PINKAL', V.M.; ZRAYCHENKO, V.A.; VOROBEV, I.N.

Plastic twinning in iron silicide. Dokl. AN SSSR 160 no.2: 329-331 Ja '65. (MIRA 18:2)

1. Sibirskiy metallurgicheskiy institut im. S. Ordzhonikidze. Submitted July 16, 1964.

FINKEL', V.M.; ZRAYCHENKO, V.A.; MASLOVSKAYA, Z.A.; BYKOV, S.B.

Mechanism of crack growth in steel. Fiz. met. i metalloved. 13 no.2:263-267 F '62. (MIRA 15:3)

1. Sibirskiy metallurgicheskiy institut.
(Steel--Metallography)
(Deformations (Mechanics))

FINKEL', V.M.; KUTKIN, I.A.; SAVEL'YEV, A.M.; ZRAYCHENKO, V.A.; ZUYEV, L.B.; KOSITSINA, V.K.

Kinetics of the propagation of cracks in bismuth single crystals. Kristalografiia 8 no.5:752-757 S-O '63. (MIRA 16:10)

1. Sibirskiy metallurgicheskiy institut im. S.Ordzhonikidze.

FINKEL', V.M.; ZRAYCHENKO, V.A.; DEYASHKINA, T.K.

Investigating crack growth in transformer and certain carbon steels. Fiz. met. i metalloved. 16 no.3:448-456 S '63. (MIRA 16:11)

1. Sibirskiy metallurgicheskiy institut imeni S.Ordzhonikidze.

CZECHOSLOVAKIA/Human and Animal Morphology - Normal and Pathological. Circulatory System. S

Abs Jour : Ref Zhur Biol., No 11, 1958, 50283

Author : Zrazavy, J.
Inst :
Title : Variations of r. perforans of the Fibular Artery and Their Importance for Collateral Blood Supply

Orig Pub : Ceskosl. morfol., 1957, 5, No 2, 73-79

Abstract : In 22 specimens, four types of distribution and ramification of r. perforans a. fibularis were found. In 19 percent of cases, r. perforans was absent. Considerable attention was devoted to the correlation of r. perforans and a. dorsalis pedis. The problem of the formation of a. malleolaris fibul. ant. was examined. The great clinical significance of different variants of the distribution of r. perforans a. fibularis was noted.

Card 1/1

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

RUDNEV, D.F.; AVRAMENKO, I.D.; ZRAZHEVSKAYA O.M.

Using DDT oil solutions for combating pests in the Kiev greenbelt. Nauch.trudy Inst.ent.i fit. 6:80-88 '55. (MLRA 9:7)
(Kiev--DDT (Insecticide)) (Kiev--Trees--Diseases and pests)

USSR / General and Specialized Zoology. Insects. P

Abs Jour: Ref Zhur-Biol., No 2, 1958, 6869.

Author : Zrazhevskaya, O. N., Kamyanov, L. A., Mochalov, S.P.
Inst : Not given.
Title : From the Practice of Using the DDT Technical Solution in Diesel Fuel Against Forest Pests.

Orig Pub: Lesn. kh-vo, 1956, No 10, 74-76.

Abstract: Plantings were sprayed with a 5% DDT solution in diesel fuel from a plane during the emergence of the pine silkworm in 1954 (40 and 20 litres per hectare). The larvae mortality was high (92%), in spite of the fact that during the spraying the meteorological conditions were unfavorable. The seat of the oak leaf-roller was sprayed with a 5% and 10% oil solution (20 litres per hectare); 99.3% and 99.5% of the larvae correspondingly perished. As a result of aerial treatment in favorable

Card 1/3

Abs Jour: Ref Zhur-Biol., No 10, 1958, 42887.

Author : Zrazhevskiy, A. I.
Inst : Not given.
Title : Interrelationship Between Woody and Bushy Varieties as Influenced by Soil Invertebrates.

Orig Pub: Pratsi In-tu lisivnitstva, AN URSR, 1955, 6, 70-83.

Abstract: Results of studies in direct effects of rain worms (Lumbricus rubellus, A. caliginosa and O. complanatum) on growth of oak seedlings, sharp-leafed clover and green ash in relation to the composition of the leaf debris, which serves as nutrient for these animals. The experiments were conducted in 1950-1952 in the vegetative booth of the Forestry Institute, Academy of Sciences, UkrSSR. The stimulatory effect of rain worms on growth of seedlings

of cases.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ZRAZHEVSKIY, A.I.

15

Determining the loosely bound humic substances in chernozem and podzolized soils. P. A. Vlasyuk and A. I. Zrazhevskii. *Pedology* (U. S. S. R.) 1941, No. 1, 67-69.—A description of the Tyulin method of differentiating the loosely bound humic substances of 3 chernozem and 2 podzolized soils. In the chernozem this type of humic substance varies from 0.4 to 21.6% of the total org. matter and in 2 podzolized soils from 11.5 to 9.7%. J. S. Joffe

POKHITON, Pavel Petrovich; ZRAZHEVSKIY, A.I. [Zrazhevs'kyi, A.I.], doktor biolog.nauk, otv.red.; KOVAL', V.A., red.izd-va; MAZVIYCHUK, O.O., tekhn.red.

[Arboraceous vegetation of the left-bank area of Polesye and its influence on soils] Derevna roslynnist' pravoberezhnoho Polissia ta ii vplyv na hrunty. Kyiv, Vyd-vo Akad.nauk URSR, 1959. 85 p. (MIRA 13:2)

(Polesye--Forest soils)

ZRAZHEVSKIY, A. I., doktor biolog. nauk

Potato midge, vector of rot infection in vegetable storages. Zashch. rast. ot vred. i bol. 5 no.10:27 O '60. (MIRA 16:1)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy, g. Kiyev.

(Potato rot)
(Insects as carriers of plant diseases)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

Dissertations. Branch of Biological Sciences, July-December 1957 (Vest. Ak. Nauk SSSR No 4, 1958 pp 119-20) 30-58-4-34/44

b) for the degree of a Candidate of Biological Sciences:
O. N. Vasil'yeva - Correlations Between Unconditioned and Conditioned Motion Reflexes and Defence Reflexes in Overlapping (Vzaimootnosheniye mezhdu bezuslovnymi i uslovnymi dvigatel'nymi oboronitel'nymi refleksami pri perekrytii).

c) for the degree of a Candidate of Medical Sciences:
Ye. D. Markova - Peculiarities of the Injury of the Neurodynamics in an Amnesic Aphasia (Osobennosti narusheniya neyrodinamiki pri amnesticheskoy afazii).

5) At the Institute for Forestry (Institut lesa) the following dissertations were defended:

a) for the degree of a Doctor of Biological Sciences:
A. I. Zrazhevskiy - Earth Worms as a Fertility Factor of Forest Soils. (Dozhdevyye chervi kak faktor plodorodiya lesnykh pochv).

b) for the degree of a Doctor of Agricultural Sciences:
V. V. Popov - Scientific Principles of Growing Broad-

Card #5

ZRAZHEVSKIY, A.I., kand. biol. nauk.

Earthworms and interaction of trees and shrubs. Priroda 47 no.3: 96-98 Mr '58. (MIRA 11:3)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy, Kiyev.

(Earthworms) (Forest soils)

ZRAZHEVSKIY, A.I.

Potato midge Pnyxia scabei Hopk. in the Ukraine. Vop. ekol. 7: 65 '62. (MIRA 16:5)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy, Kiyev.

(Ukraine--Potatoes--Diseases and pests)
(Ukraine--Fungus gnats)

ZRAZHEVSKIY, A.I.

