

USSR/Chemical Technology. Chemical Products and Their Application -- Silicates.  
Glass. Ceramics. Binders, I-9

Abst Journal: Referat Zhur - Khimiya, No 2, 1957, 5292

Author: Levin, N. I., Liogon'kaya, R. I.

Institution: ~~None~~

Title: Properties of Cements Produced by Means of Separation

Original

Publication: Tsement, 1956, No 3, 6-10

Abstract: Sorting of cement by means of a separator into a fine and a coarse fraction makes it possible to produce two different kinds of cement due to a redistribution therein of the clinker materials -- alite and belite. The fine fraction is enriched with alite, the coarse with belite. Specific surface of fine fraction 5,400-6,100 cm<sup>2</sup>/gram, of the coarse fraction 1,600-2,200 cm<sup>2</sup>/gram. Both fractions are characterized by a normal setting time with different rates of strength increase. Fine fraction obtained following separation (30-40% by weight of the initial cement), is a rapidly hardening Portland cement. The coarse fraction is a belite-type cement, which gives great strength following a prolonged period of hardening.

Card 1/1

LEVIN, N. I., kandidat tekhnicheskikh nauk.

Increasing the output of cement at the cost of clinkers with  
varying mineralogical content. Cement 22 no.6:1-4 M-D '56.  
(Cement industries) (MLRA 10:2)

LEVIN, N.I., inshener.

Mechanical strength of cellular concrete blocks and their use in construction. *Biul. stroi. tekhn.* 14 no.3:4-8 Mr '57. (MLRA 10:5)  
(Concrete blocks) (Lightweight concrete)

LEVIN, H.I., Cand Tech Sci--(dis) "Mechanical properties of  
porous concrete, strength and deformation of porous concrete  
blocks and <sup>the laying of them</sup> ~~their technology~~." Mos, 1958. 21 pp (Acad of <sup>Construction</sup> ~~Building~~  
and Architecture USSR. Central Sci Res Inst of <sup>Building</sup> ~~Building~~ Construction  
~~Engineering~~ <sup>ENISK</sup>), 100 copies (KL,25-58, 114)

SOV-101-58-4-5/12

AUTHORS: Shteyert, N.P.; Levin, N.I.; Liogon'kaya, R.I.

TITLE: Quick Setting Cement for Urgent Emergency Work (Bystrotverdeyushchiy tsement dlya srochnykh avariynykh rabot)

PERIODICAL: Tsement, 1958, Nr 4, pp 19-22 (USSR)

ABSTRACT: The authors present the results of experiments to obtain a suitable quick-setting cement. The results of various tests are given in Tables 1-4. Table 4 illustrates the results obtained by testing quick-setting portland cement. The tests were carried out in the open air and under water. The 6-hour strength of these samples, which amounted to 110 - 115 kg/sq cm, met the requirements. The above results have proved: quick-setting portland cement, of the normalized mineralogic composition, is the only suitable material for urgent emergency work. This cement brand has to be ground to the fineness degree of 5,000 sq cm/g, with a 2.5% to 3% addition of CaCl<sub>2</sub>.

Card 1/2

Quick Setting Cement for Urgent Emergency Work

SOV-101-58-4-5/12

There are 4 tables and 3 Soviet references.

1. Concrete--Development
2. Concrete--Test methods

Card 2/2

KAMEYKO, V.A., kand.tekhn.nauk; LEVIN, M.I., kand.tekhn.nauk; KLIMOVA,  
G.D., red.isd-va; TEMKINA, Ye.L., tekhn.red.

[Temporary technical specifications for using large wall  
elements made of autoclave-hardened porous concretes] Vremennye  
tekhnicheskie uslovia po primeneniю krupnorazmernykh stenovykh  
izdelii iz avtoklavnykh iacheistykh betonov. Moskva, 1959. 25 p.  
(MIRA 13:3)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut stroi-  
tel'nykh konstruktsii.  
(Walls) (Lightweight concrete)

~~LEVIN, M. I.~~, kand. tekhn. nauk

Testing mechanical properties of porous concrete blocks.  
Trudy NIIZHB no. 8:45-59 '59. (MIRA 13:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'-  
noy konstruktsii. (Concrete blocks--Testing)



LEVIN, N.I., kand.tekhn.nauk

Using lightweight concrete in building exterior walls. *Biul.stroi.tekh.*  
16 no.3:38-41 Mr '59. (MIRA 12:4)

1. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'noy kon-  
struktsii Akademii stroitel'stva i arkhitektury SSSR.  
(Lightweight concrete)  
(Walls)

LEVIN, N.I., kand.tekhn.nauk; KAMEYKO, V.A., kand.tekhn.nauk, red.;  
VILKOV, G.N., red.izd-va; RUDAKOVA, N.I., tekhn.red.

[Mechanical properties of porous concrete blocks] Mekhanicheskie  
svoistva blokov iz iacheistykh betonov. Moskva, Gos.izd-vo lit-ry  
po stroit., arkhitekt. i stroit. materialam, 1960. 141 p. (Akademiya  
stroitel'stva i arkhitektury SSSR. Institut stroitel'nykh kon-  
struksii. Nauchnoe soobshchenie, no.10). (MIRA 14:1)  
(Lightweight concrete) (Concrete blocks)

GUSAKOV, V.N., kand. tekhn. nauk; SHVARTSZAYD, M.S., kand. tekhn. nauk;  
KAMEYKO, V.A., kand. tekhn. nauk; LEVIN, N.I., kand. tekhn.  
nauk; KHAVKIN, L.M., inzh.; SKATYNSKIY, V.I., kand. tekhn. nauk;  
KRASNYY, I.M., kand. tekhn. nauk; NEMIROVSKIY, Ya.M., kand. tekhn.  
nauk; TEMKIN, L.Ye., inzh., red.; STRASHNYKH, V.P., red. izd-va;  
BOROVNEV, N.K., tekhn. red.

[Instructions SN 165-61 for designing articles made of autoclaved silicate concretes] Ukazaniya po proektirovaniyu konstruksii iz avtoklavnykh silikatnykh betonov CH 165-61. Moskva, Gos. izd-vo lit-ry po stroit., arkhitekt. i stroit. materialam, 1961. 50 p.

(MIRA 14:12)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Vsesoyuznyy nauchno-issledovatel'skiy institut novykh stroitel'nykh materialov Akademii stroitel'stva i arkhitektury SSSR (for Gusakov, Shvartszayd). 3. Vsesoyuznyy tseentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruksiy Akademii stroitel'stva i arkhitektury SSSR (Kameyko, Levin). 4. Respublikanskiy nauchno-issledovatel'skiy institut mestnykh stroitel'nykh materialov Vserossiyskogo soveta narodnogo khozyaystva (for Khavkin). 5. Nauchno-issledovatel'skiy institut stroitel'nykh konstruksiy Akademii stroitel'stva i arkhitektury USSR (for Skatynskiy). 6. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Krasnyy, Nemirovskiy).  
(Precast concrete) (Sand-lime products)

MAKARICHEV, V.V., kand. tekhn. nauk; LEVIN, N.I., kand. tekhn.nauk;  
KUDRYASHEV, I.T., kand. tekhn. nauk, retsenzent [deceased];  
RABINOVICH, A.I., kand. tekhn. nauk, retsenzent; GUSAKOV,  
V.N., kand. tekhn. nauk, retsenzent; GLOTOVA, L.V., red. izd-va;  
SHERSTNEVA, N.V., tekhn. red.

[Designing elements made of cellular concrete] Raschet konstruksii  
iz iacheistykh betonov. Moskva, Gos. izd-vo lit-ry po stroit.,  
arkhit. i stroit. materialam, 1961. 153 p. (MIRA 14:9)  
(Precast concrete)

KUZ'MENKO, D.Ye.; ROZENFEL'D, L.M., starshiy nauchnyy sotrudnik, kand.khimi-cheskikh nauk; LEVIN, N.I., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Air-entrained slag and ash concrete part 1 for precast construction.  
Stroi.mat. 7 no. 6:2-7 Je '61. (MIRA 14:7)

1. Upravlyayushchiy trestom Tagilstroy (for Kuz'menko).
2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Rozenfel'd).
3. Tsentral'nyy nauchno-issledovatel'skiy institut stroitel'nykh konstruksiy Akademii stroitel'stva i arkhitektury SSSR (for Levin).  
(Tagil River Basin—Precast concrete)  
(Air-entrained concrete)

KRZHEMINSKIY, S.A., kand.tekhn.nauk; KAMEYKO, V.A., kand.tekhn.nauk;  
KRYZHANOVSKIY, B.B., inzh.; LEVIN, H.I., kand.tekhn.nauk;  
SHUTILO, L.I., inzh.

