

AFANAS'YEV, S.M., inzhener.

The SA-2 universal vibrating unit. Nov.tekh.i pered.op.v stroi. 18  
no.10:21-25 0 '56. (MLRA 9:11)  
(Precast concrete) (Building machinery)

I. 09005-67 EWP(m)/EWP(w)/EWP(t)/ETI IJP(c) JD/HW  
ACC NR: AP6027782 SOURCE CODE: UR/0126/66/022/001/0027/0031

AUTHOR: Afanas'yev, S. V.; Barsukov, V. N.; Pliner, G. Ye.; Cherepkova, K. F.

60  
59

ORG: Leningrad Steel Rolling Plant (Leningradskiy staleprokatnyy zavod)

TITLE: Recrystallization and magnetic properties of permalloy 65N

SOURCE: Fizika metallov i metallovedeniye, v. 22, no. 1, 1966, 27-31

TOPIC TAGS: permalloy, metal recrystallization, magnetic property, magnetic permeability /  
/ permalloy 65N

ABSTRACT: Permalloy 65N (0.02% C, 0.44% Mn, 0.21% Si, 0.008% P, 0.007% S, 65.5% Ni, remainder Fe) differs from the other binary Fe-Ni alloys in that it acquires high magnetic properties only after its heat treatment in a magnetic field, due to the attendant directional ordering of its atoms which results in the rise of magnetic anisotropy. In this connection, the authors investigated the effect of the degree of deformation (from 17 to 98.6%) and temperature of annealing (from 700 to 1200°C) on the structure of this alloy and on its magnetic properties before and after thermomagnetic treatment. The thermomagnetic treatment itself was carried out in a vacuum (residual pressure  $10^{-2}$  mm Hg) at 650°C in a 10-oersted magnetic field. Grain

27

Card 1/3

UDC: 669.15'24.018.58

L 089005-67

ACC NR: AP6027782

0

size was examined metallographically and magnetic properties were measured by the ballistic d-c method. Findings: on the basis of the concomitantly plotted recrystallization diagram (Fig. 1) it is established that three basic types of recrystallization structures may be induced in permalloy 65N for the degrees of deformation and temperatures considered. Thus, for the

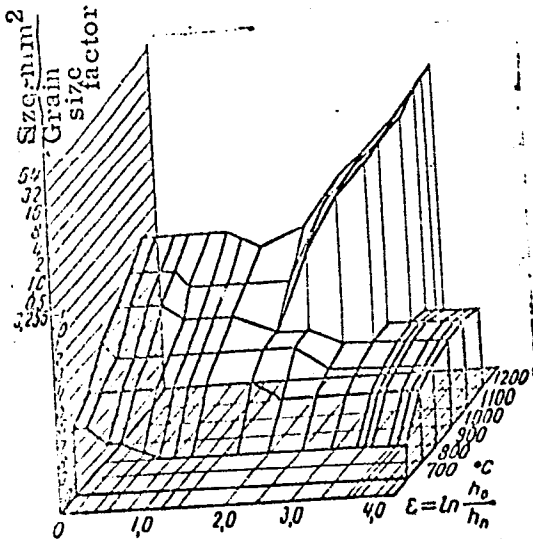


Fig. 1. Recrystallization diagram of the alloy 65N

Cont 2/5

I. 09005-67

ACC NR: AP6027782

deformation  $\epsilon < 2.0$  (85%) grain size monotonically increases with temperature, the recrystallized grains display non-ordered orientation and the recrystallization is either primary or preliminary; For  $\epsilon > 2.0$  annealing temperatures below 1000°C lead to the formation of a cubic texture of primary recrystallization; and for  $\epsilon \sim 2.0-2.3$  (85-90%), following annealing at 1000°C, large extended grains of secondary recrystallization are observed. The specimens displaying the maximum magnetic permeability (450,000-500,000 gauss/oc), the most rectangular hysteresis loop and the lowest coercive force ( $\sim 0.002$  oc) were found to be those which, prior to their thermomagnetic treatment, had a secondary recrystallization structure with maximally large grains. "The authors are indebted to the late Professor V. S. Mes'kin for a critical examination of the MS and for his interest in this project." Orig. art. has: 3 figures.

SUB CODE: 11, 20, 13/ SUBM DATE: 25Nov64/ ORIG REF: 008/ OTH REF: 002

Card 3/3 nst

A FORDS NEV 0-1

SAVARENSKIY, F.P.; AFANAS'YEV, T.P.

M: Vodnyye Resursy Srednego Povolzh'ya i ikh Ispol'zovaniye (Water Resources of the Middle Volga Region and their Utilization), Moscow - Leningrad 1946

Soviet Source:

Abstracted in USAF "Treasure Island", on file in Library of Congress, Air Information Division, Report No. 90488. UNCLASSIFIED

AFANAS' YEV, T.P.

CA

Ground waters of the middle Volga region and their classification according to their mineral composition. T. P. Afanas'ev. *Doklady Akad. Nauk S.S.S.R.* 58, 1701-4 (1947); *Chem. Zvest.* 1049, 31; cf. *C.A.* 45, 7730f. Expression of analytical results in mg-equiv-% shows the change in the character of the waters with increasing degree of mineralization. M. G. Moore

AFANAS'YEV, T. P.

May 1947

USSR/Hydrology  
Water, Underground

"The Chemical Zoning of Subterranean Waters in the  
Central Volga Region," T. P. Afanas'yev, Lab Hydrogeol  
Prob imeni F. P. Savarenskiy, Acad Sci USSR, 4 pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVI, No 6

Describes hydrogeological research and discusses ex-  
periments designed to tabulate degree of mineraliza-  
tion of subterranean waters in Central Volga Region.  
Submitted by Academician D. S. Belyankin, 24 Dec 1946.

58150



CA

14

...the chemical composition and zonal distribution of the  
ground water in the middle Volga region. T. P. Alanas'ev.  
*Doklady Akad. Nauk. S.S.S.R.* 56, 621-4(1947); *Chem.  
Zentr.* (Russian Zone Ed.) 1949, I, 25.--The horizontal and  
vertical distributions of the ground-water types were detd.  
on the basis of 338 analyses. The degree of mineralization  
of the water increases with increasing depth. The type of  
water also changes with increasing depth according to the  
following series:  $\text{HCO}_3^- \rightarrow \text{HCO}_3^-/\text{SO}_4^{--} \rightarrow \text{SO}_4^{--} \rightarrow$   
 $\text{SO}_4^{--}/\text{Cl}^- \rightarrow \text{Cl}^-$ . M. G. Moore

1951

Principal features of the hydrogeology of the Middle Volga country. T. P. Almashev. *Trudy Lab. Geolog. Problemy im. F. P. Savitskogo, Akad. Nauk S.S.S.R.* 1, 88-90 (1948).—Mineralization of water at 8 locations in the Middle Volga country is plotted against various depths showing an increase from 1-2 g. per l. at the surface to 15-17 g. per l. at 200 m. depth. The author uses S. A. Shchegolev's scheme for classifying subterranean waters into types obtained by representing 7 combinations of 3 cations ( $Mg^{++}$ ,  $Ca^{++}$ ,  $Na^+$ ) as rows, and 7 combinations of 3 anions ( $HCO_3^-$ ,  $Cl^-$ ,  $SO_4^{--}$ ) as columns, the small squares so formed being numbered downwards from 1 to 49 starting at the top left.

V. H. Gottschalk

AFANAS'YEV, T.P.

The lower Kazan deposits of the Cheboksar sector along the Volga. Trudy  
Lab. Hidrogeol. Problem im. F.P. Savarenskogo, Akad. Nauk S.S.S.R. 3, 361-  
86 '48. (MLRA 3:2)  
(CA 47 no.19:9870 '53)

AFANAS'YEV, T. P.

USSR/Agriculture  
Soil Science  
Literature

Sep 48

"Bibliography on Factors of Soil Formation, Genesis,  
and Geography of Soils" 1 1/2 PP

"Pochvoved" No 9

Lists various books on the study of soils, among  
them T. P. Afanas'yev's "Basic Hydrology of the  
Middle Reaches of the Volga," S. S. Buts'ko's  
"Geomorphology of Landslips," and B. F. Petrov's  
"Altay Loess."

61/49T10

1. AFANAS'YEV, T.P.

2. USSR (600)

"The Main Hydrogeological Features of the  
Middle Volga Region." Trudy Laboratorii  
gidrogeologicheskikh problem imeni Savarenskiy,  
Volume 1, 1949 (88-96).

9. Meteorologiya i Gidrologiya, No. 3, 1949.  
Report U-2551, 30 Oct 52.

AFANAS'YEV, T.P.

