

NISHCHER, V.S.

Hydrodynamic pulse device for studying the structure of a high  
velocity current. Visti Inst. hidrol. i hidr. AN UFSR 23:47-51  
'63. (MIRA 17:12)

NISHEV, M.; KRUSTEVA, H.; DIMITROV, D.

Preparation of high-purity ammonium chloride by the wet method  
and from Bulgarian raw materials. Khim i industriia 36 no.9:  
347-350 '64.

ISHIMBAYEV, Tamerlan Veniaminovich; NIKSEVICH, Abram Samuilovich;  
KARNAUKHOV, G.T., red.

[Repair of diesel locomotive revolution regulators] Re-  
mont regulatorev chisla oborotcv teplovozyrykh dizelei.  
Moskva, Transport, 1965. 44 p. (MIRA 18:7)

NISHIRIY, V.G.; TUZOV, L.V.

Setup for fatigue bending tests of thin plane specimens. Zav.  
lab. 30 no.9:1136 '64. (MIRA 1813)

1. Petrozavodskiy gosudarstvennyy universitet.

NISHKOV, M.

NISHKOV, M. Fishery is a profitable industry. p. 29. Vol. 11, no. 12.  
Dec. 1956. KOOPERATIVNO ZEMEDELIE. Sofia, Bulgaria

SOURCE: East European Accessions List (EEAL) Vol. 6 No. 4 Apr. 1 1957

**HEBENEVICH, L.M., assistant.**

**Control of swelling of wooden bridge piles during seasonal ground  
freezing. Trudy Khab. IIF no. 7:224-235 '54. (NLR 8:1)  
(Bridges, Wooden--Foundations and piers)**

24663 NISHENWICH, N. Ya. Voprosy regionalnoy patologii. Vrachob. Delo, 1969,  
No. 8, STB. 665-72.

SO: Letopis, No. 32, 1969.

NISHNEVICH, M.Ya.

Scientific and practical problems in present bacteriology. Klin.  
med., Moskva 29 no.11:10-16 Nov 1951. (GLML 21:2)

1. Professor. 2. Of the Department of the Propedeutics of Internal  
Diseases (Head -- Prof. M. Ya. Nishnevich), Khabarovsk Medical  
Institute.



BOTSVADZE, V.L.; WISHNIANIDZE, G.S.

Work of the orthodontic room of the Tiflis Children's Stomatological  
Polyclinic in 1953-1954. Stomatologia 35 no.4:62-63 J1-Ag '56  
(MLBA 10:4)

(TIFLIS--TETH--ABNORMITIES AND DEFORMITIES)

9,3700

S/194/62/000/006/187/232  
D295/D308

AUTHORS: Kvavadze, D., Tevdorashvili, M., and Nishnianidze, K.

TITLE: The reflection of electromagnetic waves from a system consisting of a wire grid and a conducting surface

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-7-41 d (Tr. Tbilissk. un-ta, 86, 1960, 117-123)

TEXT: An experiment has been carried out for determining the reflection coefficient  $R$  of electromagnetic waves from a system consisting of a wire grid and a conducting surface for oblique incidence of the electromagnetic wave and various parameters of the grid ( $\lambda = 3.27$  cm). The grid is a periodic wire system with a period  $d$  and wire diameter  $a$ . Two cases were investigated: 1) where the  $E$  vector of the incident wave lies in the plane of the system (wire grid + conducting surface) and 2) where the  $H$  vector lies in that plane. Graphs are plotted of the reflection coefficient of electromagnetic waves as a function of the angle of incidence  $\theta$ , of the grid constant  $d$ , of the wire diameter  $a$  and of the angle of rotation  $1/2$

The reflection of electromagnetic ...

S/194/62/000/006/187/232  
D295/D308

tation of the system (wire grid + conducting surface) about the horizontal axis. The graphs given correspond to the case when the distance of the grid from the conducting surface is equal to 14 mm. The maximum relative error in the measurement of the reflection coefficient does not exceed 15 %. 11 references. [Abstracter's note: Complete translation.]

Card 2/2

NISHNIANIDZE, N. O.

NISHNIANIDZE, N. O.: "Gray rot (*Botrytis cinerea* Pers.) of citrus plants and measures to combat it". Tbilisi, 1955. Published by the Acad Sci Georgian SSR. Inst of Plant Conservation, Acad Sci Georgian SSR. (Dissertations for the degree of Candidate of Agricultural Science.)

SO: Znizhnaya Letopis' No. 50 10 December 1955. Moscow.

CHANTURIYA, M.M.; NISHNANIDZE, N.G.

Testing new fungicides against apple powdery mildew. Scob. AN  
Grus. SSR 35 no.3:669-674 S '64.

(MIPA 17:11)

1. Gruzinskiy institut zashchity rasteniy. Predstavleno akade-  
mikom L.A. Kanchaveli.

SECRET

REGISTRATION NR: AP5016427

UN/0251/65/038/003/0651/0652

AUTHOR: Gogenava, G. V.; Nishnianidze, N. G.; Selinshvili, O. N.;  
Kobalidze, T. A.

TITLE: Effect of chemical protective agents on growth and  
development of citrus plants and on the content of their fruits

ORIGIN: AN GruzSSR. Soobshcheniya, v. 38, no. 3, 1965, 651-652

KEY TAGS: insecticide, fungicide, plant growth, horticulture

ABSTRACT: The article represents a brief resume of literature data  
and experiments on the effects of various specific fungicides (FOMED  
and others), insecticides and acaricides (Akaromol, Taranolion,  
and others) on citrus plants. As a result of the use of chemical agents,  
vegetation starts 1 to 2 days earlier, flowering of plants starts  
3 to 4 days earlier, and fruits mature 2 to 3 days earlier. Growth  
intensity of runners and fruits increases. Fruit yields are almost  
doubled, and the quality of tangerines, oranges, and lemons is  
improved. However, there is found to be no difference between the  
experimental, standard, and control variants in respect to chemical

Card 1/2

L 54445-55

ACCESSION NR: AP5016h27

analysis of fruit pulp and physical chemical indices of the aromatic

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: LB

REF SERV: 003

OTHER: 000

NISHNIAIDZE, O.A.; TABAGARI, I.S.