Technology and basic physical and mechanical properties of auto-  
claved air-entrained silicate. Sbor. trud. ROSNIIMS no.17:109-  
129 '60. (MIRA 14:12)

(Sand-lime products)

KRZHEMINSKIY, S.A., kand.tekhn.nauk; KRYZHANOVSKIY, B.B., inzh.; KAMEYKO, V.A., kand.tekhn.nauk; LEVIN, N.I., kand.tekhn.nauk; BALASHOVA, N.M., inzh.; SHUTILO, L.I., inzh.

The technology and basic physicomechanical properties of air-entrained silicate and air-entrained cinder silicate used as insulating materials. Sbor. trud. ROSNIIMS no.20:36-51 '61. (MIRA 16:1)

(Insulating materials) (Sand-lime products)

LEVIN, M.I., kand.tekhn.nauk; FREYDIN, A.S., kand.tekhn.nauk; SHOLOKHOVA, A.B.,  
inzh.; NOL'DE-STARCHENKO, A.S., inzh.

Gluing of cellular concrete wall panels. Stroi.mat. 9 no.9:16-17  
S '63. (MIRA 16:10)



NOVIKOV, B.A., kand. tekhn. nauk; LEVIN, N.I.; MASLENNIKOVA, G.P., inzh.

Manufacture of air-ash-silicate at the Stupino cellular concrete plant. Trudy NIIZHB no.32:203-217 '63.

(MIRA 17:1)

TEMKIN, L.Ye., inzh., red.; MILEYKOVSKAYA, K.M., kand. tekhn.  
nauk, red.; LEVIN, N.I., kand. tekhn. nauk, red.;  
RANNAMYAGI, L.A., inzh.

[Instructions on designing cellular concrete elements] Uka-  
zaniya po proektirovaniu konstruksii iz iacheistyykh be-  
tonov (SN 287-65). Moskva, Stroiizdat, 1965. 94 p.

(MIRA 18:7)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gosstroy SSSR (for Temkin).
3. Nauchno-issledovatel'skiy institut betona i zhelezo-  
betona (for Mileykovskaya). 4. Tsentral'nyy nauchno-  
issledovatel'skiy institut stroitel'nykh konstruksiy im.  
V.A.Kucherenko Gosstroya SSSR (for Levin). 5. VNII sili-  
kal'tsita Gosudarstvennogo komiteta po promyshlennosti  
stroitel'nykh materialov pri Gosstroye SSSR (for Rannamyagi).

ZERNOV, D. V.; YELINSON, M. I.; LEVIN, N. M.

"Study of the Autoelectronic Emission of Thin Dielectric Films." Iz. Ak. Nauk SSSR, Otdel. Tekh. Nauk, No. 3, 1944. Submitted 29 Oct 1943.

FDD Report U-1556, 14 Nov 1951

S/144/60/000/04/006/017  
E194/E455

**AUTHOR:** Levin, N.N., Engineer

**TITLE:** The Stator/Rotor Tooth Ratio in Alternate-Pole (Double-Pitched) Induction Generators,<sup>4</sup>

**PERIODICAL:** Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, Nr 4, pp 35-39 (USSR)

**ABSTRACT:** Alternate-pole induction generators with double-pitch windings are becoming widely used for high-frequency generation. Various designs exist and differ in the ratio of stator to rotor teeth. The two main types of generator are those of the Guy construction, which is illustrated schematically in Fig 1, and is used in the frequency range 4000 to 15000 c/s, and the Lorentz-Schmidt system, similarly illustrated in Fig 2 and used between 500 and 5000 c/s. Multi-phase induction generators are a special case. The object of the present article is to provide a general approach to the varying designs of single and multi-phase induction generators which differ in the stator/rotor tooth ratio employed. The rotor-stator tooth ratio of a Guy generator is first considered. Here each main pole is

Card 1/2

VEYTSMAN, L.N.; LANIN, F.I.; LEVIN, H.M.; KOLOANOVA, O.A.

Productivity of guinea hens kept in cages. Trudy Inst.gen.  
no.20:249-256 '53.

(MLRA 7:1)

(Guinea fowl)

SUBJECT:

LEVIN, N.M.  
USSR/Poultry Farming

25-5-11/35

AUTHOR:

Levin, N.M., Senior Technician in the Poultry Department of  
the Sovkhoz "Kommunarka"

TITLE:

On the "Kommunarka" State Farm (V sovkhose "Kommunarka")

PERIODICAL:

Nauka i Zhizn' - May 1957, No 5, pp 25-27 (USSR)

ABSTRACT:

The state farm "Kommunarka" is located near Moscow. Close co-operation between farm employes and agricultural scientists has resulted in highly satisfactory achievements in poultry raising, one of the main specialties of this farm. For example, a new kind of cheap and nourishing chicken food was developed. It is prepared from hay, dried in a pneumatic drier, and then pulverized. The extremely fast process of drying preserves all the vital vitamins.

Another problem solved successfully was the cure and prevention of diseases. Mycelium, a waste product of biomyacin, gave the best results in fighting diseases of the respiratory system so common to fowl, and in addition strengthens their vitality.

Card 1/2

USSR/Farm Animals. Domesticated Fowl.

Q

Abstr Jour: Ref Zhur-Biol., No 20, 1950, 92640.

Author : Laguta, A.F., Levin, N.M.

Last :

Title : Artificially Dried Hay Meal in Chicken Feed.

Orig Pub: Ptitsevodstvo, 1957, No 9, 34-35.

Abstract: The chickens of the first group were fed with artificially dried alfalfa meal, a principal source of vitamin A. For the first week each received 0.1-0.3 g, at 30 days and older, each got 3-4 g every 24 hours. Chickens of the second group up to 60 days old received vitamin A (400 i.u. each), D<sub>2</sub> (496 i.u. each), B<sub>2</sub> (100  $\gamma$  apiece) and 0.5 g of fish oil (200 i.u.) per head and

Card : 1/2

90

LEVIN, N.M.;STUDENTSOV, P.S.

Performance tests of chickens. Ptitsevodstvo 9 no.9:24-25  
S '59. (MIRA 12:12)

1. Sovkhoz "Kommunarka", Moskovskoy oblasti.  
(Poultry)



LEVIN, N.N., student 6-go kursa

Changes in electro- and ballistocardiograms as well as in the form of the pulse wave during a 24-hour period in compensated pulmonary tuberculosis. Nauch.trudy L'vov.obl.terap.ob-va no.1:128-130 '61.  
(MIRA 16:5)

1. Kafedra tuberkuleza L'vovskogo meditsinskogo instituta (zav. kafedroy - prof. I.T. Stukalo).

(ELECTROCARDIOGRAPHY) (BALLISTOCARDIOGRAPHY)  
(PULSE) (TUBERCULOSIS)

LEVIN, Nikolay Nikolayovich, inzh.

Tooth ratio in magneto-generators with unlike poles. Izv. vys. ucheb.  
zav.; elektromekh. 3 no.4:35-39 '60. (MIRA 13:9)  
(Electric generators)

SHTURMAN, G.I.; LEVIN, N.N.

Principal equations and equivalent circuits of a magneto-type asynchronous motor. Izv. vys. ucheb. zav.: elektromekh. 4 no.2: 27-33 '61. (MIRA 14:9)

(Electric motors, Induction)

LEVIN, N.N., inzh. (Riga); SHTURMAN, G.I., doktor tekhn.nauk, prof. (Riga)

Multiphase inductor machinery with unlike poles. Elektrichestvo  
no.2:52-55 F '62. (MIRA 15:2)  
(Electric machinery--~~Polyphase~~)

KUTSEVALOV, Vitaliy Mikhaylovich; LEVIN, N.N., kand. tekhn. nauk,  
retsenzent; DYMARSKAYA, O., red.

