

8/120/63/000/001/023/072  
E192/E382

AUTHORS: Zhil'tsov, V.P. and Lobov, L.F.

TITLE: Supply circuit with an intermediate storage inductance  
for stroboscopic pulse tubes

PERIODICAL: Pribory i tekhnika eksperimenta, no. 1, 1963,  
101.- 104

TEXT: The system consists of an intermediate storage device and two switches connected into the discharge circuit (see Fig. 1). The discharge capacitor is permanently connected to the stroboscope tube  $\text{VЛ}$ . The operation of the system is as follows. The keys  $K_1$  and  $K_2$  are in position 1 during the charging period, so that the intermediate storage device is connected to the supply source and is charged; the capacitor  $C_p$  is disconnected from the tube and is discharged. On terminating the charging of the storage device the keys  $K_1$  and  $K_2$  are thrown into position 2 so that the intermediate device is disconnected from the source and connected to the capacitor. The energy from the storage device is transferred to the capacitor and the tube

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Supply circuit ....

is triggered at the instant when C is fully charged. The keys K<sub>1</sub> and K<sub>2</sub> are then returned to position 1 and the process is repeated. A capacitor, delay line or choke can be used as the storage device. In the system described this was in the form of an inductance (choke). The key K<sub>1</sub> was replaced by an electron tube and K<sub>2</sub> by a thermionic diode. A special circuit for feeding the stroboscope tube, type WCU 300 (ISSh 300), based on this principle was devised. This was capable of supplying power of 300 W at 6-7 kV at frequencies up to 400 c.p.s. One of the advantages of the supply system with an intermediate storage inductor is that the output voltage of the power supply feeding the inductor can be six to eight times lower than the operating voltage of the tube. There are 4 figures.

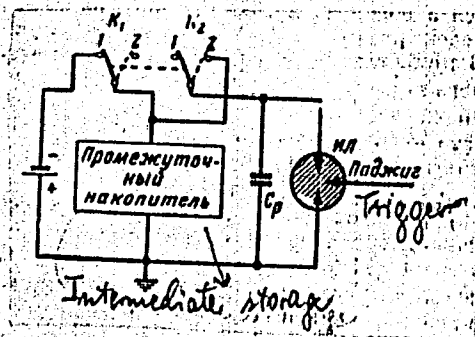
SUBMITTED: March 3, 1962

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Supply circuit ....

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E192/E382

Fig. 1:



Card 3/3

ZHIL'TSOV, V.P., inzh.

Charge network with an intermediate capacitive storage device  
for feeding large high-frequency impulse lamps. Svetotekhnika  
9 no.7:17-22 J1 '63. (MIRA 16:7)

1. Moskovskiy elektrolampovyy zavod.  
(Electric lighting)

L 1069-66

ACC NR: AT6001392

SOURCE CODE: UR/3180/64/009/000/0109/01i4

AUTHOR: Kirsanov, V. P.; Zhil'tsov, V. P.; Marshak, I. S.; Razumtsev, V. F.;  
Slutskin, Ye. Kh.; Shchukin, L. I.

ORG: none

31  
BT1

TITLE: New flash lamps with a high flash repetition frequency

SOURCE: AN SSSR. Komissiya po nauchnoy fotografii i kinematografii. Uspekhi nauchnoy  
fotografii, v. 9, 1964. Vysokoskorostnaya fotografiya i kinematografiya (High-speed  
photography and cinematography), 109-114 and inserts facing pages 112 and 113

TOPIC TAGS: flash lamp, gas discharge, hydrogen, xenon, nitrogen

ABSTRACT: The paper describes the design and performance characteristics of high-  
repetition-frequency sealed flash lamps for use in high speed photography. Two  
sources of frequently repeating flashes were considered: (1) a source for Toepler  
schlieren photographs with a maximum space stabilized luminous volume in the shape  
of a short filamentary segment; (2) a source for photographing objects in reflected  
light with maximum power and frequency of flashes. The first problem was solved most  
satisfactorily with a short capillary lamp. The second problem was solved with lamps  
having a large spherical bulb and a short discharge gap between the electrodes locat-  
ed inside the bulb. In addition, a rapidly deionizing multichamber hydrogen dis-

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L 11069-66

ACC NR: AT6001392

charger was constructed in order to provide for the commutation of the repeating high current discharges at the maximum frequencies at which the gas gaps of both types of flash lamps are unable to deionize and cannot themselves serve as the commutating element. Orig. art. has: 10 figures, 1 table. 0

SUB CODE: 13,20      SUBM DATE: 00/      ORIG REF: 004/      OTH REF: 001

Card <sup>mj</sup> 2/2

ZHIL'TSOV, V.R.; ZELENOV, A.F.; KOKIN, A.G.; KOLOSOV, V.A.;  
KOROBITSYN, M.D.; MALYAVINSKIY, A.M.; NEFEDOV, Ya.D.;  
PAVLOV, A.V.; STEPANOV, Yu.A., prof.; SUVOROV, V.G.;  
YUSHIN, S.I.; POCHTAREV, N.F., kand. tekhn. nauk, inzh.-  
polkovnik, red.; KUZ'MIN, I.F., tekhn. red.

[Internal combustion engines; design and performance] Dviga-  
teli vnutrennego sgorania; ustroistvo i rabota. [By] V.R.  
Zhil'tsov i dr. Pod red. IU.A.Stepanova. Moskva, Voen. izd-vo  
M-va obr. SSSR, 1955. 470 p. (MIRA 16:6)  
(Internal combustion engines)

ZHIL'TSOV, V R

N/5  
667.5  
.26

ZHIL'TSOV, V R

DVIGATELI VNUTRENNEGO SGORANIYA; USTROYSTVO I RABOTA (INTERNAL COMBUSTION  
ENGINES, BY) V. R. ZHIL'TSOV (I DR.) POD RED. YU. A. STEPANOVA. MOSKA,  
MINOBRONY, 1955.

470 P. ILLUS., DIAGRS., TABLES.

BIBLIOGRAPHY: P. (466)



ZHIL'TSOV, V. [V]

CP

21

Equations of material balance of condensation. N. Chernov and V. Zhil'tsov, *Khimist* 5, 2245-7(1933).—The math. formulas of Murray (C. A. 23, 831) were applied to the calcn. of condensed coking gas and its components with satisfactory results. Chas. Blanc

COMMON ELEMENTS

MATERIALS INDEX

COMMON VARIANTS INDEX

ASS. S.L.A. METALLURGICAL LITERATURE CLASSIFICATION

COMMON SYMBOLS	SYMBOLS WITH CHEM. FORM.	RELATIONS	SYMBOLS WITH CHEM. FORM.
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

PROCESSES AND PROPERTIES INDEX

ZHILTSOV, V. V.