Pharmaceutical service on the 40th anniversary of the establishment  
of Soviet rule in Georgia. Apt. delo IO no.3:9-13 My-Je '61.  
(MIRA 14:7)

1. Glavnoye aptechnoye upravleniye Ministerstva zdravookhraneniya  
Gruzinskoy SSR. (GEORGIA--DRUGSTORES)



*NISHNIAWIDZE, P. D., Candidate Med Sci (diss) -- "The problem of the clinical aspects of nonspecific suppurative wounds of the lungs and their treatment by the endobronchial method". Tbilisi, 1959, published by the Acad Sci Georgian SSR, 22 pp (Tbilisi State Med Inst), 200 copies (KL, No 24, 1959, 151)*

22(1)

SOV/27-59-4-13/28

**AUTHOR:** Nisimov, G., School Director

**TITLE:** To Become Good Specialists

**PERIODICAL:** Professional'no-tehnicheskoye obrazovaniye, 1959, Nr 4,  
p 17 (USSR)

**ABSTRACT:** The author considers the 1 year of training provided by the program insufficient for highly skilled machine operators and tractor drivers. In the first case, the terms of enrolment do not agree with the beginning of field work. Before the students are sent to practical work, they should pass a course in theoretical and practical training. The author makes a few other suggestions for improving the training of agricultural personnel. For placing the agricultural mechanization schools on a self-supporting basis, larger parcels of land should be allotted to them. This will also help to raise the level of training.

**ASSOCIATION:** Uchilishche mekhanizatsii sel'skogo khozyaystva Nr 10 - Chernovitskaya oblast'. (Agricultural Mechanization School Nr 10 - Chernovtsy Oblast').

Card 1/1

NISIMOV, G.

Creative search. Prof.-tekh. obr. 19 no.5:11-12 My '62.  
(KIRA 15:5)

1. Direktor Dubossarskogo uchilishcha mekhanizatsii sel'skogo  
khozaystva No.5, Moldavskaya SSR.  
(Farm mechanisation—Study and teaching)  
(Tractors)

НИКИМОВ, Кнз, д-р инж.

A simplified method of computing frame structures with elastically nonshifting units. Tekhnika Bulg 2 no.2:10-15 F '53.

1. Член на Редакционната колегия, "Tekhnika."

**MISIMOV, KH., d-e inah.**

**Foundations of buildings in the center of Sofia. Tekhnika Bulg  
2 no.6:23-26 Jo '53.**

**1. Chlen na Redaktsionnata kolegia, "Tekhnika."**

KISIROV, K.  
NISIMOV, Kh.

Certain measures in planning assure reduction of estimated cost of construction.

P. 18  
(STROITELSTVO. Vol. 1, No. 9110, 1954)

SO: Monthly List of East European Accession, (KEAL), LC, Vol. 4, No. 9,  
Sept. 1955, Uncl.

NISIMOV, Kh., d-r inzh.

Quality of concrete and its influence on the supporting power  
of ferroconcrete constructions. Tekhnika Bulg 3 no.4:21-25  
Ap '54.

**NISIMOV, KH.**

"Monolithic Casting of Steel and Concrete Slabs upon Special Concrete Elements", P. 11. (RATSIONALIZATSIIA, Vol. 4, No. 2, Feb. 1954, Sofia, Bulgaria)

SO: Monthly List of East European Accessions, (YEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.



NISIMOV, NH.

"New Method for Decalcification of Bone Tumors", P. 15. (RATSIONALIZATSIIA, Vol. 4, No. 2, Feb. 1954, Sofiya, Bulgaria)

SO: Monthly List of East European Accessions. (EEAL), LC, Vol. 3, No. 12, Dec. 1954, Uncl.

NISIMOV, Kh.

Simplified calculation of continuous beams with or without brackets. p..8.

Vol. 4, no. 2, Feb. 1955  
TEKHNIKA  
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 4 April 1956

MISHKOV, KH.

MISHKOV, KH. Calculation of walls without a window and one-side-developed foundations under walls. p. 11.

Vol. 3, no. 12, 1956

STROITELSTVO

TECHNOLOGY

Bulgaria

So: East European Accession, Vol. 1, No. 5, May 1957

NISIMOV, KH.

NISIMOV, KH. Simplified calculation of cross reinforcements for slabs allowing for plastic deformation. p. 29.

Vol. 5, No. 5, Sept./Oct. 1956

TEKHNIKA.  
TECHNOLOGY  
Sofia, Bulgaria

So: East European Accession, Vol. 6, No. 3, March 1957

NISIMOV, KH.

TECHNOLOGY

NISIMOV, KH. Inzhenerno-stroitelni konstruktsii. Sofia, Zenizdat, 1957. 357 p.  
(Universitetska literatura)

Monthly List of East European Accessions (ELAI) LC, Vol. 8, no. 3, March, 1959. Uncl.

NISIMOV, KH.

Frameless four-storied buildings with prefabricated floor constructions resting on stretcher walls.

p. 1 (STROITELSTVO) Vol. 4, no.9, 1957,  
Sofia, Bulgaria

SO: Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 3,  
March 1958

NISIMOV, KH.

"Concerning some questions on the planning and the construction- industry production of the Soviet Union."

p.3 (Tekhnika, Vol. 6, no. 8, 1957, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

NISIMOV, KH.

"Trilaterally fastened crosswise reinforced plates."

p.6 (Tekhnika, Vol. 7, no. 3, 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958



NISIMOV, KH.

"Efficient measurement and construction of the reinforcing cross girder of the reinforced concrete parts subjected to bending."

p.30 (Tekhnika, Vol. 7, no. 4, 1958, Sofia, Bulgaria)

Monthly Index of East European Accessions (EEAI) LC, Vol. 7, No. 8, August 1958

NISIMOV, KH.

"Sagging of crossed-reinforced plate constructions"

Tekhnika. Sofia, Bulgaria. Vol. 8, no. 2, 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclass

Nisimov, Mh.

Buildings with supporting masonry and prefabricated-floor structures. p. 6

TEKHNIKA. (Sufuz za nauchno-tekhnicheskite druzhestva v Bulgaria) Sofia, Bulgaria.

Vol. 8, no. 9, 1959.

Monthly List of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 1960

UNCL

NISIMOV, Khaskia, dots. inzh.

Spatial computation of double-flight staircases. Tekhnika Bulg  
11 no.5:169-173 '62.

ВІСНИК, Khaskia, dotsent inzh.

On a more accurate computation of cross reinforced slabs, and distribution of their loads upon circular girders. Tekhnika Bulg 12 no.1:22-26, 37 '63.

1. Chlen na Redaktsionnata kolegia, "Tekhnika."

NISIMOV, Khaskin, dots., inzh.

Lessons from the earthquake at Skopje, and indispensability  
of amending the regulations on antiseismic building. Tekhnika  
Bulg 13 no.186-10: '64

1. Chlen na Redaktsionnata kolegiia, "Tekhnika".

NISIMOV, Khaskia, dots. inzh.

Construction of floors for buildings with individual planning.  
Tekhnika Bulg 13 no.7:19-24 '64

NISIMOV, R.