[Synchronous machines with solid poles] Sinkhronnye mashiny  
s massivnymi poliusami. Riga, Izd-vo M. latvieskoi SSR,  
1965. 248 p. (MIRA 18:3)

1. 08820-67 EWT(1)

SOURCE CODE: UR/3200/65/000/004/0097/0105

ACC NR: AT6023090

AUTHOR: Levin, N. N. 21

ORG: none

TITLE: Conditions for creep-free and oscillation-free operation of systems with inductive torque-motors

SOURCE: AN LatSSR. Institut energetiki. Beskontaknyye elektricheskiye mashiny, no. 4, 1965, 97-105

TOPIC TAGS: electric motor, torque motor, torque motor design, *electrical engineering*

ABSTRACT: The operation of an ac torque-motor is analyzed and a specific design approach aimed at eliminating creep and oscillation is recommended. The main mode of operation for torque motors in many systems is one in which the rotor stalled, thus generating a momentum to maintain the desired position of the driven parts. The errors and instability in this mode must be kept to a minimum. One method of achieving these goals is the elimination of gear speed reduction. Unfortunately, this leads to a larger motor size and power consumption. While highly reliable, synchronous brushless motors are not suitable for low speeds and high torque since their rpm cannot be reduced below the value given by

$$n_1 = \frac{60f_1}{p} \quad (1)$$

Card 1/3

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ACC NR: AT6023090

where  $n$  is the rotational speed,  $f$  is the ac frequency, and  $p$  is the number of pole pairs. A new type of torque motor, an induction motor, has four times the number of poles of the ordinary induction motor with a short-circuit rotor. Due to resonance phenomena in the secondary circuits, the efficiency of such a torque motor is maintained in the face of a substantial reduction in size, weight and input power per unit of torque. The motor has a reference and a control winding; these are displaced  $90^\circ$  with respect to one another. One of the important performance parameters is the absence of creep when the voltage is removed from the control winding. Such creep may lead to intolerable system instability. It is particularly difficult to prevent creep when the control winding is open. The operational and design parameters of an induction multi-pole torque are mathematically analyzed and a parameter relation providing creep-free operation is established:

$$x_{Ck} > \frac{1}{3} \times L_2 + \sqrt{\frac{4}{9} \times L_2 - (r_2 + r_d)^2/3} \quad (2)$$

where  $x_{Ck}$  is the reactance of the compensating capacitors at line frequency,  $x_{L2}$  is the reactance of the secondary windings at line frequency,  $r_2$  is the resistance of the secondary windings, and  $r_d$  is the value of additional resistance in the secondary cir-

Card 2/3

•L 08820-67

ACC NR: AT6023090

cuit. If the inequality (2) is satisfied, the rotor will exhibit a braking tendency when the control winding is opened or shorted at any speed. An experimental motor was built to test these findings. Its performance confirmed the soundness of the mathematical analysis. Orig. art. has: 13 formulas, 4 figures.

SUB CODE: 09/      SUBM DATE: none/      ORIG REF: 004

Card 3/3 nst



MARTYNOVICH, G.Ya.; LEVIN, N.V.; RADCHENKO, B.G.; SULLA, V.B.

Inventors suggest. Mashinostroitel' no.10:30-31 0 '65. (MIRA 18:10)

SMIRNOV, Boris Vasil'yevich; LEVIN, N.Ye., red.

[Laboratory work for courses in "Radio engineering" and  
"Communication in agriculture" and methods for conducting  
them] Laboratorno-prakticheskie zaniatiia po kursam  
"Radiotekhnika" i "Sviaz' v sel'skom khoziaistve" i meto-  
dika ikh provedeniia. Moskva, Vysshiaia shkola, 1965. 207 p.  
(MIRA 18:8)

*received*  
RYVLIN, Ya.B., prof.; KOLODNER, I.B., dots.; LEVIN, O.A., prof.,  
polkovnik med. sluzhby ~~[deceased]~~; KUPRIYANOV, P.A., general-  
leytenant med. sluzhby, red.; KOLESNIKOV, I.S., polkovnik med.  
sluzhby, prof., red.; RUKHIMOVICH, G.S., ved. red.; SHEVCHENKO,  
F.Ya., tekhn. red.; SHCHADENKO, A.S., tekhn. red.

[Atlas of gunshot wounds] Atlas ognestrel'nykh ranenii. Pod  
red. P.A.Kuprianova, I.S.Kolesnikova. Leningrad, Medgiz.  
Vol.6. [Gunshot wounds of the extremities; wounds of the  
shoulder, forearm, hip, and leg] Ognestrel'nye raneniia konech-  
nostei; raneniia plecha, predplech'ia, bedra i goleni. 1954.  
215 p. Vol.9. [Anaerobic infections following gunshot wounds]  
Anaerobnaia infektsiia posle ognestrel'nykh ranenii. 1953. 259 p.  
(MIRA 16:6)

1. Russia (1923- U.S.S.R.) Glavnoye voyenno-meditsinskoye uprav-  
leniye Vooruzhennykh Sil. 2. Deystvitel'nyy chlen Akademii me-  
ditsinskikh nauk SSSR (for Kupriyanov).  
(EXTREMITIES (ANATOMY))—WOUNDS AND INJURIES)  
(GUNSHOT WOUNDS) (GAS GANGRENE)

BUKOWSKI, T.; LEVIN, P. [translator]; SAVIDANO, V.B., redaktor; PERESYPKINA,  
Z.D., tekhnicheskii redaktor

[Growing mushrooms. Translated from the Polish] Rasvedenie shampin'onov.  
Peroved s pol'skogo P.Lovina. Moskva, Gos. izd-vo selkhoz. lit-ry,  
1956. 70 p. (MIRA 10:2)  
(Mushrooms)

LEVIN, P.

The work has not started yet. Prom. koop. 13 no.7:21 J1 '59.  
(MIRA 12:10)

1. Sotrudnik redaktsii oblastnoy gazety "Rabochiy put'," Smolensk.  
(Smolensk--Cleaning and dyeing industry)

LEVIN, P.

If income is not planned. Grazhd.av. 19 no.12:9 D '62.

(MIRA 16:2)

1. Nachal'nik Omskogo aeroporta.  
(Airlines--Accounting)

LEVIN P. A.

Preparation of 1-(2-chloro-5-sulphophenyl)-3-methyl-5-py-  
razolone from the amide of acetoacetic acid P. A. LEVIN  
K. P. Voroshilov Sci. Research Inst. Org. Inorganic and  
Phys. Leningrad. Zhur. Obshch. Khim. 26, 224-5  
(1953). Addn of 4.3 ml diketene to 2 ml H<sub>2</sub>O per mole  
and 13.5 ml 28% NaOH base gave 100% yield.

1-chem

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LEVIN, E.A.

Synthesis of 1-(4'-sulfophenyl)-3-methyl-5-pyrazolone from  
diketene and 4-sulfophenylhydrazene. Zhur.ob.khim. 27 no.10:  
2864-2866 0 '57. (MIRA 11:4)

1. Nauchno-issledovatel'skiy institut organicheskikh poluproduktov  
i krasiteley im. K. Ye. Voroshilova, Leningradskiy filial.  
(Pyrazolone) (Diketene) (Phenylhydrazene)

LEVIN, P.A.

~~Distillation of diketone solutions. Zhur.prikl.khim. 30 no.5:806-808~~  
My '57. (MIRA 10:10)

(Ketones)

5.3610

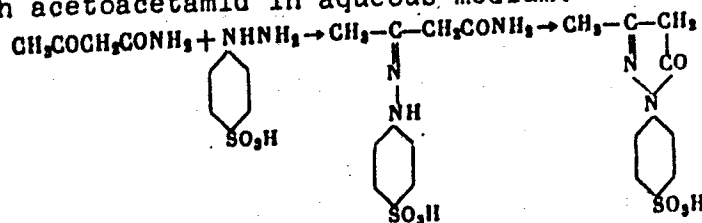
75698  
SOV/80-32-10-47/51

AUTHOR: Levin, P. A.

TITLE: Brief Communications. Preparation of 1-(4'-Sulfophenyl)-3-Methylpyrazolone-5 From Acetoacetamide

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Vol 32, Nr 10, pp 2361-2363 (USSR)

ABSTRACT: Phenylhydrazine and its derivatives react readily with acetoacetamide forming 1-phenyl-3-methylpyrazolone-5 and its derivatives (ZhOKh, 26, 2274, 1956; Am. p. 2637732, 1953). 4-Sulfophenylhydrazine reacts readily with acetoacetamid in aqueous medium:



Card 1/2

LEVIN, P.A.

Production of some pyrazolones from acetoacetamide and sodium acetoacetate.  
Zhur. prikl. khim. 34 no. 12:2803-2804 D '61. (MIRA 15:1)  
(Pyrazolinone) (Acetoacetamide) (Acetoacetic acid)

S/080/62/035/003/022/024  
D204/D302

AUTHOR: Levin, P. A.

TITLE: Assaying analysis of 'liquid' gold

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 3, 1962, 680-682

TEXT: The possibility was studied of determining gold (Au + Rh) in synthetic mixtures containing (g) : Au - 10.000, Bi oxide - 0.448, Cr oxide - 0.048, Rh oxide - 0.044. After cupellation experiments between 880 - 940°C, with the noble metals : lead ratio equal to 1:100, it was found that practically all (Au + Rh) could be separated at 900°C. With low Rh contents, (~0.4% w.r.t. Au), this could be taken as the weight of gold. Volatility and losses of Au above 900°C were reduced by the presence of Rh. Appearance of the Au/Rh beads obtained is discussed in relation to conditions of the process. Analysis of 'liquid' gold preparations based on the above compositions (10 - 12% Au) by this method proved more difficult. After thorough mixing and storage for period > 1 month, dense deposits formed which settled rapidly and made accurate sampling

Card 1/2

LEVIN, P.A.

