitrile in the gaseous state was grafted to capron cord no 34.5 which had been preirradiated with γ-rays from a Co^{60} source. Dose rate was 100 rad/sec. The effect of the number and length of grafted chains on the strength of the copolymer was studied. The number of grafted chains was varied by controlling the irradiation dose. The grafted chain length was modified by controlling the reaction time. The results of tensile tests showed that: 1) irradiation of the original fiber lowers its tensile strength by increasing the number of surface defects, and 2) the

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L 14492-66

ACC NR: AT6006237

strength of the modified fiber is determined solely by the total amount of the grafted layer and does not depend on the number and length of the grafted chains. The highest strength was exhibited by fibers containing 4 to 5% polyacrylonitrile. The study resulted in the conclusion that strengthening of the fiber is the result of a "healing" of its surface defects by small amounts of polyacrylonitrile. Orig. art. has: 2 figures and 1 table. [BO]

SUB CODE: 11/ SUBM DATE: 060ct65/ ORIG REF: 004/ OTH REF: 001/ ATD PRESS: 4199

Card 2/2

DEMCHENKO, S.V.

Gonadotropic function of the pituitary body in males with diabetes mellitus. Probl. endok. i gorm. 11 no.2:36-41 Mr-Ap '65. (MIRA 18:7)

1. Otdel vozrastnoy endokrinologii (rukovoditel' - kand. med. nauk S.V.Maksimov; nauchnyy konsul'tant - prof. M.A.Kopelovich) Ukrainskogo instituta eksperimental'noy endokrinologii (direktor - kand. med. nauk S.V.Maksimov), Khar'kov.

DEMCHENKO, T.A.

Wassermann reaction with erythrocytes of northern deer. Vest. vener., Moskva no.2:44-45 Mar-Apr 1953. (CLML 24:3)

1. Of the Experimental Biology Department (Head -- Prof. P. G. Oganesyan) of The Republic Scientific-Research Dermato-Venereological Institute (Acting Director -- A. A. Kondrat'yeva).

DEMCHENKO, T. A.

Name: DEMCHENKO, T. A.

Dissertation: Complement fixation reaction with reindeer erythrocytes

Degree: Cand Med Sci

Defended at
~~Affiliation~~ Publication: State Order of Lenin Inst of Advanced Training for Physicians imeni S. M. Kirov

~~Defense~~ Date, Place: 1956, Leningrad

Source: Knizhnaya Letopis', No 51, 1956

DEMCHENKO, T.A., mladshiy nauchnyy sotrudnik

Complement fixation test with reindeer erythrocytes. Vest.derm. i ven. 31 no.2:37-41 Mr-Ap '57. (MIRA 12:12)

1. Iz eksperimental'nogo otdela Respublikanskogo nauchno-issledovatel'skogo kozhno-venerologicheskogo instituta Ministerstva zdravookhraneniya RSFSR (rukovoditel' - prof. P.G. Oganesyan).
(COMPLEMENT
fixation test with erythrocytes of polar deer)

OGANESYAN, P.G.; DEMCHENKO, T.A.

Development of antibiotic resistance in Staphylococci. Eksp. i klin. issl. po antibiot. 1:203-208 '58. (MIRA 15:5)
(ANTIBIOTICS) (STAPHYLOCOCCUS)

CHERENKOVA, Ye.P.; DEMCHENKO, T.A.

Use of aminopeptide for preparing nutrient media. Eksp. i klin. issl. po antibiot. 2:217-220 '60. (MIRA 15:5)
(PEPTIDES) (BACTERIOLOGY—CULTURES AND CULTURE MEDIA)

CHERENKOVA, Ye.P.; DEMCHENKO, T.A.

Use of bone shavings for preparing culture media. Eksp. i klin. issl. po antibiot. 2:221-224 '60. (MIRA 15:5)
(BONE) (BACTERIOLOGY--CULTURES AND CULTURE MEDIA)

DEMCHENKO, T.A., kand.med.nauk; GRUDININA, S.M.; YERMILOVA, Ye.N.

Three years work experience in a consolidated serological laboratory. Vest.derm. i ven. no.9:71-73'62. (MIRA 16:7)

1. Iz mezhrayonnoy serologicheskoy laboratorii pri kozhno-venerologicheskom dispansere no.3 Leningrada.
(LENINGRAD—SEROLOGY)

DEMCHENKOV, V.

First results. Fin. SSSR 37 no.8:68-72 Ag '63. (MIRA 16:9)

1. Zamestitel' zaveduyushchego Vladimirskim sel'skim oblastnym finansovym otdelom.
(Vladimir Province--Finance)

KALITA, N. (Kiyev); DEMCHENKO, V. (Kiyev)

Research of Ukrainian economic scholars. Vop. ekon. no.5:156-159 My '63. (MIRA 16:6)

(Ukraine—Economic research)

Operation of feeders with high-alumina glassmelt. K. S. KUTATELADZE AND V. D. DEMCHENKO. *Steklo i Keram.*, 10 [7] 11–15 (1953).—In the Soviet Union, feeders have been operating with glassmelts of SiO_2 67 to 73.3, TiO_2 0 to 0.15, Al_2O_3 0.6 to 4.0, Fe_2O_3 0.3 to 1.8, CaO 8.0 to 10.7, MgO 0.2 to 2.5, K_2O 0 to 1.4, and Na_2O 13.5 to 16.4%. In 1947, feeders were installed at one plant and operated satisfactorily with glassmelts of SiO_2 67.5 to 68.4, Al_2O_3 5.9 to 7.5, Fe_2O_3 0.08 to 1.25, CaO 9.65 to 8.65, MgO 0.2 to 0.4, and R_2O 14.9 to 15.4%. Special studies undertaken with melts of various Al_2O_3 contents have shown that Al_2O_3 can be increased to 9.5% with a certain rise in alkali content (to 17.5 to 18%). B.Z.K.

DESYATOV, V.G., arkhitektor; DEMCHENKO, V.D., arkhitektor

Buildings in a metallurgical plant serving cultural and public needs. Sbor. trud. NII po stroi. ASiA [Sverd.] no.8:43-49 '63. (MIRA 16:10)

DEMCHENKO, V.D., arkhitektor

Design features and distribution of eating areas in industrial enterprises. Sbor. trud. NII po stroi. ASiA [Sverd.] no.8: 50-63 '63. (MIRA 16:10)

SIVACHEK, N.I.; DEMCHENKO, V.F.; KRYMSKIY, I.I.; RYSHCHENKO, A.V.