Periodic disease. Sovr. med. (Sofia) 16 no.4:33-42 '64.



**WISINOV, R.**

**Anemia in normo-acid and hyper-acid gastritis. Suvrem.med.  
Sofia No.6:43-48 '55.**

**1. In Nauchno-issledovatelskia institut po khematologija i  
krupoprelivana (direktor: An.Anastasev)**

**(GASTRITIS, complications,  
anemia)**

**(ANEMIA, in various diseases,  
gastritis)**

ATANASOVA, L.; NISIMOV, R.

Report of a case of unusual complications following therapeutic application of mercurial diuretics. *Sovrem.med.*, Sofia 6 no. 2: 92-96 1955.

1. Iz Klinika po belnichna terapija pri Visshia med. institut V.Chervenkov - Sofia (sov. Al.Pakhlev).

(DIURETICS, MERCURIAL, injurious effects, skin dis.)

(SKIN, diseases, caused by mercurial diuretics)

А.А.А.А.А.А.  
MISIMOV, R.

Infectious arthritis consecutive to abscess of the gluteal region.  
Suvrem.med., Sofia 6 no.9:96-99 1955.

1. Is Klinikata po bolnichna terapiia pri VMI V.Chervenkov-Sofia  
(sav.: prof. Al.Pukhlev).

(ARTHRITIS,

infect., in gluteal abscess (Bul))

(BUTTOCKS, abscess,

with infect. arthritis (Bul))

(ABSCZSS,

buttocks, with infect. arthritis (Bul))

NISIMOV, R.

Unusual case of adult erythroblastosis with acquired cryptocytic hemolytic anemia; specificity of antibodies. *Sovrem.med., Sofia* 6 no.10:101-106 1955.

1. Is Instituta po khematologija i krvoprelivane (direktor: A.Anastasev).

(POLYCYTHEMIA VERA, complications,  
anemia, hemolytic, case report (Bul))  
(ANEMIA, HEMOLYTIC, in various diseases,  
polycythemia vera, case report (Bul))

ANASTASOV, An.; GEORGIEV, Idr.; NISIMOV, R.

Immune hemolytic anemia. III. Clinico-hematological aspects.  
Sovrem. med., Sofia 7 no.6:18-24 1956.

(ANEMIA, HEMOLYTIC,  
immune, clin. & hematol. aspects (Bul))

ANASTASOV, An.; WISIMOV, R.

Erythrocyte therapy of blood diseases. *Suvren. med., Sofia 6 no.2:*  
11-20 1957.

1. *Is Nauchnoisledovatelskia institut po khamatologija i krveprelivane.*  
(Direktor: An. Anastasov)

(BLOOD DISEASES, therapy.

transfusion of erythrocytic mass (Bul))

(BLOOD TRANSFUSION, in various diseases,

blood dis., transfusion of erythrocytic mass (Bul))

MISIMOV, R., STOICHKOV, K.

Experience with cortisone therapy of certain blood diseases.  
Suvren. med., Sofia 8 no.2:20-32 1957.

1. Is Instituta pe khamatologija i krvoprelivane (Direktor:  
A. Anastasov)

(BLOOD DISEASES, therapy,  
cortisone (Bul))

(CORTISONE, therapeutic use,  
blood dis. (Bul))

ANASTASOV, An.; NISIMOV, K.

Treatment of pernicious anemia with Bulgarian preparation of liver extract. *Sovrem. med.*, Sofia 8 no.8:21-29 1957.

1. In institute po khematologija i krvoprelivane - Sofia.  
(LIVER EXTRACTS, ther. use  
pernicious anemia)  
(ANEMIA, PERNICIOUS, ther.  
liver extract)



WISIMOV, R.

Pernicious-like anemia in myxedema. Suvrem. med., Sofia 9 no.1:97-100  
1958.

1. Is Instituta po khamatologija i krvoprelivane--Sofia (Direktor:  
K. med. nauki V. Serafimov).

(ANEMIA, PERNICIOUS, etiology and pathogenesis,  
myxedema (Bul))

(MYXEDEMA, compl.  
pernicious anemia (Bul))

NISIMOV, R.

Improvement in hypertrophic osteoarthropathy in bronchial cancer following deep roentgenotherapy of tumor. *Suvrem. med., Sofia* 9 no.7:83-86 1958.

1. Is Otkrushnitsa onkologicheski dispanser v Sofia (Gl. lekar: M. Dimitrov).  
(OSTEOARTHROPATHY, HYPERTROPHIC PULMONARY, compl.  
bronchial cancer, x-ray ther. (Bul))  
(BRONCHI, neoplasms,  
with hypertrophic pulm. osteoarthropathy, x-ray ther. (Bul))  
(RADIOTHERAPY, in var. dis.  
bronchial cancer with hypertrophic pulm. osteoarthropathy  
(Bul))

HISIDOV, R.

Hypochromic iron-deficiency anemias of gastric origin. Suvrem med.,  
Sofia no.11:40-46 '60.

1. Iz TSentralnata konsultativna poliklinika pri VMI, Sofia.  
(ANEMIA HYPOCHROMIC etiol)  
(STOMACH dis)

НИСКОУ, Р.

Clinico-hematological and hemato-chemical studies on juvenile  
chlorosis. *Suvrem med.*, Sofia no.3:15-28 '61.

I. Tsentralna konsultativna poliklinika pri Visshia meditsinski  
institut, Sofiya.

(ANEMIA HYPOCHROMIC in adolescence)

NISIMOV, R.

Clinico-hematological and hemato-chemical studies on juvenile chlorosis. *Suvrem med.*, Sofia no.3:15-28 '61.

I. Tsentralna konsultativna poliklinika pri Visshia meditsinski institut, Sofiya.

(ANEMIA HYPOCHROMIC in adolescence)

NISIMOV, R.

An unique case of pernicious anemia with consecutive development of polycythemia complicating myocardial infarct. *Sovr. med.* 15 no.1:34-37 '64.

\*

NISIMOV, R.

Changes in leuko- and thrombopoiesis in hypochromic iron-deficiency anemias in adults. Suvr. med. 12 no.9:15-20 '61.

1. Iz tsentralnata konsultativna poliklinika pri Vissh meditsinski institut, Sofia.

(HEMATOPOIESIS) (BLOOD PLATELETS)  
(LEUKOCYTES) (ANEMIA HYPO)

NISIMOV, V.V. (Moskva); KHOKHLOV, R.V. (Moskva)

Shock waves forming in a viscous gas flow past thin profiles.  
Prikl. mat. i mekh. 28 no.3:557-563 1970 (MIRA 17:7)



NISINMAN, Ye.P.