Assaying "liquid" gold. Zhur.prikl.khim. 35 no.3:620-682 Mr  
'62. (MIRA 15:4)  
(Gold--Assaying)

LEVIN, P.A., inzh.; TUMANOV, S.G., doktor tekhn. nauk

Liquid gold preparations for decorating purposes. Stek. 1  
ker. 21 no.7:33-35 J1 '64. (MIRA 17:10)

1. Dulevskiy krasochnyy zavod.

LEVIN, P.A., kand.tekhn.nauk

New luster colors for glass and porcelain. Stek. i ker.  
23 no.1:26-29 Ja '66.

(MIRA 19:1)

1. Dulevskiy krasochnyy zavod.



LEVIN, P.A.; TUMANOV, S.G.

Incombustible components of a preparation of liquid polishing  
gold. Zhur. prikl. khim. 37 no.12:2752-2754 D '64. (MIRA 18:3)

L 8902-66 EWP(e)/EWT(m)/EVP(b)/ETC(m) WH/WH

ACC NR: AP5025658

SOURCE CODE: UR/0080/65/038/010/2264/2269

40  
38  
B

AUTHOR: Levin, P. A.; Tumanov, S. G.

ORG: none

TITLE: Solvents, polymers and other component parts of gilding solutions

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 10, 1965, 2264-2269

TOPIC TAGS: gold, porcelain, metal coating, ceramic coating

ABSTRACT: The purpose of this investigation was to develop gilding solutions which would spread easily, not flow outside the coverage areas and make no runs, but form films uniform in thickness. Resins, solvents and other components must be sufficiently stable on storage and must have the required consistency and adhesion to porcelain prior to kiln drying. The tests were conducted with rosin, shale pitch, Syrian asphalt, bitumen, phenolformaldehyde resin, polymethyl- and polybutylmethacrylate, PKhV-4 and PKhV-11 resins, copal, cumarone resin, shellac, acetyl and ethylcellulose. The following solvents were used: turpentine, aromatic and chlorinated hydrocarbons (benzene, toluene, chloroform, chlorobenzene and others), tetrahydronaphthaline, cyclohexanol, cyclohexanone, nitrobenzene, ethylbenzoate, etheral oils and others. Some polymers along with the formation of a film also decrease the gloss of the gold deposit in the course of kiln drying. This property of gilding preparations depends on

UDC: 621.793 + 546.59

Card 1/2

2

L 8902-66

ACC NR: AP5025658

the solvents which are present. The replacement of soluble metal compounds by insoluble metal compounds or the use of inert solvents improves the properties of gilding preparations. The use of surfactants and stabilizing additives has an adverse effect on the properties of fired gold paint. The authors express their gratitude to P. P. Budnikov for consultations in the course of these investigations. Orig. art. has: 3 tables, 2 figures.

SUB CODE: 11/

SUBM DATE: 02Sep63/

ORIG REF: 003/

OTH REF: 000

CC  
Card 2/2

L 08452-67 EWT(m)/EWP(t)/ETI LJP(c) JD/JG

ACC NR: AP6030899

SOURCE CODE: UR/0080/66/039/008/1751/1754

AUTHOR: Levin, P. A.

25  
B.

ORG: none

TITLE: Preparation of resinsates of certain metals

SOURCE: Zhurnal prikladnoy khimii, v. 39, no. 8, 1966, 1751-1754

TOPIC TAGS: soap, rosin acid, metal compound

ABSTRACT: A study of the preparation of lithium, silver, cadmium, cerium, titanium, tin, vanadium, bismuth, chromium and uranium resinsates showed that soluble and stable resinsates of cadmium, titanium and chromium can be obtained in quantitative yield by the fusion method, whereas chromium and vanadyl resinsates can be prepared by precipitation. Fused lithium, cerium, tin, bismuth and uranyl resinsates and precipitated bismuth resinate were obtained in yields of no more than 90% based on the metal in reactions with both equivalent and excess (up to 2 eq. per 1 eq. of metal) amounts of rosin acids. Silver does not form a resinate, and is reduced to the metal upon fusion with rosin. Vanadium pentoxide is unsuitable for the preparation of the resinate. A uranium soap containing 32% U<sub>3</sub>O<sub>8</sub> was prepared.

SUB CODE: 07/ SUBM DATE: 30Jul64/ ORIG REF: 010/ OTH REF: 006

Cord 1/1 *oak*

UDC: 668.472:661.8+668.189

FILIPPOV, S.N. [deceased]; BUDA, N.I.; ALIMOV, I.G.; RYZHKOV, P.Ya.; LEVIN,  
P.G.; GORYUCHKO, I.G.; ZADOROZHNYAYA, M.A.; VOLKOVA, L.A.

Building up steel rools. Biul. TSNIIICM no.22:54-55 '57.

(MIRA 11:5)

1. Zavod im. Petrovskogo.

(Electric welding) (Rolls)

66981

SOV/81-59-13-45192

24.1800

Translation from: Referativnyy zhurnal, Khimiya, 1959, Nr 13, p 67 (USSR)

AUTHORS: Levin, P.I., Safronov, A.I., Pronina, Ye.S.

TITLE: The Action of Ultrasound on the Oxidation Rate of Ferrous Oxide

PERIODICAL: Sb. nauchn. tr. Vses. n.-i. gorno-metallurg. in-t tsvetn. met., 1958, Nr 3, pp 111 - 117

ABSTRACT: The action of ultrasound (frequency 500 kc, power 25 w) on the oxidation of Fe(2+) in aqueous solutions by oxygen of the air at various temperatures and also at the addition of Zn<sup>2+</sup> ions has been investigated. In the sound-treatment, oxidation has not been detected due to the formation of H<sub>2</sub>O<sub>2</sub>. The rate of the oxidation of iron in ZnSO<sub>4</sub> solutions at pH 5.0 increases 1.6 - 1.8 times, in solutions containing only Fe(2+) sulfate, 1.3 - 1.4 times. The reduction of the solubility of O<sub>2</sub> in the sound-treatment decreases the oxidation rate under the action of ultrasound. The practical application of ultrasound in the hydrometallurgy of Zn for intensifying the oxidation of iron is not expedient at the present time.

Card 1/1

B. Kudryavtsev



LEVIN, P.I.

Use of ultrasonic waves in the fur and leather industries.  
Kosh.-obuv.prom. no.9:21-24 S '59. (MIRA 13:2)  
(Ultrasonic waves--Industrial applications)  
(Leather industry) (Fur)



LEVIN, P.I., kand.khim.nauk; KUZNETSOV, V.I., inzh.

Using radioactive isotopes for locating gas leaks in underground pipelines. Gor.khoz.Mosk. 33 no.4:19-21 Ap '59.

(MIRA 12:6)

(Radioactive isotopes--Industrial application)

(Gas, Natural--Pipelines)

8510

S/191/60/000/007/003/015  
B004/B056

15.8102

AUTHOR: Levin, P. I.

TITLE: Stabilization of Polyolefines Against Destruction by the  
Action of Heat, Light, and Oxygen

PERIODICAL: Plasticheskiye massy, 1960, No. 7, pp. 9 - 15

TEXT: This is a review of papers on inhibitors of the destruction of polyolefines and stabilizers against the action of light. The oxidative destruction of polyolefines develops according to a radical chain mechanism, the course of which is interrupted by the inhibitor. The corresponding reaction equations are taken from publications. The inhibiting action of quinone, polymethyl-β-naphthylamine, N-methyl aniline and various alkyl phenols are given. A table compares the inhibiting efficacy of various alkyl phenols. Further, the destruction processes occurring under the action of light and the stabilizing effect of benzo-phenone-hydroxyl derivatives are explained. As the most important task in this field, the author describes the research of the inhibiting action of: 2,6-di-tert-butyl-3-methyl phenol; 2,4-dimethyl-6-tert-butyl phenol;

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Stabilization of Polyolefines Against  
Destruction by the Action of Heat, Light, and  
Oxygen

85110  
S/191/60/000/007/003/015  
B004/B056

2,4-dimethyl-6-sec-butyl phenol, and 2,4,2-trimethyl phenol, of methyl phenyl sulfide and compositions from sulfides and phenol derivatives, as well as the action of alkylated aryl phosphites with long aliphatic chain; the research of the action of light upon the inhibited oxidation in the presence of light absorbers and the protective effect of light stabilizers; comparison of the oxidation of polyolefines with chemical processes in polymers and in low-molecular hydrocarbons; investigation of the kinetics of oxidation as a function of the concentration of the inhibitor and its aging. Finally, the synthesis of new stabilizers<sup>15</sup> is demanded. The author mentions papers by V. B. Miller, V. S. Pudov, M. B. Neyman, L. Lafer, A. S. Kuz'minskiy, and L. G. Angert. There are 1 table and 36 references: 9 Soviet, 17 US, 7 British, 2 German, and 2 Italian.