Ca

22

Computations for fractional condensation of gases from the pyrolysis of petroleum. V. V. Zhilsov, L. B. Tikhman and N. N. Chernov. *Sintet. Kuznets* 1933, No. 4, 35-41. —A material balance of the "primary gas" condensation process (gas formed by pyrolysis under vacuum of kerosene distillate). Theoretical computations were made to predict the compn. of liquid condensed from the gas under the following conditions (pressure (atms.) =  $P$ ; temp. =  $t$ ):  $P = 1.0, t = -3^{\circ}$ ;  $P = 4.0, t = -15^{\circ}$ ;  $P = 16.0, t = -15^{\circ}$ , and the compn. of the remaining gas. Murray's method of computation (C. A. 23, 8311) was employed; the figures checked well with the actual compn. obtained under the conditions stated. This method is recommended for technological computations. James Survei

A.S.M.-I.I.A. METALLURGICAL LITERATURE CLASSIFICATION

HOW TO WRITE

ZHIL'TSOV, Yu.K.; SAPHYKIN, F.Ya.; KOMAROVA, N.I.

Mode of the occurrence of uranium in Jurassic sandstones  
and the weathering surface of Archean granitoids lying  
beneath them. Sov.geol. 8 no.11 61-70 N '65.

(MIRA 19:1)

ZHILITSQV, Z. G.

Role of assimilation processes in the formation of Kenkol intrusive  
rocks (northwestern Tien Shan). Izv. AN Kir. SSR. Ser. est. i tekhn.  
nauk 2 no.8:85-91 '60. (MIRA 13:12)  
(Tien Shan--Rocks, Igneous)

USSR/Cultivated Plants - Fodders.

M.

Abs Jour : Ref Zhur - Biol., No 10, 1953, 44169  
Author : Kozlovskiy, A., Krotova, Ye., Zhil'tsova, A.  
Inst : Siberian Scientific Research Institute for Animal Raising.  
Title : Combined Sowings of Corn with Leguminous Cultures.  
Orig Pub : S. Kh. Sibiri, 1956, No 3, 27-29.  
Abstract : The 1954-1955 experiments of the Siberian Scientific and Research Institute of Animal Husbandry showed that with the combined sowings of corn with leguminous cultures the aggregate crop increased (corn in pure form produced 313 centners/ha of green bulk. Corn plus vetch 343 and corn plus peas 350 centners/ha). The presence of the leguminous plants in the crop increased the protein content to 22.4%. In dry years it is recommended to carry

Card 1/2

Abs Jour : Ref Zhur - Biol., No 10, 1953, 44169

but the sowing of vetch or peas into the corn sowings after the harrowing of the sprouts and after the first cultivation between rows. -- Ye.T. Zhukovskaya

Card 2/2

BABITSKIY, B.L.; VINITSKIY, L.Ye.; DROZDOVSKIY, V.F.; DYUBKO, L.D.; KAPLUNOV,  
Ya.N.; MELENT'YEVA, Z.G.; SHOKHIN, I.A.; Primali uchastiye:  
ZHIL'TSOVA, A.A.; LEVIT, R.G.; YAKOVLEV, D.A.

Effect of filling reclaimed rubber on the dielectrical properties of  
the reclaimed product. Kauch. i rez. 24, no.5:22-25 My '65.

(MIRA 18:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zheleznodorozhnogo  
transporta i Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

5(2)

SOV/80-32-3-8/43

AUTHORS: Pozin, M.Ye., Kopyiev, B.A., Zhil'tsova, D.F.

TITLE: The Rate of the Decomposition of Apatite by Phosphoric Acid (O skorosti razlozheniya apatita fosfornoj kislotoy)

PERIODICAL: Zhurnal prikladnoy khimii, 1959. Vol XXXII, Nr 3, pp 509-515 (USSR)

ABSTRACT: The decomposition of apatite by phosphoric acid for the production of fertilizer in a cyclic process is studied here. The unreacted apatite was returned to the process. The apatite used had a content of 39.45%  $P_2O_5$ . The phosphoric acid was chemically pure. If the acid had a  $P_2O_5$  content of 13.6%, the coefficient of decomposition reached 20.5% in the first hour, but only 2 and 1.5% respectively in the following 2 hours. A similar difference between the initial and final rate of decomposition may be observed at other concentrations. The decomposition by dilute acid was relatively slow. The optimum was obtained with acid containing 54%  $P_2O_5$ , a temperature of 40 - 60°C and a norm of 95 - 100% of the stoichiometric one. The coefficient of decomposition after 2 hours was 70% in this case.

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There are 5 graphs, 1 table and 7 references, 5 of which are

SOV/80-32-3-8/43

The Rate of the Decomposition of Apatite by Phosphoric Acid

Soviet and 2 English.

ASSOCIATION: Leningradskiy tekhnologicheskii institut imeni Lensoveta (Leningrad Technological Institute imeni Lensovet)

SUBMITTED: April 10, 1958

Card 2/2



5(2)

SOV/80-32-4-2/47

**AUTHORS:** Pozin, M.Ye., Kopylev, B.A., Zhil'tsova, D.F.

**TITLE:** On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions (O skorosti gidroliza monokal'tsiyfosfata v vodnykh rastvorakh)

**PERIODICAL:** Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 4, pp 710-716 (USSR)

**ABSTRACT:** The decomposition of monocalciumphosphate by water is determined by the time of contact. At a salt:water ratio of 1.5 and 20°C the decomposition in the first 10 min is 32.5%, in the following 10 min-7.5%. For a ratio of 0.1 the figures are 10 and 1.7%, respectively. A higher temperature increases decomposition. At a ratio of 1.5 the decomposition within 2 hours reaches at 30°C 38.5%, at 50°C 55.4% and at 80°C 72.5%. At a ratio of 0.05 the corresponding figures are: 22.5%, 29.5% and 47.2%. In the presence of free phosphoric acid the degree of decomposition is considerably lower. At a temperature of 20°C and ratios of 0.75 and 0.5, decomposition could not be observed in the first 5 hours when free phosphoric acid was present. At 40°C hydrolysis started only after 3 hours. The hydrolysis rate decreases after an initial period which is explained by the saturation of the water with dicalciumphosphate.

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SOV/80-32-4-2/47

On the Hydrolysis Rate of Monocalciumphosphate in Aqueous Solutions

There are 7 graphs, 1 table and 8 references, 3 of which are Soviet, 2 American, 1 English, 1 French and 1 German.

ASSOCIATION: Leningradskiy tekhnologicheskij institut imeni Lensoveta (Leningrad Technological Institute imeni Lensoveta)

SUBMITTED: April 10, 1958

Card 2/2

5.4300

75657  
SOV/80-32-10-6/51

AUTHORS: Pozin, M. Ye., Kopylev, B. A., Zhil'tsova, D. F.  
TITLE: Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid  
PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2164-2171 (USSR)

ABSTRACT: This is a study of the effect of acid concentration (Fig. 1), time (Fig. 2), temperature (Figs. 3 and 4), and H ion concentration (Fig. 5) on the apatite decomposition rate; industrial acid/phosphate ratios were used. The decomposition was found to occur in two stages. At the first and short stage, the rate is characteristic of chemical reactions in that it depends both on phosphoric acid concentration, acid/phosphate ratio, and on temperature within the 40-80° range. The decomposition rate peak shown in Fig. 1 is explained by an increase in the H ion concentration despite a decrease in dissociation up to this peak beyond which a sharp drop in dissociation lowers the decomposition

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Concerning the Mechanism of Apatite Decomposition  
by Phosphoric Acid

75657

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rate. The H ion concentrations plotted in Fig. 5 were calculated from the formula:

$$C_{H^+} = K_s \cdot \frac{C_H}{C_0 \cdot \alpha}$$

in which  $C_0$ , the  $\text{Ca}(\text{H}_2\text{PO}_4)$  concentration, was determined graphically using the  $\text{CaO-P}_2\text{O}_5\text{-H}_2\text{O}$  phase diagram.