Novocaine block in treating bronchial asthma in children. Ped., akush.  
i gin. 20 no.3:36 '58. (MIRA 13:1)

1. Ob'yedinenaya bol'nitsa (glavnyy vrach - G.Ye. Yemets) Kharzhon-  
kovo Stalinskoy oblasti.  
(NOVOCAINE) (ASTHMA)

~~НИСМЛН. В. П.~~

Case of spontaneous pneumothorax in a one-year-old child and its  
treatment in the sector hospital. *Pediatrics* 36 no.11:77 W '58.  
(MIRA 12:8)

1. Из детского отделения об'единенной бол'ницы гор. Кланшанково  
Сталинской области.  
(PNEUMOTHORAX)

NISINMAN, Ye.P. [Nisyman, E.P.]

Treatment of acute rhinitis and rhinopharyngitis in very young children. Ped., akush. i gin. 23 no.5:31 '61. (MIRA 14:12)

1. 4-ya gorodskaya bol'nitsa (glavnyy vrach - N.M.Sharetskaya  
[Sharets'ka, N.M.] g. Zaporozh'ye.  
(NOSE\_DISEASES) (NASOPHARYNX\_DISEASES)

SMIRNOV, B.P.; POPOVA, R.A.; NISKANEN, R.A.

Quantitative paper chromatography of higher fatty acids in the form of methyl esters (R.C.OO.C14H3). Biokhimiya 25 no.2:368-375 Mr-Apr '60. (MIRA 14:5)

1. Laboratoriya biokhimii lipidov Instituta biologii Karel'skogo filiala Akademii nauk SSSR, Petrosavodsk.  
(ACIDS, FATTY) (PAPER CHROMATOGRAPHY)

SMIRNOV, B.P.; POPOVA, R.A.; DANILOVA, G.P.; NISKANEN, R.A.

Paper chromatography of bile acids in the form of methyl esters  
(R. COO.C<sup>14</sup>H<sub>3</sub>). Biokhimiia 27 no.2:197-201 Mr-Apr '62. (MIRA 15:8)

1. Laboratory of Lipid Biochemistry, Biological Institute of the  
Carelian Branch of Academy of Sciences of the U.S.S.R., Petrozavodsk.  
(PAPER CHROMATOGRAPHY) (BILE ACIDS)

NISKIEMICZ, Jerzy

Nickel ore mining in Lower Silesia. Przegł geol 11 no. 8:  
393-394 Ag '63.

1. University, Wrocław.

SOKOLOVSKIY, O.P.; NIKOLVSKIKH, V.M.; KALNIN, I.M.

Mechanizing marking operations on blooming and billet rolling mills.  
Sber.st.UZTM no.1:140-155 '58. (MIRA 11:12)  
(Rolling mills--Attachments) (Marking devices)

12.5100

81536

SOV/137-59-5-11252

Translation from: Referativnyy zhurnal, Metallurgiya, 1959, Nr 5, p 252 (USSR)

AUTHORS: Lipatov, A.P., Niskovskikh, V.M.

TITLE: Mechanization of Auxiliary Operations on Thick-Sheet Rolling Mills

PERIODICAL: Sb. statey, Ural'skiy z-d tyazh. mashinostr, im. S. Ordzhonikidze, 1958, Nr 1, pp 156 - 165

ABSTRACT: With the aid of special machines and mechanisms the 2800 thick-sheet mill at Uralmashzavod is used to carry out the following operations: layout prior to trimming of edges, cutting to the gauged length, marking after cutting and piling of the finished and checked sheets. The layout machine produces longitudinal and transverse lines on the sheet with a lime solution. It is located in the mill line on rails parallel to the roller-conveyer and consists of a trolley with a welded cantilever fastened perpendicularly to the axis. There are two lime containers on the cantilever; one of them (for transverse lines) is mounted on a movable carriage, the other one (for longitudinal

Card 1/2



KHIMICH, Georgiy Lukich, inzh.; GOLUBKOV, Konstantin Alekseyevich;  
KONDRATOV, Yuriy Nikolayevich; NISKOVSКИЙ, Vitaliy  
Maksimovich; SIDELEV, Nikolay Petrovich; PAL'COV, Ye.V.,  
doktor tekhn. nauk, retsenzent; DUGINA, N.A., tekhn. red.

[Improving the quality and economic efficiency of machinery]  
Povyshenie kachestva i ekonomichnosti mashin. Pod red. G.I.  
Khomicha. Moskva, Mashgiz, 1962. 124 p. (MIRA 1587)  
(Machinery industry)

NISKOVSKIY, Yu. N.

Cand Tech Sci - (diss) "Determination of the safe depth and methods of coal-working under reservoirs with the use of modelling with hydro-control. (Suitable to the lignite coal deposits of the Primorskiy Kray)." Moscow, 1961. 23 pp; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Mining Inst imeni I. V. Stalin); 200 copies; free; (KL, 5-61 sup, 191)

MAKOVSKIY, Yu.N.

Determining on models of equivalent materials a safe depth in  
working deposits under bodies of water by the hydraulic control  
method. Zap.LGI 44 no.1:33-43 '61. (MIRA 14:10)  
(Mining engineering) (Hydraulic control)

NISKOVSKIY, Yu.N., Inzh.

Determining safety factors and methods of mining coal seams  
under bodies of water. Izv. vys. ucheb. zav.; gor. zhur. 5  
no.1:24-30 '62. (MIRA 15:4)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo  
Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana  
kafedro, razrabotki plastovykh mestorozhdeniy Leningradskogo  
gornogo instituta.

(Coal mines and mining) (Mine water)

SON/123-59-15-59362

Translation from: Referativnyy zhurnal. Mashinostroyeniye, 1959, Nr 15, p 72 (USSR)

AUTHORS: Lipatov, A.P., Nislovskikh, V.M.

TITLE: Mechanization of Auxiliary Operations of Plate Mills

PERIODICAL: Sb. statey. Ural'skiy z-d tyazh. mashinostr. im. S. Ordzhonikidze, 1958, Nr 1, pp 156 - 165

ABSTRACT: Designs of marking machines, branding devices and plate stacking devices are described, which were manufactured at the Uralmashzavod and installed at one of the 2500 plate mills. The machine for the marking of plates represents a driving trolley, travelling on rails which are located parallel to the table on which the marking is effected. A welded cantilever, carrying special tanks for the lime mortar with which the lines are made on the plate, is fastened on the trolley perpendicular to the axis of the table. The working organ of the plate branding device is a pneumatic cylinder, fitted on pivots in roller bearings; the box with the branding irons is fitted in a T-shaped groove at the end of the cylinder rod. The shield of the disappearing support has a special jut, which serves as bearing surface for the plates during the

Card 1/2

NISMAN, Aleksandr Yefimovich; YEVTEYEV, V.Z., red.; MAL'KOVA, N.V.,  
tekhn. red.