X

Card 2/2

84249

S/076/60/034/009/010/022  
B015/B056

11.12.10

AUTHORS:

Miller, V. B., Levin, P. I., Konareva, G. P., Neyman,  
M. B., and Yenikolopyan, N. S.

TITLE:

Application of the Kinetic Method of Isotopes for  
Investigating the Oxidation of Methane in the Presence  
of Nitromethane

PERIODICAL:

Zhurnal fizicheskoy khimii, 1960, Vol. 34, No. 9,  
pp. 1980-1986

TEXT: Two of the authors (Ref. 7) observed that in the oxidation of methane with small additions of NO<sub>2</sub>, a slight temperature rise occurs. The latter is due to the formation of nitromethane, which acts as a catalyst and, at first, decays quickly into formaldehyde and carbon monoxides, and in the further course of the reaction it maintains a constant concentration for 1-1.5 minutes. For the time of concentration constancy of the nitromethane it may be assumed that nitromethane either does not take part in the reaction, or (which is more probable) is used up, but is re-formed in the same quantity. In the present case, it was found by the kinetic method that the latter assumption is correct. The  
Card 1/3

84249

Application of the Kinetic Method of Isotopes S/076/60/034/009/010/022  
for Investigating the Oxidation of Methane in BO:5/BO56  
the Presence of Nitromethane

$C^{14}H_4$  used was produced from  $BaC^{14}O_3$ , and the  $C^{14}H_3NO_2$  from marked acetic acid was obtained by a method developed by P. I. Levin (Ref. 11), and formaldehyde was separated by distillation from nitromethane (Table, results of separation). Three series of experiments were carried out; in the first, a mixture of 74.0 torr  $CH_4$  + 146 torr  $O_2$  + 4.7 torr  $C^{14}H_3NO_2$  was used at a temperature of 473°C. The activity curves (Fig. 3) show that nitromethane is formed from methane, and that nitromethane is not isolated. In the second series of experiments,  $C^{14}H_4$  was oxidized besides nitromethane, and it was found that formaldehyde is formed partly direct from nitromethane and partly from methane (Fig. 4). To explain the part played by  $O_2$ , a third series was carried out with 220.3 torr  $CH_4$  + 4.7 torr  $C^{14}H_3NO_2$  at 473°C, and it was found that in the presence of  $O_2$  the maximum concentration of formaldehyde is four times lower, and is attained three times more rapidly. The fraction of formaldehyde not formed from nitromethane, is formed by a reaction of methane

Card 2/3

84249

Application of the Kinetic Method of Isotopes S/076/60/034/009/010/022  
for Investigating the Oxidation of Methane in B015/B056  
the Presence of Nitromethane

with nitrogen oxides. The isotopic exchange follows the scheme  
 $C^{14}H_3NO_2 + CH_4 \rightleftharpoons C^{14}H_4 + CH_3NO_2$ . The formation and consumption rates  
of nitromethane in the presence and in the absence of oxygen were cal-  
culated. 2-3 methane molecules are oxidized for every nitromethane  
molecule. There are 8 figures, 1 table, and 11 references: 10 Soviet and  
1 US.

ASSOCIATION: Akademiya nauk SSSR Institut khimicheskoy fiziki  
(Academy of Sciences USSR, Institute of Chemical Physics)

SUBMITTED: December 18, 1958

Card 3/3

26301-26501

S/190/61/003/008/014/019  
B110/B208

15-8200

2209

AUTHORS: Levin, P. I., Lukovnikov, A. F., Neyman, M. B.,  
Khloplyankina, M. S.

TITLE: Mutual increase of antioxidant activity (synergism). I.  
Occurrence of synergism in mixtures of mercapto benzimidazole  
with some inhibitors

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 8, 1961,  
1243 - 1246

TEXT: With reference to foreign papers the authors studied the effect of antioxidants. If the action of one inhibitor prevents the formation of free radicals, and that of another peroxide decomposition, joint use of both inhibitors may have a better effect than additivity. This was studied by the effect of mixtures of mercapto benzimidazole (MBA), p-hydroxyphenyl- $\beta$ -naphthylamine (p-oxyneozone, ON), or П-24 (P-24) (condensation product of styrene and phenol) on the oxidation of polypropylene containing 10% atactic structure at 200°C and 200 mm Hg. The induction period of oxidation was determined from the drop of oxygen pressure to 1.0 mm Hg. It was found that the induction period linearly increased at Card 1/3

~~2628-15~~  
S/190/61/003/008/014/019  
B110/B208

Mutual increase of...

low inhibitor concentration, and that it remained practically constant at a concentration of about 0.1 moles/kg. Fig. 2 shows the effect of a mixture of MBA and ON at different concentration. Conditions are similar when a mixture of MBA and P-24 is used. At optimum molar ratios, the activity of a mixture of oxidation inhibitors is by a multiple higher than the sum of component activities. To determine the volatility of anti-oxidants, polymer samples were heated to 200°C for 3, 6, or 12 hr in CO<sub>2</sub> atmosphere (200 mm Hg), oxidation was performed, and the induction period measured. The induction period was found to be shortened corresponding to volatilization of reagents. The use of mixtures of oxidation inhibitors for polymer stabilization is very promising. A paper by K. I. Ivanov, Ye. D. Vilyanskaya, A. A. Luzhetskiy, Teploenergetika, 1960, no. 11, 34 is mentioned. There are 5 figures and 7 references: 3 Soviet-bloc and 4 non-Soviet-bloc. The three most important references to English-language publications read as follows: Ref. 2: G. W. Kennerly, W. L. Patterson, Industr. and Engn. Chem. 48, 1917, 1956); Ref. 3: K. U. Ingold, J. E. Puddington, Industr. and Engn. Chem., 51, 185, 1959; Ref. 5: W. L. Hawkins, V. L. Lanza, B. B. Loeffler, W. Matreyek, F. H. Winslow, Rubber Chem. and Technol., 32, 1179, 1959.

X

Card 2/3



~~ZD 30202~~

S/190/61/003/008/014/019  
B110/B208

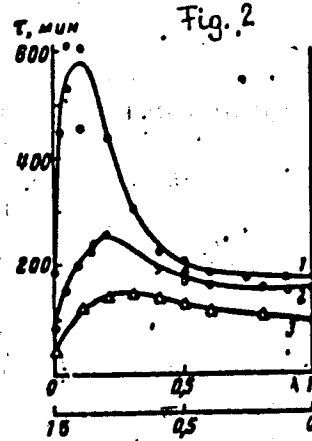
Mutual increase of...

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics AS USSR)

SUBMITTED: December 6, 1960

Fig. 2. Change of the induction period of polypropylene oxidation at 200°C as dependent on the composition of a mixture of p-hydroxyphenyl-β-naphthylamine (A) with mercapto benzimidazole (B)

Legend: Total concentrations of mixtures:  
(1) 0.1 moles/kg; (2) 0.05 moles/kg;  
(3) 0.025 moles/kg.



Card 3/3

DUDOROV, V.V.; SAMVELYAN, A.L.; LUKOVNIKOV, A.F.; LEVIN, P.I.

Decomposition of hydroperoxide groups in oxidized atactic polypropylene. Izv.AN Arm. SSR. Khim.nauki 15 no.4:311-320 '62. (MIRA 15:11)

1. Institut khimicheskoy fiziki AN SSSR.  
(Propene) (Hydroperoxide) (Oxidation)

15.8200

45395

S/190/63/005/002/006/024  
B101/B102

AUTHORS: Khlopyankina, M. S., Lukovnikov, A. F., Levin, P. I.

TITLE: Mutual intensification of the effect of antioxidants (synergism). II. Basic manifestations of the effect of antioxidant mixtures

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 2, 1963, 195-200

TEXT: In the oxidation of 70% crystalline polypropylene at 200°C in oxygen ( $p_{O_2} = 200$  mm Hg), single sulfur-containing compounds, amines and hydroxy amines as well as mixtures of these were studied as regards their effect on the induction period (min) of the oxidation. The total concentration of the stabilizers was 0.01 mole per kg of polymer. Results:

Card 1/3

S/190/63/005/002/006/024  
B101/B102

Mutual intensification of ...