$\alpha$  was assumed equal to 1, so that Fig. 5 shows only the character of the rate-H ion concentration relation rather than the absolute value. Actually, since  $\alpha$  decreases with increasing acid concentration, curve III should lie to the right of II, followed by V, VI, IV, and I. Only at the first stage is the decomposition rate, in agreement with Chepelevetskiy (Tr. NIUIF, 137 (1937)), proportional to H ion concentration. No single relation can describe the entire process. At the second stage, decomposition involves H ion diffusion through a  $\text{Ca}(\text{H}_2\text{PO}_4)$  solid film. Examination of the shape of the  $1/y$

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Concerning the Mechanism of Apatite Decomposition 75657  
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vs  $1/\tau$  curve (Fig. 6) indicates that the film is not the only factor retarding decomposition in the first 15 to 20 min; after that time, however, the film becomes the main retarding factor. The existence of two stages explains the small effect the acid/phosphate ratio and temperature within the 40-80° range have on the decomposition rate. Although an increase in the ratio prolongs the first stage by increasing the  $\text{Ca}(\text{H}_2\text{PO}_4)$  solubility somewhat, a very large excess of acid is required to increase the decomposition rate markedly. At the second stage, since temperature rises within the 40-80° range have little effect on H ion diffusion rates and on  $\text{Ca}(\text{H}_2\text{PO}_4)$  solubility, the decomposition rate is changed only slightly. There are 6 figures; and 8 Soviet references.

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Concerning the Mechanism of Apatite Decomposition  
by Phosphoric Acid

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SOV/80-32-10-6/51

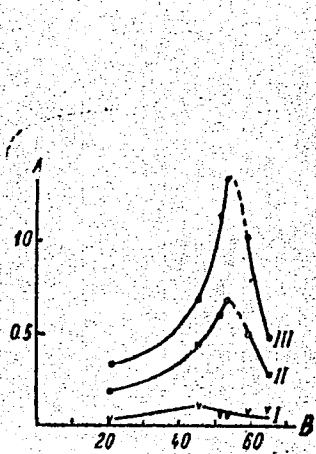


Fig. 1.

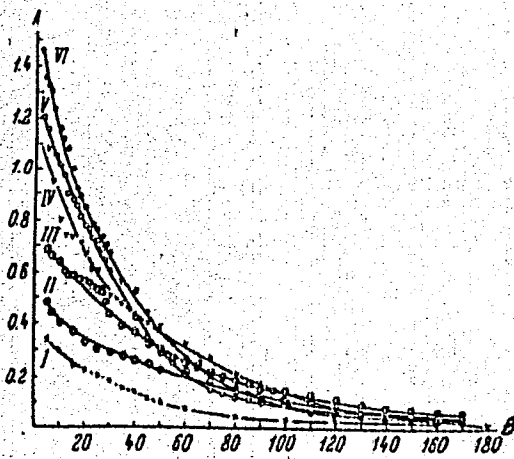


Fig. 2.

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Concerning the Mechanism of Apatite Decomposition by Phosphoric Acid 75657  
SOV/80-32-10-6/51

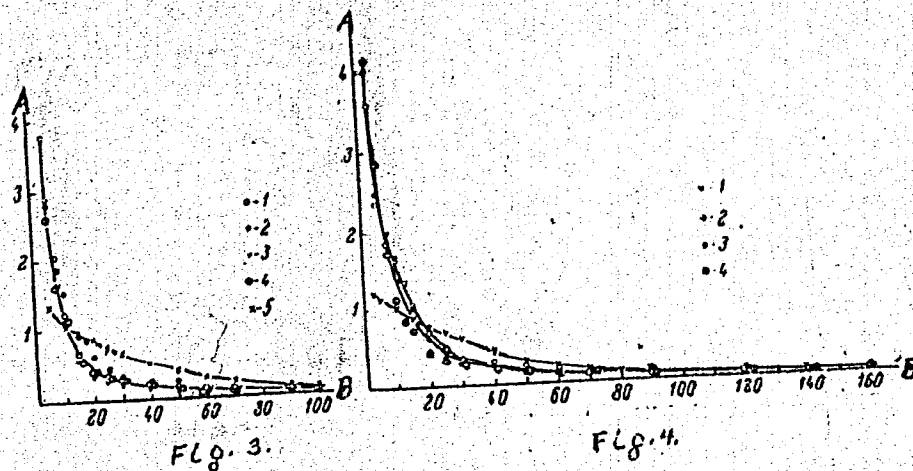
Fig. 1. Isotherm-isochrons of the dependence of apatite decomposition rate on phosphoric acid concentration at 20° and with stoichiometric acid/phosphate ratio. (A) Decomposition rate (g/min); (B) acid concentration (% P<sub>2</sub>O<sub>5</sub>). Time (min): (I) 120, (II) 30, (III) 5.

Fig. 2. Change in the apatite decomposition rate with time. (A) Decomposition rate (g/min); (B) time (min). Acid concentration (% P<sub>2</sub>O<sub>5</sub>): (I) 21.0, (II) 64.77, (III) 45.6, (IV) 59.0, (V) 51.5, (VI) 53.6.

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Concerning the Mechanism of Apatite Decomposition  
by Phosphoric Acid

75657  
SOV/80-32-10-6/51



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Concerning the Mechanism of Apatite Decomposition 75657  
by Phosphoric Acid SOV/80-32-10-6/51

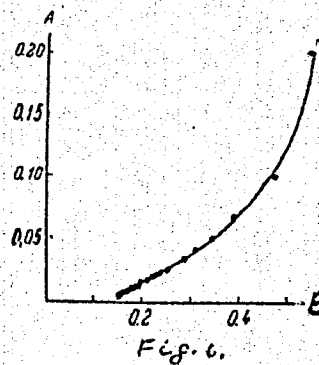
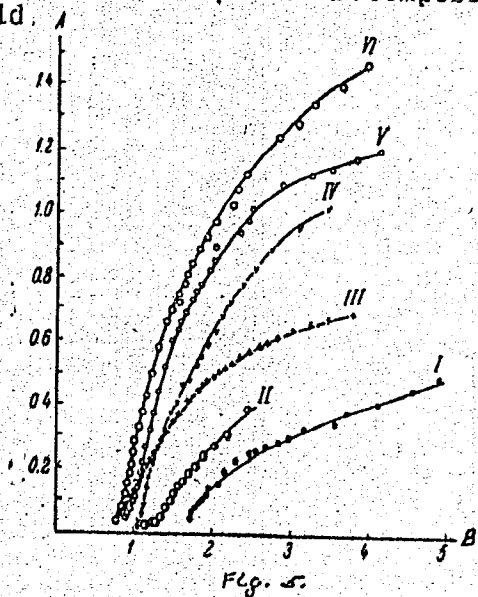
Fig. 3. Rate of apatite decomposition by acid containing 53.6%  $P_2O_5$  vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature: (1) 40, (2) 50, (3) 60, (4) 70, (5) 20.