Mechanizing the operation of shaft grates. Sbor.rats.predl. vnedr.v proizv. no.5:5-8 '60. (MIRA 14:8)

1. Trest "Dzerzhinskruda", rudoupravleniye "Ingulets".
(Mining machinery--Technological innovations)

L 55316-65 EWT(1)/EWG(v) Po-4/Pe-5/Pq-4/Pg-4 GW
ACCESSION NR: AT5014772 UR/2552/65/000/043/0114/0121

AUTHOR: Lukavchenko, P. I.; Demchenko, V. F.

29
B+1

TITLE: New sea-bottom gravimeter 10

SOURCE: Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut geofizicheskikh metodov razvedki. Prikladnaya geofizika, no. 43, 1965, 114-121

TOPIC TAGS: sea gravimeter, electromechanical gravimeter, elastically compensated gravimeter, gravimeter design, ultramicrometer

ABSTRACT: A new, sea-bottom, quartz gravimeter has been developed at the VNIIgeofiziki. The electrostatic device usually used to compensate for gravity variations has been replaced by an elastic-mechanical device similar to those in GAK gravimeters used on land. The elastic force of the spring is adjusted by a micrometer screw turned by a d-c electric motor. The use of this electromechanical ultramicrometer significantly simplifies the construction of the elastic quartz system of the pendulum; namely, the quartz system need not be covered by metal. The article presents the electromechanical diagrams of the elastic and remote control systems of the gravimeter, shows its external appearance, lists the parameters of two of the experimental devices, presents the temperature stability

Card 1/2

L 55376-65
ACCESSION NR: AT5014772

and null drift curves of one of them, and reports tabulated data from comparative measurements using new and old KDG gravimeters at land and underwater test sites, as well as data from field test measurements. The results show that the accuracy of sea-bottom measurements made on 9—10 hour runs is 2.5—3 times higher than that of present Soviet-made gravimeters. In addition, the new devices are more reliable, and the processing of data obtained with them is simpler. Recommendations for design changes which would further improve these gravimeters are briefly listed. Orig. art. has: 5 figures and 3 tables. [08]

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: ES

NO REF SOV: 000 OTHER: 000 ATD PRESS: 4032

Card 2/2

L 3553-66 EWT(1) GW

ACCESSION NR: AP5024438 UR/0286/65/000/015/0169/0169

AUTHORS: Demchenko, V. F.; Lukavchenko, P. I.

TITLE: Ground quartz gravimeter with remote control. Class 42, No. 152316

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 15, 1965, 169

TOPIC TAGS: gravimeter

ABSTRACT: This Author Certificate presents a ground quartz gravimeter with remote control. To widen the range and to increase the accuracy of measurements, the micrometer screw is connected through a reductor to a synchronous dc electric motor. The screw is provided at the end points of its travel with microswitches for stopping this motor. Another identical electric motor is mounted on the control panel and is connected to a counter. Control for the one-way feed of the micrometer screw is accomplished by a polarized relay and an electric lamp.

ASSOCIATION: none

SUBMITTED: 07Feb62 ENCL: 00 SUB CODE: ES

Card 1/1

L 39687-66 EWT(1) GW/GD-2

ACC NR: AP6009541 (A,N) SOURCE CODE: UR/0413/66/000/005/0075/0076

AUTHOR: Lukavchenko, P. I.; Demchenko, V. F.; Belkin, M. A.

ORG: none

TITLE: A well gravimeter[1] Class 42, No. 179486

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 5, 1966, 75-76

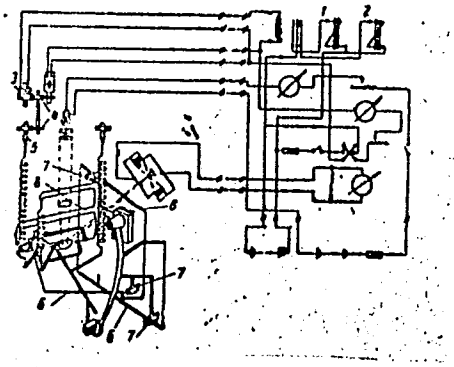
TOPIC TAGS: gravimeter, earth science instrument, electronic measurement

ABSTRACT: This Author's Certificate introduces a well gravimeter which contains a quartz elastic sensing system, a temperature compensator, an optical system and a measuring device. The accuracy of the instrument is improved and remote measurements are facilitated by electromagnetic counters in the measuring device which are connected through a sign-sensitive relay, collector and speed reducer to the micrometer screw of the measuring system. The temperature compensator is made in the form of series-connected quartz frames with levers whose axes of rotation are rigidly connected to the principal frame of the sensitive system.

UDC: 550.831

Card 1/2

L 39687-66
ACC NR: AP6009541



1 and 2--electromagnetic counters; 3--collector; 4--speed reducer; 5--micrometer screw; 6--quartz rollers; 7--axes of rotation for the levers; 8--main frame

SUB CODE: 08/ SUBM DATE: 01Mar63/ ORIG REF: 000/ OTH REF: 000

Card 2/2

DEMCHENKO, V.G.

ROGOZHIN, A.P.; DEMCHENKO, V.G.; SHIBAYEV, B.N.; KORNIYENKO, Yu.A.; SHUSTOV, V.A.; BRODOVSKIY, S.S.; KALASHNIKOV, I.V.

Increasing the control of brake relays to 540 a on type G cars of the subway. Prom. energ. 12 no.7:22 Jl '57. (MLRA 10:8)
(Electric railroads--Brakes)

DEMCHENKO, V.N.

USSR/ Agriculture

Card 1/1 Pub. 86 - 8/40

Authors : Demchenko, V. N.

Title : Utilization of desert lands

Periodical : Priroda 3, 70-73, Mar 1954

Abstract : The problems of converting the arid desert lands extending north and north-west from the foothills of the Alatau country to the shores of the Balkhash Lake, an area of about 5 million hectares, into arable land, are discussed. Examples are cited of certain small districts of the Kazakh-SSR, which were successfully transformed into fruit bearing areas. Illustrations.

Institution : Academy of Sciences Kaz-SSR, Scientific Research Institute, Iliysk

Submitted : .....

DEMCHENKO, V. N.

"The Introduction of Fruit-Berry, Decorative Wood, and Brushwood Plants on the Desert of the Southern Balkhash Region." Cand Biol Sci, Inst of Botany, Iliysk Sci Res Base, Acad Sci Kazakh SSR, Alma-Ata, 1955. (KL, No 18, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

DEMCHENKO, V.N. [deceased]

Growing berry plants in the desert of the southern Lake Balkhash Region. Trudy Inst.bot.AN Kazakh.SSR 14:93-117 '62.
(MIRA 16:4)
(Balkhash Lake region--Berries)

DEMCHENKO, V.N. [deceased]; OSPANOV, S.O.