	I(25)	II(100)	III(680/350 <sup>+</sup> )	IV(180 <sup>+</sup> )	V(150)	VI(10)
A(20)	25	-	-	-	-	-
B(350 <sup>+</sup> )	475(1:4)	-	-	-	375(1:3)	-
C(19)	-	260(1:1.5)	-	-	550(1:3)	-
D(45)	90(1:1)	290(1:2)	-	-	320(1:3)	260 (4:1) <i>f</i>
E(200)	250(1:4)	-	-	-	-	-
F(95)	170(1:1)	270(1:1)	-	-	-	-
G(75/65 <sup>+</sup> )	100 (1:1)	300 (1:4)	700	280 (1:3.5)	620 (1:19)	250 <sup>+</sup> (1:1)
H(20/15)	60 (1:1)	220 (5:1)	60 <sup>+</sup> (1:1)	180 <sup>+</sup>	150	65 (1:1)
I(25)	65 <sup>+</sup> (1:2)	175 (1:2)	285 <sup>+</sup>	-	-	75 (1:1)
K(130/75 <sup>+</sup> )	125	-	800	280 <sup>+</sup>	-	-

A is phenyl-benzyl sulfide, B 2,2'-(6-tert-butyl-4-methyl phenol) sulfide;  
C tetramethylthiuram monosulfide; D tetramethylthiuram disulfide;

Card 2/3

temperature. The importance of such effects in practice is emphasized for  
combining amine-containing antioxidants with sulfur-containing rubber.  
There are 4 figures and 1 table.

APPROVED FOR RELEASE: 08/23/2000  
Chemical Physics AS USSR

SUBMITTED: July 25, 1961

Card 3/3

J. 17896-63  
ACCESSION NR: AP3004701

EWP(j)/KPF(o)/EWT(m)/BDS ASD Po-4/Pt-4 RM/WW  
S/0190/63/005/008/1152/1155

73  
68

AUTHOR: Levin, P. I.; Kirpichnikov, P. A.; Lukovnikov, A. F.; Khlopyankina,  
M. S.

TITLE: Mutual improvement of the effectiveness of antioxidants (synergism).  
3. Manifestation of synergism in mixtures of alkylated phenol sulfide with cer-  
tain phosphites

L 17896-63

ACCESSION NR: AP5004701

4 7

acid were used: 2,6-tert-butyl-4-methylphenyl 1,2-phenylene phosphite (PKIF),  $\alpha$ -naphthyl 1,2-phenylene phosphite (PK- $\alpha$ -NP), tris-[p-( $\alpha$ -methylbenzylidene)phenyl] phosphite (phosphite of the reaction product of phenol with styrene) (FP-24), tris(p-nonylphenyl) phosphite (Polygard, TNF), and tris(p-tert-butylphenyl) phosphite (TTEFF). Single or mixed antioxidants were added in amounts of 0 to 0.05 mol/kg. Their effectiveness was evaluated by the induction period of oxidation,  $\tau$ . The results of the study are given in the form of plots of antioxidant concentration versus induction period. Addition of individual antioxidants produced a considerable inhibitory effect. Thus,  $\tau$  increased from 3--5 min for uninhibited FP to about 290 min for FP in the presence of 0.05 mol/kg SAO-6 or 0.05 mol/kg PKIF. The effectiveness of individual antioxidants increased in the sequence: TNO < FP-24 < PK- $\alpha$ -NP < PKIF < SAO-6. Mixtures of individual phosphites with SAO-6 produced a synergistic effect in all cases; the induction period increased in some instances to about 500 min. Long induction periods can be obtained not only by increasing the total concentration of the components mixed in a given ratio but also by increasing the concentration of one component at a constant concentration of the other. It is concluded that mixtures of SAO-6 with triesters of phosphorous acid are very effective stabilizers of such polymers as FP and that the effectiveness of the mixtures considerably exceeds that of the individual compounds. Orig. art. has: 4 figures and 1 table.

Card 2/3

L 17896-63  
ACCESSION NR: AP3004701

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 25Dec61

DATE ACQ: 28Aug63

ENCL: 00

SUB CODE: CH, MA

NO REF SOV: 005

OTHER: 000

Card 3/3

LUKOVNIKOV, A.F.; FEDOROV, B.P.; VASIL'YEVA, A.G.; KRASNANSKAYA, E.A.;  
LEVIN, P.I.; GOL'DVARD, Ya.L.

Benzimidazole derivatives as inhibitors of the oxidation  
of polypropylene and the effect of p-hydroxydiphenylamine  
on their effectiveness. Vysokom. soed. 5 no.12:1785-1789  
D '63. (MIRA 17:1)

1. Institut khimicheskoy fiziki AN SSSR i Institut  
organicheskoy khimii im. N.D. Zelinskogo AN SSSR.

ACCESSION NO: AP4017630

S/0190/64/006/002/0201/0205

AUTHORS: Lukovnikov, A. F.; Fedorov, B. P.; Stoyanovich, F. M.; Bulgakova, T. A.;  
Levin, P. K.

TITLE: Arylamines of the thiophene series with a thioether group as antioxidants

SOURCE: Vy\*sokomolekulyarny\*ye soyedineniya, v. 6, no. 2, 1964, 201-205

TOPIC TAGS: antioxidant, polypropylene, polypropylene antioxidant, thiophene, thenyl  
compound, thioether group, arylamine, stabilization, functional stabilizing group,  
phenyl compound, Neozone, sulfide, oxidation, p phenolamine, induction periodABSTRACT: The performance of sulfides of the thiophene series containing an  
arylamine group as inhibitors of polypropylene oxidation was studied at 200C in an  
atmosphere of oxygen. It was found that the arylamines of the thiophene series are  
generally equal (in some instances even superior) as antioxidants to the commercial  
Neozones. It was also observed that the presence of a thenyl or a benzyl radical  
in the arylamine molecule had a favorable effect on the effectiveness of the  
compound. The sulfides of the thiophene series as such do not possess any anti-  
oxidative properties in respect to polypropylene. It was also shown that the

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ACCESSION NO: AP4017630

thioether group does not enhance the effectiveness of arylamine either when added  
separately or when the thioether group forms a part of the amine molecule. The  
presence of a thioether group in p-aminophenol derivatives results in increased  
effectiveness of the compounds as antioxidants, especially where the sulfide sulfur  
is directly bound to the thiophene group. Orig. art. has: 1 table and 3 charts.ASSOCIATION: Institut organicheskoy khimii im. N. D. Zelinskogo AN SSSR, (Institute  
of Organic Chemistry AN SSSR); Institut khimicheskoy fiziki AN SSSR (Institute of  
Chemical Physics AN SSSR)

SUBMITTED: 19Jul62

DATE ACQ: 23Mar64.

ENCL: 00

SUB CODE: CH

NO REF SOV: 003.

OTHER: 004



L 10795-65 EWT(m)/EPF(o)/EWP(j) Pc-4/Pr-4 ASD(p)-3/AMD/Pb-4/RAEM(1)

RM

ACCESSION NR: AP4032570

S/0190/64/006/004/0700/0705

AUTHORS: Levin, P. I.; Bulgakova, T. A.

TITLE: Mutual strengthening (synergism) of antioxidants. 4. Increased efficiency<sup>B</sup> in mixtures containing esters of pyrocatecholphosphorous acid

SOURCE: Vy\*sokomolek. soedin., v. 6, no. 4, 1964, 700-705

TOPIC TAGS: antioxidant, polypropylene antioxidant, pyrocatecholphosphorous acid ester, phosphite ester, alkyl acyl antioxidant, mercaptan additive, sulfide additive, disulfide additive, synergism, oxidation induction period/ SaO 6 additive, DiSaO 6 additive, Santonox

ABSTRACT: It was shown in an earlier publication by P. I. Levin and associates (Vy\*sokomolek. soyed. 5, 1152, 1963) that the antioxidant effect of pyrocatecholphosphorous acid esters was substantially enhanced by the addition of 2,2'-thio-bis-(6-tert. butyl-4-methylphenol)(SaO-6). The present study deals with the effects of pyrocatecholphosphorous acid esters on the structure of the radical and with the enhancing effects of phenolsulfides, disulfides, and mercaptans. The performance of these antioxidants was studied on isotactic molten polypropylene at 200C and an oxygen pressure of 200 mm Hg. The list of antioxidants included

Card 1/5 APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R000929520020-2

L 10795-65

ACCESSION NR: AP4032570

6

pyrocatecholphosphoric acid (PCPA), phenyl pyrocatecholphosphite (PPCP), p-methylphenyl pyrocatecholphosphite (MPPCP), p-tert.butylphenyl pyrocatecholphosphite (BPPCP), 2,4,6-tri-tert.butylphenyl pyrocatecholphosphite (2,4,6-BPPCP), 2,2'-thio-bis-(6-tert.butyl-4-methylphenol)(SaO-6), 2,2'-dithio-bis-(6-tert.butyl-4-methylphenol)(DiSaO-6), 4,4'-thio-bis-2-(tert.butyl-5-methylphenol)(Santonox), and mercaptobenzimidazole (MBIA). It was determined that at concentrations within the 0-0.05 mole/kg range the induction period changed in proportion to the concentration of the antioxidants. The highest effectiveness was shown by 2,4,6-BPPCP and the lowest by PCPA, with PPCP and BPPCP occupying intermediate positions. Individual enhancing of PCPA, PPCP, MPPCP and BPPCP with SaO-6 had a synergistic effect. Thus, while a 0.01 mole/kg concentration of SaO-6 alone called for an induction period of 160 minutes, and a 0.04 mole/kg concentration of PCPA alone called for an induction period of 30 minutes, the combined effect of both antioxidants in these concentrations caused the induction period to expand to 240 minutes. Tests with a combination of 2,4,6-BPPCP and Santonox also revealed (at a summary concentration of 1%) a pronounced synergistic effect on the performance of these antioxidants. On the other hand, a combination of 2,6-di-tert.butyl-4-methylphenyl-PCPA with MBIA had the opposite effect. The theoretical aspects of these phenomena are discussed at length. Thanks for the preparation of reagents are given to P. A. Kirpichnikov, N. A. Mukmeneva, L. M. Popova, G. Ya. Richmond, A. Ye. Grenberg, and T. A. Frishman.