Waters from the Upper Permian sediments of the N. Volga Basin. Trudy Lab.  
Gidogeol. Problem im. F.P.Savarenskogo, Akad. Nauk S.S.S.R. 2, 93-121 '49.  
(CA 47 no.22:12703 '53) (MIRA 5:9)

1. AFANAS'YEV, T.F.
2. USSR (600)
4. Volga Valley - Water, Underground
7. Geochemistry of underground waters of the central Volga region. Trudy Lab.gidrogeol.:  
probl. 10. 1951

9. Monthly List of Russian Accessions, Library of Congress, March, 1953. Unclassified.

1. AFANAS'YEV, T. P.
2. USSR (600)
4. Water, Underground - Kuybyshev Reservoir Region
7. Underground waters in the territory of the Kuybyshev Reservoir, and the trend of further research on them. Izv. AN SSSR. Ser. geol. No. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.



1. AFANAS'YEV, T. P.
2. USSR (600)
4. Volga Valley - Geology, Stratigraphic
7. Geology of the middle Volga and Kama valleys. Dokl. AN SSSR 86 no. 5, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953, Unclassified.

AFANAS'YEV, T.P.; SLAVYANOV, N.N.; redaktor; KAVELINA, N.A.; redaktor; CHEPIKOVA, I.M., redaktor; SHEVCHENKO, G.N., tekhnicheskii redaktor.

[Underground waters in the middle Volga and middle and lower Kama Valleys and their hydrochemical zones] Podzemnye vody Srednego Povolzh'ia i Prikam'ia i ikh gidrokhimicheskaiia zonal'nost'. Moskva, Izd-vo Akademii nauk SSSR, 1956. 261 p. --[Diagramatic hydrogeological profiles] --Skhematicheskie gidrogeologicheskie profilli. 9p. (MIRA 9:6)

1.Chlen-korrespondent AN SSSR (for Slavyanov).  
(Water, Underground)

AFANAS'YEV, T.P.

KASHANOV, S.G. (Kazan'); AFANAS'YEV, T.P. (Kazan'); NELIDOV, N.N. (Kazan')

Underground waters of the Volga-Kama region. Uch.zap.Kaz.un. 115  
no.10:126-129 '55. (MIRA 10:5)  
(Volga Valley--Water, Underground)

(

SOV/11-59-6-10/15

AUTHORS: Gordeyev, D.I., Afanas'yev, T.F., and Makarenko, F.A.

TITLE: In Memory of Nikolay Nikolayevich Slavyanov

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geologicheskaya, 1959, Nr 6, pp 112-113 (USSR)

ABSTRACT: This is an article to the memory of the eldest Soviet hydrogeologist N.N. Slavyanov, **Corresponding Member** of the AS USSR, who died on October 16, 1958. He received the degree of Doctor of Sciences without having to defend a thesis on the recommendation of Academicians V.I. Vernadskiy, V.A. Obruchev and P.I. Stepanov. He was one of the creators of hydrogeochemistry as a science.

Card 1/1

MAKARENKO, F.A.; AFANAS'YEV, T.P., doktor geol.-min.nauk, otv.red.;  
TUGARINOV, D.N., red.izd-va; KOVAL'SKAYA, I.F., tekhn.red.

[Characteristics of subsurface flow in the basin of the Don River;  
regime, balance, hydrochemistry, and geological activity] Kharakte-  
ristika gruntovogo stoka basseina Dona; rezhim, balans, gidrokhimia  
i geologicheskaya deiatel'nost'. Moskva, Izd-vo Akad.nauk SSSR,  
1961 73 p. (Akademiia nauk SSSR. Laboratoriia gidrogeologicheskikh  
problem. Trudy, vol.34). (MIRA 14:6)  
(Don Valley--Water, Underground)

GORDEYEV, Dem'yan Ignat'yevich; AFANAS'YEV, T.P., doktor geol.-mineral.-  
nauk, otv.red.; SPRYGINA, L.I., red.izd-va; SUSEKOVA, L.A.,  
tekhn.red.

[Nikolai Nikolaevich Slavianov; his life and work] Nikolai  
Nikolaevich Slavianov; zhizn' i deiatel'nost'. Moskva, Izd-vo  
Akad.nauk SSSR, 1962. 135 p. (Akademiia nauk SSSR. Laboratoriia  
gidrogeologicheskikh problem. Trudy, vol.43). (MIRA 15:3)  
(Slavianov, Nikolai Nikolaevich, 1878-1958)

AFANAS'YEV, T.P.

General characteristics of the distribution of underground waters  
in the Volga-Ural oil-bearing region. Trudy Lab.gidrogeol.probl.  
42:94-100 '62. (MIRA 15:8)

(Ural-Volga region--Water, Underground)

GAVRYUKHINA, A.A.; AFANAS'YEV, T.P., doktor geol.-min. nauk, otv.  
red.

[Formation of underground waters under the effect of artificial discharge as revealed by a study made in Moscow] Formirovaniye podzemnykh vod pod vlianiem iskusstvennoi razgruzki. (na primere Moskvy). Moskva, Izd-vo "Nauka," 1964. 130 p.  
(MIRA 17:5)



KULAKOV, N.V.; LEVINSKIYEV, T.F., doktor geol.-miner. nauk,  
nauchn. red.

[Paleohydrogeological conditions governing the formation  
of gas and oil fields as revealed by a study made in the  
Volga Valley portion of Saratov and Volgograd Province]  
Paleogidrogeologicheskie usloviia formirovaniia gazonef-  
tiannykh mestorozhdenii' ( na primere Saratovsko-Volgograd-  
skogo Povolzh'ia, Moskva, Nedra, 1964., 193 p.  
(EINA 1740)

AFANAS'YEV, T.P.; GASHICHEV, V.I.; YELIN, S.N.; KAPLYANSKIY, B.A.;  
LAVROVA, G.I.

Automation of crushing and grinding processes at the No.1  
Apatite-Nephelite Ore Dressing Plant. Obog. rud 9 no.4:  
36-41 '64. (MIRA 18:5)

AFANASIYEV, Tikhon Pavlovich; POPOV, I.V., doktor geol.-min.  
nauk, otv. red.

[Hydrogeology and hydrogeochemistry of the Volga Valley; a  
brief outline] Gidrogeologiya i gidrogeokhimiya Povolzh'ia;  
kratkie ocherk. Moskva, Nauka, 1965. 170 p. (MIRA 18:12)

KOZLOVA, Nadezhda Dmitriyevna; AFANAS'YEV, T.P., doktor geol.-  
miner. nauk, otv. red.

[Geochemistry and the formation of underground waters  
as revealed by a study in the middle Don- Valley] Geo-  
khimii i formirovanie podzemnykh vod; na primere  
Stednego Dona. Moskva, Nauka, 1965. 164 p.  
(MIRA 18:12)

32325

S/081/61/000/024/007/086

B138/B102

21.6000

AUTHORS: Trukhmanova, Ye. S., Afanas'yev, T. S.\*

TITLE: The use of special ionization chambers to measure the activity and check the purity of radioactive preparations

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 24, 1961, 61, abstract 24B418 (Tr. Tashkentsk. konferentsii po mirn. ispol'zovaniyu atomn. energii. Tashkent, AN UzSSR, v. 2, 1960, 382 - 389)

TEXT: The possibility is investigated, of using an ionization chamber with  $4\pi$  geometry to measure  $\gamma$  activity in production conditions. This kind of chamber was found to have a number of advantages over those with external irradiation. It is only slightly dependent on the shape of the preparation, there is practically no external background and laboratory workers are exposed to only a low degree of irradiation. To test for impurities it is suggested that a differential ionization chamber with spectral sensitivity should be used. In this type of apparatus measurement is made on the principle of compensating the current from different

Card 1/2

*\* Ministry of Health USSR*

S/137/62/000/006/028/163  
A006/A101

AUTHORS: Reznichenko, V. A., Sidorenko, G. D., Solov'yev, V. I., Karyazin, I. A., Dmitrovskiy, Ye. B., Afanas'yev, T. V.

TITLE: Developing electric melting techniques for perovskite-titanium-magnetite sinter

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 6, 1952, 13, abstract 6594  
(In collection: "Titan i yego splavy", no. 5, Moscow, AN SSSR, 1961, 54 - 59)

TEXT: As a result of experimental industrial investigations on the electric melting of perovskite titanium-magnetite sinter, the possibility was proved of extracting Nb into cast-iron and of obtaining titanous slag. Nb cast-iron can be used as an initial product to obtain Nb slag which is a raw material for producing Nb metal. Titanous slag can be employed for  $TiO_2$  production. For melting, sinter was used containing 25% perovskite and 75% titanium-magnetite concentrates. The Fe content in the sinter was 39 - 45%,  $TiO_2$  content was 12 - 15%. Melting was conducted in an ore-heating furnace with a cupola. Its capacity is

Card 1/2

107-57-1-16/60

AUTHOR: Afanas'yev, V. (Pargolovo, Leningrad oblast)  
TITLE: UAICI. A New-Year Questionnaire (Novogodnyaya anketa)

PERIODICAL: Radio, 1957, Nr 1, p 14 (USSR)

ABSTRACT: The author reports on his radio contacts and communications in 1956. He worked amateur stations of all Soviet republics and 105 oblasts, all continents and 65 countries of the world. His transmitter capacity is 25 w; his 7-tube receiver is of the superheterodyne type. As an operator of radio club VHF station O63019 he established numerous long-distance communications in the 38-40 mc band.