Fig. 4. Rate of apatite decomposition by acid containing 51.5%  $P_2O_5$  vs temperature. (A) Decomposition rate (g/min); (B) time (min). Temperature ( $^{\circ}C$ ): (1) 20, (2) 40, (3) 50, (4) 60.

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Concerning the Mechanism of Apatite Decomposition  
by Phosphoric Acid.

75657  
SOV/80-32-10-6/51



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Concerning the Mechanism of Apatite Decomposition 75657  
by Phosphoric Acid SOV/80-32-10-6/51

Fig. 5. Rate of apatite decomposition by phosphoric acid vs H ion concentration. (A) Decomposition rate (g/min); (B) H ion concentration (g-ion per liter  $\times 10^{-2}$ ). Starting acid concentration (%  $P_2O_5$ ): (I) 64.77, (II) 21.0, (III) 45.6, (IV) 59.0, (V) 51.1, (VI) 53.6.

Fig. 6.  $1/y$  vs  $1/\tau$ . (A)  $1/\tau$ ; (B)  $1/y: 10^{-1}$  (y is the % apatite decomposed by 59.0%  $P_2O_5$  acid,  $\tau$  is the time in min).

ASSOCIATION: Leningrad Technological Institute imeni Lensovet (Leningradskiy tekhnologicheskii institut imeni Lensoveta)

SUBMITTED: June 2, 1959

Card 9/9

POZIN, Maks Yefimovich; KOPYLEV, Boris Aronovich; ZHIL'TSOVA, D.F.,  
red.; LEVIN, S.S., tekhn. red.

[New methods of preparing mineral fertilizers] Novye metody po-  
lucheniia mineral'nykh udobrenii. Leningrad, Goskhimizdat,  
1962. 233 p. (MIRA 16:2)  
(Fertilizers and manures) (Phosphates)

ZHIL'TSOVA, D.F., Cand. Tech Sci <sup>(diss)</sup> "Study of <sup>the speed</sup> ~~velocity~~ and mechanism of <sup>by means of</sup> decomposition of phosphates ~~with~~ phosphoric acid."  
Len, 1959. 12 pp (Min of Higher Education USSR. Len Order of Labor Red Banner Technological Inst in Lensoviet), 150 copies (KL, 27-59, 120)

POZIN, M.Ye.; KOPYLEV, B.A.; ZHIL'TSOVA, D.F.

"Superphosphate; physicochemical principles of its production"  
by M.L.Chepelevtskii, E.B.Brutskus. Reviewed by M.Ye.Pozin, B.A.  
Kopylev, D.F.Zhil'tsova. Zhur.prikl.khim. 33 no.7:1680-1681  
Jl '60. (MIRA 13:7)

(Phosphates) (Chepelevtskii, M.L.)  
(Brutskus, E.B.)

L 20978-66 EWT(1)/I RO/JK

ACCESSION NR: AP5019085

UR/0286/65/000/012/0110/0110

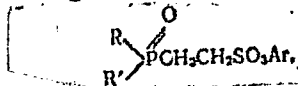
AUTHORS: Granin, Ye. F.; Fadeyev, Yu. N.; Zhil'tsova, G. I.; Bliznyuk, N. K.;  
Kolomiyačs, A. P.; Golubeva, K. N. 27  
B

TITLE: A method for controlling fungous diseases of plants. Class 45, No. 172153

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 12, 1965, 110

TOPIC TAGS: agriculture, pesticide, fungicide, disease control, plant culture

ABSTRACT: This Author Certificate presents a method for controlling fungous diseases of plants by treating the latter with fungicides. To broaden the assortment of fungicides, derivatives of β-phosphorylethanesulfoacid are used as fungicides. These compounds follow the general formula



where R and R' are alkoxy, aroxy, alkyl, aryl, or hydroxyl, and Ar is a non-replaced or replaced aryl.

ASSOCIATION: none

Card 1/2

ACCESSION NR: AP5019085

SUBMITTED: 01Jul64

ENCL: 00

SUB CODE: LS

NO REF SOV: 000

OTHER: 000

Card 2/2 *mas*



VOZNYAKOVSKAYA, Yu.M.; ZHIL'TSOVA, G.K.

Conditions determining the composition of the rhizosphere microflora  
of different plants. Trudy Vses. inst. sel'khoz. mikrobiol. 16:15-  
30 '60. (MIRA 13:9)

(Rhizosphere microbiology)

IMSHENETSKIY, A.A.; ZHIL'TSOVA, G.K.

Possibility for identifying nucleoids in the cells of  
bacteria as related to the age of their cultures. Mikro-  
biologiya 34 no.2:305-312 Mr--Ap '65. (MIRA 18:6)

1. Institut mikrobiologii AN SSSR.

IMSHENETSKIY, A.A.; ZHIL'TSOVA, G.K.

Cytology of lactic acid bacteria. Mikrobiologiya 32 no.2:  
239-244 Mr-Apr '63. (MIRA 17:9)

1. Institut mikrobiologii AN SSSR.

VOZNYAKOVSKAYA, Yu. M. ZHIL'TSOVA, G.K.

Species making up the rhizosphere bacteria of several plants  
[with summary in English]. Mikrobiologiya 27 no.5:611-618

S-O '58

(MIRA 11:12)

1. Moskovskoye otdeleniya Vsesoyuznogo nauchno-issledovatel'skogo  
instituta sel'skokhozyaystvennoy mikrobiologii.  
(RHIZOSPHERE MICROBIOLOGY)

Country : USSR  
Category: Forestry. Forest Cultures.

K

Abs Jour: RZhBiol., No 11, 1958, No 48767

Author : Zhil'tsova, G.S.

Inst : -

Title : The Storage of Acorns in Different Genetic Soil Horizons.

Orig Pub: Byul. nauchno-tekhn. inform. po s.-kh. mikrobiol., 1957, No 3, 26-27

Abstract: Experimental data has established that the non-sterile soil of horizon A<sub>1</sub> completely suppresses fungi of the following genera: Penicillium, Fusarium, Trichothecium and Verticillium. However the soil of the B<sub>1</sub> horizon suppressed only the development of the Trichothecium

Card : 1/2

Country : USSR  
Category: Forestry. Forest Cultures.

K

Abs Jour: RZhBiol., No 11, 1958, No 48767

roseum. In the storage of the acorns (with germinating ability at 100%) under laboratory conditions in the turf-podzolic, clayey and slightly podzolized soil from the horizons A<sub>1</sub> and B<sub>1</sub>, it was found that in the soil from the horizon A<sub>1</sub>, the number of diseased acorns is reduced by more than one half compared with the soil of horizon B<sub>1</sub>. The infestation of the soil in the horizon A<sub>1</sub> with pathogenic mold fungi did not harm the acorns, and in the horizon B<sub>1</sub> it increased the amount of the diseased acorns by 30% in comparison with the soil which was not infected. -- L.V. Nesmelov

Card : 2/2

ZHIL'TSOVA, G.V.; LEYTES, L.G.