Cord 2/3

L 10795-65  
ACCESSION NR: AP4032570

Orig. art. has: 4 charts and 8 formulas.

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics,  
AN SSSR)

SUBMITTED: 03May63

ENCL: 00

SUB CODE: 00, GC

NO REF SOV: 002

OTHER: 006

Card 3/3

ACCESSION NR: AP4033402

8/0076/64/038/003/0672/0675

AUTHOR: Levin, P. I. (Moscow)

TITLE: Mechanism of the phosphite inhibition of the oxidation of hydrocarbons.

SOURCE: Zhurnal fizicheskoy khimii, v. 38, no. 3, 1964, 672-675

TOPIC TAGS: inhibition mechanism, oxidation, propylene, trinitrophenyl phosphite, pyrocatechyn phosphorous acid, phenyl pyrocatechyn phosphate, hydroperoxide decomposition, hydrocarbon, phosphite inhibition

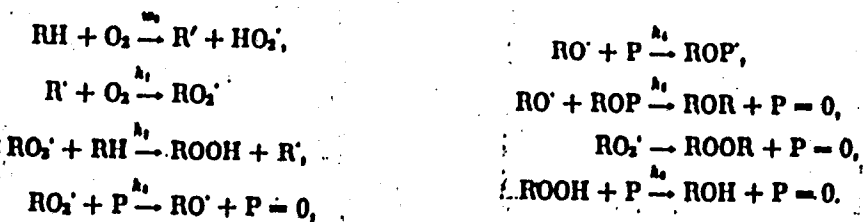
ABSTRACT: The mechanism and the effectiveness of the inhibition of the oxidation of polypropylene by trinitrophenyl phosphite (I), pyrocatechyn phosphorous acid (II), phenylpyrocatechyn phosphite (III), 4-tert-butylphenylpyrocatechyn phosphite (IV),  $\alpha$ -naphthylpyrocatechyn phosphite (V), 2,6-tert-butyl-4-methylphenylpyrocatechyn phosphite (VI) and 2,4,6-tert-butylphenylpyrocatechyn phosphite (VII) were studied at 200 C with 200 mm Hg. It was shown that aliphatic esters of phosphorous acid were less effective and that the effectiveness of esters of pyrocatechynphosphorous acid increases greatly if a tert-butyl group is introduced in the o-position and also on changing the oxyphenyl radical to oxynaphthyl

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in the ester. The effectiveness of the phosphites increases in the following order:  
 (I) < (II) < (III) < (IV) < (V) < (VI) < (VII)

The induction period of the phosphites increased linearly as a function of the concentration and strongly suggests a general inhibition mechanism. The difference in the effectiveness is suggested to depend on the reactivity of the intermediate unstable products of phosphite transition during its reaction with radicals RO<sub>2</sub> or on the difference of the reaction rate for the decomposition of the hydroperoxides. The possible inhibition mechanism of oxidation of hydrocarbons by phosphites is as follows:



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It is concluded that the inhibition of oxidation may be due to free radical loss and suppression of the decomposition of the newly formed hydroperoxides. Orig. art. has: 1 table and 1 figure.

ASSOCIATION: Institut Khimicheskoy fiziki Akademii nauk SSSR (Institute of Chemical Physics, Academy of Sciences, SSSR)

SUBMITTED: 08Apr63

ENCL: 00

SUB CODE: OC

NO REF SOV: 002

OTHER: 004

Card 3/3

L 27189-65 EWT(m)/EPF(o)/EPR/EWP(j) Pc-4/Pr-4/Ps-4 RPL EW/WJ/JW/JFW/RM

ACCESSION NR: AP5006075

S/0204/65/005/001/0049/0052

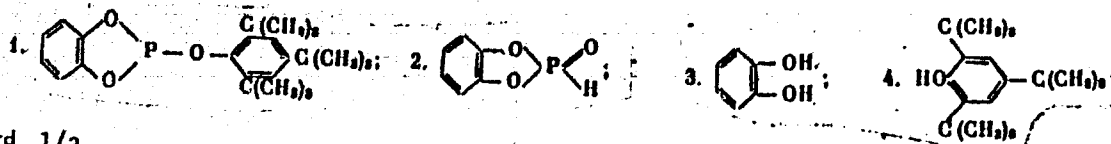
AUTHOR: Khlopiyankina, M. S.; Karpukhin, O. N.; Buchachenko, A. L.; Levin, P. I.

TITLE: Mechanism of inhibition by phosphites

SOURCE: Neftekhimiya, v. 5, no. 1, 1965, 49-52

TOPIC TAGS: oxidation, inhibition, inhibitor, hydrocarbon oxidation, polymer oxidation, peroxide, phosphite, chemiluminescence

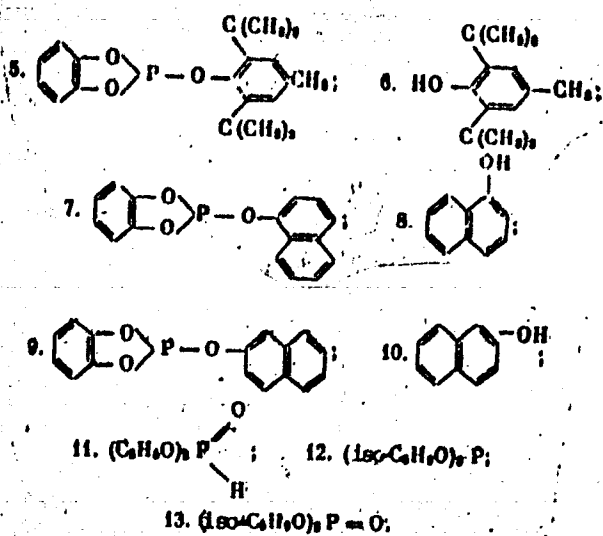
ABSTRACT: A study has been made of the mechanism of the inhibition by phosphites of hydrocarbon and polymer oxidation, as exemplified by the reaction of phosphites with peroxide radicals. A chemiluminescent method, described in an earlier study, of investigating oxidation reactions was used for the reaction at 600C in the presence of azobisisobutyronitrile of ethylphenyl peroxide radicals with the following phosphites, phosphates, or phenols:



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It was found that of the phosphites studied, only aryl phosphites react rapidly; the alkyl phosphites and phosphates hardly reacted at all. Analysis of the data suggested that at 60C, phosphites do not react with peroxide radicals; chemiluminescence quenching by aryl phosphites was attributed to peroxide-radical reaction with partial hydrolysis products of the phosphites. The rate of constants of the reactions of ethylbenzene peroxide radicals with pyrocatechol, and the number of chains terminated by one pyrocatechol molecule, were determined. The authors express their gratitude to V. Ya. Shlyapintokh for his assistance in the research and discussion of the results. Orig. art. has: 1 figure, 1 table, and 21 formulas.

[SM]

ASSOCIATION: Institut khimicheskoy fiziki AN SSSR (Institute of Chemical Physics, AN SSSR)

SUBMITTED: 28Nov63

ENCL: 00

SUB CODE: IC, GC

NO REF SOV: 005

OTHER: 003

ATD PRESS: 3191

Card 3/3

YERMILOVA, G.A.; KORNEV, A.Ye.; LEVIN, P.I.; LEBEDEVA, L.N.; GRINBERG,  
A.Ye.; FRISHMAN, T.A.

Effectiveness of some stabilizers in the extrusion of polypropylene  
films and their aging. Plast. massy no.5:46-49 '65.

(MIRA 18:6)

LEVIN, P. L.

PA 28/49T38

USSR/Engineering  
Cement  
Brick

Jun 48

"Model SM-41 Machine for Production of Cement-Slag and  
Cement-Sand Bricks," P. L. Levin, Engr, 2 pp

"Mekh Stroi" No 6

Performance characteristics for subject piece of  
equipment, capable of manufacturing 1,660 bricks per  
hour. Size of bricks is 250 x 120 x 65 mm.

28/49T38

LEVIN, P.M.