Results of testing some trees and shrubs in the southern Balkhash region. Trudy Inst.bot.AN Kazakh.SSR 17:22-28 '63. (MIRA 17:3)

GROMASHEVSKAYA, L.L.; GETTE, Z.P.; TAT'YANKO, N.V.; DEMCHENKO, V.N.; MIRONOVA, Ye.M.

Enzymic reactions in differential diagnosis of infectious hepatitis and machanical jaundice. Vop.med.virus. no.9:329-337 '64. (MIRA 18:4)

1. Institut infektsionnykh bolezney Ministerstva zdravookhraneniya UkrSSR.

GROMASHEVSKAYA, L.L.; DEMIN, V.I.; GETTE, Z.P.; DEMCHENKO, V.N.; MIRONOVA, Ye.M.

Serum enzymes in Botkin's infectious hepatitis. Vop.med.khim. 10 no.3:246-252 My-Je '64. (MIRA 18:2)

1. Institut infektsionnykh bolezney Ministerstva zdravookhraneniya UkrSSR, Kiyev.

PROTASOV, N.F.; STEFANOV, V.Ye.; DEMCHENKO, V.P.; SHIYAN, V.A.; KRISHTAFOVICH , P.D.

Rolling SVP-17 and 27 shapes with a greater incline of the walls. Metallurg 8 no.9:31-34 S '63. (MIRA 16:10)

1. Zavod "Azovstal'."
(Rolling (Metalwork))

CHUISTOV, Vladimir Mikhaylovich, kand.ekonom.nauk; DEMCHENKO, V.P., kand.ekonom.nauk, glavnyy red.

[The seven-year plan is the decisive phase in the carrying out of the principal economic objective of the U.S.S.R.] Semyrichnyi plan - vyrishal'nyi etap v zdiisnenni osnovnoho ekonomichnoho zavdannia SRSR. Kyiv, 1959. 50 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.2, no.6) (MIRA 12:9)
(Russia--Economic policy)

DEMCHENKO, Valentin Petrovich, kand.ekonom.nauk; ZATSEPILIN, V.G., [Zatsepilin, V.H.], kand.ekonom.nauk, glavnyy red.

[Development of the socialist national economy in the Polish People's Republic] Budivnytstvo sotsialistychnoi ekonomiky v Pol's'kii Narodnii Respublitsi. Kyiv, 1959. 70 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.1, no.28) (MIRA 12:11)
(Poland--Economic conditions)

PHASE I BOOK EXPLOITATION SOV/4214

Demchenko, Valentyn Petrovych, Candidate of Economic Sciences

Budivnytstvo sotsialistychnoyi ekonomiky v Pol's'kiy Narodniy Respublitsi (Construction of a Socialist Economy in the Polish People's Republic). Kyyiv, 1959. 71 p. Errata slip inserted. 24,600 copies printed. (Series: Tovarystvo dlya poshyrennya politychnykh i naukovykh znan' Ukraynskoy RSR. Seriya 1, no. 28)

Chief Ed.: V.H. Zatsepilin, Candidate of Economic Sciences; Ed. of Editorial and Publishing Section: I.H. Merzlikin.

PURPOSE: This booklet is intended for the general reader.

COVERAGE: The booklet describes the pre-Communist national economy of Poland, the changeover to the present economic system, the development of Polish industry, and the cooperation of Poland with other people's republics. No personalities are mentioned. There are 10 references: 6 Polish and 4 Soviet.

Card 1/2

ROKITKO, Anastasiya Ivanovna, kand.ekonom.nauk; DEMCHENKO, V.P., kand. ekonom.nauk, red.

[In peaceful economic competition socialism is winning] V myrnomu ekonomichnomu zmahanni peremahaie sotsializm. Kyiv, 1960. 38 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.2, no.1) (MIRA 13:6)
(Economic conditions)

BULASH, Mikhail Alekseyevich, kand. ekonom. nauk; DEMCHENKO, V.P., kand. ekon. nauk, otv. red.; TUBOLEVA, M.V.[Tubolieva,M.V.], red.

[Decisive factor in the development of mankind; development and consolidation of the international socialist economic system] Vyrishal'nyi faktor rozvytku liudstva; rozvytok ta zmitsnennia svitovoi sotsialistychnoi sistemy hospodarstva. Kyiv, 1961. 47 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR, Ser.4, no.4) (MIRA 14:9)
(Communist countries—Economic conditions)

DEMCHENKO, V.P., kand. ekon. nauk, glav. red.; VAYNSHTEYN, Sh.I. [Vainshtein,Sh.I.], red.; LISOVETS, O.M.[Lysovets', O.M.], tekhn. red.

[Economic bases of the transition to communism of the countries of the world socialist system] Ekonomichni osnovy perekhodu krain svitovoi sotsialistychnoi systemy do komunizmu. Kyiv, vyd-vo AN URSR, 1963. 265 p. (MIRA 16:9)

1. Akademiya nauk URSR, Kiev. Instytut ekonomiky.
(Communist countries--Economic conditions)

PROTASOV, N.F.; STEFANOV, V. Ye.; SHIYAN, V.A.; DEMCHENKO, V.P.; KRISHTAFOVICH, P.D.

Rolling of a No. 16 c' annel by the gradual bending method. Metallurg 9 no.1:27-29 Ja '64 (MIRA 18:1)

1. Zavod "Azovstal'".

DEMCHENKO, V.S.

AUTHOR: DEMCHENKO, V.S., KHUDOLEY, A.Ya. 32-6-16/54

TITLE: A Method for the Utilization of the Corrosion Properties of Lubricating Oils. (O metode otsenki korrozionnykh svoystv masel, Russian)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 6, pp 693-695 (U.S.S.R.)

ABSTRACT: The method for the determination of the corrosion properties of lubricating oils by means of the apparatus constructed by PINKIEWICH requires a long time for testing and has also other disadvantages many of which have been eliminated by the DK-2NAMI apparatus, which was developed as a standard apparatus (GOST 8245-56). Tests are carried out in such a manner that a thin layer of oil is applied to the metal plate which is periodically in contact with air and acts upon the metal plate. The metal plate is alternatingly dipped in oil and brought into contact with the air by means of a slanting case. The oil to be tested is in a piston in which round metal plates are fixed several mm from the bottom and held by glass holders. When the case rotates, the plate is covered by the oil.
Results: Machine lubricating oil after a test period of 10 to 20 hours has a corrosion of 45 g/m^2.

Card 1/2

DEMCHENKO, V.S.

BRUSYANTSEV, Nikolay Vasil'yevich, CHERNOZHUKOV, N.I., doktor tekhn.nauk, retsenzent, DAVYDOV, P.I., kand.tekhn.nauk, retsenzent, GULIN, Ye.I. kand.tekhn.nauk, retsenzent, DEMCHENKO, V.S., kand.tekhn.nauk, retsenzent, SHTEPAN, M.G., kand.tekhn.nauk, retsenzent, PAPOK, K.K. doktor tekhn. nauk, red.; NAKHIMSON, V.A., red.izd-va., UVAROVA, A.F., tekhn.red.