Distribution and soil-forming activity of earthworms in mountain-forest soils of the Carpathians. Nauk. zap. UzhGU 40:285-291 '59.
(MIRA 14:4)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy.
(Carpathian Mountains--Earthworms) (Forest soils)

SOV-26-58-3-25/51

AUTHOR: Zrazhevskiy, A.I., Candidate of Biological Sciences

TITLE: Earthworms and their Relations to Tree and Shrub Vegetation (Dozhdevyye chervi i vzaimosvyazi drevesnykh i kustarnikovykh porod)

PERIODICAL: Priroda, 1958, Nr 3, pp 96-98 (USSR)

ABSTRACT: The former Institut lesa AN USSR (Forest Institute of the AS UkrSSR) investigated the influence of earthworms on trees and shrubs. It was found out that earthworms influence the growth and development of seedlings.
There is 1 photograph.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy-Kiyev (Ukrainian Scientific Plant Protection Research Institute-Kiyev)

1. Plants--Growth 2. Plants--Development 3. Plants--Ecology
4. Animals--Ecology

Card 1/1

ZRAZHEVSKIY, A. I., Doc Biol Sci -- (diss) "Rain-worms as a Factor of Fertility of Forest Soils." Mos, 1956. 29 pp with diagrams (Acad Sci USSR, Inst of Forestry), 100 copies (KL, 47-57, 86)

POKHITON, Pavel Petrovich; ZRAZHEVSKIY, A.I. [Zrazhevs'kyi, A.I.], doktor biolog.nauk, otv.red.; KOVAL', V.A., red.izd-va; MATVIYCHUK, O.O., tekhn.red.

[Arboraceous vegetation and its influence on soils in the right-bank regions of Polesye] Derevna roslynnist' pravoberezhnoho Polissia ta ii vplyv na hrunty. Kyiv, Vyd-vo Akad.nauk URSR, 1959. 35 p. (MIRA 12:8)
(Polesye--Forest soils)

ZRAZHEVSKIY, A. V.

30(1)
AUTHOR: Arnol'di, K. V., Doctor of Biological Sciences

SOV/30-59-2-46/60

TITLE: Problems of Soil Zoology (Problemy pochvennoy zoologii)

PERIODICAL: Vestnik Akademii nauk SSSR, 1959, Nr 2, pp 104-105 (USSR)

ABSTRACT: The 1st All-Union Conference on these problems took place in Moscow from November 25 to 29, 1958. It was attended by representatives of the Ukrainskaya SSR, the Baltic and Central Asiatic Republics, especially from Uzbekistan, altogether 115 persons. From the many lectures which were heard the author briefly mentions the following:
M. S. Gilyarov spoke of basic researoh problems of the zoology of invertebrates and the tasks of soil zoology.
A. I. Zrazhevskiy, V. K. Eglitis, S. I. Ponomareva and V. F. Nikolyuk reported on problems of soil productivity in connection with the activity of invertebrates and their soil-forming rôle.
I. I. Malevich reported on the investigation of earth worms.
M. M. Aleynikov, Kazanskiy filial Akademii nauk SSSR (Kazan' Branch of the Academy of Sciences, USSR) reported on the

Card 1/2

soil fauna of the Tatarskaya ASSR.
V. K. Baluyev (Ivanovo) characterized the soil fauna of arable soils.
V. I. Grimal'skiy (Kiyev) reported on the soil-forming rôle played by ants in forests.
P. V. Matekin (Moscow) reported on the variability of the molluscs inhabiting the soil in connection with different conditions of life.
Yu. B. Bysova, N. P. Krivosheina, G. F. Kurcheva, B. M. Mamayev, L. M. Semenova, I. V. Stebayev, Laboratoriya pochvennoy zoologii Instituta morfologii zhivotnykh im. A. N. Severtsova Akademii nauk SSSR (Laboratory of Soil Zoology of the Institute of Animal Morphology imeni A. N. Severtsov of the AS USSR) delivered 8 reports, which were followed by reports of young zoologists from Moscow under the scientific supervision of M. S. Gilyarov. On this conference the existence of soil zoology as an independent and important subject was demonstrated and the necessity of its integration into the number of problems coordinated by the AS USSR was emphasized. The next conference on soil zoology will probably be held in Kiyev in 1961.

ZHUKOVSKIY, A.I.

GILYAROV, M.S., doktor biologicheskikh nauk, professor, otvetstvennyy redaktor; GRUDZINSKAYA, O.S., redaktor izdatel'stva; ZHUKOVSKIY, A.D., tekhnicheskiy redaktor

[Earthworms as a factor of the fertility of forest soils] Dozhdevye chervi kak faktor plodorodiia lesnykh pochv. Kiev, Izd-vo Akad.nauk USSR, 1957. 268 p. (MLRA 10:10)

(Earthworms) (Soil fertility) (Forest soils)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ZHAZHEVSKII, V.

Agriculture

Agro-technical measures of combatting the ordinary snout beetle of beets. Kiev, An USSR, 1951.

Monthly List of Russian Accessions, Library of Congress, November, 1952. UNCLASSIFIED.

ZHAZHEVSKIY, A.I., doktor biolog.nauk

Effect of row crop rotation on soil inhabiting pests. Zashch. rast.ot vred.i bol. 7 no.4:31-32 Ap '62. (MIRA 15:12)

1. Ukrainskiy institut zashchity rasteniy.
(Polesye—Field crops—Diseases and pests) (Soil fauna)

ZRAZHEVSKIY, A.I. [Zrazhevs'kyi, A.I.]

Determining the causes of mass propagation of the sugar beet wireworm. Dop. AN URSR no.10:1385-1388 '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut zashchity rasteniy. Predstavleno akademikom AN USSR A.P.Markevichem.
(Sugar beet wireworm)

ZRAZHEVSKIY, A.L. [Zrazhevs'kyi, A.L.], doktor biol.nauk

Stem nematoda of potatoes. Nauka i zhyttia 9 no.8:36 S '59. (MIRA 13:1)
(Nematoda) (Potatoes--Diseases and pests)

KOTLYARENKO, N.F.; ZRAZHEVSKIY, G.N.

A great methodological and scientific work. Avtom., telem. i sviaz' 8 no.8:47-48 Ag '64. (MIRA 17:10)

1. Zaveduyushchiy kafedroy "Avtomatiki i telemekhaniki" Khar'kovskogo instituta inzhenerov zheleznodorozhnogo transporta im. S.M. Kirova (for Kotlyarenko). 2. Zaveduyushchiy kafedroy "Transportnaya svyaz'" Khar'kovskogo instituta inzhenerov zheleznodorozhnogo transporta im. S.M. Kirova (for Zrazhevskiy).

ZRAZHEVSKIY, G.N., kand.tekhn.nauk; MINKINA, TS.I., kand.biol.nauk; BUTUZKINA, T.G.; PETRUSHENKO, N.G., inzh.; BOGOMOLOV, P.V., inzh.; POLYAKOV, V.F., inzh.; RYSIN, V.I., inzh.

Exchange of experience among the enterprises of economic councils. Torf. prom. 38 no.8:30-34 '61. (MIRA 14:12)

1. Belorusskiy institut inzhenerov zheleznodorozhnogo transporta (for Zrazhevskiy). 2. TSentral'naya torfo-bolotnaya opytnaya stantsiya (for Butuzkina). 3. Torfopredpriyatiye Tesovo 1, Lengostorf (for Petrushenko, Bogomolov). 4. Sverdlovskaya fabrika izoplit (for Polyakov). 5. Torfopredpriyatiye Radovitskiy mokh Mosoblsovnarkhoza (for Rysin).

(Peat machinery)

ZRAZHEVSKIY, G.N., kand.tekhn.nauk; RYBALKO, G.Ye., inzh.

Two-way parallel-type amplifier for selector communication circuits. Avtom., telem. i sviaz' 9 no.4:14-16 Ap '65.

(MIRA 18:5)

SOV/112-58-1-70

Translation from: Referativnyy zhurnal, Elektrotekhnika, 1958, Nr 1, pp 6-7 (USSR)

AUTHOR: Zrazhevskiy, G. N.