Special drill for cutting out leather and "paranite" packing  
for pumps and dryer drums. Obm.tekh.opyt. [MLP] no.10:30-31  
'56. (MIRA 11:11)  
(Drying apparatus--Textile fabrics)

LEVIN, P.M.

Redesigning the propeller shaft and the drive system of a KS-2  
double-chamber dryer. Obm.tekh.opyt. [MLP] no.10:31-33 '56.  
(Drying apparatus--Textile fabrics) (MIRA 11:11)

LEVIN, R.B.

Sanitary education in the health resorts of the Crimea. Med.  
sestra 22. no.4:56-58 Ap '63. (MIRA 16:7)

1. Glavnyy vrach Krymskogo oblastnogo Doma sanitarnogo prosveshche-  
niya.

(CRIMEA--HEALTH RESORTS, WATERING PLACES, ETC.)  
(HEALTH EDUCATION)

IEV-11, 1.7.

Copying and reproducing design documentation by a method of flat copying. Vych. i org.tekh. i stroi. i projekt. no.2:88-94 '64.

(MIRA 18:10)

1. Gosudarstvennyy institut tipovogo i eksperimental'nogo proyektirovaniya i tekhnicheskikh issledovaniy Gosstroya SSSR.

LEVIN, R.I., Doc Med Sci--(diss) "Direct complications of ~~gastric~~ gastric  
resection <sup>because</sup> ~~on account~~ of ulcer ~~lesions~~." Len, 1958. 16 pp (First Len  
Med Inst in Acad I.P. Pavlov), 200 copies (ML, 45-58, 151)

-128-



LEVIN, R.I. (Leningrad, D-14, ul. Saltykova-Shchedrine, d.17, kv.54)

Effect of applying clamps to the gastric, duodenal, and jejunal walls  
[with summary in English]. Vest.khir. 80 no.5:65-73 My '58 (MIRA 11:7)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (zav. - prof. A.V. Mel'nikov  
i prof. V.I. Kolesov) 1-go Leningradskogo meditsinskogo instituta  
im. I.P. Pavlova.

(STOMACH, physiology,  
eff. of clamps, histopathol. in animals (Rur))

(DUODENUM, physiology  
same)

(JEJUNUM, physiology,  
same)

BOLDIN, K.M. (Yaroslavl'); DROZDOVA, Z.S.; LEVIN, R.I.; VAYSMAN, L.A. (Kuybyshev-obl.); PODOSINOVSKIY, V.V. (Kazan'); SAYFULLINA, Kh.M. (Kazan'); BUGYGIN, N.V. (Kazan'); RAZUMOVSKIY, Yu.K. (Leninogorsk); GEL'FER, G.A., dotsent (Gor'kiy); MAMISH, M.G. (Kazan'); RAFALOVICH, M.B., dotsent; MEL'NICHUK, S.P., ~~and~~ med. nauk; KRAPIVIN, B.V.; STAROVEROV, A.T. (Saratov); SURIN, V.M.; POROSENKOV, V.S. (Romodanovo, Mordovskoy ASSR); ANDROSOV, M.D. (Moskva); ZARIPOV, Z.A. (Urussu, Tatarskoy ASSR); MURAV'YEV, M.F. (Izhevsk); KUZ'MIN, V.I. (Batyrevo, Chuvashskoy ASSR); SITDYKOV, E.N. (Kazan'); YUDIN, Ya.B. (Novokuznetsk)

Short reports. Kaz.med.zhur. no.4:81-91 J1-Ag '62. (MIRA 15:8)  
(MEDICINE--ABSTRACTS)

LEVIN, R. KH.

"Evaporation of Aluminate Solutions With Simultaneous Continuous  
Crystallization of Soda." Sub 18 Dec 47, Moscow Inst of Chemical Machine  
Building

Dissertations presented for degrees in science and engineering in Moscow  
in 1947

SO: Sum No. 457, 18 Apr 55

KARAPETYAN, Gurgun Beybutovich; ZVORYKIN, Serafim Vasil'yevich;  
Prinimali uchastiye: YURCHENKO, P.I.; LEVIN, R.R.; LUBENSKIY,  
V.D., kand.tekhn.nauk. LYUBARSKIY, A.L., retsenzent: SOKOLOVSKIY,  
V.I., red.; DUGINA, N.A., tekhn.red.

[Deep well drilling rigs] Burovye ustanovki glubokogo burenia.  
Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 367 p.  
(MIRA 14:1)

(Oil well drilling rigs)

LEVIN, R. S.

4  
MH

2892. A study of the process of crystallization of silicate glasses by annealing.—M. V. Oskinnik, R. S. Levin, and E. K. Vinogradova (*Glass & Ceramics*, Moscow, 11, No. 6, 8, 1954). ~~Some~~ glasses were found with an abundance of crystallization centres and from which crystals had rapidly grown to cover the surface of the glass as star-like accumulations or as a felted mass of acicular crystals. Such glasses contain 6–8% CaO, if the SiO<sub>2</sub> content is 75%, 10% CaO for 74% SiO<sub>2</sub>, 6–8% CaO, if the MgO and Al<sub>2</sub>O<sub>3</sub> contents are >3% each, and 10% CaO if the MgO and Al<sub>2</sub>O<sub>3</sub> contents are >1% each. In the remaining glasses investigated, the crystallization tendency was small. The main compound in almost all glasses (except for those containing >74% SiO<sub>2</sub> and >3% MgO and >3% Al<sub>2</sub>O<sub>3</sub>) is devitrite (Na<sub>2</sub>O.3CaO.6SiO<sub>2</sub>). (13 figs., 1 table.)

LEVIN, R.S.; VLADYKINA, M.I.

Roentgen diagnosis of bronchial foreign bodies in children. Vopr.  
pediat. 18 no.6:30-37 1950. (CIML 20:5)

1. Of the Department of Roentgenology (Head--Prof.Ya.L.Shik),  
Leningrad State Pediatric Medical Institute.

**LEVIN, R.S.**

**Osseous changes in blood pathology in children according to roentgenologic data. Vopr. pediat. 20 no.2:35-39 Mar-Apr 1952. (GLML 22:1)**

**1. Professor. 2. Of the Department of Roentgenology (Head -- Prof. Ya. L. Shik), Leningrad Pediatric Medical Institute (Director -- Prof. N. T. Shutova).**

1. LEVIN, R. S., Prof., STONIK, A. Ya.
2. USSR (600)
4. Tuberculosis
7. Body section roentgenography of lungs in tuberculosis in children. Probl. tub., No. 1, 1953.

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



LEVIN, R.S., professor; BOGOPOL'SKIY, I.A.; FILENKO, M.D.

Mass fluorography of young children. Vest.rent.i rad. no.6:45-48  
M-D '53. (MLRA 7:1)

1. Iz rentgenologicheskogo otdeleniya (zaveduyushchiy I.A.Bogopol'skiy  
Ob"yedineniya detskoy bol'nitsy im. K.A.Baukhfusa v Leningrade  
(glavnyy vrach V.A.Vinogradova).  
(Diagnosis, Fluoroscopic) (Tuberculosis--Diagnosis)

LEVIN, R. S.

USSR/Medicine - Roentgenology

FD 223

Card 1/1

Author : Levin, R. S., Professor; Bogopol'skiy, I. A.; Filenko, M. D.

Title : The technique of fluorographic examination of small children

Periodical : Vest. Rent. i Rad. 89-91, Mar/Apr 1954

Abstract : The fluorographic method should find wide use in the prophylactic examination of small children. Describes a special attachment to the fluorograph with which the chest cavity can be examined on an ordinary fluorograph filling the entire screen. Two drawings; two photographs (X-rays).

Institution : X-Ray Department (Chief - I. A. Bogopol'skiy) United Children's Hospital imeni K. A. Raikhfus in Leningrad (Head Physician V. A. Vinogradova).

LEVIN, R.S

LEVIN, R.S., professor

So-called cortical hyperostosis in children [with summary in English].  
Vest.rent. 1 rad. 32 no.3:30-37 My-Je '57. (MIRA 10:10)

1. Iz rentgenologicheskogo otdeleniya Nauchno-issledovatel'skogo  
pediatricheskogo instituta (dir. - prof. A.L.Libov) Ministerstva  
zdravookhraneniya RSFSR.

(BONE DISEASES, in inf. and child  
infantile cortical hyperostosis, clin. aspects,  
etiol. & ther.)

LEVIN, R.S., prof. (Leningrad)

"Roentegenological study of the chest in cases of acute pneumonia during early childhood" by N.A. Panov. Reviewed by R.S. Levin. Vop.okh.mat. 1 det. 3 no.5:92-94 S-0 '58 (MIRA 11:11)  
(CHEST--RADIOGRAPHY)  
(CHILDREN--DISEASES)  
(PNEUMONIA)  
(PANOV, N.A.)