[Motor vehicle and tractor fuels and lubricants]. Avtotraktornye topliva i smazochnye materialy. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1958 . 340 p. (MIRA 11:9)
(Motor fuels)
(Lubrication and lubricants)

28(5)

AUTHORS: Demchenko, V. S., Novikov, V. K. SOV/32-25-6-34/53

TITLE: Device for the Determination of the Ability of Corroding of Lubricating Oils With an Inconsiderable Wear of the Material to Be Tested (Pribor dlya opredeleniya korrozionnosti smazochnykh masel s nebol'shim raskhodom ispytuyemogo produkta)

PERIODICAL: Zavodskaya Laboratoriya, 1959, Vol 25, Nr 6, pp 741-742 (USSR)

ABSTRACT: 160 g of the testing substance are necessary for determining the corroding ability of lubricating oils according to Pinkevich's method (GOST 5162-49), 73 g in the case of the method NAMI (GOST 8245-56). A new device was constructed in the case of which for two parallel tests of this kind only 10 g of the substance are consumed. A standard apparatus DK-2 NAMI (GOST 8245-56) is used in a somewhat modified form. The change consists in a reduction of the size of the L-shaped pistons and lead plates (Fig). From the data mentioned it may be seen (Table) that the test results achieved by means of the standard device are in good agreement with the device for small amounts as suggested here. The data show that various

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oils were investigated and various additions used in this connection (AzNII-4, TsIATIM-339, VNII NP-360, IP-22). There are 1 figure and 1 table.

S/065/60/000/004/009/017
E071/E435

AUTHORS: Demchenko, V.S. and Novikov, V.K.

TITLE: The Influence of Resins Contained in Oils on Their Corrosive Activity

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.4, pp.40-43

TEXT: The role of resinous compounds in oils in the process of corrosion of antifriction alloys by lubricating oils was investigated. Resins were separated from oil MT16 produced from the Emba crudes by the Yaroslavskaya refinery and from sulphurous crudes produced by the Novokuybyshev refinery. The separation was done by adsorption of silica-gel and subsequent extraction with an alcohol-benzene mixture after removing the adsorbed naphthene-paraffinic and aromatic hydrocarbons with iso-octane. The main properties of the isolated resinous compounds are given in the text. Physico-chemical properties of oils before and after the removal of resinous compounds are given in Table 1; the dependence of corrosive activity and acid number of oils on the content of resinous compounds are given in Table 2. It was

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S/065/60/000/004/009/017
E071/E435

The Influence of Resins Contained in Oils on Their Corrosive Activity

found that a high corrosive activity o. oils from the Emba crudes is due to their increased content of re.inous compounds which sharply increase the process of oxidatic. of oils and their corrosive activity. Therefore, to impro.e the stability of these oils, a more complete extraction of resinous compounds is necessary. Resins separated from MT16 oils made from sulphurous oils have little influence on the corrosive activity of oils. A low corrosive activity of these oils is due to properties and a high content of aromatic hydrocarbons which on oxidation form products of phenolic nature, inhibiting the process of oxidation of oil as a whole thus decreasing its corrosive activity. In the presence of resins separated from the oil from the Emba crudes, the resistance to oxidation of aromatic hydrocarbons and the anticorrosive properties of natural sulphurous compounds in oils from sulphurous crudes sharply decrease. There are 2 tables and 3 Soviet references.

Card 2/2

DEMCHENKO, V.S.

Factors determining the economic effectiveness of using (poly) functional additives. Khim.i tekh.topl.i masel 5 no.12:41-47 D '60. (MIRA 13:12)

(Lubrication and lubricants--Additives)

MOROZOV, Georgiy Andreyevich; DEMCHENKO, V.S., kand. tekhn. nauk, retsenzent; GULIN, Ye.I., kand. tekhn. nauk, red.; YURKEVICH, M.P., red. izd-va; SPERANSKAYA, O.V., tekhn. red.

[Use of sulfurous fuels in diesel engines] Primenenie sernistykh topliv v dizeliakh. Moskva, Mashgiz, 1961. 145 p. (MIRA 14:12)
(Diesel fuels)

26523
S/065/61/000/008/008/009
E194/E135

11,9700

AUTHORS: Demchenko, V.S., Morozov, G.A., Ivanov, L.F., and Mikutenok, Yu.A.

TITLE: Assessment of the lacquer forming tendencies of lubricating oils

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1961, No.8, pp. 53-58

TEXT: The authors discuss laboratory tests for assessing the effectiveness of multi-functional additives in heavy duty diesel engine lubricants. One method that has been proposed is due to K.K. Papok; it has been described in ГОСТ (GOST) 4953-49. Later the test was modernised and issued as GOST 9352-60. A very interesting method was described by S.K. Kyuregyan in his dissertation of 1959. Kyuregyan's apparatus preserves all the positive features of the revised Papok method and makes it possible to oxidise the oil in a thin layer on sliding metal surfaces. The present article gives test results with different lubricants on both instruments (Papok and Kyuregyan). The tests were made with lubricant МТ-16 (MT-16) made from Emba crude at

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Assessment of the lacquer forming ...

the Mendeleyev refinery and grade ДС-11 (DS-11) of high sulphur crude at the Novo-Kuybyshev refinery. The tests were made with experimental additives received from the VNII NP (All-Union Scientific Research Institute of the Petroleum Industry). In the Papok instrument to GOST 9352-60 the thermal and oxidation stability is expressed as the time in minutes during which the oil is converted to a lacquer residue under the test conditions. The lacquering tendency is also measured by the amount of lacquer formed at the end of the test time. Kyuregyan's instrument is illustrated in Fig.1. The oil sample is a thin (0.1 mm) layer on a ground steel ring 7, placed on a rotating plate 6 which is heated to a given temperature, and the time required for the oil to lose its lubricating properties by evaporation and lacquer formation is measured. The test is continued until there is a sharp increase in the angle of rotation of the loading disc 9, which is supported from the test ring by three aluminium (or iron or brass) supports 8 and is connected by the shaft 10 to the damper 11 and spring 12 which prevent the disc 9 from turning during the test. The time in minutes during which, under