TITLE: Parameters of a Wire Placed Between Two Parallel Planes (Parametry provoda, raspolozhennogo mezhdu dvumya parallel'nymi ploskostyami)

PERIODICAL: Tr. Belorussk. in-ta inzh. zh.-d. transp., 1957, Nr 1, pp 68-82

ABSTRACT: The problem is investigated in connection with an inductive system of direct telephone communication between a subway dispatcher and train crew, during both the run and the stop periods of the train. An antenna is placed longitudinally on the coach roof, while the guiding conductor is laid along the wall of the tunnel. The effect of the tunnel tube lining and the coach enclosure on the electromagnetic fields of the guiding conductor and antenna is replaced by an effect of two parallel conducting planes. First, the electromagnetic field of an infinitely long round conductor in an unlimited dielectric medium is examined. Solution of differential equations is selected in the form of the Hankel function. In the conductor field problem, the parallel planes are assumed to be perfectly

Card 1/2

Parameters of a Wire Placed Between Two Parallel Planes

conducting. Therefore, the effect of the planes can be replaced by an infinite system of alternating specular images. Approximate design formulas are deduced for field components, for characteristic impedance of the system, running inductance, running capacitance, and running resistance. Bibliography: 5 items.

V.A.G.

AVAILABLE: Library of Congress

1. Communications systems--Design 2. Electromagnetic fields--Analysis
3. Electrical conductors--Properties 4. Mathematics

AUTHORS: Gnusin, N. P., Zrazhevskiy, G. N. 76-32-5-6/47

TITLE: Primary Current Determination in a Slit Bath (Pervichnoye raspredeleniye toka v shchelevoy vanne)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 5, pp. 1003-1007 (USSR)

ABSTRACT: In many cases the primary current is determined directly by experiments, while the present paper gives a possibility of theoretical determination for the case mentioned in the title. The mentioned cell consists of a rectangular vessel in which one wall serves as cathode and the anode is a slit between two opposite fins. The authors start from the assumption of an infinitely long linear electrode located between two parallel infinite flat electrodes. In the deduction of the mathematical equations the method of reflected image representation is used and it is assumed that the currents flowing from each linear electrode are equal as regards their sign and quantity. Graphical representations of the current distribution in the cell in dependence on the dimensional ratio are given as well as the function of the maximum current density D_{max} on the minimum

Card 1/2

Primary Current Determination in a Slit Bath

76-32-5-6/47

current density D_{min}. The equation $T = \frac{1}{4} e^{\pi l/2h}$ deduced from the expression for the unequal current distribution on the electrode $T = \frac{D_{max}}{D_{min}}$ is given as calculation formula for the cells with a length to width ratio < 0.5.

There are 3 figures and 3 references, 1 of which is Soviet.

ASSOCIATION: Belorusskiy institut inzhenerov zheleznodorozhnogo transporta Gomel' (Belorussian Institute for Railroad Transportation Engineers, Gomel')

SUBMITTED: October 25, 1956

1. Electrolytic cells--Circuits 2. Electric currents--Determination 3. Mathematics applications

Card 2/2

ZRAZHEVSKIY, G.N., kand. tekhn.nauk (g.Gomel'); POTAPENKO, V.D., inzh. (g.Gomel')

Transiterized rail flaw detector. Put'i put.khoz. 5 no.5:34-35 My '61. (MIRA 14:6)

(Railroads--Rails--Defects) (Transistors)

32 (3)

SOV/112-57-5-10939

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, pp 196-197 (USSR)

AUTHOR: Zrazhevskiy, G. N.

TITLE: Parameters of a Guiding Wire in an Inductive Train Communication System in Subways (Parametry napravlyayushchego provoda v induktivnoy sisteme poyezdnoy svyazi v metropolitene)

PERIODICAL: Sb. Leningr. in-ta inzh. zh.-d. transp., 1956, Nr 151, pp 101-114

ABSTRACT: In an inductive train communication system, high-frequency energy is propagated along a guiding wire connected to the depot transmitter-receiver station. Methods of determining the primary and secondary parameters of the guide wire are considered, with the guide wire placed in a subway tubing tunnel. The following simplifying assumptions are made: (1) tunnel walls are smooth and made from a homogeneous material; (2) the carrier-frequency potential of the track rails, the third contact rail, cables, and other conducting structures

Card 1/3

Parameters of a Guiding Wire in an Inductive Train Communication System . . .

is assumed to be equal to the potential of the tunnel walls; (3) the guide wire and the tunnel are assumed to be uniform and of infinite length. With such assumptions, the solution of the above problem is reduced to determining the parameters of an infinite round cylindrical cavity with semiconducting walls. The primary and secondary parameters of the wire circuit are determined from the law of distribution of an electromagnetic field in the wires and in the ambient electrical and semiconducting media by means of the successive approximations method. In the first approximation, the field in the dielectric between the conductors is calculated, assuming perfect conductance. It is also assumed that the current flows over the surface of the conductors and does not penetrate into them. With the second assumption (approximation?), the values obtained for the field in the first approximation remain as if the conductors had a finite but good conductivity. (Translator's note: Not clear in the Russian original.) Knowing the parameters of the conductor materials, the longitudinal

PANFILOV, K.K.; KOTLYARENKO, N.F.; ZRAZHEVSKIY, G.N.

First electrical engineers graduated by the S.M. Kirov Railroad Engineering Institute in Kharkov. Avtom., telem. i sviaz' 8 no.4:17-18 Ap '64. (MIRA 18:2)

1. Dekan fakul'teta avtomatiki, telemekhaniki i svyazi Khar'kovskogo instituta inzhenerov zheleznodorozhnogo transporta im. S.M. Kirova (for Panfilov). 2. Zaveduyushchiy kafedroy "Avtomatika i telemekhanika" Khar'kovskogo instituta inzhenerov zheleznodorozhnogo transporta im. S.M. Kirova (for Kotlyarenko). 3. Zaveduyushchiy kafedroy "Transportnaya svyaz'" Khar'kovskogo instituta inzhenerov zheleznodorozhnogo transporta im. S.M. Kirova (for Zrazhevskiy).

ZRAZHEVSKIY, M.N. [Zrazheva'kyi, M.N.]; KHOLODOVA, Yu.D.

Use of water-soluble ion exchange substances to increase soil fertility. Khim.prom. [Ukr.] no.1:34-36 Ja-Mr '64. (MIRA 17:3)

ZRAZHEVSKIY, P.D.; MITIN, I.I.

Automatic temperature control in electric heating [illegible].
met. i obog. AN Kazakh. SSR 8:171-173 '63 (MIRA 17:8)

L 57874-65 EWT(d)/FSS-2/EEC-4/EEC(t) Pn-4/Pp-4/Pac-4

ACCESSION NR: AP5016723 UR/0286/65/000/010/0041/0041
621.315.052.7

AUTHOR: Berkman, N. A.; Gontar', V. M.; Gurov, V. S.; Darova, P. I.; Yetrukhin, N. N.; Zolotarev, Ya. M.; Zrazhevskiy, S. P.; Kopp, V. M.; Pasechnik, N. D.; Ponomarenko, V. A.; Pugach, A. B.; Raykin, P. S.; Sergeyev, I. V.

TITLE: System for measuring the duration and number of interruptions in a communication channel. Class 21, No. 171023

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 10, 1965, 41

TOPIC TAGS: noise measurement, frequency meter, communication channel, pulse meter

ABSTRACT: The proposed measuring device converts the spectrum of the investigated pilot (measuring) frequency to a region of higher frequencies and uses a filter to separate the side band containing information on the signal envelope. Provision is made for simultaneous analysis of pulse noise and decline in the level of the pilot frequency with respect to voltage and duration. Information on interruption time is transmitted in the form of quantized pulse packets to a measuring circuit consisting of flip-flops, AND gates, and registers. Orig. art. has: 1 figure. [DW]

Card 1/2

L 57874-65
ACCESSION NR: AP5016723

ASSOCIATION: Kiyevskoye otdeleniye Tsentral'nogo nauchno-issledovatel'skogo instituta svyazi Ministerstva svyazi SSSR (Kiev Department of the Central Scientific Research Institute of Communications of the Ministry of Communications, SSSR)

SUBMITTED: 10Nov63	ENCL: 00	SUB CODE: EC
NO REF SOV: 000	OTHER: 000	ATD PRESS: 4038

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ACCESSION NR: AP4041865 S/0125/64/000/007/0091/0092

AUTHOR: Zrazhevskiy, V. A. (Engineer)

TITLE: Experimental generation of electron beams by a hollow cold cathode

SOURCE: Avtomaticheskaya svarka, no. 7, 1964, 91-92

TOPIC TAGS: welding, electron beam welding, electron gun, electron gun cathode, gas discharge cathode, hollow cathode, cold cathode

ABSTRACT: A hollow cylindrical cathode for an electron gun has been developed. Experiments showed that discharge occurs in both inert gas and in air. The working pressure range depends, however, upon the gas composition and is wider in air than in inert gas. The purity of cathode material has no substantial effect on discharge because of rapid self-cleaning at the beginning of operation. A magnetic focusing system concentrated the beam to about 1 mm-diameter in the welding plane. Beam power of 1 kilowatt was obtained at a discharge voltage of 8—9 kv. Orig. art. has: 1 figure.