AVAILABLE: Library of Congress

Card 1/1

POPOV, I.; AFANAS'YEV, V.; SUKHOVA, G.

Using synthetic washing agents in laundries. Zhil.-kom.khoz.  
8 no.10:2-4 '58. (MIRA 11:11)  
(Washing powders)



AFANAS'YEV, V.

Landscaping and protection of the banks of the Volga-Baltic Sea  
Waterway through afforestation. Rech. transp. 24 no. 2849-50 '65.  
(MIRA 18:5)

1. Glavnyy inzh. proyekta instituta "Soyuzgiproleskhoz".

L 45520-66 EWP(m),EWT(1)/T-2/FSS-2 IJP(c) TT/AT/GW

ACC NR: AP5027656 SOURCE CODE: UR/0309/65/000/011/0018/0021

AUTHOR: Afanas'yev, V.

ORG: none

TITLE: Earthly professions of a stellar substance

SOURCE: Nauchno-tekhnicheskiye obshchestva SSSR, no. 11, 1965, 18-21

TOPIC TAGS: plasma propulsion, plasma research, *controlled thermonuclear reaction*

ABSTRACT: The historical development of the plasma engine is discussed. Scientists are said to feel that techniques for developing a thermonuclear reaction in plasma are still in their infancy and that many problems have yet to be solved; however, sooner or later controlled thermonuclear reactions will provide man with an unlimited energy supply. The temperature of plasma can be changed; it has been proved theoretically that this temperature change can vary from one thousand to tens of thousands of degrees, and plasma power from one kw to millions of kw. The use of plasma in reaction engines was initiated in 1964 in the Soviet Zond-2 spacecraft. Terrestrial plasma has opened promising prospects in the conquest of outer space, and, according to Academician V. Kirillin, the Soviet Union will be able to start building industrial magnetohydrodynamic stations by 1970. [WH]

~~SUB~~ CODE: 21/ SUBM DATE: none /

Card 1/1 *nd*

76  
B

4Chem

(3)

Structure of 1,6-dioxaspiro[4.4]nonane, A. A. Ponomarev  
 V. A. Alandov, and N. T. Kurgenin, *Doklady Akad. Nauk*  
 S.S.S.R. 87, 983-6(1952); cf. Burdick and Adkins, C.I.  
 28, 4055; Farlow, et al., C.A. 29, 775'.—Condensation of  
 AcH with 5-methylfurfural gave 28% 3-(2-methyl-5-furyl)-  
 2-propenal, b<sub>p</sub> 98-100°. This hydrogenated over Cu chromi-  
 te catalyst at 120° and 120-35 atm. in EtOH gave 75%  
 3-(2-methyl-5-furyl)-1-propanol, b<sub>p</sub> 97-9°, n<sub>D</sub><sup>20</sup> 1.4775, d<sub>4</sub><sup>20</sup>  
 1.0322, which, hydrogenated over Ni-kieselguhr at 150 atm.  
 and 120° in EtOH, gave 2 products: 3-(2-methyl-5-tetra-  
 hydrofuryl)-1-propanol, b<sub>p</sub> 111-13°, n<sub>D</sub><sup>20</sup> 1.4635, d<sub>4</sub><sup>20</sup> 0.9972,  
 and 2-methyl-1,6-dioxaspiro[4.4]nonane, b<sub>p</sub> 162-4°, n<sub>D</sub><sup>20</sup>  
 1.4412, d<sub>4</sub><sup>20</sup> 0.9920, n<sub>D</sub><sup>20</sup> 1.4428 (15.6% yield) (cf. Alexander,  
 et al., C.A. 46, 1535e). Me<sub>2</sub>CO and 5-methylfurfural gave  
 4-(2-methyl-5-furyl)-3-buten-2-one, b<sub>p</sub> 105.5-7.0°, m. 35-6°.  
 This hydrogenated over Cu chromite at 88-95 atm. and 120°  
 in EtOH gave 80.5% 4-(2-methyl-5-furyl)-2-butanol, b<sub>p</sub>  
 130.5-8.0°, n<sub>D</sub><sup>20</sup> 1.4760, d<sub>4</sub><sup>20</sup> 1.000, which hydrogenated  
 over Ni-kieselguhr at 130-40 atm. and 120° gave: 73.6%  
 4-(2-methyl-5-tetrahydrofuryl)-2-butanol, b<sub>p</sub> 134-6°, n<sub>D</sub><sup>20</sup>  
 1.4542, d<sub>4</sub><sup>20</sup> 0.9574, and 3.1% 2,7-dimethyl-1,6-dioxaspiro-  
 [4.4]nonane, b. 167-9°, n<sub>D</sub><sup>20</sup> 1.4389, d<sub>4</sub><sup>20</sup> 0.9594, which gives a  
 positive Tollen test. These results indicate that the  
 hydrogenation of furan aldehydes leads to tetrahydrofuran  
 alcs. which on further hydrogenation either yield satd.  
 furan alcs. or the spiro derivs. Thus, hydrogenation of  
 furfurylideneacetone and 3-(2-methyl-5-furyl)-2-propenal  
 should yield 2-methyl-1,6-dioxaspiro[4.4]nonane, along  
 with the satd. furan alcs., confirming the identity of the 2  
 five-atom rings in such compds. which is possible only in  
 spiro derivs.

G. M. Kosolapoff —

MF  
7-28-54

4. V-48  
~10, 1954  
Organic Chemistry

PONOMAREV, A.A.; AFANAS'YEV, V.A.; KUROCHKIN, N.I.

Study of furan compounds. Part 3. Structure of 1,6-dioxaspiro-(4,4)-nonanes  
and the mechanism of their formation. Zhur.ob.khim. 23 no.8:1426-1430 #g '53.  
(MIRA 68)

1. Kafedra organicheskoy khimii Saratovskogo Gosudarstvennogo universiteta im.  
N.G.Chernyshevskogo. (Oxaspiro-nonanes)  
(CA 47 no.22:12344 '53)

PHILIPINES, VIETNAM

~~RESEARCH~~

Changes taking place in southern Viet Nam during the

0  
0

A FANASYEV, V. A.

USSR/ Chemistry - Organic chemistry

Card 1/1 Pub. 22 - 22/46

Authors : Rubinshteyn, A. M.; Zakharov, B. A.; Pribytkova, N. A.; and Afanasyev, V. A.

Title : About binary oxide catalysts on the MgO base

Periodical : Dok. AN SSSR 103/1, 83-86, Jul 1, 1955

Abstract : Investigation was conducted to determine the effect of equimolecular amounts of metal oxides, belonging to various groups of the periodical system, on the catalytic properties of MgO during the decomposition of alcohol. X-ray analysis data show that a part of the metal additives introduced into the solution activates the MgO catalyst and the second part either produces no effect (negative effect) or deactivates the catalyst. Results obtained with inert or deactivated CaO, SrO, BaO, PbO and CdO additions are listed. Five references: 1 Eng. and 4 USSR (1945-1954). Table; graph.

Institution : Acad. of Sc., USSR, Inst. of Organ. Chem.

Presented by : Academician A. A. Balandin, February 16, 1955

~~SECRET~~

Испытание динамометри-  
паров для определения величины поверхности катализа-  
торов. А. М. Рубинштейн and В. А. Алапачев. Известия Акаде-  
мии Наук СССР, Отделение Химических Наук, no. 11, Nov.  
1950, p. 1293-1303.

11/11

И. И. Калашников  
11/11

*APANAS'YEV, V.A.*  
RUBINSHTEYN, A.M.; AFANAS'YEV, V.A.; PRIBYTKOVA, N.A.

Determining the surface magnitudes of the components of mixed MgO-  
Cr<sub>2</sub>O<sub>3</sub> catalysts. Izv. AN SSSR Otd. khim. nauk no.12:1505-1507 D '56.  
(MIRA 10:4)

1. Institut organicheskoy khimii im. N.D. Zelinskogo Akademii nauk  
SSSR.

(Catalysts)





*Malic acid-lactic acid fermentation. V. A. Atanas'ev.*  
*Sadovodstvo, Vinogradarstvo i Vinodetna Makhana 12, No. 1, 1970.*  
4x 9 (1970). Malic acid lactic acid fermentation in wine  
is a complex process. It is characterized by the  
wine. It follows usually the course of malic acid  
but precedes that of lactic acid. It is caused  
by a group of bacteria. The process is  
of great importance for the quality of wine.