the test conditions, the oil loses its lubricating properties and is converted into a lacquer film is termed the lacquer formation time. The test results show that the ratio of the Kyuregyan lacquer formation time to the Papok thermal-oxidation stability is not a constant one but the order of rating of the different base oils with and without additives is the same in the two tests. In carrying out tests on the Kyuregyan instrument it was found that the curve of change of angle of rotation of the loading disc with time is different for different specimens. The form of this curve was found to depend primarily on the intensity of the accumulation of oxidation products in the oil. The significance of the shape of this curve was studied by making tests with different kinds of additives including the following and their components: thiophosphorus containing types ДФ-1 (DF-1), ИП-22 (IP-22), В-353 (V-353), В-354 (V-354) and ЗИТ-1 (ZIT-1). Alkyl-phenolic types В-350 (V-350), АзНИИ-7 (AzNII-7). Sulphonate types АзНИИ-5 (AzNII-5) and ПМС-19 (PMS-19). Some of the additives tested were mixtures of thiophosphorus containing compounds and alkyl-phenols. Thus additive В-360 (V-360) consists of the components

of V-350 and V-354. Additive В-361 (V-361) is made up of V-350 and V-353. Additive Аз-НИИ-8 (Az-NII-8) is produced by mixing sulphurised alkyl-phenolate of barium (additive АзНИИ-7 (AzNII-7) and barium sulphonate (the surface active component of additive АзНИИ-5 (AzNII-5). The additives containing thiophosphorus compounds, which are good anti-oxidants, gave slow reduction in the angle of rotation of the disc in the early part of the test. Oils with alkyl phenols and sulphonates show a marked reduction in the angle of rotation of the disc because these are not anti-oxidant additives and oxidation products are formed from the start of the test. It was found that additives containing thiophosphorus compounds are the best suppressors of lacquer formation. Particularly good results were obtained by adding to the oil an ester of thiophosphoric acid (component V-353) and zinc dithio-phosphate (component V-354). The influence of sulphonate additives and mixtures of sulphonate with alkyl phenol is much less but is greater with some feed stocks than with others. Additives and components of the alkyl phenol type (V-350 and AzNII-7) are intermediate in their ability to improve the stability

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Assessment of the lacquer forming ... S/065/61/000/008/008/009
E194/E135

of a thin layer of oil. Test results obtained on a Kyuregyan instrument were in satisfactory agreement with the results of engine tests.
There are 3 figures, 1 table and 5 Soviet references.

Card 5/6

B655G

S/081/62/000/006/094/117
B162/B101

11.9100

AUTHORS: Demchenko, V. S., Novikov, V. K.

TITLE: Effect of natural organo-sulfur compounds on the corrosive action of lubricating oils

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 545, abstract 6M290 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh. v. 4". M., Gostoptekhizdat, 1961, 194-198)

TEXT: On the ЛКМ-НАМИ(LKM-NAMI) apparatus, using L-shaped flasks of reduced volume, at 140°C and for a period of 10 hrs, the corrosive properties of the МТ-16 (MT-16) oil from sulfur petroleums were investigated before and after desulfurization. The sulfur compounds were removed from the oil by oxidation with H_2O_2 at about 20°C in a medium of CH_3COOH with subsequent removal of the oxidation products on silica gel. Desulfurization was applied both to the initial oil and to previously deresinated oil. In the first case, the sulfur content dropped by 45%, and in the second, by 80%. The corrosiveness of the previously deresinated oil rises

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approximately twice as much here as that of the non-deresinated oil. On adding to the oil the resins separated from it by silica gel, its corrosiveness drops slightly, despite the rise in its acid number. The corrosiveness of the desulfurized oils is 7-14 times lower than that of the oil MT-16 from Emba petroleum, which is attributed to the comparatively high aromatic hydrocarbon content in the desulfurized oil, which effectively slows down the oxidation of the naphthene-paraffin hydrocarbons (NPH). On adding desulfurized oils and the initial oil to the NPH separated from the sulfur oil, the corrosiveness of the latter and their acid number dropped considerably. The addition of oils from sulfur petroleum to oils from Emba and Baku petroleum effectively improves the anti-corrosive properties of the latter only when their concentration in the mixture exceeds 70%. [Abstracter's note: Complete translation.]

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S/081/62/000/006/093/117
B162/B101

11.9700

AUTHORS: Demchenko, V. S., Novikov, V. K.

TITLE: Effects of temperature and duration of test on the corrosive action of oils from sulfur petroleum

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 6, 1962, 545, abstract 6M289 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya v neftyak i nefteproduktakh. v. 4". M., Gostoptekhizdat, 1961, 199-205)

TEXT: The corrosiveness of oils was evaluated on Pinkevich's and the AK-2 (DK-2) apparatus of NAMI in the temperature range of 100-200°C from the variation in weight of plates of lead of grade C -1 (S-1). For the investigation the oils MT-16 (MT-16) and A -11 (D-11) from sulfur petroleum were used, without additives and with various multi-functional additives (for motor oils) in a concentration of 3-3.5%. At temperatures of up to 140°C and test periods (in accordance with NAMI) of 10 hrs, the oils without additives possessed low corrosiveness, but with a further rise in temperature and with an increase in the test period (up to 50 hrs)

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Effects of temperature and ...

their corrosiveness increased substantially. Therefore, when using the oils MT-16 and D-11 on boosted engines subject to high thermal stress, effectively acting anti-corrosive additives must be added to them. Most of the additives tested greatly reduced the corrosiveness of the oils only at temperatures of up to 140°C and at NAMI test periods of 20-30 hrs. A further rise in temperature or an increase in the test period (up to 50 hrs) reduced the effectiveness of the additives. The additives Циатим-339 (Tsiatim-339) and Азнии-4 (Aznii-4) had inadequate anti-corrosive properties; the additives ТМС 19Я (PMS 19Ya), Внии НП-360 (Vnii NP-360), ИП-22К (IP-22K), Внии НП-353 (Vnii NP-353), and especially the additives Азнии-7 (Aznii-7) and Азнии - Циатим-1 (Aznii-Tsiatim-1) effectively reduced the corrosiveness of the oils at temperatures of up to 200°C and at NAMI test periods of up to 50 hrs. [Abstracter's note: Complete translation.]

Card 2/2

S/152/62/000/009/001/001
B126/B101

AUTHOR: Demchenko, V. S.

TITLE: Temperature coefficient of corrosion rate and temperature of maximum oil corrosiveness

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 9, 1962, 100 - 104

TEXT: The corrosion rate of metals in lubricating oils was investigated. It was established that the temperature coefficient of the corrosion rate is lower than that of the oil oxidation. In the temperature range 100 - 160°C this coefficient is 1.2 to 1.7 for lead and 1.1 to 1.3 for cast iron and steel; these low values are due to a film of polycrystalline structure formed by the corrosion products on the metal surfaces. At high temperatures stearic or oleic acids affect the corrosive properties of oils much more than low boiling acids, as the capacity of the latter to decompose metal decreases long before their boiling point is reached. This is due to an intense volatilization of the light fractions of oxidation products at temperatures above 160 to 180°C. Thus the main reason

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Temperature coefficient of corrosion...

for the decrease of the corrosion rate of metals at the above temperatures is the reduced concentration of organic acids in the oil. The experiments were carried out with industrial oils using the Pinkevich, ГОСТ 5162-49 (GOST 5162-49), and NAMI, ГОСТ 8245-56 (GOST 8245-56), methods which after approximation gave similar results. There are 2 figures and 3 tables.

