

ZASLAVSKIY, V. A.

New genus and species of the tribe Hyperini (Coleoptera, Curculionidae). Trudy Zool. inst. 30:260-267 '62. (MIRA 15:10)

(Soviet Central Asia--Weevils)

ZASLAVSKIY, V.A.

New Palaearctic species of *Chilocorus* (Coleoptera,  
Coccinellidae). Ent. oboz. 71 no.2:398-401 '62.

(MIRA 15:11)

1. Zoologicheskiy institut AN SSSR, Leningrad.  
(Ladybirds)

ZASLAVSKIY, V.A.

Hybrid sterility as a limiting factor in the distribution of allopatric species. Dokl. AN SSSR 149 no.2:470-471 Mr '63. (MIRA 16:3)

1. Zoologicheskiy institut AN SSSR. Predstavleno akademikom Ye.N.Pavlovskim.

(Insect populations) (Hybridization)

ZASLAVSKIY, V.A.

New Central Asiatic genus and species of weevils of the subfamily  
Hyperinae (Coleoptera, Curculionidae). Ent. oboz. 44 no.1:179-181  
'65. (MIRA 18:7)

1. Zoologicheskii institut AN SSSR, Leningrad.

ZASLAVSKIY, V.A.

New and little-known Hyperaepia (Coleoptera, Carcinellidae)  
from Kazakhstan and Central Asia. Trudy Zool. inst. 34:152-  
154 1964. (MIRA 18:2)

ZASIAVSKIY, V.A.

New species of Hyperini (Coleoptera, Curculionidae) from Kazakhstan.  
Trudy Zool. inst. 34:172-176 1964. (MIRA 18:2)

GENDON, Yu.Z.; ZASLAVSKIY, V.G.; MARCHENKO, A.T.

Some problems of expediency in the preparation of polio-  
myelitis vaccine. Trudy Mosk. nauch.-issl. inst. virus.  
prep. 2:107-110 '61. (MIRA 17:1)

LEVENBUK, I.S.; ZASLAVSKIY, V.G.; MARCHENKO, A.T.

Criterion of the proper introduction of test vaccines into  
the spinal cord of monkeys. Trudy Mosk. nauch.-issl. inst.  
virus. prep. 2:364-369 '61. (MIRA 17:1)



ZASLAVSKIY, V.G.; AMCHENKOVA, A.M.

Cytochemical study of some enzymes and protein thiol groups  
in the cells of tissue cultures inoculated with the polio-  
myelitis virus. Trudy Mosk. nauch.-issl. inst. virus. prep. 2:  
323-329 '61. (MIRA 17:1)

ZASLAVSKIY, V.G.

Cytochemical determination of the activity of some enzymes  
in the cells of primary and transplanted cultures. Trudy  
Mosk. nauch.-issl. inst. virus. prep. 2:316-322 '61.  
(MIRA 17:1)

ZASLAVSKIY V.G.

ZASLAVSKIY, V.G.

Cytological and cytochemical investigations of monkey kidney cell cultures. Acta virol. Engl. Ed., Praha 4 no.2:124-127 Mr '60

1. Scientific Research Institute of Anti-poliomyelitis Preparations and the Tarasevich State Control Institute of Medical Biological Preparations, Moscow.

(TISSUE CULTURE)

(KIDNEYS)

ZASLAVSKIY, V.G.; AMCHENKOVA, A.M.

Cytochemical study of the activity of succinic dehydrogenase in explanted cells. *Biul. eksp. biol. i med.* 51 no.1:91-94 Ja '61. (MIRA 14:5)

1. Iz morfologicheskoy laboratorii (zav. prof. S.Ya.Zalkind) i laboratorii patogistologii (zav. - prof. Ya.Ye.Khesin) Moskovskogo nauchno-issledovatel'skogo instituta preparatov protiv poliomyelita (dir. O.G.Andzhaparidze). Predstavlena akademikom V.M.Chernigovskim.

(TISSUE CULTURE)

(SUCCINIC DEHYDROGENASE)

ZASLAVSKIY, V.G.

Comparative cytochemical study of the activity of succinic dehydrogenase and alkaline phosphatase in the cells of primary explanted and transplanted tissue cultures. Biul. eksp. biol. i med. no.2: 107-110 F '61. (MIRA 14:5)

1. Iz morfologicheskoy laboratorii (zav. - prof. S.Ya.Zalkind) Moskovskogo nauchno-issledovatel'skogo instituta preparatov protiv poliomyelita (dir. - dotsent O.G.Andzhaperidze). Predstavlena deystvitel'nym chlenom AMN SSSR V.V.Parinym.

(SUCCINIC DEHYDROGENASE) (PHOSPHATASE)  
(TISSUE CULTURE)

AGOL, V.I.; ZASLAVSKIY, V.G.

Effect of normal human sera on metabolism in the cells of Ehrlich's ascites carcinoma. *Biokhimiia* 27 no.4:583-588 J1-Ag '62.

(MIRA 15:11)

1. Institute of Poliomyelitis and Viral Encephalitides of the Academy of Medical Sciences of the U.S.S.R., Moscow.

(CANCER RESEARCH)

(CELL METABOLISM)

(SERUM)

ZALKIND, S.Ya.; ZASLAVSKIY, V.G.

Adaptation of cells to conditions of cultivation in vitro. *TSitologiya*  
5 no.5:519-529 S-0 '62. (MIRA 18:5)

1. Laboratoriya virusnoy tsitopatologii Moskovskogo nauchno-  
issledovatel'skogo instituta virusnykh preparatov, Moskva.

ZASLAVSKIY, V. G.

Dissertation defended at the Institute of Animal Morphology imeni  
A. N. Severtsov for the academic degree of Candidate of Biological Sciences:

"Cytochemical Investigation of the Activity of Several Enzymes in Primary  
and Transplanted Tissue Cultures."

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



ZASLAVSKIY, V. G.

"Cytochemical Study of the Activity of Certain Enzymes in the Cells of  
Primary and Transplanted Epithelial Tissue Cultures."

report submitted for the First Conference on the problems of Cyto and  
Histochemistry, Moscow, 19-21 Dec 1960.

Laboratory of Virus Cytopathology of the Scientific Research Institute of Virus  
Preparations, Moscow.

ZASLAVSKIY, Ye.

EL'PINER, I.Ye.; POGOSYANTS, Ye.Ye.; ZASLAVSKIY, V.G.

Effect of ultrasonic waves on the milk factor. Vop.onk. 1  
no.2:42-44 '55. (MLRA 8:10)

1. Iz laboratorii eksperimental'noy onkologii (sav. chl.korr.  
AMN SSSR prof. L.M.Shabad) Akademii meditsinskikh nauk SSSR)  
(ULTRASONICS, effects,  
on milk factor)  
(NEOPLASMS, experimental,  
milk factor, eff. of ultrasonics)  
(BREAST, neoplasms,  
milk factor, eff. of ultrasonics)

VOLOBRINSKIY, Sergey Davidovich, kand. tekhn. nauk; KUDRYAVTSEV, Mikhail Vasil'yevich, kand. tekhn. nauk, dots.; STEPANOV, Vladimir Nikolayevich, prof.; KOLESOV, D.S., inzh., retsenzent; RYSHKOVSKIY, I.Ya., kand. tekhn. nauk, retsenzent; NECHAYEV, N.A., kand. tekhn. nauk, retsenzent; ZASLAVSKIY, V.I., inzh., retsenzent; ZUBCHENKO, V.V., inzh., red.; MEDVEDEVA, M.A., tekhn. red.

[Electrical networks and power systems]Elektricheskie seti i energosistemy. Moskva, Transzheldorizdat, 1962. 313 p.  
(Electric lines) (MIRA 15:10)  
(Electric power distribution)

ACC NR: AP6021482

SOURCE CODE: UR/0413/66/000/011/0111/0112

INVENTOR: Zaslavskiy, V. I.

ORG: None

TITLE: A free piston engine cycle controller. Class 46, No. 182441

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 111-112

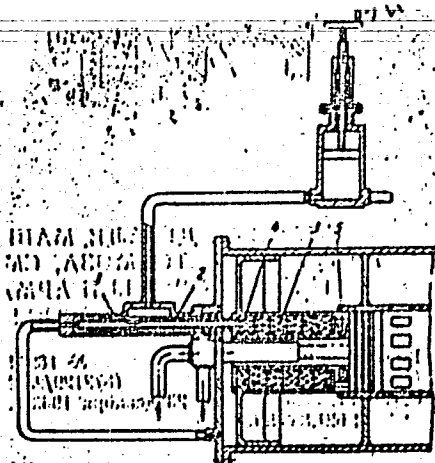
TOPIC TAGS: piston engine, engine control system

ABSTRACT: This Author's Certificate introduces: 1. A free piston engine cycle controller containing a mechanism for steady variation of piston group cycles. Design is simplified and better control is achieved by making the mechanism in the form of a telescoping unit composed of two tubes, one located in the cylinder head and the other in the piston. The second tube supplies the piston with a fluid such as mercury for varying piston mass during engine operation. 2. A modification of this unit incorporating a filler (e. g. plastic) in the internal areas of the piston. This filler has helical channels which are filled by the working fluid. 3. A modification of this device equipped with an automatic valve in the piston for maintaining overpressure in the piston cavity.