AUTHORS: Afanas'yev, V. A., Rubinshteyn, A. M. SOV/32-24-7-21/65

TITLE: The Determination of the Surface of Catalysts According to the Adsorption Isothermal Lines (Opredeleniye poverkhnosti katalizatorov po izoternam adsorbtsii, snyatym v protochnoy sisteme)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 7, pp. 830 - 832 (USSR)

ABSTRACT: In order to avoid the complicated vacuum apparatus, the range of application of this system, the accuracy of determination and the means of producing samples is investigated. From the scheme of the apparatus and from its description proceeds that nitrogen was used as carrier gas, benzene and carbon tetrachloride were used as adsorbate and MgO-catalysts were used as catalysts (in pure state or with admixtures of metal oxides and of magnesium salts, respectively). Data by Katzow (Ref 3), and Brunauer and Emmett (Ref 1) were used in the computations. The method is based upon a computation of the relative vapor pressure from a given equation by means of the results of the measurements. The adsorption isothermal line is drawn by plotting the adsorption, taken in millimoles or moles of ad-

Card 1/2

The Determination of the Surface of Catalysts According SOV/32-24-7-21/65  
to the Adsorption Isothermal Lines

sorbed vapors per gram of weighed sample, versus the relative vapor pressure. The results were checked by other methods and were graphically compared. It may be seen that the deviations do not exceed  $\pm 10\%$  as the surface varies within the interval of from 20 to  $25 \text{ m}^2/\text{g}$  and above. The time necessary for the determination of the surface can be considerably reduced, if the equation Brunauer-Emmett-Teller (Ref 2) is applied. There are 2 figures and 4 references, 1 of which is Soviet.

ASSOCIATION: Institut organicheskoy khimii im.N.D.Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N.D.Zelinskiy, AS USSR)

Card 2/2

5(2,3)

**AUTHORS:**

Rubinahteyn, A. M., Afanas'yev, V. A., SOV/20-124-5-32/62  
Akimov, V. M., Pribytkova, N. A., Slovetskaya, K. I.

**TITLE:**

The Influence of the Composition and of the Conditions of the Thermal Treatment on the Structure and Catalytic Activity of  $Al_2O_3$ - $ZrO_2$  Catalysts (Vliyaniye sostava i usloviy termicheskoy obrabotki na strukturu i kataliticheskuyu aktivnost'  $Al_2O_3$ - $ZrO_2$ -katalizatorov)

**PERIODICAL:**

Doklady Akademii nauk SSSR, 1959, Vol 124, Nr 5, pp 1076-1079 (USSR)

**ABSTRACT:**

The authors are not aware of publications on results of systematic changes of the ratio of components or of the conditions of the thermal treatment nor on the determination of the specific activity of the catalysts mentioned in the title. They have investigated the decomposition of absolute isopropyl alcohol on such catalysts which had been produced by precipitation with 10 % ammonia from 10 % solutions of Al- and Zr-nitrate at room temperature and pH 8.7-9.5. During the calcining of samples of the catalysts at 400, 600, and 750° it was found that the dehydration of the hydroxide is already

Card 1/4

The Influence of the Composition and of the Con- SOV/20-124-5-32/62  
ditions of the Thermal Treatment on the Structure and Catalytic Activity of  
Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> Catalysts

Al<sub>2</sub>O<sub>3</sub>. It can be concluded that the addition of ZrO<sub>2</sub> does not result in an activation of Al<sub>2</sub>O<sub>3</sub> under the conditions given. Figure 3 shows a diagram - the variation of A<sub>sp</sub> with the composition and the calcining temperature of the catalysts (1-750°, 2-600°, 3-400°) - for experiments carried out at 260°. The fact that A<sub>sp</sub> is constant throughout a wide range of ZrO<sub>2</sub> concentrations seems to indicate that the reaction is taking place in this case only on Al<sub>2</sub>O<sub>3</sub> whereas ZrO<sub>2</sub> behaves only as an inert support. All this is in good agreement with the results of the X-ray analysis (made with the assistance of L. D. Kretalova). It has been found that in co-precipitated catalysts ZrO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> are present as separate phases rather than solid solutions (in agreement with reference 4). Neither the increase of the temperature at which the experiment was carried out (up to 320°) nor of the volume velocity (up to

Card 3/4

The Influence of the Composition and of the Con- SOV/20-124-5-32/62  
ditions of the Thermal Treatment on the Structure and Catalytic Activity of  
Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> Catalysts

. 12h<sup>-1</sup>) have destroyed, on the whole, the picture of figure 3  
nor affected the conclusions derived therefrom in table 1.  
This relates to the catalysts calcined at 600°. The total  
activity (Table 1) and A<sub>sp</sub> increase with the calcining temper-  
ature between 400 and 600° (Fig 3) probably because the finest  
pores are destroyed, which are difficultly accessible to the  
alcohol molecules. There are 3 figures, 1 table, and 6 referen-  
ces, 4 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii im N. D. Zelinskogo Akademii  
nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy  
of the Academy of Sciences, USSR)

PRESENTED: October 17, 1958, by A. A. Balandin, Academician

SUBMITTED: April 19, 1958

Card 4/4

RUBINSHTEYN, A.M., PRIBYTKOVA, N.A., AFANAS'YEV, V.A., SLINKIN, A.A.

Structure and texture of alumina - chromic oxide - potassium  
monoxide catalysts, and their activity and selectivity of  
action in the decomposition of  $\lambda$ -C<sub>3</sub>H<sub>7</sub>OH. Kin. i kat. 1 no.1:129-  
143 My-Je '60. (MIRA 13:8)

1. Institut organicheskoy khimii im. N.D.Zelinskogo Akademii  
nauk SSSR.

(Alumina)

(Chromium oxide)

(Potassium oxide)

(Butanol)



20360

S/020/61/136/005/021/032  
B004/B058

53700

1209, 1273, 1274

AUTHORS: Afanas'yev, V. A., Ponomarenko, V. A., and Zadorozhnyy, N. A.

TITLE: Adsorbability and catalytic activity of platinized carbon  
with regard to the addition of some silanes to unsaturated  
compounds

PERIODICAL: Doklady Akademii nauk SSSR, v. 136, no. 5, 1961, 1123-1126

TEXT: In previous publications (Refs. 1 to 3) on the addition of alkyl- and chloro-alkyl silanes on halogenated allyl ether it was found that the adsorption interaction of the reacting molecules with the catalyst surface has a great effect on the addition reaction. This effect was checked in the present study by investigating the capacity of platinized carbon (1% Pt) to adsorb  $(C_2H_5)_3SiH$  (I),  $CH_3(C_2H_5)_2SiH$  (II),  $C_2H_5(C_3H_7)_2SiH$  (III),  $Cl_3SiH$  (IV),  $C_2H_5SiHCl_2$  (V), and  $CH_3(C_2H_5)SiHCl$  (VI). The experiments were conducted in a continuous apparatus at atmospheric pressure and  $20^\circ C$ . The relative partial pressure of the vapors was varied between 0 and 0.5. Nitrogen served as carrier gas. Before the experiment, the catalyst was

Card 1/1

20360

S/020/61/136/005/021/032  
B004/B058

Adsorbability and catalytic ...

heated to 300°C in a vacuum (approximately  $10^{-4}$  mm Hg). The pressure  $P_s$  of the saturated vapor of I - VI was determined in the same apparatus.  $P_s$  was determined from the equation  $P_s/P = v/V$ .  $P$  is the total pressure (atmospheric pressure) in the system,  $v$  the volume of the substance vaporized per unit time, and  $V$  is the rheometrically measured total volume of the mixture. A linear increase of adsorption with increasing length of experiment was found for all alkyl silanes.  $P_s$  was calculated at  $v_1 = 1$  ml/min (velocity of silane vapor) and  $v_2 = 20$  ml/min (velocity of the carrier gas). The experimental data for the compounds I - VI are compared in Table 1 with the values calculated according to Haas and Newton and Antoine. Fig. 2 shows the adsorption isotherms at 20°C for  $P/P_s$  from 0 to 0.5. A different adsorbability of the substances was found. Chloro-alkyl silanes are adsorbed more intensively than alkyl silanes. A quantitative estimate of adsorbability was made by a comparison of the various areas  $\omega_0$  occupied by the molecules.  $\omega_0$  was calculated from the BET equation by using  $\omega_0$  for benzene ( $40 \text{ \AA}^2$ ). These data were compared with the reactivity of the compounds in the case of simultaneous addition to 1,1,2-trifluoro-2-chloro-ethyl allyl ether (Table 2). With increasing

Card 2/7/

20360

S/O20/61/136/005/021/032  
B004/B058

Adsorbability and catalytic ...