SUBMITTED: April 16, 1962

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L 9101-65 EWT(m)/SPF(c)/T/EWP(b) Pr-4 RPEPL/ASD(p)-3 JD/WB/DJ

ACCESSION NR: AT3001317 S/2933/63/005/000/0219/0224

AUTHOR: Demchenko, V. S.

TITLE: The effect of sulfur- and phosphorus-containing compounds on the anticorrosion properties of oils

SOURCE: AN SSSR. Bashkirskiy filial. Khimiya seraorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh, v. 5, 1963, 219-224

TOPIC TAGS: lubricating oil, oil additive, sulfur, phosphorus, Emba oil, sulfonate, dithiophosphate, dialkyl dithiophosphate, oil corrosiveness, corrosion prevention

ABSTRACT: Experimental data obtained by testing the anticorrosive properties of sulfur- and phosphorus-containing polyfunctional additives are tabulated, and the effect of the functional group and hydrocarbon radical of the sulfo salt on the anticorrosion activity of sulfonates (Ba, Cu, Sr, Co, Ca, Pb) is analyzed. The anticorrosive properties of calcium isocetylbenzene, isocetylnaphthalene and isocetyltetralin sulfonates are compared (1% sulfonate in the oil). Among Ba sulfonates, the best protection is offered by isooctyl-naphthalene sulfonate. An increase in the number of rings in aromatic hydrocarbons strengthens their interaction with metals; consequently, the protective film formed by them adheres more stably to the metal surface. Calcium sulfonates decrease the cor-

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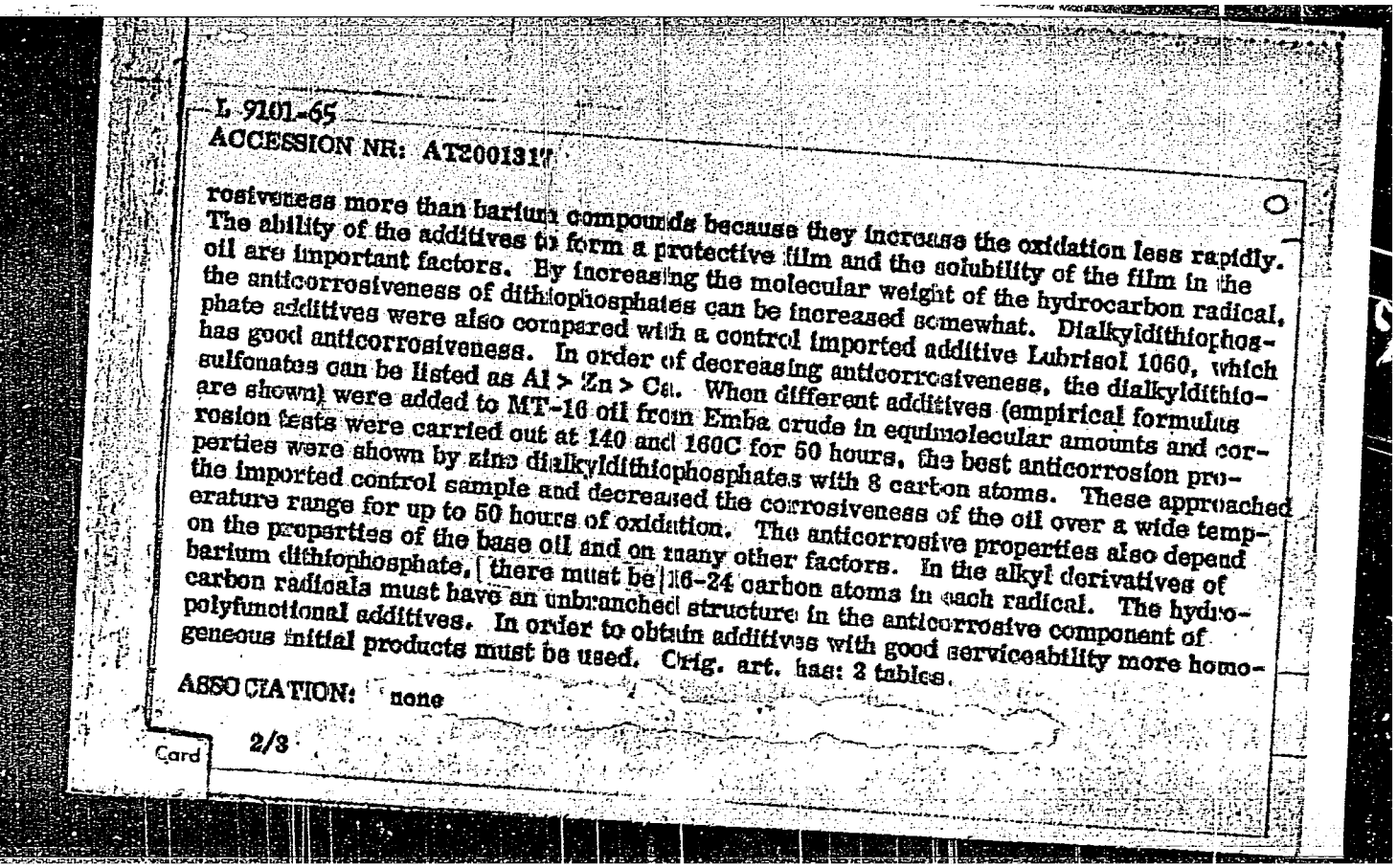
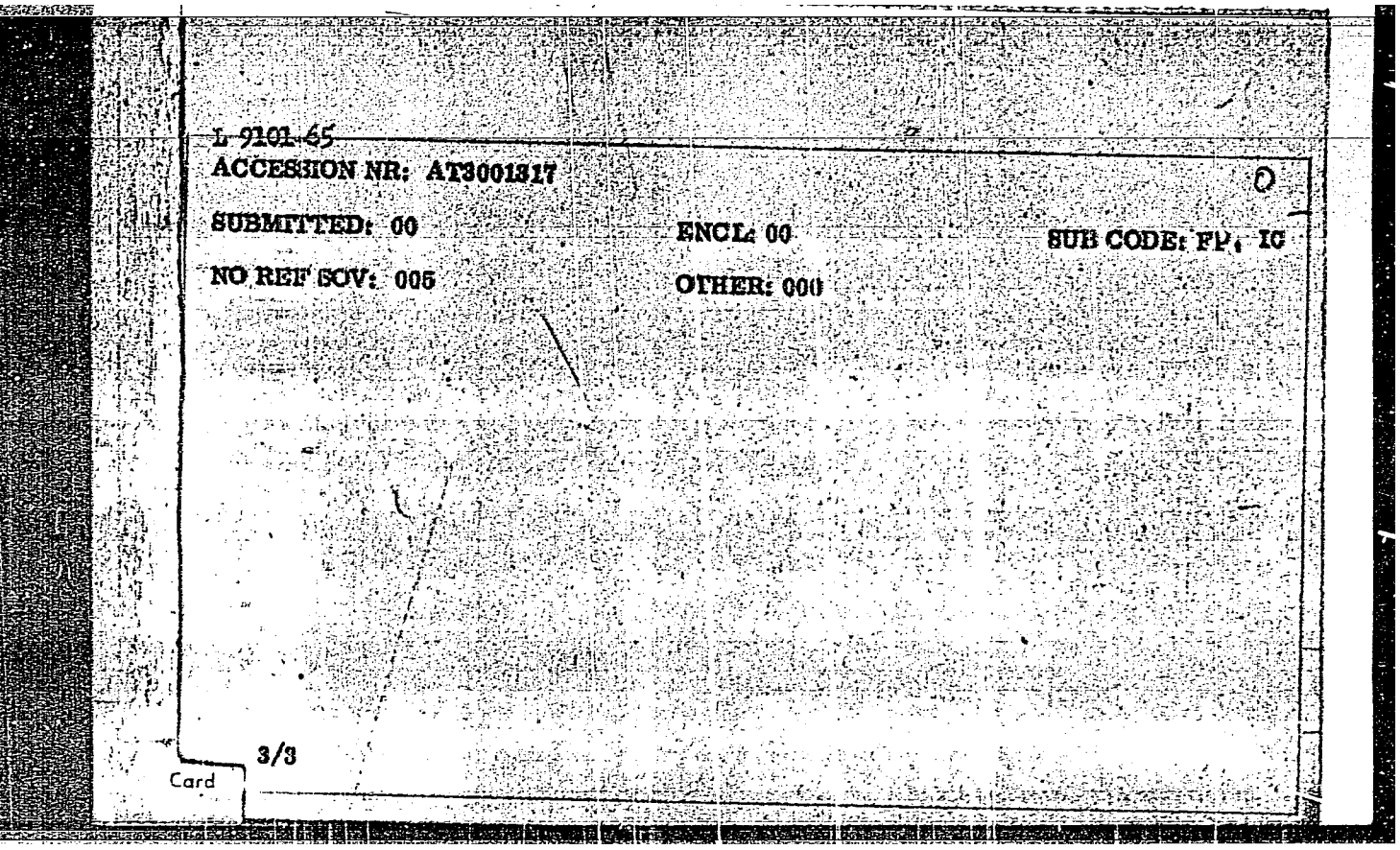