Studying the wear resistance of woolen cloth with various backing surfaces. Izv. vys. ucheb. zav.; tekhn. teks. prom. no.6:8-12 '65. (MIRA 19:1)

1. Moskovskiy ordena Trudovogo Krasnogo Znameni institut narodnogo khozyaystva imeni G.V. Plekhanova. Submitted December 12, 1964.

LEYTES, L.G.; ZHIL'TSOVA, G.V.; TIKHOMIROVA, V.I.

Fulling and pile as a factor for fabric protection against  
weathering. Izv. vys. ucheb. zav.; tekhn. tekst. prom. no.6:  
36-40 '63 (MIRA 17:8)

1. Moskovskiy institut narodnogo khozyaystva imeni Plekhanova.



ZHIL'TSOVA, I. A.

"Data on a Study of the Phases in the Development of Traumatic Shock."  
Cand Med Sci, Rostov-na-Donu State Medical Inst, Rostov-na-Donu, 1954. (RZhBiol,  
No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations  
Defended at USSR Higher Educational Institutions (14)

IGNATOVA, I.I.; KARPOVA, L.N.; ZHIL'TSOVA, I.G.

Synthesis of minerals of the aluminum phosphate group. *Geokhimiia*  
no.11:1355-1363 N '65. (MIRA 19:1)

1. Submitted March 27, 1965.

L 00163-66 EPF(c)/EMP(j)/EPI(m)/T RPL JAJ/RM/WW

ACCESSION NR: AP5025550

BU/0011/65/018/002/0121/0124

AUTHOR: Mihailov, M.; Boudevska, H.; Korolev, G.; Zhiltsova, L.

TITLE: Polymerization kinetics in blocks of polyester methacrylates based on terephthalic and furane-2, 5-dicarboxylic acid

SOURCE: Bulgarska akademija na naukite. Doklady, v. 18, no. 2, 1965, 121-124

TOPIC TAGS: methacrylate plastic, polyester plastic, carboxylic acid, polymerization, polymerization kinetics

ABSTRACT: G. V. Korolev et al. (see, e.g., Vysokomol. sovedineniya, 4, 1962, No 11, 1663) have discovered a number of important laws of steric polymerization while investigating the polyester methacrylates (PEM) synthesized by them by means of the thermometric method. A further development of notions about the relation between the structure of the polymerizing polyfunctional oligoesters and their reactivity and properties makes it necessary to study the character of steric polymerization with new PEM types and other oligomers. In this connection the authors investigated the polymerization kinetics of PEM of terephthalic and furane-2,5-dicarboxylic acid (M. Mihailov, H. Boudevska, Compt. rend. Acad. bulg. Sci., 18, No 1, 1965)

Card 1/2

L 00163-66

ACCESSION NR: AP5025550

synthesized earlier. The thermometric method which is most suitable for steric polymerization was used for this purpose (G. V. Korolev et. al., Vysokomol. soedineniya, 1, 1959, No 1, 1396). Results are presented in the form of detailed graphs. Orig. art. has: 4 graphs.

6

ASSOCIATION: Institute of Chemical Physics, Academy of Science, SSSR; Institute of Organic Chemistry, Bulgarian Academy of Science

44.55

SUBMITTED: 00

ENCL: 00

SUB CODE: MT, GC

NR REF SOV: 003

OTHER: 003

JPRS

44.55

✓

Card 2/2

USSR / General and Special Zoology. Insects. System- P  
atics and Faunistics.

Abs Jour: Ref Zhur-Biol., No 14, 1958, 63847.

Author : Zhil'tsova, L. A.

Inst : Not given.

Title : Stoneflies (Plecoptera) in the Caucasus. 2. New  
Nemuridae Species of the Trialet Ridge Fauna.

Orig Pub: Entomol. obozreniye, 1957, 36, No 3, 659-670.

Abstract: Literary data about the Nemuridae fauna in the  
Caucasus. A description of three new species  
of the genera Protonemura and Amphinemura.

Card 1/1

ZHIL'TSOVA, L. A.

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R002064810020-8

USSR/Special and General Zoology - Insects.

0-3

Abs Jour : Referat Zhur - Biologiya, No 16, 1957, 69671

Author : Zhil'tsova, L.A., Chistyakova, A.K.

Inst :

Title : Nests For the Breeding of Insects in Mountain Rivers of  
the Minor Caucasus.

Orig Pub : Tr. In-ta Zool. AN GrSSR, 1956, 14, 289-294

Abstract : The method of matching of spring and river larvae in  
mountain streams which is usually conducted by establish-  
ing the nests on the bottom of the river, was changed  
to a set up on a few stones; the nest was secured to  
the bushes and held down with stones. The upper part of  
the nests was covered with a soft sack material, which  
facilitated the imago collection. The simplification of  
the nest consisted of a cylindrical wire structure cover-  
ed with gauze, which proved to be non-durable. By  
using a dense metallic soft mesh, this drawback was

Card 1/2

-- 1 -

ZHIL'TSOVA, L.A.

Study of stone flies (Plecoptera) of the Caucasus: Part 1. New species of Taeniopterygidae and Chloroperlidae in the Trialet Range [with summary in French]. Ent.oboz.35 no.3:659-670 '56. (MLRA 9:10)

1.Zoologicheskly institut Akademii nauk SSSR, Leningrad.  
(Caucasus--Stone flies)

ZHIL'TSOVA, L.A.

Studying stoneflies (Plecoptera) of the Caucasus. Report no.2:  
New species of Nemuridae from the Trialet Range [with summary in  
French]. Ent. oboz. 36 no.3:659-670 '57. (MLRA 10:9)

1. Zoologicheskii institut Akademii nauk SSSR, Leningrad.  
(Trialet Range—Stoneflies)

ZHIL'TSOVA, L.A.

Studying stone flies (Plecoptera) of the Caucasus. Report No. 3:  
Revision of some old and description of new species of the genus  
Protonemura [with summary in French]. Ent. oboz. 37 no. 3:691-704  
'58. (MIRA 11:10)

(Caucases--Stone flies)



KOROLEV, G.V.; AL'TER, Yu.M.; ZHIL'TSOVA, L.A.

Dependence of the block polymerization rate of certain polyester  
serylates on the concentration of the initiating agent and  
temperature. Plast. massy no.3:9-11 '65. (MIRA 18:6)

SOURCE: [Illegible]

"APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R002064810020-8

APPROVED FOR RELEASE: 07/19/2001

CIA-RDP86-00513R002064810020-8"

ZHIL'TSOVA, L.A.

Study of stoneflies (Plecoptera) of the Caucasus. Report No.6:  
New species of Taeniopterygidae, Nemouridae and Capniidae. Ent.  
oboz. 43 no.2:347-362 '64. (MIRA 17:9)

1. Zoologicheskii institut AN SSSR, Leningrad.

ZHIL'TSOVA, L.A.

Investigation of the stoneflies (Plecoptera) of the Caucasus.  
Report No. 5: Stoneflies of Armenia. Ent. oboz. 40 no.4:872-  
880 '61. (MIRA 17:1)

1. Zoologicheskii institut AN SSSR, Leningrad.

ZHIL'TSOVA, L.A.

Materials on stoneflies (Plecoptera) of Karelia, Trudy Zool.  
inst. 31:5-12 '62. (MIRA 16:1)  
(Karelia--Stoneflies)

ZHIL'TSOVA, L.A.