$\omega_0$  (decreasing adsorbability) of the silane, and increasing yield of its addition products resulted. For substances with equal  $\omega_0$ , the yield of addition products is equal, too. The following interpretation is given for concurrent reactions: Owing to the increased adsorbability of chloro-alkyl silanes, highly active chloro-silyl radicals ( $Cl_3\dot{Si}$  and  $Cl_2\dot{Si}C_2H_5$ ) form on the catalyst surface. They seize upon the hydrogen of the tri-alkyl silane under the formation of a less active trialkyl-silyl radical. Only the latter reacts with the unsaturated bond of the ether. Apart from this, however, also a direct addition of the chloro-silyl radical to the unsaturated compound takes place. With the concurrent addition reaction of  $(CH_3)(C_2H_5)(Cl)SiH$  with  $Cl_3\dot{Si}$  or  $C_2H_5SiHCl_2$ , the higher adsorbability of  $(CH_3)(C_2H_5)(Cl)SiH$  and its weak Si-H bond, as compared with the other two compounds, causes the predominant formation of the radicals  $(CH_3)(C_2H_5)(Cl)\dot{Si}$  on the catalyst surface. These radicals are, however, unable to seize upon the more strongly bound hydrogen of  $Cl_3SiH$  or

Card 3/14

20360

S/020/61/136/005/021/032  
B004/B058

Adsorbability and catalytic ...

$C_2H_5SiHCl_2$ . In spite of the stronger adsorbability of  $CH_3C_2H_5ClSiH$ , a predominant addition of this compound to the unsaturated ether sets in in this case. This interpretation may also be valid for the forming radicals  $X-SiCH_2-CH-R$  ( $X = Cl$ ,  $R = CH_2OOC_2FC_2H$ ). There are 2 figures, 2 tables, and 5 Soviet-bloc references. ✓

ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo Akademii nauk SSSR (Institute of Organic Chemistry imeni N. D. Zelinskiy, Academy of Sciences USSR)

PRESENTED: September 17, 1960, by A. A. Balandin, Academician

SUBMITTED: September 14, 1960

Card 4/4

AFANAS'YEV, V.A.; BYSTROV, V.F.; DEKABRUN, L.L.; KUL'YANOV, Yu.N.;  
STEPANYANTS, A.U.

Multipurpose spectrometer of nuclear magnetic resonance.  
Zav.lab. 28 no.1:102-103 '62. (MIRA 15:2)

1. Institut khimicheskoy fiziki AN SSSR.  
(Spectrometer)

AFANAS'YEV, Vitaliy Arkad'yevich; KITAYGORODSKIY, A.I., doktor  
fiziko-matem. nauk, prof., otv. red.; VOZHEYKO, I.V.,  
red. izd-va; POPOVA, M.G., tekhn. red.

[Physical methods for studying the molecular structure of  
organic compounds] Fizicheskie metody issledovaniia stro-  
eniia molekul organicheskikh soedinenii. Frunze, Izd-vo  
AN Kirgiz.SSR, 1963. 247 p. (MIRA 16:10)  
(Organic compounds) (Molecular structure)

VOL'KENSHTEYN, E.V., doktor fiz.-matem. nauk, prof., red.;  
SHEYNKER, Yu.N., doktor khim. nauk, red.; SAMITOV,  
Yu.Yu., kand. fiz.-mat. nauk, red.; AFANASYEV, V.A.,  
kand. khim. nauk, red

[Transactions of the Conference on the Physical Methods of  
Study of Organic Compounds and Chemical Processes] Trudy  
Soveshchaniia po fizicheskim metodam issledovaniia organi-  
cheskikh soedinenii i khimicheskikh protsessov. Frunze,  
Ilim, 1964. 268 p. (MIRA 17:11)

1. Soveshchaniye po fizicheskim metodam issledovaniya  
organicheskikh soedineniy i khimicheskikh protsessov.  
Frunze, 1962. 2. Institut vysokomolekulyarnykh soedineniy  
AN SSSR, Leningrad (for Vol'kenshteyn). 3. Institut khimii  
prioranykh soedineniy AN SSSR, Moskva (for Sheynker).  
4. Kazanskiy gosudarstvennyy universitet, Kazan' (for  
Samitov). 5. Institut organicheskoy khimii AN Kirgizskoy  
SSR, Frunze (for Afanas'yev).

AFANAS'YEV, V.A.; STREL'TSOVA, I.F. (Frunze)

Spectroscopy of aqueous solutions of carbohydrates. Part 1.  
Zhur. fiz. khim. 39 no. 1110-115 Ja '65 (MIRA 19:1)

1. Institut organicheskoy khimii AN Kirgizskoy SSR. Submitted  
March 12, 1964.



L 44260-65 EWT(m)/T/EWP(t)ETI IJP(c) DS/JD/JG

ACC NR: AP6013262 SOURCE CODE: UR/0413/66/000/008/0052/0052 <sup>36</sup>  
<sub>B</sub>

INVENTOR: Afanas' yev, V. A.; Volodin, Yu. A.; Smirnov, V. A.; Druzhinin, A. V.

ORG: none

TITLE: Oxide-coated cathode<sup>n</sup> Class 21, No. 180710<sup>1/2</sup>

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 8, 1966, 52

TOPIC TAGS: electron tube cathode, surface active coating, iridium coating, osmium coating, ~~oxide coating~~, ~~oxide-coated cathode~~

ABSTRACT: An Author Certificate has been issued describing an oxide-coated cathode for electronic tubes containing a base on part of the surface of which is an emissive coating. To suppress the emission with an inactive surface coating and to obtain a clearly defined emitting surface, an iridium or osmium coating is applied on the inactive surface of the emissive coating. [Translation] [NT]

SUB CODE: 09/ SUBM DATE: 20Apr65/

Card

1/1 *Red*

UDC: 621.385.032.213.6

AFANAS'YEV, V.A., assistant

From the history of the domestic leather production. Nauch. trudy  
MTILP no.27:3-26 '53. (MIRA 17:11)

1. Kafedra organizatsii proizvodstva i ekonomiki legkoy promyshlennosti Moskovskogo tekhnologicheskogo instituta legkoy promyshlennosti.

AFANAS'YEV, V.A., assistant

Leather industry in the ukases of Peter I. Nauch. trudy MTILP  
no.28:3-31 '63. (MIRA 17:11)

1. Kafedra organizatsii proizvodstva i ekonomiki legkoy  
promyshlennosti Moskovskogo tekhnologicheskogo instituta  
legkoy promyshlennosti.

AFANAS'YEV, V. A.

"Parasitism and Symbiosis," in the book: Problemy obshchey parazitologii (Problems of General Parasitology), 15-21, Leningrad-Moscow, 1937

AFANAS'YEV, V. A.

Afanas'yev, V. A. "The production problems of eating silk-worm cocoons by fur-bearing animals," Karakulevodstvo i zverovodstvo, 1949, No. 2, p. 40-44.

SO: U-3736, 21 May 53, (Letopis 'Zhurnal 'nykh Statey, No. 17, 1949).

AFANAS'YEV, V. A.

~~AFANAS'YEV, V. A.~~ AFANAS'YEV, V. A.

24195 AFANAS'EV, V. A. Udeshevin sodержaniye pushnykh zverey v sovkhozakh.  
Karakulevodstvo i zverovodstvo, 1949, No. 4, S. 34-38.

SO: Letopis, No. 32, 1949.

AFANAS'YEV, V. A.

"Effect of Keeping Silver Fox in Smaller Pens with a Woven Wire Floor on Their Productivity and Viability," Kar. i Zver., 5, No.4, 1962

1. AFANAS'YEV, V.A.
2. USSR (600)
4. Fur Farming
7. Procurement of animal feeds is an important task of state fur farms, Kar.izver. 6 no. 2, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.



ABRAMOV, M.D., redaktor; AFANAS'YEV, V.A., redaktor; PEREL'DIK, N.Sh.,  
redaktor; NECHAYEVA, Ye.G., redaktor; FEDOTOVA, A.P., tekhnicheskiy  
redaktor

[Raising fur-bearing animals] Zvedrovodstvo. Izd. 2-oe, perer. i  
dop. Moskva, Gos. izd-vo selkhoz. lit-ry, 1956. 615 p. (MLRA 9:9)  
(Fur-bearing animals)

AFANASYEV, V.A.

USSR/Farm Animals - Wild Animals.

Q-6

Abs Jour : Ref Zhur - Biol., No 1, 1958, 2621

Author : V.A. Afanas'yev

Inst : -

Title : Notes on Scandinavian Husbandry of Wild Animals.