Card 1/2

UDC: 621.43-543.3

ACC. NR. AP6021482



1—telescoping section in the cylinder head; 2—telescoping section in the piston;  
3—filler; 4—helical channels; 5—automatic valve

SUB CODE: 21.31 / SUBM DATE: 06Apr65

Card 2/2

USVYATSKIY, Ye.A.; ZASLAVSKIY, V.I.; KORSAKOV, A.P.

Using ultrasonic equipment in cutting optical parts. Opt.-mekh.prom.  
25 no.5:1-5 My '58. (MIRA 11:9)

(Ultrasonic waves---Industrial applications)

2000/11 VIL/1

ZASLAVSLOU, Vo; Izrail'yevich; KORSAKOV, Aleksandr Pavlovich;  
USvyatskiy, Yefim Abramovich; BRYANTSEVA, V.P., inzh., ved.  
red.; MARKOV, A.I., kand. tekhn. nauk, red.; PONOMAREV, V.A.,  
tekhn. red.

[UZG-2 ultrasonic equipment for machining parts made of hard  
materials]Ul'trazvukovaya ustanovka UZG-2 dlia obrabotki de-  
talei iz tverdykh materialov. Moskva, Filial Vses.in-ta  
nauchn. i tekhn.informatsii, 1958. 15 p. (Peredovoi nauchno-  
tekhnicheskii i proizvodstvennyi opyt. Tema 8. No.M-58-267/4)  
(MIRA 16:3)

(Ultrasonic metal cutting)

SHAROV, B.K. (Chelyabinsk, ul. TSvillinga, d.43, kv.1); ZASLAVSKIY, V.K.

Azygography. Grud. khir. 6 no.1:61-68 Ja-F '64.

(MIRA 18:11)

1. Otdeleniye grudnoy khirurgii (zav. - dotsent G.L. Ratner)  
fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. I.D.  
Korabel'nikov) i mediko-sanitarnaya chast' (nachal'nik L.L.  
Seredinina) Chelyabinskogo traktornogo zavoda. Submitted  
June 5, 1962.



RATNER, G. L. (Chelyabinsk, prosp. Lenina, d. 61, kv. 31);  
ZASLAVSKIY, V. K.

Intubation of the esophagus in inoperable tumors; report No. 2.  
Grud. khir. 4 no.3:55-58 My-Je '62. (MIRA 15:7)

1. Iz otdeleniya grudnoy khirurgii (zav. - dotsent G. L. Ratner)  
kliniki fakul'tetskoy khirurgii (zav. - prof. I. D. Korabel'-  
nikov) Chelyabinskogo meditsinskogo instituta (dir. - dotsent  
P. M. Tarasov)

(ESOPHAGUS—CANCER) (ESOPHAGUS—INTUBATION)

ZASLAVSKIY, Ya.

107-57-5-39/63

AUTHOR: Zaslavskiy, Ya. (Moscow)

TITLE: A Photoresistor-Type Relay (Rele na fotosoprotivlenii)

PERIODICAL: Radio, 1957, Nr 5, p 35 (USSR)

ABSTRACT: A short description of a relay circuit designed with one type 6S2S tube is offered. A bridge circuit whose one arm includes type FS-KI photoresistor is connected to the grid of the tube. An electromagnetic final relay is in the anode circuit. Supply: 127/220 v a.c. via a power transformer.

There is one circuit diagram.

AVAILABLE: Library of Congress

card 1/1

ZASLAVSKIY, Ya.

Signal device for voltage changes. Radio no.7:57 J1'55.  
(Electric transformers) (MIRA 8:10)

ZASLAVSKIY, Ya., (Moskva).

Relay based on a photoresistor. Radio no. 5:35 Ny '57. (MLRA 10:6)  
(Electric relays)

ZASLAVSKIY, Ya. (Moscow).

Testing the insulation of transitional capacities. Radio no.3:  
60 Mr '54. (MLRA 7:3)  
(Condensers (Electricity))

ZASLAVSKIY, Ya.N.

Electronic block for two electric contact pickups. Stan. i instr.  
34 no.8:32 Ag '63. (MIRA 16:10)

VEDENKIN, D.P., inzh., red.; ZASLAVSKIY, Ye.I., inzh., red.;  
KOVAL'SKIY, L.Ya., inzh., red.; VOYTOVA, V.P., inzh.,  
red.; SHELIKHOV, S.N., inzh., red.; NEUDAKIN, K.A., red.

[Price list for the assembly of equipment] TSennik na  
montazh oborudovaniia. Moskva, Stroiizdat. No.11. 1965.  
104 p. (MIRA 18:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po de-  
lam stroitel'stva. 2. Gosstroy SSSR (for Vedenkin).
3. Nauchno-issledovatel'skiy institut ekonomiki stroitel'-  
stva Gosstroya SSSR (for Zaslavskiy, Koval'skiy, Voytova).
4. Proyektno-konstruktorskoye byuro No.12 Glavmontavto-  
matiki (for Neudakin). 5. Vsesoyuznyy bank finansirovaniya  
kapital'nykh vlozheniy SSSR (for Shelikhov).

ZASLAVSKIY, J.S. [Zaslavskiy, Ya. S.]; SGR, G.I. [Shor, G.I.]

Radio-determining of neutralization efficiency of engine oil additions. Ropa a uhlie 5 no.3:66-72 Mr '63.

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefi i gazov i polucheniyu iskusstvennogo zhidkovo topliva.



LEVKO, I., inzh.; ZASLAVSKIY, Ye., arkh.

Housing construction carried out by White Russian enterprises.  
Zhil.stroi. no.7:8-9 '58. (MIRA 12:6)  
(White Russian--Apartment houses)

ZASLAVSKIY, Yofim Grigor'yevich, inzh.; PORTNOY, Vladimir Isaakovich, inzh.; KOSHEVOY, Vladimir Ivanovich, inzh.; DUBROVSKIY, Vladimir Zakharovich, inzh.; KESAREV, A.P., inzh., retsenzent; STREL'NIKOV, S.V., inzh., retsenzent; MEL'NIKOV, V.Ye., red.

[Repair of TE10 diesel locomotives in the roundhouse] Remont teplovozov TE10 v depo. Moskva, Transport, 1965. 90 p. (MIRA 18:2)

1. Khar'kovskiy teplovozostroitel'nyy zavod imeni V.A.Malysheva (for Zaslavskiy, Portnoy, Koshevoy, Dubrovskiy).

DUBROVSKIY, V.Z., konstrktor; ZASLAVSKIY, Ye.G., konstrktor;  
KOSHEVOY, V.I., konstrktor

Electric circuit of TE10 and TE10 diesel locomotives,  
Elek. i tepl. tiagu 7 no.10:24-26 0 '63. (MIRA 16:11)

1. Khar'kovskiy mashinostroitel'nyy zavod im. Malysheva.

ARTIZANOV, Ye.A., inzh.; DORFMAN, Yu.I., inzh.; ZASLAVSKIY, Ye.G.,  
inzh.; KUSHNER, B.I., inzh.; PLUTSNER-SARNO, Yu.N., inzh.;  
SMOL'YANINOV, A.Ye., inzh.; SPIVAK, Ya.L., inzh.; STIUNGE,  
B.N., inzh., EPSHTEYN, A.S., inzh.; SAZONOV, A.G., inzh.,  
red.; USENKO, L.A., tekhn. red.

[The TE10 diesel freight locomotive] Gruzovoi teplovoz TE10.  
Moskva, Transzheldorizdat, 1962. 171 p. (MIRA 15:10)  
(Diesel locomotives)

KOSHEVOY, V.I., konstruktor; DUBROVSKIY, V.Z., konstruktor; ZASLAVSKIY, Ye.G.,  
konstruktor

Recommendations on the operation of TE10 and TE10 diesel locomotives.  
Elek. i tepl.tiaga 7 no.11;33-35 N '63. (MIRA 17:2)

1. Khar'kovskiy zavod transportnogo mashinostroyeniya.

L 20931-66 EWT(d)/EWT(l)/EWT(m)/EWP(f)/T-2/ VVI  
ACC NR: AP6002575 (A) SOURCE CODE: UR/0286/65/000/023/0069/0070

AUTHORS: Zaslavskiy, Ya. G.; Portnoy, V. I.