A contribution to the study of stoneflies (Plecoptera) of the  
Caucasus. Report No.4: New species of Leuctridae [with summary  
in French]. Ent. oboz 39 no.1:156-171. '60. (MIRA 13:6)

1. Zoologicheskii institut Akademii nauk SSSR, Leningrad.  
(Caucasus--Stoneflies)

30V-120-58-3-9/33

AUTHORS: Medvedev, M. N., Matveyeva, Ye. N., Zhil'tsova, L. Ya.

TITLE: Large Volume Plastic Scintillators (Plasticheskiye stsintillyatory bol'shikh ob'yemov)

PERIODICAL: Pribery i Tekhnika Eksperimenta, 1958, Nr 3, pp 45-48 (USSR)

ABSTRACT: The preparation of large plastic scintillators using the uncatalyzed high-temperature polymerization of styrene is described. The system used was a modification of that of Ref.4, which was intended for small volumes only; it can give volumes up to 3 litres. For these large volumes particular attention was paid to purifying the styrene. First the water was removed with  $\text{CaCl}_2$ , and the styrene distilled off in vacuo, the temperature and pressure in the distillation flask being 40-50°C and 20-50 mm Hg respectively. The polymerization was slight. This also removes the inhibitor and dust, etc. The doubly-distilled styrene is poured into the polymerization ampoule seen in Fig.1; the ampoule was of Mo glass. Dissolved oxygen is removed by bubbling nitrogen and then evacuating. The ampoule is sealed off and heated on a water-bath till the activator dissolves completely, and then transferred to a preheated glycerol bath at 70-90°C;

Card 1/3



SOV-120-58-3-9/33

## 7 Large Volume Plastic Scintillators

the temperature is then raised to 200°C over 8-10 hours and kept there until 3-4 hours after the styrene has completely ceased to bubble. The temperature is then slowly reduced to 100°C, and the bath then switched off. Total time required 4-5 days. The ampoule fractures and the glycerol is washed from the recovered plastic.  $\alpha$ -NPO, POPOP, TPB and TPP can all be used. The results with these are given in the Table, the compounds being: 1) TPB, 2) and 3) terphenyl +, 4) terphenyl + TPP, 5) terphenyl + quaterphenyl, 6) terphenyl, and 7) anthracene. The next two columns give the dimensions (diameter and thickness), the third and fourth being the pulse height (relative to stilbene) for RdTh  $\gamma$ -rays, for scintillations at the near and far ends, and the last column the light loss in an 80 mm length. Fig. 3 shows

Card 2/3

SOV-120-58-3-9/33

Large Volume Plastic Scintillators

that the light absorption does not fall off nearly as rapidly with length as calculation would indicate. Fig.2 generalises some of the data in the Table. The paper contains 3 figures, 1 table and 4 references, 3 of which are Soviet and 1 English.

ASSOCIATION: Ob'yedinennyy institut yadernykh issledovaniy  
(United Institute for Nuclear Investigations)

SUBMITTED: August 9, 1957.

1. Phosphors--Preparation
2. Styrene--Polymerization
3. Styrene (Polymerized)--Applications

Card 3/3

ZHIL'TSOVA, L.Ya.; MATVEYEVA, Ye.N.; RUBINA, O.G.; PILIPENKO, T.D.

Production of plastic scintillators of any volume and shape. Prib. i  
tekh. eksp. 10 no.1:76-78 Ja-F '65. (MIRA 18:7)

1. Ob'yedinennyy institut yadernykh issledovaniy.

~~MEDVEDEV, M.N.; MATVEYEVA, Ye.N.; ZHIL'TSOVA, I.Ye.~~

Plastic scintillators with oxazole-group fillers. Prib. i tekh. eksp.  
no.1:55-57 Ja-F '57. (MIRA 10:6)

(Scintillation counters)

MEDVEDEV, M.N.; MATVEYVA, Ye.N.; ZHIL'TSOVA, L.Ya.

Large-volume plastic scintillators. Prib. i tekhn. eksp. no. 3:45-48  
My-Je '58. (MIRA 11:6)

1. Ob'yedinennyy institut yadernykh issledovaniy.  
(Scintillation counters)

ZHIL'TSOV, P.N.

Damping of shearing coupling in SPV drives. Avtom. telem. i svyaz'  
3 no.8:33 Ag '59. (MIRA 13:2)

1. Starshiy ekspert Glavnogo upravleniya signalizatsii i svyazi Minister-  
stva putey soobshcheniya.  
(Electric driving)

*Zhil'tsova, L. Ya.*

AUTHORS: Medvedev, M. N., Matveyeva, Ye. N., 48-1-10/20  
Zhil'tsova, L. Ya.,

TITLE: Amplitudes of the Impulses of Plastic-Scintillators With Various Activators (Amplitudy impul'sov ot plasticheskikh stsin-tillyatorov s razlichnymi aktivatorami)

PERIODICAL: Izvestiya AN SSSR Seriya Fizicheskaya, 1958, Vol. 22, Nr 1, pp. 44-47 (USSR)

ABSTRACT: The purpose of the present work was the production of plastic-scintillators of a large circumference with good transparence for fluorescent radiation, and a maximum ratio  $B_E/\tau$  (yield of energy the duration of scintillation). The impulse-amplitude in a plastic-scintillator is not only dependent on the activator-concentration, but also on the purity of the solvent and that of the activator. The influence exerted by benzoylperoxide upon the impulse-amplitude was investigated here and data for some samples which were produced with catalysts and without catalysts are given. It is shown that the plastic-scintillators which were produced without catalysts bring about an increase in the impulse-amplitudes by ~10%. The samples of p-terphenyl, produced without catalysts, yield impulse-amplitudes of the order of magni-

Card 1/3

Amplitudes of the Impulses of Plastic-Scintillators With Various Activators-48-1-b/20

tors. tude 0,6 of stilbene, but for fluorescent radiation they are not transparent enough. Some substances of the oxazole-class were also investigated. These were used in plastic-scintillators as well as base-fillers as additions to p-terphenyl and 2,5-diphenyloxazole. It is shown that in these substances the maximum amplitudes are attained at an activator-concentration of 0,5 ÷ 1,0 %. The best results were attained in samples with PBD as activator. The sample with 1 % PBD in polystyrene without benzoylperoxide shows impulses whose amplitude amounts to 0,9 with reference to stilbene. The sample with 1% αNPO (i.e. 2-(1-naphthyl)-5-phenyloxazole) in polystyrene without benzoylperoxide yields impulses whose amplitudes amount to 0,73 with reference to stilbene.- PBD is 2-phenyl-5-(4-biphenyl)-1,3,4-oxydiazole. POPOP is 1,4-di[2-(5-phenyloxazolyl)] benzene. It is finally shown that the plastic-scintillators which are produced with p-terphenyl and luminescing additions of POPOP, BBO and αNPO and which possess a comparatively good transparence for characteristic radiation, can be successfully used for scintillation-counters. BBO is 2,5-di-(4-biphenyl)oxazole. There are 4 tables, 4 references, 1 of which is Slavic.

Card 2/3



Amplitudes of the Impulses of Plastic-Scintillators With  
Various Activators.