L 9101-65
ACCESSION NR: AT2001317

rosiveness more than barium compounds because they increase the oxidation less rapidly. The ability of the additives to form a protective film and the solubility of the film in the oil are important factors. By increasing the molecular weight of the hydrocarbon radical, the anticorrosiveness of dithiophosphates can be increased somewhat. Dialkyldithiophosphate additives were also compared with a control imported additive Lubrisol 1060, which has good anticorrosiveness. In order of decreasing anticorrosiveness, the dialkyldithiosulfonates can be listed as Al > Zn > Ca. When different additives (empirical formulas are shown) were added to MT-16 oil from Emba crude in equimolecular amounts and corrosion tests were carried out at 140 and 160C for 50 hours, the best anticorrosion properties were shown by zinc dialkyldithiophosphates with 8 carbon atoms. These approached the imported control sample and decreased the corrosiveness of the oil over a wide temperature range for up to 50 hours of oxidation. The anticorrosive properties also depend on the properties of the base oil and on many other factors. In the alkyl derivatives of barium dithiophosphate, [there must be] 16-24 carbon atoms in each radical. The hydrocarbon radicals must have an unbranched structure in the anticorrosive component of polyfunctional additives. In order to obtain additives with good serviceability more homogeneous initial products must be used. Orig. art. has: 2 tables.

ASSOCIATION: none

Card 2/3



L 9101-65
ACCESSION NR: AT3001317

SUBMITTED: 00 ENCL: 00 SUB CODE: FP, IC

NO REF SOV: 005 OTHER: 000

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Card

L 17507-63 EPF(c)/EWP(q)/EWT(m)/BDS AFFTC/ASD/APGC Pr-4 JD/DJ

ACCESSION NR: AP3004537 S/0065/63/000/008/0064/0069

AUTHORS: Demchenko, V. S.; Shchemelev, V. N.

TITLE: Electron diffraction analysis of films formed on lead by anticorrosion additives.

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 8, 1963, 64-69.

TOPIC TAGS: electron diffraction analysis, lead, anticorrosion additive, dimethylsulfide, DF-1 additive, DF-8 additive, TsIATIM-339 additive, VNII-additive, NP-371 additive, BFK-1 additive

ABSTRACT: The effect of anticorrosion additives, which are added to lubricating oils, depends to a great extent upon the properties and structure of the protective films formed by these additives. The films formed on the metal surface are very thin. The thickness of the film formed with diphenylsulfide on the surface of lead is only 300 angstrom. These films were analyzed by electron-diffraction method. It was found that the films formed by the studied anticorrosion additives DF-1, DF-8, TsIATIM-339 consist of a multitude of disarranged fine crystals and the films from additives VNII, NP-371, and BFK-1 consist of crystals oriented in a definite direction. Destruction of the protective film apparently takes place

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ACCESSION NR: AP3004537

2

not only by means of solvational disruption of the additive radicals with acids, but also as the result of loose property of the surface-active oxidation products of the lubricating oil which penetrate into the crystal micro-interspace resulting in the separation of the entire crystal from the film. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 27Aug63 ENCL: 00

SUB CODE: CH NO REF SOV: 011 OTHER: 002

Card 2/2

DEMCHENKO, V.S.

Effect of the structure of hydrocarbon radicals on the anticorrosion properties of sulfur- and phosphorus-containing additives. Khim.i tekh.topl.i masel 8 no.2:46-48 F '63. (MIRA 16:10)

L 53615-65 EWT(m)/EPF(c)/EWP(i)/EWA(d)/T/EWP(t)/EWP(z)/EWP(b)/EWA(c)
Pr-4 IJP(c) MJW/JD/WB/DJ

ACCESSION NR: AP5011693 UR/0065/65/000/005/0052/0055
539.27:66.022.38

AUTHOR: Demchenko, V. S.