[Accounting in the automobile road system] Buhgalterskii  
uchet v dorozhnom khoziaistve. Izd.2., perer. Moskva, Avto-  
transdat, 1956. 347 p. (MIRA 16:7)  
(Roads--Maintenance and repair) (Accounting)

VARIANOV, Ye.G.; NISMAN, A.Ye.

Using new bookkeeping systems in road building. Art.dor. 20

no.12:32 D '57.

(Road construction—Accounting)

(NIRA 12:4)

VARLANOV, Ye. G., NISMAN, A. Ye.

Using lower echelon business accounting in road construction.  
Art. dor. 21 no. 7:2-4 JI '58. (MIRA 11'8)  
(Road construction--Accounting)



26239  
S/119/61/000/008/305/008  
D215/D302

28.1000 (1064/1089)

**AUTHOR:** Kerenevskiy, B.S., and Nisman, L.N.

**TITLE:** Control mechanisms (Main types and characteristics)

**PERIODICAL:** Priborostroyeniye, no. 8, 1961, 11 - 24

**TEXT:** The article gives data on the main types and technical characteristics of electrical, pneumatic and hydraulic control mechanisms of general industrial application, used in systems of automatic control and remote control of industrial processes:  
1) Electrical control mechanisms ЭВМ (EIM): a) EIM of the positional operation type ЭМ (EM) and type ЭМТ (EMT) with the electromagnetic brake and resistance transducer manufactured by the Chelyabinsk Council of the National Economy and designed for the supply of 220/380 volts, 50 c.p.s. [Abstractor's note: A table for types EM and EMT is given]. b) The mechanism of the remote control type КЭВ (KDU) manufactured by the factory "Energopribor" is used as the control mechanism in the electrical automatic and remote con-

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trol systems being designed for the supply of 220/380 volts, 50 c. p.s. Type KDU-1 and KDU-2 have end switches on the reducer  $\Pi P$  ( $\Pi P$ ) and  $\Pi P$  ( $\Pi P$ ). [Abstractor's note: Basic technical specifications given]. c) EIM type  $\Pi P$  ( $\Pi P$ ) (two position) and  $\Pi P$  ( $\Pi P$ ) (proportional) with progressive and rotary movement of the outgoing link is manufactured by the factories of Sverdlovsk and Penrenskiy Council of the National Economy [Abstractor's note: Basic specifications given]. d) EIM for the remote control of valves and slide valves is manufactured by the factory "Znanya Truda" of the Leningrad Council of the National Economy. This mechanism is manufactured in five types: Type A with the sun and planet cylindrical reduction gear and with electric motor of 125 watts power. Types B, B (V) and  $\Gamma$  (G) with the worm reduction gear and with electric motor from 600 to 7,000 watts power. Type D (D) with the worm reduction gear, the secondary cylindrical reduction gear and with electric motors of 4,000 and 7,500 watts power. e) EIM type IM-25 (B) single revolution, in a dust and splash-proof case was designed for the automatic control systems for use with the regulators, se-

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ries B or 59 of the M3TA (MZTA) factory of the Moscow Council of the National Economy. f) EIM type 5MK (BIM)- 25/120 single revo- lution in a dust and splash-proof case was designed to work in co- junction with: 1) contactless regulators 5P (BR-11) in the automa- tic control system of different technological processes; 1i) mea- suring apparatus having resistance transducer with proportional band 10 and 100 % and resistance 120-300 ohms. This mechanism was manufactured by Chuvash Council of the National Economy and is suitable for the supply of 127 volts, 50 c.p.s. g) EIM type M3K (MKK)-10K single gear was designed to work with the automatic con- trol systems having contact control of reversible magnetic star- ters, type MKP (MKR)-0.58. This mechanism can also work in the sys- tems of remote control. It is manufactured by Chuvash Council of the National Economy. h) Control valves type KЭ(KE)-81 with elec- tric drive, packless is lined inside with anti-corrosive non-me- tallic material and is made from cast iron. These control valves are used for regulating the flow of strongly corrosive liquids and gases containing chlorine in the system of automatic and remote

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control. It has no provision to be operated manually. Full stroke of the valve lasts 40 secs. and is done by 120 degrees turning of the control mechanism. i) Shutdown solenoid control valve type ЗСК (EKS) and ЗСКВ (ESKV) is used for automatic stoppage of the flow of liquid or gas in working temperatures up to 200°C. It can be manufactured in six different types: - 2 - 3/4 inch size, non-explosive proof for supply 110v or 220 v, 50 c.p.s. - 4 - 20 - 70 mm size, explosive proof for supply 110 - 127 v, 50 c.p.s. Control valves ЭСКВ-50-31 and ЭСКВ-70-31 can be installed in area of 2nd and 3rd category of explosive materials, and in area of A, B, G group of inflammable materials. j) Electropneumatic 3-way solenoid valve type EPK 1/4 inch used for supplying compressed air to diaphragm control valve, pneumatic alarm, pneumatic instrument etc. There are two types of this valve: - EPK 1/4" - 70 - Normally closed - Solenoid de-energized - EPK 1/4" - 72 - Normally open - Solenoid energized. It is designed for air pressure of 2KG/cm<sup>2</sup>. Electrical supply 220 or 127 volts, 50 c.p.s. Voltage supply can vary ± 10%. k) Electropneumatic double solenoid valve type EPKD-VZG is explosive-proof. It is used for remote control of stop cocks by means Card 4/8

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of electrical impulses. It is suitable for compressed air up to 8 Kg/cm<sup>2</sup>. Electrical supply: 127 or 220 volts, 50 c.p.s. Size of valve - 224 x 130 x 116 mm. 2) Pneumatic control mechanisms ПИМ (PIM): A) Pneumatic servo-piston type CPP-1 is the control mechanism of one way action. It is used for the damper cut-off and manufactured by the factory "Teploavtomat" of the Khar'kov Council of the National Economy. B) Piston type pneumatic actuator ППЭ (PPE)-1 with electric control is used for remote or automatic control by means of control valve КПЭ (KPE)-1. It is manufactured by the factory "Teploavtomat" of the Khar'kov Council of National Economy. C) Diaphragm actuators type МПП (MPP) are used for displacing regulating parts in the automatic control systems. There are two main types: i) progressive return movement of rod (pushing type), ii) turning lever (lever type). D) Pneumatic control valves made of steel with cooling fins, and without cooling fins. These control valves have diaphragm and spring and they are used for regulating the flow of water, steam, gas, non-corrosive and corrosive oil products up to a max. temperature of 450°C. They are manufac-