Card 1/2

ACCESSION NR: AP4041865

ASSOCIATION: none

SUBMITTED: 00	ATD PRESS: 3072	ENCL: 00
SUB CODE: MM	NO REF SOV: 000	OTHER: 000

Card 2/2

GRIN'KO, F.M., Geroy Sotsialisticheskogo Truda; ZRAZHEVSKIY, V.P., nauchnyy sotrudnik

"Rodina" Collective Farm in the Altai Territory is striving for higher standards of agriculture. Zemledelie 8 no.6:17-19 Je'60. (MIRA 13:10)

1. Predsedatel' kolkhoza Altaya (for Grin'ko). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut agrolesomelioratsii. (Shipunovo District--Agriculture)

ZRAZHEVS'KYY, A.I.

Effect of earthworms (Lumbricidae) on the germinability of seeds. Bot. zhur.[Ukr.] 10 no.2:66-72 '53. (MLRA 6:6)

1. Instytut lisivnytstva AN URSR. Laboratoriya gruntoznavstva.
(Earthworms) (Germination)

ZRAZHEVSKIY, G.N., kand.tekhn.nauk dots.

Attenuation along the conductor of two-wire symmetrical line.
Izv.vys.ucheb.zav.; energ. 2 no.8:29-32 Ag '59.
(MIRA 13:2)

1. Belorusskiy institut inzhenerov zheleznodorozhnogo transporta.
Predstavleno kafedroy elektrotekhniki.
(Electric lines)

ZRAZHEVSKIY, G.N., kandidat tekhnicheskikh nauk.

Parameters for guide wires in an inductive system of train communication for the subway. Sbor.LIIZHT no.151:101-114 '56.
(MLRA 10:1)

(Electric railroads--Communication systems)

ZRAZHEVSKIY, G.N., kandidat tekhnicheskikh nauk.

Parameters for communication wires placed between two parallel planes. Trudy BIIZHT no.1:68-82 '57. (MIRA 10:9)
(Railroads--Communication systems)

COUNTRY : [illegible]
CATEGORY : Forestry. Forest Management. K

ABS. JOUR. : RZhBiol., No. 14 1958, No. 63217

AUTHOR : Zrazhevskiy, M. M.
INST. : --
TITLE : The Influence of Older Undergrowth on the Productivity of Forest Stands (in the Ukraine)

ORIG. PUB. : Byul. sil's'ko-gospod. inform. Zhitom. obl. vid. t-va dlya poshir. polit. ta nauk. znan', 1957, No. 4, 126-8
ABSTRACT : No abstract

Card: 1/1

"The Reaction of Glandular Epithelium to Denervation." Sub 25 Jun 51, Second Moscow State Medical Inst imeni I. V. Stalin.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

ZRELOV, F.

VUL'FERT, A., inzhener-polkovnik; ZRELOV, F., polkovnik.

Visual aids in training. Voen.-inzh. zhur. 101 no.11:8-12 N '57.
(Military education) (MLRA 10:11)

ZRELOV, M.

Teaching by stages. Prof. tekh. obr. 21 no.11:29 N '64
(MIRA 18:2)

1. Zamestitel' sekretarya partkoma Nevskogo mashinostroitel'nogo zavoda im. V.I. Lenina.

ZRELOV, N.P., kandidat tekhnicheskikh nauk, starshiy nauchnyy sotrudnik.

Laboratory investigation of a periodic operation sedimentation basin. Trudy gidrav.lab.VODGEO no.3:62-86 '52. (MLRA 9:10)
(Dams)

ZHELOV, N.P., kandidat tekhnicheskikh nauk, starshiy nauchnyy sotrudnik.

Designing a microvane device for measuring water flow at slow speeds.
Trudy gidrav.lab.VODGEO no.3:104-112 '52. (MIRA 9:10)
(Flow meters)

BLIZNYAK, Ye.V., otv.red. [deceased]; ROSSINSKIY, K.I., otv.red.; ANDREYEV, O.V., red.; VENDROV, S.L., red.; ZHELOV, N.P., red.; POPOVA, K.L., red.; RZHANITSYN, N.A., red.; FIDMAN, B.A., red.; YAROSLAVTSEV, I.A., red.; VIKULOVA, L.I., red.; VASIL'YEV, Yu.F., red.izd-va; MAKUNI, Ye.V., tekhn.red.

[New methods and equipment for studying stream-channel processes] Novye metody i apparatura dlia issledovanii ruslovykh protsessov. Moskva, 1959. 220 p. (MIRA 12:8)

1. Akademiya nauk SSSR. Sovet po problemam vodnogo khozyaystva. 2. Sovet po problemam vodnogo khozyaystva Akademii nauk SSSR (for Bliznyak). 3. Giprorechtrans Ministerstva rechnogo flota RSFSR (for Vendrov). 4. Vsesoyuznyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Yaroslavtsev).
(Hydrology--Research)

ZHELOV, N.P., kandidat tekhnicheskikh nauk, starshiy nauchnyy sotrudnik.

Generalized formula for the speed of particle sedimentation in a non-moving liquid. Trudy gidrav.lab.VODGEO no.4:119-163 '55.
(Hydraulics) (Sedimentation and deposition) (MLRA 9:10)

ZRELOV, M.P., kand.tekhn.nauk

Circulatory currents and sediment deposition in canals of rectangular cross section. Trudy Gidrav.lab.VODGEO no.7:221-262 '59. (MIRA 13:8)

(Hydraulics)

ZRELOV, N.P., kand.tekhn.nauk

Ejection apparatus for atomizing and mixing liquids and gases.
Trudy Gidrav.lab.VODGEO no.7:263-269 '59. (MIRA 13:8)
(Atomization)

Verbatim: Zrelov, N. P. - "Photometric method of determining the three coordinates and the velocities of the particles moving with the flow," Trudy Gidravl. laboratorii (Vesesoyuz. nauch.-issled. in-t vodosnabzheniya, kanalizatsii, gidrotekhn. sooruzheniy i inzh. gidrogeologii), Collection 2, 1948, p. 176-94

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ZRELIV, N.P.

10(4) SOV/98-59-7-21/22

AUTHOR: Rozinoer, S.T., Chairman

TITLE: Conference on Scientific Research in the Field of Hydromechanics

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 7, pp 62-65 (USSR)

V.V. Dlougiy, Candidate of Technical Sciences (VNIIGS) and Engineer M.I. Khrustalev Ferro-Concrete (VNII): "The Hydraulic Fractionation of Natural Sand in the Preparation of Concrete." At the session on equipment the following papers were read: Engineer B.M. Shkundin (Gidroproyekt): "Special-purpose Earth Detonators"; Engineer, V.A. Korox (Planning and Design Office of the Hydromechanization Trust of the Ministry of the RSFSR): "New Designs of Bucket-Rotor Types of Disintegration Equipment"; L.D. Borisenko, Candidate of Technical Sciences (IGD of the Academy of Sciences of the USSR), Engineer E. I. Kazakov (The Lead-Mining Trust), and N.Ye. Zhurzha, Candidate of Technical Sciences (DONUGI): "The Design of Feeders for the Loading of Heavy Materials into Pressurized Water Conduits"; The session on transport contained papers read by the following: I.V. Yegiazarov, member of the Academy of Sciences of the Armenian SSR: "The Movement of Alluvia and Related Problems"; Prof. M.A. Dementyev, Doctor of Technical Sciences (VNIIG imeni B.Ye.Vedeneyev), A.K. Ananyan, and B.G. Sanoyan, Candidate of Technical Sciences (the Institute of Energetics of the Academy of Sciences of the Armenian SSR): "The Kinematics of Turbulent Streams"; Prof. F. I. Frankl', Doctor of Technical Sciences (Kabardino-Balkar State University): "A Method for Settling the Movement of Alluvia"; M.A. Velikanov, corresponding member of the Academy of Sciences of the USSR: "The Theoretical and Practical Value of the Gravitational Theory of Alluvia"; N.A. Silin, Candidate of Technical Sciences: "Loss of Pressure and Hydraulic Resistance in Large-Diameter Tubes"; A.E. Klimentov, Candidate of Technical Sciences (VNIITS), N.P. Zrelov (VODGEO), and S.A. Korzhayev (IGD of Academy of Sciences of the USSR): "Experiments in Water Supply in Conduit Tubes of Various Diameters"; I.S. Ikonnikov, Candidate of Technical Sciences: "Resistance in Rough Open Riverbeds."