28  
B

ORG: none

TITLE: Device for starting internal combustion engines. Class 47, No. 176748

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 23, 1965, 69-70

TOPIC TAGS: engine starter system, internal combustion engine component

ABSTRACT: This Author Certificate presents a device for starting internal combustion engines. The device contains a storage battery, an electric motor used as a starter, and an actuating unit consisting of a system of relays and contacts. This system connects the fuel and oil pump motors to the storage battery and subsequently switches the electric motor into the generator mode (see Fig. 1). To increase the reliability of starting, one of the coils of a double-coil relay is connected in the actuating unit circuit. This coil locks with the activation of the second coil of the relay as a result of the activation of the

Card 1/2

UDC: 621.436-573

L 20931-66

AGC NR: AF6002575

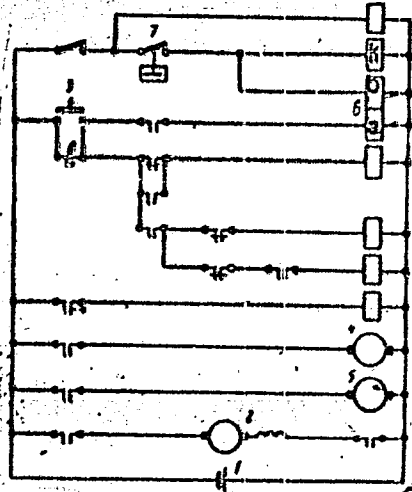


Fig. 1. 1 - storage battery;  
2 - electric motor; 3 - actuating  
unit; 4 - fuel pump motor;  
5 - oil pump motor; 6 - double-  
coil relay; 7 - oil pressure  
relay; a - locking coil;  
b - unlocking coil.

oil pressure relay. Orig. art. has: 1 diagram.

SUB CODE: 21/ SUBM DATE: 03Oct64

Card 2/2 ULR

VYAZOVSKAYA, N.M.; ATROSHCHENKO, F.A.; ZASLAVSKIY, Ye.I.; ZAYTOV, M.A.

Establishing standards for the number of cutting bits used.  
Nauch. trudy KNIJI no.13:351-356 '64 (MIRA 18:1)



18 (5, 7)

06179  
SOV/115-59-11-7/36

AUTHOR: Zaslavskiy, Ye.Ye.

TITLE: Improving Methods of Checking Weighbridges

PERIODICAL: Izmeritel'naya tekhnika, 1959, Nr 11, p 24

ABSTRACT: The existing methods of checking weighbridges at blast furnace departments of metallurgical plants do not provide a reliable accuracy, since the weighbridges are not evenly loaded with reference weights. In addition these methods are very time consuming. For this reason, the author recommends a simpler, but more reliable checking method, which has been successfully used for two years. Double-T beams are used with winches at their ends for lifting the reference weights. The beams are installed on the knife edges of the weighbridge and the 500 kg reference weight are lifted by the winches, as shown in a diagram. A note from the editor says that the ratios of the lever arms must be strictly maintained, thus an identical loads acts on all arms. There is 1 diagram.

Card 1/1

ZASLAVSKIY, Ye.Ye.

Simplifying computations used in checking analytical balances.

Izv. tekhn. 20 no.2:22 F '59.

(MIRA 12:3)

(Balance--Testing)

SOV/115-59-2-11/38

9(6)  
AUTHOR:

Zaslavskiy, Ye.Ye.

TITLE:

Simplified Calculations When Checking Analytical Scales  
(Uproshcheniye raschetov pri poverke analiticheskikh  
vesov)

PERIODICAL:

Izmeritel'naya tekhnika, 1959,

Nr 2, p 22 (USSR)

ABSTRACT:

The author gives the usual formula for checking analytical scales, then presents a simplified computational formula, which results in greater accuracy of checking, as it avoids the need for expressing intermediate calculations in round figures. There are 2 formulae.

Card 1/1

GROSHIKOV, Nikolay Iosifovich, inzh.; ZASLAVSKIY, Yuriy L'vovich, inzh.;  
GORBENKO, Nikolay Iosifovich, inzh.; GORBUNOV, M.N., kand. tekhn.  
nauk, dotsent, retsenzent; SHEKHTER, V.Ya., kand. tekhn. nauk,  
red.; MOROZOVA, P.B., red. izd-va; ROZHIN, V.P., tekhn. red.

[Preparing and stamping operations in the manufacture of airplanes]  
Zagotovitel'no-shtampovochnye raboty v samoletostroenii. Moskva,  
Gos. nauchno-tekhn. izd-vo Oborongiz, 1961. 555 p. (MIRA 14:10)  
(Sheet-metal work) (Airplane industry)

ZASLAVSKIY, Yu. L.

PHASE I BOOK EXPLOITATION

SOV/5902

Groshikov, Aleksandr Ivanovich, Yuriy L'vovich Zaslavskiy, and Nikolay Iosifovich Gorbenko

Zagotovitel'no-shtampovochnyye raboty v samoletostroyeni (Pressworking Processes in Aircraft Fabrication) Moscow, Oborongiz, 1961. 555 p. Errata slip inserted. 5000 copies printed.

Reviewer: M. N. Gorbunov, Candidate of Technical Sciences, Docent; Ed.: V. Ya. Shekhter, Candidate of Technical Sciences; Ed. of Publishing House: P. B. Morozova; Tech. Ed.: V. P. Rozhin; Managing Ed.: S. D. Krasil'nikov, Engineer.

PURPOSE: This textbook is intended for students in aircraft-construction tekhnikums. It can also be useful to workers, foremen, and process engineers in aircraft fabrication.

COVERAGE: Basic information is given on pressworking processes used on aircraft, including methods of planning the manufacturing processes and the design of

Card 1/8

## Pressworking Processes (Cont.)

SOV/5902

accessories for shops making pressworked parts. The equipment, accessories, and processes used in making aircraft parts from sheet, shapes, and tube are described. Also discussed are the means for mechanization and automation of pressworking processes, particularly manual finishing operations, which account for to 30 to 60% of the labor in all pressworking operations in experimental and small-lot production. Ch. I to III were written by N. I. Gorbenko, Engineer; Ch. IV to VII, XI, XIII, and XVI, by A. I. Groshikov, Engineer; and Ch. VIII to X, XII, XV, and XVI by Ya. L. Zaslavskiy, Engineer. There are 26 references, all Soviet.

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Ch. I. Basic Information on Preparation of Aircraft Production	5
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Engineering Preparation of production	6
Planning of manufacturing processes	7

Card 2/8

1ST AND 2ND CROSS

PROCESSES AND PROPERTIES INDEX

4

Determination of iron in fine oil filters. N. V. Brusyantsev, Yu. S. Zaslavskii, and S. G. Koltypin. *Zavodskaya Lab.* 13, 408-10(1949).—Fe retained by a fine oil filter (cardboard or paper types), as a measure of engine wear, is best detd. by ashing the entire filter, slowly from 200° to 550° over 3-4 hrs., followed by 8-10 min. at 575° in a muffle. Analyze the ash for Fe conventionally. The oil which seeps, during the initial heating is decanted into a crucible and ashed separately. None of the mech. or chem. extn. methods is satisfactory. G. M. Kosolapoff

3RD AND 4TH CROSS

ASIA-ELA METALLURGICAL LITERATURE CLASSIFICATION

SECTION ONE

1100-1400-1500-1600-1700-1800-1900-2000-2100-2200-2300-2400-2500-2600-2700-2800-2900-3000-3100-3200-3300-3400-3500-3600-3700-3800-3900-4000-4100-4200-4300-4400-4500-4600-4700-4800-4900-5000-5100-5200-5300-5400-5500-5600-5700-5800-5900-6000-6100-6200-6300-6400-6500-6600-6700-6800-6900-7000-7100-7200-7300-7400-7500-7600-7700-7800-7900-8000-8100-8200-8300-8400-8500-8600-8700-8800-8900-9000-9100-9200-9300-9400-9500-9600-9700-9800-9900-10000

ZASLAVSKIY, Yu. S.

"Test Stand Method of Investigating the Deterioration of Automobile Motor Oils in Carburetor Engines with Fine-grained Oil Cleaners", p 24,

"Test Stand Method for Investigating Sediment Formation in Oil Under Low Engine Operating Temperatures", p 43, both in the Monograph "Investigation and Use of Petroleum Products", edited by N. G. Fuchkov "ostoptekhizdat, Moscow-Leningrad, 1950.



ZASLAVSKIY, Yu. S., Engineer *Cand. Technical Sci.*

"Method of Stand Tests of Autotractor Oils for Tendency to Precipitation During Reduced Operating Temperatures of the Engine." Sub 19 Oct 51, Moscow Inst of Mechanization and Electrification of Agriculture imeni V. M. Molotov

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

SO: Sum. No. 480, 9 May 55

ZASLAVSKIY, Yu.

SECRET  
This document contains information that is  
classified "SECRET" in accordance with the  
Automatic Desclassification Schedule (ADS)  
of the Executive Order on the  
Classification of Government Information.  
It is to be declassified and downgraded  
unless otherwise indicated.

KREYN, S.E.; ZASLAVSKIY, Yu.S.; VOINOV, N.P.; L'VOVA, L.A., ved.  
red.; FOLOSINA, A.S., tekhn. red.

[Lubricant and the engine] Smazochnoe maslo i dvigatel'. Mo-  
skva, Gostoptekhizdat, 1952. 198 p. (MIRA 16:7)  
(Internal combustion engines--Lubrication)

ZASLAVSKIY, Yu. S.

USSR .