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2225/2222

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ured in the following sizes: 15, 20, 25, 40, 50, 70, 80, 100 and 150 mm and with flanged connection for flat and oval gaskets. Valve plug and seats for all types of valves are manufactured from stainless steel, type 1X18H9T (1Kh18N9T) and have rectilinear characteristic. Diaphragms of the above control valve are actuated by air at pressure 0.2 - 1.0 KG/cm<sup>2</sup>. E) Pneumatic control valve type ППК (PKK) are used for small bore pipes from 6 to 9 mm diameter and up to 64 KG/cm<sup>2</sup> pressure. It is manufactured by Leningrad Council of the National Economy with: - air to close and air to open; - cooling fins up to temp. 450°C and without cooling fins up to temperature 200°C. F) Angular pneumatic control valve type YKC (UKS) and YKH (UKN) are manufactured by the Tselin Council of the National Economy. These valves are manufactured as screwed and flanged type, with or without cooling fins, air to close or air to open, from carbon steel and 1X18H9 (1Kh18N9) stainless steel. G) Diaphragm control valve regulating the flow of the lowtemperatures substances. МРКХ (MRKYaKh) type MMP (MMR) is suitable for use with the gaseous or liquid oil products, liquefied gases down to

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temperature 160°C below zero. H) Flanged diaphragm control valves B3 (VZ) and B0 (VO) having Y (U) shaped port inner valve of parabolic characteristic. The same type valve is manufactured with cooling fins for use up to 425°C. For viscous or coking substances the control valves have inner valve with linear characteristic. 3) Hydraulic control mechanism (VM) (GIM). A) Hydraulic crank servo-mechanism type СПГК (SPGK) was designed for the following: i) actuating regulating parts of direct action mechanism; ii) cycling of control inputs directly to two or more receivers of synchro control mechanism; iii) changing position of regulating parts in accordance with the change of position of piston of servo-mechanism. B) Hydraulic, straight control mechanisms type СПГП (SPGP) manufactured by the Khar'kov Council of the National Economy. Used for actuating the regulating parts of valves etc. C) Self-contained hydraulic drive type АПГ-1 (APG-1) manufactured by the Khar'kov Council of the National Economy is a control mechanism of the electro-hydraulic system of automation [Abstractor's note: Basic specifications given]. D) Hydraulic power cylinders are designed by the Institute of "Hydro-coal Automation" for driving different  
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D215/D302

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mechanisms in the system of coal industry automation. E) Direct movement hydraulic drives type ЭП (EGP) manufactured by the "Krasny Metallist" plant (Konotop). F) Direct movement hydraulic drive designed by UKSA (TsKBA) (in Leningrad) for the drive of slides in the automation control of different processes. G) Hydraulic control mechanisms (cylinders) type UC (TsS) manufactured by the Lipets tractor plant. They are applied for securing the lifting and lowering of hinged mechanisms and also for control of working parts of tractor drawn machines. There are 42 figures and 19 tables.

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17. 1100  
17. 8100

29329  
S/119/61/000/010/001/008  
D209/D305

26.2190  
AUTHORS:

Nissan, L.N., and Sokolin, G.F., Engineers

TITLE:

On a method of choosing pneumatic diaphragm actuators

PERIODICAL:

Priborostroyeniye, no. 10, 1961, 5 - 7

TEXT:

The authors present a mathematical treatment of the effective area of an elastic diaphragm, utilized in pneumatic diaphragm-spring actuators operating in conjunction with regulating elements. In an ideal case when the unbalance and friction in the regulator amount to zero, the stem travel corresponds to the commanding air pressure. In an actual case, however, the thrust due to change of pressure  $\Delta p$ , (stem held in position), is given by

$$Q_{\Delta p} = q (h - \Delta h) + N, \quad (3)$$

where  $q$  - stiffness of return spring;  $N$  - force determined by the amount of unbalance and friction;  $\Delta h$  - absolute error of positioner;  $h$  - stem travel due to  $\Delta p$ . Since in an ideal case  $Q_{\Delta p} = qh$ , where  $Q_{\Delta p}$  - force

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D209/D505

On a method of choosing ...

developed by the sensing element due to  $\Delta p$  when the stem is held in position, the relationship

$$\delta = \frac{M}{Q_{\Delta p}} \quad (6)$$

is obtained, where  $\delta = \Delta h/h$ . This thrust is also given by

$$Q_{\Delta p} = F_{\text{eff}} \Delta p, \quad (7)$$

where  $F_{\text{eff}}$  - effective area of the sensing element (diaphragm) -  $1/3F$ , where  $F$  is the calculated area of diaphragm ( $\pi D^2/4$ ), assuming that the diaphragm has a support at the center. In practical actuators, the diaphragm (radius  $R$ ) is supported by a concentric disc of radius  $r$ . Assuming that the surface of the disc lies in the plane of the diaphragm mounting, an expression for the theoretical effective diaphragm area ( $F_{\text{teff}}$ )

$$F_{\text{teff}} = \frac{1 + \beta + \beta^2}{3} F = K_{\beta} F, \quad (15)$$

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On a method of choosing ...

is devised, where  $\beta = \frac{d}{D}$  ( $r = \frac{d}{2}$ ;  $R = \frac{D}{2}$ ) and  $K_{\beta} = \frac{1 + \beta + \beta^2}{3}$ . This expression is derived by integrating from  $r$  to  $R$  the infinitesimal thrusts acting on an infinitesimal lamina ring of the diaphragm area and adding the resulting thrust to the force acting on the disc to pressure  $p$ . This equation holds for absolutely elastic diaphragms only. The actual effective diaphragm area with a supporting disc is

$$F_{\text{teff}} = K K_{\beta} F, \quad (16)$$

where  $K$  - practical correction factors: (position of the disc, material of diaphragm, its form, thickness, stiffness, mounting etc.) For each unit the factor  $K$  is determined from a graph  $h = f(p)$  according to

$$K = 1 \pm \frac{\Delta h}{h}. \quad (19)$$

The effective area of the sensing element with a two-contour diaphragm mounting is given. An actuator should be so chosen that the ratio of unbalance

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S/119/61/000/010/001/008  
D209/D303

and friction forces  $N$  in the regulator to the force  $Q_{\Delta p}$  does not exceed a given relative error  $\delta$  of the positioner. There are 3 figures and 1 Soviet-bloc reference.

*J*

Card 4/4

BAYSH, L.G., NISMAN, L.M.