Orig Pub : Karakulevodstvo i zverevodstvo 1956, No 5, 47-53

Abstract : Describes breeding in Scandinavian animal husbandry. Describes the essential criterion in selecting and matching wild life animals, the quality of the fur, its color and size. Presents the registration forms used in the wild-life breeding ranches in Scandinavian countries.

Card 1/1

USSR / Farm Animals. Wild Animals.

Q-4

Abs Jour : Ref Zhur - Biol., No 10, 1958, No 45247

Author : Afanas'yov, V. A.

Inst : Not given

Title : Seal Meat - a Good Protein Feed for Growing Fur-Bearing Animals.

Orig Pub : Karakulevodstvo i zverovodstvo, 1957, No. 4, 28-32

Abstract : Experiments in feeding raw and jerked seal meat to silver-black foxes, Arctic foxes and minks showed that seal meat possesses high nutritive qualities and is not inferior to

AFANAS'YEV, V. A., Cand. Agri. Sci. (diss) "Rationalization of Methods of Care and Feeding of Furbearing Animals on Animal Sovkhozes," Moscow, 1961, 22 pp. (Moscow Veter. Acad.) 200 copies (KL Supp 12-01, 278).

100837-66

ACCESSION NR: AP5016081

UR/0302/65/000/002/0017/0019

681.142.642

AUTHOR: Afanas'yev, V. A.; Kazais, E. B.; Plotnikov, A. D.

TITLE: Specialized arithmetic unit

SOURCE: Avtomatika i priborostroyeniye, no. 2, 1965, 17-19

TOPIC TAGS: arithmetic unit

ABSTRACT: The development of a specialized few-digit arithmetic unit based on three-cycle ferrite-diode logical elements is briefly reported. The use of a table of binary logarithm-antilogarithms has simplified the logical circuit of the unit and has accelerated the multiplication, division, and evolution operations. The unit performs addition and subtraction of numbers, yields logarithms, and can add, subtract, and shift the logarithms. The number code has 17 binary digits; the mantissa significant part has 11 digits; order, 4 digits; order sign and mantissa sign, 1 digit each. Orig. art. has: 1 figure.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: DP, EC

Card 1/1

NO REF SOV: 001

OTHER: 001

AFANAS'YEV, V.A., kand.tekhn.nauk, dotsent

Concrete compaction by surface vibration. Trudy NIIZHB no.21:146-  
162 '61. (MIRA 14:12)

1. Leningradskaya Krasnoznamennaya voyenno-vozdushnaya inzhenernaya  
akademiya im. A.F.Mozhayskogo.  
(Vibrated concrete)

AFANAS'YEV, V.A.

Olivinites of the Khabozero region (southeastern part of the Kola Peninsula). V. A. Afanas'ev. *Compt. rend. acad. sci. U. R. S. S.* 25, 313-16 (1930) (in English). The structure of the ultrabasic intrusion is zonal. The central zone is composed of olivine rocks: pegmatoid, titaniferous, magnetitic, perovskitic; the intermediate zone is composed of pyroxenitic and pyroxene-feldspar rocks; along the contact with the orthogneisses are fine-grained rocks with green pyroxene, melanite, feldspars, nepheline, apatite and pyrrhotite. Eleven analyses of various phases are given. The ore fraction of the pegmatoid olivinite contains 12.49%  $Cr_2O_3$ . Many of the joints in the olivinites are filled with the monomineral white rock kalskite - see Efremov, *C. z.* 33, 76889) of which an analysis shows:  $SiO_2$  40.32,  $Al_2O_3$  0.70,  $Fe_2O_3$  1.82,  $MgO$  36.27,  $CaO$  2.41,  $CO_2$  3.35 and S 15.30%. D. W. Pearce

Kirovsk Academy of Sciences.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

147085	99	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
--------	----	---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

AFANAS'YEV, Vladimir Aleksandrovich; APENKO, M.I., red.;  
KHROMCHENKO, F.I., red. izd-va; SUNGUROV, V.S., tekhn. red.

[Optical measurements] Opticheskie izmereniia. Moskva, Izd-  
vo geodez.lit-ry, 1961. 238 p. (MIRA 15:2)  
(Optical measurements)





KULAGIN, S.V.; AFANAS'YEV, V.A., dots., retsenzent; KRAUSH, L.Ya., dots., retsenzent; PELL', V.G., dots., retsenzent; YESHCHENKO, N.N., red.; TITOVA, V.A., red.

[Photography and photographic apparatus] Fotografii i fotoapparatura. Petrozavodsk, Rosvuzizdat, 1963. 282 p.  
(MIRA 17:7)

**В. А. Кривор**  
Перегляди історичних телевізійних про-  
грам на об'єкті авіації СРСР

**12 жовтня**  
(с 10 до 16 годин)

**М. М. Кривошея**  
Історичні фотознімки історії в телебаченні

**В. Л. Іванов**  
О зразках фізичних металів використаних в ве-  
стимових системах зв'язку телебачення

**С. Д. Радіон**  
Перспективи використання фототрубок для реєст-  
рації малых систем металів

**М. Г. Доржін**  
Питання для програми діяльності телевізійного  
каналів

**18 жовтня**  
(с 18 до 22 годин)

**В. В. Крутов**  
Технічні питання передачі даних з телебачення  
с

20

**Ч. Г. Пустарняк**  
Телевізійні системи використання історичних  
зображень на передавачах і прийомних станціях

**М. М. Кривошея**  
Учителі для дистанційних програм

**В. З. Бончаров**  
**М. Г. Марков**

О електронних пристроях розширення в телебаченні  
історичних зображень

**2. СЕАНС ЕЛЕКТРОНИК**

Регістратори М. А. Дмитрієв

**8 жовтня**  
(с 10 до 16 годин)

**Г. М. Руденко**  
**Г. М. Копельов**

Нові методи радіофізичних металів в радио-  
електроніці

**В. А. Афанасьєв**

Перспективи розвитку радіофізичних металів зме-  
тронних програм СВЧ

21

report submitted for the Centennial Meeting of the Scientific Technological Society of  
Radio Engineering and Electrical Communications in. A. S. Popov (VSEKIS), Moscow,  
8-12 June, 1959

HI-AMTOS YEV, V.A.

100 Let so dnya razbivaniya A.S. Popova (1894-1950) 2,000 copies printed.

100 Let so dnya razbivaniya A.S. Popova (1894-1950) 2,000 copies printed.
Sponsoring Agency: Akhmatiya NERL.
Chief Ed.: A.I. Mints, Academician; Editorial Board: G.B. Burdun, A.B. Volpert, L. Ya. Gurev, I. I. Gotsman, I. I. Gurev, M. B. Deryabin, E. A. Zhabitskiy, M. A. Kozlov, M. A. Kozlov, V. I. Sidorov, and E. A. Chistyakov; Ed. of Publishing House: L. V. Gerasimov; Youth Ed.: S. G. Shcherbakov.

FOREWORD: This collection of reports is intended for scientists and technicians working in radio engineering and telecommunications.

CONTENTS: The reports included in this collection were submitted at the scientific meeting held in 1959 by the Machine-Substance Laboratory of the Academy of Sciences of the USSR (Scientific and Technical Society of Radio Engineers and Telecommunications).

Engineering and Telecommunications (A.S. Popov) is commemorated on the 100th anniversary of A.S. Popov's birth. Only 85 of the more than 400 reports submitted at the meeting are included. The remainder are published in the proceedings of the AS USSR, State Committee, the Ministry of Communications and the Academy of Sciences. The book contains the reports read at the meeting by A.S. Popov, Academician, A.A. Firsirotu, Professor, as well as those submitted by A.S. Mironov and I. I. Gotsman, Professors, as well as three specific sections: Theoretical Foundations of the Theory of Waveguide Propagation, Engineering, Transceiving Devices, Radios, Radio Measurements, General Radio Engineering, Electromagnetic and Acoustic Propagation, Electron Microscopy, Radiography, and X-Ray Devices. These studies were presented at the Editorial Board which prepared the papers for publication. References accompany most of the reports.

On Handwritten Manuscripts (Cont.) 807/2135

Chistyakov, V. A. Prospects of Developing HF Electronic Amplifiers with Low Noise Factor 171

Shayt, A. A. Concerning the Theory of Parametric Frequency Amplification and Conversion in Waveguide Systems 176

Erudobiy, A. I., A. E. Akhlyayev, V. I. Nagda, and A. P. Sen'ko. Standard Calorimetric Installation For the Checking of Low-Power Heaters 186

Burdun, G. D., Ye. B. Zaitseva, and V. Ye. Poyarkova. Installation For Measuring Dielectric Permeability and Dielectric Loss-Angle Tangent in the 8-cm Wave Band 194

Rozendin, B. I. Methods of Raising the Peak and Average Power of a Single-Beam Transmitter 202

Gusev, V. D., Yu. V. Kuznetsov, and S. P. Mirman. Comparison of Results of Observation of Large and Small Fluctuations in the F2 Layer 211

TRANS-4/T

S/123/61/000/022/016/024  
A004/A101

AUTHOR: Afnas'yev, V.A.