Investigation of antiwear properties of lubricating oils by  
 the radiolysis method. Yu. S. Zaslavskiy, G. I.  
 Shein, and E. N. Likhachev. *Izv. Akad. Nauk S.S.S.R.*  
*Obshch. Nauk* 1953 1608-1608 — The possibility of  
 wear study on friction machine constructed at the U.S.S.R.  
 Academy of Sciences was demonstrated. Also studied was a  
 single cylinder motor with rings made radioactive Zn. The  
 radiation in the electrolysis with radioactive Zn. The  
 radiation in the electrolysis as well as qual data  
 M. Kerner

*Handwritten initials*

Translation D-178252, Nov 53

ZASLAVSKIY, Yu. S.

FD 267

USSR/Engineering

Card 1/1

Authors : Zaslavskiy, Yu. S., Shor, G. I., Lebedeva, F. B.

Title : Accuracy of testing engines for wear by the radioactive-indicator method

Periodical : Iz. Ak. Nauk SSSR, OTN, 1, 54-60, Jan 1954

Abstract : Gives method and results of experimental study of accuracy of testing engine for wear by the radioactive-indicator method. Compares results obtained by simultaneous testing of the piston ring of single-cylinder engine L-3/2 for wear by the following methods: radioactive indicators, weight of piston ring, holes stamped in ring, and iron in oil. Four references: 2 U.S.S.R.; all 1953. Graphs, tables.

Institution :

Submitted : December 23, 1953. Presented by Academician V. I. Dikushin.

2 ZASLAVSKIY, YU. S.

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, 62618

Author: Zaslavskiy, Yu. S.

Institution: None

Title: Investigation of the Wear-Inhibiting Properties of Oils and Fuels by  
Means of Radioactive Isotopes

Original  
Periodical: Sessiya AN SSSR po mirnomu ispol'zovaniyu atom. energii, 1955,  
Zasedaniya otd. tekhn. n. M., Izd-vo AN SSSR, 1955, 115-139; English  
resumé

Abstract: By means of radioactive isotopes an investigation was made of the  
wear inhibiting properties of motor oils, a study was made of the  
mechanism of action of anticorrosion additives and an evaluation was  
made of the protective action of the film formed by the additive on  
the metal. The investigation was conducted on a single cylinder,

Card 1/3

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, 62618

Abstract: 4 cycle, carburetor engine in which the top piston ring was either activated by irradiation with neutrons to  $Fe^{59}$  or use was made of rings activated by inserts of  $Zn^{65}$ . On the basis of preliminary researches the following operating conditions of the engine were chosen:  $n$  2,000 RPM;  $M_{cr}$  1.12 Kgm and temperature of cooling water  $20^{\circ}$ . Under these conditions rate of wear of the ring was: with AS-5 oil 1 mg/hour; AS-5 + 3% NAKS 0.50; SU 0.61 and SU + 2% additive "A" = 0.30. Study of the mechanism of the action of anticorrosion additives was conducted by means of the apparatus of Pinkevich using radioactive tracers at 90, 110, 140, 170, 200 and  $220^{\circ}$  with plates made from lead, red copper, lead-containing copper and "st.3" brand of steel. Use was made of MK-22 oil with 0.5% added "sulfurized oil" (S35) or with 0.5% tributyl phosphite ( $P32$ ). The data thus obtained indicate that formation of a film as a result of chemical interaction of S and P with the metal takes place differently with different combinations of metal and additive: S interacts most intensively with Cu and P with Pb. With "st.3" sulfur reacts

Card 2/3

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

APPROVED FOR RELEASE: 03/15/2001 The CIA-RDP86-00513R001963910015-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 62618

Abstract: very slightly at  $>110^{\circ}$ ; on the other hand interaction of P with "st.3" occurs more intensively at lower temperatures. The amount of the film increases at first and then becomes stabilized, and its absolute amount is then different with different metals. Temperature of the oil affects the kinetics of film formation as well as the amount of film formed on the metal. Thus rate of film formation with triphenyl phosphite increases sharply with temperature while the maximum amount of the film decreases. With increase in concentration of additive in the oil the amount of the film formed increases. Determination of radioactivity of removed microlayers of metal showed a penetration of S into the metal; depth of penetration and amount of penetrated S depending on the nature of the metal. Experiments were also carried out with irradiated steel and cast iron plates using MK-22 and MT-16 oil. Maximal corrosion occurs at  $170^{\circ}$ . Inclusion of an effective additive decreases sharply corrosion of the metal. A description is given of the procedures used in working with radioactive isotopes.

Card 3/3

ZASLAVSKIY, Yu. S.  
USSR/Engineering -- Metallography

FD-2617

Card 1/1 : Pub. 41-3/21

Author : Zaslavskiy, Yu. S. and Shor, G. I., Moscow

Title : Quantitative determination of machine parts wear by the radioactive tracer method

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 4, 43-52, Apr 1955

Abstract : Describes two methods developed by the All Union Scientific Research Institute of Petroleum for the quantitative determination of the wear of friction surfaces in machines. One method consists of the removal of oil specimens from the machine, the measurement of their radioactivity, and their reinsertion back into the machine. In the other method a meter is inserted into the oil circuit of the machine. Presents a description of a meter for the automatic, continuous registration of radioactivity in the circulating oil. Develops a method for the rapid evaluation of fuel and lubricant quality on engine wear. Graphs, tables, diagrams of equipment. Fifteen references, 6 USSR.

Institution :

Submitted : December 12, 1954



USSR/ Chemistry - Physical Chemistry

Card 1/1

Author

Title

Periodical : Zhur

Abstract

Institution :

Submitted : January 11, 1955

7  
USSR/Engineering - Auto engines

Date

Particular

advantages of the test stand running-in

Institution

Submitted : .....

*ZASLAVSKIY, Yu. S.*

Ispol'zvaniye Atomnoy Energii v Neftyanoy Promyshlennosti (Use of Atomic Energy in the Petroleum Industry), by Yu. S. Zaslavskiy and G. I. Shor, Moscow, Gostoptekhizdat, 1956, 88 pp (from a standard CARD of the USSR State Library imeni V. I. Lenin, No 6P1.6 + 6P7.43)

"Problems of utilizing the achievements of nuclear physics in the petroleum industry are discussed as follows: exploration, prospecting, and development of petroleum fields; processing, transport, storage, and properties of petroleum products. List of references follows each section of the book. Written for engineering and technical workers in all branches of the petroleum industry and readers interested in peaceful uses of atomic energy." (U)

*Sum in 1467*

ZASLAVSKIY, Yu. S.

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 2, 1 957, 5590

Author: Zaslavskiy, Yu. S., Shneyerova, R. N., Shor, G. I.

Institution: ~~None~~

Title: Radiochemical Method for the Investigation of the Stability of Solutions of Additives in Lubricant Oils

Original  
Publication: Zavod. laboratoriya, 1956, No 4, 417-418

Abstract: Description of the procedure of determining the stability of solutions of oil additives, by the use of radioactive isotopes emitting beta-radiation. According to the procedure that has been developed, an investigation was made of the effect of addition of water on the stability of a solution of the additive AzNII-4 in various oils. In the presence of 20% water in the oil the stability of the solution of the additive is decreased.

Card 1/1

VINOGRADOV, G.V.; KUSAKOV, M.M.; SANIN, P.I.; ZASLAVSKIY, Yu.S.; RAZUMOVSKAYA,  
E.A.; UL'YANOVA, A.V.; RYABOVA, D.V.

Use of radioactive indicators in studying the action of organic  
thiophosphoric additives in oils. Khim.i tekhn. topl.no.6:14-20  
Je '56. (MIRA 9:9)

1. Institut nefti AN SSSR.

(Oils) (Radioactive tracers--Industrial applications)

ZASLAVSKIY, Yu. S.

"Present and Possible Future Utilization of Radioactive Isotopes in Petroleum Refining, as Well as in the Transportation and Storage of Crude Petroleum and Petroleum Products," Utilization of Radioactive Isotopes & Emanations in the Petroleum Industry (Symposium), Min. Petroleum Industry USSR, 1957.

Results of the Joint Session of the Technical Council of Min. of the Petroleum Industry USSR and Soviet Sci. and Technical Association, Moscow 14-19 Mar 1956.

ZASLAVSKIY, Yu. S.,redaktor; ZLOTNIKOV, I.M.,redaktor; PER'KOV, N.A.redaktor;  
SHEBRODOL'SKIY, D.M.,redaktor; MARTYNOVA, M.P.,vedyushchiy  
redaktor; MUKHINA, E.A.,tehnicheskiiy redaktor

[The use of radioactive isotopes and radiation in the petroleum  
industry; proceedings of an All-Union conference] Primenenie  
radioaktivnykh izotopov i izlucheni v neftianoi promyshlennosti;  
trudy Vsesoiuznogo soveshchaniia. Moskva, Gos. nauchno-tekhn.  
izd-vo nefti i gorno-toplivnoi lit-ry, 1957. 239 p.(MLRA 10:5)  
(Radioisotopes--Industrial applications)  
(Petroleum engineering)

ZASLAVSKIY, Yu. S.