Standardization of pneumatic actuating equipped with diaphragm mechanisms.  
Standartizatsia 25 no.3:8-13 Mr '61. (MIRA 14:3)  
(Pneumatic control) (Standards, Engineering)

ACC NR: AP8009938

(A)

SOURCE CODE: JR/0118/65/000/011/0024/0025

44  
B

AUTHOR: Nisman, L. N. (Engineer)

ORG: none

TITLE: Control valves for high-pressure flows

SOURCE: Mekhanizatsiya i avtomatizatsiya proizvodstva, no. 11, 1965, 24-25

TOPIC TAGS: valve, high pressure valve, flow control

ABSTRACT: The article deals with the technical specifications of the control valves of the RKU series developed in the Soviet Union for high-pressure environments. These valves, which have a linear flow characteristic and feature lenticular packing, are effective to temperatures of +200C and in environments not corrosive to 30 KhMA steel. These valves are supplied in both the "normally open" and "normally closed" versions. Standard dimensions and other important technical characteristics of all of the series-RKU high-pressure control valves are given together with diagrams. This line of valves has successfully passed industrial testing, specifically under conditions of production utilization on fresh hydrogen lines. Hydrogen pressure before the valve was measured at 650 kg/cm<sup>2</sup> and after the valve at 500 kg/cm<sup>2</sup>, with a flow rate through the valve of 30,000 nm<sup>3</sup>/hr and a valve temperature of 30C.

UDC: 631.783:62-334.3

Card 1/2

APPROVED FOR RELEASE: Tuesday, August 01, 2000

ACC NR: AP6025281

SOURCE CODE: UR/0119/66/000/007/0001/0003

AUTHOR: Wisman, L. N. (Engineer)

ORG: none

TITLE: Design and selection of pneumatic actuators with and without positioners

SOURCE: Priborostroyeniye, no. 7, 1966, 1-3

TOPIC TAGS: automatic control equipment, automatic control theory

ABSTRACT: Operation of a pneumatic spring-and-diaphragm actuator (final control element) with and without a positioner is theoretically considered. Relations between the stem-travel error and the unbalance, friction, etc. in the mechanism are established. These recommendations are suggested: (1) In designing a pneumatic actuator, the maximum relative error of stem travel and maximum pressure drop in the actuator should be specified; (2) Next, the effect of the pressure drop on the unbalance-plus-friction force and the maximum force should be determined; (3) Technical papers that accompany each manufactured actuator should indicate the effect of the pressure drop in the actuator and the positioner pressure upon the stem-position error. Orig. art. has: 3 figures and 15 formulas.

SUB CODE: 15, 09 / SUBM DATE: none / ORIG REF: 001 / OTH REF: 000

Cord 1/1 *flh*

UDC: 62.525

24  
B

14

SOURCE CODE: UR/0413/66/000/012/0121/0121

INVENTOR: Brushteyn, A. S.; Slobodkin, M. S.; Nisman, L. N.

ORG: None

TITLE: An extremely sensitive flow regulator. Class 47, No. 182991 [announced by the Special Design Office for Automation of Petroleum Processing and Petrochemistry (Spetsial'noye konstruktorskoye byuro po avtomatike v neftepererabotke i neftekhi-mii)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 121

TOPIC TAGS: flow regulator, flow control, hydraulic device

ABSTRACT: This Author's Certificate introduces a very sensitive flow regulator consisting of an actuating mechanism and a control unit. Uninterrupted adjustment of the working cycle for the regulating unit plunger during continuous operation of the actuating mechanism rod is achieved by equipping the flow regulator with an adjustment mechanism in the form of a rocker arm sitting on a shaft and connected by a lever to the actuating mechanism rod. The flow control mechanism also contains a section with an annular slot, a regulating screw which moves the section with the slot along the rocker arm, and bushings which move along the annular slot and are rigidly connected to the plunger in the control unit. The relative motion of the

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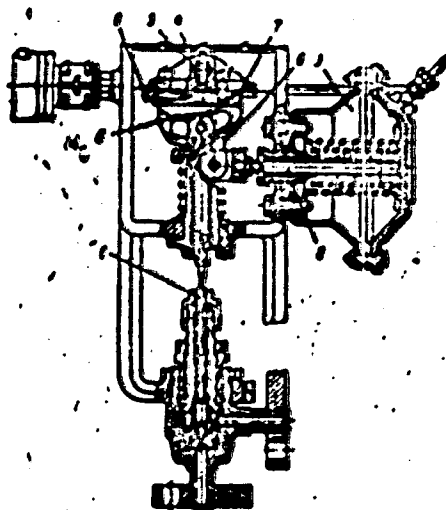
UDC: 621.646.3



ACC NR: AP6021825

rocker arm and the sector with the annular slot is varied by the eccentricity of the annular slot center with respect to the center of rotation of the rocker arm. This varies the operation of the control unit plunger with respect to variation in the operation of the actuating mechanism rod.

1—plunger; 2—rod; 3—actuating mechanism;  
4—rocker arm; 5—shaft; 6—lever; 7—section  
with annular slot; 8—bushing; 9—regulating  
screw



SUB CODE: 13/ SUMM DATE: 07Feb63

Card 2/2

NISMAN, Ya.S., uchitel'

Acquainting students with oxidation-reduction reactions.  
Khim. v shkole 17 no.1:62-63 Ja-F '62. (MIRA 15:1)

1. Shkola rabochey molodezhi No.2, g. Bel'tay, Moldavskaya SSR.  
(Oxidation-reduction reaction--Study and teaching)

NISNEVICH, A. I.

USSR/Chemistry - Metallurgy

Card 1/1 : Pub. 61 - 12/23

Authors : Ushakov, A. D., and Nisnevich, A. I.

Title : Sulfur in magnesium cast-iron

Periodical : Lit. proizv. 4, page 25, July 1954

Abstract : Quantitative determination of S (number of impulses) in a basic cast-iron was carried out after introduction of the S-isotope, after addition of Hg and after secondary heating of the cast-iron to 1580°. Simultaneously, with the quantitative determination of S by means of radioactive indicators, the S content was also chemically analyzed by the conventional method by burning the cast-iron batch in an oxygen stream. Results, obtained with the aid of both methods, are described. Illustrations.

Institution : ...

Submitted : ...

W 157707-11  
WISSEVICH, A.I., inzhener

Effect of surface roughness of the wear of tractor engine parts.  
[Ind.] LOHITOMASH no. 34:86-105 '54. (MIRA 8:10)

1. Nauchnyy avtotraktornyy institut  
(Surfaces (Technology))

USSR/Engineering - Engine Wear

FD-3240

Card 1/1

Pub. 41-21/22

Author : Nisnevich, A. I. and Shchurov, S. A., Moscow

Title : The use of radioactive isotopes to determine the influence of dust in the air on the wear of a tractor engine

Periodical : Izv. AN SSSR, Otd. Tekh. Nauk 7, 149-150, Jul 55

Abstract : Describes results of test employing radioactive zinc inserts placed 45 degrees apart on periphery of piston ring (2 inserts at ring joint) of D-54 tractor engine operated with varying content and composition of dust in intake air. One table, 2 graphs.