Card 4/6

Card 5/6

ASSOCIATION: (Conference Organizing Committee) Orgkomitet po provedeniyu soveshchaniya

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

SOV/124-58-3-2887

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 48 (USSR)

AUTHOR: Zrelov, N. P.

TITLE: The Method of Extrapolational Model Simulation of Hydraulic Processes (Metod ekstrapolyatsionnogo modelirovaniya gidravlicheskikh protsessov)

PERIODICAL: Tr. Gidravl. labor. Vses. n.-i. in-ta vodosnab., kanaliz., gidrotekhn. sooruzh. i inzh. gidrogeol., 1957, Nr 5, pp 5-15

ABSTRACT: The method presented by the author consists of the determination of the dependence of certain characteristics upon the model scale on the basis of experiments conducted on several models of different scales and subsequent extrapolation of the relationship thus established to the scale of a model under consideration which for one reason or another cannot be realized. The author discusses the method of selection of a scale for the models and analyzes several examples which are of interest in themselves. Unfortunately, the author does not make use of the concepts of the dimensional analysis, the application of which could clarify the method described in the paper.

Card 1/1

G. I. Barenblatt

BLIZNYAK, Ye.V., doktor tekhn.nauk, otv.red.[deceased]; ROSSINSKIY, K.I., kand.tekhn.nauk, zamestitel' otv.red.; ANDREYEV, O.V., kand.tekhn. nauk, red.; ZRELOV, N.P., kand.tekhn.nauk; RZHANITSYN, N.A., kand. tekhn.nauk, red.; N.S. SHARASHKINA, N.S., red.; YEGOROV, V.I., red.izd-va; KNOROZ, M.M., red.izd-va; SIMKINA, Ye.I., tekhn.red.; KASHINA, P.S., tekhn.red.

[Channel processes; a collection of articles] Ruslovye protsessy; sbornik statei. Moskva, 1958. 394 p. (MIRA 12:1)

1. AN SSSR. Sektsiya po nauchnoy razrabotke problem vodnogo khozyaystva. 2. Sektsiya no nauchnoy razrabotke problem vodnogo khozyaystva AN SSSR, Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-izyskatel'skiy inst. im. S.Ya.Zhuka (for Rossinskiy). 3. Vsesoyuznyy nauchno-issledovatel'skiy inst. transportnogo stroitel'stva Ministerstva transportnogo stroitel'stva SSSR (for Andreyev). 4. Vsesoyuznyy nauchno-issledovatel'skiy institut vodosnabzheniya, kanalizatsii, gidrotekhnicheskikh sooruzheniy i inzhenernoy gidrogeologii (for Zrelov). 5. Tsentral'nyy nauchno-issledovatel'skiy institut ekonomiki i ekspluatatsii vodnogo transporta (for Rzhanitsyn). 6. Sektsiya po nauchnoy razrabotke problem vodnogo khozyaystva AN SSSR (for Sharashkina).
(Hydraulic engineering) (Rivers)

ZHELOV, N.P., kandidat tekhnicheskikh nauk.

Modeling the settling of suspended drift material. Trudy Gidrav. lab. VODGEO no.5:79-109 '57. (MIRA 10:8)
(Hydraulics)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

124-58-6-6867

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 6, p 87 (USSR)

AUTHOR: Zrelov, N.P.

TITLE: The Cinematography of the Three-dimensional Displacement of Particles in a Flow of Water (Kinos"yemka prostranstvennogo peremeshcheniya chastits v vodnom potoke)

PERIODICAL: Tr. Gidravl. labor. Vses. n.-i. in-t vodosnab., kanaliz., gidrotekhn. sooruzh. i inzh. gidrogeol., 1957, Nr 5, pp 58-62

ABSTRACT: An operational method for the taking of moving pictures of the motion of tracer particles in a three-dimensional stream flow by means of a single camera mounted on the side of the test trough is suggested. On top of a rectangular transparent test trough a mirror is set up at an angle of 45° to the surface of the water; this arrangement allows the simultaneous photography of the particle trajectory in the plan view and the vertical elevation. From geometrical considerations, formulas are worked out for determining the three coordinates of a particle and the three projections of its velocity. A working example of the plan-view and vertical-elevation projections of the trajectory of a particle moving at approximately 17 cm/sec mean velocity is given.

The Cinematography of the Three-dimensional Displacement (cont.)

Possible limitations of the experimental methods are not considered. These consist, in particular, in the distortion of the plan-view projection due to the irregularity of the surface of the stream, which is not perfectly plane even at insignificant speeds.

N.A.Mikhailova

1. Water--Properties 2. Particles--Motion
3. Motion picture photography

SOV/124-58-4-4311

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 4, p 89 (USSR)

AUTHOR: Zrelov, N. P.

TITLE: Model Experiments on the Settling of Suspensed Particles (Modelirovaniye osazhdeniya vzveshennykh nanosov)

PERIODICAL: Tr. Gidravl. labor. Vses. n.-i. in-t vodosnab., kanaliz., gidrotekhn. sooruzh. i inzh. gidrogeol, 1957, Nr 5, pp 79-109

ABSTRACT: The article comprises a review of various methods used in model testing involving suspended particles. Rules for model testing are discussed in connection with a formulation offered by the author for the numerical computation of particle settling in a liquid at rest. The model testing of the settling process of sand particles, it is recommended, should be performed with the aid of specially prepared spherical particles of low density. The article gives the results of the testing of such spherical particles and conveys practical recommendations relative to the employment of the model-testing method proposed.

1. Inland waterway models--Test results 2. Sand--Hydrodynamic characteristics

Card 1/1

B. A. Fidman

ZRELOV, M.F.

21699 ZRELOV, M.F. Zdekty-mahometrieskiy metod izmereniy davleniya vody. V. So: Tidpavd issledovaniya insh. Sdoru zheniy. M., 1949, S 181-99

SO: Letopis'Zhurnal'nykh Statey, No. 29, Moskva, 1949

ZHELOV, N.P., kandidat tekhnicheskikh nauk.

Taking motion pictures of the spatial distribution of particles in a stream of water. Trudy Gidrav. lab. VODGEO no.5:58-62 '57. (Hydraulics) (MLRA 10:8)

ZHILOV, N.P., kandidat tekhnicheskikh nauk.

Method for extrapolating processes in hydraulic modeling. Trudy Gidrav. lab. VODGEO no.5:5-15 '57. (MIRA 10:8)
(Hydraulic models)

ZHELOV, N.I.

21693 ZHELOV, N.I. Metod gidrokinematicheskikh indikatorov tipa izmeriya skorostnoy struktury vodnykh potokov. V Sb: Tidpavd issledovaniya inzh. Sooruzheniy. M 1949, S 165-80

SO: Letopis'Zhurnal'nykh Statey, No. 29, Moskva, 1949

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ZRELOV, V. N.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

B. T. [illegible]
Vol. 3 No. 6
May 1954
Fuels and Combustion

(2)

4541*. Auto-Oxidation of Hydrocarbon Fuels. (Russian.) [illegible] and V. N. Zrelov. *Zhurnal Prikladnoi Khimii,* v. 26, no. 10, Oct. 1953, p. 1038-1044.