Study and Use of Petroleum Products, ~~Sci~~ Moscow, Gostoptekhnizdat, 1957, 213pp

Serov, A.V. The Basis for Methods of Short-term Tests for Evaluating the Wear-resistant Properties of Diesel Oils 46

In this article the author cites methods of evaluating wear-resistant properties of diesel oils on the basis of several considerations which are discussed at length. It is stated that determination of motor wear according to the amount of iron dissolved in the lubricating oil is quite possible. It is concluded that the basic factors determining the rate of motor wear are the rotational speed of the crankshaft, motor load, and temperature, although the influence of the latter is apparently less noticeable in diesels than in carburetor motors. There are 7 figures, 4 tables and 7 Soviet references.

## II. INVESTIGATION OF PETROLEUM PRODUCTS

Zaslavskiy, Yu. S.; Shor, G.I.; Kirillov, I.G.; Lebedeva, F.B.; Yevstigneyev, Ye. V.; and Zlobin, O.A. The Application of

Card <sup>1/3</sup> ~~5/57~~

This collection of articles gives results of sci. res. work of All-Union Sci. Res. Inst. for the Processing of Petroleum and Gas for Production of Synthetic Liquid Fuel.



Study and Use of Petroleum Products 917

Radioactive Indicators (Tagged Atoms) in the Investigation of  
Wear-resistant Properties of Lubricating Oils 58

The purpose of this investigation was to establish a rapid method of evaluating wear-resistant properties of lubricating oils by the use of radioactive isotopes. A motor part was exposed to an isotope, e.g., Co. <sup>60</sup>, and wear was measured by measuring the radiation intensity of the lubricating oil with a counter tube. A structural scheme is given for an automatic apparatus which will continuously record the radioactivity of circulating oil (thereby making "visible" the wear on components as it fluctuates with changing test conditions). There are 17 figures, 6 tables and 32 references, of which 11 are Soviet and 21 English.

Zaslavskiy, Yu. S.; Kreyn, S.E.; Shneyerova, R.N.; and Shor,  
G.I.. Radiochemical Investigation of the Action of Oil  
Additives 85

Card <sup>2/3</sup>~~6/17~~

## Study and Use of Petroleum Products

917

This investigation concerned the capacity of additives to demonstrate an inhibiting action on oil during the operative process (i.e., to ensure an antioxidizing effect), or the capacity to prevent the catalytic influence of surface metal on the oxidation of oil. It was found that the protective coating, once having formed, later begins to decompose and erode, and is eventually washed off the metal surface completely; retardation of corrosion, therefore, is most effective during the formation of the protective coating. Engineers A.I. Kuznetsova, I.A. Morozova; Technicians M.B. Koziyenko, N.M. Avdeyeva,; and laboratory assistants P.I. Shishova and N.V. Dmitriyeva participated in the work. There are 16 figures, 1 table, and 14 references, of which 12 are Soviet and 2 English.

Zaslavskiy, Yu. S.; Shneyerova, R.N.; Shor, G.I.; and Kuznetsova, A.I. Radiochemical Investigation of the Stability of Solutions of Additives in Oils

107

This investigation was made because of need for additives that will not precipitate from oil under influence of various factors.

Card ~~7/17~~

3/3

ZASLAVSKIY, Yu.S.

USSR/Chemical Technology - Chemical Products and Their Application. Treatment of Natural Gases and Petroleum. Motor and Jet Fuels. Lubricants. I-8

- Abs Jour : Ref Zhur - Khimiya, No 1, 1958, 2514
- Author : Zaslavskiy, Yu.S.
- Inst : -
- Title : Present State and Prospects of the Utilization of Radioactive Isotopes in Processing, Transportation, Storage and Use of Petroleum and Petroleum Products.
- Orig Pub : Sb.: Primeneniye radioaktivnykh izotopov i izlucheniya v neft. prom-sti. M., Gostoptekhizdat, 1957, 84-99
- Abstract : A review. Bibliography 13 references.

Card 1/1

*ZHIVSAL Yu.S.*

ZASLAVSKIY, Yu.S.; SHOR, G.I.; KIRILLOV, I.G.; LEBEDEVA, F.B.; YEVSTIGNEYEV,  
Ye.V.; ZLOBIN, O.A.

Using radioactive tracers (tagged atoms) for studying wear  
properties of lubricants. Trudy VNIIP no.6:58-84 '57. (MIRA 10:10)  
(Lubrication and lubricants) (Radioactive tracers)

ZASLAVSKIY, Yu.S.; KREYN, S.E.; SHNEYIROVA, R.N.; SHOR, G.I.

Radiochemical study of the mechanism of action of additives for  
oils. Trudy VNII NP no.6:85-106 '57. (MIRA 10:10)  
(Lubrication and lubricants) (Corrosion and anticorrosives)

ZASLAVSKIY, Yu.S.; SHNEYEROVA, R.N.; SHOR, G.I.; KUZNETSOVA, A.I.

Radiochemical analysis of the stability of additives in oil.  
Trudy VNI NP no.6:107-116 '57. (MIRA 10:10)  
(Lubrication and lubricants) (Radioactive tracers)

*Zaslavskiy, Yu. S.*  
ZASLAVSKIY, Yu. S.; SHOR, G.I.

Radiochemical investigation of the action of additives for reducing  
corrosive wear in motor cylinders and pistons. Khim. i tekhn. topl.  
i masel no.9:41-49 S '57. (MIRA 10:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefi  
i gaza i polucheniyu iskusstvennogo zhidkogo topliva.  
(Corrosion and anticorrosives) (Radiochemistry)  
(Lubrication and lubricants)

ZASLAVSKIY, Yu.

AKHROMENKOV, A.A.; ZASLAVSKIY, Yu.S.; VARGIN, A.A.; KORNIYAYEV, A.H.; LAPIN,  
V.P.

Controlling consecutive pumping of petroleum and petroleum products  
through pipelines by use of gamma-densitometer. Neft. khoz. 35 no.12:  
60-61 D '57. (MIRA 11:2)

(Petroleum--Transportation)  
(Gamma rays--Industrial application)



ZASLAVSKIY, Yu.S., kand. tekhn. nauk; KREYN, S.E., doktor tekhn. nauk.

Radioactive isotopes in the oil industry. Priroda 46 no.8:35-44 Ag  
'57. (MIRA 10:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke  
nefti i gaza i polucheniyu iskusstvennogo zhidkogo topliva, Moskva.  
(Petroleum industry) (Radioisotopes--Industrial applications)

ZASLAVSKIY, Yu., SHOR, G. and SHNEYEROVA, R.

"Researches into the Mechanism of Protection of Friction Surfaces from Corrosive Wear."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sep 58.

2 AS LAVSKIY, Yu. S.

21(6)

Vsesoyuznyy nauchno-issledovatel'skiy tsentr po fiziko-khimicheskoy i stroitel'noy kibernetike i inzheneriy v mashinostroyeniye i avtomaticheskoy upravleniyu, Moskva, 1971.

Trudy... Nauchno-issledovatel'skiy tsentr po fiziko-khimicheskoy i stroitel'noy kibernetike i inzheneriy v mashinostroyeniye i avtomaticheskoy upravleniyu, Moskva, izdanie 11, 1971, 388 p. 4,500 copies printed.

Sponsoring Agencies: USSR, Glavnoye upravleniye po izobrazovaniyu i nauchnoy energii, and Akademiya nauk SSSR.

Editorial Board of Acts: V.I. Dikubich, Academician (Resp. Ed.), N.M. Shumilovskiy (Deputy Resp. Ed.), Yu. S. Zaslavskiy (Deputy Resp. Ed.), L.I. Tetschenko, B.I. Verkhovskiy, S.P. Krikorov, L.I. Petrovskiy and M.G. Zeleninskaya (Secretary).

Ed. of Publishing House: P.M. Belyuzina; Tech. Ed.: P.P. Polonskaya. PURPOSE: This book is intended for specialists in the field of machine and instrument manufacture who use radioactive isotopes in the study of materials and processes.

COVERAGE: This collection of papers covers a very wide field of the application of tracer methods in industrial research and control technology. The main part of this volume is the use of radioisotopes in the machine- and process-control industry. The individual papers discuss the applications of radioisotopes in the study of metals and alloys, problems of friction and lubrication, metal cutting, engine performance, and defects in metal fabrication. Several papers are devoted to the use of radioisotopes in the automation of industrial processes, recording and measuring devices, quality control, flowmeters, level gauges, safety devices, radiation counters, etc. These papers represent contributions of various Soviet institutes and laboratories. They were published as Translations of the All-Union Conference on the Use of Radioisotopes and Stable Isotopes and Radiation in the National Economy and Science, April 8-12, 1971. No personalities are mentioned. References are given at the end of most of the papers.