TITLE: Automatic tabling unit

PERIODICAL: Referativnyy zhurnal. Mashinostroyeniye, no. 22, 1961, 19, abstract 22D115 (V sb. "Avtomatiz. i puti primeneniya vychisl. tekhn. v khim. prom-sti, Lugansk, 1959 [1960], 48 - 52)

TEXT: The author describes a permanent storage unit developed by the Lishchansk Branch of the Automation Institute. The unit has been developed to be used in combination with a pH-meter and conductivity meter to measure the concentration of salts and bases in the juice vapors of the ammonium nitrate shop. The unit is a memory system of an automatic table in which the pH-value determines the number of the table column, while the conductivity value determines the line number. A prohibition cell on a ferrite core with the square shape of the magnetic characteristic serves as elementary memory cell. The memory system is a ferrite netting with a number of horizontal rows equal to 14, since 7 binary digits are necessary for the recording of the concentration of the salts and bases in per cent, with an accuracy of up to 1%. The number of vertical rows is

Card 1/2

Automatic tabling unit

S/123/61/000/022/016/024  
A004/A101

determined by the number of divisions of the electric conductivity range. The recording of the values of the salt and base concentrations is effected by the prohibition buses passing consecutively across the ferrite netting. The author points out the possibility of using the automatic tabling units in various technical fields owing to the universality of the discrete unit used in it. ✓

F. G. M.

[Abstracter's note: Complete translation]

Card 2/2



L 51370-65

ACCESSION NR: AT5011677

(where  $e_0, e_1, \dots, e_{n-2}, e_{n-1}$  are consecutive - from zero on - orders of the decoded binary code, and  $\bar{e}_0, \bar{e}_1, \dots, \bar{e}_{n-1}$  are the respective orders) usually require a large number of gates according to the number of parameters of the computer and control circuits, Traub (1954). Ferrite cores (Traub, 1954). Ferrite cores can be used with two inputs only. Consider the decoders described by (1) and covering more than two orders. However, if one transforms these equations somewhat and obtains

$$\begin{aligned}
 f_0 &= \bar{e}_{n-1} \wedge (e_{n-2} \vee \dots \vee e_1 \vee e_0); \\
 f_1 &= e_{n-1} \wedge (e_{n-2} \vee \dots \vee e_1 \vee e_0); \\
 &\dots \\
 f_{n-2} &= e_{n-1} \wedge (e_{n-2} \vee \dots \vee e_1 \vee e_0); \\
 f_{n-1} &= e_{n-1} \wedge (e_{n-2} \vee \dots \vee e_1 \vee e_0).
 \end{aligned}
 \tag{2}$$

Card 2/3

L 51370-65

ACCESSION NR: AT5011627

one can then associate to each  $f_k$  an element which should trigger only in the presence of a pulse not entering into the bracket and in the absence of all the pulses contained within the bracket (the cell is then set to a single open and (n-1) closed inputs). It is easy to materialize such elements using ferrite toroids. The article presents the theory, design and operation of such a decoder carrying out the switch of a binary code containing 15 rectangular hysteresis loop elements. The design of such decoders are also discussed. Orig. art. has 11 pages and 4 figures.

ASSOCIATION: none

SUBMITTED: 29Sep64

ENCL: 00

SUB CODE: DP

NO REF SOV: 004

OTHER: 002

Card 3/3 *7/28*



AFANAS'YEV, V.A.; KAZAIS, E.B.; PLOTNIKOV, A.D.

Special-purpose arithmetical device. Avtom. i prib. no.2:17-19 Ap-Je  
'65. (MIRA 18:7)

AFANAS'YEV, V.A.; ITENBERG, I.I.; KAZAIS, E.B.; SMELKOV, V.A.

Network for program interruption. Avtom. i prib. no.1;  
40-43 Ja-Mr '65. (MIRA 18:8)

AFANAS'YEV, V.D., kand. tekhn. nauk

Selecting the forming angle in the production of spirally welded  
pipe. Stal' 25 no.12:1111-1113 D '65. (MIRA 18:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstrukterskiy  
institut metallurgicheskogo mashinostroyeniya.

AFANAS'YEV, V.D., kand. tekhn. nauk.

Investigating a new system of electric drive for drum-type flying shears. [Trudy] TSNITMASH 73:77-126 '55. (MIRA 11:3)  
(Shears (Machine tools)--Electric driving)

AFANAS'YEV, V.D., kandidat tekhnicheskikh nauk.

Investigating individual roll drives used on cold rolling mills.  
[Trudy] TSNIITMASH no.80:58-83 '56. (MLRA 10:1)  
(Rolls (Iron mills))--Electric driving)

GUREVICH, Anriyel' Yefimovich; ROKOTYAN, Yevgeniy Sengeyevich; ~~AFANASIEV,~~  
Y.D., redaktor; POBEDIN, I.S., redaktor; GORDON, L.M., redaktor  
izdatel'stva; BERLOV, A.P., tekhnicheskii redaktor.

[Methods for investigating rolling mills] Metody issledovaniia  
prokatnykh stanov. Moskva, Gos.nauchno-tekhn.izd-vo lit-ry po  
cherno i tsvetnoi metallurgii, 1957. 494 p. (MIRA 10:6)  
(Rolling mills)

AFANAS'YEV, V.D., kandidat tekhnicheskikh nauk.

Automatization of new rolling mills. Vest.mash. 37 no.6:3-8  
Je '57. (MIRA 10:7)  
(Rolling mills) (Automatic control)

**AUTHORS:** Afanas'yev, V. D., Candidate of Technical Sciences, Ivobotenko, V. A., Engineer 105-58-3-3/31

**TITLE:** Speed Control of a Direct Current Motor When Fed by a Magnetic Amplifier (Regulirovaniye skorosti dvigatelya postoyannogo toka pri pitanii yego ot magnitnogo usilitelya)

**PERIODICAL:** Elektrichestvo, 1958, Nr 3, pp. 14-19 (USSR)  
Received: April 1958

**ABSTRACT:** An approximated, yet rather simple computation method is given here. It admits the determination of the mechanical characteristics of the amplifier motor system according to the work characteristic of the amplifier from the catalogue. For the computation of the static characteristics of direct current motors of low output which are fed from the power supply (industrial frequency) over a magnetic amplifier the inductive resistance of the armature can be neglected and substituted by an equivalent effective resistance  $R_e$ ... (equation (1)). Thus the task consists in finding artificial amplifier characteristics in various load resistances which differ from the nominal ones. For this purpose the conception of the universal characteristic (Ref. 1) is used. The amplifier

Card 1/3



Speed Control of a Direct Current Motor When Fed by a Magnetic Amplifier 105-58-3-3/31

characteristic consists of relative units, i.e. as function of the steering-control current, taking into account the positive feed-back of the amplifier. The experimental- and computed characteristics of the magnetic amplifier PMU-1 given here show that they differ by 10%. Therefore it can be assumed that the computation method given here guarantees sufficient accuracy for practice. The computations for other amplifiers have analogous results. The description of the checking of the possibility of a substitution of the motor load by an equivalent effective resistance by experimental way follows. It is shown that the introduction of only corresponding positive current feed-back is not sufficient in order to obtain fixed mechanical characteristics of the motors. Besides this also the negative voltage feed-back has to be carried out. The experiments showed that in schemes with magnetic amplifiers with internal feed-back it is necessary to use additionally a small winding for the external positive current feed-back; i.e. in such a way that the current feed-back factor is increased by 3-5% and the carrying out of the negative voltage feed-back is thus facilitated. Comprisingly is said that the selection of the amplifier type is very important for securing the demanded

Card 2/3



SLEZHANOVSKIY, Ol'gerd Vladislavovich; Prínimal uchastiye PISTRÁK, M.Ya.  
DRUZHININ, N.N., kand.tekhn.nauk, retsentsent; APANAS'YEV, V.D.,  
kand.tekhn.nauk, red.; KISELEVA, T.I., red.izd-va; MIKHAYLOVA,  
V.V., tekhn.red.

[Electric drives on reversing rolling mills] Elektroprivod  
reversivnykh stanov goriachei prokatki. Moskva, Gos.nauchno-  
tekhn.izd-vo lit-ry po chernoí i tsvetnoi metallurgii, 1961.  
444 p. (MIRA 14:1)

(Rolling mills--Electric driving)

AFANAS'YEV, Vasilii Danilovich; GUREVICH, A.Ye., red.; YEMZHIN, V.V.,  
tekhn.red.