48-1-10/20

ASSOCIATION: United Institute for Nuclear Research AN USSR (Ob"yedinennyy  
institut yadernykh issledovaniy Akademii nauk SSSR).

AVAILABLE: Library of Congress

1. Crystals
2. Benzoylperoxide-Application

Card 3/3



**"APPROVED FOR RELEASE: 07/19/2001**

**CIA-RDP86-00513R002064810020-8**

**APPROVED FOR RELEASE: 07/19/2001**

**CIA-RDP86-00513R002064810020-8"**

ZHIL'TSOVA, L.A.

Professor S.G. Lepneva's seventy-fifth birthday. Ent. oboz. 38  
no.3:699-700 '59. (MIRA 13:1)  
(Lepneva, Sof'ia Grigor'evna, 1883-)

ZHIL'TSOVA, M.N.; POSPELOVA, G.N.

State of peripheral blood circulation in migraine patients;  
from data of arterial oscillography. Zhur. nevr. i psikh. 64  
no.9:1334-1340 '64. (MIRA 17:12)

1. Tsentral'nyy institut kurortologii i fizioterapii, Moskva.

ZHIL'TSOVA, N.G., inzh.

Methods for the economic estimate of coal losses in the course  
of mining. [Trudy ] VNIMI no.47:264-271 '62 (MIRA 17:7)

ZHIL'TSOVA, N.G., inzh.

Relationship between the labor productivity of a cutter-loader crew and the length of a mine chute in the Polysayevskaya-Severnaya hydraulic mine of the Kuznetsk Basin. Izv. vys. ucheb. zav.; gor. zhur. no.8:104-109 '61. (MIRA 15:5)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G.V. Plekhanova. Rekomendovana kafedroy ekonomiki i organizatsii proizvodstva Leningradskogo gornogo instituta.

(Kuznetsk Basin--Hydraulic mining--Labor productivity)

ZHIL'TSOVA, N.G., inzh.

Potentials for the growth of labor productivity in stopes of Polysayevskaya-Severnaya hydraulic mine in the Kuznetsk Basin. Izv. vys. ucheb. zav.; gor. zhur. no.11:66-71 '61. (MIRA 15:1)

1. Leningradskiy ordena Lenina i ordena Trudovogo Krasnogo Znameni gornyy institut imeni G.V.Plekhanova. Rekomendovana kafedroy ekonomiki i organizatsii proizvodstva.  
(Kuznetsk Basin--Stoping (Mining))



GOLENKOV, V.F.; BRATUKHIN, A.M.; ZHIL'TSOVA, T.Ye.

Chemical composition of high-quality rye grist products.

Prikl. biokhim. i mikrobiol. 1 no.4:369-372. JI-Ag '65.

(MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut zerna i produktov yego pererabotki.

ZHIL'TSOVA, V.I.

Results of testing forecasting methods of the geopotential heights  
of isobaric surface 200 mb. Trudy TSIP no.125:13-18 '63.  
(MIRA 16:12)

TURKMTI, Z.L.; ZHIL'TSOVA, V.I.

Results of testing the method of precipitation calculation  
for cold seasons of the year in the operative work of the  
Central Weather Institute. Trudy TSIP no.77:103-111 '58.  
(MIRA 12:5)

(Weather forecasting)

ZHIL'TSOVA, V.M.; KRUGLYAKOVA, K.Ya.; ULANOV, B.P.; GINDIN, L.G.

Kinetics of DNA denaturation following ultraviolet irradiation.  
Dokl. AN SSSR 164 no.1;198-200 S '65. (MIRA 18:9)

1. Vsesoyuznyy zaochnyy politekhnicheskiy institut i Institut  
khimicheskoy fiziki AN SSSR. Submitted March 25, 1965.

ZHIL'TSOVA, Z.P. (Moskva)

Improving the accounting for materials in clothing factories.  
Shvein. prom. no.4:21-24 J1-Ag '65. (MIRA 18:9)



ZHILYAKOV, I.

Mutual interests have united the miners. Mast. ugl. 8 no.11:10  
N '59. (MIRA 13:2)

1. Brigadir kompleksnoy birgady shakhty "Koksovaya-1" imeni Stalina  
Kuznetskogo basseyna. (Kuznetsk Basin--Mine management)

Zhilyakov, I. G.

133-12-6/26

**AUTHORS:** Bedel'yan, L.P., Zhilyakov, I.G., Kanevskiy, V.M.,  
Rysev, A.I., and Urinson, A.I., Engineers.

**TITLE:** Operation of 185-ton Open Hearth Furnaces on Natural Gas  
(Rabota 185-t martenovskikh pechey na prirodnom gaze)

**PERIODICAL:** Stal', 1957, No.12, pp. 1082 - 1085 (USSR).

**ABSTRACT:** Operation of a 185-ton open hearth furnace fired with natural gas carburised with fuel oil is described. Originally designed and actually used gas-oil burners are shown in Figs. 1 and 2, respectively, and the gas installation used in fig.3. For the atomisation of the fuel oil, the use of gas and steam was tried. Operational indices of best heats and a comparison of the furnace operation when fired with gas-fuel oil, gas-fuel oil (atomised with steam) and fuel oil alone are given in Tables 1 and 2, respectively. It is concluded that on transfer of furnace from oil to natural gas (10 atm.) firing the output will not decrease only if high pressure superheated steam is used for the atomisation of fuel oil. The flame obtained with natural gas, carburised with 25% of oil has similar properties as fuel-oil flame. A proposal is made to carry out experiments on firing an open hearth furnace with natural gas preheated to 250-300 °C, as well as with gas of increased pressure (13 - 15 atm.). There are 2 tables and 3 figures.

Card 1/2



133-12-6/26

Operation of 185-ton Open Hearth Furnaces on Natural Gas

ASSOCIATION: Taganrog Metallurgical Works im. Andreyev  
(Taganrogskiy metallurgicheskiy zavod imeni  
Andreyeva)

AVAILABLE: Library of Congress

Card 2/2

**XHLYSTOV, A.S.; ZHILYAKOV, S.M.**

Magnetic characteristics of lithium-aluminum ferrites. *Izv.vys.*  
ucheb.zav.;fiz. no.2:151-153 '60. (MIRA 13:8)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniversitete  
im. V.V.Knybysheva.  
(Ferrites--Magnetic properties)

KHLYSTOV, A.S.; ZHILYAKOV, S.M.; PETRAKOVSKIY, G.A.

Magnetic characteristics of nickel-chromium ferrites. Izv.vys.  
ucheb.zav.; fiz. no.6:168-169 '59. (MIRA 13:6)

1. Sibirskiy fiziko-tekhnicheskii institut pri Tomskom gosuniver-  
sitete imeni V.V.Kuybysheva.

(Nickel ferrates--Magnetic properties)

(Chromium ferrates--Magnetic properties)

69167

S/139/59/000/06/026/034  
E201/E191

24.7900

AUTHORS: Khlystov, A.S., Zhilyakov, S.M., and Petrakovskiy, G.A.