Rate of oxidation is proportional to hydrocarbon concentration in the fuel. Oxidation products include alcohols and carbonyl compounds. Tables, 4 ref.

10-13-54
[illegible]

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

ZRELOV, V.N.

AID P - 831

Subject : USSR/Chemistry

Card 1/1 Pub. 78 - 16/26

Authors : Chertkov, Ya. B. and Zrelov, V. N.

Title : Wood resin as an anti-oxidizer additive for hydrocarbon fuels

Periodical : Neft. khoz., v. 32, #9, 70-74, S 1954

Abstract : The effectiveness of various anti-oxidizers for fuels is discussed. Anti-oxidizers of wood resin types are found less effective than the aminol-phenol type. 5 charts and 5 Russian references (1936-1951).

Institution: None

Submitted : No date

AID P - 3735

Subject : USSR/Chemistry

Card 1/1 Pub. 152 - 15/16

Authors : Chertkov, Ya. B. and V. N. Zrelov

Title : Oxidation products of kerosine produced by cracking

Periodical : Zhur. prikl. khim. 28, 8, 899-905, 1955

Abstract : Oxidation of kerosine obtained by cracking from Baku crudes was carried out at various temperatures, and the products obtained were studied. They were identified as alcohols consisting of a benzene ring with an aliphatic chain. Three tables, 12 references, 6 Russian (1921-1952).

Institution : None

Submitted : Jl 2, 1953

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor Fuels. Lubricants, I-13

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62579

Abstract: Effects of additions to cracking kerosenes on the tendency of the latter to undergo oxidation were evaluated on the basis of oxygen absorption, changes in acid number and actual tars, on oxidation of the fuel for 2.5 hours with air oxygen at 125°. It is shown that TAN and HA are strong initiators of autoxidation of the fuel, and TNN in amounts found in the fuels have an inhibiting effect on the reaction of autoxidation. The inhibiting effect being increased with increase of their amount in the fuel. PC present in cracking kerosenes of first and second Baku have a slight inhibiting effect on autoxidation of fuels. Described is the procedure of isolation of oxidation products from cracking kerosenes.

Card 2/2

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

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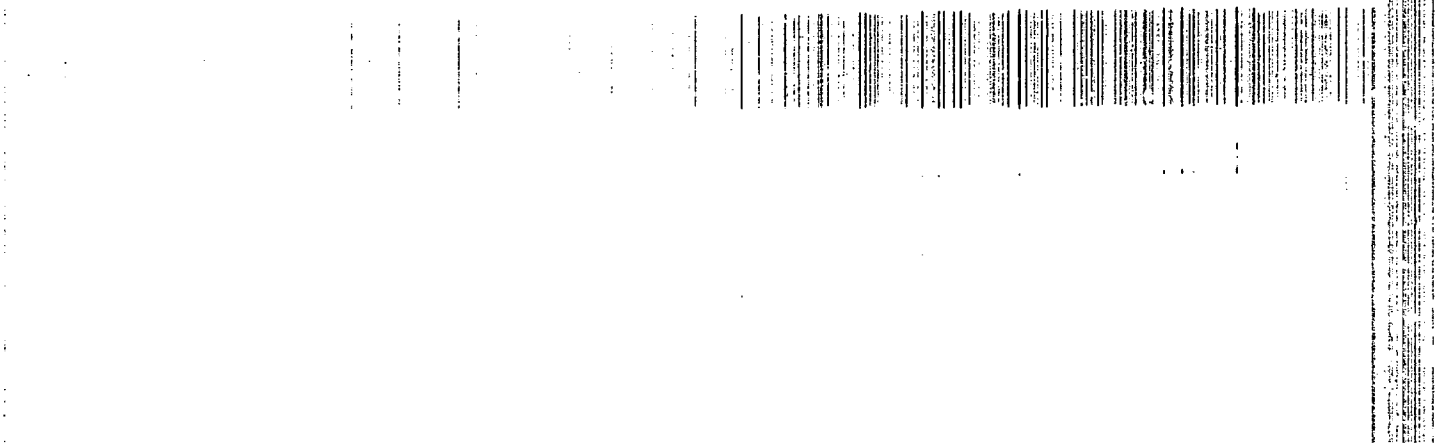

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

AUTHORS: Chertkov, Ya. B. and Zrelov, V.N. (MII.GSM).

TITLE: Inhibition of the formation of "actual" resins during storing of cracking-kerosenes. (Zamedleniye obrazovaniya "fakticheskikh" smol pri khranenii kreking kerosinov).

PERIODICAL: "Khimiya i Tekhnologiya Topliva i Masel" (Chemistry and Technology of Fuels and Lubricants), 1957, No.2, pp.57-58 (U.S.S.R.)

ABSTRACT: It was experimentally shown that additions of anti-oxidants (paraoxidiphenylamine and "wood tar TP") to cracking-kerosenes decrease the rate of formation of resins. Experimental results are shown in tables and a graph. 2 tables, 1 graph, no references.

Card 1/1

65-7-11/14

AUTHORS: Chertkov, Ya.B., Zrelov, V.N., Marinchenko, N.I. and Shchagin, V.M.

TITLE: Precipitate Formation in Fuels for Gas Turbine Engines (Osadkoobrazovaniya v toplivakh dlya gazoturbinnykh dvigateley)

PERIODICAL: Khimiya i Tekhnologiya Topliva i Masel, 1957, No.7, pp. 57 - 63 (USSR)

ABSTRACT: The importance of thermal stability of fuels for aero gas turbine and jet engines with increasing speed of flying and literature data on the problem of testing and thermal stability of fuels are briefly discussed. In 1954, the authors developed a method for simultaneous determination of the corrosive activity and the susceptibility of fuels to resin and precipitate formation, which during the two-and-a-half years proved suitable for the evaluation of many fuels of various origin. In this method, a fuel in contact with a freshly polished surface of antimony bronze is submitted to a temperature of 120 °C for 6 hours. The surface area of bronze is 20 cm^2/100 ml of fuel. During the test, the fuel is moving with a velocity sufficient for equalising concentrations of reacting substances (Ref.12). The following factors are determined in the test: the loss of weight of the metal, the amount of resins adhering to the surface

Card 1/3

Precipitate Formation in Fuels for Gas Turbine Engines

of the metal and the amount of insoluble precipitate in the fuel. A number of fuels of various origins (Table 1) were tested by this method and the elementary composition of the precipitates formed and that of the ash were determined (Tables 2 and 3, respectively). Conclusions: straight run fuels, well-refined with a minimum content of unsaturated hydrocarbons and non-hydrocarbon admixtures (compounds containing sulphur, nitrogen and oxygen and impurities of mineral origin) possess the highest thermal stability at 120 °C. The source of the formation of precipitates insoluble in fuels are: a) products of interaction of active sulphurous and oxygen compounds in an oxidising medium, b) products of deep oxidising transformations of compounds containing sulphur, nitrogen and oxygen which are present in fuels; c) products of deep oxidising transformations of hydrocarbons, mainly of an unsaturated character: d) products of deep polymerisation and condensation of unsaturated compounds which are accompanied by carbonisation of the molecule; e) mineral admixtures present in fuels due to insufficient alkali purification and the washing with strongly-contaminated-with-mineral-admixtures water; admixtures passing into the fuel after contact-catalytic

purification, metals from storage vessels; dust which finds its way into the fuel during transport and storage. As nearly all processes of the formation of insoluble in fuel precipitates take place in oxidising medium, and the composition of precipitate is characterised by a high content of oxygen, it can be assumed that by preventing or minimising the supply of oxygen to fuels, the velocity of the formation as well as the total amount of precipitates formed can be decreased, thus increasing the thermal stability of fuels. There are 3 tables and 13 references, 3 of which are Russian, 8 English and 2 German.