[Electric drives of automatically controlled flying shears]  
Elektroprivođ avtomaticheskikh letuchikh nozhnits. Moskva,  
Gosenergoizdat, 1962. 143 p. (Biblioteka po avtomatike,  
no.59) (MIRA 15:10)  
(Shears (Machine tools)--Electric driving)

АФАНАС'ЯЕВ, В. Д.

37

PHASE I BOOK EXPLOITATION

SOV/5985

Rokotyan, Ye. S., Doctor of Technical Sciences, ed.

Proklatnoye proizvodstvo; spravochnik (Rolling Industry; Handbook) v. 1. Moscow, Metallurgizdat, 1962. 743 p. Errata slip inserted. 9250 copies printed.

Authors of this volume: B. S. Azarenko, Candidate of Technical Sciences; V. D. Afanas'yev, Candidate of Technical Sciences; M. Ya. Brovman, Engineer; M. P. Vavilov, Engineer; A. B. Vernik, Engineer; K. A. Golubkov, Engineer; S. I. Gubkin, Academician, Academy of Sciences BSSR; A. Ye. Gurovich, Engineer; V. I. Davydov, Candidate of Technical Sciences; V. G. Droad, Engineer; N. F. Yermolayev, Engineer; Ye. A. Zhukovich-Stopha, Engineer; N. M. Kirilin, Candidate of Technical Sciences; M. V. Kovynov, Engineer; A. M. Kogos, Engineer; A. A. Korolev, Professor; M. Ye. Kugayenko, Engineer; A. V. Laskin, Engineer; B. A. Levitanskiy, Engineer; V. M. Lugovskoy, Engineer; I. M. Payerovich, Candidate of Technical Sciences; M. S. Orcharov, Engineer; V. I. Pasternak, Engineer; I. L. Perlin, Doctor of Technical Sciences; I. S. Pobodin, Candidate of Technical Sciences; Ye. S. Rokotyan, Doctor of Technical Sciences; M. M. Saf'yan, Candidate of Technical Sciences; V. V. Smirnov, Candidate of Technical Sciences; V. S. Smirnov, Corresponding Member, Academy of Sciences USSR; O. P. Sokolovskiy,

Card 1/12

32

Rolling Industry; Handbook

SOV/5985

Engineer; O. P. Solov'yev, Engineer; M. A. Sidorkovich, Engineer; Ye. M. Trat'yakov, Engineer; I. S. Trishovskiy, Candidate of Technical Sciences; G. N. Khenkin, Engineer; and A. I. Tzolikov, Corresponding Member, Academy of Sciences USSR. Introduction: A. I. Tzolikov, Corresponding Member, Academy of Sciences USSR; Ye. S. Rokotyan, Doctor of Technical Sciences; and L. S. Al'shevskiy, Candidate of Technical Sciences.

Eds. of Publishing House: V. M. Gorobinchenko, R. M. Golubchik, and V. A. Rymov; Tech. Ed.: L. V. Dobuzhinskaya.

**PURPOSE:** This handbook is intended for technical personnel of metallurgical and machine-building plants, scientific research institutes, and planning and design organizations. It may also be useful to students at schools of higher education.

**COVERAGE:** The fundamentals of plastic deformation of metals are discussed along with the theory of rolling and drawing. Methods of determining the power consumption and the forces in rolling with plane surface or grooved rolls are

Card 2/10

Rolling Industry; Handbook

SOV/5985

6. Calculation of the drawing force and required power 644
7. Auxilliary equipment of drawing machines 646

## PART IV. ELECTRIC DRIVE AND AUTOMATION OF ROLLING MILLS

- Ch. 27. Electric Drive of Rolling Mills (B. A. Levitanskiy)
1. Selection of the motor and of the drive type 661
  2. Power consumption and efficiency of the main drive 663
  3. Characteristics of electric machinery of the main drive and of auxilliary mechanisims 664
- Ch. 28. Electric Drive of Reversible Blooming and Slabbing Mills  
(B. A. Levitanskiy)
1. Rolling condition and principal requirements of the electric drive 682
  2. Calculation of power and selection of reversible drive 683
  3. Control of the motor at the reversible rolling mill 691
- Ch. 29. Electric Drive of Shape, Plate, Sheet, and Tube-Rolling Mills  
(V. D. Afanas'yev)
- Card 17/19

Rolling Industry; Handbook

SOV/5985

1. Electric drive of continuous billet mills 699
2. Electric drive of shape mills 700
3. Electric drive of plate and sheet hot-rolling mills 704
4. Electric drive of plate and sheet cold-rolling mills 708
5. Electric drive of tube-rolling mills 713

Ch. 30. Electric Drive of Auxiliary Mechanisms (V. D. Afanas'yev)  
[Abridged]

1. Electric drive of flying shears 715
2. Electric drive of the screw-drawn mechanism on reversing mills 718
3. Electric drive of coilers of cold-rolling mills 719
4. Electric drive of transfer tables 721

Ch. 31. Automation of the Rolling Process (A. Ye. Gurevich)  
[Abridged]

1. Definitions and general requirements 722
2. Organization of the rolling process 725

Card 18/19



AFANAS'YEV, Vasilii Danilovich; BORISOV, Yuriy Matveyevich; GUREVICH, Azriyel' Yefimovich; LEVITANSKIY, Boris Aronovich; MAKEYEV, Ivan Fedorovich; STEFANOVICH, Nikolay Nikolayevich; KHALIZEV, Georgiy Petrovich, kand. tekhn. nauk; SINITSYN, O.A., kand. tekhn. nauk, retsenzent; NEMIROVSKIY, M.I., prepodavatel', retsenzent; YAKOVENKO, N.N., red. izd-va; ISLENT'YEVA, P.G., tekhn. red.

[Electrical equipment of ferrous metallurgy enterprises] Elektro-oborudovanie predpriyatii chernoi metallurgii. [By] V.D.Afanas'yev i dr. Moskva, Metallurgizdat, 1963. 606 p. (MIRA 16:9)

1. Dnepropetrovskiy metallurgicheskiy tekhnikum (for Nemirovskiy). (Iron and steel plants--Electric equipment)

VAL'TER, A.K.; ZALYUBOVSKIY, I.I. [Zaliubovs'kyi, I.I.];  
KLYUCHAREV, V.A. [Kliuchar'ov, V.O.]; AFANAS'YEV, V.D.  
[Afanas'iev, V.D.]

Measurement of the gyromagnetic ratios of nuclei in the  
excited state. Ukr. fiz. zhur. 8 no.9:9)~94) 8 '63.

(MIRA 17:8)

S/056/63/044/004/002/044  
B102/B186

AUTHORS: Klyucharev, V. A., Val'ter, A. K., Zalyubovskiy, I. I.,  
Afanas'yev, V. D.

TITLE: Measurement of the gyromagnetic ratio of the  $W^{182}$  nucleus in  
the first excited state

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44,  
no. 4, 1963, 1136 - 1140

TEXT: The authors developed an apparatus suitable for measuring the gyromagnetic ratio of excited nuclei according to the method of Coulomb excitation as well as to the method of  $\gamma\gamma$ -correlation. Its main parts are a two-channel goniometer, an electronic recorder, and an electromagnet generating fields of up to 35000 gauss. The  $\gamma$ -detector consists of a NaI(Tl) crystal with an  $\Phi\gamma$ -42 (FEU-42) photomultiplier; its pulses are fed to a fast-slow coincidence circuit. The gyromagnetic ratio of the first excited state (100 keV) of the even-even  $W^{182}$  nucleus was measured by the  $\gamma\gamma$ -correlation method. Neutron-irradiated natural metallic tantalum was used as a gamma source. The gyromagnetic ratio was determined from the perturbation of the  $\gamma\gamma$ -correlation of the 229 - 100 keV cascade caused by the magnetic  
Card 1/2

Measurement of the gyromagnetic ratio...

S/056/63/044/004/002/044  
B102/B186

field (35 kgauss). The shift of the correlation function  $W(\theta)$  was  $\Delta\theta = 4^{\circ}10'$  which corresponds to a gyromagnetic ratio  $g = 0.247 \pm 0.037$ . In the case of a liquid source,  $\Delta\theta$  was  $5^{\circ}35'$  corresponding to  $g = 0.323 \pm 0.048$ . The mean value for both measurements is  $g = 0.285 \pm 0.042$ . The anisotropy factors of the unperturbed correlation functions were  $A_2 = 0.087 \pm 0.008$  and  $A_2 = 0.108 \pm 0.008$  for a solid and liquid source, respectively. There are 2 figures.

ASSOCIATION: Fiziko-tehnicheskij institut Akademii nauk Ukrainskoy SSR (Physicotechnical Institute of the Academy of Sciences Ukrainskaya SSR); Khar'kovskiy gosudarstvennyy universitet (Khar'kov State University)

SUBMITTED: August 31, 1962

Card 2/2