Mikhail, M.D. (Central'nyy nauchno-issledovatel'skiy tsentr po fiziko-khimicheskoy i stroitel'noy kibernetike i inzheneriy v mashinostroyeniye i avtomaticheskoy upravleniyu, Moskva). Effect of the Number of Revolutions and Maximum Cycle Pressure on the Wear of Upper Piston Ring and Cylinder Sleeve in Diesels 43

Mironish, A.I. (Nauchno-issledovatel'skiy tsentr po fiziko-khimicheskoy i stroitel'noy kibernetike i inzheneriy v mashinostroyeniye i avtomaticheskoy upravleniyu, Moskva). Study of the Effect of Dust on the Wear of Parts of Tractor Engines 47

Zaslavskiy, Yu.S., G.I. Rhoz, and I.A. Korozova (VNIi po perevalivaniyu i gazu i polucheniyu izdelatsevmogo zhidkogo topliva - All-Union Scientific Research Institute for the Processing of Petroleum and Gas and the Production of Synthetic Liquid Fuel). Reduction of the Low-Temperature Wear of Cylinder-Piston Units in Engines by the Use of Oil Additives 58

Zaslavskiy, Yu.S., S.E. Krain, R.M. Shcherbatskiy, and G.I. Sheer (VNIi po perevalivaniyu i gazu i polucheniyu izdelatsevmogo zhidkogo topliva - All-Union Scientific Research Institute for the Processing of Petroleum and Gas and the Production of Synthetic Liquid Fuel). Study of the Mechanism of the Action of Antiseize-ive Oil Additives 64

Kuznetsov, M.M., G.Y. Vinogradov, E.A. Kuznetsovskiy, E.I. Manin, and A.V. Lyubovskiy (Institut nafti AN SSSR - Petroleum Institute, Academy of Sciences, USSR). Study of the Mechanism of the Action of Oil Additives with Metals 67

Studenitsa, Ya.Ya. (Vsesoyuznyy nauchno-issledovatel'skiy tsentr po fiziko-khimicheskoy i stroitel'noy kibernetike i inzheneriy v mashinostroyeniye i avtomaticheskoy upravleniyu, Moskva). Study of the Wear of Gears in Mining Machinery 73

U

ZASLAVSKIY, G. I., S.

SOV/5555

PHASE I BOOK EXPLANATION

Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh. 34, 1958.

Oldrodinamicheskiy teoriya treniya. Ocherk teorii treniya. Smazka i smazochnyye materialy (Hydrodynamic Theory of Lubrication. Slip Bearings. Lubrication and Lubricant Materials) Moscow. Izd-vo AN SSSR, 1958. Kratka slip inserted. 3,800 copies printed. (Series: Ika. Trudy, v. 3)

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Resp. Ed. for the Section "Hydrodynamic Theory of Lubrication and Slip Bearings": Ye. M. Gut'yar, Professor, Doctor of Technical Sciences, and A. K. D'yachkov, Professor, Doctor of Technical Sciences; Resp. Ed. for the Section "Lubrication and Lubricant Materials": G. V. Vinogradov, Professor, Doctor of Chemical Sciences; Ed. of Publishing House: K. M. Alekhanov; Tech. Ed.: O. M. Gus'kova.

PURPOSE: This collection of articles is intended for practicing engineers and research scientists.

COVERAGE: The collection, published by the Institut mashinovedeniya AN SSSR (Institute of Science of Machines and Sciences USSR) contains papers presented at the Vsesoyuznaya konferentsiya po treniyu i iznosu v mashinakh (Third All-Union Conference on Friction and Wear in Machines) which was held April 9-13, 1958. Problems discussed were in Hydrodynamic Theory of Lubrication and

Use of Lubricant Materials

Koleznikov, A. I. Special Features of the Behavior of Plastic Lubricants in Roller Bearings	291
Kuznetsov, Ye. S. On a Rational Regime for Lubricating Automobiles Through Pressure Lubricators	299
Lebedev, V. G., M. E. Stepanov, and V. A. Derzhavlenko. Selection of Lubricant Materials for Reduction Gears Operating Under Low-Temperature Conditions	306
Lebedev, S. A. (deceased), and M. A. Geiger'nyy. Wear of Components With Various Methods of Changing the Oil in the Lubrication System of an Automobile Engine	313
Semenko, Ye. G., and V. I. Sharapov. Oils Produced by a New Method, and Their Effect on the Wear of Engines	321
Smolovskiy, I. A., and A. S. Lozar'. Investigation of the Wear of the Components of Automobile Engines Operating With Various Oils	328
El'ovitch, I. I. Theoretical Foundations of the Requirements for the Operational Qualities of Oils Used in Internal-Combustion Engines	338
Chemical Composition and Operational Lubrication Materials	
Drushinina, A. V. Reduction of Wear in Engines Operating on Sulphurous Diesel Oil by Means of Alkaline Additives	344
Zaslavskiy, G. I., G. Y. Shor, and E. M. Shneyarova. Mechanisms of Wear of Lubricating Surfaces from Corrosion Wear With the Aid of Additives to the Oils	348
Kuz'min, S. E., and G. F. Yevdokimov. Oils of Optimal Chemical Composition Groups	356

ZASLAVSKIY, Yu.S.

Present state of knowledge of the application of radioisotopes  
and in radioactivity processing petroleum products. Khim.  
i tekhn. i masel 4 no.1:5-15 Ja '59. (MIRA 12:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut neftyanoy  
promyshlennosti.  
(Radioisotopes--Industrial applications) (Petroleum products)

ZASLAVSKIY, Yu.S.; SHOR, G.I.; MONASTYRSKIY, V.N.

Neutralizing action of anticorrosive additives in motor oils.  
Khim.i tekhn. topl.i masel 4 no.2:51-56 F '59. (MIRA 12:2)  
(Lubrication and lubricants--Additives)

5-1) 18.9300

66188

AUTHORS: Zaslavskiy, Yu. S., Shor, G. I.,  
Shneyerova, R. N.

SOV/20-128-5-42/67

TITLE: Mechanism of the Destruction of Protective Films Formed by  
Anticorrosive Admixtures

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 128, Nr 5, pp 1010 - 1011,  
(USSR)

ABSTRACT: The authors investigated this mechanism of chemical destruction  
so far unknown which limits the service life of the admixtures  
as lubricating oils in the engine. The problem in question is  
the protection of the bearing bush in combustion engines a-  
gainst corrosion caused by the oxidation products of the lu-  
bricating oil. The authors used the Pinkevich apparatus (GOST  
5162-49) and a radiometric method worked out already earlier  
(Ref 2). Film destruction was investigated on the surface of  
lead. Lead plates were put into Mt-16 oil. In the first case,  
2.8% of diphenyl sulphide labeled with S<sup>35</sup> and C<sup>14</sup>, and 0.066%  
of stearic acid were introduced into that oil; in the second  
case, the same amount of nonlabeled admixture and 0.05% of tri-  
decanoic acid labeled with C<sup>14</sup> were introduced. Figure 1 shows

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Mechanism of the Destruction of Protective Films Formed by Anticorrosive Admixtures SOV/20-128-5-42/67

the experimental results at 140°C. It appears that there is a synchronism in the formation and destruction of the film. It may be assumed that the synchronism of the vanishing of the acid together with the radicals of the admixture from the lead surface is related to the fact that the acid formed the metal-admixture complex by solvation due to its polarity. Thereby the acid carries over the radicals - because sulphur is more strongly bound to the metal than to the radicals - and disappears with them from the surface. The synchronism of the vanishing of the film formed by the acid and the film observed from sulphur radiation seems to be related to the chemical interaction of the acid with lead sulphide (it takes place after destruction of the complex of the admixture with the metal, i.e. with formation of a lead salt soluble in oil (Refs 1,3,4)). Reaction diagrams of formation and destruction of the protective film on the lead surface are given. Vanishing of the acid and radicals of the admixture in experiments with a phosphorus-containing admixture also showed synchronism (Fig 2). In this case, however, the film caused by the acid and the radicals of the admixture disappear completely and simultaneously. The acid

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Mechanism of the Destruction of Protective Films Formed  
by Anticorrosive Admixtures

66188

SOV/20-128-5-42/67

seems not to react with the lead phosphide formed in the destruction of the admixture complex with metal due to solvation. This may explain why phosphorus remains on the lead surface so long after the radicals of the admixture have disappeared (Ref 4). There are 2 figures and 4 references, 2 of which are Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut po pererabotke nefti i gaza i poluoheniyu iskusstvennogo zhidkogo topliva

(All-Union Scientific Research Institute for Petroleum and Natural Gas Refining and the Production of Synthetic Liquid Fuels)

PRESENTED: May 18, 1959, by V. I. Dikushin, Academician

SUBMITTED: May 18, 1959

Card 3/3

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82502  
S/065/60/000/009/001/003  
E194/E184

AUTHORS:

Zaslavskiy, Yu.S., Shor, G.I., Monastyrskiy, V.N., and  
Kaznikov, V.D.