ASSOCIATION: NII GSM

AVAILABLE: Library of Congress

Card 3/3

Prevention of Corrosion Caused by Aviation Fuel (Cont.)

formed in a valve and impaired its hermetic tightness, causing leakage. The fuel pump plungers may be affected by corrosion which may cause the engine to stop. The flocculent ferric hydroxide, developing as a result of the corrosion of steel, may clog the filters or other fuel system parts, or jam the fuel pump plungers. The authors recommend compliance with the established norms, State Standards, specifications, and the preventive maintenance measures. There are three figures.

AVAILABLE: Library of Congress.

Card 2/2

CHERTKOV, Ya.B.; ZRELOV, V.N.

Self-oxidation of cracking-kerosenes. Zhur.prikl.khim. 30 no.12: 1875-1877 D '57. (MIRA 11:1)

1.Nauchno-issledovatel'skiy institut goryuche-smazochnykh materialov.
(Oxidation) (Kerosene)

ZRELOV VA

11(5) PHASE I BOOK EXPLOITATION SOV/1319

Akademiya nauk SSSR. Bashkirskiy filial

Khimiya sero-organicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; materialy II nauchnoy sessii (Chemistry of Sulfur-Organic Compounds Contained in Petroleum Products; Papers of the 2nd Scientific Session) v. 1. Ufa, Izd. Bashkirskogo filiala AN SSSR, 1958. 225 p. 1,500 copies printed.

Ed.: Sudarikov, K.I.; Editorial Board: Ayvazov, B.N., Mashkina, A.V., Obolentsev, R.D. (Resp. Ed.), Rozhdestvenskiy, V.F., and Shamin, L.L.; Tech. Ed.: Bakhlanov, R. Sh.

PURPOSE: This book is intended for petroleum specialists of scientific research establishments, educational institutions, and petroleum refining plants.

COVERAGE: This collection is the first of a multivolume publication on the results of scientific research work carried out in the Soviet Union on the chemistry and technology of sulfur- and nitrogen-organic compounds during the period 1954-1955 and according to a coordinated research project outlined in 1956 by the sponsoring agency (Bashkir Branch, AS USSR).

Card 1/15

Chertkov, Ya. B., and V.N. Ivolov, Tsentral'nyy nauchno-issledovatel'skiy institut goryuchego-smazochnykh materialov (Central Research Institute for Fuel and Lubricating Materials). Activity of Sulfur-Organic Compounds in Relationship to the Metal Card 5/15

of the Fuel System of Gas-Turbine Engines 69

Various fuels from the ligroin-kerosene fractions of petroleum, products of both direct distillation and thermal cracking, with an average content of sulfur (0.12 - 0.94 percent), mercaptan (0.004 - 0.060 percent and elementary sulfur (0.001 - 0.010 percent), were investigated for corrosive, resin- and residue-forming properties in relationship to copper, bronze, cadmium, zinc and chromium-steel alloys with various surface finishes (nitrided, case-hardened, etc.). Illustrations of laboratory apparatus, graphs of the corrosive effects of elementary sulfur and aliphatic and aromatic mercaptans, and tables showing the content of these substances in fuels are given.

ZRELOV V.N.

92-58-3-14/32

AUTHORS: Chertkov, Ya.B., and Zrelov, V.N., Scientific Workers

TITLE: Water Treatment of Petroleum Distillates (Ochistka neftyanykh distillyatov vodnoy promyvkoy)

PERIODICAL: Neftyanik, 1958, Nr 3, pp 13-14 (USSR)

ABSTRACT: The author states that the treatment of straight-run distillates and cracked distillates with caustic solution is widely used at refineries for removing hydrogen sulfide, part of the mercaptanes, and the organic acids. The disadvantage of the treatment is that a considerable quantity of alkali is spent in this process. Therefore, in 1953 the Odessa refinery started to treat gasoline first with water and then with alkali solution. As a result, the consumption of alkali substantially dropped.

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

Water Treatment of Petroleum Distillates 92-58-3-14/32

Studies of the Ufa Petroleum Scientific Research Institute have proved that the reactivation of the alkali and the re-utilization of 25-30 percent of the spent alkali solution can considerably reduce the consumption of the reagent. Further studies have shown that only 50 percent of aggressive sulfur compounds can be removed by alkali treatment. Results of tests made by the Groznyy Petroleum Institute in 1955 indicated that the treatment of the gasoline distillate with industrial water produces better results than the treatment with alkali. The author emphasizes that the treatment of petroleum distillates with water at present is attracting considerable attention from refiners and scientists. In this connection the author refers to United Kingdom patent Nr 705267 of March 10th, 1954, and USA patent Nr 2728714 of May 20th, 1954. He also refers to the American periodical "Petroleum Refiner" (Nr 2, 1956) which describes the procedure of water treatment and the apparatus used. In addition, the author outlines results of his study of sulfur compounds contained in various commercial fuels obtained from sulfurous

crudes. He found that a considerable amount of sulfur can be extracted by mercury from commerical fuels with B. P. 100°-300°C which were obtained from sulfurous crudes and treated at the refinery with caustic soda. It is clear, therefore, that caustic soda treatment does not ensure a complete removal of sulfur compounds. The composition of sulfur compounds contained in petroleum distillates produced at various refineries from sulfurous crudes is given by the author in Table 1. Characteristics of cracked kerosene treated with water and of cracked kerosene treated with caustic soda is given in Table 2. The author points out that the problem of treating fuels with water instead of caustic soda deserves the most serious attention.

AVAILABLE: Library of Congress

SOV/ 65-58-7-10/12

AUTHORS: Chertkov, Ya. B; Zrelov, V. N; Shchagin, V. M. and Marinchenko, N. I.

TITLE: The Corrosive Activity of Hydrocarbon Fuels in the Presence of Elementary Sulphur. (Korroziynaya aktivnost' uglevodorodnykh topliv v prisutstvii elementarnoy sery).

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr.7. pp. 62 - 66. (USSR).

ABSTRACT: By using radioactive indicators, the authors found that the formation of a layer on metal is not due to adsorption, but to chemical interaction the elementary sulphur penetrates into the metal. Investigations on the changes of the metals in fuel mixtures under the influence of elementary sulphur and oxygen were carried out to define the character of occurring processes. Bronze was used as the investigated metal, and white spirit as the hydrocarbon mixture. The absorption of oxygen by the fuel was measured at 125°C, at normal pressure according to the PK method (Ref.6). The corrosion of bronze and the quantity of deposits formed on the metal in fuel mixtures to which elementary sulphur had been added was also determined at 120°C during six hours (Ref.7).

The Corrosive Activity of Hydrocarbon Fuels in the Presence of Elementary Sulphur.

Fig.1: A graph giving curves of the oxidation of white spirit. When white spirit was oxidised in the presence of elementary sulphur (concentration = 0.001 - 0.01%), when not in contact with bronze, it was seen that elementary sulphur acted in all cases as a strong anti-oxidant; the induction period = 300 minutes. During these oxidations it was found that the polished surface of the bronze showed definite catalytic activity. When the bronze surface was covered with a layer of cupric oxide or cuprous sulphide no catalytic activity could be observed. When elementary sulphur is contained in the fuels in quantities of 0.002 - 0.005% and higher, considerable corrosion occurs and precipitates are formed which penetrate into the fuel and cause accumulation of hard deposits. There are 4 Figures and 7 References: 4 English and 3 Soviet.

1. Fuels--Corrosive effects 2. Sulfur--Properties

CHERTKOV, Ya.B.; ZHELOV, V.N.

Effect of sulfur compounds on efficiency of hydrocarbon fuels.
Zhur. prikl. khim. 31 no.9:1384-1389 S '58. (MIRA 11:10)
(Sulfur compounds) (Fuel research)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

PHASE I BOOK EXPLOITATION SOV/3663

Akademiya nauk SSSR. Institut khimicheskoy fiziki

Okisleniye uglevodorodov v zhidkoy faze; sbornik statey (Oxidation of Hydrocarbons in the Liquid Phase; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 334 p. Errata slip inserted. 2,200 copies printed.

Ed.: N. M. Emanuel', Corresponding Member, Academy of Sciences USSR; Ed. of Publishing House: K. M. Dyumayev; Tech. Ed.: I. F. Kuz'min.