TITLE: On the electronographic investigations and the mechanism of the destruction of films formed on metals by anticorrosion additives

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 5, 1965, 52-55

TOPIC TAGS: lubricant, lubricant additive, anticorrosion additive, anticorrosion agent, protective coating, metal corrosion, ferrous metal, nonferrous metal, antifriction alloy/ TsIARIM 339 additive, VNII NP 371 additive, BFK 1 additive, PMS additive, DF 1 additive, DF 8 additive, MNI IP 22k additive, MT 16 oil, DS 11 oil, K 17 lubricant, K 19 lubricant, NG 203A lubricant, St 3 ferrous alloy, SCh21 40 ferrous alloy, M 3 nonferrous alloy, ASM antifriction alloy, BrOTs5 5 5 antifriction alloy

ABSTRACT: Diffraction patterns of 50 different films formed on various metals due to the metal reaction with machine oils and lubricants containing anticorrosive additives were investigated in an effort to verify the statement made by T. I. Shor (Khim. i tekhnol. topliv i masel, No. 1, 1964) to the effect that the mechanism of

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formation and destruction of the protective films formed on metals was clarified entirely in his previous works. The films studied were formed by the additives: TsIARIM-339, VNII NP-371, BFD-1, PMS, DF-1, DF-8, MNI MP-22k (and others) added to the MT-16 Emba oil or DS-11 sulfurous oil and to the lubricants K-17, K-19, NG-203A, on metallic plates made of lead, ferrous metals St3 and Sch21-40, the M-3 nonferrous metal and the antifriction alloys ASM and BrOTs5-5-5. The films formed were multilayered and differed noticeably in respect to the structure of metals on which they were found. Their own composition and structure when formed by the same additive on different metals were similar, while compositions and structures produced by different additives on the same metal at 20-500 were dissimilar. Identifying the films was possible only by comparing their diffraction patterns to those of substances of known compositions. The most complete discussion of these processes was given by Yu. S. Zaslavskiy, G. I. Shor, and R. N. Shneyerova in 1) (Mekhanizm razrusheniya zashchitnykh plenok, obrazuyemykh antikorrozionnymi prisadkami. DAN SSSR, t. 128, No. 5, 1959, page 1010); 2) (Trudy III Vsesoyuznoy konferentsii po treniyu i iznosu v mashinakh. t. III, Izd. AN SSSR, 1960, page 283); 3) (Prisadki k maslam i toplivam. Sb. dokladov Gostoptekhizdat, 1961, page 168). The authors believed that the film destruction was due to the effect of organic acids removing the hydrocarbon radicals from the molecules of additives. According to the experimental results, this was only one of the possible causes. The destruction of crystalline films by

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ACCESSION NR: AP5011693

friction was also intensified by the action of surface-active products of oil oxidation penetrating into the microscopic fissures in the film and causing its plastic flow and the separation of single crystals. It is concluded that, contrary to the G. I. Shor belief, the process of protective film growth and destruction has not been entirely clarified and should be investigated further. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00 ENCL: 00 SUB CODE: MM

NO REF SOV: 009 OTHER: 000

Card 3/3

DEMCHENKO, V.S.; [illegible]

Composition of alunite-kaolinite. Zap. Vses. min. ob-va [illegible]
no.6:727-732 '65.

1. Dal'nevostochnyy geologicheskiy institut [illegible] SO AN SSSR, Vladivostok.

DEMCHENKO, V.T. (Berdichev)

Work acheivements and problems of the workers of the Berdichev No.1 Clothing Factory. Shvein.prom. no.2:9-11 Mr-Ap '61. (MIRA 14:4)

(Berdichev--Clothing industry) (Efficiency, Industrial)

DEMCHENKO, V.V.

Short summary of the primary study of grape varieties in the desert of the southern Balkhash region. Trudy Inst.bot.AN Kazakh.SSR 17: 139-145 '63. (MIRA 17:3)

DEMCHENKO, V.V., inzh.

New Tuchkov Bridge across the Malaya Neva River in Leningrad. Sbor. rab.Lengiproinzhproekta:23-29 0 '61. (MIRA 18:1)

OSTROUKHOV, I.I., gornyy inzh.; DEMCHENKO, V.V., gornyy inzh.

Using new types of equipment to develop strip mines for exploitation. Gor. zhur. no.11:22-25 N '61. (MIRA 15:2)

1. Trest Nikopol'-Marganets, g. Marganets. (Nikopol' region (Dnepropetrovsk Province)--Manganese mines and mining--Equipment and supplies)

DEMCHENKO, V.V.

Theory of hydrogen overvoltage. Zhur.fiz.khim. 36 no.5: 1037-1039 My '62. (MIRA 15:8)

1. Khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.
(Hydrogen) (Overvoltage)

DEMCHENKO, V.V.

Compressibility of metals. Zhur.fiz.khim. 36 no.10:2251-2252 O '62. (MIRA 17:4)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

DEMCHENKO, V.V.

Theory of surface tension. Part 1. Zhur. fiz. khim. 36 no.11:2524-2526 N'62. (MIRA 17:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

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[Improvement of open-pit manganese mining in the Ukrainian S.S.R.] Sovershenstvovanie otkrytykh razrabotok margantsevykh rud USSR. Kiev, Gostekhizdat USSR, 1963. 119 p. (MIRA 16:8)

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1. I Moskovskiy institut stali i splavov.

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AUTHOR: Demchenko, V. V.

ORG: Moscow Institute for Steel and Alloys (Moskovskiy institut stali i splavov)

TITLE: Relation between the work function and surface tension of a metal

SOURCE: Fizika metallov i metallovedeniye, v. 21, no. 4, 1966, 634-636

TOPIC TAGS: work function, surface tension, electron emission

ABSTRACT: A relationship between the work function φ and surface tension σ of a metal is derived

$$\varphi = 9{,}6\,\pi R^2 \sigma / Z,$$

where R is the atomic radius and Z is the number of electrons per atom. It was found that the equation is in good agreement with the experimental data of V. V. Demchenko and N. Ye. Khomutov (Trudy MKhTI im. D. I. Mendeleyeva, 1962, 39, 115). It was also found that the dependence of φ on the degree of deformation $\varepsilon = \delta V/V$

$$\Delta\varphi = \varphi - \varphi_0 = \varphi_0\left[\left(\frac{1}{1+\varepsilon}\right)^{1/3} - 1\right],$$

derived from the above equation, was also in satisfactory agreement with the results

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of L. A. Andreyev and Ya. Palige (DAN SSSR, 1963, 152, 1086). Orig. art. has: 1 table and 10 equations.

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