TITLE:

The Effects of Suppression of Functional Activity when  
the Components of Oil Additives are Mixed

PERIODICAL:

Khimiya i tekhnologiya topliv i masel, 1960, No 9,  
pp 51-57

TEXT:

Engine oil additives often contain components with  
different functions such as neutralising, wetting, "anti-corrosion"  
etc. Tests have shown that a combination of a neutralising  
component with a protective one gives less engine wear than does the  
neutralising component alone with the same total metal content in  
the oil. However, in many cases mixing of additives has resulted in  
loss of some of their effectiveness. For example, on mixing  
additives VNII-NP-350 (barium alkylphenolate), TsiATIM-339 (barium  
disulphide alkylphenolate) and VNII-NP-360 (barium alkylphenolate  
mixed with zinc dialkyldithiophosphate) suppression of functional  
activity is observed as will be seen from the test results plotted  
in Fig 1. This shows results of determinations of the duration of  
neutralisation of corrosive wear of radioactive sliding parts in a

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82502

S/065/60/000/009/001/003

E194/E184

The Effects of Suppression of Functional Activity when the Components of Oil Additives are Mixed

laboratory rig in corrosive acid vapours as function of the barium concentration in oil grade AS-9.5 NKZ. The duration of neutralisation is a linear function of the metal content. Ash determinations on the used oil showed that the tests depleted all the barium in each of the three additives but, with equal initial barium contents in the oil, additive VNII-NP-350 gave much longer neutralisation time than additive TsIATIM-339 and VNII NP-360. This is presumably because the barium in the last two additives was expended not only in neutralising the corrosive acid but also in reacting with other components of the additives, probably those containing sulphur. To verify this, tests were made with specially synthesized additives containing various amounts and kinds of sulphur compounds, as shown in Fig 1. These additives were blended with oil grade AS-9.5 NKZ to constant barium content: the test results are given in Table 1 and Figs 2 and 3, which show the duration of effective neutralisation and the angle of slope of the wear curve of radioactive components after neutralisation, as functions of the sulphur content in the oil for various additives. It will be seen that the neutralising action of barium alkylphenolate varies

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inversely as the sulphur content of the additive. The different effects of the various sulphur compounds used in the tests are described. It is considered that in some cases the sulphur compounds can easily be split off when the additive is attacked by acid and that the free sulphur evolved interacts with the barium ions to form barium sulphide, so reducing the barium available for neutralisation of acids. The formation of barium sulphide is confirmed by the high rate of wear after effective neutralisation. However, when sulphurised oil is used it may form a protective film after the barium additive is used up, so reducing wear. Interaction between additive components alters the electrical conductivity of oil containing these components as compared with that of the same oil containing each component separately. Fig 4 shows a graph of the electrical conductivity of oil grade AS-9.5 NKZ containing 5% barium alkylphenolate as function of the sulphur content of the blend when sulphurised oil is added to it. The direct current conductivity was measured at a temperature of 100 °C with a microammeter. It will be seen that adding sulphur reduces the conductivity and the curve

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corresponds closely to that of reduction in duration of neutralising effect. Interaction of components with suppression of neutralising effect was also observed on mixing barium alkylphenolate and basic calcium sulphonate with dialkyldithiophosphate, and here too correspondence was observed between the decrease in electrical conductivity and that of duration of neutralising effect. The results of duration of neutralising effect tests given in Table 1 were compared with hundred hour engine tests using a type D-35 engine; see Table 2. The engine test conditions are stated; the fuel contained 1% sulphur. It will be seen that the minimum wear obtained with barium alkylphenolate additive results from the more effective neutralisation. The high barium and low iron content of the deposits is evidence of greater use of barium for neutralisation. Tests with other additives revealed similar correlation between engine tests and those of duration of neutralising effect. Similar correlation was observed in tests on used oil. Fig 5 shows graphs of the change in neutralising effectiveness of oil DS-11 plus additives as function of the operating time of the oil in a diesel

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engine type D-38. It will be seen that the difference in neutralising effectiveness of different oils initially containing equal quantities of barium is mainly due to the dialkyldithio-phosphate components which remain in the oil throughout the engine tests. The results of engine tests given in Table 3 show that increased wear of piston rings associated with suppression of the neutralising effect of barium alkylphenolate by dialkyldithio-phosphate components is accompanied by appreciable reduction in deposits, particularly on pistons. Apparently it is often necessary to use mixtures of additive components which give satisfactory wetting action with some impairment of neutralisation and so of anti-wear properties. However, it would be better to select the additive components in such a way that such interaction is absent. There are 5 figures, 3 tables and 7 references: 4 Soviet and 3 English.

ASSOCIATION: VNII NP

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S/069/60/022/005/000/011  
B015/B064

AUTHORS: Zaslavskiy, Yu. S., Shor, G. I., and Morozova, I. A.

TITLE: Investigation of Electrokinetic Processes and Sedimentation  
in Disperse Systems by the Method of Radioactive Indicators 19

PERIODICAL: Kolloidnyy zhurnal, 1960, Vol. 22, No. 5, pp. 593-598

TEXT: A "radioindicator" method of studying electrokinetic processes related to the action of "dispersive" admixtures to motor oils is described here. Two beta counters are used simultaneously as counters and as electrodes (forming an electric field), as well as for recording the shift of the tagged disperse phase. Carbon black tagged with  $Tl^{204}$  was dispersed in motor oil of the type AC-5 (AS-5) and the admixtures ВННН НП-354 and -353 (VNII NP-354 and -353) (dialkyldithiophosphates), ПМС-19 (PMS-19) (calcium sulfonate with 17.0% ash content produced by V. N. Monastyrskiy and T. K. Aval'yani), ПМС-19 + barium alkyl phenolate, ЦИАТИМ-339 (TsIATIM-339) (barium disulfide alkyl phenolate) were tested. The device used (Fig. 1) contains two beta counters of the type Т-25 БФЛ (T-25 BFL), arranged one above other, and connected to a radiometric

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Investigation of Electrokinetic Processes  
and Sedimentation in Disperse Systems by the  
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apparatus of the "Bambu" type (with electronic potentiometers of the types ЭПП-09 (EPP-09) and ПС-1 (PS-1), as well as БСМ(VSM) rectifiers). The upper counter measures the sedimentation rate under the action of the electric field, i.e., the intensity of electrophoresis, while the lower one measures sedimentation with and without electric field. Calcium sulfonate was found to be adsorbed on the surface of the carbon black particles and to give them a positive charge. The deflocculating effect of PMS-19 sulfonate is apparently due to a molecular adsorption in which the negative charge of the sulfonate molecules is directed toward the colloid particles, and the positive charge toward the oil. Addition of PMS-19 sulfonate in any concentration caused the migration of carbon black to the cathode, while in the presence of TsIATIM-339 phenolate carbon black migrated to the cathode only. In the two thiophosphate admixtures, the carbon-black charge depends on the concentration of the admixture (Fig. 4). There are 4 figures and 6 references: 5 Soviet, 1 US, 2 French, and 1 Dutch.

ASSOCIATION: Nauchno-issledovatel'skiy institut po pererabotke nefi i gaza i polucheniyu iskusstvennogo zhidkogo topliva, Moskva  
Card 2/3 (Scientific Research Institute of Petroleum and Gas



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and Sedimentation in Disperse Systems by the  
Method of Radioactive Indicators

S/069/60/022/005/008/011  
B015/B064

Processing and the Production of Artificial Liquid Fuel,  
Moscow)

SUBMITTED: August 11, 1959

X

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ZASLAVSKIY, Yuriy Semenovich; TARAKANOVA, A.A., red.; PCHELINTSEVA, G.M.,  
red.; VLASOVA, N.A., tekhn. red.

[Radiation resistance of lubricants] Radiatsionnaya stoikost' smazochnykh materialov. Moskva, Gos.izd-vo lit-ry v oblasti atomnoi nauki i tekhniki, 1961. 158 p. (MIRA 14:12)  
(Lubrication and lubricants) (Materials, Effect of radiation on)

ZASLAVSKIY, V.U.S.

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PHASE I BOOK EXPLOITATION

BOV/5486

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniy v narodnoye khozyaystvo SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy soveshchaniya v 4 tomakh. t. 1: Obshchiye voprosy primeneniya izotopov, pribory i istochnikami radioaktivnykh izlucheniy, radiatsionnaya khimiya, khimicheskaya i neftopererabatyvayushchaya promyshlennost' (Radioactive Isotopes and Nuclear Radiations in the National Economy of the USSR; Transactions of the Symposium in 4 Volumes. v. 1: General Problems in the Utilization of Isotopes; Instruments With Sources of Radioactive Radiation; Radiation Chemistry; the Chemical and Petroleum Refining Industry) Moscow, Gostoptekhizdat, 1961. 340 p. 4,140 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR, and Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'sovaniyu atomnoy energii.

Ed. (Title page): N.A. Petrov, L.I. Petrenko and P.S. Savitskiy; Eds. of this Vol.: L.I. Petrenko, P.S. Savitskiy, V.I. Sinitzin, Ya. M. Kolotyrgan, N.P. Syrkus and R.F. Romm; Executive Eds.: Ye. S. Levina and B. F. Titskaya; Tech. Ed.: E.A. Mukhina.

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Radioactive Isotopes (Cont.)

SOV/5486

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**PURPOSE:** The book is intended for technical personnel concerned with problems of application of radioactive isotopes and nuclear radiation in all branches of the Soviet economy.