PURPOSE: This collection of articles is intended for chemists interested in hydrocarbon oxidation reactions, particularly for those specializing in petroleum fuels.

COVERAGE: This collection of 35 articles represents the results of investigations over a period of several years on problems of hydrocarbon oxidation. The authors present their own theoretical and experimental data and also draw from current literature. No personalities are mentioned. References accompany most of the articles.

Man'kovskaya, N.K., G.I. Mochvina, and V.P. Kubryashova [Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov i Kombinat sinteticheskikh zhirnykh kislot i zhirnykh spirtov (All-Union Research Institute of Fats; Combine of Synthetic Fatty Acids and Fatty Alcohols)]. Oxidation of High-Molecular Hydrocarbons to Fatty Acids 268

The authors have synthesized fatty acids and several neutral oxygen derivatives by oxidizing paraffinic hydrocarbons with atmospheric oxygen. Catalysis with 0.2% potassium permanganate increased oxygen absorption fourfold and yielded 45% fatty acids after 20 hours.

Tretyannikov, B.N. and A.A. Perchenko. [Khar'kov Polytechnical Institute imeni V.I. Lenin]. Role of a Mixture of Manganese Oxides as an Accelerator of Paraffin Oxidation by Atmospheric Oxygen 275

Manganese oxide waste-products of the vitamin industry and manganese oxide residue from treating paraffin with a potassium permanganate solution increased the rate of air oxidation of paraffin. The authors cite a method for the preparation of active catalysts for this reaction from pyrolusite.

Tsyskovskiy, V.K., and A.I. Il'ina. [Vsesoyuznyy nauchno-issledovatel'skiy institut zhirov (All-Union Scientific Research Institute of Fats)]. Effect of Temperature and a Catalyst on Liquid-Phase Oxidation of Paraffin to Monobasic Fatty Acids 282

Petrov, G.S. (Deceased), and A.P. Grigor'yev. Preparation of Various Types of Acids From Solar Distillate 295

The authors give data on the extraction of sulfo acids from the sulfonated solar oil fraction of petroleums, and on the oxidation of vaseline oil to obtain carboxylic and hydroxy carboxylic acids.

Chertkov, Ya.B., and V.N. Zrelov [Nauchno-issledovatel'skiy institut goryuche-smazochnykh materialov (Scientific Research Institute of Combustibles and Lubricating Materials)]. The Oxidation of Hydrocarbon Fuels in Storage 299

The authors state that the oxidation of fuels stored at moderate temperatures may be minimized by removing low-stability cyclic hydrocarbons having unsaturated side chains, or by introducing additives which will prevent their oxidation or the thickening of their oxidation products into resinous substances. It is also stated that low temperatures and nearly hermetic conditions also inhibit oxidation.

10

11(4) PHASE I BOOK EXPLOITATION SOV/2075

Akademiya nauk SSSR. Bashkirskiy filial. Ufa

Khimiya seroorganicheskikh soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh; [materialy III nauchnoy sessii] (Chemistry of Sulphur Organic Compounds Contained in Petroleum and Petroleum Products; [Papers of the Third Scientific Session]) Moscow, Izd-vo AN SSSR, 1959. 376 p. 2,000 copies printed. Errata slip inserted.

Editorial Board: R.D. Obolentsev (Resp. Ed.) Doctor of Chemical Sciences; S.R. Galpern, Doctor of Chemical Sciences; Ya. B. Chertkov, Doctor of Technical Sciences; V.V. Fanov, Candidate of Technical Sciences; and V.P. Rozhdestvenskiy, Candidate of Chemical Sciences; Ed. of Publishing House: I.I. Bruskov; Tech. Ed.: T.P. Polkovnikova

PURPOSE: This book is intended for chemists, chemical engineers, and technicians specializing in the chemistry of petroleum.

COVERAGE: The book is a collection of papers presented at the Third Scientific Session on the Chemistry of Organic Sulfur and Nitrogen Compounds Contained in Petroleum and Petroleum Products. The scientific session was held in Ufa, June 3-8, 1957. The book consists of six sections: 1) Synthesis, characterization, and analysis of organic sulfur compounds; 2) Separation and compositions of organic sulfur compounds contained in petroleum and petroleum products; 3) Transformation of organic sulfur compounds by thermal catalysis; 4) Corrosive properties of and tar formation in sulfur-containing petroleum and petroleum products; 5) Uses of organic sulfur compounds and hydrogen sulfide; 6) Physiological properties of organic sulfur compounds. No personalities are mentioned. There are 315 references, of which 179 are Soviet, 118 English, 5 French, 12 German, and 1 Czech.

TABLE OF CONTENTS

Card 2/10

Chemistry of Sulphur Organic Compounds (Cont.) SOV/2075

PART IV. CORROSIVE ACTIVITY AND TAR FORMATION OF SULFUR-CONTAINING PETROLEUM AND PETROLEUM PRODUCTS

Card 8/10

S/081/62/000/012/032/063
B166/B101

AUTHORS: Chertkov, Ya. B., Zrelov, V. N., Shchagin, V. M.

TITLE: Organosulfur compounds in fuels as inhibitors of corrosion in copper and its alloys

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 12, 1962, 350-351, abstract 12I202 (Sb. "Khimiya seraorgan. soyedineniy, soderzhashchikhsya v neftyakh i nefteproduktakh". M., AN SSSR, 1959, 284-292)

TEXT: The question of the corrosive activity of fuels containing sulfurous compounds, and the corrosion of fuel system elements in gas turbine engines, made from Cu and Cu alloys is examined. [Abstracter's note: Complete translation.]

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

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S/081/60/000/010/008/009
A166/A129

11.0132

AUTHORS: Chertkov, Ya.B.; Zrelov, V.N.

TITLE: The effects of chemical composition on the thermal stability of T-1 fuel

PERIODICAL: Referativnyy zhurnal. Khimiya, 1960, no. 10, 459, abstract 40284. (Azerb neft. teserrufaty, Azerb. neft. kh-vo, 1959, no. 10, 39 - 40)

TEXT: In a study of the relation between the chemical composition and thermal stability of T-1 fuel obtained from a mixture of petroleum, the fuel was subjected to chromatographic analysis on silica gels. It was found that non-hydrocarbon impurities, mainly their high-molecular conversion products, reduce the fuel's thermal stability. Paraffin-naphthene hydrocarbons are distinguished by thermal stability. Due to the presence of small amounts of olefin-aromatic structures, aromatic hydrocarbons somewhat reduce thermal stability. Olefin-aromatic structures, most subject to oxidation, are the main source for the formation of non-hydrocarbon impurities in the fuel. The removal of non-hydrocarbon impurities and the least stable of the hydrocarbons from the fuel should promote a considerable improvement in thermal stability.

[Abstracter's note: Complete translation] A.N.

Card 1/1

CHERTKOV, Ya.B.; ZRELOV, V.N.; OBOLENTSEV, R.D.

Thermal stability of sulfur compounds and their effect on the performance characteristics of fuels. Khim.sera-i azotorg.soed.v neft.i nefteprod. 3:461-468 '60. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut goryuchikh-smazochnykh materialov, Bashkirskiy filial AN SSSR.
(Sulfur organic compounds—Thermal properties)
(Fuel—Testing)

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R002065510014-7"

S/065/60/000/007/007/008/XX
E194/E484

AUTHOR: Zrelov, V.N.

TITLE: Fuel Additives for Air-Jet Engines (Review of Foreign Literature)

PERIODICAL: Khimiya i tekhnologiya topliv i masel, 1960, No.7, pp.62-68

TEXT: This is a brief review of published work on additives for jet fuels used to improve storage stability, thermal stability, to prevent the formation of ice crystals, to prevent foaming at high altitudes and also metal deactivators and others. In particular, mention is made of the use of anti-oxidants in fuel Jp-4, the influence of ashless additives on the thermal stability of jet fuels, the influence of a number of co-polymer additives in kerosene and others. There are 4 figures, 2 tables and 20 references: 18 English and 2 French.

Card 1/1