TITLE: Magnetic Properties of Nickel-Chromium Ferrites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika,  
1959, Nr 6, pp 168-169 (USSR)

ABSTRACT: Nickel-chromium ferrites ( $NiFe_{2-x}Cr_xO_4$ ) were prepared by the usual ceramic techniques from "ch" and "chda" oxides taken in stoichiometric ratios. The oxides were mixed in steel-ball mills for 24 hours. After drying, the mixtures were subjected to a preliminary 6-hour heating in a Silit electrical furnace at 1100 °C. Then the materials were quenched by rapid cooling in air. Powders obtained in this way were ground and pressed (2-3 tons/cm<sup>2</sup>) into samples of required shape, using polyvinyl alcohol as a binder. Finally the samples were fired at 1300 °C for 12 hours and cooled at the rate of 600 °C per hour. The measured magnetic properties of the samples are given in Figs 1 and 2 and Table 1. Saturation magnetization,  $4\pi M_s$ , was measured at room temperature; it is given as a function of composition (a ranging from 0 to 1.0) in Fig 1 (upper

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1/4

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S/139/59/000/06/026/034  
E201/E191

Magnetic Properties of Nickel-Chromium Ferrites

curve) and Table 1 (column 2). The value of  $4\pi M$  is reduced by introduction of chromium ions into the ferrite: it falls from 2300 gauss at  $a = 0$  to practically zero at  $a = 1.0$ . This behaviour can be explained in terms of Neel's theory (Ref 1). Chromium ions which have the tendency to six-fold coordination (Ref 2) occupy octahedral compositions up to compositions with  $a = 1$ . Then the structural formula of the ferrite is:



Magnetization at the absolute saturation of a ferrite with the structure given by Eq (1) is:

$$\{[2 + (1-a)5 + a \cdot 3] - 5\} \mu\text{B} = 2(1-a) \mu\text{B} \tag{2}$$

The above equation shows that magnetization of the ferrite passes through zero approximately at

$$a = 1$$

which agrees qualitatively with the results obtained

(3) ✓

Card  
2/4

69167  
S/139/59/000/06/026/034  
E201/E191

Magnetic Properties of Nickel-Chromium Ferrites

(Fig 1). The results obtained show that at concentrations  $0.4 < a < 0.8$  the materials with a comparatively high Curie point ( $T_c = 480-200$  °C) and low saturation magnetization can be obtained. This is of practical importance since the lower frequency limit of very-high-frequency ferrite devices is governed by the losses due to ferromagnetic resonance. This frequency limit is given by (Ref 3)

$$\frac{\omega}{\gamma} > 4\pi M + \frac{2|K_1|}{M} \quad (4)$$

where  $K_1$  is the first constant of magnetic anisotropy of a cubic crystal,  $\omega$  is the angular frequency of e.m. waves and  $\gamma$  is the magneto-mechanical ratio. Fig 2 and column 5 of Table 1 show that the initial permeability  $\mu_0$  (at 100 c/s) falls sharply with increase of the chromium content. Values of the Curie point, coercive force (in Oe) and density (in g/cm<sup>3</sup>) are listed in columns 3, 4 and 6 of Table 1.

There are 2 figures, 1 table and 3 references, of which 1 is Soviet, 1 French and 1 English.

Card  
3/4

✓

L 8597-66 EWT(d)/FSS-2  
ACCESSION NR: AP5021166

UR/0139/65/000/004/0046/0049

AUTHOR: Khlystov, A. S.<sup>44</sup>; Zhilyakov, S. M.<sup>44</sup>

TITLE: The problem of preparing thermally stable materials for the decimeter band

SOURCE: IVUZ. Fizika, no. 4, 1965, 46-49

TOPIC TAGS: ferrite, decimeter wave, thermal stability, waveguide antenna, aluminum containing alloy, saturation magnetization

25B.44

ABSTRACT: Requirements are discussed for the parameters of ferrite materials in connection with the thermal stability essential for ferrites used in antenna-waveguide systems in the decimeter band. The temperature dependence of the saturation magnetization was investigated for ferrites with the formula  $Li_{0.5}Fe_{2.5-a}Al_aO_4$  for  $a = 0, 0.1, 0.2, 0.4, 0.45, 0.50, 0.55, 0.60,$  and  $0.70$ . The ferrites were prepared from oxides by the usual ceramic method under a pressure of 1200 atm. The temperature dependence of the saturation magnetization of the ferrite spheres was measured with a vibrational magnetometer in a field of 6000 Oe. The sample was heated by high-frequency currents and cooled by liquid-nitrogen vapor. It was found that the saturation magnetization changes with aluminum ion content. For a ferrite with  $a = 0.70$  the saturation magnetization did not change by more than 10% in the range from 0 to 270C; for ferrites with  $a = 0.60$

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2

L 8597-66

ACCESSION NR: AP5021166

and 0.55 it remains constant at least between -150 to 275 and 220C respectively. This indicates that thermally stable lithium aluminum ferrites for the decimeter range can be obtained. Orig. art. has: 2 formulas and 2 figures.

ASSOCIATION: Sibirskiy fiziko-tekhnicheskiy institut imeni V. D. Duznetsova (Siberian Physicotechnical Institute)

SUB CODE: EC, EM

SUBMITTED: 29Dec63

ENCL: 00

OTHER: 006

NR REF SOV: 003

Card <sup>14</sup> 2/2



ACC NR: AP7005623 (N) SOURCE CODE: UR/0413/67/000/002/0068/0068

INVENTOR: Khlystov, A. S.; Zhilyakov, S. M.

ORG: None

TITLE: A ferrite material. Class 21, No. 190501

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 2, 1967, 68

TOPIC TAGS: ferrite, thermal stability, saturation magnetization

ABSTRACT: This Author's Certificate introduces a ferrite material which contains oxides of iron, aluminum and lithium with the composition  $Li_{0.5}(1-\alpha)Fe_{1.9+0.1\alpha}Al_{0.6(1-\alpha)}Co_{\alpha}O_4$ , where  $\alpha=0.004-0.010$ . The material is designed for thermally stable saturation magnetization in the temperature range from  $-150$  to  $+285^{\circ}C$ .

SUB CODE: 11/ SUBM DATE: 29Nov65

Card 1/1

UDC: 621.318.124

ZHILYAKOV, V.

Strengthen staff discipline. Fin. SSSR 21 no.8:75-76 Ag '60.  
(Kishinev--Meat industry) (MIRA 13:8)

PLYUSHCHEV, V. Ye.; STEPINA, S.B.; ZIMINA, G.V.; ZHILYAKOV, V.G.

Investigating the interaction of antimony chloride and bromide with corresponding halides close to the properties of alkali elements. *Izv. vys. ucheb. zav.; tsvet. met.* 7 no. 4:112-116 '64 (MIRA 19:1)

1. Moskovskiy institut tonkoy khimicheskoy tekhnologii, kafedra khimii i tekhnologii redkikh i rasseyannykh elementov.

ZHILYAKOV, V.G.; IGOSHIN, D.M.

Automation of the beer distillation section. Gidroliz, 1  
lesokhim. prom. 17 no.6:17-18 '64. (MIRA 17:12)

1. Andizhanskiy gidroliznyy zavod.

ZHILYAKOV, Ya.G. (Khar'kov)

Design of rods fixed in an elastic semispace. Stroi, mekh. 1  
rasch. soor. 4 no.6:26-30 '62. (MIRA 16:1)  
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