**COVERAGE:** An All-Union Conference on problems in the introduction of radioactive isotopes and nuclear radiation into the national economy of the Soviet Union took place in Riga on 12-16 April 1960. The Conference was sponsored by: the Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific and Technical Committee of the Council of Ministers, USSR); Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for the Utilization of Atomic Energy of the Council of Ministers, USSR); Academy of Sciences, USSR; Gosplan USSR; Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers, USSR, for Automation and Machine Building) and the Council of Ministers of the Latvian SSR. The transactions of this Conference are published in four volumes. Volume I contains articles on the following subjects: the general problems of the Conference topics; the state and prospects of development of radiation chemistry; and results and prospects of applying radioactive isotopes and nuclear radiation in the petroleum refining and chemical industries. Problems of designing and manufacturing instruments which contain sources of radioactive radiation and are used for checking and automation of technological processes are examined, along with problems of accident prevention in their use. No personalities are mentioned. References accompany some of the articles.

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Radioactive Isotopes (Cont.)

807/5486

Romm, R.F. Application of Radioactive Isotopes for Checking  
Chemical Processes

302

Shelyubskiy, V.I. Checking the Homogeneity of the Charge by  
[Its] Natural Radioactivity

313

Veksler, M.A. Prospect of Implementation of Certain Level  
Indicators and [Other] Indicators Utilizing Radioactive  
Radiation in the Organic Synthesis Industry

318

Zaslavskiy, Yu. S., and G.I. Shor. Radioindicating Checking of  
Operational Properties of Admixtures to Oils

329

AVAILABLE: Library of Congress

Card 12/12

JP/dfk/mas  
9-13-61

ZASLAVSKIY, YU.S., SHOR, G.I.

Mechanismus der Dispersionswirkung von Motorenolzusätzen Trotz.

Report to be submitted for the Symposium Lubricants and  
Lubrication, Dresden, 27-30 June 1961

L 20322-63

EPF(c)/EWP(q)/EWI(m)/EWP(b)/BDS

AFFTC/ASD/APGC

Pr-4

BW/WW/

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ACCESSION NR: AT3001986

DJ/JD

S/2664/61/000/000/0168/0173

AUTHORS: Zaslavskiy, Yu.S.; Shor, G.I.; Shneyerova, R.N.

X  
B

TITLE: The mechanism of the action of additives. On the mechanism of the action of some types of additives for lubricants (detergent, corrosion-inhibiting, and antiseizure additives).

SOURCE: Prisdaki k' maslam i toplivam; trudy nauchno-tekhnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 168-173.

TOPIC TAGS: lubricant, lubrication, oil, additive, detergent, corrosion, inhibitor, inhibiting, anticorrosion, seizure, antiseizure, aggressiveness, corrosional, friction, wear, antiwear, radioactive tracer, mixed, ionic, absorption.

ABSTRACT: The paper provides a literature survey of the mechanism of detergent, corrosion-inhibiting, and seizure-preventing additives. Approximately one-half of the sources cited are by the authors and other coauthors. The paper summarizes the RUM-1 tests with radioactive matched parts for the precision measurement of corrosion and wear. It refers to studies by the authors on the deterioration of the functional effectiveness of mixed additives. 100-hour test data on the D-38 engine show the change in the neutralizing effectiveness in the oils with operational time. The report mentions the findings on the especially high effectiveness of protective

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additives that form complex compounds with the metal to be protected. It mentions studies in which the loss in corrosion-inhibiting effectiveness is shown to be attributable to the solvational removal of the radicals of the additive by acids. It cites the conclusion that the greatest effectiveness of antiseizure additives depends not only on the selection of suitable chemical compounds that combine an antiseizure effect with a minimal corrosional activity but on a selection of 2-component additives that comprise a combination of the most effective antiseizure and anticorrosion components. The paper describes the radiometric determination of the corrosive aggressiveness of an oil in combination with an evaluation of its antiseizure properties on an ordinary 4-ball VNI NP wear tester. A description is given of the radioactive-tracer method for the investigation of the electrokinetic processes that provide data on the mechanism of the detergent action of some additives introduced into engine oils. It is postulated, in conclusion, that the mechanism of the action of some detergent additives depends on the micellar structure of solutions of these additives in oils and the capability of the micelles (colloidal ions) to render the soot particles soluble, whereas the mechanism of the effectiveness of other additives depends on their capability to dissociate in oils and effect an ionic absorption on soot particles and metallic surfaces. Orig. art. has 3 figures and 3 tables.

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EPF(c)/EAT(m)/BDS

AFFTC/AFGC

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BN/HH/DJ

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ACCESSION NR: AT3001998

S/2364/61/000/000/0264/0269

**AUTHORS:** Zaslavskiy, Yu. S.; Shor, G. I.; Shneyerova, R. N.; Lebedeva, F. B.;  
Morozova, I. A.; Ryabova, D. V.; Stukin, A. D.; Yevstigneyev, Ye. V.; Yurchenko,  
P. F.; Nizhnik, V. Ya.

**TITLE:** Methods of investigation of the effectiveness of additives. Radioactive-tracer methods for the investigation of the functional properties of oils with additives.

**SOURCE:** Prisdaki k maslam i toplivam; trudy nauchno-tekhnicheskogo soveshchaniya. Moscow, Gostoptekhizdat, 1961, 264-269.

**TOPIC TAGS:** lubricant, lubrication, additive, radioactive, tracer, test, isotope, tagging, tagged, electrophoresis, dispersion, soot, detergent, varnish, wear, antiwear, seizure, antiseizure,  $Ti^{204}$ ,  $Ca^{45}$ ,  $Co^{60}$ ,  $Fe^{59}$ ,  $Ag^{110}$ , beta radiation, As-5, VNII NP-354.

**ABSTRACT:** In addition to a literature survey on the use of radioactive tracer (RAT) methods for testing of the functional and operational properties of oils with additives, the paper describes several newly developed Soviet methods: (1) The VNII NP method for the RAT study of the electrokinetic processes involved in the

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mechanism of the action of some dispersion-augmenting additives to engine oils. In this method, the RAT radiation counters are employed simultaneously as electrodes for the formation of an electrical field and for the registration of the displacements of the tagged dispersive phase. The soot that simulates the dispersive phase (oxidation products of oil and fuel combustion) was tagged by the radioactive (RA) isotope  $Tl^{204}$ . The experimental equipment is schematically portrayed and described, and a diagram of the electrophoresis of the tagged soot in AS-5 engine oil (an S-containing-crude derivative) with VNII NP-354 additive is shown (counter readings in pulses/sec vs. time in min). (2) RAT methods for the investigation of the detergent properties of oils with additives. The degree of varnish formation is measured with a method based on the measurement of the thickness of varnish film by means of its absorption of the beta-radiation of  $Co^{60}$ .  $Co^{60}(NO_3)_2$  served to activate areas on a piston which were not subject to wear. The amount of varnish film formed on the piston surface during a given testing period was evaluated with the aid of a calibrated graph that expressed the change in the intensity of radiation in units of the density of varnish film (in  $mg/dm^2$ ). Test results, comprising the amount of deposits and the amount of soot in the deposits, for AS-5 oil with various additives, are tabulated. RAT methods, developed at the VNII VP for the evaluation of the chemical activity of antiseizure additives, are based on the postulate that the most effective antiseizure additives must be those chemical

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compounds that have the greatest corrosional aggressiveness. The chemical activity of such additives was evaluated by the transfer kinetics of radioactive steel ( $Fe^{59}$ , neutron irradiated) or Cu (activated by tracer quantities of  $Ag^{110}$  in fused Cu). Tests of the radiometric determination of the chemical activity of additives are shown. Inasmuch as chemically active antiseizure additives may lead to appreciable chemical wear of friction surfaces under normal and even small loads, the VNII NP has developed a RAT method for an evaluation of the wear properties of oil with additives on a specially designed frictional-wear tester. The operative part of the machine is activated with  $Co^{60}$ . Small quantities of oil (appx.  $1\text{ cm}^3$ ) are employed; the global radioactivity of the oil is measured. Loads up to  $80\text{ kg/cm}^2$  at 1,000 rpm and oil T up to  $250^\circ\text{C}$  are attainable. Test results are graphed. Orig. art. has 5 figures and 2 tables.

ASSOCIATION: VNII NP

SUBMITTED: 00	DATE ACQ: 23Jan63	ENCL: 00
SUB CODE: FL, CH, EL	NO REF SOV: 005	OTHER: 006

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Z/011/61/018/012/002/007  
E073/E535

11.9700

**AUTHORS:** Reznikov, V.D., Zaslavskiy, Yu.S. and Shor, G.I.

**TITLE:** New method of determining the content of active neutralising additives in motor oils

**PERIODICAL:** Chemie a chemická technologie; Přehled technické a hospodářské literatury, v.18, no.12, 1961, 560, abstract Ch61-7745 (Khimiya i tekhnologiya topliv i masel, no.5, 1961, 63-66)

**TEXT:** The proposed method is based on the existence of a linear relation between the content of these additives in the oil and the degree of neutralisation of the corrosive impurities. The engine defects caused by these abrasive products are enumerated. 5 figures, 6 references.

[Abstractor's note: Complete translation.]

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