Institution :

Submitted : 9 April 1955

MISNEVICH, A. I.

Misnevich, A. I. -- "Investigation of the Wear Resistance of Parts of the Connecting-Rod Group of Tractor Motors during the Break-in Period Following Repair." Min Higher Education USSR. Moscow Inst of the Mechanization and Electrification of Agriculture imeni V. M. Molotov. Moscow, 1956. (Dissertation For the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-111.

NISNEVICH, A.I., inzhener; AKOPYAN, S.I., kandidat tekhnicheskikh nauk, redaktor; GOSTIN, B.I., kandidat tekhnicheskikh nauk, redaktor; VASIL'YEV, A.V., kandidat tekhnicheskikh nauk, redaktor; KRISTI, N.K., professor, redaktor; L'VOV, Ye.D., professor, redaktor; MALASHKIN, O.N., kandidat tekhnicheskikh nauk, redaktor; YUDUSHKIN, N.G., inzhener, redaktor; POPOVA, S.M., tekhnicheskij redaktor.

[New methods for determining the wear rate of tractor engine parts]  
Primenenie novykh metodov opredeleniya velichiny iznosa detalей traktornogo dvigatelya. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit. lit-ry, 1956. [Trudy], no.14) (MLA 9:10)

1. Direktor nauchno-issledovatel'skogo avtotrakternogo instituta (for Akopyan). (Tractors--Engines)

AT THE VICH, A I

*Abstract*  
*APR*  
*Abstract*

The Interaction of Robbing Surfaces During the Process of  
 Year 1971, 122-123. The process of interaction between  
 with broken and steel surfaces. The process of interaction  
 exists as a function of the amount of steel for which the  
 amount of surface area the amount of steel for which the  
 transferred all only to the steel has also from the steel

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1 R. 1  
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exists as a function of the amount of steel for which the  
 amount of surface area the amount of steel for which the  
 transferred all only to the steel has also from the steel

and

60



SOV/137-57-10-20496

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 10, p 301 (USSR)

**AUTHORS:** Nisnevich, A. I., D'yachenko, P. Ye.

**TITLE:** Investigation of the Wear of Metals Utilizing Automatic Recording  
(issledovaniye iznosa metallov s primeneniym avtomaticheskoy zapisi)

**PERIODICAL:** Izuch. iznosa detaley mashin pri pomoshchi radioaktivn. izotopov. Moscow, AN SSSR, 1957, pp 15-25

**ABSTRACT:** A description of the tagged-atoms method for the evaluation of wear (W) utilizing automatic recording, as developed by NATI (Automobile and Tractor Scientific Research Institute) in collaboration with IMASH AN SSSR (Institute of Machine Construction, Academy of Sciences, USSR). The effect of the microgeometry of the surface of a piston pin of the D-54 type engine on the wear of both the ring itself and the bushing of the piston-pin head of the connecting rod was investigated. The tests were conducted on a specially equipped type M1 friction machine under various conditions of lubrication and a load of 100 kg. The measurement of the activity of the oil (O) was performed by means of drawing test

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SOV/137-57-10-20496

## Investigation of the Wear of Metals Utilizing Automatic Recording

samples or by means of placing a counter in the continuous stream of O (with abundant lubrication). The specimens tested had a surface finish of the sixth and tenth class. Rollers 32 mm in diam and 10 mm in width were prepared of carburized 20Kh-grade steel with a hardness of 54 - 56 H<sub>Rc</sub>. In the course of the tests the W of a machine part prepared from OTsS-5-5-5 grade bronze coupled to a roller was evaluated. The activation of the machine part was accomplished by introducing the Sb<sup>124</sup> isotope into the melt. The activity of the discharged O was determined, taking into account the correction for background radiation and the radioactive decay of Sb<sup>124</sup> during the test. The number of radioactive atoms per unit of time was calculated according to the exponential law of decay. The specimens tested were placed into the oil sump, the circulation of the lubricant was accomplished by a gear-type oil pump which ensured ten exchanges of oil in the chamber during each count period (3 min). It is established that with the growth of the initial microgeometry of the surface of the piston pin (or of the roller) the W of the piston-pin head of the connecting rod also increases. Relationships between the working-in lengths of time of the individual pairs investigated were obtained experimentally. A description is given of the apparatus for the investigation of the effect of the variation in the magnitude of the load on the intensity of W and on the moment of friction, and the fundamental results are cited.

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SOV/137-57-10-20496

Investigation of the Wear of Metals Utilizing Automatic Recording

For the purpose of monitoring the variations in the amount of the product of W in the lubricant an instrument was developed which records automatically the total number of impulses received from the counting apparatus during a specified period of time. The instrument is connected to the output terminals of the radiographic apparatus in parallel with the mechanical counter and carries on its recording independently of the latter. The instrument can record up to 25,600 impulses during a single counting period and can carry out an uninterrupted recording during more than 200 hours of testing. With an increase in the number of impulses recorded by the instrument the absolute error of the measurement also increases; however, the magnitude of the relative error is  $\leq 2.5\%$ . A comparison of the results of the laboratory investigations by the tagged-atom method with the results of previously conducted shop tests showed that they were completely identical.

L. G.

Card 3/3

SOV/137-57-11-22409

Translation from: Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 254 (USSR)

AUTHORS: D'yachenko, P.Ye., Nisnevich, A.I., Vaynshteyn, V.E.

TITLE: A Study of Wear in Tractor Antifriction Materials in the Presence of Dust in the Lubricant (Izucheniye iznosa antifriktsionnykh traktornykh materialov pri nalichii pyli v smazke)

PERIODICAL: V sb.: Izuch. iznosa detaley mashin pri pomoshchi radioaktivn. izotopov. Moscow, AN SSSR, 1957, pp 26-38

ABSTRACT: An investigation is made of the effect of the quantity and the fractional composition of dust (D) upon the rate of wear upon parts (32-mm rollers) made of OTsS5-5-5 and OTsS5-5-10 bronzes activated by radioactive isotope in the melt. Direct determination of extent of wear is made on the MI friction machine. The amount of wear of the second specimen in contact therewith (a roller of Nr 20Kh carburized steel) is estimated by weighing it before the start and at the end of the test. Natural D ( $\gamma = 2.35$ ) introduced into transformer oil in quantity of 0.05 to 0.75% is used in the tests. In all of the experiments the loading on the samples was  $25 \text{ kg/cm}^2$ . It is established that the presence of D in the lubricant increases the rate of

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